UCSC Farm & Garden Apprenticeship

University of California, Santa Cruz

Teaching Direct Marketing & Small Farm Viability

RESOURCES *for* INSTRUCTORS

Edited by Jan Perez, Martha Brown, and Albie Miles

A COMPANION VOLUME TO
Teaching Organic Farming & Gardening
2ND EDITION *Revised & Expanded*

CASFS
The CENTER *for* AGROECOLOGY
& SUSTAINABLE FOOD SYSTEMS

The Center for Agroecology & Sustainable Food Systems is a research, education, and public service program located at the University of California, Santa Cruz. The Center's mission is to advance sustainable food and agricultural systems that are environmentally sound, economically viable, socially responsible, nonexploitative, and that serve as a foundation for future generations.

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ISBN 978-0-9828781-1-8
©2015 Center for Agroecology & Sustainable Food Systems
University of California, Santa Cruz
Santa Cruz, California
casfs.ucsc.edu
First edition published 2005

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Preface and Acknowledgments

The first edition of *Teaching Direct Marketing and Small Farm Viability: Resources for Instructors* was published in 2005 as a complement to *Teaching Organic Farming & Gardening: Resources for Instructors* (published in 2003, with a new edition produced in 2015). Direct marketing through outlets such as Community Supported Agriculture projects and farmers' markets often goes hand-in-hand with the type of small- to medium-scale, organic, mixed specialty crop operations that many of the students in UC Santa Cruz's Apprenticeship in Ecological Horticulture and other beginning farmers are interested in developing. Issues of small farm viability and land tenure are also of particular interest to beginning farmers, and the first edition of the manual addressed those topics as well.

As reflected in this second edition, learning how to access direct markets is more relevant than ever. Direct marketing and local food venues, key outlets for small-scale farmers, have grown exponentially in the past decade. In 2002, there were 3,137 farmers markets in the U.S.—by 2014, there were 8,268.[1] Interest in locally grown foods has blossomed: the National Restaurants Associations survey of chefs notes that local food has " . . . topped the list of most important menu trends . . . ." for the past few years.[2] The federal government, through the USDA, is promoting these local and more direct marketing venues through the program called "Know Your Farmer, Know Your Food," which supports local and regional food systems across the U.S.[3]

Not only is direct and local marketing now a standard and evolving practice, but there continue to be new farmers and new organizations helping people get into farming. The USDA's Beginning Farmer & Rancher Development Program, a significant funder of this training manual project, has spent over $70 million between 2009 and early 2014 on programs to benefit beginning farmers and ranchers.[4]

This manual was written, and updated, to assist farmer educators in their work. It is designed to serve –

- Instructors at college and universities, agriculture organizations, farm-training programs, and apprenticeship programs
- Agricultural Extension personnel
- Farmers with interns or apprentices
- Growers, teachers, and organizers at urban farms, community gardens, and food projects with direct-marketing outlets

This new edition is organized into nine units and has been revised and expanded to focus more specifically on the needs of the beginning farmer—targeting the basics of what she or he needs to know to have a successful farm operation.

All of the lectures and resource sections have been updated, and new units added on topics of particular importance to beginning farmers, including units on hiring labor and developing apprenticeships, addressing food safety, and implementing the basics of marketing (particularly the use of social media). Some of the primary updates reflect changes in marketing channels, with new information on retail, agritourism, eCommerce, food hubs, institutional markets, collaborative efforts, farm dinners, and marketing to faith-based communities. Also updated and expanded are the core elements of the original manual, including business planning, managing cash flow, direct marketing through Community Supported Agriculture (CSA), farmers' markets, roadside stands, and restaurants, as well as various land access strategies.

Similar to the original edition, this new version's units were written by staff and guest lecturers of the Apprenticeship in Ecological Horticulture at UC Santa Cruz, along with other invited experts (see Contributors and Reviewers, page viii). Thus, the manual provides a bounty of timely, useful information for educators and beginning growers.

1 Agricultural Marketing Service, USDA. 2014. Farmers markets and local food marketing: National count of farmers market directory listing graph-1994-2014. *www.ams.usda.gov/AMSv1.0/*

2 Willis, Kendra. 2013. Locally-sourced food dominates National Restaurant Association's top trends list for 2014. Extension, Michigan State University. *msue.anr.msu.edu/news/locally_sourced_food_dominates_national_restaurant_associations_top_trends*

3 USDA. 2013. Know your farmer, know your food—Our mission. *www.usda.gov/wps/portal/usda/usdahome?navid=KYF_MISSION*

4 National Sustainable Agriculture Coalition. 2014. Funding restored for beginning farmer training programs! NSAC's Blog. *sustainableagriculture.net/blog/2014-bfrdp-rfa/*

This manual and *Teaching Organic Farming & Gardening: Resources for Instructors* are both available through our website at *casfs.ucsc.edu/about/publications* for free download in PDF format (as individual units or the entire text). Print versions can be purchased at cost through the Center for Agroecology & Sustainable Food Systems (CASFS). It is our intention that these instructional materials be used as widely as possible for education and training. We also plan to update and add materials to both the web-based and printed versions in the future, and we encourage educators to visit the website to offer evaluation and to send us instructional materials that may be of use in future revisions.

The development of this new resource was made possible with funding from Western SARE, Gaia Fund, True North Foundation, and the USDA Beginning Farmer and Rancher Development Program. The first edition in 2005 was also supported by the Foundation for Sustainability and Innovation, and the Organic Farming Research Foundation.

This training manual represents the experience and work of many people. The authors and reviewers are listed on the Contributors page. The overall direction for the manual was devised by Jan Perez and Martha Brown. Jan Perez was the primary coordinator, working with authors to design and finish their drafts. She oversaw field-testing of curricula, and wrote or contributed to many of the units. Martha Brown also provided coordination and direction with two units, and oversaw the book's editing and production. We thank Jane Bolling of Jane Bolling Design for creating the beautiful cover design and updating the format, and Amy Bolton for her expertise in laying out and proofing the text. We also thank CASFS grant writer Ann Lindsey for bringing in the funding for the project and helping to shape and guide it along the way, and Daniel Press, CASFS Executive Director, for his support throughout the project.

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How to Use This Resource

Teaching Direct Marketing and Small Farm Viability: Resources for Instructors provides resources for teaching a variety of skills and topics related to small farm viability, including options for direct marketing, business planning, issues related to labor, apprenticeships, food safety, and land tenure options. It also offers an overview of small farm viability and produce marketing in the U.S. to give agriculture students, farm apprentices, and other trainees a context for the challenges that small-scale growers face in developing an economically viable farming operation.

This teaching manual is a companion volume to *Teaching Organic Farming and Gardening: Resources for Instructors*, a largely production-oriented and field-based resource that includes natural science and social science course material for sustainable agriculture instruction (see more at *casfs.ucsc.edu/about/publications*).

This nine-unit manual is designed so that units or individual lectures can be used on their own or in any sequence. The theme and content of each of the nine units are described immediately below, followed by a description of the different components of the units.

Unit 1. Small Farm Economic Viability

This unit provides the context for subsequent studies of the economics of small-scale agriculture. Following an overview of the trends and factors affecting the economic viability of small-scale agriculture in the U.S., the unit addresses the history of U.S. agriculture's economic development, the social and economic factors affecting small farm viability, and the barriers small-scale growers face to achieving economic success. It concludes with a brief review of short-term economic strategies and long-term public and private sector strategies geared toward maintaining small farms as part of the American agricultural system.

Unit 2. Overview of Produce Marketing

This unit introduces students to the history of produce marketing in the U.S. and discusses growers' most common marketing options. The historical overview reviews the changes growers made to their marketing practices after the advent of supermarkets and 20th century technology, such as refrigerated shipping and storage. Three main marketing options (wholesale buyers, grower/shipper/packers, and brokers) are introduced, stressing the advantages and disadvantages of each. The unit also discusses development of a marketing strategy and includes an overview of three alternative marketing options (direct to retail, farmers' markets, and community supported agriculture), which are covered in detail in subsequent units.

Unit 3. Community Supported Agriculture (CSA)

The six sections of this unit on direct marketing through Community Supported Agriculture address multiple aspects of the CSA model. The unit opens with a section on the history of CSA, introducing principle figures and the economic and social values that have directed the development of this model of sustainable agriculture in Europe, Japan, North America, and beyond. It includes a discussion of how CSAs have changed over the past decade, from "membership" farms to "subscription" models. Subsequent sections address the practical aspects of developing and managing CSA operations, including CSA organization, outreach, administration, crop planning, and harvest and post-harvest crop handling.

Unit 4. Other Direct Marketing Options

This four-part unit includes sections on a number of creative marketing options that small-scale producers are using to maintain the economic viability of their operations, and addresses the rewards, challenges, and techniques for cultivating marketing outlets. These lectures address the strategies for cultivating direct marketing outlets such as farmers' markets, roadside stands, eCommerce, agritourism and faith based options. This unit also covers what have been traditionally considered intermediate marketing options, such as restaurants, retail, institutions (schools, colleges, hospitals, etc.), food hubs and collaborative ventures.

Unit 5. Marketing Basics

This unit addresses the standard 4 P's of marketing: Product, Place, Price and Promotion, and reviews the steps for communicating who you are as a farmer. It starts by asking farmers to think about their desired market channels and target audience, then some brief steps for evaluating the demand for your product. Much of the unit focuses on how to

develop a brand and value proposition, and how to communicate that to the target customer segment, including basic instructions on developing a website and using social media.

Unit 6. Building Resilience—Small Farm Planning and Operations

This five-part unit provides a comprehensive overview of the business side of the farming operation, including practical advice on how to approach it. Using a case study to demonstrate the need for thoughtfulness and planning, it covers the steps for creating a resilient and successful farm by developing a business plan that integrates a crop plan, marketing plan, financial plan and a time plan. It also explores using social media and farm dinners as two different strategies that can build resilience. Finally, it addresses important business basics about cash flow planning, bookkeeping, and taxes.

Unit 7. Food Safety on the Farm

This unit introduces the topic of food safety on the farm, and why it has become an increasingly important issue for growers. Lectures review the various sources and types of microbial contaminants and the "good agricultural practices (GAPS)" approach to evaluating potential risks and developing a food safety plan. The unit includes examples of logs, checklists, and other tools used in assessing and minimizing the risks of microbial contamination, and discusses the importance of maintaining biological diversity in light of food safety concerns.

Unit 8. Farm Employees and Innovative Models for Interns and Apprentices

This unit covers the basic information about having employees on a farm. Although most beginning farmers will start out by using just their own labor, as they expand they often need to bring in help. Topics addressed include employee protections under federal and California state labor laws, and the basics that are required for doing taxes and complying with other regulations. This unit also outlines different types of working relationships often used by farmers, such as hiring contractors, interns, and apprentices, and discusses ways to set up a legal apprenticeship program.

Unit 9. Land Tenure Options

This unit introduces a range of strategies that farmers can use to identify and secure long-term and affordable access to agricultural land. Along with cash rental, lease, and crop-share arrangements, it reviews a range of innovative approaches such as partnership options, owner financing, conservation easements, land pooling, community land trusts, and leases to nonprofits. It also provides specific information to new farmers about how to find a piece of land to rent or purchase, and how to execute a fair lease.

UNIT COMPONENTS

Each unit in this manual contains multiple components and is designed for use by both the instructor and students. Note that not all units contain all of the components outlined below.

The units are designed with some or all of the following components:

Introduction—An overview for use by both instructor and students

In the Introduction, the Unit Overview summarizes the unit and briefly describes the information to be conveyed through the lecture(s) and (in some units) student exercises, as well as the approximate time for the activities.

Lecture Outlines—Instructor and student outlines that guide presentations and discussions

The lecture outlines provide a broad but comprehensive overview of a given subject, identifying many of the key concepts within a given discipline that may be addressed in an introductory lecture. Instructors are encouraged to adapt the content of the lecture to specific audiences or settings. Some units have one lecture outline and some have several. We suggest that the instructor give copies (or electronic versions) of the lecture notes to the students before the lecture.

Step-By-Step Sheets—For student use

These detailed "how-to" instructions walk students through tasks such as developing a cash flow projection and assessing the economic viability of a farming operation or developing a crop plan for a CSA operation. The step-by-step sheets contain reference information for students to use when working independently. Intended to be provided with Student Exercises described below.

Student Exercises

These activities or exercises reinforce student comprehension of the subject matter or skill by providing practice following a lecture or demonstration.

Resources and References

This section provides an annotated list of books, periodicals, websites, and other electronic resources, videos, and organizations that offer ideas and information for implementing the concepts presented in the unit or provide resources for further study. Based

on their relevance to the material, the same resources may be listed in more than one unit. In some instances the section may include material cited in the lectures.

Appendix Section

The appendices provide tables, graphs, charts, student exercises, and other material to use as visual aids in lectures and demonstrations, or as reference materials for student exercises.

Online Resources

Each of the units in this manual is also available online as a .pdf. Also online are the various Excel files referenced in Unit 6. We will continue to add material to the online materials at: *casfs.ucsc.edu/about/publications*. Look for the *Teaching Direct Marketing and Small Farm Viability: Resources for Instructors* link.

The Center for Agroecology & Sustainable Food Systems, and the Farm & Garden Apprenticeship

The Center for Agroecology and Sustainable Food Systems (CASFS, the Center) is a research, education, and public service unit of the Division of Social Sciences at the University of California, Santa Cruz, dedicated to increasing ecological sustainability and social justice in the food and agriculture system. Center research and education efforts seek to increase understanding of the social, economic, political, and ethical foundations of agricultural sustainability; to establish the ecological and agronomic basis for sustainable production systems; and to demonstrate and facilitate the use of information critical to the adoption of sustainable food and agriculture systems.

The Center's work covers a spectrum that includes academic education and practical training, theoretical and applied research, and public service for audiences ranging from international grower groups to local school children. The Center's 3-acre Alan Chadwick Garden and the 33-acre UCSC Farm are unique organic demonstration, education, and research sites on the UCSC campus.

The Farm & Garden Apprenticeship is a six-month training program held annually at the Center's farm and garden sites. Initiated by Alan Chadwick in 1967, this full-time course now brings participants of all ages from around the world to learn the basic skills of organic gardening and farming, while also studying the complex social and environmental issues surrounding sustainable agriculture and food systems. The program combines classroom instruction, small group demonstrations, and readings with hands-on learning in the fields, gardens, greenhouses, and orchards. The main instructors in the Apprenticeship course are the two Garden Managers and the Field Production Manager, who work daily alongside the apprentices, present classes, and lead training sessions. UCSC faculty, researchers, and members of the agricultural and urban gardening community add a wide range of expertise to the course.

To date nearly 1,500 apprentices have completed the Apprenticeship training program. Graduates have established their own commercial farms and market gardens, run community gardens for inner city and prison populations, and developed school garden programs. Many graduates take part in international development and food security projects. Others have raised the standards of the organic food industry through work with certification programs and retailers. One of the most important outcomes of the Apprenticeship is the ripple effect our graduates have working locally, nationally, and internationally to practice, promote, and teach sustainable, organic farming and gardening.

> "There are very few programs that provide an academic component to the very real world of organic agriculture. This [Apprenticeship] program ranks among the very best in the nation thanks to the skill of the instructors, the diversity of the students, and the certified organic gardens and fields themselves."
>
> *—Bob Scowcroft, Founding Director*
> *Organic Farming Research Foundation*

Our on-campus farm and garden are open to the public year-round. Thousands of visitors come annually to see the hundreds of varieties of annual vegetable and flower crops, fruit trees, and perennial plantings, and to learn about sustainable growing methods, research projects, and education programs. Also based at the UCSC Farm, the non-profit group Life Lab hosts pre-K–12 science, nutrition, and environmental education programs, and the "Food, What?!" youth empowerment program. In conjunction with our support group, the Friends of the UCSC Farm & Garden, the Center offers a year-long series of organic gardening classes, workshops, and seasonal celebrations for the community.

For more information on the Center and its activities, contact us at:

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For questions about the Apprenticeship in Ecological Horticulture program, see the Center's website, *casfs.ucsc.edu* and *www.growafarmer.org,* or contact us at 831.459-3240, casfs@ucsc.edu.

UNIT 1.0

Small Farm Economic Viability

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Introduction: Small Farm Economic Viability

UNIT OVERVIEW

This unit provides students with an overview of trends and issues that affect small farm economic viability in the food system.

The first lecture reviews how small farms are defined and includes an overview of the ecological, economic, and social importance of small-scale farms, as well as the demographics of the current farmer population.

Lecture 2 examines recent economic trends and government policies impacting this sector. It concludes with a discussion of movements and strategies to support small farms, and sets the stage for subsequent units with an overview of marketing and income diversification strategies.

MODES OF INSTRUCTION

> LECTURES (2 LECTURES, 1–1.5 HOURS TOTAL)

LEARNING OBJECTIVES

CONCEPTS

- Concepts and terminology related to small farm economic viability
- Importance of small-scale farms in diverse settings
- Recent trends in the small farm sector
- Marketing and income diversification strategies used by small-scale farmers
- Movements and strategies to support small farm economic viability
- Where to find additional information about topics included in this unit

Lecture 1: Definition & Importance of Small-Scale Farms; Farmer Demographics

A. Introduction to Small-Scale Farms

1. What is a farm?
   a) The USDA definition of a "farm" has evolved over time:
      i. 1850: A "farm" was defined as an operation that produced at least $100 in agricultural products
      ii. 1959: A "farm" was defined as an operation with less than 10 acres grossing $250 or more, OR 10 acres or more grossing $50 or more
      iii. 1974 (currently used by USDA): Since 1974 a farm has been defined, for statistical purposes, as any place from which $1,000 or more of agricultural goods (crops or livestock) were sold or normally would have been sold during the year under consideration
2. What is a small farm?
   a) What may be considered a "small" farm or ranch varies with crop or livestock product, given both the scale needed to produce a given product and different market values. For example, a 50-acre vineyard or diversified vegetable farm (both of which produce relatively high-value crops) would likely gross higher sales per acre than a 50-acre wheat farm, meaning that a wheat farm would need to be larger in order to be economically viable. Thus, one might consider the 50-acre wheat farm as "small" while the 50-acre vineyard might be considered medium-sized.
   b) Generally, small farms are considered to be operations that gross $250,000 or less. Sometimes farms of this size are referred to as small and mid-sized farms or small and intermediate sized farms—with mid-sized or intermediate farms being considered those earning between $100,000 and 250,000 (Kirschenmann et al, ND)
   c) Small farms contain a variety of farm types and structures. They are also classified in different ways. Below are some classifications used by the USDA.
      i. Rural-residence family farms (eXtension 2013):
      - Retirement farms. Small farms whose operators report they are retired.
      - Residential/lifestyle farms. Small farms whose operators report a major occupation other than farming.

      ii. Intermediate family farms:
      - Farming-occupation farms. Family farms whose operators report farming as their major occupation.
      - Low-sales farms. Gross sales less than $100,000.
      - High-sales farms. Gross sales between $100,000 and $249,999."
3. Other farm definitions
   a) Large and very large scale family farms. Farms operated in the majority by families, and grossing between $250,000 and $500,000, respectively.
   b) Non-family farms. Any farm for which the majority of the farm business is not owned by individuals related by blood, marriage, or adoption.
   c) To more specifically categorize farms in the United States, the USDA uses a system of farm descriptors that account for variables including gross sales; cash expenses; farm, household, and operator characteristics; household income, including off-farm income; acres operated; government payments; and conservation practices. These can be found on the USDA website.

See the Glossary for more definitions on different types of farms, as well as positions and people involved in farming

4. Governmental definitions related to agriculture and farms have important and far-reaching political implications for agricultural producers. Government definitions qualify farmers for participation incentives in the Farm Bill, as well as assistance from the numerous USDA agencies that provide technical support to farmers (such as Risk Management Agency's agricultural insurance programs, the Farm Service Agency's credit and loans, and other assistance and granting programs).

B. Importance of Small-Scale Farms in Diverse Settings

Small farms, whether in rural or urban settings, bring many benefits to communities and the surrounding environment, as described below

1. Rural/urban edge farms
   a) Biodiversity. While scale alone does not translate into any particular production method, many small farms use biologically diversified systems to help decrease economic risks (e.g., of crop failure for a single crop; diversifying their marketable products) and stabilize the farm ecosystems (e.g., by avoiding monocrops; using natural predators for pest control). Small farms that use these types of practices may increase biological diversity of landscapes by:
      i. Growing diverse plant species (both crop and non-crop) on a single farm;
      ii. Contributing to diversified crop species within a region;
      iii. Fostering habitat diversity, increasing non-crop, animal- and insect diversity.
   b) Farmland preservation. As farmland loss continues, land in financially successful small farms may be preserved from urban and/or industrial farming uses.
   c) Rural economies and ways of life. Small farms can provide income and economic opportunity for rural residents, communities, and economies.
      i. Some farmers engage in agriculture as a lifestyle choice, meaning that economic self-determination of rural communities may be enhanced by small farming situations.
      ii. Small farms are also part of the cultural heritage in some rural and agricultural communities.
2. Urban farms and gardens
   a) Benefits of urban farms and gardens include:
      i. Increased food access or community food security. Farms and gardens in cities can increase access to fresh and healthy food for residents who may not otherwise have access to these, thereby enhancing community food security.
      ii. Food and environmental education. By providing opportunities for hands-on and experiential learning, urban farms and gardens can help increase residents' awareness of the food system and environment.
      iii. Job training. Some urban farms provide training in horticulture and other related activities, as well as basic job skills (e.g., responsibility; team work) that may be elusive for some groups.
      iv. Cultural continuity for some immigrant groups. Some groups and individuals with agricultural backgrounds have immigrated to the U.S. as refugees, and urban farms and gardens can offer a sense of cultural continuity. (Though, it should also be noted that some groups have negative cultural associations with agriculture.)
      v. Increased green spaces in urban settings. Urban farms and gardens can provide and preserve green spaces in urban settings otherwise dominated by the built environment.

b) Drawbacks
   i. Despite the benefits of urban agriculture, these can also be counterbalanced by challenges including site/soil contamination, zoning regulations, and land tenure, as well as potentially negative effects including public health risks from improper disposal of animal wastes and reinforcement of historical/social inequities such as access to land/resources

C. Farmer Demographics

Each year, the USDA National Agriculture Statistics Service (NASS) provides estimates (based on the previous Census of Agriculture data)[1] about demographics in the agricultural sector, including age, gender, race/ethnicity, and incomes derived from agricultural production. Changes result from economic forces (see below), the impacts of agricultural and other national policies and programs, as well as changing interests in farming. For example, younger farm family members may not want to continue farming as the older ones retire, and beginning farmers coming from urban environments are often interested in smaller-scale and/or specialty farming.

1. U.S. farmers are aging—between 2007 and 2012 (U.S. Department of Agriculture, 2014b):
   a) The average age of U.S. farm operators increased from 57.1 to 58.3
   b) The older age groups (55 and up) all increased, and the younger age groups (54 and less) all decreased
2. Race/ethnicity and gender of U.S. farmers (U.S. Department of Agriculture, 2014a)
   a) Of the 2.1 million farms counted in the 2012 Census of Agriculture, 1.83 million had a white male principal operator; White male operators accounted for 83% of all farmers. This percentage is down from 85% in 2007.
   b) Females comprised 13.7% of the principal operators counted in 2012, down .2% from 13.9% in 2007
   c) ▶ **TABLE 1.1** shows the demographic breakdown of principle farm operators in 2012

▶ **TABLE 1.1** | FARMER DEMOGRAPHICS

FARMER DEMOGRAPHICS*	NUMBER PRINCIPLE OPERATORS (2012)	PERCENT OF PRINCIPLE OPERATORS
ALL OPERATORS	2,109,363	100%
American Indian or Alaskan Native	37,857	1.8%
Asian	13,699	0.6%
Black or African American	33,372	1.6%
Spanish, Hispanic or Latino	67,014	3.2%
White	2,012,674	95.4%
Women operators	288,269	13.7%
Male operators	1,821,094	86.3%

*Data calculated from 2012 Census of Agriculture (US Department of Agriculture, 2014a).

These and a host of additional statistical data on the U.S. agricultural economy and population are found on the USDA websites listed in the Resource section under Websites

1 The Census of Agriculture is the authoritative source of statistics about agriculture in the United States. It is conducted every five years by the United States Department of Agriculture.

Lecture 2: Recent Trends, Economic Forces, & Policies Affecting Small Farm Viability; Strategies & Movements to Support Small Farms

A. Recent Trends in Small Farm Economic Viability

1. Farmland conversion and demographic trends (for a history of agriculture in the US, and how it impacts small farms, please Unit 3.1, The Development of U.S. Agriculture in *Teaching Organic Farming & Gardening: Resources for Instructors*)

   Each year, the USDA National Agriculture Statistics Service (NASS) provides estimates (based on the previous Census of Agriculture data) about the number of farms, farmland acreage, and a host of other information and statistics about the nation's agricultural landscape, population, and economy

   a) Farmland conversion, small farms, and industry consolidation
      i. Farmland conversion has impacts on both farming communities and the environment; as open space and natural habitat are converted to built uses, land becomes more expensive, making it more difficult for existing and beginning farmers to access land
      ii. Land in farms continues to decrease: Between 2011 and 2012, the USDA estimated that 3 million acres of farmland were converted to non-farm uses (e.g., urban development). Between 2002 and 2007, land in farms declined by 1.7 percent from 922,095,840 to 938,279,056 acres.
      iii. Small farms (i.e., those grossing under $250,000) represent 91 percent of farms in the United States (Hoppe et al., 2010)
      iv. The number of small farms decreased by 1 percent between 2007 and 2012 (US Department of Agriculture, 2014a)
      v. The consolidation of farms and agricultural land has been a trend for some time in the U.S. See the resource section under "Farmland Conversion, Small Farms, and Industry Consolidation" for graphics depicting this consolidation, data sources regarding land consolidation, and other references on the topic.
   b) Farmer income
      i. In general, the majority of farm households obtained most of their household income off-farm. In 2011, off-farm income comprised 83% of households income (US Department of Agriculture ERS, 2013).
      ii. In 2011, average farm income for new farmers was $1,902 (and $18,119 for established farmers; U.S. Department of Agriculture ERS, 2013)
      iii. Small family farms, whose primary source of income is off-farm employment, represent 60 percent of all small farmers. Gross cash farm income (GCFI) for these farmers is less than $10,000 per year (Hoppe et al., 2010).
      iv. Among small family farmers,* those who engage in direct marketing (e.g., farmers markets, community supported agriculture) may be able to bring in high value for their products, relative to products sold through conventional market chains
      v. Intermediate/small commercial farms,* whose primary source of income is derived from gross cash farm income (GCFI), are often referred to as "agriculture of the middle"

   *See Unit 3.4, Sustainable Agriculture and Sustainable Food Systems in *Teaching Organic Farming & Gardening: Resources for Instructors,* for additional information; available online at *casfs.ucsc.edu/about/publications*

vi. Intermediate/small commercial farmers often fall between the scale of the small non-commercial farms that engage in direct marketing (as above) and larger scale farms that engage in conventional wholesale distribution and marketing chains. Due to this, and the fact that these farms (by classification) do not rely primarily on off-farm income, they may be at greatest risk in terms of economic viability.

vii. Initiatives to support "agriculture of the middle" are growing throughout the United States, and include university-based and non-profit groups

viii. For more information on small farm incomes and "ag of the middle" see the Resources section under "Farmer Income"

B. Economic Forces and Policies Impacting Small Farm Economic Viability

Broad economic forces impacting the U.S. agricultural sector have specific effects on the economic viability of small farms and "socially disadvantaged" farmers (see Glossary). Likewise, policies governing U.S. agriculture and immigration may favor large over small farms.

1. Economic Forces (see Glossary for definition of terms)
   a) Market conditions create an economic environment in which farmers must constantly adapt by finding new market niches or increasing the scale of production to remain economically viable
   b) Non-valuation of non-economic goods: Traditional economic models either ignore costs and benefits such as environmental and social goods (e.g., clean water or local jobs for community members), or classify them as externalities. This gives the impression that small farms are always less economically efficient than larger farms, even as they bring the benefits listed above. The valuation of "ecosystems services" is a way of attempting to quantify the benefits provided by the environment. Some innovative farm programs attempt to compensate farmers for providing ecosystems services in addition to food.
   c) Consumers are accustomed to cheap food and may not recognize, or be willing to pay for qualitative differences in agricultural products, including both social and environmental externalized costs of production
   d) Larger, well-capitalized farms adopting high technology production practices, along with vertically integrated agricultural firms, are able to capture the consumer market. They have lower per-unit costs of production and marketing costs, as well as the ability to provide consumers with convenience and consistency at a price below what is economically feasible for small-scale producers.
   e) Small farms are less able to compete in conventional wholesale markets, due to constraints on liquid cash flow, as well as time constraints
   f) Many consumers struggle to meet their basic needs, so paying extra for qualitative differences in products, or simply to support the small farm sector, is not an option

      Note that some innovative new programs have allowed low-income consumers to use state-provided nutrition assistance funds at farmers markets and sometimes even for CSA boxes. In some areas city agencies and/or non-profit organizations match the public assistance dollars so people can buy two dollars worth of farmers market produce with one dollar of benefits.
2. Policies and government agency practices
   a) **The Farm Bill** is the federal legislation that sets priorities and funding for agriculture and related environmental and emergency food programs in the United States. The Farm Bill is revised and then enacted by Congress every five to seven years.
      i. The Farm Bill legislates and allocates funding in the following areas (called "titles"): Commodity, conservation, trade, nutrition, agricultural credit, rural development, agricultural research, forestry, energy, horticulture and specialty crops, crop insurance, livestock, and miscellaneous (a catch-all which includes programs for specific groups mentioned above such as socially disadvantaged farmers)

ii. Under the "nutrition" title, the Farm Bill also authorizes funding for the Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps), Special Supplemental Nutrition Program for Women, Infants, and Children, (WIC), Farmers Market Nutrition Programs (FNMP), other emergency food and community food security granting programs. These national programs, along with foreign nutrition aid, traditionally receive the bulk of the budgetary allocations in the Farm Bill.

iii. To learn more about the Farm Bill, see the Resources section under "Farm Bill." Note that numerous advocacy organizations provide information on the Farm Bill. Educators are advised to review these carefully, as they may portray a specific stance on this highly controversial piece of legislation.

b) USDA grants and consumer assistance programs

i. Depending on available funding (which is voted by legislative bodies every five to seven years for the Farm Bill, as well as annually for select programs), **competitive grant programs** make funds available for research, education, and new enterprise development for specific groups of farmers.

ii. Again contingent on federal and/or state funding, programs such as **Farmers' Market Nutrition Programs** (including those for seniors and Women, Infants, and Children – WIC) provide small amounts of additional food assistance to recipients to be able to purchase food at farmers' markets

iii. Recipients of the federal **Supplemental Nutrition Assistance Program (SNAP)** may also use these funds at participating farmers' markets and CSAs, and increasing number of these are also able to accept these funds through **Electronic Benefits Transfer (EBT)** cards

c) USDA discrimination against specific groups of farmers

i. Since the late 1990s there have been numerous class action lawsuits filed against the USDA on behalf of African American and Black farmers, Native American, female, and Latino farmers. These suits have claimed that USDA agencies (particularly the Farm Service Agency) discriminated against specific groups of farmers based on their race or gender in granting agricultural loans and access to related agency programs:

ii. Pigford lawsuit

- In 1997 a class action lawsuit (Pigford v. Glickman) was filed on behalf of African American farmers claiming that the United States Department of Agriculture (particularly the Farm Service Agency) had discriminated against African American farmers in its granting of agricultural loans. (The allegations pertained to the period between 1981 and 1996, though advocacy organizations also claim that USDA agencies have a history of race-based discrimination.)
- The case was settled in 1999, but due to the process through which individual claimants (i.e., farmers who met the criteria for payment) were to file claims, a large number of farmers did not meet the filing deadlines set in 1999 and 2000 and thus did not receive payment
- Provisions were made in the 2008 Farm Bill for eligible claimants who did not meet the 1999/2000 deadline to proceed with the claims process. This is known as Pigford II.

iii. Several other lawsuits were filed on behalf of Native American, Hispanic, and women farmers. Some were settled in favor of the claimants (Keepseagle) and some were not (Love lawsuit). However, they both provided a process through which individual farmers could submit claims. For more information on these and other lawsuits see the resources section under "USDA Discrimination Lawsuits".

d) Government and non-government initiatives responding to discrimination

The cases cited above notwithstanding, a number of government agencies and non-profit organizations provide technical assistance, outreach, education, and/or advocacy for specific groups of socially disadvantaged farmers in the United States. See the Resources section for a list of these organizations.

e) Immigration and Farm Labor policy

i. Immigration policy significantly impacts the agricultural sector because of the large percentage of farmworkers who are foreign-born

- A recent report from the USDA Economic Research Service (based on data from the National Agricultural Workers Survey) found that over 40 percent of all hired farm workers were foreign-born, with 37.3 percent originating from Mexico. Of Mexican immigrant hired farm workers, 90 percent were non-citizens. (Kandel 2008). For more information about farmworker issues, please see the Resources section.

ii. Currently, agricultural employers are able to bring in temporary "non immigrant foreign workers" under H-2A visas, although the program remains controversial and changes are being debated in Congress as of this writing

- H-2A visas currently allow employers to hire temporary foreign-born workers for up to one year with possible extensions for up to three years. To hire these workers, employers must demonstrate that they lack a sufficient and timely supply of locally available qualified U.S. workers, and that using foreign workers would not adversely affect wages and working conditions of comparably employed U.S. workers (Kandel, 2008).

iii. Changes in immigration policy could impact both small and large farms by restricting the number of immigrating workers available for hire; requiring increased wages paid to farmworkers; and/or increasing the number of farmworkers who immigrate to the U.S. illegally

iv. Many small-scale farmers, similar to farms of larger scale, often rely on temporary or seasonal farm workers as a way to remain economically viable

v. State level labor policy also has impacts on the small-scale farms. For instance, apprenticeships have often been a method for small-scale growers to have seasonal labor and help train the next generation of farmers. However, in some states, such as California, there are strict laws defining what constitutes an apprentice. Apprenticeship arrangements in place on some small-scale farms may not meet the law's requirements (see Unit 8.0, Farm Employees and Alternative Models for Interns and Apprentices for more information).

vi. A number of small farm advocacy groups have recently created social justice certification standards for farms following specifically defined fair labor, pricing, and business practices. For more information see the Agricultural Justice Project website (in Resource section).

vii. For more information on the impacts of immigration policy on the agricultural sector see the Resources section under "Immigration and Farm Labor Policy"

C. Strategies and Movements to Support Small Farms

Given the structure of the U.S. agricultural economy, and the challenges posed by this system to small, family farms, groups ranging from Cooperative Extension programs to grassroots coalitions have developed strategies to help support small farms. These include a diversity of marketing strategies, policy advocacy, land preservation, education, and social movement organizing.

1. Marketing and income diversification strategies

a) Niche markets

i. One way that small farmers have been able to realize economic returns in the face of increasing control of the market by larger farms and firms is by providing products that larger farms cannot or do not provide. Examples are specialty products (e.g., value-added, early-season crops), services (such as U-pick operations), or certain production methods (e.g., certified organic, free-range animal products).

ii. Some niche markets may eventually cease to be viable economic options for small-scale producers, such as when increased demand for specialty products reaches an economic threshold, making it profitable for larger-scale producers (e.g., the development and concentration of the wholesale organic food industry). Niche markets become subject to the same economic trends that lead to the control of the market by large firms and a decline in the economic viability of small-scale producers.

b) Direct marketing

Direct marketing is one way for small farmers to capture a larger share of the price for their products, as it reduces the number of sellers in the supply chain. Popular direct marketing strategies covered in this manual include Community Supported Agriculture (Unit 3.0), farmers' markets and roadside stands (Unit 4.1.), and direct sales to restaurants (Unit 4.2). Unit 4.3 highlights other types of direct and intermediate marketing options, such as selling to institutions and food hubs, faith-based options, eCommerce strategies, and agritourism.

c) Diversification of on-farm enterprises/activities

i. Rather than relying on one or a few crops or types of livestock to provide sole income, small farms may choose to diversify their production activities

- **Enterprise diversification** provides income at more points throughout the year, rather than relying on one harvest (or one type of livestock) to provide all income
- **Product diversification** reduces whole farm risk. Diverse cropping strategies reduce likelihood of disease or pest outbreaks and help to assure some marketable product. This is especially important when crop insurance is not available.
- **Value-added products,** including processing, repackaging, or otherwise creating "special" or "unique" products are a way to add value that has the potential to increase profits. Examples are jam/preserves, dried fruits, cheeses, floral wreaths, etc. (But be aware that the tax law is very different for most of these activities and you may need to include substantial additional bookkeeping and accounting fees to your budget in order to become a "food manufacturer" as well as a farmer.)
- **Services** may also provide diversified incomes on the farm. Examples are agricultural tourism and U-pick operations (see Unit 4.3).

d) Diversification of income

i. Most small and beginning farms rely on off-farm income to complement farm/product income and in some cases to provide benefits such as health insurance. Increasingly even families operating larger farms rely on some off-farm income.

2. Policy strategies

As noted above, the federal Farm Bill governs agricultural policy nation-wide, and state departments of agriculture have additional jurisdiction over farms in each state. To this end, farm policy advocacy groups attempt to influence legislative decisions impacting the agricultural sector.

a) **Farm association advocacy**. Large-scale agricultural associations (e.g., the American Farm Bureau Federation, the National Farmers Union, and various crop-specific organizations) exert significant influence with regard to agricultural policymaking. There are also farmer coalitions that advocate for policies that are more favorable for smaller-scale and/or "minority" owned farms. These include the National Sustainable Agriculture Coalition, the National Family Farm Coalition, and the Federation of Southern Cooperatives, and the Rural Coalition.

b) **Consumer/non-farmer advocacy**. Coupled with social movements (see below), consumer/non-farmer advocacy groups have paid increasing attention to policies affecting agriculture and the food system in recent years. Examples include Farm Bill advocacy (often referred to by advocacy groups as the "farm and food bill") and initiatives to label genetically engineered/genetically-modified foods in numerous states.

3. Land preservation and transition strategies

a) **Land trusts and agricultural easements** help preserve land from development in rural and urban spaces, in some cases keeping land accessible and more affordable for small-scale farmers

b) **Farm transition and "farmlink" organizations** offer programs to help beginning or immigrant farmers gain access to farmland and mentorship. Programs exist throughout the United States and internationally. An index can be found at *http://www.farmtransition.org/*.

4. Education strategies

a) **Consumer education** efforts have grown since the 1970s. These have emphasized the importance of non-farmer support for small-scale and family farmers in maintaining an economically viable small farm economy. Examples include Buy Fresh, Buy Local campaigns and marketing locally grown foods at retail outlets and in restaurants.

b) **Agricultural education programs** have been created to help small-scale farmers hone economic skills needed to operate financially viable operations in rural and urban areas. Some of these programs are based in universities or are part of Cooperative Extension, while others are run by non-profit organizations. Examples include the UC Small Farm Program; Cornell University's Small Farms Program; CASFS Farm Apprenticeship in Ecological Horticulture at UC Santa Cruz; Farm School NYC; and Growing Power in Milwaukee and Chicago.

c) **Immigrant farm education and assistance programs** have been created specifically to help new immigrants (many of whom have agricultural backgrounds) establish commercial farming operations in the U.S. context. Examples include Agriculture and Land-Based Training Association (ALBA), the New Farmer Development Project, and the National Immigrant Farming Initiative.

5. Agriculture and Food System Social Movements

Social and political movements focused on agricultural and food systems have coalesced since the late 20th Century. Many of these attend to issues impacting small farm economic viability.**

a) The **mainstream alternative agriculture movement** grew in the 1960s and 1970s out of concern for the environment

i. During this time, some urban residents moved out of the city and began farming in the "back to the land" movement

ii. At points, the alternative agriculture movement intersected with farm labor movement (especially that led by Cesar Chavez, Dolores Huerta, and United Farm Workers)

iii. Since the 1980s, the alternative agriculture movement (and outgrowths, including the organic, sustainable agriculture, and local foods movements) has tended to focus more on environmental aspects and support for small farmers (e.g., farm owners), and less on social and labor issues

b) New food movements began to arise in the 1990s, focusing on a number of broad issues including community food security, food justice/food sovereignty, and renewed interest (among non-farmers) in farmworker rights

c) There is an increasing tendency for food movement groups to collaborate on food system reform, rather than focusing on singular issues or constituencies

**See Unit 3.4, Sustainable Agriculture and Sustainable Food Systems in *Teaching Organic Farming & Gardening: Resources for Instructors,* for additional information; available online at *casfs.ucsc.edu/about/publications*

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ADDITIONAL RESOURCES

FARMLAND CONVERSION, SMALL FARMS, AND INDUSTRY CONSOLIDATION

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These two lectures explain the process of consolidation on agriculture in the U.S. Available online at casfs.ucsc.edu/about/publications.

The California Department of Conservation

conservation.ca.gov/dlrp/FMMP/Pages/index.aspx.

Maintains data on farmland conversion in California. The most recent information (from 2010 as of this writing).

Consolidation Info Graphics – by Phil Howard

www.msu.edu/~howardp/infographics.html

USDA National Agricultural Statistics Service (NASS)

www.nass.usda.gov

The NASS tracks the acreage used for agriculture each year. These data are searchable by specific land uses (e.g., cropland, pasture, woodland); as well as certain production practices (e.g., organic; irrigated). This information is available at quickstats.nass.usda.gov. The NASS website also includes a geospatial database, CropScape, which offers advanced interactive visualization and geospatial queries detailing land use, including specific crops. This information is available at: nassgeodata.gmu.edu/CropScape/

The USDA Natural Resources Conservation Service

www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/nri/

Maintain records of current and past data on national land use trends.

FARMER INCOME

Agriculture of the Middle

www.agofthemiddle.org

Cornell Cooperative Extension Small Farms Program

smallfarms.cornell.edu

UC Small Farm Program

sfp.ucdavis.edu

FARM BILL

Farm Bill Primer

farmbillprimer.org/

National Sustainable Agriculture Coalition

sustainableagriculture.net

United States Department of Agriculture

www.usda.gov/farmbill

USDA Economic Research Service

www.ers.usda.gov/farm-bill-resources.aspx#.UplJvI0hhpc

USDA DISCRIMINATION LAWSUITS

For more information on the Pigford case see:

The Federation of Southern Cooperatives website

www.federationsoutherncoop.com/

The USDA summary of this case

www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_015583.pdf

For more information on the Keepseagle case (lawsuit on behalf of Native American farmers) see:

The USDA summary of this case

www.usda.gov/wps/portal/usda/usdahome?contentid=2011/07/0321.xml

For more information on the women and Hispanic farmers cases see:

Justice for Hispanic Farmers and Ranchers

hispanicfarmerjustice.com/

National Agriculture Law Center

nationalaglawcenter.org/center-outreach/hwfrcp/

GOVERNMENT AND NON-GOVERNMENT INITIATIVES RESPONDING TO DISCRIMINATION

Black Farmers and Agriculturalists Association

www.bfaa-us.org/

Federation of Southern Cooperatives

www.federationsoutherncoop.com/

Rural Coalition

www.ruralco.org/

United Farm Workers

www.ufw.org/

USDA Beginning Farmer & Rancher Program

www.outreach.usda.gov/smallbeginning/

USDA Council for Native American Farming and Ranching

www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=otr-council-native-american-farming-ranching.html

USDA Farm Service Agency Women Outreach Program

www.fsa.usda.gov/FSA/webapp?area=home&subject=oued&topic=ops-wn

USDA Socially Disadvantaged Farmers and Ranchers Program

www.outreach.usda.gov/sdfr/

Women's Food and Agriculture Network

wfan.org/

IMMIGRATION AND FARM LABOR POLICY

Agricultural Justice Project

agriculturaljusticeproject.org

Farmworker issues – see Unit 3.2, Lecture 1: Social Issues in US Agriculture—Labor in *Teaching Organic Farming and Gardening, Resources for Instructors,* available online at *casfs.ucsc.edu/about/publications.*

Zahniser, Steven, Thomas Hertz, Maureen T. Rimmer, and Peter B. Dixon. 2012. *The Potential Impact of Changes in Immigration Policy on U.S. Agriculture and the Market for Hired Farm Labor: A Simulation Analysis.* Economic Research Report No. (ERR-135). *www.ers.usda.gov/publications/err-economic-research-report/err135.aspx#.UjzG04YQZSA*

GENERAL BOOKS AND REPORTS

Danbom, D. B. 1979. *The Resisted Revolution: Urban American and the Industrialization of Agriculture, 1900-1930.* Ames, IA: The Iowa State University Press.

This book analyzes the development of U.S. agriculture in the early 20th century. It particularly focuses on government-led initiatives to expand industrial practices to rural America in order to make the agricultural sector of the U.S. economy more efficient and economically productive. Danbom examines the reaction to these efforts among small-scale, family farmers, and finds that initial resistance to the industrialization of agriculture in the United States was eventually overcome, leading to increased mechanization, use of chemical inputs, increasing size of farms, and subsequent effects for small-scale, family farmers.

Friedland, William. H., Amy Barton, and Rober J. Thomas. 1981. *Manufacturing Green Gold: Capital, Labor, and Technology in the Lettuce Industry.* Cambridge: Cambridge University Press.

This monograph provides an analysis of mechanized lettuce harvesting as it came to the fore in the 1970s, examining the conditions necessary for it to take place and its potential impacts on the farmers, farmworkers, and the economy. Written at a transformative period in U.S. agriculture, the work provides a critical analysis of the impacts of increased industrialization, and offers theoretical insights that can be applied in both rural/agrarian as well as industrial sociology.

Goldschmidt, Walter. 1947. *As You Sow, 1st Edition.* New York: Harcourt, Brace and Co.

This classic study of the social consequences of farming structures finds that large-scale industrial agriculture is associated with negative community outcomes, while smaller-scale agriculture continues to feed into more robust and prosperous communities. It presents three case studies of agricultural towns in Central California: one host to industrial scale, non-family farming; the second, a rural community in which agriculture is undergoing industrialization; and the third, a rural community of comparable makeup with small- to moderate sized farms. The Goldschmidt study was the first to examine these relationships as U.S. agriculture underwent industrialization following World War II.

Guthman, Julie. 2014. *Agrarian Dreams: The Paradox of Organic Farming in California, 2nd Edition.* Berkeley: University of California Press.

This book traces the evolution of organic farming in California, explaining that, despite its image, small, family farming was never the dominant form of agriculture in the state: Agriculture in California has, at its roots, large-scale, non-farmer owned operations. Guthman argues that the popular image of organic agriculture as an independently-owned alternative to corporate farming is a misconception, and that, as an industry, organic agriculture follows the same model as other large scale farming operations. The new version builds on the 2004 edition by examining the federal organic program and includes a discussion of how the certification arena has continued to grow and change since its implementation, as well as an up-to-date guide to the structure of the organic farming sector.

Horne, Savi and Lorette Picciano No Date. *A Seat at the Table: Diversity and the 2008 Farm Bill: A Report on the Farm and Food Policy Diversity*

Initiative. Washington, D.C.: Farm & Food Policy Diversity Initiative.

Written for the Obama-Biden transition project, this report addresses the USDA's history of discrimination against socially disadvantaged farmers and farmers of color, and outlines the ways in which the 2008 Farm Bill addresses these inequities. It argues that the class-action lawsuits brought against the USDA on behalf of women farmers and farmers of color did not produce structural changes in the USDA, but that the 2008 Farm Bill addresses these issues through land preservation and protection programs, credit and grants, and outreach focusing on socially disadvantages farmers and ranchers.

Tourte, Laura, and B. A. Faber. 2011. *Small Farm Handbook, 2nd Edition* (p. 188). Oakland, CA: University of California (System), Division of Agriculture and Natural Resources.

This book is designed for both farmers and agricultural professionals, and reviews topics such as the essentials for successful farming, enterprise selection, farm and financial management, marketing and product sales, labor management, post harvest handling, etc.

U.S. Department of Agriculture. 1998. *A Time to Act: A Report of the USDA National Commission on Small Farms*. (National Commission on Small Farms.). USDA.

Formed to examine the status of small farms in the United States and determine a course of action for the USDA, the National Commission on Small Farms produced this report, which calls for immediate action to preserve small-scale, family farming in the face increased concentration in farm ownership, and consequent loss of small farms. It proposes eight policy goals for the protection and promotion of small farms, analyzes the public value of small farming, and lays out guiding principles for federal farm policy.

Walker, Richard 2004. *The Conquest of Bread: 150 Years of Agribusiness in California*. New York: The New Press.

This book provides a systematic overview of agribusiness in California, the dominant state in both production and revenue for farming and food processing. The book examines labor, growers, land, technology, and capital as they relate to the agriculture industry. Walker includes not only economic forces, but also the sociological and political forces at work in the growth and development of industrial agriculture in his analysis.

Wise, Timothy A. 2011. *Still Waiting for the Farm Boom: Family Farmers Worse Off Despite High Prices*. Global Development and Environment Institute, Tufts University. Policy Brief 11-01, March 2011.

WEB-BASED RESOURCES

GOVERNMENT RESOURCES

USDA Census of Agriculture

www.agcensus.usda.gov/

USDA Economic Research Service (ERS)

www.ers.usda.gov/

USDA Family and Small Farms (with links to state-specific programs)

http://www.nifa.usda.gov/familysmallfarms.cfm

USDA Farm Service Agency (with information about Beginning Farmers and Ranchers Loans; Farm Service Agency Minority and Women Farmers Loans)

www.fsa.usda.gov

USDA Know Your Farmer, Know Your Food

www.usda.gov/wps/portal/usda/usdahome?navid=KYF_RESOURCES/

USDA National Agricultural Statistics Service (NASS)

www.nass.usda.gov/

USDA National Institute of Food and Agriculture (NIFA) Family and Small Farms (with links to small farm Extension programs, nationally)

www.nifa.usda.gov/familysmallfarms.cfm

USDA Socially Disadvantaged Farmer and Rancher Program

www.outreach.usda.gov/sdfr/

SMALL-SCALE & SUSTAINABLE FARMING RESOURCES

Cornell Small Farms Program (NY State)

smallfarms.cornell.edu

Ecological Farming Association
www.eco-farm.org

Leopold Center for Sustainable Agriculture
www.leopold.iastate.edu/

University of California Small Farm Program
www.sfp.ucdavis.edu

University of California Agricultural Sustainability Institute
www.asi.ucdavis.edu

University of California, Davis Center for Regional Change
regionalchange.ucdavis.edu

POLICY RESOURCES

California Rural Legal Assistance, Inc.
www.crla.org

Farm Bill Primer
farmbillprimer.org/

U.S. Citizen and Immigration Services
www.uscis.gov

U.S. House Committee on Agriculture
agriculture.house.gov/farmbill

U.S. Senate Committee on Agriculture, Nutrition, and Forestry
www.ag.senate.gov/issues/farm-bill

ACKNOWLEDGMENTS:

Pauline Zaldonis and Katherine Nehring, M.S. candidates at The New School, New York, NY provided valuable assistance compiling resources for this unit.

Glossary

A. Concepts and terminology

1. Agricultural Economics Terms

It is useful to have a basic understanding of agricultural economics concepts in order to consider small farm economic viability:

- **Supply:** *The goods (e.g., agricultural products) and services (e.g., agricultural labor) available in an agricultural system or economy. The abundance or scarcity of these influences their price or cost. When supplies are abundant, all other things equal, prices are low; when supplies are relatively scarce, all other things equal, prices are higher.*
- **Demand:** *The market, or consumer, demand for goods and services. If demand is high for a good or service, prices will be relatively low, and vice versa, all other things equal.*
- **Price equilibrium:** *The point where supply meets demand.*
- **Cost of production:** *Includes all inputs needed for production. This includes land rent, seed, animal feed, animals, labor (either hired or owner/family labor), equipment, water, fuel, marketing costs, etc.*
- **Revenue:** *The money taken in at the point of sale.*
- **Farm-gate price:** *The price that the farmer receives for a product at the farm. Does not include costs of transportation to market, thus farm gate prices will be lower than retail if products are sold off-farm.*
- **Marginal costs and returns:** *The costs and returns (revenues) per unit of production.*
- **Fixed costs:** *The costs that are fixed, regardless of the quantity produced. Examples: Barn, tractor, land.*
- **Profit:** *Essentially the difference between price received and cost of production. Fixed costs (costs that do not increase with increased scale, such as the purchase of a tractor) and variable costs (that depend on scale, such as amount of seed needed) influence the cost of production and thus the profit.*
- **Economies of scale:** *In economics, "economy" refers to "efficiency." Larger farms produce more "economically" as production cost per unit is lower as amount produced increases (marginal costs). This does not take externalities (defined below) into account.*
  - **Example:** It may cost a large grower $0.02 per apple produced, while the small grower has a cost of $0.04 per apple. The large firm can sell 100 apples for $0.03 each and make one cent per apple, totaling $1.00, while the small grower would need to sell the apple for $0.05 per apple to make one cent per apple and earn $1.00.
  - Small farms that produce efficiently may be equally efficient (or more efficient, if externalities are taken into account) as large farms in some circumstances.
  - Other studies have more closely examined how economies of scale have been evaluated and purport that economies of scale measurements may not account for other factors that differentiate small farms from large ones. Small farms may have poorer quality land, and are likely to have off-farm employment, which takes away from management time and may lead to less efficient labor management (Peterson, 1997).
- **Externalities/Externalized Costs of Production/"hidden costs":** *Impacts of an economic activity on individuals or entities when they are not included in economic analysis (e.g., environmental pollution from the use of pesticides and fertilizers in agriculture; substandard working conditions and wages of agricultural labor).*
- **Commodity Crop:** *The term refers to crops such as wheat, corn, soy that are produced in large quantities for trade and sale in the commercial marketplace. Most of what are considered commodity crops are subject to subsidies by the USDA, under terms spelled out in the Farm Bill.*

- **Specialty Crop:** *A crop that is not classified as a commodity crop. In the Farm Bill and related programs, this category includes most fresh fruits and vegetables, though in marketing, specialty crops are those for which there is a niche (or small and specific) market. Examples include bitter melon, heirloom tomatoes, pithahaya, etc., as well as early- or late-season products such as blueberries produced in hoop houses and harvested up to a month before availability in the mainstream market.*
- **Vertical Integration:** *The merging of different stages of production into a single business. Agricultural firms that grow, process, and market their products are considered vertically integrated operations.*
- **Value-added:** *A product that has gone through processing which increases its market value to customers. Examples include jams, jellies, and sauces made from farm produce, cheese made from milk produced on the farm or ranch, dried herbs, etc.*

2. Government Definitions

Governmental definitions related to agriculture and farms have important and far-reaching political implications for agricultural producers. Government definitions qualify farmers for participation incentives in the Farm Bill, as well as assistance from the numerous USDA agencies that provide technical support to farmers (such as Risk Management Agency's agricultural insurance programs, the Farm Service Agency's credit and loans, and other assistance and granting programs.)

- **Farm operators and workers.** The USDA uses the following classifications of people who own and/or work on farms:
  - **Farm owner.** *The person or entity that owns the land upon which agricultural production occurs.*
  - **Farm operator.** *The person who runs the operation of a farm and who makes day-to-day management decisions. This can be an owner, hired manager, a tenant, or a partner.*
  - **Tenant farmer.** *A person who produces agricultural products on another's land, typically in exchange for rent. A tenant farmer may be a farm operator by the USDA definition.*
  - **Sharecropper.** *A farmer who produces agricultural products on another's land. Generally, a sharecropper retains part of the revenue from the products produced, while the remainder is retained by the landowner. A sharecropper may be a farm operator, by the USDA definition.*
  - **Farmworker.** *Generally, a person working on a farm. However, in the United States, farmworker has become all-but-synonymous with low-paid, immigrant agricultural worker. In the 2009 National Agricultural Workers Survey, 72% of all farmworkers were foreign-born, and 68% of all farmworkers were born in Mexico.*
- **Specific groups.** The USDA also identifies specific groups of farmers (who may be farm owners or operators) that may be eligible for specific government agricultural assistance programs:
  - *Socially disadvantaged farmer or rancher: A farmer or rancher who is a member of a "Socially Disadvantaged Group, defined as one whose members have been subjected to racial or ethnic prejudice because of their identity as members of a group without regard to their individual qualities. These groups include African Americans, American Indians or Alaskan natives, Hispanics, and Asians or Pacific Islanders.*
  - *Limited resource farmer: A person with direct or indirect gross farm sales not more than $172,800 (for FY2013) in each of the previous two years.*

    A person with a total household income at or below the national poverty level for a family of four or less than 50 percent of county median household income in each of the previous two years.
  - *Beginning farmer:* The USDA considers a Beginning Farmer or Rancher means an individual who:

    Has not operated a farm or ranch, or who has operated a farm or ranch for not more than 10 consecutive years. This requirement applies to all members of the farm entity.

    Will materially and substantially participate in the operation of the farm or ranch.

- **Organic, as defined by USDA:** *The national-level standards for organic production went into effect in 2002. (Prior to this, states had their own certification standards.) The USDA Agricultural Marketing Service's National Organic Program administers certification and labeling of products in three general categories: crops, livestock products, and multi-ingredient (e.g., processed) foods. Generally, these standards pertain to use of synthetic fertilizers, pesticides, herbicides, and animal hormones; animal welfare and animal feed; and genetic engineering (aka genetically modified organisms, or GMOs). The comprehensive set of regulatory standards are found on the NOP website.*

UNIT 2.0

Overview of Produce Marketing

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Introduction: Overview of Produce Marketing

UNIT OVERVIEW

The choice of a produce marketing channel is one of the most critical decisions produce farmers must make. This unit introduces students to the history of produce marketing and provides information on the most common marketing options.

Lecture 1 provides an historical overview and discusses the changes growers made to their marketing practices after the advent of supermarkets and 20th century technology. It also introduces Agricultural Marketing Orders and their unique role in marketing produce. Three main conventional market channel options (wholesale buyers, grower/shipper/packers, and brokers) are also reviewed, including their advantages and disadvantages for small-scale growers.

Lecture 2 discusses alternative marketing options (Direct to Retail & Restaurants, Farmers' Markets, and Community Supported Agriculture); these topics will be covered in detail in later units. The lecture concludes with questions to consider in choosing a marketing strategy.

MODES OF INSTRUCTION

> LECTURES (2 LECTURES, 1–1.5 HOURS EACH)

LEARNING OBJECTIVES

CONCEPTS

- The recent history of produce marketing
- Agricultural marketing orders and their role in produce marketing.
- How produce distribution operates through the primary channels (wholesale buyers, grower/shipper/packers, and brokers)
- The advantages and disadvantages to the farmer of deals involving wholesale buyers, grower/shipper/packers, and brokers
- Three of the most common alternative marketing choices for farmers, and the advantages and disadvantages to the farmer of each choice
- Key decision making points and tips for assessing which market channel is right for your farming operation

Lecture 1: Overview of Produce Marketing & Mainstream Market Channels

A. Produce marketing is all the steps between when the crop leaves the edge of the field and when the end consumer purchases it

1. This includes your postharvest handling, building relationships with buyers, paperwork and accounting, telling the story of the farm and the farmer, branding and packaging, and promotion and advertising to the end consumer.

B. Brief History of Modern Produce Marketing in the U.S. and Canada

1. Before refrigeration (1920s) –
   a) Produce farmers were scattered all over the U.S. and Canada and did most of their own marketing
   b) Local sales – Sales were direct to retail stores, at the farm gate, or at street markets
   c) Most items were unavailable to consumers during off-season
   d) Farm cooperatives, for either purchasing inputs or collectively marketing products, became increasingly important and significant. Federal and state legislation was passed to exempt farm co-ops from anti-trust laws and otherwise assist the efforts of farm organizations including the Grange, the National Farmers Union, and the Farm Bureau to establish farmer co-ops as a dominant marketing model.
   e) Farmers not selling through co-ops did everything including: farming, packing produce, selling, delivering, and collecting money. Few were (and are today) equally proficient at all these tasks.
   f) Regional crop failures resulted in communities having nothing for people to buy in local markets. This provided an opportunity for long distance transport of produce to supply local markets.
2. Following the development of refrigeration, cheap transportation, synthetic pest control agents, and supermarkets (1940s) –
   a) Most farmers stopped doing the marketing themselves and instead specialized in growing crops. They hired professional marketing help, or began contract growing for specific wholesale buyers.
   b) Farmers began to increase their scale of production to take advantage of the economies of scale, producing fewer crops per farm unit. Cheap and effective pesticides and fertilizers enabled farmers to grow large monocultures with fewer crop rotations.
   c) Scale of production grew exponentially and production became concentrated in a few specific regions (e.g., apples in Central Washington, lettuce and cole crops in the Salinas Valley of California), each with its own infrastructure for production, packing, processing, and distribution
   d) Specialization – Businesses developed with specialized skills and/or equipment to take over harvesting, cooling, sales and delivery, etc. of fresh produce
3. Development of Agricultural Marketing Agreements and Orders (1940s–present)
   a) Federal Marketing agreements and orders were authorized by the Agricultural Marketing Agreement Act of 1937 and administered through the Agricultural Marketing Service of the USDA. Many states have marketing orders and agreements administered through the state's department of agriculture.

b) Marketing orders are initiated by industry and financed through mandatory assessments on all shipment of the covered commodity and can include provisions that 1) regulate the volume of product marketed; 2) establish mandatory minimum quality, container, and pack standards; 3) finance generic advertising and promotion programs; and 4) sponsor production and marketing research. Marketing agreements are similar to marketing orders but participation is not mandatory.

c) One aspect of marketing programs, often referred to as a "check-off" program, allows producers and/or handlers to pool their resources together to fund research, promotion, and advertising campaigns. Advertising campaigns such as "Got Milk?" and "Beef, it's what's for dinner," were funded by these provisions.

d) Historically the organic industry has not been able to fully benefit from such programs because agricultural marketing programs engage in generic marketing and promotion aimed at increasing consumption of a generic commodity. The price premium associated with certified organic products comes from the grower's ability to assert a unique product, something worth more than the generic commodity version of the same crop.

e) A provision in the 2002 Farm Bill was intended to exempt organic producers that "solely" produce "100%" organic products, from contributing towards their respective commodity specific promotion orders. The effects of this exemption were minimal because many farmers produce both organic and conventional products and the exemption only applied to federal marketing promotion programs.

f) The 2014 Farm Bill exempted all certified organic operations from the previous check-off programs, and opened the door for the creation of an organic check-off program (see: *www.organicaglaw.com/2014/02/2014-farm-bill-organic-checkoff-program-and-organic-crop-insurance/*)

4. Summary

a) Local production and sales are still the primary system in many parts of the world, but not in the U.S. and Canada

b) Cheap and efficient refrigeration and transportation, plus the rise of supermarket outlets, lowered profit margins for most U.S. farmers and forced many regional farmers and small produce retail stores out of business (see *Teaching Organic Farming and Gardening: Resources for Instructors*, Unit 3.1, The Development of U.S. Agriculture for other issues contributing to consolidation of the food system)

c) The growing consumer trend to "buy local," has led to an increase in origin of produce labeling in retail stores. However, local production still remains a very small portion of total produce sales.

C. Mainstream Marketing Options for Today's Farmers: Advantages and Disadvantages

1. Mainstream produce market overview

a) Mainstream market channels include: produce wholesalers, retail grocery stores, mass merchandizers, shipper/packers (or in some cases, grower/shipper/packers; see below), food service buyers, brokers, and export marketing channels

b) Grocery stores sell the majority (70%) of fruits and vegetables

c) Certified Organic produce is a growing segment within grocery stores; carrots lead with 17.1% of share of organic sales, followed by packaged salads, cooking greens, sprouts and lettuce. Among fruit, apples lead with 7.1% share of organic fruits sales, followed by berries and pears.

d) According to the 2011 Organic Production Survey, organic sales include 81% wholesale market sales, 13% direct-to-retail sales, and 6% consumer direct sales

e) While going through mainstream market channels is not frequently the best choice for new produce farmers, it is important to understand the full range of options available

2. Wholesale produce buyers
    a) A wholesale buyer buys and re-sells or distributes produce to retail grocers, restaurants, food service companies, and/or other wholesale markets
    b) Wholesale produce distributors take custody of a grower's produce once it is purchased. They sell produce from their warehouse and take responsibility for its care once it is received.
    c) Two goals of wholesale buyers are: to get product at the best price and quality and to get enough volume of the product to meet their customers' demand. Wholesale buyers resell product to other wholesalers, produce brokers, retail stores, restaurants, schools or other institutions.
    d) Growers sell/market their produce directly to wholesale buyers
    e) Advantages of working with wholesale buyers
        i. Can move large volumes of produce
        ii. Don't have to deal with end consumer directly
        iii. Transportation managed by wholesaler
    f) Disadvantages of working with wholesale buyers
        i. Hard to keep customers— if not enough volume or year-round product
        ii. Need good market price information (can be hard to get)
        iii. Need on-farm sales office for customer service
        iv. Must bill customers and collect money
        v. Have to have own label, standard cartons and packaging, harvest crew, delivery
        vi. Produce may travel long distances, requiring farmer to have own cooler or arrangement with a cooler. It is critical that field heat be removed before produce gets shipped to the wholesaler to ensure the maximimum shelf life of your produce.
        vii. In the next few years expect to see steadily increasing barriers to entry into the wholesale market in the form of required GAP and food safety certifications and bar-coding at the carton (if not item) level
3. Grower contracts with a grower/shipper/packer*
    a) The majority of fresh produce is marketed through grower/shipper/packers
    b) Originally started by individual successful growers going direct to wholesale. They built coolers, hired harvesters and salespeople, and offered their services to others. Over time, many grower/shipper/packers stopped farming and became service providers and farming partners.
    c) Today grower/shipper/packers may make contracts with independent farmers to provide services for everything needed after a given crop matures (e.g., harvest, pack, refrigerate, ship, sales, collections, etc.). The grower/shipper/packer usually provides 50–60% of the money for growing costs. The farmer takes responsibility for just growing the crop. However, the grower/shipper/packer decides what crops to grow, how much, and when it needs to be ready. The grower/shipper/packer negotiates charges for services with the grower. The charges include the actual cost to the shipper, plus extra for profit. These charges are deducted from the gross sales returns with the remainder divided between the grower/shipper/packer and the grower in proportion to their shares of the growing costs.
        i. However, there is also a trend for grower/shipper/packers to hire farmers as employees to farm on the land they own or lease

* Grower/shipper/packers can play slightly different roles and are often referred to by other names, such as grower-shippers or shipper-packers. In this lecture, we'll use the term grower/shipper/packer even though not all of these entities do the growing or packing

d) Grower/shipper/packers are primarily handlers, essentially acting as marketing agents for growers

e) In recent decades due to increased demand for year-round fresh produce, larger shippers have transitioned from seasonal to year-round operations, sourcing from shifting production regions, which follow climatically-determined seasonal patterns throughout the year. This means that many shippers market, and may invest in, production from several states and often other countries.

f) Grower/shipper/packers' headquarters are fixed in the dominant production regions, and most are actually grower-shippers, large forward-integrated growers handling and marketing production for themselves as well as other growers. In this way they assemble a greater supply volume and come closer to matching the scale of the fewer, larger buyers that exist today, allowing growers of all sizes to gain access to major domestic and export markets.

g) In meeting retail and foodservice demand for year-round availability, grower/shipper/packers import produce during the off-season. Grower/shipper/packers apply their considerable expertise and technology to standardize product quality, employ Good Agricultural Practices (GAPs) and traceability mechanisms, and now increasingly social and environmental responsibility best practices; all of which must be achieved across each of a shipper's growers and production locations, whether in the United States or abroad.

h) The majority of grower/shipper/packers are based in California and Florida except in the case of apples, pears, and cherries; for these crops, firms located predominantly in the state of Washington. Online queries of a fresh produce industry credit reporting service, The Blue Book, showed that in 2011 there were 3214 total shippers in the United States, including 1259 in California and 465 in Florida (an approximation due to potential classifications of firms in multiple categories).

i) In many areas it is difficult or functionally impossible for small farmers (especially those with limited English language proficiency, poor records, or poor credit) to obtain agricultural credit. Grower/shipper/packers can be a viable alternative since they may be accustomed to dealing with farmers. Unfortunately there are many examples of grower/shipper/packers extending far more credit than a farmer could reasonably repay, and there are areas of the country where farmers end up increasing their debt to the packer year after year.

j) Grower/shipper/packers are often more informed than banks about market fluctuations and have expert staff. By providing financing, grower/shipper/packers become farmer partners and make some growing decisions independent of the farmer, such as about which crop to grow, and how it will be grown. Farmers begin to lose significant control over their businesses.

k) Economic advantage over farmers: Grower/shipper/packers make money on their services, even in marginal market circumstances when the farmers that they contract with are losing money on the crop sales. Grower/shipper/packers also have a larger financial base that can withstand temporarily deflated market prices for longer than farmers.

l) Advantages of contractual arrangements between independent growers and grower/shipper/packers

   i. Growers reduce their personal financial risk, as the grower/shipper/packer has an investment in the crop

   ii. Growers are able to take advantage of a grower/shipper/packers brand name, facilities, and advice

   iii. Growers can concentrate on farming—cropping system may be very simple

m) Disadvantages of contractual arrangements between individual growers and grower/shipper/packers
    i. Growers are in competition with one another for the contracts with grower/shipper/packers. This competition depresses the produce market and growers become price-takers for the grower/shipper/packer services.
    ii. In response to the trend towards lower prices for wholesale produce, growers have increased their scale of production in an attempt to take advantage of the economies of scale. This, in turn, results in fewer farmers with more land, more start-up costs, more product, and thus more dependence on the grower/shipper/packer.
    iii. Although growers can concentrate on farming, they lose their independence and must farm in partnership with the grower/shipper/packer
    iv. Although just growing a few crops on large acres may be simple, it results in a loss of agroecosystem complexity and diversity, resulting in negative ecological consequences

4. Grower works with grower agents/produce brokers
    a) Grower agents are a subset of brokers that provide sales and coordination services for the farmer for a fee but usually have no investment in the farming. Grower agents try to get the best deal for the farmer and do not provide services for buyers.
    b) Non-grower agent are produce brokers who do not work for farmers, but put deals together between a farmer and a buyer. The broker finds product, finds a buyer, and puts the two together. Brokers can work for the buyer, or be an independent deal-maker, billing both buyer and farmer for putting the deal together.
    c) Brokers generally do not take custody of the product. They set up shipping from farms to their customers using trucks, planes, and at times boats.
    d) Brokers use their prior experience, skills, and connections to find potential buyers. Market knowledge of current market value and product availability determine what price to offer.
    e) Produce broker's income is made in two ways –
        i. Fixed price for selling each unit of product. This can result in little incentive for the broker to pursue a high price for the grower because the broker gets paid the same regardless of price.
        ii. Broker percentage/commission derived from the sales price, typically 4–10%. This can results in little incentive for a broker to sell when market price is low because the broker gets very little commission for each low-priced unit sold.
    f) Advantages of working with grower agents and produce brokers
        i. More independence than with a grower/shipper/packer
        ii. Freed up from the responsibility of sales and can concentrate on farming and harvesting
        iii. No splitting of profits with grower/shipper/packer
    g) Disadvantages of working with grower agents and produce brokers
        i. Farmer/grower needs to find his/her own financing
        ii. Farmer needs to provide delivery
        iii. Standard cartons and packaging required
        iv. High quality standards
        v. Grower agents expect a high degree of crop planning and predictable harvest
        vi. Low prices paid and high charges of brokers and grower agents can prove uneconomical for grower

Lecture 2: Introduction to Marketing Alternatives, & Choosing Your Marketing Strategy

A. Marketing Alternatives for Growers (see Unit 3.0, Community Supported Agriculture, and Unit 4.0, Other Direct and Intermediate Marketing Options, for information on implementing alternative marketing strategies)

1. The driving force behind alternative markets and marketing
   a) Some farmers are looking for higher profit margins and to sell at smaller volumes
   b) Consumers desire direct market relationships in order to –
      i. Have personal connection to farms and farmers
      ii. Provide direct financial support to farmers
      iii. Realize their perceptions of freshness, absence of pesticides, and farmworker safety
   c) Direct marketing alternatives are generally a more accessible market for new farmers
2. Examples of direct marketing
   a) Marketing directly to retail stores and restaurants (see Unit 4.2, Direct Marketing to Restaurants and Retail Outlets, for more information)
      i. Grocery retail stores may be large corporate chains like Safeway or Krogers, independent growers, or retail cooperative like Sacramento Natural Foods
      ii. Retail cooperatives are member-owned operations. They source directly from farmers, produce wholesalers, and distributors and may have their own central buying and warehousing facility.
      iii. Retail chains have introduced formal performance guidelines and food safety requirements for produce suppliers. The Food Safety Modernization Act, in the process of being implemented through the Food and Drug Administration, will set national standards for the growing and handling of produce entering wholesale or direct-to-retail markets. See more at Unit 7.0, Food Safety on the Farm.
      iv. Advantages
         - High prices
         - Less stringent standards than wholesaling—less difficult to get good market price information; less elaborate (or no) on-farm sales office because there are relatively few customers; less elaborate billing system, cooling, label, standard cartons and packaging, harvest crew, delivery because the products don't need to travel a long way and customers do not require standardized packaging
      v. Disadvantages
         - Farmers need marketing skills
         - Fairly complicated, need much more infrastructure than with a grower/shipper/packer
         - Limited market
         - Small amounts per customer
         - Customer service is most important, yet can be costly and difficult
         - Some supermarket chains are closed to local growers because they have year-round contracts with wholesaler distributors and grower/shipper/packer
         - The restaurant industry is characterized by rapid changes in personnel; the chef or a buyer can change suddenly, creating the need to constantly develop new relationships with potential buyers

b) Farmers' markets (see Unit 4.1, Direct to Consumers – Farmers' Markets and Roadside Farm Stands, for more information)
   i. Major resurgence in recent years
      - At time of printing the USDA's Agricultural Marketing Service reports as of National Farmers Market Week 2013, (the first full week in August), there were 8,144 farmers markets listed in USDA's National Farmers Market Directory. This is a 3.6 percent increase from 2012. These data are updated every year. Check AMS website for current stats: *www.ams.usda.gov/AMSv1.0/farmersmarkets.*
      - The growth in farmers' markets is a response to consumer trends of:
        - Shopping as recreation
        - Perceived freshness and quality
        - Consumers seek out their favorite farms and want to support them every week
        - Customer preference for personal attention
   ii. Advantages of farmers' markets to growers
      - Opportunity to build relationships directly with end consumer
      - Enjoy higher margins on produce with instant cash flow
      - Exemption from pack standards reduces post harvest time and cost
      - Possible to use sub-standard product—consumers are more forgiving of cosmetic blemishes on fruit and vegetables
      - No special packaging or post-harvest handling requirements (other than what is required to make products safe and attractive)
      - Access to chefs
      - Farmers don't always have to attend themselves
   iii. Disadvantages of farmers' markets to growers
      - Good markets are often saturated/not accepting new growers, are highly price competitive and political
      - It can be hard to move large volumes of produce at small markets
      - Growers often must provide a high diversity or specialty crop to be accepted
      - Loading and offloading the truck combined with long travel times to markets can make for a long day
      - Need high degree of social skills to deal directly with a wide range of customer personalities
c) Community Supported Agriculture (see Unit 3, Community Supported Agriculture, for more information)
   i. Individual consumers pay fee/purchase share at the beginning of the season and receive regular boxes of produce throughout the season when it is ready
   ii. Attracts sophisticated consumers who want to provide financial and other forms of support for regional agriculture
   iii. CSAs often afford the opportunity to visit the farm in order to confirm the land use practices employed
   iv. Requires an outreach plan to reach consumers and register for subscriptions
   v. Advantages
      - Solves pre-plant financing
      - Provides guaranteed market
      - No middlemen = greater potential profit
      - Potentially low capital costs

- Moderate over and under supply can be handled by shareholders
- Regular delivery schedule

vi. Disadvantages

- Complexity of cropping system—quality and quantity can be difficult as few farms can grow a wide range of high-quality product every week
- Need high degree of social skills to deal directly with a wide range of customer personalities
- Requires a high level of coordination and paperwork to manage subscriptions and logistics of delivery

B. Choosing Your Marketing Strategy (adapted from Organic Marketing 101: A Guide for Getting our Products to Market, CCOF 2012)

There are several market channels for your organic product. However, not all of them will fit with your goals, values, products and situation. To help identify the best marketing channels for your situation, start by reviewing the key assessment questions below to identify strengths and resources.

Many organic growers find that diversity in marketing, just like diversity on their farm, is important to economic sustainability. These growers may do both wholesale and direct marketing, and cultivate a variety of customers and outlets. This diversity is limited mostly by their management capability.

1. Assess the strengths and weaknesses of your operation. Your strengths will help prioritize where to focus your energy in developing new markets.
   a) What are your strengths and core competences? What resources do you have?
   b) What are your weaknesses and challenges?
   c) How many markets do you currently work in? Do you have the desire and/or ability to expand?
   d) Who are your target customers? Where do they shop?
2. Assess your postharvest capacity
   a) Do you have a washing station with potable water and adequate drainage?
   b) Do you have access to skilled labor to harvest your produce?
   c) Do you have the right packing supplies for your target market channel?
3. Assess your transportation storage needs
   a) Will the buyer pick up product at your farm or will you need to pay a driver to do deliveries?
   b) Will you need to purchase a truck? Will it need refrigeration?
   c) What type of storage does your product need? Will it require a cooler or ice?
   d) How much space will you need for inventory? Do you have dry storage that is clean and rodent proof?
4. Understand the pack standards and packaging requirements for your market
   a) What are the packaging and postharvest handling requirements for the particular market?
   b) What are the labeling requirements?

   There is no magic formula to help you decide what market channel(s) is/are right for you. Consider the advantages and disadvantages of each market channel (more information on these topics are listed in Units 3 and 4 of this training manual), combined with your assessment of your strengths, resources, and infrastructure. Don't forget to consider which market fits your personality and personal preferences as well.

Resources & References

PRINT RESOURCES

Born, Holly. 2004. *Agricultural Business Planning Templates and Resources.* National Center for Appropriate Technology (NCAT), June 2004. *attra.ncat.org/attra-pub/summaries/summary.php?pub=276*

This resource contains sources of business planning templates and further resources for agricultural enterprises. Also included are internet and print resources as well as training courses and workshops.

Calvin, Linda, Roberta Cook, Mark Denbaly, Carolyn Dimitri, Lewrene Glaser, Charles Handy, Mark Jekanowski, Phillip Kaufman, Barry Krissoff, Gary Thompson and Suzanne Thornsbury. 2001. *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues.* Agricultural Economic Report No. (AER-795), January 2001. *www.ers.usda.gov/publications/aer-agricultural-economic-report/aer795.aspx*

DiGiacomo, Gigi, Robert King and Dale Nordquist. 2014. *Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses* (fourth printing). Minnesota Institute for Sustainable Agriculture and Sustainable Agriculture Research and Education. *www.sare.org/Learning-Center/Books/Building-a-Sustainable-Business*

A thorough introduction to business planning for sustainable agriculture entrepreneurs. Building a Sustainable Business provides sample worksheets for setting goals, researching processing alternatives, determining potential markets, and evaluating financing options. Blank worksheets help the reader develop a detailed, lender-ready business plan or map out strategies to take advantage of new opportunities. Includes many examples of actual business plans. A very user-friendly and value-based approach to business planning. See: www.sare.org; www.misa.umn.edu/publications/bizplan.html for description, ordering information and pdf version of the document.

Grubingers, Vern. 1999. *Sustainable Vegetable Production from Start-up to Market.* Natural Resources Agriculture and Engineering Services (NRAES).

Covers equipment thoroughly, as well as farm planning and business management. Contains a section on grower profiles for 18 crops, including their enterprise budgets. A great overview for farmers starting out or those looking for different angles. See: www.nraes.org.

Hartman, Harvey and David Wright. 1999. *Marketing to the New Natural Consumer.* Bellevue, WA: The Hartman Group.

A summary of the Hartman Group's research into organic and lifestyle consumer trends. Understanding consumer trends in the food and natural products market can help you succeed in this new marketplace. 267 pages, paperback. Available through the New England Small Farm Institute Library: www.smallfarm.org.

The Hartman Group. 2013. *The Organic & Natural Consumer.* Bellevue, WA. *www.hartman-group.com/publications/reports/the-organic-natural-consumer*

A summary of the Hartman Group's most recent research into organic and lifestyle consumer trends. 15 pages.

LeRoux, Matthew. 2014. *Guide to Marketing Channel Selection: How to Sell Through Wholesale and Direct Marketing Channels.* Cornell University Extension, Thomkins County.

This document describes the different marketing channels available to new farmers, including wholesale, institutional options and auctions. Also provided is information and exercises to help choose the best channel, or combinations of channels. Available online at: http://smallfarms.cornell.edu/files/2014/07/Guide-to-Marketing-Channel-1ib5phn.pdf

Macher, Ron. 1999. *Making Your Small Farm Profitable.* North Adams, MA: Storey Publishing.

Covers marketing and balanced farm management for the beginning or experienced farmer. See: www.smallfarmtoday.com.

Olson, Michael. 2010. *Metro Farm: The Guide to Growing for Big Profit on a Small Parcel of Land, 2nd Edition.* Santa Cruz, CA: TS Books.

Thorough and fun to read, this book generates a million ideas and helps you chart your course for creating a new small farm enterprise.

Rowell, Brent, Tim Woods, and Jim Mansfield. 1999. *Marketing Options for Commercial Vegetable Growers*. University of Kentucky, College of Agriculture, Cooperative Extension ID-134. *www.ca.uky.edu/agc/pubs/id/id134/id134.htm*

Publication exploring various marketing options for producers of vegetable crops.

Schwenke, Karl. 1991. *Successful Small-Scale Farming: An Organic Approach*. North Adams, MA: Storey Publishing.

This book goes beyond growing crops to show everything you need to know—including which direction to begin plowing your fields, machinery you might not need, how to pull up old fence posts, and other info you missed from your farming grandparents!

Slama, Jim, and Atina Diffley (eds). 2013. *Wholesale Success: A Farmer's Guide to Food Safety, Selling, Postharvest Handling, and Packing Produce*. Fourth Edition. *FamilyFarmed.org.*

This 300-plus page book provides extensive information on how to local and regional produce needs by selling fruits and vegetables through wholesale channels. Purchasing information can be found here: www.familyfarmed.org/publications/wholesalesuccess/

Vance Publishing, 1993. *The Packer: A Century of Produce, 1893-1993*. Overland Park, KS: Vance Publishing.

Traces the development of the US produce industry.

Western Extension Marketing Committee. 2003. *Western Profiles of Innovative Agricultural Marketing: Examples from Direct Farm Marketing and Agri-Tourism Enterprises*. Cooperative Extension of the University of Arizona, Publication AZ1325.

Provides 16 case studies of successful innovative direct farm marketing enterprises. Available online at http://ag.arizona.edu/arec/wemc/westernprofiles/westernprofilesbookweb.pdf

White, Gerald B. and Wen-fei L. Uva. 2000. *Developing a Strategic Marketing Plan for Horticultural Firms*. Dept. Agricultural, Resources, and Managerial Economics, College of Agriculture and Life Sciences. Cornell University, NY. *http://www.nysl.nysed.gov/scandoclinks/ocm43610110.htm.*

PERIODICALS

American Vegetable Grower/American Fruit Grower, *www.meistermedia.com/publications/american-vegetable-grower/.*

A subscription magazine for produce growers and marketers. Meister Publishing. See:

Growing for Market, *www.growingformarket.com/*

A very useful national monthly newsletter for direct market farmers. Covers production and marketing of vegetables and flowers.

The Packer, *www.thepacker.com*

A business newspaper for the produce industry.

Small Farm Digest, *www.reeusda.gov/smallfarm*

A subscription newsletter published three times a year by the Cooperative State Research, Education, and Extension Service (CSREES), part of the USDA. Discusses issues impacting today's small farmers.

Small Farm News, *sfp.ucdavis.edu/pubs/SFNews/*

The Small Farm Newsletter is a quarterly publication of the UC Small Farm Center. The newsletter features farmer and farm advisor profiles, research articles, farm-related print and web resources, news items and a calendar of state, national and international events.

WEB-BASED RESOURCES

Alternative Farming Systems Information Center's Organic Agriculture Products: Marketing and Trade Resources

www.nal.usda.gov/afsic/index.html

A comprehensive listing of electronic resources addressing the following subject areas: Regulation, Laws, and Legislation governing organic production and trade; How-to Guides on Marketing, Business Planning, and Sample Enterprise Budgets; Guides to Data, Suppliers, Outlets, and Events; Industry and Data Sources; Market and Consumer Studies; Support Organizations. Compiled by Mary V. Gold of the National Agricultural Library in association with the Agricultural Research Service of the U.S. Department of Agriculture.

ATTRA—National Sustainable Agriculture Information Service—Marketing, Business and Risk Management Series

attra.ncat.org/marketing.html

This site contains extensive listings of concise online publications addressing all aspects of direct marketing and alternative marketing arrangements including; marketing of organic products, institutional buying relationship, cooperatives, value added, selling to restaurants, agricultural tourism, farmers' markets and CSA. It also offers tip sheets on working with various marketing channels including retail grocery stores, institutions, produce distributors, produce brokers, packing houses, restaurants and wholesale buyers at terminal markets.

Cornell Small Farms Program

smallfarms.cornell.edu/resources/marketing/

Offers a number of excellent articles on marketing method and strategies.

California Department of Food and Agriculture Regulations

www.cdfa.ca.gov/cdfa/pendingregs/

California Department of Food and Agriculture Regulations (CDFAR) is a California state agricultural agency with divisions of Animal Health & Food Safety Services; Fairs and Expositions; Inspection Services; Marketing Services; Measurement Standards; and Plant Health & Pest Prevention Services. The web site contains links to the services and programs of the above agencies as well as links to county agricultural commissioners and official statements and policies of the USDA, FDA, and CDFAR on current events in agriculture.

Direct Marketing Resource Guide Online Database

www.sare.org/publications/dmrg.htm

This extensive annotated listing includes practical, high-quality resources such as print publications, videos and web resources that will help growers meet direct marketing goals. The resources are organized into 9 categories including: Farmers' Markets; Community Supported Agriculture; Agricultural Cooperatives; Farm-to-School/ Selling to Institutions; Direct Marketing Livestock; Roadside Stands/Markets; Selling to Restaurants; and Value-Added Production/ Marketing.

Growing Produce

www.growingproduce.com/

"Growing Produce serves as a top information source for specialty crop growers seeking information about production techniques, crop protection, farm management, new varieties, and more. Our readers are commercial fruit, vegetable, and citrus growers, as well as other allied professionals in specialty agriculture industry."

New England Small Farm Institute

www.smallfarm.org/main/for_new_farmers/new_farmer_q_and_a/how_do_i_market_my_products/

This site has a section for new farmers. This section contains resources for exploring the small farm dream, landlinking information, new farmer Q&A and a number of other resources listed by topic.

Organic Agricultural Products: Marketing and Trade Resources

www.nal.usda.gov/afsic/pubs/OAP/OAP.shtml

A collaborative program of the USDA Agricultural Research Services and the National Agricultural Library to provide marketing and trade information for organic agriculture products. Contains information on: Regulations, Laws and Legislation; How-to Guides; Guides to Data, Suppliers, Outlets and Events; Industry Data Sources; Market and Consumer Studies; Support Organizations; and a listing of appendices containing USDA National Organic Program standards for certification, production, labeling, and marketing.

The Organic Trade Association (OTA):

www.ota.com/index.html

The Organic Trade Association (OTA) is the membership-based business association for the organic industry in North America. OTA's mission is to encourage global sustainability through promoting and protecting the growth of diverse organic trade.

Produce Marketing Association:

www.pma.com

Home page of the Produce Marketing Association. Lists conventions, other events, links to the web pages of major produce companies including organic.

UC Small Farm Center

www.sfc.ucdavis.edu

The Small Farm Center was established to enhance the viability of small- and moderate-scale agricultural producers by stimulating research and extension education in production systems, marketing, and farm management. Contains a fully searchable library and database for many topics on small-scale agriculture in California, including many marketing references.

USDA Agricultural Marketing Service

www.ams.usda.gov/AMSv1.0/

The Agricultural Marketing Service includes six commodity programs providing standardization, grading, and market news services for those commodities. The AMS Science and Technology Program provides centralized scientific support to various AMS technical programs (e.g., Plant Variety Protection, Pesticide Testing, and Pesticide Recordkeeping Programs). The AMS Transportation Program addresses problems of U.S. and world agricultural transportation. The Marketing program serves to increase the overall effectiveness of the food marketing system, provide better quality products to the consumer at reasonable cost, improve market access for growers with small-to medium-sized farms, and promote regional economic development.

USDA AMS Market News Service

www.ams.usda.gov/marketnews.htm

Provides current U.S. price and sales information. One of the best sources for daily to weekly reports for all kinds of commodity prices, bids, imports and exports in the U.S., from dairy, feedstuffs, fruit and vegetables, futures, grains, hay, livestock, meat, poultry, tobacco. Reports cover both domestic and international markets. Other reports include information on volume, quality, condition, and other market data on farm products in specific markets and marketing areas.

UNIT 3

Community Supported Agriculture (CSA)

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Introduction to Community Supported Agriculture

UNIT OVERVIEW

Community Supported Agriculture (CSA) is an agricultural and community development movement that was developed to serve a dual purpose: as a stable marketing opportunity for growers, and as a way to reconnect consumers with the sources of their food and foster closer personal relationships between farmers and their communities.

Robyn Van En, one of the early pioneers of CSA in America, expressed the concept dually. She wrote that Community Supported Agriculture should be coupled with ASC—Agriculturally Supported Communities. This mutually supportive relationship between producer and consumer was what CSA was founded upon. In 1985, Van En wrote that CSA embodied the principle of "local food for local people at a fair price to them and a fair wage to the growers. The members' annual commitment to pay their share of the production costs and to share the risk as well as the bounty set this apart from any other agricultural initiative" (Henderson and Van En, 2007).

Since Robyn Van En and other farmers kick-started the CSA movement in the mid 1980s, much has changed in the way that both farmers and the public perceive Community Supported Agriculture. While some farmers continue to subscribe to the original tenets of CSA (later described), many farmers, communities, and companies now use the term CSA to encompass a wide variety of market and community relationships.

Throughout the changes in the conception and practice of Community Supported Agriculture, the UCSC Farm & Garden of the Center for Agroecology & Sustainable Food Systems (CASFS) has remained committed to many of those founding tenets of CSA. In particular the Farm and Garden supports both in practice (on our farm) and in teaching (both to our apprentices and in this manual) the concepts of locally grown organic food, affordability, and seasonal commitment. In doing so, the Farm and Garden attempts to bridge the growing gap between these founding ideals while adapting to the faster-paced, more customer-oriented version of CSA projects that exist today.

This unit on direct marketing through Community Supported Agriculture introduces students to the history of CSA and today's various CSA structures. In addition, this unit will focus in depth on the two primary forms of CSA (the Membership/Share Model CSAs and the Subscription Model), illustrating how CSA structure, outreach, and administration differ for each model. The unit also covers the agronomic considerations for running a CSA, including crop planning, soil fertility, harvest, and post-harvest handling.

Along with lecture outlines, each unit contains appendices that include student exercises and/or information that the instructor can use as visual examples and student handouts.

Unit 3.1 – History of CSA explores the history and development of the community supported agriculture movement, introducing students to the principal figures and the economic and social values that have directed the growth of this model of sustainable agriculture in Europe, Japan, and North America.

Unit 3.2 – CSA Structure and Organization examines the various forms that a CSA operation can take, from those run by a farmer to those run by the community. It discusses variations on the CSA model, examines some of the challenges of running a CSA project, and lists training opportunities for learning CSA farming skills.

Unit 3.3 – CSA Outreach looks at strategies for recruiting CSA members, developing low-income memberships, developing a core group, and producing outreach materials such as brochures, pledge forms, and printed and online newsletters.

Unit 3.4 – CSA Administration introduces the nuts and bolts of organizing the administrative details of a CSA operation, including advertising, correspondence with CSA members, billing, and creating databases.

Unit 3.5 – CSA Crop Planning covers the basic considerations involved in developing the type of diverse mixed fruit and vegetable operation required for CSA production. This unit also includes a crop planning exercise and a number of appendices that can be used to develop a crop plan and track CSA field production.

Unit 3.6 – CSA Harvest & Post-Harvest Handling outlines the techniques involved in successful harvesting and post-harvest handling of crops for CSA operations, including information on packing CSA shares, harvest record keeping, and harvest crew management.

MODES OF INSTRUCTION

> LECTURES (1-2 HOURS EACH)

> STUDENT EXERCISE (UNIT 4.5)

LEARNING OBJECTIVES

CONCEPTS

- Historical development of community supported agriculture in Europe, Japan, and the U.S.
- Various CSA structures and organizational models
- Opportunities and challenges presented by the CSA model
- Techniques for recruiting CSA members and administering a CSA
- CSA crop planning considerations
- Harvesting and post-harvest handling considerations for a CSA operation

SKILLS

- Understanding of various CSA management techniques
- Ability to develop a basic crop plan for a mixed vegetable CSA operation

Resources & References

PRINT

Adam, Katherine. 2006. *Community Supported Agriculture.* Fayetteville, Arkansas: ATTRA-National Sustainable Agriculture Information Service. *attra.ncat.org/attra-pub/summaries/summary.php?pub=262*

This publication reports on the history of Community Supported Agriculture (CSA) in the U.S. and discusses the various models that have emerged. Recent trends in the CSA movement are presented and demographic information provided about the distribution of CSA farms in the U.S. Several CSA cases are profiled and a survey of recent research is presented. References and resources follow the narrative.

Butler Flora, Cornelia, and Corry Bregendahl. 2007. The role of collaborative community supported agriculture: Lessons from Iowa. *Leopold Center Progress Report* 16:44-7.

The aim of this research project was to understand the role collaborative Community Supported Agriculture (cCSA) plays in community and economic development in Iowa.

de Selencourt, Kate. 1997. *Local Harvest: Delicious Ways to Save the Planet.* Lawrence and Wishart.

Outlines the array of benefits—for people and the environment—that responsible food production and marketing can bring. It also shows that good food costs less when it's local.

Douthwaite, R. J., and Richard Douthwaite. 1998. *Short Circuit: Strengthening Local Economics for Security in an Unstable World.* New York: Green Books.

Chronicles the many efforts by regular people to recapture their economies and their resources from sprawling, globalized systems. Chapter 6—Living from the Land—has a section about CSA as well as Buschberghof. Available online in its entirety at www.feasta.org/documents/shortcircuit/index.htm.

Groh, Trauger, and S. McFadden. 2000. *Farms of Tomorrow Revisited: Community Supported Farms—Farm Supported Communities.* The Biodynamic Farming and Gardening Association.

Provides an introductory overview of the need for alternative farming systems and offers multiple case studies of successful CSA operations. Contains useful overviews of alternative land tenure options for CSA producers. Sample budgets for a CSA operation are included, along with suggestions for the formation and management of farmers' markets.

Henderson, Elizabeth, and Robyn Van En. 2007. *Sharing the Harvest: A Citizen's Guide to Community Supported Agriculture—Revised and Expanded Edition.* White River Junction, VT: Chelsea Green Publishing Co.

A revised and expanded version of this excellent introduction to the CSA model. Covers all aspects of CSA from organization to production and distribution considerations, including how "community support" may be applied to other industries.

Henderson, Elizabeth. 2010. The World of Community Supported Agriculture. Keynote address at Urgenci Conference on Community Supported Foods and Farming, 22 February, at Kobe, Japan. *www.chelseagreen.com/content/elizabeth-henderson-the-world-of-community-supported-agriculture/*

A brief history of CSAs and an around-the-world tour of the present trends in the CSA movement.

Jackson, Greg, Amanda Raster, and Will Shattuck. 2011. An analysis of the impacts of health insurance rebate initiatives on Community Supported Agriculture in southern Wisconsin. *Journal of Agriculture, Food Systems, and Community Development,* 2 (1): 287 – 296.

Lass, Daniel, Ashley Bevis, G. W. Stevenson, John Hendrickson, and Kathy Ruhf. No Date. *Community Supported Agriculture Entering the 21st Century: Results from the 2001 National Survey.* Amherst: University of Massachusetts, Department of Resource Economics. *www.cias.wisc.edu/wp-content/uploads/2008/07/csa_survey_01.pdf*

Madison Area Community Supported Agriculture Coalition. 1996. *From Asparagus to Zucchini: A Guide to Farm-Fresh Seasonal Produce.*

The main section of the book features 51 different vegetable and herb sections. Each section includes nutritional, historical, and

storage information as well as cooking tips and specific recipes—over 385 recipes in all. Includes essays that address how food choices fit into our economy, environment, and communities. Includes information on home food preservation and an extensive resource section and recipe index.

McFadden, Steven. 2011. *The Call of the Land: An Agrarian Primer for the 21st Century, Second Edition.* Bedford, IN: NorLights Press.

More theoretical. A good teaching tool for families and communities to learn about the alternative food system. Includes ways for families, neighborhoods, communities, schools, and churches to contribute to the good food movement by supporting alternative agriculture.

McFadden, Steven. 2004. *The History of Community Supported Agriculture, Part I and II: CSA's World of Possibilities.* Rodale Institute. *www.new-farm.org/features/0104/csa-history/part1.shtml*

Norberg-Hodge, Helena, Todd Merrifield, and Steven Gorelick. 2000. *Bringing the Food Economy Home: The Social, Ecological and Economic Benefits of Local Food.* London: International Society for Ecology and Culture (ISEC).

An ISEC report showing that the globalization of food is not only undermining farmers and damaging the environment, but also posing a real threat to human health, food security, local economies, and, ultimately, consumers.

Norberg-Hodge, Helena, Peter Goering, and John Page. 2000. *From the Ground Up: Rethinking Industrial Agriculture.* London: International Society for Ecology and Culture (ISEC) and Zed Books.

An analysis of the roots of the environmental, social, and economic crises facing modern industrial agriculture, and a review of more sustainable options.

Norberg-Hodge, Helena, Todd Merrified and Steven Gorelick. 2002. *Bringing the Food Economy Home: Local Alternatives to Global Agribusiness.* London: Zed Books.

Based on the ISEC report (above), this book includes some new and updated information, a resource guide, and an index.

Perry, Jill, and Scott Franzblau. 2010 (revised). *Local Harvest: A Multi-Farm CSA Handbook.* Sustainable Agriculture Research and Education (SARE). *www.sare.org/publications/csa/csa.pdf*

Offers straightforward guidance on an innovative practice that is helping CSAs stay strong and viable over the long term: cooperative marketing. The 130-page book details how farmers in CSA cooperatives can best work together to market their produce, including advice on staffing, volunteer boards, distribution, legal topics and other practical information.

Peterson, Farmer John, and Angelic Organics. 2006. *Farmer John's Cookbook: The Real Dirt on Vegetables.* Layton, Utah: Gibbs Smith.

Lyrical yet practical, this cookbook chronicles the lives of vegetables as they make their voyage from field to feast, celebrates the seasonal cycles of fresh produce, and will inspire delicious, healthful food for your table.

Soil Association. 2001. *A Share in the Harvest—An Action Manual for Community Supported Agriculture.* (Ringbound manual)

A practical guide to support those—including farmers/growers, consumers, and activists—who wish to develop community supported agriculture (CSA) initiatives. The manual uses experiences from CSA farms in the United Kingdom and overseas and includes information on CSA models, membership, finance and legal issues, land and share issues, grant advice, and useful publications.

Soil Association. 2001. *A Share in the Harvest—A Feasibility Study for Community Supported Agriculture.*

This feasibility study looks at how community supported agriculture (CSA) can help in the development of local and sustainable food economies. It investigates community involvement in farming around the globe and in a number of established and planned CSA initiatives in England. Eleven case studies provide the basis of discussion, along with relevant policy recommendations and areas for future research.

Tuin, Jan Vander. 1992. Zürich Supported Agriculture. *RAIN magazine* 14(2), Winter/Spring.

This article describes the philosophy and inspiration for CSA in Switzerland which Jan Vander Tuin brought to the the US to help inform the beginnings of CSA on the east coast.

WEB-BASED RESOURCES

Alternative Farming Systems Information Center

www.nal.usda.gov/afsic/csa

An excellent and comprehensive resource for accessing information on all topics in print and video media relating to CSA. AFSIC is a cooperative effort between the Cooperative State Research Education and Extension Service (CSREES) and the National Agricultural Library (NAL) of the U.S. Department of Agriculture (USDA). "CSA Resources for Farmers or Producers" provides extensive CSA-related information, online articles, and print resources. "Organizations and Related Web Sites" will take you to the support groups in your area that can provide further, regionally specific information and crucial one-on-one support for CSA endeavors. These centers provide information about books and periodicals, and provide access to farm budgets, crop tracking sheets, and management software.

Angelic Organics

www.csalearningcenter.org

A comprehensive information clearinghouse on all aspects of CSA. The CSA Learning Center is a nonprofit resource center (501(c)3) that provides opportunities for diverse community members, prospective farmers, and CSA shareholders from the greater Chicago area. Includes youth education programs; models for developing low-income CSA shares; technical assistance and training programs for regional producers, among others.

The Biodynamic Farming and Gardening Association:

www.biodynamics.com

The Biodynamic Farming and Gardening Association is a nonprofit, membership organization and is open to the public. The association has an educational focus and conducts conferences, workshops and seminars. The Biodynamic Farming and Gardening Association maintains a national CSA online database.

The Center for Agroecology & Sustainable Food Systems (CASFS)

casfs.ucsc.edu

A research, education, and public service program at the University of California, Santa Cruz, dedicated to increasing ecological sustainability and social justice in the food and agriculture system. On the UCSC campus, the Center operates the 3-acre Alan Chadwick Garden and the 33-acre UCSC Farm. Both sites are managed using organic production methods and serve as research, teaching, and training facilities for students, staff, and faculty. The CASFS operates a 130-member CSA program and conducts research and publishes articles on the efficacy of alternative food initiatives such as CSA.

Center for Integrated Agricultural Systems

www.cias.wisc.edu

Brings together university faculty, farmers, policy makers, and others to study relationships between farming practices, farm profitability, the environment, and rural vitality. Includes links to sustainable grazing dairy systems, pastured poultry, and the School for Beginning Dairy Farmers; research summaries on CSA; information on the School for Beginning Market Gardeners and on developing farm-to-college projects.

Community Alliance with Family Farmers (CAFF)

www.caff.org

A searchable web resource containing information on CSA and other related regional food system initiatives. Contains notices of current agriculture public policies, listing of current CAFF publications as well as a calendar of sustainable agriculture events. Contains links to multiple CAFF-sponsored agriculture and wildland interface projects. In 2013 CAFF co-hosted the URGENCI worldwide CSA conference.

Educational and Training Opportunities in Sustainable Agriculture

www.nal.usda.gov/afsic/AFSIC_pubs/edtr.htm

A comprehensive listing of post-secondary education and training opportunities in

sustainable agriculture. Contains listings of both academic and practical training programs.

The Equity Trust, Inc.

equitytrust.org/equity-trust-fund/

Equity Trust, Inc. is a nonprofit organization concerned with the principles of equity and their practical applications as they relate to land tenure. Equity trust provides planning, financial, and technical assistance in negotiating alternative land tenure arrangements for low-income persons. Equity Trust, Inc. also maintains a low-interest revolving loan program for new CSA farmers.

FairShare Coalition

www.csacoalition.org/

Formerly known as MADSAC, FairShare is a regional coalition of CSA Farms in the Madison area. The non-profit engages in education, outreach, community building, and resource sharing in order to attract new consumers and support CSA farmers in their region. They have a collaborative model for sponsoring low-income CSA shares.

The Food Project

www.thefoodproject.org

A unique program involving youth workers and adult volunteers growing organic vegetables for homeless shelters, CSA shareholders, and farmers' markets in the Boston area.

FoodRoutes Network

www.foodroutes.org

FoodRoutes Network, LLC (FRN) provides communications tools, technical support, networking and information resources to organizations nationwide that are working to rebuild local, community-based food systems. FRN is dedicated to reintroducing Americans to their food – the seeds it grows from, the farmers who produce it, and the routes that carry it from the fields to their tables.

Growing Food and Justice

www.growingfoodandjustice.org/

The Growing Food and Justice for All Initiative is a new initiative aimed at dismantling racism and empowering low-income and communities of color through sustainable and local agriculture. This comprehensive network views dismantling racism as a core principal which brings together social change agents from diverse sectors working to bring about new, healthy and sustainable food systems and supporting and building multicultural leadership in impoverished communities throughout the world.

Growing Power

www.growingpower.org

Growing Power transforms communities by supporting people from diverse backgrounds and the environments in which they live through the development of Community Food Systems. These systems provide high-quality, safe, healthy, affordable food for all residents in the community. Growing Power develops Community Food Centers, as a key component of Community Food Systems, through training, active demonstration, and outreach.

The Hartford Food System (HFS)

www.hartfordfood.org

A private, nonprofit organization working to create an equitable and sustainable food system that addresses the underlying causes of hunger and poor nutrition facing lower-income and elderly Connecticut residents. HFS has developed dozens of projects, initiatives, and coalitions that tackle a wide range of food cost, access, and nutrition problems.

International Society for Ecology and Culture

www.isec.org.uk

A nonprofit organization concerned with the protection of both biological and cultural diversity. ISEC has developed and maintains many programs that focus on promoting local production and consumption of products as a way to maintain economic and cultural self-determination.

Just Food

www.justfood.org

Encourages new marketing and food-growing opportunities that address the needs of regional, rural family farms, New York City community gardeners, and New York City communities through encouraging CSA relationships, hosting workshops, providing training materials in horticulture, marketing, garden preservation, leadership development, and emergency

food relief. Just Food also conducts training, leadership development, and outreach programs to address these issues.

Local Harvest

www.localharvest.org

Maintains a public nationwide directory of small farms, CSAs, farmers' markets, and other local food sources. Their search engine helps people find local sources of sustainably grown food, and encourages them to establish direct contact with family farms in their local area. Listing your farm on their service is free and can be one of the best ways to connect with consumers.

The Maine Organic Farming and Gardening Association

www.mofga.org

A sustainable horticulture and agriculture advocacy group offering technical assistance; agriculture, public policy, and consumer awareness education programs; organic certification services; and public events.

Marcie Rosenweigg's Market Farm Forms

www.back40books.com/i/1395/market-farm-forms.htm

Market Farm Forms: Spreadsheet Templates for Planning and Organizing Information on Diversified Market Farms is a software program containing recordkeeping spreadsheet templates for use in direct-marketing operations (e.g., farmers' markets, CSAs, direct sales to restaurants and co-ops). The forms are intended to help direct market growers make better management decisions and to help small producers comply with the record-keeping requirements for organic certification.

Northeast Organic Farming Association

www.nofa.org

A grassroots association with 7 state chapters of farmers, homesteaders, organic land care professionals and gardeners encouraging the adoption of sustainable farming and gardening practices and direct market/consumer support relationships. See, e.g.: www.nofamass.org; www.nofany.org.

The Pennsylvania Association for Sustainable Agriculture

www.pasafarming.org

A sustainable agriculture advocacy organization promoting environmentally sound and economically viable regional agriculture through marketing and production-oriented technical assistance programs.

The Robyn Van En Center

www.csacenter.org

An excellent clearinghouse for all information relating to CSA. Includes a national CSA farm directory; publications and products; an online posting of events, positions, and technical assistance relating to CSA production.

Sustainable Agriculture Research and Education (SARE) Program, National Database of Projects

www.sare.org/Project-Reports/Search-the-Database

Searchable database of project reports including several about CSA.

Urban-Rural: To Generate New Commitments between Citizens (URGENCI)

www.urgenci.net

Seeks to be a worldwide network for imparting information about consumer/producer and urban/rural relationships. Sponsored the "First International Symposium on Local Contracts between Farmers and Consumers" in February 2004 and has sponsored events biannually since then.

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Lecture 1: History of Community Supported Agriculture

A. Introduction

In its first decade of introduction into the United States, community supported agriculture (CSA) efforts followed roughly the same form. Farmers and/or communities formed a cooperative agreement whereby the community would share in the risk of the farmer, experiencing the abundance of some seasons and supporting the business through scarce times. Often, members of the CSA would form a "core group," volunteering to take on important roles within the CSA management. In some cases, farmers made their finances transparent so that communities could cover the true cost of producing their food while supporting the farmer making a decent income.

As time has progressed the CSA movement has swept from the East to the West coast in the U.S., and both the number of farms and number of consumers participating in CSA have continued to expand. The expansion of the movement has now spanned nearly three decades and has witnessed a grand shift in the conceptualization of what constitutes community supported agriculture.

Although some farms still practice what's now known as the *Membership* or *Share model* first envisioned by the founder of the American CSA movement Robyn Van En, farmers, businesses, and communities now call many things CSA. These include a more customer-oriented *Subscription CSA*, in which customers sign up weekly, monthly, quarterly, or seasonally to receive boxes of produce from one or multiple farms. The Subscription CSA diverges from Van En's idea of CSA because in most cases subscribers do not share in the risk of the farming operation and contribute little to no labor on the farm. The subscription model, among others described in this unit, enabled the movement to reach more members, many of whom reside in cities and would not otherwise be able to participate in Van En's more hands-on approach to CSA (although some city-based CSAs also feature a hands-on component).

B. Philosophy and Definition of Community Supported Agriculture

1. Community Supported Agriculture defined

   Up until the early 2000s, CSA was primarily conceptualized as a direct marketing partnership between a farmer or farmers and a committed network of community members/consumers who help to provide a portion of a given farm's operating budget by purchasing "shares" of the season's harvest in advance of the growing season

   In its initial form, CSA shareholders made a commitment to support the farm financially (and/or through other roles) throughout the growing season, thereby assuming some of the costs and risks along with the grower. The two primary tenets of CSA as originally conceived were: Shared Risk, and Upfront Seasonal Payment.

   a) However, the types of arrangements in CSAs between consumer and producer have changed substantially since first envisioned, and, over the last decade, many farms have ceased to adhere strictly to the original tenets of CSA
      i. Many CSA projects no longer require season-long, nor half-season, nor quarter-season payments, but have transitioned instead to monthly or even weekly payments from consumers
      ii. Many CSAs no longer share the risk of crop failure with consumers, choosing instead to purchase goods from other farmers when their farm experiences crop failure and the CSA box falls short of expectations. This form of CSA puts the burden on the grower to provide more service in order to stay competitive, while diminishing the opportunity for consumers to take responsibility for their food supply.

iii. Many CSAs have lost the "community" aspect of Community Supported Agriculture, instead experiencing the programming as a (albeit enhanced) consumer experience

2. The intended outcome of all types of CSA relationships
   a) Greater economic viability for the farmer: Through community member commitment, CSA relationships may help to ensure the economic viability of regional agriculture by assuring regional direct market outlets for smaller-scale producers/growers unable or disinterested in competing in the wholesale produce market. CSA share prices are often a compromise between wholesale prices and retail prices, thereby giving consumers a bargain while giving the farmer a larger share of the food dollar than selling through a middleman.
      i. If shares are sold before the season, the farmer has increased revenue at the beginning of season when input costs are high and the farmer may also have a sense of the amount to plant ahead of season as the produce has been pre-sold
   b) Increased consumer contact with agriculture and therefore awareness of and appreciation for farmland and for the growing practices used
   c) Increased awareness and appreciation of seasonal limitations of regional food production
   d) Increased consumer awareness of differences in food quality
   e) The development of personal relationships between growers and community members
   f) Environmental soundness of farming practices
      i. CSA and land use practices: The majority of CSA programs use certified organic, biodynamic, or similar farming practices that restrict the use of synthetically compounded fertilizers and pests control agents known to pose environmental quality and human health risks. Recently in the Northeast, the younger generation of some conventional family farms has initiated CSA projects as a way to stay in farming, and is willing to consider reducing chemical use in order to do so.
      ii. CSA, cropping diversity, and pest management: In order to provide for the seasonal fresh fruit and vegetable needs of shareholders, a large variety of crops are typically grown, which also encourages pest and disease prevention
      iii. Financial support for the adoption of conservation farming practices: In the case of the Membership/Share Model (see section D.4.a) a farmer may make his or her true costs of production known to a potential shareholder group, and may be fairly compensated for adopting specific conservation farming practices, allowing the grower to internalize the true costs of production
      iv. Food miles reduction: CSA distribution usually takes place within a 100-mile radius more or less; global food miles average 1500 miles
   g) CSA programs' contribution to social justice and community development: In the Membership/Share Model (section D.4.a), a farmer may make the true costs of production known to a potential shareholder group, and may be fairly compensated for specific social services provided by the farm
      i. Examples of social services provided by CSA farms
         - Limited-income shares partially or wholly subsidized by shareholders, community members
         - Donations of excess produce and/or gleaning programs with food banks and anti-hunger organizations
         - Environmental and agricultural education for the community
         - Fair employee/labor compensation practices: A living wage plus health insurance and retirement fund for farmers
         - Seasonal community celebrations (e.g., harvest festivals)

C. History of Community Supported Agriculture:

The independent development of the CSA model in Japan and Europe

1. The development of CSA in Japan
   a) Japanese food scares prompt sharp increase in demand for domestically produced and "natural" or certified organic foods
      i. "Minimata Disease" – Kumamoto, Japan (c: 1955). Over 3,000 victims of methyl mercury poisoning resulting from the dumping of an estimated 27 tons of industrial mercury compounds into Minamata Bay between 1932 and 1968 (see: *www1.american.edu/ted/MINAMATA.HTM).*
      ii. Concern over radioactive contamination of food products following Chernobyl nuclear power plant accident of 1986
      iii. Agricultural trade imbalances between Japan and other nations threaten Japanese agricultural economy
      iv. Labeling frauds for organic foods stimulate increase in direct market relationships
   b) The Cooperative movement in Japan and the development of CSA (see: *uwcc.wisc.edu/icic/today/consumer/move.html)*
      i. A long history of cooperatives – First co-ops were established in 1897
      ii. Many consumers were drawn to the co-ops in the 1960s and 1970s because of their stated objective of providing "safe, affordable and reliable foods" to their members
      iii. Today 22 million co-op members (30% percent of all Japanese households) are involved in the Japanese Consumers' Co-operative Union, the largest consumer organization in the country (see: *community-wealth.org/content/japanese-consumers-co-operative-union-english-language-site)*
      iv. Co-ops are engaged in a wide array of mutual help activities covering all aspects of daily living including: medicine, insurance, housing, and education
      v. Most of Japan's CSA programs have been organized between existing cooperatives of producers/farmers and consumers
      vi. CSA relationships are strongly supported by Japanese co-op members as they allow for more direct communication with the producers on how foods are produced, thereby allowing members to gauge food safety and the soundness of agricultural practices for themselves
   c) Teikei system – Teikei in Japanese means "cooperation," "joint business," or "link up." In reference to CSA, it is commonly translated as "food with the farmer's face on it" (see: *www.joaa.net/English/teikei.htm)*
      i. The Teikei system (c. 1970): Producer-consumer co-partnerships were developed by a small group of Japanese women concerned with food safety, pesticide use, processed and imported foods, and the corresponding decrease in the regional small-scale farming population in Japan
      ii. Primary objectives of Teikei
         - Create an alternative distribution system independent of the conventional produce market
         - Develop a mutual understanding of the needs of both producers and consumers
         - Develop a better way of life through mutually supportive producer/consumer interactions and cooperation
      iii. Teikei list of ten principles: See Appendix 1, Ten Founding Principles of the Teikei System
   d) Japan Organic Agricultural Association (JOAA; see: *www.joaa.net/English/teikei.htm)*

i. Established in 1971 in response to a period of unprecedented economic growth, rapid industrialization, and subsequent concerns over environmental quality and human health impacts from agriculture
ii. An estimated 3,000 members in association: 20–25% growers, 80% consumers
iii. Producers and consumers share objective of expanding the organic agriculture movement through mutual support

2. The development of CSA in Europe
   a) The influence of Rudolf Steiner (1861–1925) on European agriculture, education, medicine, the arts, religion, and economics, 1930s–1970s (see: *www.biodynamics.com/steiner.html*)
      i. The development of Biodynamic farming (see: *www.biodynamics.com/biodynamics.html*)
         • Agriculture movement that seeks to "…actively work with the health-giving forces of nature"
         • A world-wide agricultural movement with strict production standards and independent certification through the Demeter Association (see: *www.demeter-usa.org/)*
      ii. Waldorf education (see: *www.whywaldorfworks.org/?src=awsna.org/index.html*)
      iii. Anthroposophy (see: *www.anthroposophy.org)*
      iv. Camp Hill Communities: Social renewal and community building through working with populations of developmentally delayed children and adults (see: *www.camphill.org)*
      v. Threefold Commonwealth: New forms of economic development intended to define desirable economic outcomes and direct economic life in a conscious, human way while resisting the temptation to defer to market forces alone
   b) The influence of Rudolf Steiner's thinking on small-scale agricultural economics: "The associative approach" to economics
      i. Associative Economics: Economic arrangement that fosters interaction among producers, traders, creditors, and consumers and where appropriate price, true human needs, the eradication of poverty, greater social equity, and environmental impacts are explicitly addressed in the process (see: *www.cfae.biz/associative-economics/rudolf-steiner/; www.goetheanum.org/Rudolf-Steiner-Associative-Economics.4437.0.html)*
      ii. Examples of associative economics: Gemeinnutzige Landbau-Forschungsgesellschaft (LBF) in Germany
         • Creating equitable partnerships through new forms of land tenure. Carl-August Loss and Trauger and Hans Groh establish community land trust, Gemeinnutzige Landbau-Forschungsgesellschaft (LBF), through personal donations of land and capital (1968).
         • Carl-August Loss and Trauger Groh establish Buschberghof farm on LBF lands (1968)
         • Objectives of Landbau-Forschungsgesellschaft (LBF)
            ▪ Hold title to agricultural lands and make them available through leases to biodynamic farmers, in perpetuity
            ▪ Eliminate owner privileges/power imbalances in agricultural partnerships where one partner holds title
            ▪ Protect agricultural lands from development by removing land from speculative real estate market

        - Replace the old systems of employers and employees by encouraging cooperative and equitable partnerships
    - Creating new forms of financial cooperation: Landwirtschaftliche Arbeitsgemeinschaft (LAG). Carl August and Trauger Groh establish "Agriculturally Cooperating Community," a network of non-farming community members who support farmers through providing loans to active LBF farmers who no longer qualify for conventional bank loans without the equity conveyed through private land ownership.

iii. European CSA relationships develop from multiple models and influences
- Jan Vander Tuin travels through Switzerland and Germany to study associative economic relations in agriculture
- Producer-consumer food alliance in Geneva, Switzerland inspired by co-operative movement in Chile during Allende Adminstration (1970–1973)
- Jan Vander Tuin helps to found CSA farm (Topinambur) in Zurich, Switzerland (1984)
- LAG members in Germany became customers of farms, creating proto-CSA (1985)
- LAG members and Carl-August hear of CSA scheme begun at Temple Wilton Farm (USA) and begin discussions of starting a CSA at Buschberghof (1987)
- As the CSA model developed and more consumers became shareholders, adequate start-up capital was provided by the CSAs, making the LAG obsolete
- Wolfgang Stranz adopted Trauger Groh's system of CSA, developed on The Temple Wilton Community Farm, on Buschberghof (1988)

D. The History of Community Supported Agriculture in North America

(see: *newfarm.rodaleinstitute.org/features/0104/csa-history/part1.shtml)*

1. Indian Line Community Farm
   a) Jan Vander Tuin brings the concept of CSA to North America from Europe. Introduces the idea to Robyn Van En at Indian Line Farm in South Egremont, Massachusetts and Susan Witt, director of the E. F. Schumacher Society (1984). CSA is seen as a way to integrate Schumacher's and Steiner's ideas.
   b) Robyn Van En, Jan Vander Tuin, John Root, Jr., and Charlotte Zanecchia form core group to begin first CSA with a small apple orchard operation
   c) With Hugh Ratcliffe, Indian Line Community Farm begins to offer shares in vegetable harvests (1986)
   d) Within four years, the Indian Line CSA expands from 30 to 150 members
   e) Robyn Van En drafts pamphlet: "Basic Formula to Create Community Supported Agriculture" (1992); produces video: "It's Not Just about Vegetables" (1992); and founds CSA North America (CSANA), a nonprofit clearinghouse supporting CSA development (1992)
2. Temple-Wilton Community Farm, New Hampshire (see: *www.templewiltoncommunityfarm.com)*
   a) Started by Anthony Graham, Trauger Groh, and Lincoln Geiger (1986). Inspiration for the Temple-Wilton farm came out of discussions with Trauger Groh about Rudolf Steiner's anthroposophical writings, associative economic models in Germany, and from the model of the Camphill Village in Copake, New York.
3. East Coast CSA movement
   a) From the mid 1980s to the present, the number of CSAs on the East Coast has continued to grow steadily, with a large surge in CSA interest between 2004–2008
   b) Examples of East Coast CSA farms
      i. Roxbury Farm NY *(www.roxburyfarm.com)*
      ii. Peacework Organic CSA (formerly Genesee Valley CSA) *(www.peaceworkcsa.org)*

iii. CSA in NYC *(www.justfood.org/csa/csa-in-nyc)*

4. CSA spreading West
   a) Midwest hubs for Community Supported Agriculture
      i. In Wisconsin, the first CSA projects began near Milwaukee and the Twin Cities in 1988
      ii. Many CSA farms have formed associations or networks to exchange information and ideas, educate consumers, and support new or struggling farms (Fair Share Coalition is a large group of Midwest CSAs that work together; *www.csacoalition.org)*
      iii. Examples of Midwest CSAs
         - Angelic Organics, Caledoni, IL (serving the Chicago area) *(www.AngelicOrganics.com)*
         - Common Harvest Farm, Osceola, WI *(www.commonharvestfarm.com)*
         - Gardens of Eagan, Northfield, MN *(www.gardensofeagan.com/farmers_market_csa.php)*
   b) Examples of Community Supported Agriculture on the West Coast
      i. Live Power Community Farm in Covelo, California—the first CSA in California. Horse-powered farm delivering vegetables and fruits to the Bay Area core group *(www.livepower.org)*.
      ii. Full Belly Farm, Capay Valley, California *(www.fullbellyfarm.com)*
      iii. Live Earth Farms, Corralitos, California, started in 1995 (*www.liveearthfarm.com*)
      iv. Eatwell Farm, Winters, California *(www.eatwell.com)*
      v. Homeless Garden Project, Santa Cruz, California (*www.homelessgardenproject.org*). The Homeless Garden Project, founded in 1990, provides job training and support for the homeless population of Santa Cruz.
      vi. UCSC CASFS Farm & Garden CSA, Santa Cruz, California *(casfs.ucsc.edu/community-outreach/produce-sales/community-supported-agriculture)*. Organic horticulture and agriculture training program located at the University of California, Santa Cruz, providing instruction in CSA production and management. The CSA project was started in 1995.
      vi. Gathering Together Farm, Philomath, OR *(www.gatheringtogetherfarm.com)*
      vii. The Root Connection CSA, Woodinville, WA *(www.rootconnection.com)*

E. The CSA Movement in North America: What is Happening to CSAs?

1. Recent research on CSA projects suggests that the number of CSAs experienced moderate but steady growth from their inception in the North America until 2004. At this time the local food movement began to take off, as did memberships in existing CSAs and the development of new CSAs. Regional studies indicate that between 2004–2013, CSA membership and CSA farm operations expanded dramatically, curtailed only by the U.S. financial recession in 2008. In interviews, long-time CSA farmers in California describe increased competition from newer CSAs in areas where the local food movement has grown (see Galt et. al 2011 in Resources section of Unit 3.0, Introduction to Community Supported Agriculture).
   a) Farms also report increasing competition from "Box Schemes" (produce distribution companies representing themselves as CSAs), particularly in urban areas. Many have home delivery.
2. The form of CSA projects has diverged widely from the form described by Robyn Van En and other writing in the early 1990s. Known types of CSAs now include:
   a) Membership/Share Model CSAs: Van En-style community-driven CSA. Involves a "core group" that helps facilitate the CSA, shared risk of crop failure between farm and member, can be started by either farmer or by members, longer membership periods (.5 year, 1 year), rare on the West coast. This type of CSA usually involves a single farm rather than multiple farms.

b) Subscription CSA: Farmer initiated, includes a subscription to the farm, length of subscription varies widely; anywhere from a one-box/one-week commitment, to a full-year subscription. Generally, one farm is involved in this type of CSA, however many farms supplement their boxes with produce or items from other farms. Multiple-Farm CSAs also exist in the subscription model, where several farms will join together to produce one box. Farms also may offer additional subscriptions for other farms' honey, eggs, meat, etc. Subtypes include:
   i. Single Farm Subscription Farm
   ii. Multi-Farm Subscription farm

c) Box-Scheme: Not to be confused with the name of a CSA in the UK, in North America a "Box-Scheme" is coming to be known as the term for CSAs that are not farm-based, but rather are businesses that aggregate the majority of their produce from other sources and (mis)label it a CSA. Box-schemes use the concept of CSA as a marketing device for what is essentially a produce-distribution company.

3. Yearly membership turn-over for all type of CSAs, both in times of expansion and not, continue to be a major challenge for CSA farms. CSA farms of all types and sizes report needing to replace 20–30% of membership every year.
4. Nationally, the number of CSA farms is in constant flux, as farms decide to begin to use CSA as a marketing method, while other farms decide CSA doesn't work for their operation and/or do not survive as a business. While it is difficult to know the exact number of CSAs in North America, author Steven McFadden estimates there are approximately 6,000–6,500 CSA farms after conversations with a range of knowledgeable sources including Elizabeth Henderson, author of *Sharing the Harvest;* Erin Barnett of *LocalHarvest.org*; Professor Ryan Galt at UC Davis; and Jill Auburn, Senior Advisor for the USDA's Ag Systems (see *thecalloftheland.wordpress.com/2012/01/09/unraveling-the-csa-number-conundrum*).
5. In California, farms of all sizes reported an inability to grow CSA membership since the 2009 season, due to losing members and needing to replace them, as well as increased competition from Box Schemes and other CSAs (Galt et al. 2011)
6. CSA farmers in America tend to be more youthful and well educated than the average farmer (Lass et al. No Date; see: *www.cias.wisc.edu/wp-content/uploads/2008/07/csa_survey_01.pdf)*
7. Nationally, most CSA farms manage their land organically or biodynamically (Lass et al. No Date), although only about half are certified organic or biodynamic
8. Nationally, most CSA farms use other forms of marketing in addition to CSA (retail to restaurants, wholesale, and farmers' markets are most common). (Lass et al. No Date)
9. Nationally, the "majority of the farmers surveyed felt the CSA improved their ability to meet farm costs, their own compensation, their quality of life, their ability to maintain and improve soil quality and community involvement" (pg. iii Lass et al. No Date)
10. The CSA movement in North America is currently figuring out how to define itself so as to maintain some integrity of the originating concepts of CSAs within the rapidly expanding number of businesses claiming that they are CSAs
    a) In 2013 California became the first state to enact legislation that defines and regulates CSAs under direct marketing regulations (see Appendix 2, California's Legal Definition of Community Supported Agriculture)

F. The Developing International CSA Movement

1. The term CSA is mostly used in the USA but a variety of similar production and marketing systems are in use worldwide:
   • Association pour le maintien d'une agriculture paysanne (AMAP) in France
   • Agriculture soutenue par la communauté (ASC) in Québec

- Teikei in Japan
- Reciproco in Portugal
- Solidarische Landwirtschaft in Germany
- Andelslandbruk in Norway
- Gruppi di Acquisto Solidale (GAS) in Italy (see also, Ethical purchasing groups)
- Съпричастно земеделие in Bulgaria
- Asociația pentru Susținerea Agriculturii Țărănești (ASAT) in Romania
- Grupa solidarne razmjene (GSR) in Croatia

2. Urban-Rural Generate New Commitments between Citizens (URGENCI) – Seeks to be a worldwide network for imparting information about consumer/producer and urban/rural relationships (*www.urgenci.net/index.php?lang=en*). URGENCI sponsored the "First International Symposium on Local Contracts between Farmers and Consumers" in February 2004 in France, and has met biennially since, the last of which was at Asilomar Conference Center in Pacific Grove, California 2013; the next international symposium is scheduled to take place in China in 2015.

G. How Well Are CSA Programs Meeting Their Goals?

1. While CSAs continue to be a small sector of the North American produce market, they continue to connect producers and consumers, educating the public about organic agriculture and the importance of eating locally
2. As voiced at the 2013 URGENCI conference, CSAs struggle to reach out to the broader U.S. population, and feel at times that they are preaching to the converted
3. Farms operating CSAs report having higher incomes than those of similar size and sale not operating CSAs; they also report a greater connection to their community and increased satisfaction with their life-work
4. The divergence from CSA as a philosophy of farming in its inception to its current conceptualization as a marketing strategy has watered down many of the community-oriented goals
5. The majority of CSA farms, regardless of size, philosophy, or type, continue to use agro-ecological farming methods, thereby reaching many of the environmental protection goals

Appendix 1: The Ten Founding Principles of the Teikei System in Japan

1. **Principle of Mutual Assistance**
   The principle of mutual assistance is intended to direct both consumers and producers toward a mutually supportive and beneficial relationship based on a shared understanding of each other's needs and desires.

2. **Principle of Intended Production**
   The principle of intended production is intended to guide growers to produce the maximum diversity and highest quality of produce within the production capacities of the farm unit.

3. **Principle of Accepting the Produce**
   This principle encourages consumers to accept the produce that has been grown in accordance with the previous consultations between growers and consumers; their diet should depend as much as possible on the produce provided.

4. **Principle of Mutual Concession in the Price Setting Decision**
   This principle encourages the use of full disclosure and an open discussion of the true costs and benefits of CSA for both producer and consumer when establishing the price of a given CSA share.

5. **Principle of Deepening Friendships**
   Founded on the assumption that enduring partnerships require true friendships, the principle of deepening friendly relationships encourages frequent contact among CSA members and producers.

6. **Principle of Self-distribution**
   This principle encourages reliance on the producer or shareholders for the distribution of CSA shares and discourages the use of professional transporters.

7. **Principle of Democratic Management**
   The principle of democratic management encourages both producer and consumers to practice democratic decision making with shared responsibilities.

8. **Principle of Learning Among Each Group**
   This principle encourages the continued development of friendship and non-material culture, in order to avoid the tendency for CSA to devolve into an exclusively commodity/trade-based relationship.

9. **Principle of Maintaining the Appropriate Group Scale**
   As the size (or scale) of the producer or consumer groups will determine the ability of the above practices to be maintained, the principle of maintaining the appropriate group scale encourages the limitation of scale to appropriate levels.

10. **Principle of Steady Development**
    The principle of steady development encourages the continued effort of engaging in mutual cooperation in order to achieve satisfactory conditions for both producer and consumer groups.

Adapted from *Sharing the Harvest: A Guide to Community Supported Agriculture,* by Elizabeth Henderson and Robyn Van En. Chelsea Green Publishing Co., 2007.

Appendix 2: California's Legal Definition of Community Supported Agriculture

Assembly Bill No. 224: Agricultural Products: Direct Marketing: Community Supported Agriculture

CHAPTER 404

An act to amend Section 47000 of, and to add Article 6 (commencing with Section 47060) to Chapter 10.5 of Division 17 of, the Food and Agricultural Code, and to amend Section 113735 of the Health and Safety Code, relating to agricultural products.

Approved by Governor Jerry Brown, September 28, 2013. Filed with Secretary of State September 28, 2013.

Article 6. Community-Supported Agriculture 47060.

For purposes of this article, the following definitions apply:

(a) "Community-supported agriculture program" or "CSA program" means a program under which a registered California direct marketing producer, or a group of registered California direct marketing producers, grow food for a group of California consumer shareholders or subscribers who pledge or contract to buy a portion of the future crop, animal production, or both, of a registered California direct marketing producer or a group of registered California direct marketing producers.

(b) "Single-farm community-supported agriculture program" means a program in which all delivered farm products originate from and are produced at the farm of one registered California direct marketing producer, and no more than a de minimus amount of delivered farm products originate at the farms of other registered California direct marketing producers.

(c) "Multi-farm community-supported agriculture program" means a program in which all delivered farm products originate from and are produced at one or more farms of a group of registered California direct marketing producers who declare their association as a group at the time of their annual certification or by amending the annual certification during the year.

(d) "Farm" means a farm operated by a registered California direct marketing producer or a group of registered California direct marketing producers.

The bill's complete language is available here: caff.org/wp-content/uploads/2012/06/ab_224_bill_20130928_chaptered1.pdf

3.2

CSA Structure and Organization

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Appendix 1: Job Description for the Genesee Valley Organic Community Supported Agriculture (GVOCSA) Core Group 75

Lecture 1: CSA Structure & Organization

A. The Organization of Community Supported Agriculture Operations

1. Types of CSA organization (see also Unit 3.1, History of CSA, page 57)
   a) Membership/Share Model CSA: Community-driven CSA. Involves a "core- group" that helps facilitate CSA, more shared cost between farm and member, can be started by farmer or by members, longer membership periods (.5 year, 1 year), currently rare on the West coast. Usually, only a single farm is involved in this type of CSA (rather than sourcing from multiple farms).
   b) Subscription CSA: Farmer-initiated, includes a subscription to the farm, length of subscriptions vary widely; anywhere from a one box/one week commitment, to a full-year subscription. Generally one farm is involved in this type of CSA, however many farms supplement their boxes with produce or items from other farms. Multiple-Farm CSAs also exist in the subscription, where several farms will get together to produce one box. Farms also may offer additional subscriptions for other farms honey, eggs, meat, etc.

      Subtypes:

      i. Single Farm Subscription Farm (one farm that's growing produce)
      ii. Multi-Farm Subscription farm (collaborative amongst farms)
   c) Box-Scheme: Not to be confused for the common name of a CSA in the UK, in North America a "Box-Scheme" is coming to be known as the term for CSAs that are not farm-based, but rather are businesses that aggregate the majority of their produce from other sources and (mis)label it a CSA
   d) Farm-stand CSA, Farmers'-Market CSA: Some farms give a 10% discount at their farm stand or farmers' market stall to consumers that pay for a "share" at the beginning of the season. For example, a consumer pays $300 at the beginning of the season for a line of credit at the farm stand or farmers' market stall, the farmer in turn gives that consumer a 10% discount, or, $330 worth of produce total.
   e) Animal-Share: Legal agreement between farmer and consumer where the consumer "owns" part of an animal, and pays a monthly maintenance fee for food, housing, etc. In turn the consumer gets part of the animal product (milk, cheese, meat, etc.) that they own. Legal agreements creatively address laws against raw milk.
2. Potential roles and responsibilities within Community Supported Agriculture programs
   a) Farmer/operator – Manages agricultural production system (e.g., crop planning; manages work crew; tractor work; engages in day-to-day field activities)
   b) CSA manager – Manages public relations, share distribution, community outreach, billing, membership recruitment, newsletter production, special events coordination. A manager is recommended for all CSAs with more than 200 members.
   c) Field crew/labor – Field work (tractor work, planting, irrigation, cultivation, harvest, and pack), distribution/delivery
   d) Core group (Membership/Share Model only) – Averages 5–12 people and includes farmer(s) and CSA shareholders. May accept responsibilities including: administrative responsibilities (see CSA manager, above), special events/festivals, addressing legal issues, developing low-income share program, or contributions of expertise in any area (see Appendix 1, Core Group Responsibilities, for a sample of the roles filled by CSA core group members).

e) Drop-site hosts – For farms that have off-site pick up locations for members (churches, personal residences, office building, etc.), a drop site host is a great way to maintain a constant connection to that location, some farmers choose to reward these hosts with a box in exchange for the use of the space. Farmers also testify that hosts often are great advocates for the CSA, and bring in new members

3. Variations and innovations on the Membership/Share and Subscription CSA model
   a) Mixed vegetable CSA – Most common form of CSA, providing a wide diversity of fresh annual vegetables
   b) Fruit and vegetable CSA – Many CSAs offer fresh fruit that is produced by the CSA farmers themselves, or through purchasing from other growers, as part of their shares (or as supplemental shares)
   c) Grains, beans, seed CSA – A small number of CSAs offer rare varieties of fresh grains, beans, and seeds as part of their offerings
   d) Meat, dairy, bread, and other products – Many CSAs purchase meat, dairy, and baked good from other producers and offer them as part of their shares or as "add-on shares." Some CSA operations are now purchasing bulk food (e.g., tropical fruits) and food supplies from wholesale distributors and reselling these items to their shareholders in order to accommodate the "one-stop shopping" that many consumers prefer.
   e) Multi-Farm CSA – Many CSA operations have teamed with producers of different crops to collectively supply the wide diversity of produce and other foods that consumers prefer
   f) Full-diet CSA, offers all of the above (grains, beans, vegetables, dairy, meat, eggs, bread, flower bouquets, wine, etc.)

B. Challenges Commonly Faced by CSA Farms

1. Production complexities – In order to provide for the desires of their shareholders, many CSA operations produce more than 30 different crops. This makes crop planning, cultivation, harvest, and crop rotation very complex and thus requires a great deal of knowledge and management oversight (see Unit 3.5, CSA Crop Planning).
2. Administrative complexities – Correspondence with consumers/members/shareholders, billing, distribution of shares, coordinating community support events, etc., all require significant amounts of time and skills in building a social organization
3. Turnover in consumers/members/shareholders – As CSA shareholders do not always continue from year to year, recruitment is an ongoing responsibility. Shareholder retention rate averages 60–70%.
4. Pressure of providing high quality and diversity in shares on a weekly basis
5. Customer preferences that lie outside the format of the CSA (e.g., more choices in crops)
6. Labor challenges – CSA farms are almost continually planting and harvesting a wide diversity of crops throughout the growing season. As with any fresh vegetable or fruit operation, harvesting, weed management, and post-harvest handling on a CSA farm represent a large proportion of total farm labor and require careful oversight.
7. Community involvement – Involving community members/shareholders in farm labor or activities requires additional training and management oversight
8. Land security – Like other forms of sustainable agriculture, which involve considerable investment of time, money, and materials, and investment in the development of soil fertility and infrastructure, CSA operations share the challenge of access to affordable lands close to urban areas where CSA farming usually thrives. Innovative ways of creating affordable and secure access to land are being developed and are addressed in Unit 9, Land Tenure Options.
9. CSA income and expenses

a) Expenses – As CSA shares sold to members do not cover the cost of initial capital investment for farm equipment, CSA farmers will need to seek sources of financing (e.g., approach banks with business plan or make large purchases as they become possible within the farm budget) to cover major start-up costs

b) Income – Many CSA farmers report difficulties in receiving adequate returns for their labor, and lack adequate health care and retirement security. Farmers with larger CSAs report having larger and more stable incomes. Transparent budgeting and educating members about the true cost of production are essential in building a supportive and knowledgeable CSA project where the needs of both farmers and shareholders are met.

10. Competition from Box-Schemes – Farmers nationally have reported losing current and potential members to large-scale produce distribution operations

C. Community Supported Agriculture Training and Education Opportunities

1. UCSC CASFS Farm & Garden Apprenticeship Program – Provides a six-month residential training program in organic farming and gardening. Includes CSA curriculum and training *(casfs.ucsc.edu)*.
2. Michigan State Organic Training Program – Nine-month training on year-round CSA production (see: www.msuorganicfarm.com/organic-farmer-training-program)
3. Sustainable Agriculture Education Association *(sustainableaged.org/Resources/AcademicPrograms/tabid/86/Default.aspx)*

   A comprehensive listing of colleges, Universities, and nonprofit organizations providing educational opportunities in sustainable agriculture
4. The Farm School, Massachusetts – Year-long organic farming and homesteading program *(www.farmschool.org)*
5. Collaborative Regional Alliance for Farmer Training (CRAFT) – CRAFT is a cooperative farmer-driven effort. CRAFT groups exist around the country. They are self-organized by farmers and/or apprentices to enhance educational opportunities for farm interns. Every other week from April through October, interns from all participating farms gather at one farm for a visit and/or workshop. Each visit includes an overview of the farm as well as a hands-on demonstration of one or two specific topics, including CSA-related topics.
6. Angelic Organics' CSA Learning Center – The CSA Learning Center is a nonprofit resource center (501(c)3) that provides opportunities for diverse community members, prospective farmers, and CSA shareholders from the greater Chicago area. Projects include youth education programs, models for developing low-income CSA shares, and technical assistance and training programs for regional producers *(www.csalearningcenter.org)*.

Appendix 1: Job Descriptions for the Genesee Valley Organic Community Supported Agriculture (GVOCSA) Core Group

The GVOCSA Core Group is a participatory 160-member CSA

ONE CLERK:

- Keep minutes at monthly core group meetings
- Report on action items at end of meetings
- Check up with people who have accepted assignments

ONE REGISTRAR

- Keep membership list up to date
- Serve as one of several contact people for information about CSA
- Prepare list of members for large/bulk mailing

EIGHT DISTRIBUTION COORDINATORS (4 COORDINATORS FOR EACH PICK-UP DAY)

- Each coordinator covers 4 to 5 distribution days during the 26-week season
- Coordinator arrives early to distribution point to check distribution list from farm against boxes in cooler
- Oversee work of helpers who prepare bulk produce and boxes for pickup
- Check in members as they come for shares
- Collect money
- Distribute flyers or recipe sheets for the week
- Stock tables with vegetables for shares
- Break down, clean up, and return necessary materials to farm
- Submit bulk orders and payments to farm
- Assure coordination among other distribution coordinators
- Organize annual meeting to review procedures, train new coordinators
- Ensure necessary supplies (e.g., bags, boxes) are available; makes sure cooler is working properly
- Follow up on repeated no-shows for pick up
- Make sure leftover food goes to soup kitchen or local families

ONE WEBSITE MANAGER

- Manage GVOCSA website: add and remove recipes and news, answer queries, add links, archive newsletters

TWO SCHEDULERS

- Oversee member sign ups for work dates at farm and on distribution
- Prepare copy of schedules for mailing to members (members are responsible for finding replacements and trading work times; they are asked to inform the scheduler of changes made)
- Receive weekly attendance reports from farmers and distribution coordinators
- Reschedule members who miss work slots

ONE SPECIAL ORDER COORDINATOR

- Arrange with other farms for additional products on need basis
- Prepare sign-up sheets so members can place orders
- Collect money and forward to farms
- Arrange for pick up and distribution of products

TWO TREASURERS

- Set up bookkeeping system
- Collect deposits from members before season begins
- Prepare member contracts
- Help new members fill out contracts

- Collect payments and deposit in bank account
- Put up reminders when payments are due
- Pay farmers
- Pay bills for Core and distribution expenses
- Arrange for scholarships for members who need them
- Make monthly reports to Core on state of finances
- Prepare end-of-season financial report

ONE FARMER

- Report to monthly Core meetings on what has been happening at the farm
- Represent the farm at Core meetings

TWO NEWSLETTER EDITORS

- Collect articles, recipes, jokes and announcements for bimonthly issues of newsletter
- Format, copy and mail/e-mail newsletter to members
- Oversee big annual mailing of beginning-of-season information to members

TWO OUTREACH COORDINATORS

- Design outreach plan for recruiting new members
- Oversee mailing of annual letter with 3 CSA brochures to each member
- Write press releases for church, temple, environmental groups' newsletters
- Make presentations on CSA at meetings, or arrange for farmers to do so
- Line up media opportunities for farmers to publicize CSA
- Make special efforts to recruit low-income members

ONE WINTER SHARE COORDINATOR

- Sign members up for winter shares
- Arrange for distribution site
- Hold meeting with members who sign up
- Recruit helpers for distribution from among members buying winter shares
- Oversee food delivery to site, distribution, and clean up

ONE NEW MEMBER COORDINATOR

- Identify new members who need guidance of experienced member
- Recruit experienced members and make pairs
- Twice during season, check in with experienced members to make sure pairs are functioning well
- Get report from pairs at end of season

ONE SOCIAL COORDINATOR

- Arrange for early-in-season picnic
- Arrange for a few people to bring snacks, provides nametags, and encourages members to linger and socialize at pick-up stations
- Organize end-of-season banquet

ONE PHONE/ART PROJECT PERSON

- Call members each week to remind them of distribution work
- Designs posters or signs when needed

AD HOC CHILDREN'S COMMITTEE

- Help farmers design and develop play area for children
- Collect toys for farm

3.3

CSA Outreach

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Lecture 1: CSA Outreach

A. Member Recruitment Strategies

> **Note:** As we have discussed earlier in this section, there are many ways to run a community supported agriculture effort. In this lecture we will explore CSA Outreach in regards to the two most common methods of running a CSA, a "Subscription Model" in which the farmer starts the CSA by advertising and acquiring members who do not help run the CSA, and a "Membership or Share Model" where community members come together to form a "core group" that helps the farmer operate the CSA.

1. Forming a new CSA – Farmer seeking to build a membership (Subscription) or a farmer or community seeking to collaboratively form a CSA (Membership). See Appendix 1, Steps to Forming a CSA.
   a) Both Subscription and Membership: Contact existing community groups—e.g., day care, faith communities, health clubs/gyms, social justice groups, agriculture organizations, schools and colleges, churches, environmental and consumer organizations, civic groups, natural food retailers, etc., with brochures describing your potential enterprise
   b) Both Subscription and Membership: Use public media—Encourage newspaper articles, community TV and radio programs that address CSA as a topic and profile existing and forming CSAs
   c) Membership only: Organize an exploratory meeting of prospective shareholders to present and discuss the following –
      i. The social and environmental issues facing agriculture today
      ii. What CSA is, how CSAs generally function, and how CSA attempts to address the social, economic, and environmental concerns in agriculture
      iii. Define other potential consumers/CSA members in the community. What is their demographic profile? What are their food preferences?
      iv. Assess community interest in supporting low-income households via donations to low-income CSA shares
      v. Assess which fresh foods are culturally appropriate for the community
      vi. What kind of CSA model/structure are community members interested in?
      vii. Define which risks (due to crop failures/low yield) people are willing to take as CSA members
      viii. Assess commitment level of assembled participants to join CSA
      ix. Form core group to assist in additional recruitment (see below for information on core groups)
   d) Membership only: Organize a subsequent meeting to discuss prospective shareholder preferences. Address the following topics –
      i. What commodities does the community want the grower to produce?
      ii. What type of production/land use practices does the community support (e.g., organic or biodynamic standards)?
      iii. What types of labor compensation practices is the community willing to support?
      iv. Will CSA shareholders contribute labor or other forms of work, and how will this affect share costs?
   e) Membership only: Prepare proposal with budget to present to group based on group preferences
   f) Membership only: Organize core group (or CSA coordinator) to –
      i. Approve budget proposed by farmer

ii. Set fee policy, payment schedule, and collect dues
iii. Define location and timing of share distribution
iv. Define and coordinate member responsibilities
v. Recruit new/additional members through outreach, education, advertising

2. Recruiting and maintaining membership for an existing CSA: A necessity in all types of CSAs
   a) Give current members a price break for next season if they sign up in advance
   b) Email existing members to spread the word to friends, family, co-workers, and neighbors; send them a PDF of a flyer that they can print and post
   c) Request members send out emails, make phone calls, and/or help distribute flyers about the CSA
   d) Get a newspaper reporter to do a story on the history of your CSA
   e) Use community TV and radio to advertise your CSA
   f) Flyer at gyms, schools, sympathetic businesses (bakeries and coffee shops), etc.
   g) Advertise for a farm potluck/slideshow to attract new members and educate your audience about agriculture
   h) Review and consider adding new drop sites to expand and change reach of CSA
   i) Table at local colleges and/or county health and wellness events
   j) Tie the CSA effort into a "wellness" effort. E.g., the FairShare CSA coalition in Wisconsin has teamed with local health insurance providers. The health plans offer rebates to subscribers who belong to CSAs to encourage healthy eating habits. For details see: *www.csacoalition.org/our-work/csa-insurance-rebate/*.
   k) This will take substantial time, who is going to do it? Consider paying a coordinator/staff person over the fall and winter for recruitment for CSAs over 200 people
3. CSA and low-income membership (see: *www.hungeractionnys.org;* The FairShare CSA Coalition website: *www.csacoalition.org)*
   a) Recruiting, funding sources, and fundraising

      Easy:

      i. CSA operating on a sliding scale with additional compensation by other members
      ii. CSA fundraising events for low-income shares (e.g., part of Harvest Festival or Farm Dinner income)

      Requires more coordination—consider doing with a coalition of CSAs:

      iii. Revolving loan funds that allow farmers to be paid up front, with low-income CSA members paying back the sponsoring organization at an affordable weekly cost
      iv. CSAs and Federal Food Stamp Program (SNAP/EBT)—Coalition or CSA farms can apply to become a SNAP Retailer and receive electronic bank transfer (EBT) funds direct to bank account. Recommendation: make your farmers' market/farm stand/ CSA the same name and account. More information can be obtained here: *www.fns.usda.gov/operating-csa-and-snap-participation*
   b) Developing a low-income CSA membership program

      Outreach:

      i. Contact your county's human resources division or organizations such as Women Infant and Children's Supplemental Program (WIC) for information on determining eligibility for receiving low-income shares and for developing a low-income application form (see Appendix 2, Low Income CSA Member Application)
      ii. Contact local food banks, senior citizen groups, homeless shelters, women's centers, welfare programs, schools, etc., to explain your interest in developing a limited-income share program. Request information on funding sources.

iii. Invite program directors of the above types of organizations to your farm for a potluck/slideshow/CSA presentation
iv. Bring literature about CSA, your CSA brochure/flyers, and low-income application forms to public events (see Appendix 2, Confidential Low-Income CSA Membership Application)
v. Get the word out through flyers, newspaper ads/articles, community TV, and radio to explain your low-income share program specifically
vi. Contact other organizations for ideas on outreach strategies to households of all incomes. Examples include:
- FairShare CSA Coalition *(www.csacoalition.org)*
- Just Food *(www.justfood.org)*
- Hunger Action Network *(www.hungeractionnys.org)*

c) Ways to subsidize
i. Organize fundraising events for low-income/scholarship shares and increase awareness about CSA and efforts to reach out to households of all incomes
ii. Include low-income donation program on CSA application forms
iii. Make CSA a sliding scale

B. CSA Brochures, Pledge Forms, Informational Flyers, and Web Pages

See Appendix 3, UCSC Farm CSA Brochure and Pledge Form; Appendix 4, UCSC Farm General Information Flyer. For model CSA web sites, see Angel Organics, *www.angelicorganics.com;* Full Belly Farm, *fullbellyfarm.com;* Peacework Organic CSA, *www.peaceworkcsa.org;* and Live Earth Farm, *www.liveearthfarm.net/csa/about-our-csa-program/)*

1. Content: web pages, brochures, informational flyers should include –
a) Clearly defined vision/mission of the CSA
b) Description of your CSA
c) Who you are personally
d) Location of your farm(s)
e) Commitment you're asking for from potential shareholders
f) Definition of shares and how much food is provided
g) Price of share (full, half, per season, per month, per box, etc.)
h) Payment plan options
i) Contact information
j) Pickup times and days
k) Length of produce season
l) Event calendar
m) Volunteer opportunities
n) What one can expect in the CSA box throughout the season
o) Additional information: farm history and background, growing methods, crop harvest schedule, photographs and other artwork

2. How to distribute outreach materials
a) Distribute flyers to organizations (described above) with contact information to receive formal brochure with additional information and pledge form
b) Web and Facebook sites
c) Farmers' markets (keep a sign-up list at your sign for people who are interested and would like to know more)
d) Informational meetings

3. Layout/Design
    a) Get help from your members: This can be considered one of the core group tasks and/or a member could do this work in exchange for a share

C. CSA Newsletters (Recommended for all types of CSAs; see Appendix 5, Examples of CSA Newsletters)

1. Purpose and content: Fundamentally, to get people engaged with and excited about your farm!
    a) Communicate with members about farm events and progression of season
    b) Educate members about your farming practices
    c) Inform members of how to store produce
    d) Provide recipes for preparing vegetables and fruits
    e) Provide information about crop history, crop culture, culinary uses
    f) Present issues related to sustainable food and agriculture systems
    g) Story telling, entertainment: E.g., personal stories featuring the farmers, farm apprentices, interns, paid laborers, or CSA members
    h) Other possible content: Photos of farm, farmers, interns, paid laborers, CSA members; artwork of vegetables, fruits, flowers
2. Who designs and writes the newsletter? (Depends on your scale)
    a) Farmer, Paid CSA coordinator, CSA members, interns/apprentices can each be in charge of designing, editing, and distributing the newsletter
    b) Farmers can also simply contribute a column that keeps members up to date on farm happenings, with others accepting primary responsibility for content, layout, etc.
3. Frequency
    a) During off season: Once a month to keep members informed about what the farmers are doing to prepare for the season, share current issues in sustainable agriculture, etc.
    b) During the season: Once a week with each share (hard copy, website, or email), also has details about the crops and varieties included in their share and what to do with them (people love recipes)
4. Design/Layout
    a) Keep it simple: One page, single or double-sided
    b) Create a masthead that includes the name of the newsletter; the name of the farm; the date; volume number; and farm or CSA logo
5. Examples of newsletters (see also Appendix 5)
    a) Angelic Organics, *www.angelicorganics.com*
    b) Peacework Organic CSA, *www.peaceworkcsa.org/about/newsletter-archive/*
    c) UCSC Farm CSA, *casfs.ucsc.edu/community/produce-sales/csa-newsletters.html*
    d) Waltham Fields Community Farm, *communityfarms.org/index.php/csa/csa-newsletters/*
    e) Shooting Star CSA, *www.shootingstarcsa.com/Shooting_Star_CSA/Newsletters.html*

D. Shareholder Surveys (see Appendix 6, UCSC Farm CSA Shareholder End-of-Season Survey)

1. Purpose
    a) To survey shareholders' satisfaction and involvement with the CSA
    b) To provide members an opportunity to define what they like about the CSA and provide suggestions for changes
    c) To survey membership for their opinions on produce quantity, quality, and variety

2. Methods
    a) Online survey sent via email or embedded on your website/in your e-newsletter
    b) Include paper copy as supplement in newsletter
    c) Informally survey members by talking one-on-one at pick up
    d) Conduct survey at shareholder gatherings (Membership CSAs only)

E. "Work Exchange Shares" on the Farm

1. Important considerations in developing a work exchange program
    a) Liability, insurance, workman's comp, what state labor regulations are pertaining to "volunteers" and people working on your farm, regardless of compensation type (see Unit 8.0, Farm Employees and Innovative Models for Interns and Apprentices for a discussion of employee and volunteer considerations)
    b) Once you have determined that work shares are of interest to your operation, here are the important factors for consideration:
        i. Hours required for a share
        ii. Tracking hours worked
        iii. Who will meet with and explain needed work priorities, activities on the farm?
        iv. Develop farm policy: Members will need to be informed of these policies from the beginning to prevent any misunderstandings
        v. Example: Vermont Valley Community Farm (in Wisconsin) *www.vermontvalley.com/worker-shares;* Peacwork Organic CSA (in New York) *www.peaceworkcsa.org/about/work-requirements/*
2. CSAs that require members to work on the farm
    a) It is important to motivate your members and get them excited about their participation
    b) It is important to communicate that their participation is imperative for the CSA to remain sustainable

F. Volunteers, Workdays, and Special Events

1. Periodic scheduled workdays can develop relationships with your members and assist at critical time periods in getting farm work completed
2. Organizing for volunteers/work days/special events
    a) Determine who will organize and/or be in charge of volunteers, workdays, and special events
    b) Determine when you will need volunteers and provide advanced or scheduled notice to members
    c) Consider liability and labor laws; many farms now have waivers for all volunteers (and visitors)
    d) Develop farm policies regarding age of volunteers, animals on farm, tool use, times of visitation, etc.
    e) Members need to be made aware of policies in advance
3. Special events: Harvest Festivals, workshops, potlucks, fundraisers
    a) Special events provide members opportunities to visit the farm to enjoy and celebrate the growing of food and the CSA relationship
    b) Find out from your membership who would be interested in being the "special events coordinator." Delegate to that person(s).

G. CSA and Community Service (donations, gleaning programs, etc.)

1. For farms that decide that making a community contribution (beyond growing food) is one of their goals
   a) Examples of social services programs associated with CSAs
      i. Harvest Against Hunger, Seattle (firstharvest.org) – A Rotary Club/AmeriCorps program that partners gleaning from local farms to hunger relief organizations
      ii. Marin Organic Gleaning Program (www.marinorganic.org/food-justice/) – Farmers donate vegetables that are harvested by a "glean team" and donated to area food banks and community organizations
      iii. The UCSC Farm CSA – Excess produce is donated to a variety of organizations serving low-income groups including California Grey Bears, local soup kitchens serving the homeless population of the City of Santa Cruz, and the UCSC campus food pantry serving food insecure students and their families
   b) Donate left over CSA boxes to service organizations, have them pick up at the farm
   c) Partner with an NGO (Food Bank, etc.) to collect gleaned harvests from the farm

H. CSA Core Group Development and Recruitment (only for Membership CSAs)

1. What is a CSA core group?
   a) Core groups provide the community support that can create the stability for farms that offsets the unpredictability of nature and the produce market
   b) The core group averages 5–12 people, which includes farmers and CSA shareholders
   c) The core group accepts additional responsibilities, which can include distribution, collecting payments, organizing festivals, preparing the budget, paying the farmers, dealing with legal issues, and recruiting more shareholders as required
   d) Core groups are often an indispensable part of CSA operations that, together with the farmer(s), create the institution that is true community supported agriculture. E.g., see Live Power Community Farm, *www.livepower.org/about-the-farm/*.
2. How to develop a core group
   a) Assess shareholder interest in taking on additional responsibilities beyond financial compensation for a share
   b) Discuss with members (and potential members) your desire to have a committed group of individuals play a leadership role in the administration and support of the CSA
   c) Assess what skills your members could offer (e.g., web design, newsletter writing, publishing, brochure and survey distribution, database management, distribution, accounting, legal work, organizing work crews and/or celebrations). Encourage members to accept leadership in these roles.

      Example: Angelic Organics CSA Shareholder's Service Directory (see: *www.angelicorganics.com)*. The Shareholder's Service Directory encourages the sharing of skills and talents among CSA shareholders and may help identify people who have particular talents.
   d) Examples of core group roles/responsibilities (see Appendix 1, Job Descriptions for the Genesee Valley Organic Community Supported Agriculture Core Group, in Unit 3.2, CSA Structure and Organization)
      i. Membership Coordinator – Ensures contact between farmer and members, collects all correspondence and fees, and addresses membership questions, concerns
      ii. Treasurer – Receives fees from the membership coordinator, keeps a schedule of payment, deposits fees, writes checks to farmer, does bookkeeping, and maintains a bank account

iii. Communication Coordinator – Writes email or online newsletters, and maintains membership list and addresses
iv. Volunteer Coordinator – Helps coordinate volunteer days, maintains a list of volunteers, and calls volunteers for market assistance when needed
v. Social Director – Organizes social activities, coordinates volunteers for activities, and works with the farmer for on-farm special events
vi. Low-Income CSA Coordinator – Identifies families for free or reduced-fee shares, contacts families for the farmer, and ensures that shares are distributed to families
vii. Other core group roles
    - Database manager
    - Survey/evaluation writer and distributor

e) CSA Core Group meetings
i. The importance of regular meetings (approximately once a month)
ii. Decide how you want meetings to be run: Facilitator, note taker, etc.
iii. Have an agenda and time limit for each meeting, and stick to it
iv. Decide on your decision-making process (consensus, majority, etc.)
v. Allow for everyone present to participate in the meeting

Appendix 1: Steps to Forming a CSA

To form a subscription CSA or membership/share CSA, start small and grow organically!

1. Initiators (either farmers or groups of non-farmers) issue a call to form a CSA. You as a farmer can also seek members/subscribers:
   a) Among friends or neighbors
   b) Among existing groups: daycares, environmental or consumer organizations, churches, civic groups, schools or other institutions, workplaces
   c) For Subscption CSAs, by advertising as any new business would in order to gain customers
2. If going with a Membership/Share CSA: Hold exploratory meeting of prospective sharers and farmer(s). Possible agenda:
   a) What is a CSA?
   b) Why eat locally grown food?
   c) Why small farms need support
   d) Assess level of commitment of participants
   e) If interest is high enough, create founding core group
3. If going with a Membership/Share CSA: At this meeting or a subsequent meeting, come to agreement on the group's values:
   a) Does the group want organic food?
   b) Does the group want locally grown food?
   c) Does the group want racial, ethnic, and economic diversity among members?
   d) Is it important to involve children?
   e) Will all members contribute work, or will some buy out by paying a higher fee?
   f) Do members want to share production risks with the farm(s)?
   g) What commodities does the group want?
   h) Does the group want to share mailing list with other groups?
4. If going with a Membership/Share CSA: Organize the core group to:
   a) Decide on farmer(s)
   b) Decide growing site
   c) Decide how and where food will be distributed
   d) Divide up member responsibilities
   e) Approve the budget proposed by the farmer(s)
   f) Set fee policy and payment schedule
   g) Clarify expectations as to variety and quantity of food
   h) Set guidelines on participation of children (if desired)
   i) Decide who owns any equipment purchased
5. If going with a Membership/Share CSA: The core group recruits additional members through a variety of techniques:
   a) Post fliers
   b) Organize recruitment meetings
   c) Talk up idea with friends
   d) Share on social media sites (Facebook, etc.)
   e) Place notices in organizations, churches, mailing to likely groups

f) Send out press release
g) Find friendly reporter to write story

6. Both types of CSAs: Ideally, CSA members make a commitment –
   a) To pay in advance of receipt of food (whether by season, month, or other schedule), regardless of quantity and quality of food due to conditions
   b) Perhaps to participate in farm, distribution, and other work (less common)
7. Establish the legal status of the CSA. Many defer decisions on legal structure for a season. Advice from a lawyer may be helpful, or see Nolo Press in Resources, Unit 3.0. Existing options include:
   a) Consumer cooperative
   b) Sole proprietorship or partnership of farm
   c) Corporation or limited liability corporation
   d) Nonprofit corporation (or branch of existing nonprofit)
   e) farmer-owned co-op
8. Determine capitalization of farm(s). May start with a minimum amount of rented or borrowed equipment. For the longer term, decision to be made on purchase and maintenance. Options include:
   a) Farmer(s) capitalize
   b) Members capitalize through fees
   c) The group seeks grants
   d) The groups seeks loans. Possible sources include FarmLink, Farm Credit, National Cooperative Bank, commercial banks, revolving loan funds

   Options for land tenure include:
   e) Private holding
   f) Land trust
   g) Lease agreement with private owner or institution (see Unit 9.0, Land Tenure Options and Strategies, for more information)

Adapted from *Sharing the Harvest: A Guide to Community Supported Agriculture, 2nd Edition,* by Elizabeth Henderson and Robyn Van En. Chelsea Green Publishing Co., 2007.

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Appendix 2: Confidential Low-Income CSA Membership Application

CONFIDENTIAL

2015 Low Income Community Supported Agriculture (CSA) Membership Application

Center for Agroecology & Sustainable Food Systems, University of California, Santa Cruz

The aim of **Community Supported Agriculture (CSA)** is to build a healthy community by providing a local, organic food supply and by re-establishing a relationship between the community and the farmer. It is a partnership—the community members support the farm and farmers directly for an entire season and in return receive a share in the weekly harvest. This partnership increases community involvement in food production and in the health of the local economy and environment.

The **UCSC Farm's CSA program,** part of the *Apprenticeship in Ecological Horticulture,* is a training ground for 40 apprentices in crop planning, cultivation techniques, harvest methods and community outreach and education. Members of the CSA receive a weekly share throughout the harvest season, beginning in early June and continuing for approximately 22 weeks.

The UCSC Farm is committed to making our CSA program accessible to individuals and families of all economic backgrounds. To ensure this, we are offering low-income memberships at the half-price rate ($280) for our growing season. To apply, please complete the following information. Acceptance is based on a first-come, first-serve basis and is available to those applicants who demonstrate the greatest need. EBT cards are accepted for food benefits.

Name (s) _____

Street Address _____

_____ Home # _____

City / State / Zip

Occupation _____ Cell or Work # _____

Spouse / Partner's Occupation (if applicable) _____ Email _____

If you are a student, can a parent or guardian claim you as a dependent on their IRS federal tax form? _____

Combined monthly income $ _____ Add'l income $ _____

e.g. child support, etc.

Number of children supported by the applicant / family? _____ Monthly expenses $ _____

Circle one category below – A, B, or C, and complete:

A. Individual / family receives public assistance – circle one that applies:

SNAP (EBT card) Social Security Unemployment Disability AFDC # _____ Medical # _____

B. Income – circle one if gross monthly income is under (over 5 people, add $678 per person):

$1,946 (1 person) $2,622 (2 people) $3,300 (3 people) $3,976 (4 people) $4,652 (5 people)

C. Individual / family income is over category B guidelines, but feel assistance is needed. Please explain:

_____

_____

➡ ***Required:*** Please explain your reasons for requesting a low-income membership to the UCSC Farm CSA (cont. back of page), and, if you file taxes, include a copy of last year's IRS federal tax return 1040, pages 1 and 2 (income and signature/date).

_____

Appendix 3: UCSC Farm CSA Pledge Form

2015 Community Supported Agriculture (CSA) Shares Pledge Form

In becoming a member of the UCSC Farm CSA, I understand the following:

- I am making a financial commitment for the 2015 farm season. As the designated primary shareholder, I understand that my share payment is non-refundable.
- I recognize that due to the inherent risks of farming, there are no guarantees on the exact amount of produce that I will receive.
- that my share comes from an educational farm and that apprenticing farmers are producing my food.
- I understand and accept this commitment and assume responsibility to contact the staff if there are any questions or concerns.

Please note that in order to complete your reservation for the 2015 CSA Program, you must submit payment with a signed pledge form to the address listed below.

Signature _____ Date _____

Primary Shareholder _____ Co-Shareholder _____

Primary Address _____ Zip _____
Street / City

Primary Cell # _____ Home or Work # _____

Email _____ Co-share Email _____

Co-share Phone _____

Payment options

FULL SEASON: (begins Tuesday, June 2):

❑ **payment in full:** **$560**

❑ **Two checks:** **$280**
today's date and
post-dated June 1 **$280**

❑ **Four checks:** **$140**
today's date and
post-dated June 1 **$140**
post-dated July 1 **$140**
post-dated Aug 1 **$140**

LATE SEASON: (begins Tuesday, Aug.18):

❑ **payment in full:** **$280**

❑ **Two checks:** **$140**
today's date and
post-dated Sept 1 **$140**

Payment by Check only, payable to **"UC Regents"** *Money order or cashier's check OK*

Send with this pledge form to:

CASFS / UCSC Farm
1156 High Street
Santa Cruz, CA 95064
Attn: CSA

Pick-up site

❑ **Tuesdays at the Farm** (noon-6:30 p.m.)

❑ **Fridays at the Farm** (noon-6:30 p.m.)

❑ **Fridays at Bay & High** (2:30-6:00 p.m.)

OFF-CAMPUS PICKUP SITE:

❑ **Westside (Tuesday only** 2:30-5:30 p.m.)
Location: **Westside Farm & Feed**
817 Swift St., Santa Cruz 95060

Office Use Only: ❑ Payment enclosed
Date rec'd: _____ Check payment amount: _____

Make a donation to support low-income shares!

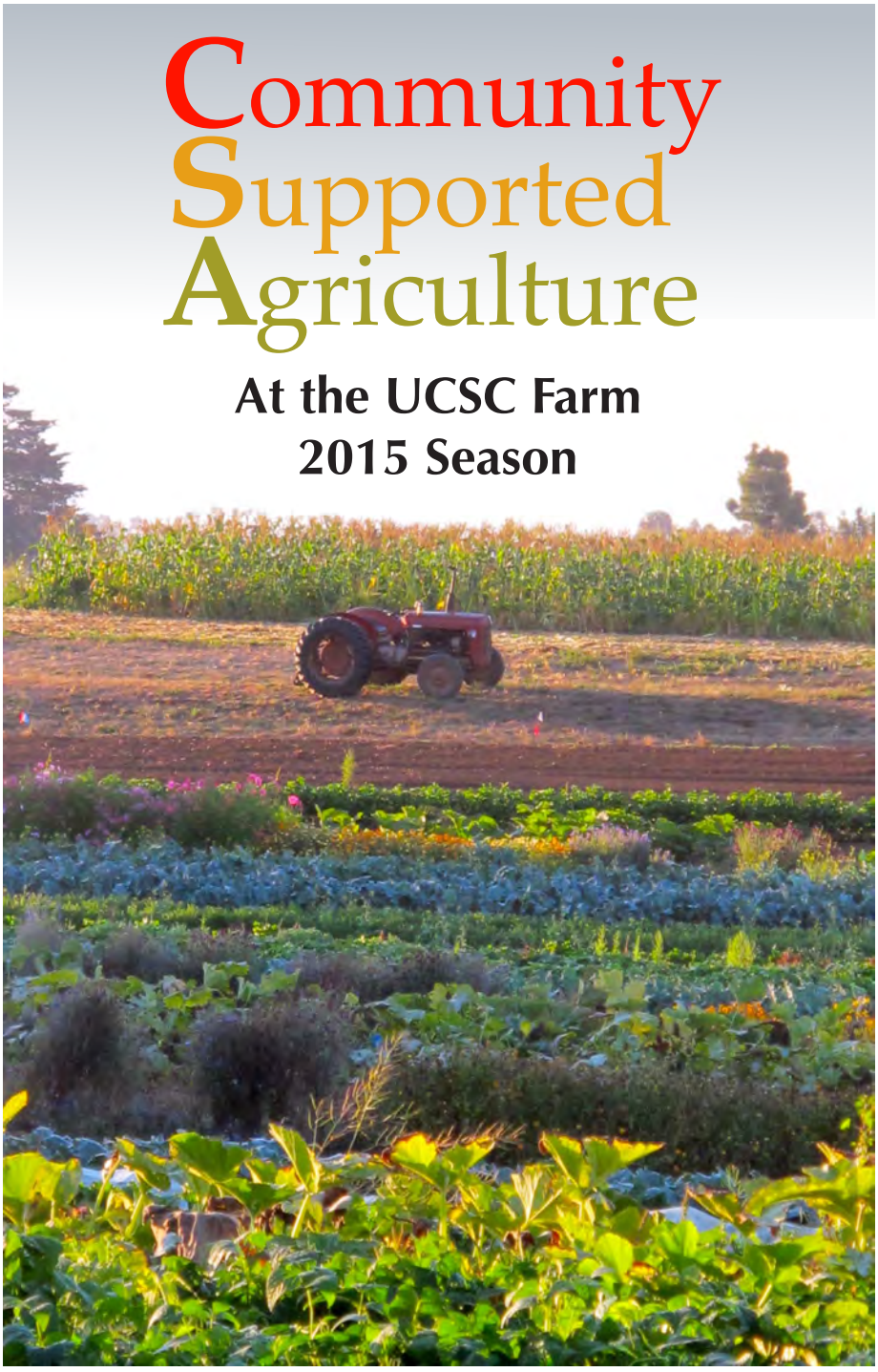
We gratefully accept donations to support low-income shares. *Donations are tax deductible.*

If you would like to donate, please include with your pledge form and payment, indicating the amount below:

❑ $25 ❑ $50 ❑ $100 ❑ $280 (full share)

I would like to donate $_____ to a low-income share.

Appendix 4: UCSC Farm CSA Brochure



Appendix 4 (cont.): UCSC Farm CSA Brochure

Community Supported Agriculture (CSA)

CSA is a collaboration between the local community and the farmer. The community members support the farm directly for an entire season and in return receive a share in the weekly harvest. This partnership increases community involvement in food production and in the health of the local economy and environment.

CSA at the UCSC Farm and Garden

For more than 46 years, people from around the world have come to the UCSC Farm and Garden each spring to take part in the six-month Apprenticeship in Ecological Horticulture, offered through the Center for Agroecology & Sustainable Food Systems (CASFS). Under the direction of the CASFS teaching staff, apprentices have an immersion learning experience in cultivation and care of organic crops using ecological methods. They are intimately involved in the whole season's work, planting, cultivating, and harvesting crops from the six acres of tractor-worked fields and the two large gardens – the Farm Garden and the Alan Chadwick Garden. Apprentices harvest for the CSA and the CASFS market cart held seasonally from June through October. The apprenticeship program of study covers agricultural and horticultural topics including soils and soil fertility management, plant propagation, composting, hand-scale and tractor tillage, irrigation, pest management and crop culture, as well as food justice / sustainable food systems.

The CSA program was piloted in 1995, and grew quickly to the current 130-member capacity. The CSA serves the campus and Santa Cruz community. Ten percent of shares are reserved for low-income households, and we donate thousands of pounds of produce each year to community organizations serving populations in need.

Our Vision is to –

- establish a partnership between the local community and apprenticing organic growers
- demonstrate a viable model of sound economics for small-scale farming and regional food systems
- foster ecological stewardship of the land
- provide the community with high quality, nutritious produce in season

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Cover photograph by Britt Retzlaff, 2011 Apprentice

Appendix 4 (cont.): UCSC Farm CSA Brochure

The CSA Season: What to Expect

Our planned start date is Tuesday, June 2nd, with the season extending through Friday, October 30th, weather permitting.

What's in the box?

Each week's box will contain a diversity of crops (9-13 items), balanced amongst greens, root crops, summer vegetables, fresh herbs, and tree fruit and berries *(see page 4 for our crop list)*. We pack a one-size box, which feeds two to four adults for a week, depending on cooking habits. Members can sign up to share a box with a co-member. Usually, friends agree to share a membership and submit their payment together, but we can also help to facilitate shared boxes.

Recipes and Newsletters

Members receive a weekly newsletter (email and/or print) with produce recipes and farm news! Additionally, we offer a recipe archive on our website.

Friends of the Farm and Garden Membership

CSA members receive a complimentary membership to the Friends of the Farm and Garden (FF&G) for the duration of the CSA season. FF&G membership benefits include a 10% discount on plants and merchandise at our biannual plant sales and discounts to FF&G-sponsored workshops.

Cost and Season Dates

Full season $560 (planned 22 weeks, June 2 - Oct. 30)

Late season $280 (last half of season, 11 weeks Aug 18 - Oct. 30)

For payment plan, see page 5. (Please note that no refunds are available.)

Low-income Shares

Ten percent of our shares are reserved each year for low-income households at the price of $280 per share. We also accept SNAP/EBT benefits for CSA payment. To apply, contact farmcsa@ucsc.edu to have an application mailed to you. *To help support low-income shares, please see information on page 6.*

Volunteer Opportunities

Volunteers are welcome to join the apprentice crew in harvesting on **Tuesday** and **Friday** mornings, by arrangement. It's a really fun way to see up close how the food grows! Volunteers are also welcome to join our Banana Slug "Glean Team" to harvest remainder crops for local food banks. Call 459-3240 or email farmcsa@ucsc.edu if you would like to get involved.

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Appendix 4 (cont.): UCSC Farm CSA Brochure

Pick-up Days and Locations

Crops are harvested the same day they are packed! Members pick up their boxes in the afternoons on either **Tuesdays** or **Fridays** (same day of the week for duration of season, with option to change permanently or temporarily with advance notice). Members bring their own carry bags to the farm or pick-up site, and transfer the contents of their box to take home.

Shares not picked up at the end of the day will be donated to local food access organizations. Map and directions to the farm will be sent before the season begins, along with a temporary parking permit for pick up on the farm.

Pick-up Day	Location
Tuesdays	***CASFS Farm*** or ***Westside Farm & Feed*** (Swift St.)
Fridays	***CASFS Farm*** or ***Market Cart*** (corner of Bay & High Streets)

Pick-up Times	Location
12:00 noon to 6:30 pm	On-farm
2:30 pm to 6 pm	Market Cart
2:30 pm to 5:30 pm	Westside Farm & Feed

CASFS *The* CENTER *for* AGROECOLOGY *&* SUSTAINABLE FOOD SYSTEMS

The UCSC Farm's CSA program is part of the Center for Agroecology & Sustainable Food Systems (CASFS), a research, education, and public service program dedicated to increasing ecological sustainability and social justice in the food and agriculture system.

The CASFS mission is to research, develop, and advance sustainable food and agricultural systems that are environmentally sound, economically viable, socially responsible, non-exploitative, and that serve as a foundation for future generations. Center staff conduct research on both agronomic and social aspects of sustainable agriculture, as well as offer an extensive public education program, including tours of the UCSC Farm and a series of public workshops on gardening techniques and other topics *(see page 7)*.

How to Contact Us

Mailing Address: CASFS / UCSC Farm
1156 High Street
Santa Cruz, CA 95064
Attn: CSA

Phone Number: 831.459-3240 or 831.459-4661 | *Email:* farmcsa@ucsc.edu

Web page: http://casfs.ucsc.edu/community/produce-sales/csa.html

Location: UCSC Farm and Garden

Detailed instructions on parking will be sent with membership confirmation.

Appendix 4 (cont.): UCSC Farm CSA Brochure

Produce Availability Guide

CSA is a unique opportunity to experience local, seasonal eating and deepen your connections amongst food, land and community.

We strive to make boxes diverse and bountiful throughout the season. Weekly newsletters will keep you in touch with the field and growing conditions as the summer goes on.

Pick-Your-Own Herb & Flower Garden

CSA members are invited to cut flowers and herbs from the garden at the Farm pick-up site.

JUNE

- arugula
- Asian greens
- spinach
- lettuce
- Swiss chard
- beets
- carrots
- turnips
- kohlrabi
- broccoli
- cilantro
- blueberries
- strawberries
- plums

JULY-AUGUST

- spinach
- salad mix
- lettuce
- beets
- carrots
- broccoli
- cabbage
- basil
- cilantro
- dill
- cucumbers
- zucchini
- green beans
- sweet corn
- new potatoes
- strawberries
- plums

SEPTEMBER-OCTOBER

- spinach
- salad mix
- Swiss chard
- kale
- radicchio
- endive
- beets
- broccoli
- cauliflower
- fennel
- basil
- cilantro
- zucchini
- strawberries
- apples
- green beans
- potatoes
- pumpkins
- winter squash
- tomatoes (dry-farmed and heirloom)

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Appendix 4 (cont.): UCSC Farm CSA Brochure

2015 CSA Shares Pledge Form

In becoming a member of the UCSC Farm CSA, I understand the following:

- I am making a financial commitment for the 2015 farm season. As the designated primary shareholder, I understand that my share payment is non-refundable;
- I recognize that due to the inherent risks of farming, there are no guarantees on the exact amount of produce that I will receive;
- that my share comes from an educational farm and that apprenticing farmers are producing my food; and
- I understand and accept this commitment and assume responsibility to contact the staff if there are any questions or concerns.

Please note that in order to complete your reservation for the 2015 CSA Program, you must submit payment with a signed pledge form to the address listed below.

Signature _____ Date _____

Primary Shareholder _____ Co-Shareholder _____

Primary Address _____ Zip _____
Street / City

Cell # _____ Home or Work # _____

Primary Email _____ Co-share Email _____

Payment options

FULL SEASON:

❑ **payment in full:** **$560**

❑ **Two checks:** **$280**
today's date and
post-dated June 1 **$280**

❑ **Four checks:** **$140**
today's date and
post-dated June 1 **$140**
post-dated July 1 **$140**
post-dated Aug 1 **$140**

LATE SEASON:

❑ **payment in full:** **$280**

❑ **Two checks:** **$140**
today's date and
post-dated Sept 1 **$140**

Payment by Check only Money order or Cashier's check OK
payable to ***"UC Regents"***
Send ***with this pledge form to:***
CASFS / UCSC Farm
1156 High Street
Santa Cruz, CA 95064
Attn: CSA

Pick-up site

❑ **At the Farm** (noon-6:30 p.m.)
- ❑ **Tuesdays**
- ❑ **Fridays**

❑ **Bay & High (Friday only** 2:30-6:00 pm**)**

❑ **Westside Location**
(**Tuesday only** 2:30-6:00 pm)

Office Use Only: ❑ Payment enclosed

Check payment amount: _____ Date received: _____

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Appendix 4 (cont.): UCSC Farm CSA Brochure

Make a donation to support low-income shares!

We gratefully accept donations to support low-income shares. Donations are tax deductible.

If you would like to donate, please include with your pledge form and payment, indicating the amount below:

❑ $25 ❑ $50 ❑ $100 ❑ $280 (a full, low-income share)

I would like to donate $_____ to a low-income share.

Pick-Your-Own Herbs & Flowers

To complement your share, you are welcome to pick herbs and flowers throughout the season in the CSA garden adjacent to the CSA Barn on the Farm.

The Exchange Basket

On pick-up days, take advantage of our exchange basket and frequent offerings of farm bounty.

Comments from our CSA Members:

We enjoyed the rich flavor of CSA produce versus store bought. It was so rewarding to visit the farm with the kids and explain what we are a part of and how CSA upholds the values of our family.

The balance of produce has been very nice this year. We are looking forward to the winter box!

We love the farm experience and having fresh fruit and veggies every week, we hope to continue to be a part of this every year. Thank you!

I appreciated the half season share and the two-part payment option, as it's difficult to put all the money up at once. I look forward to my winter box. Thank you!

It has been fun to bring my toddler to the farm each week to gather our vegetables. This was our first CSA experience and it has been fun to get veggies we wouldn't have usually purchased on our own. I now love to eat roasted beets. They are sooo good.

Appendix 4 (cont.): UCSC Farm CSA Brochure

2015 Spring Calendar of Events

CSA membership includes complimentary membership of the Friends of the Farm & Garden (FF&G) during the CSA season and are eligible for discounts on workshop fees (typical pre-registration cost is $30 general public; $20 FF&G members). Pre-register online or by check (send check, payable to "UC Regents" to:

CASFS | 1156 High St. | Santa Cruz, CA 95064 | Attn: Workshop

Please include workshop name/date and contact info). Full refunds available if event is cancelled due to inclement weather. A current calendar is posted on the CASFS website's home page, ***casfs.ucsc.edu***

Selecting & Growing Citrus in the Backyard Orchard & Small Farm

Saturday, February 28, 9:30 am – 1 pm
Louise Cain Gatehouse, UCSC Farm

Join workshop instructors Daniel Paduano, owner of Abounding Harvest Mountain Farm, and Orin Martin, manager of UCSC's Chadwick Garden to learn about the best varieties of citrus (lemons, limes, oranges, tangerines, and more) for the Monterey Bay region; how to select and prepare a planting site; how to plant; and how to irrigate, fertilize, prune, and control pests and diseases in a range of citrus trees. Includes a tasting of local citrus.

Workshop cost, general admission: **$55** *(pre-registered)* / **$65** *(at gate);* FFG members: **$45** / **$55***;* UCSC Farm & Garden Docents: **$35** / **$45**; UCSC students and limited income: **$30** / **$40** (student ID required).

Register online: ***http://citrus2015.bpt.me*** *or by check (see page above).*

Gopher Control in the Home Garden & Small Farm

Saturday, March 7, 9:30 am – 12:30 pm
Louise Cain Gatehouse, UCSC Farm

Learn how to control gophers in the home garden, landscape, and on the small farm using non-toxic techniques that focus on exclusion and trapping. Taught by Thomas Wittman, founder and owner of Gophers Ltd., an expert on vertebrate pest control. General admission: **$30** / **$40** *(at gate);* FFG members: **$20** / **$30***;* **$5** current UCSC students (student ID required).

Register at: ***http://gopher2015.bpt.me*** *or by check (see above)*

Appendix 4 (cont.): UCSC Farm CSA Brochure

2015 Calendar of Events *(continued)*

All About Berries—Blueberries & Cane Fruit for the Home Garden & Small Farm

Saturday, April 4, 9:30 am–12:30 pm
Louise Cain Gatehouse, UCSC Farm

Learn the basics of selecting, planting, and caring for blueberries and cane berries (blackberries, raspberries, etc.) in the home garden and small farm from Matthew Sutton of Orchard Keepers. General admission: **$30** / **$40**; FFG members: **$20** / **$30**; Limited income: **$15** / **$25; C**urrent UCSC students: **$5** (student ID required).

Register online: ***http://berries.bpt.me*** *or by check (see page 7).*

UCSC Farm & Garden Spring Plant Sale

Saturday, May 2, 10 am–3 pm and Sunday, May 3, 10 am–2 pm
Barn Theater Parking Lot, corner of Bay & High Streets, UCSC

Choose from the largest organically grown selection of vegetables, annual flowers, and perennials available in the Monterey Bay region. Please note: Friends of the Farm & Garden members are welcome to a "members' hour" from 9–10 am on Saturday, May 2.

A Garden of Poetry and Music

Saturday, June 20, 12 noon – 2 pm
Alan Chadwick Garden, UCSC

Join us for this free event in the historic Alan Chadwick Garden and enjoy the talents of our region's poets and musicians. This is a wonderful way to celebrate the Summer Solstice! Free admission, snacks provided. Questions? Email casfs@ucsc.edu

Look for these summer workshops and events at casfs.ucsc.edu:

Summer Pruning; Selecting and Planting Garlic; Farm to Fork Benefit Dinner; Fall Harvest Festival

Appendix 4 (cont.): UCSC Farm CSA Brochure

Never doubt that a small group of thoughtful committed citizens can change the world. Indeed it's the only thing that ever has.
–Margaret Mead

UCSC Farm – Community Suppported Agriculture (CSA)
1156 High Street
Santa Cruz, CA 95064
831.459-3240 or 831.459-4661 | *Email:* farmcsa@ucsc.edu
http://casfs.ucsc.edu/community/produce-sales/csa.html

Appendix 5: Examples of CSA Newsletters

UCSC Farm CSA

2-page (double-sided) newsletter is printed and distributed with boxes, as well as emailed to shareholders as a PDF (example on following pages). The newsletters are archived online at *casfs.ucsc.edu/community/produce-sales/csa-newsletters.html*

Shooting Star CSA (Fairfield, California)

See example on following pages, and see other issues at: *www.shootingstarcsa.com/Shooting_Star_CSA/Newsletters.html*

Other examples of CSA newsletters that can be found online:

Angelic Organics Farm News (Caledonia, Illinois)

angelicorganics.wordpress.com/

High Ground Organics (Watsonville, California)

www.highgroundorganics.com/csa-program/csa-membership-information/weekly-newsletter/

Waltham Field Community Farm (Waltham, Massachusetts)

communityfarms.org/index.php/csa/csa-newsletters/

Appendix 5 (cont.): Examples of CSA Newsletters

FIELD *notes*

UCSC Farm
Community Supported Agriculture
Tenth Harvest: 8/5/14 & 8/8/14

What's in the box?

Lettuce, *Green Butter*
Onions, *Cipollini*
Basil, *Sweet Thai*
Dill, *Bouquet*
Corn, *XTender 270A*
Green Beans, *Bronco*
Summer Squash, *mix*
Cucumber, *Marketmore*
Cabbage, *Farao*
Broccoli, *Gypsy*
Potatoes, *Yukon Gold*
Strawberries, *Albion*

Harvest Forecast* for August 12 and 15

Corn	Red Beets	Squash
Green Beans	Red Onions	Strawberries
Jalapeños	Salad Mix	

***Harvest may vary for 1 or 2 crops , determined on day of harvest**

Recipes by Crop
Recipe PDFs are online, indexed by crop, at:
http://casfs.ucsc.edu/community/produce-sales/recipes.html

Newsletter archives are also available online at:
http://casfs.ucsc.edu/community/produce-sales/csa-newsletters.html

Upcoming Event

Fall Gardening Workshop: Transplanting & Direct Seeding for Fall & Winter Crops
Saturday, August 23 – 9:30 to 12:30 pm
Alan Chadwick Garden – UCSC

Extend your gardening season! Orin Martin and Sky DeMuro of UCSC's Chadwick Garden will teach participants about crops that grow well in fall and over the winter in the Monterey Bay region. Workshop held at the Alan Chadwick Garden. Topics covered: sowing seeds and raising seedlings indoors; when to transplant; and what crops to sow directly in garden beds. Be prepared to get your hands dirty! Participants will go home with a six-pack of vegetables or flowers..

COST: $20 for Friends of the Farm & Garden members (pre-registered)/$30 at the door; $30/$40 general admission; $15/$25 UCSC students and limited income. Register online at *http://seedsowing.bpt.me,* or send a check, payable to "UC Regents" to:

CASFS
1156 High St.
Santa Cruz, CA 95064 Attn: Workshop

For information, call **831.459-3240** or email **casfs@ucsc.edu**.

Notes from the Field *by Mary Liz Watson, First Year Apprentice*

It is hard to believe we are into August already! Sweet corn provided our harvest excitement this past week. We'd been watching the stalks grow taller and the ears gain size, and a peek into the cob revealed kernels plumping up. Then the pink silks started to dry up and brown, and the ears filled out all the way to the end, and they were ready!

The uses for sweet corn are endless. For southerners like myself, sweet corn marks the beginning of summertime. I have distinct memories of summer evenings, the air warm and heavy and full of fireflies, spent shucking corn on my grandmother's back porch. We'd eat our corn straight off the cob and serve it with okra and thickly sliced tomatoes or fried green tomatoes – all the bounty of Nana's garden.

New to this week's CSA box is Thai basil, which, when made into a smooth basil butter, serves as the perfect compliment to our sweet corn! Simply pulse the basil leaves and garlic in a food processor, add a bit of lemon juice, salt, and sugar to taste, place the butter into basil mixture and process until smooth.

For those of the 'Waste Not Want Not' philosophy, warming (note: not simmering) the blossoms in olive oil on the stovetop yields an aromatic dip for bread and veggies. If you are overwhelmed with basil, try infusing it into simple syrup for future use in flavoring drinks, desserts, and popsicles.

In other happenings, the summer routine is pretty serious with summer squash on its usual rampage, the tomatoes setting fruit and beginning to ripen, and our little farm community continues to eat well.

CENTER FOR AGROECOLOGY & SUSTAINABLE FOOD SYSTEMS
UC SANTA CRUZ, 1156 High St., Santa Cruz, CA 95064 • 831.459-4661 • 831.459-3240 • farmcsa@ucsc.edu

Appendix 5 (cont.): Examples of CSA Newsletters

UCSC Farm
Community Supported Agriculture
Tenth Harvest: 8/5/14 & 8/8/14

Tomato-Corn Pudding with Leeks and Peppers

4 ears of sweet corn, shucked and cut off cob
1 large leek, sliced
1 cubanelle* pepper, diced
1 tomato, diced
1 bunch (about 2 T) fresh thyme, chopped
1 T fresh parsley, chopped
1 T fresh chive, chopped
2 egg whites
1 cup whole milk
Salt and pepper to taste

In a large saute pan, sweat leek, cubanelle and thyme in olive oil over medium-high heat for about 5 minutes.

After the leeks and pepper become tender, add corn kernels and saute for 2-3 minutes. Season with salt and pepper, then drain off any excess liquid using a fine mesh strainer or colander. Transfer to a large mixing bowl and stir in diced tomato.

Brush a 7″x9″ casserole dish with olive oil and spread vegetables evenly inside it. In small mixing bowl, whisk together egg whites and milk and pour over the corn.

Cover and bake at 400ºF for 25-30 minutes or until the eggs have set. Allow to cool, and garnish with fresh parsley and chive.

*Anaheim chiles may be used as a substitute.

www.greensgrow.org

Parmesan Roasted Potatoes

4 cups cubed Yukon Gold potatoes (3/4″ square cubes)
3 tbsp olive oil
1/2 tsp garlic salt
1/2 tsp salt
2 tsp paprika
1 tsp pepper
4 tablespoons freshly grated Parmesan cheese

Preheat oven to 425ºF. Place cubed potatoes into a baking dish. Use baking spray on dish to reduce sticking.

Pile on olive oil, garlic salt, salt, paprika, pepper and Parmesan cheese. Using your fingers, or spoon, thoroughly coat all the potatoes with the seasonings.

Bake for 15 minutes. Remove from oven and toss the potatoes with a pair of tongs. Continue baking for 10 more minutes. Remove baking dish and give potatoes another toss. Continue roasting until golden and crispy.

Season with an dusting of sea salt and extra parmesan cheese and serve.

http://whatsgabycooking.com

Peachy Sweet Corn Tacos with Lentils and Basil Slaw

Makes 10-12 tacos

Slaw:
1/4 head of green cabbage, shredded
1 big sprig of basil, leaves removed and sliced
juice of 1 lime
2 T grapeseed oil
salt and pepper

Succotash:
1/3 cup french lentils, rinsed
1 T grapeseed oil
1 shallot, small dice
1 small red pepper, small dice
1/2 tsp. chili powder (ancho or chipotle are amazing)
1/2 tsp. ground cumin
4 ears of corn, kernels removed
2 ripe peaches, pitted and diced
juice of 1 lime
salt and pepper

Tortillas and garnish:
10-12 corn tortillas, warmed
1 avocado, peeled, pitted and sliced lime wedges

Cook lentils: Place the rinsed lentils in a small saucepan with 1 cup of water. Bring to a boil and simmer for about 20 minutes, or until lentils are tender but still have some bite. Set aside.

Make slaw: Combine the shredded cabbage, basil, lime juice, oil, salt and pepper in a large bowl. Toss to combine. Taste for seasoning and cover bowl with plastic wrap. Set aside in the fridge.

Make succotash: Heat grapeseed oil in a medium-large skillet over medium heat. Add diced shallot and red pepper. Saute mixture until soft and slightly translucent. Add chili powder and cumin. Saute until fragrant, about 30 seconds. Add corn kernels and stir to combine. Season with salt and pepper at this point. Cook, stirring frequently until corn is crisp-tender and slightly more golden, about 4 minutes. Remove the pan from the heat. Add the diced peaches, cooked lentils and lime juice. Check for seasoning and keep warm.

To assemble: Place 1/4 cup or so of succotash in each tortilla, top with avocado slices and a generous helping of slaw.

www.thefirstmess.com

Appendix 5 (cont.): Examples of CSA Newsletters

October 14th, 2014

Week 22

THIS WEEK'S SHARE:
Lettuce: Skyphos or Cherokee
Pumpkins: Baby Pam
Beets: Detroit Dark Red
Turnips: Hakueri
Shallots: Conservador
Chard: Bright Lights
Tomatoes: Early Girl, Heirloom
Sweet Peppers: Gypsy + Carmen

Chinese Cabbage: Minuet **OR** Summer Squash

Possibilities for Next Week:
Butternut Squash
Kale
Arugula

SHOOTING STAR CSA
suisun valley, ca

Cover Cropping for the Earth

The tractor lurches forward, dragging the disk behind it. To understand what a disk is, imagine a series of metal plates with a shaft running through their centers. The plates roll along as they dig into the soil displacing the weeds and breaking up clods. The disk is no spring chicken. We have no idea how old it is, all we know is that it works. Behind the disk is a fluffy soil that is ready for cover crop seeding. Cover cropping is the most counter-intuitive thing a farmer can do. Growing a crop just to till it in the ground seems absolutely ridiculous from many conventional farmers points of view. From the point of view of the earth it is a pretty good idea; plants cover the ground during the rainy season preventing erosion and runoff. Cover cropping keeps the soil here on the farm, right where we want it. We plant a mix of seeds: bell beans, vetch, oats, and rye. The legumes are nitrogen fixing, which means that they pull nitrogen from the atmosphere; this nitrogen becomes part of the soil when we till it back in the spring. A good cover crop transforms a muddy field into a magical place full of wonder, legumes, and beneficial insects. Soil is a living thing and not meant to be exposed all the time. It is through cover cropping and responsible crop rotation that we believe that in 1000 years this soil will still be fertile. Enjoy your boxes.

Crop Notes:
Tomatoes: This crop is winding down for the season. This week we have a little over a pound in each box. We hope to have them at least a little longer!
Turnips: These delicious Japanese turnips can be eaten raw or cooked. Raw, they resemble a less spicy radish. They are great chopped in a salad, stir-fried, braised or roasted. The leaves can be cooked just like mustard greens- make sure you wash them first.
Pumpkins: Baby Pam is a special kind of cooking pumpkin that makes great soups, pies, and also roasts well. It tastes nothing like the standard Halloween pumpkins (they are pretty bland if you have ever tried to cook one), has a sweet flavor and a texture more similar to Butternut squash.
Chard: This tasty leafy green is back for the fall. Cook it just like you would spinach or kale. The

Shooting Star CSA PO Box 3087 Fairfield, CA 94533 707-207-0548
shootingstarcsa@gmail.com www.shootingstarcsa.com

Appendix 5 (cont.): Examples of CSA Newsletters

October 14th, 2014 Week 22

stems can be eaten as well (they have a slightly longer cooking time than the leaves). It is great in tomato sauce over pasta, or sauteed with olive oil and sprinkled with lemon juice.
Chinese Cabbage: This is a totally new crop for us this year! It can be eaten raw like regular cabbage (shredded in a salad), or cooked. For cooking, use it just like you would bok choi: chop and stir fry with onions and garlic, soy sauce and sesame oil. Store in the fridge in a plastic bag. Let us know what you think!

Recipes:

Pumpkin and Roasted Red Pepper Soup

2 tablespoons olive oil
1 onion or 2 shallots, chopped
2 garlic cloves, minced
1 cooking pumpkin, peeled (optional) and seeded, cut into chunks
vegetable broth or water
4-5 sweet peppers
salt and pepper

Heat oil in heavy large pot over medium-high heat. Add onions; sauté until tender, about 10 minutes. Add garlic; stir 1 minute. Add pumpkin and enough broth or water just to cover; bring to boil. While it is cooking, roast peppers on a gas burner or in the oven broiler. Peel skin under running water, coarsely chop, and add to pot. When pumpkin boils, reduce heat, cover and simmer until it's soft, about 40 minutes. Working in batches, puree soup in blender until smooth. Return puree to pot. Season with salt and pepper.

Beet Salad (adapted from molliekatzen.com)

1 bunch beets
1/4 cup cider vinegar
1 medium clove garlic, minced
1 to 2 teaspoons honey
1/2 teaspoon salt
1/2 cup minced onion or 1 shallot, chopped
1 cup plain yogurt (optional)
Freshly ground black pepper
2 tablespoons chopped fresh herbs: dill, parsley or cilantro
2 hard-boiled eggs, quartered or chopped (optional)

Trim the beets of their stems and greens, and place the beets in a medium-large saucepan. Cover them with water and bring to a boil. Cook for about 25 minutes, or until tender enough for a fork to slide in easily. Meanwhile, combine the vinegar, garlic, honey, salt, and onion, in a medium-large bowl. Rinse the cooked beets under cold running water as you rub off and discard their skins. Chop the beets and potatoes into 1/2-inch pieces, and add them, still warm, to the bowl. Stir and let stand about 30 minutes. Stir in the yogurt (if using), and season to taste with black pepper and, if necessary, more salt. Stir in the herbs. Serve garnished with hard-boiled eggs.

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Appendix 6: UCSC Farm CSA Shareholder End-of-Season Survey

The UCSC Farm CSA Shareholder End-of-Season Survey is distributed both online (via Survey Monkey), as well as made available in print**.**

2014 UCSC Farm CSA End-of-Season Survey

Please fill out this end-of-season survey in order to help us improve the CSA program. Mail completed surveys to UCSC Farm & Garden CSA, 1156 High St., Santa Cruz, CA 95064 or return to your pickup site**.**

1. I would prefer to have received more of the following produce:

- ❑ Apples
- ❑ Arugula
- ❑ Avocados
- ❑ Basil
- ❑ Beets
- ❑ Blueberries
- ❑ Broccoli
- ❑ Cabbage
- ❑ Carrots
- ❑ Cauliflower
- ❑ Celeriac
- ❑ Chard
- ❑ Cilantro
- ❑ Cipollini Onions
- ❑ Corn
- ❑ Cucumbers
- ❑ Dill
- ❑ Fennel
- ❑ Green Beans
- ❑ Kale
- ❑ Kohlrabi
- ❑ Lettuce
- ❑ Onions
- ❑ Pac Choi
- ❑ Peppers, hot
- ❑ Peppers, sweet
- ❑ Plums
- ❑ Potatoes
- ❑ Pumpkins
- ❑ Purplette fresh onions
- ❑ Salad Mix
- ❑ Shallots
- ❑ Spinach
- ❑ Strawberries
- ❑ Tomatoes
- ❑ Turnips
- ❑ Winter Squash
- ❑ Yellow Wax Beans
- ❑ Zucchini

2. I would prefer to have received less of the following produce:

- ❑ Apples
- ❑ Arugula
- ❑ Avocados
- ❑ Basil
- ❑ Beets
- ❑ Blueberries
- ❑ Broccoli
- ❑ Cabbage
- ❑ Carrots
- ❑ Cauliflower
- ❑ Chard
- ❑ Cilantro
- ❑ Cipollini Onions
- ❑ Corn
- ❑ Cucumbers
- ❑ Dill
- ❑ Fennel
- ❑ Green Beans
- ❑ Kale
- ❑ Kohlrabi
- ❑ Lettuce
- ❑ Onions
- ❑ Pac Choi
- ❑ Peppers, hot
- ❑ Peppers, sweet
- ❑ Plums
- ❑ Potatoes
- ❑ Pumpkins
- ❑ Purplette fresh onions
- ❑ Salad Mix
- ❑ Shallots
- ❑ Spinach
- ❑ Strawberries
- ❑ Tomatoes
- ❑ Turnips
- ❑ Winter Squash
- ❑ Yellow Wax Beans
- ❑ Zucchini

3. On a scale of 1 to 5, 5 being the best, 1 being the worst, rate the overall *quality* of the produce you received this season:

- ❑ 5 (best)
- ❑ 4
- ❑ 3
- ❑ 2
- ❑ 1 (worst)

4. Which best describes the *volume* of produce received each week:

- ❑ More than I / we could use
- ❑ Sufficient
- ❑ Insufficient

Appendix 6 (cont.): UCSC Farm CSA Shareholder End-of-Season Survey

2014 UCSC Farm CSA End-of-Season Survey *(continued)*

5. How interested would you be in a smaller weekly box (avg. $20/week)?

- ❑ Interested – have trouble using all the food provided in the current share size
- ❑ Interested – could better afford a smaller box
- ❑ Not interested – prefer the current share size
- ❑ Not interested – prefer the amount of food offered, and find a way to share when too much

Other _____

6. How did you find out about our CSA? (multiple choice)

- ❑ Friend or colleague
- ❑ CASFS website
- ❑ Local Harvest website
- ❑ Friends of the Farm & Garden
- ❑ Brochure
- ❑ Other (please specify)

7. If you were to recommend our CSA to a friend, what has been the most prominent benefit for you/ your family?

8. Which scenarios best describe your relationship to the campus? (check only one box)

- ❑ I work at UCSC in a staff position
- ❑ I work at UCSC in a faculty position
- ❑ I /we are graduate students at UCSC
- ❑ I/ we are undergraduate students at UCSC
- ❑ No affiliation, but live nearby
- ❑ None of the above

9. Which scenarios best describe your situation? (check only one box)

- ❑ I joined the CSA this year
- ❑ I have been with this CSA for at least 2 seasons
- ❑ I have been with this CSA for 3 or more seasons

10. Additional comments about the CSA experience, and improvements you would like to see:

Appendix 7: Health Insurance Collaborations with CSAs

A potentially revolutionary model for starting and maintaining CSAs that are affordable and accessible is the collaboration that started in Wisconsin in 2005 amongst four regional health insurance companies and the FairShare CSA Coalition. Three of the four companies offer rebates for their customers who join a CSA, which can offset the cost of CSA membership by up to 40%. One of the companies no longer offers rebates but instead gives its members "points" that they can use to earn cash back for healthy habits (one of which is eating fresh food from a CSA).

The program is facilitated by the FairShare CSA Coalition (once known as the Madison Area Community Supported Agriculture Coalition). FairShare handles the vetting and listing of the CSA programs, and connects consumers with CSA and the rebate program. The rebate program has been successful, attracting new customers to the CSAs, and increasing the amount of CSA farms in the FairShare Coalition. As an additional bonus, the program has also resulted in a massive reduction in time that growers spend marketing their program to new customers, and it has expanded their potential consumer audience.

More information can be found on the FairShare Coalitions website:

www.csacoalition.org/about-csa/csa-insurance-rebate/

and in Jackson, et. al. (2011) in the Resources section of Unit 3.0.

3.4

CSA Administration

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Lecture 1: CSA Administration

A. Essential CSA Administration Activities

1. Recruitment, advertisements
2. Correspondence with current membership
3. Billing
4. Information management
   a) Member contact information
   b) Distribution of shares
5. Newsletter, website maintenance

B. Time Required for CSA Administration

1. Time varies depending upon complexity of CSA

C. Who Does Administrating?

1. Farmer
   a) Advantages
      i. Opportunity to build relationships with membership through direct contact
      ii. Possible with small CSAs
   b) Disadvantages
      i. Often impossible to do both farming and administration of CSA. Can lead to reduced quality of work in both areas, reduced capacity to take on more members and generate revenue/living wage for farmer
      ii. Inadequate skills or lack of desire to manage database and accounting, leading to disorganization and dissatisfaction among membership
2. CSA Office Manager
   a) Advantage: Dedicated position for managing the communication with members, billing, etc.
      i. Frees farmer to focus on growing food
      ii. Opportunity to build relationships between CSA Office Manager and members
      iii. Often necessary with larger CSAs (recommended for CSAs over 200)
      iv. Farmer maintains contact via newsletter and special events
      v. CSA Office Manager can be the bridge between the farmer/s and member
   b) Disadvantage: Is there enough money to support this position? (Farmers surveyed testified that 'taking the leap' of hiring someone for this position helped their farm grow and become more financially viable in the long run)
3. Members/Volunteers
   a) Advantage: True community support of agriculture by having members actively participate in overall management of the CSA
      i. Greater communication, stronger relationships
      ii. More sustainable for all by having different jobs covered by the members
   b) Disadvantage: There can be difficulties if the member(s) or volunteer does not do a good job, if high-turn over in volunteer/members, can lead to disorganization

D. Information Management

1. Information management is most often done by the CSA Office Manager, however the Farmer/s would usually be doing it on smaller-scale CSAs and/or for crop planning, harvest, and record keeping
2. Databases or other software can be valuable tools for tracking information about CSA members, production, and distribution activities
3. Software options:
   a) FileMaker Pro: The UCSC Farm CSA uses this system to easily track shareholder information, billing, and for printing sign-out sheets
   b) Excel: Excel can be a great database tool for financial management as well as for crop planning and record keeping. See: *www.cogniview.com/blog/crop-calendars-go-digital-using-spreadsheets-in-agriculture/*
   c) Farmigo: The Farmigo System enables CSA members to easily sign-up and pay online for shares as well as an easy way for farms to offer flexible share options. There is also a web store where farms can choose to sell excess items or optional items to be delivered with the share. In addition to member sign-ups and management, the system also helps farms manage the logistics associated with harvesting, packing and delivering shares. It costs 2% of gross sales from the CSA or farm. See: *www.farmigo.com*
   d) CSA Toolbox is an online "toolbox" that offers programs to communicate with your customers, do your paperwork, handle your billing, and take payments. See: *www.csatoolbox.com*
   e) CSAware is a customizable, user-friendly Community Supported Agriculture software from LocalHarvest.com designed for CSAs with lots of moving parts. The cost is 2% of sales. See: *csaware.com*
4. What data need to be tracked?
   a) Contact information (see Appendix 1, Example of Shareholder Contact Information)
      i. Name, address, phone numbers, email address
      ii. Type of share (whole share, half share, etc.)
      iii. Pick-up site and day
      iv. Length of membership
      v. Shareholder list
   b) Billing and payment tracking (see Appendix 2, Example of Shareholder Billing Information, and Appendix 3, Example of Financial Report)
      i. Type of payment (payment in full, installments, monthly)
         • When that person paid/when late
      ii. Post-dated checks
      iii. Low-income share, complimentary, or work trade
      iv. Billing list
      v. Payment reminders (calls, emails)
5. Crop Planning, Harvest, and Packing schedules
6. Sign-out sheets for tracking pick-up for drop-off locations (in order to track who didn't pick up)

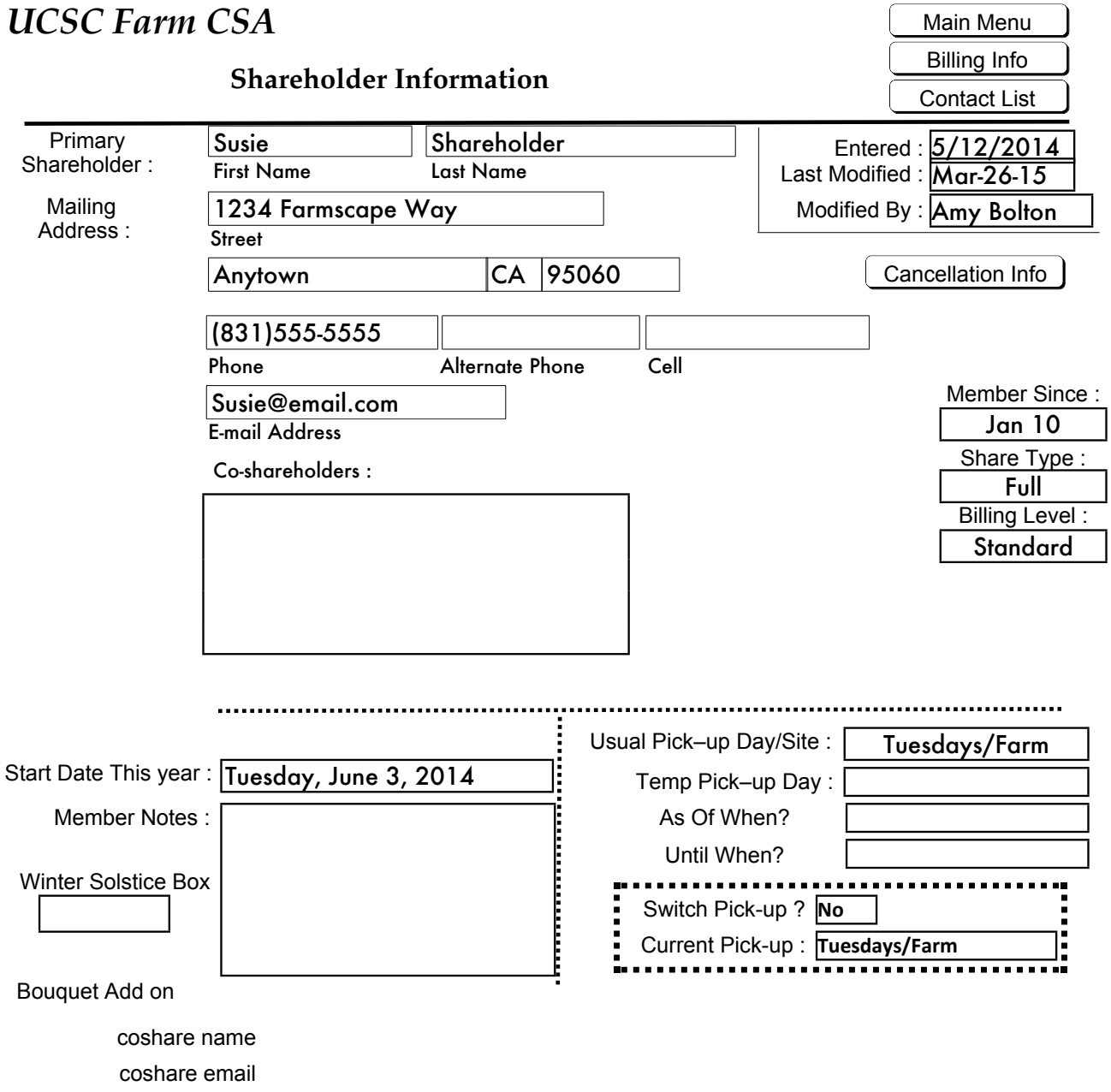
E. Distribution of Shares

1. Types of distribution
   a) On-farm pick-up models
      i. Already packed in boxes for people to pick up

ii. "Farmers' Market Style," with produce displayed on table and consumers weigh and pack their own boxes

2. Off-farm pick-up models
   a) Consumer picks up packed boxes at farmers' markets
   b) Grower drops boxes at different pick-up sites (churches, homes, work sites, schools, etc.) where consumers can pick up during a several-hour window
   c) Grower produces and ships in bulk to urban distribution hub. Members pack and redistribute to neighborhood clusters, where members rotate pack and distribution responsibilities.
3. Things to consider in both on- and off-farm pick-up cases:
   a) Where will people park?
   b) How will this affect the neighborhood (traffic, noise, etc.)?
   c) Set up, monitoring, breaking down (will someone be there the whole time?)
   d) Surplus and Exchange tables (have a trade basket so folks can leave what they won't eat and perhaps trade in for something they like better)

Appendix 1: Example of Shareholder Contact Information



UCSC Farm CSA

Main Menu
Billing Info
Contact List

Shareholder Information

Primary Shareholder : Susie (First Name) Shareholder (Last Name)

Entered : 5/12/2014
Last Modified : Mar-26-15
Modified By : Amy Bolton

Mailing Address : 1234 Farmscape Way (Street)

Anytown | CA | 95060

Cancellation Info

(831)555-5555 (Phone) | (Alternate Phone) | (Cell)

Susie@email.com (E-mail Address)

Co-shareholders :

Member Since : Jan 10
Share Type : Full
Billing Level : Standard

Start Date This year : Tuesday, June 3, 2014

Member Notes :

Winter Solstice Box

Bouquet Add on

coshare name

coshare email

Usual Pick–up Day/Site : Tuesdays/Farm
Temp Pick–up Day :
As Of When?
Until When?

Switch Pick-up ? No
Current Pick-up : Tuesdays/Farm

Appendix 2: Example of Shareholder Billing Information

UCSC Farm CSA

Shareholder Info | Contact List | Billing List

Billing Information

Primary Shareholder : Susie (First Name) Shareholder (Last Name)

Entered : May-12-14
Last Modified : Mar-26-15
Modified By : Amy Bolton

Total Due : $560.00 **Current Balance :** $0.00 **Share Type** Full

Billing : Standard (Level) Four Payments (Payment Plan) (Special Cost) (Use ONLY to manually override automatic share cost calculation!)

Payment History

Post–dated Checks? ☒ Yes

Date Received	Check Date	Check #	Paymt Amt	Donation	Donation Toward	Deposited?	Date Deposited	Receipt #
May-12-14	May-12-14	1570	$140.00			◉ Y ○ N		
	Jun-1-14	1571	$140.00			◉ Y ○ N		
	Jul-1-14	1572	$140.00			◉ Y ○ N		
	Aug-1-14	1573	$140.00			◉ Y ○ N		
						○ Y ○ N		
						○ Y ○ N		
						○ Y ○ N		
						○ Y ○ N		
						○ Y ○ N		
						○ Y ○ N		
Totals :			$560.00					

Billing Notes

Appendix 3: Example of Financial Report

PS Full Name	Ck Num	Ck Date	Date Rec'd	Payment Amt.	Donation Amt.	Total Due	Total Payments
Fred Shareholder	1485	1/31/14	2/7/14	140.00		560.00	560.00
Carolyn Shareholder	3638	2/10/14	2/14/14	280.00		560.00	560.00
Bill Shareholder	1720	2/28/14	3/3/14	560.00	280.00	560.00	560.00
Rebecca Shareholder	3766	3/18/14	3/20/14	560.00		560.00	560.00
Melanie Shareholder	3781	12/20/13	3/25/14	560.00		560.00	560.00
Karen Shareholder	5807	5/3/14	3/25/14	560.00		560.00	560.00
Sylvia Shareholder	3007	3/13/14	4/1/14	560.00		560.00	560.00
Roberto Shareholder	1225	3/28/14	4/3/14	280.00		560.00	560.00
Deborah Shareholder	9631	3/29/14	4/4/14	560.00		560.00	560.00
Phil Shareholder	6607	4/1/14	4/6/14	280.00		280.00	280.00
Andrea Shareholder	3893	4/8/14	4/15/14	280.00		560.00	560.00
Sergio Shareholder	9836	3/27/14	4/20/14	560.00		560.00	560.00
Ron Shareholder	1102	4/15/14	4/25/14	560.00		560.00	560.00
Kristen Shareholder	2553	4/30/14	5/1/14	280.00		280.00	280.00
Wendy Shareholder	5499	4/28/14	5/3/14	560.00		560.00	560.00
Stefanie Shareholder	679	5/1/14	5/7/14	280.00		560.00	560.00
Maria Shareholder	8159	5/5/14	5/9/14	280.00		560.00	560.00
Jessica Shareholder	1921	5/3/14	5/10/14	140.00		560.00	560.00
Andrea Shareholder	1857	5/10/14	5/18/14	560.00		560.00	560.00
Heidi Shareholder	1083	5/15/14	5/20/14	240.00		560.00	560.00

3.5

CSA Crop Planning

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CSA Crop Planning Exercise 123

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Lecture 1: CSA Crop Planning

A. The Need for Crop Planning in CSA Production

As many CSA operations provide a great diversity of produce in each share throughout the season, a crop plan becomes an essential planning tool for creating and maintaining efficiency and timeliness of cropping in order to meet harvest goals

1. To grow a diversity of crops well, the grower essentially develops a mini-plan for each crop grown each year—projecting yields, deciding planting dates, row or bed feet needed, seed amounts needed, dates to maturity, best varieties, etc.
2. Crop planning is an iterative process, refined many times, and from various angles. Two primary vantage points are 1) setting harvest goals by date, i.e., envisioning what you will be growing for the CSA and when it will be harvested, and 2) creating a planting plan that will get you there.
3. The best way to develop accurate projections for a particular farm is to maintain planting and harvest records, and use this information as the basis for future decision making
4. Succession plantings, or repeated plantings, are driven by the harvest period that a crop "stands" in the field. For many fresh vegetables, the interval is approximately two weeks from first harvest to loss of quality due to the crop bolting, becoming oversized, tough, bitter, etc.
5. In planning for a CSA, succession plantings often become "block plantings" completed on the same day, or over two days, often with transplanted crops alongside direct sown crops. "Blocking " crops together will create efficiencies with field preparation, irrigation, and timeliness of weed control.
6. Planting on a schedule has a tremendous benefit in terms of ensuring that plantings happen in successive fashion, and are not delayed
7. It can be very helpful to see planting dates laid out in a spreadsheet format, where the time interval between successions is easily noted—for example, being able to see if one week or two (or three) have passed between plantings
8. The number of shares will depend on land available (acreage and fertility), farming expertise, financial resources, etc. A reasonable starting point would be 20 shares per acre.

B. Developing and Implementing a Crop Plan for a CSA Operation

1. Generate a crop list
   a) Think about balance in the offering each week, and over the season. One way to organize the crop list is to categorize crops according to how foods will be used in meal prep, e.g. salad greens, cooking greens, fresh herbs, root crops, summer fruiting crops like beans and tomatoes, calorie foods like potatoes and winter squash, tree fruit and berries.
   b) Reality test your crop list against conditions of climate, land, and water availability. For example, not every farm would have the heat to grow eggplant or the cool conditions needed to grow lettuce. With sandy soil you'll be encouraged to grow more carrots than on clay ground.
      i. Visiting local farmer's markets, if they exist, can be a good way to get a sense of the seasonality of crops in your area, and basic list of potential crops and typical harvest dates
   c) Consider labor available/needed at different times in the season, and infrastructure such as washing and packing facilities, dry storage, and refrigerated space

2. Categorize the crop list according to plant life cycles
   a) **Storable crops, single planting/single harvest crops** – These crops can be either directly sown or transplanted. They are typically planted en masse on one planting date and are later harvested en masse once they have reached maturity, to optimize factors associated with ideal planting dates and ideal harvest dates, as well as proper handling and storage once harvested.
      - Examples: onions, garlic, potatoes, winter squash, dry beans, dry corn
   b) **Non-storable, single or few plantings/extended harvest crops** – These crops, once they reach maturity, continue to yield over an extended period of time (4 to 5 weeks, or more). Generally, these are fruiting crops, and some of the more sturdy greens.
      - Examples: tomatoes, peppers, eggplant, zucchini, cucumbers, pole beans, peas, chard, kale, collards. These crops can be either directly sown or transplanted.
   c) **Transplanted, succession plantings/succession harvest crops** – These crops have relatively short cropping cycles and small harvest windows, requiring regular and repeated sowings to ensure a continuous supply
      - Examples: lettuce, broccoli, cabbage, cauliflower, scallions, leeks, fennel. These crops are most often transplanted.
   d) **Direct sown succession plantings/succession harvest crops** – These crops have relatively short cropping cycles and small harvest windows, requiring regular and repeated sowings to ensure a continuous supply. Crops on this list are direct sown due to a number of factors: either do not take well to transplanting (are tap-rooted), or are quick to bolt from transplant, or are planted in high density for bunching, or are planted on very large acreages, costly to transplant.
      - Examples: salad mix, spinach, arugula, broccoli raab, choi, carrots, beets, turnips, radishes, cilantro, dill, bush beans, corn, melons
3. Create a sowing schedule to meet production goals
   a) Knott's Handbook for Vegetable Growers (see Resources, Unit 3.7) and seed catalogues are useful resources for crop planning information such as average yields, plant spacing, seeds per weight, and other specific production data
   b) Determining specific harvest goals for each crop to be grown: How much of each crop do you need to harvest and at what frequency?
      i. Question: What is the quantity (in pounds, bunches, heads, etc.) of produce intended for each share and what is the frequency of harvest?
      ii. What is the total length (in weeks) of the harvest period in the climate in which you wish to grow produce?
      iii. What is the total number of plants required each week (if applicable) to supply this amount of produce at this frequency?
      iv. What is the total number of plants required for the season to supply this amount of produce at this frequency?
      v. Review Appendix 1, Calculating Weekly and Seasonal Harvest Goals, for example of first step in crop planning calculations
   c) Calculating the number of plants per sowing needed to meet harvest goals
      i. Determine: What is the average yield per plant? (Or, per 100 ft. row?)
      ii. Determine: How many plants (or 100 ft. rows) are necessary to meet defined harvest requirements?
      iii. Determine: How long (in days or weeks) does the crop hold in the ground before declining in quality?
      iv. For transplants, add 25% more for possible greenhouse problems. This is the total number of plants needed for each sowing.

v. Review Appendix 2, Calculating the Number of Plants Per Sowing Required to Meet Harvest Goals

d) Determining the specific sowings dates throughout the season that are needed to achieve the harvest goals you have established for each crop
   i. How long from sowing does it take on average for the crop to reach a harvestable stage of maturity?
   ii. What is the very first sowing date in your climate?
   iii. Planting dates will be subject to change in many areas due to climate change effects
   iv. Review Appendix 3, Determining First, Last, and Frequency of Sowing Dates

e) Calculating the number of sowings needed per season to meet specific harvest goals
   i. Define the first sowing date and last harvest dates possible based on climate (i.e., soil and air temperatures). This will determine first distribution day and the availability of season extension.
   ii. Days to maturity: How many days (on average) are required for the crop to reach maturity?
   iii. Determine: How long (in days or weeks) does the crop hold in the ground before declining in quality?
   iv. Define timing/frequency of sowings: For continuous supply of succession crops, plant no longer than 2 weeks apart. Utilize gaps of 3 or 4 weeks between succession plantings where desired to offer variety in the harvest.
   v. What is the total number of sowings needed for each crop for the season?
   vi. Review Appendix 4, Calculating the Number of Sowings Required Per Season to Meet Specific Harvest Goals

f) A sowing schedule can be a useful living document if updated throughout the season, recording sowings completed and adjusting projections for future plantings

4. Calculating seed costs
   a) For transplanted crops, determine the number of transplants per sowing x the total number of sowings in the season = total seed count to order (add buffer for thinning in greenhouse trays, and greenhouse problems)
   b) For direct sown crops, use yield estimates per row foot to determine the size of each sowing that will meet production goals. Based on the total number of sowings for the season, order seed to match the total row feet to plant.
   c) Seed costs are calculated for each unique crop that is planned, and then added up for a total projected seed cost. In the back and forth of crop planning, seed costs may feed back into the decision process step of setting production goals. E.g. if a particular crop variety is very expensive to buy, you may decide to grow less of that crop, and more of another crop in order to stay within an overall seed budget.
   d) Allow a good amount of time for placing seed orders, and keep detailed notes by crop, so you can build expertise
   e) Seed prices change frequently, and are calculated by the count and by weight. Allow time for conversions back and forth.
   f) Under the National Organic Program certification standards, organic seed must be sourced, unless an organic source of the variety you wish to purchase is not commercially available
   g) Note: Seed potato costs are calculated based on needing 2 to 3 oz of cut "potato seed" per foot planted. Number of cut pieces will vary per 50# or 100# weight depending on the variety (and number of "eyes" per tuber), and generally on the size of the tubers in the sack.
   h) Review Appendix 5, Calculating Seed Costs

C. Using Crop Plans and Harvest Schedules

1. Accurate planting and harvest records help to determine days to maturity in your specific region and season
2. Crop plans, sowing/transplanting, and harvest schedules serve as a record of crop performance, harvest quality and quantity for later trouble shooting
3. Crop plans, sowing/transplanting, and harvest schedules provide data for variety trials
   a) See the following appendices
      - Appendix 6: Field Sowings (Direct)
      - Appendix 7: Transplantings
      - Appendix 8: Crop Plan for 100-Member CSA
      - Appendix 9: Examples of Propagation Requirements and Sowing/Planting Schedule for Direct Market and CSA Crops
      - Appendix 10: CSA Crop Harvest Schedules

CSA Crop Planning Exercise

INTRODUCTION

In the following exercise you will develop a simple crop plan for four crops that would be produced for a 100-member CSA operation. The exercise introduces you to the essential steps used in developing a crop plan for a working garden or small farm. Though the emphasis in this exercise is on crop planning for a CSA operation, the same general principles apply to other types of farming and gardening operations and the same steps are involved.

SCENARIO

You have a 100-member CSA operation located on the central coast of California. Your operation distributes weekly shares of vegetables from June 1 to November 1. Harvest and pickup days occur two times each week, with half of the shares being distributed on Tuesdays and the other half on Fridays.

For the purpose of the exercise, you'll grow and supply your members with four different and seasonally available items each week (a simplification for the sake of the exercise.) The climate is frost free from April 1 through December 1. The beds in your field are 300 feet long and are on 36-inch centers; in other words, the center of one bed is 36 inches from the center of the next bed. The spacing of plants in the beds varies from crop to crop, with some beds having two lines of crops and some having one line. Please consult your seed catalogues for recommended plant spacing, seeding rates, days to maturity and other relevant cultural information.

Work with a partner and generate a crop plan for four crops, one from each of the following categories. Please also answer the series of questions listed under "Other considerations" as part of this exercise. A sample lettuce crop plan from the UCSC Farm's CSA program has been included for your review.

EXERCISE STEPS

1. **Choose four crops, one from each category below:**
    - Storage crops, single planting/single harvest crops: onions, garlic, potatoes, winter squash, dry beans, dry corn. These crops can be either directly sown or transplanted.
    - Non-storable, single or few plantings/extended harvest crops: tomatoes, peppers, eggplant, zucchini, cucumbers, pole beans, peas, chard, kale, collards. These crops can be either directly sown or transplanted.
    - Transplanted, succession plantings/succession harvest crops: lettuce, broccoli, cabbage, cauliflower, scallions, leeks, fennel. These crops are most often transplanted.
    - Direct sown succession plantings/succession harvest crops: salad mix, spinach, arugula, broccoli raab, choi, carrots, beets, turnips, radishes, cilantro, dill, bush beans, sweet corn, melons. These crops are most often directly seeded.

2. Determine weekly goals for each crop, and generate a projected harvest by week

Choose the four crops, and determine for each one:

- Quantity-specific harvest goals in terms of pounds, heads, or bunches. (e.g. one head of 'Nancy' green butterhead per share)
- Frequency of harvest (e.g. every week, or only 3 times in the fall)
- Over what period of time (e.g. June 1 – November 1)?
- Check your goals against what you know is a reasonable maturity for this crop. What weeks/months of the growing season is it actually possible to harvest this crop? E.g. it is not possible in most areas to field cure and harvest winter squash before early fall; sweet peppers may not be red-ripe till fall, etc.
- Check your plan for balance – plan for variety over the season. For example, CSA members may not want beets every week of the summer.

EXAMPLE

Lettuce

How often: given every week, all 22 weeks of season

Specific goal: 1 head per week

Weekly harvest: 1 head lettuce x 100 shares = 100 harvestable* heads of lettuce per week.

*Add 25% for crop loss (insect damage, irrigation or cultivation problems, tipburn, etc.)

100 x .25 = 25 additional plants

100 + 25= 125 plants/week from which to harvest

Seasonal need: 125 heads/week x 22 weeks = 2750 lettuce plants/season in the ground from which to harvest.

TIP: It's helpful to lay out weekly harvest goals in a chart form, before trying to draft a planting plan. Seeing harvest goals by week will help you refine your plan for balance in the crop mix, and meeting conditions of climate and seasonality.

- Make a chart with the crops on the left axis, units of harvest in the first column, and the weeks of harvest in columns going across the page. Pencil in desired harvest dates with an "asterisk."

For example:

Crop	Unit	Week 1	Week 2	...Week 6	Week 7	...Week 20	Week 21	Week 22
Winter Squash	3#					*	*	*
Cucumber	1#			*	*			
Lettuce	1 head	*	*	*	*	*	*	*
Beets	1 bunch			*	*		*	*

Winter squash: 3# per week – Weeks 17, 18, 19, 20, 21, 22 (6 weeks total)

Cucumbers: 1# per week – Weeks 6, 7, 8, 9, 10, 11 (6 weeks total)

Lettuce: 1 head per week – Weeks 1-22 (22 weeks total)

Beets: 1 bunch per week – Weeks 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 18, 20, 21, 22 (14 weeks total)

3. Determine the size of the sowing needed to meet harvest goals, and number of sowings over the season

How large do the sowings need to be for each succession planted, or for each field dedicated to a long-season single-harvest crop?

- What is the average yield per plant or bed-foot planted? Reference seed catalogs, farming handbooks, online crop planning tools, previous farm records or the advice of seasoned farmers.
- How long does your crop hold in the ground before becoming overly mature and losing quality?
- Over how many weeks will the plant yield?
- For transplants, add an additional 20–25% for greenhouse problems, e.g. poor germination, disease, etc.)

Estimating Yields per Crop

The easiest crop yields to estimate are for crops where you harvest the ***whole plant***, e.g., one head of lettuce, one head of cabbage.

Fruiting crops take more work to estimate. They may produce for only 2 weeks before losing quality (e.g., green beans, sweet corn) or may produce for a long interval, up to 6 weeks for tomatoes and sweet peppers. Or, in the case of winter squash, may have a predictable harvest of 3 fruits of average size all on the same harvest day in fall. E.g., a bush variety of Acorn squash produces 2 fruits per plant, average 3# each, plants direct sown and thinned to 2 foot spacing, rows 36″ apart. Or, each plant of sweet corn typically produces 2 harvestable ears over a 2 week period, direct sown, and thinned to 12″, rows 36″ apart. Or, green beans yield 0.3# per bed foot planted, for two and a half weeks if picked every 3 days.

Keeping up with harvest will improve profitability and overall yields achieved on fruiting crops. Plan for best yields, but build in flexibility such that if yields are low, you have food to harvest in other crop rows.

Bunching greens or bunched root crops can be estimated working with recommended plant spacing from seed catalogs, and extrapolating logical numbers of bunches from suggested plant density. E.g., cilantro is direct sown at 1–2″ spacing, planted 2 lines per bed, estimated harvest 2 bunches per row foot.

Keep yield records by row foot periodically for greens and root crops to generate a farm-specific crop planning tool.

TIP: An important data point for storage crops is harvestable yield per row foot at time of harvest, e.g., # of potatoes dug per row, number of bins of winter squash collected per row, # of sacks of onions per row. These will be the numbers you can use to compare yields one year to the next, to compare crop varieties one to another, and to test your field conditions against figures in a handbook or crop planning tool. Using sales data on storage crops is another data point, which includes feedback regarding harvest and storage protocols, and effectively moving produce while it is still in the best shape.

EXAMPLES

A lettuce plant yields only one harvestable head of lettuce. On average, a mature lettuce crop in this coastal climate will retain its quality in the ground for approximately 10 days (the range is 7 to 14 days depending on weather and variety). If you plant varieties with a range of days to maturity, this will allow you to harvest for two weeks from each succession planting.

With 125 lettuce plants needed each week (see above calculations) and with two weeks of harvest possible from each planting, the number of plants per sowing should include two weeks' worth of harvest.

2 Weeks x 125 plants = 250 plants per sowing

Add in a 20% loss rate for greenhouse problems (poor germination, disease, etc.):
250 x 1.2 = 300 Transplants needed per sowing

We want to have lettuce for 22 weeks, and each sowing will be harvested over 2 weeks. Therefore we will need to plan on eleven sowings.

Bunched beets hold their quality in the ground for about 2 weeks. If planted two lines to a bed, expect to harvest 1 bn per bed foot.

With 100 bunches of beets needed each week of harvest, and harvesting for 2 weeks from one sowing, plant enough row feet to harvest 2 weeks worth, or 200 bn from a sowing.

At 1 bn per bed foot, the calculation is:

200 feet x 1 bn per bed foot = 200 bunches

Add 20% for field problems (poor germination, cultivation damage or pest damage):
200 feet x .20 = Add 40 feet
Plan to plant 200+ 40 feet = 240 feet per sowing

To give beets to the CSA 14 different weeks, plan on 7 sowings of 240 feet over the course of the summer.

4. Determine a specific planting calendar for the entire season

Research the following question for each crop in your CSA program:

- How long from planting does it take on average for the crop to reach a harvestable stage of maturity?
- Make refinements for season and day length. Growth is accelerated in the 6 weeks before and after summer solstice, June 21st, which is significant for quick crops like salad mix or spinach.
- Note that catalog maturities are climate-specific, and need to be verified at your farm. (E.g., a sweet corn variety listed in Johnny's Seeds as 70 days can take 110 days in the cool summers of the Central Coast.)
- For transplants, use the catalogue maturity plus about one week for calculating maturity in the field. Count day 1 as the greenhouse sowing date. The extra week is to compensate for slow-down in growth at the end of the greenhouse interval, and continuing into the first few days after plant out in the field when roots are establishing. Maturities are more profoundly influenced by day length and temperature than direct sowing vs. transplanting. (Keep planting records and find out typical maturities for a local area according to planting date.)

- Now, make a planting calendar that combines both direct sowing dates and transplant dates. Look at your harvest goals, and count back in time using the estimated days to maturity for each crop. Remember that some of the plantings will generate harvest for more than one week; planting dates will be fewer than harvest dates.
- For storage crops, set only one (or a few) planting dates.
- Once you have planting dates for transplants, generate a greenhouse sowing list. Allow 5 weeks to have most transplants ready for plant-out: 4 weeks to develop a plug, and another week for hardening off. Some crops take longer to produce for plant-out, including tomatoes, peppers, eggplant, fennel, and alliums (7 weeks on average). Sowings near summer solstice will be accelerated.

EXAMPLE

To produce lettuce for the whole summer season, transplant every 2 weeks; also sow lettuce in the greenhouse every 2 weeks.

Red Cross variety lettuce is listed in Johnny's catalog as 48 days. We'll plan to transplant about 48 days before the first harvest day of June 1st, which would be April 22nd.

Sow in the green house on March 18th, allowing 5 weeks for development of the transplant. Designate planting dates every 2 weeks from April 22nd until about September 1st, allowing for more time to size up in the fall, 60 days instead of 48 days.

Greenhouse sowings would be scheduled March 18th until July 25th (5 weeks before the last planting)

The harvest goals chart can be easily modified to be the planting plan. **TIP:** Using an interval of one week for the harvest goals and planting plan simplifies all of the math and tracking. Simply count backwards from harvest goals in weeks to get planting date. For example, to have beets ready for July 6, where direct sown beets mature in 50 days on the Central Coast, count back approximately seven weeks (=49 days) for a planting date of week of May 18.

For example:

	Crop			CSA Week 1	CSA Week 2	CSA Week 3	CSAWeek 4	CSA Week 5	CSA Week 6
		May 18	May 25	June 1	June 8	June 15	June 22	June 29	July 6
harvest	beets								*
plant	beets	*	<<<<<	<<<<<	<<<<<	<<<<<	<<<<<	<<<<<	<<

5. Determine amount and cost of seed needed to complete the sowings for each crop

- For direct-seeded crops, refer to seed catalogues for amount of seed needed per row foot, and convert to bed-feet if needed. Using early calculations of amount to sow for each crop, sum up total row feet for the season, and calculate seed needs.
- For transplanted crops, refer back to calculations for amount to sow for each crop, and sum up number of plants needed for the season. Calculate amount of seed needed to fulfill greenhouse sowings for the season.
- Make note of average seed viability per crop. This will inform if surplus seed may be used the following year.

EXAMPLES

Transplanted

Say we need 300 lettuce transplants per sowing and a total of 11 sowings:

300 x 11 = 3,300 seeds

Add another 25% for manually seeding trays: 3,300 x 1.25 = 4,125

Order nearest size in catalog, 5,000 seeds of a pelleted lettuce to reduce thinning expense in the trays. Order 5M organic "Nancy" butterhead at $2.44 per thousand, equals seed cost of $12.20. Order 5M of another variety of lettuce since seed cost is low, and we want to plant out 2 varieties each planting for overlapping harvests.

Direct seeded

Say we plant 6 sowings of beets, each one equal to a 300' bed with 2 lines of plants. The seed catalog says 5,000 seeds (5M) sows 333' (row feet, i.e. a single line of plants.)

Double that amount for a bed with 2 rows. Need 10,000 seeds per 300' bed with 2 lines.

6 beds @ 10,000 seeds/bed would be minimum seed need of 60,000 seeds. Order 75,000 to be safe, Red Ace from Johnny's for $0.99 per thousand, or $74.25.

6. Additional crop planning considerations

- What equipment is necessary to directly sow or transplant these crops?
- Is equipment available to form or refresh beds throughout the season, or only in spring?
- What are the specific spacing requirements for each of the crops?
- Does the crop need to be thinned after germination? How will this be accomplished? How much time will this take?
- Do any of the crops have specific fertility or harvest requirements?
- What are the post-harvest requirements for the crops?
- What surface area of land would be required to produce all of the four crops?
- What type of irrigation will you use for each crop and why?
- Consider varietal differences—in flavor, tenderness, bolt resistance, insect and disease resistance, and *price of seed*.

Appendix 1: Calculating Weekly & Seasonal Harvest Goals

EXAMPLE

WEEKLY HARVEST REQUIREMENTS

- 2 heads lettuce x 50 full shares = 100 heads total for full shares
- 1 head lettuce x 50 half shares = 50 heads total for half shares
- Total for week (both full and half shares) = *150 high quality heads of lettuce per week

  *Note: Add in a 25% cull rate for poor quality transplants, crop losses, and for unmarketable crop in the ground

  Calculations: 150 x .25 = 38 additional plants. 150 + 38 = 188 plants/week from which to harvest the necessary 150 heads

SEASONAL HARVEST REQUIREMENTS

- Harvest period: June 1 – November 1 = 5 months
- 188 heads/week x 22 weeks = 4,136 lettuce plants/season in the ground from which to harvest

Appendix 2: Calculating the Number of Plants Per Sowing Required to Meet Harvest Goals

EXAMPLE

- One lettuce plant yields one head of lettuce
- On average, a mature lettuce crop in a cool coastal climate will retain its quality in the ground for 14 days
- This will allow you to harvest for two weeks from each succession of plantings
- In order to create a small degree of harvest overlap in mature lettuce successive sowings are scheduled at a frequency of 1x/10 days

CALCULATIONS

GIVEN:

- 188 lettuce plants are needed each week (see previous)
- Two weeks of harvest is possible from each planting
- The number of plants per sowing should therefore include two weeks' worth of harvest
- 2 x 188 = 376 plants/sowing
- Add in a 25% cull rate for poor germination, disease, etc.
- 376 x .25 = 94; 376 + 94 = 470 total plants needed per sowing
- Standard propagation trays used for lettuce have 120 cells each
- Four cell trays would therefore be required for each sowing, providing a total of (120 x 4) = 480 transplants/sowing

Appendix 3: Determining First, Last, & Frequency of Sowing Dates

EXAMPLE

Determining First and Last Sowing Dates

- A lettuce crop requires 60 days to mature from the date sown (on average)
- To have a mature crop on your first harvest date of June 4 for example, the first sowing would take place on April 4
- Therefore, the first sowing of lettuce would take place on April 1st (and every 10 days thereafter). The last sowing date would be August 20th for the final harvests at the beginning of November.

Determining Frequency of Sowings

- To standardize the process we have scheduled our lettuce sowings for 1st, 10th, and 20th of each month (3x/month)

  This date will be determined by when the ground is dry enough for tillage in spring, and when the soil has warmed (except for overwintered crops such as garlic, other alliums, peas, fava beans, etc.)

- Storage and long-season crops often have a distinct "best" planting date:
  - to increase flavor and sugars, e.g., winter squash
  - to finish or cure before the onset of rain, or a freeze, e.g., potatoes
  - in relation to foliar or soil-born diseases such that they produce better if planted early, e.g., storage onions.
- Some planting dates have to do with crop/insect pest interactions—e.g., many growers time sweet corn plantings so that the crop matures before the first hatch or migration of corn earworm, *Helocoverpa zea*
- Some planting dates are relative to day length—e.g., bulb onions that bulb with long days; or, asteraceae crops (endive and radicchio) that tend to bolt if transplanted before summer solstice but not after

Appendix 4: Calculating the Total Number of Sowings Required Per Season to Meet Specific Harvest Goals

EXAMPLE

- The first and last harvest dates for the CSA are June 4 and November 2, respectively
- Sowings take place every 10 days (the 1st, 10th, and 20th of each month)

CALCULATIONS

- 3 sowings/month x 5 month harvest season = 15 sowings total/season are required to meet harvest goals

Appendix 5: Calculating the Total Number of Transplants Required & Associated Seed Costs

EXAMPLE

Multiplying the number of transplants per sowing by the number of sowings per season will provide you with the number of transplant and seeds needed to implement your crop plan

CALCULATIONS

- 480 transplants/sowing are needed (see Appendix 2)
- 15 sowings/season are required
- 480 x 15 = 7,200 transplants/season
- Two seeds are sown into each cell when propagating
- 2 x 7,200 = 14,400 seeds needed to produce the lettuce crop for your 100 CSA subscribers
- Seed costs are $0.96/1,000 seeds. $0.96 x 14.4 = $13.80 + shipping and handling

Appendix 6: Field Sowings (Direct)

YEAR:

DATE	FIELD	CROP/VARIETY	SEED CO.	HOLE #	# OF BEDS	# OF ROWS	# OF FEET	DAYS / GERMINATE	DAYS / MATURE	FIRST HARVEST	LAST HARVEST	TOTAL YIELD	NOTES

Appendix 7: Transplantings

YEAR:

DATE	FIELD	CROP / VARIETY	SEED CO.	HOLE #	# OF BEDS	# OF ROWS	# OF FEET	DAYS / GERMINATE	DAYS/ MATURE	FIRST HARVEST	LAST HARVEST	NOTES

Appendix 8: Crop Plan for 100-Member CSA

(50 full shares, 50 half shares)

CROP	FULL SHARE	HALF SHARE	TOTAL/WEEK	# PLANTS/ SOWING+25% x 2 WEEKS	SPACING	# ROW FEET/ SOWING	SOWING PERIOD EVERY ? DAYS
Basil	100 plants	50 plants	160	300	12 in	150 ft	20
Beans	100 lb	50 lb	150+	1,200	3.5 in	300 ft	10
Beets	250	150	450	1,200	2 in	100 ft	variable
Broccoli	100 heads	50 heads	200	600	12 in	300 ft	10
Cabbage	100 heads	50 heads	160	600	15–18 in	300 ft	20
Carrots	500	300	800+	3,600	1 in thin	150 ft	10
Cauliflower	50 heads	50 heads	100	300	1ft	150 ft	2
Chard	600 leaves	300 - 350	1,000	300	1ft	150 ft	variable
Cilantro	50 lg. Bn.	50 sm. Bn.	variable	15,000 seeds	swath	75 ft	variable
Collards	600 leaves	300–350	1,000	150	1ft	150 ft	1
Corn	300 ears	200 ears	500+	18,000	1 ft	1,800 ft	10 -14
Cucumbers	250	150	500	200	1.5 ft	300 ft	30
Dill	50 lrg. Bu.	50 sm. Bu.	?	15,000 seeds	swath	75 ft	variable
Eggplant	200–300	100–200	500=	600	1 ft	600 ft	1
Fennel	100 plants	50 plants	150	300	6 in	75 ft	variable
Garlic	100	50	150	6,000	4–5 in	1,500 ft	1
Green Garlic	250 plants	150 plants	400	800	3 in	100 ft	1
Green Onions	100 plants	50 plants	150	300	plugs of 10, 6 in	75 ft	4
Hard Squash	100–200	200–300	500	1800	2 ft	5400 ft	1
Kale	600–800 leaves	300–400	1,100	300	1 ft	150 ft	variable
Kohlrabi	100 plants	50 plants	150	300	6 in	150 ft	30
Leeks	250	150	400	1,440	5 in	300 ft	variable
Lettuce	100 heads	50 heads	200	500	double line, 10 in	208 ft	10
Melons	100	50	150	300	2 ft	600 ft	variable
Onions	100	50	350	4,800	6 in	1,200 ft	variable
Parsnips	250	150	400	800	2 in	75 ft	variable
Peppers	200	100	300+	600	1ft	600 ft	1
Potatoes	150–200 lbs	75–100 lbs	300 lbs.+	4,500	8 in	3,600 ft	2
Pumpkins	100	50	150	1,400	2 ft	4,400 ft	1
Radish	400	200	680	1,800	thin 1 in	75 ft	30
Salad Mix	25–50 lbs	15–25 lbs	75 lbs.+	36,000	swath	180 ft	20
Spinach	200 plants	100 plants	300	720	thin to 5 in	150 ft	20
S.Squash	200	100	300	150	2 ft	300 ft	30
Strawberries	100 baskets	50 baskets	150 bks. +	1,650	12 in	900 ft	11
Tomatoes	200 lb	100 lb	300 lb	200	3 ft	600 ft	30
Turnips	250	150	450	1,200	2 in	100 ft	variable

CROP	# SOWINGS	SOWING INFO	SEEDS/CELL* SEEDS/FT**	SEED AMOUNTS	GERMINATION	DAYS TO MATURITY	TOTAL BED FEET
Basil	9	greenhouse*	5	13,500	5 to 10	78	1,350
Beans	9	direct sow**	3.5 seeds/ft	10,800	6 to 16	50	2,700
Beets	11	direct sow	10 seeds/ft	16,500	5 to 17	58	1,100
Broccoli	16	greenhouse	1 to 2	48,000	4 to 20	64	4,800
Cabbage	6	greenhouse	1 to 2	10,800	4 to 20	66	1,800
Carrots	16	direct sow	30 seeds/ft	72,000	N/A	56	2,400
Cauliflower	2	greenhouse	1 to 2	3,000	4 to 20	65, 80	300
Chard	3	greenhouse	1 to 2	2,700	7 to 14	50, 65	450
Cilantro	7	direct sow	200 seeds/ft	105,000	N/A	50, 55	525
Collards	1	greenhouse	1 to 2	250	4 to 20	50	150
Corn	4	direct sow	2 seeds/ft	9,000	4 to 12	80	7,200
Cucumbers	4	combo	2, 1 seed/ft	2,400	3 to 10	58, 65	1,200
Dill	4	direct sow	200 seeds/ft	60,000	7 to 21	40-55	300
Eggplant	1	greenhouse	Flats	2,250	5 to 14	67, 58	600
Fennel	2	greenhouse	2 to 3	1,800	N/A	75	150
Garlic	1	direct sow	2 cloves/ft	6,000	4 to 13	210	1,500
Green Garlic	1	direct sow	3 cloves/ft	800	4 to 13	150	100
Green Onions	variable	combo		6,000	4 to 13	60	300
Hard Squash	1	direct sow	1 seed/ft	5,400	3 to 10	95, 100	5,400
Kale	3	greenhouse	1 to 2	2,700	4 to 20	50, 65	450
Kohlrabi	5	greenhouse	1 to 2	4,500	4 to 20	38, 45	750
Leeks	2	greenhouse	Flats	1,440	4 to 13	75, 90	600
Lettuce	15	greenhouse	2 to 3	22,500	3 to 7	45	3,120
Melons	2	combo	2 to 3, 1 seed/ft	1,800	3 to 10	72	1,200
Onions	2	combo	20 seeds/ft, 2/ft	12,000	4 to 13	95, 100	2,400
Parsnips	2	direct sow	14 seeds/ft	800	N/A	110	150
Peppers	1	greenhouse	flats	2,250	6 to 28	75, 80	600
Potatoes	2	direct sow	1.5 seeds/ft	11,250	N/A	110	6,000
Pumpkins	1	direct sow	1 seed/ft	4,200	3 to 10	85, 95, 110	4,400
Radish	4	direct sow	35 seeds/ft	21,600	3 to 10	30	300
Salad Mix	8	direct sow	200 seeds/ft	300,000	3 to 7	20	1,440
Spinach	8	direct sow	35 seeds/ft	28,800	6 to 12	35, 42	1,200
S.Squash	4	combo	2 to 3, 1 seed/ft	1,800	3 to 10	48, 55	1,200
Strawberries	1	nursery	1 pl/ft	1,650	N/A	120	900
Tomatoes	4	greenhouse	flats	1,000	5 to 14	65	2,400
Turnips	2	direct sow	35 seeds/ft	1,800	1 to 5	40-55	150
						TOTAL BED FEET:	**59,585**

Total acreage: 4.103

*seeds/cell=propagated in greenhouse
**seeds/ft=direct sown in field

Appendix 9: Examples of Propagation Requirements & Planting Schedules for Direct Market & CSA Crops

FIELD SOWING DATES (DIRECT SOWINGS)

	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
Beans		25	15	5 25	15	5	
Beets	25	5 15 25	5 25	15	5 25	15 25	
Carrots	25	5 15 25	5 15 25	5 15 25	5 15 25	5 15 25	
Cilantro		15	5 25	15	15	5	5
Corn			5 25	15	5		
Dill			5	5	15	5	
Onions		5					20
Parsnips		5		5			
Potatoes		15					
Pumpkins			15				
Radish		25	15	5			
Salad Mix			15	5 25	15	5 25	15 25
Spinach			5 25	15	5 25	15	5 25
Squash, Winter			15				
Turnips			5			15	

NUMBER OF TRANSPLANTS NEEDED PER SUCCESSION:

Basil	400	Eggplant	600
Broccoli	500	Fennel	375
Bunch Onions	375 (6-10 seeds/cell)	Kale	400
Cabbage	400	Kohlrabi	375
Cauliflower	250	Leeks	1440
Chard	400	Lettuce	500
Collards	400	Melons	300
Cucumbers	200	Peppers	900 (300 each)
Eggplant	600	S. Squash	150
Flowers	600	Tomatoes	200

PROPAGATION TRAY REQUIREMENTS

CROP	TYPE OF TRAY	#TRAYS/SOWING	# SOWINGS	TOTAL
Eggplant	Sowing flat	2	1	2
Leeks	Sowing Flat	2	2	4
Peppers	Sowing flat	4	1	4
Tomatoes	Sowing flat	2	4	8
Bunching Onions	175 speedling	6	5	30
Basil	120 speedling	4	9	36
Broccoli	120 speedling	7	17	119
Cabbage	120 speedling	4	10	40
Chard	200 speedling	2	3	6
Collards	200 speedling	2	1	2
Cucumbers	2″ 72 speedling	4	1-2	4-8
Eggplant	50 cell plug tray	16 (8 each)	1	16
Flowers	50 cell plug tray	10 (2 of each)	2	20
Kale	200 speedling	2	3	6
Lettuce	216 green tray	2	17	34
Melon	2″ 72 speedling	5	1	5
Peppers	50 cell plug tray	10	1	10
Summer Squash	2″ 72 speedling	3	1-2	10
Tomatoes	50 cell plug tray	5	4	20

In this example, the column labeled "sown" can be used in the greenhouse to check off when done. Calculations of the number of plants needed are done on a separate spreadsheet or in a formula based on spacing and harvest needs.

Date Sown	Crop	Variety	# Flats	Flat Size	# of Plants Needed	Bed Feet	# Rows / Spacing	Notes
Feb. 1	Tomatoes, Red Slicing	Early Girl	70	72	5000		5000	
	Tomatoes, Gold Cherry	Sungold	5	72	360	360 ft		
Feb. 15	Broccoli	Blue Wind	7	400	2800			
	Onions, Yellow	Bridger	15 flat		7500			
	Carrots	Bollero		Direct		900 ft	3 rows	Flame Weed
March 1	Artichokes	Imperial Star	18	72	1300			
	Tomatoes	Early Girl	50	72	3600			
	Beets, Red	Red Ace		Direct		900 ft	3 rows	Flame Weed

In this example, calculations are made in a separate spreadsheet.

Date Sown	Crop	Variety	Row Feet	# of Plants Needed	Flat Size	Flats Needed	Beds	Notes
April 5	Greens	Joi Choi	600	600	72	8	1	
	Tomatoes	New Girl	200	100	50	3	1	Sow into 50s, on heat mats
	Swiss Chard	Bright Lights	1400	1400	128	11	3.5	
April 12	Cabbage	Gonzales	400	400	72	6	1	
	Kohlrabi	Kohlibri	600	600	128	5	1	3 seeds per plug
	Greens	Fiero	600	600	128	5	1	

In this example, crops are organized alphabetically. Before each sowing, a list of the day's sowings would be made and recorded in the Greenhouse. "T" in Greenhouse sowing date column refers to "tray."

Crop	Variety	Order #, Quantity	Ordered From	Greenhouse Seeding Date	Direct Seeding Date	Total Beds	Notes	Spacing
Basil	Genovese	9119P, 16M	J	9T (200's): 4/6, 5/18, 6/1, 6/15, 7/13, 7/27 5T (200's): 4/20, 5/4 12T (200's): 6/29		10		
Beets	Red Ace	112, 110M	J	20T: 3/30	2B: 4/21, 5/19, 6/9, 6/23	14	Reserve 5 beds for Winter Share	
Broccoli	Blue Wind	2812, 5M	J	6T: 4/12, 5/10, 5/31, 6/21, 7/12		13	Blue Wind & Violet Queen: Plant early under remay, uncover and hoe, recover	
	Arcadia	139, 5M	J	6T: 5/10, 5/31, 6/21, 7/12				
	Green Magic	283, 2M	J	6T: 5/10, 5/31				
Brussel Sprouts	Diablo	334B, 1C+2B	F	10T: 5/31		5		3 rows 18"
Cabbage	Super Red 80	16P, 1M	J	5T: 5/3, 5/31		9		3 rows 18"

Appendix 10: CSA Crop Harvest Schedule

CROP	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER	
Apples					■	■	■	■	■	■
Basil	■	■	■	■	■	■	■	■	■	■
Beans				■	■	■	■	■	■	■
Beets	■	■	■	■		■		■		■
Broccoli	■	■	■	■	■	■	■	■	■	■
Cabbage			■		■		■		■	■
Carrots	■	■	■	■	■	■	■	■	■	■
Cauliflower		■			■					
Chard	■	■	■	■	■	■	■	■	■	■
Cilantro	■	■		■		■		■	■	■
Collards		■	■	■	■	■	■	■	■	■
Corn					■	■	■	■		
Cucumbers					■	■	■	■	■	■
Dill		■		■		■		■		■
Eggplant						■	■	■	■	■
Fennel						■			■	
Garlic				■	■	■	■	■	■	
Green Garlic	■	■	■							
Green Onions	■	■	■							
Hard Squash								■	■	■
Kale	■	■	■	■	■	■	■	■	■	■
Kiwis	■	■	■							
Kohlrabi	■		■		■		■		■	
Leeks						■	■		■	■
Lettuce	■		■	■	■	■	■	■	■	■
Melons								■	■	
Onions				■	■	■	■	■	■	■
Parsnips					■				■	
Pears						■	■	■	■	■
Peppers					■	■	■	■	■	■
Plums				■	■	■				
Potatoes			■	■	■	■	■	■	■	■
Pumpkins									■	■
Radish	■	■	■							
Salad Mix	■		■		■		■		■	
Spinach		■		■		■		■		■
S. Squash			■	■	■	■	■	■	■	
Strawberries	■	■	■	■	■	■	■	■		
Tomatoes						■	■	■	■	■
Turnips			■							■

3.6

CSA Harvest and Post Harvest Handling

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Lecture 1: CSA Harvest and Post-Harvest Handling of Fruit and Vegetable Crops

A. Importance of Skillful Harvesting and Post-Harvest Handling

1. Crop quality and the success of direct marketing farming businesses. A primary attraction of direct marketing outlets for many consumers is high quality produce. Sound produce harvesting, post-harvest handling, and packaging will preserve the quality of produce, which is critical to the success of any market farm or CSA operation.
2. The influence of harvest and post-harvest handling on the aesthetics, flavor, texture, and shelf life of produce
3. Post-harvest handling, long-term storage and nutrition
   a) Post-harvest handling and long-term storage of onions, garlic, winter squash, potatoes, etc.
   b) The influence of post-harvest handling on the nutrient profile of perishable crops
4. Harvest and post-harvest practices impact on food safety and farmers' liability (see Unit 7, Food Safety, for more information)
5. How the quality of the final product is impacted by cultivar selection, and growing methods, techniques, and skills; how decisions made around production impact the quality of the produce
6. Information on which post-harvest practices and techniques are allowable under organic systems

B. General Pre-Harvest Guidelines: When to Harvest

1. Harvesting crops at peak maturity and quality (see Appendix 1, Handling Information for Fruits and Vegetables, and Appendix 2, Suggested Displays and Storage Groups for Selected Vegetables)
2. Time of day to harvest: Most crops (with the exception of dry storage crops) are best harvested in the cool of the morning to avoid moisture stress at time of harvest and preserve marketability
   a) For storage crops: Often the best time to harvest is after the dew has dried, as the crops should be dry when put into storage
3. Crop turgor, soil moisture, and irrigation considerations prior to harvest (see Appendix 3, Estimating Soil Moisture by Feel)
   a) Leafy crops (e.g., lettuce, carrots, beets, spinach, greens, etc.): Check soil irrigation-sensitive crops the day before harvest and irrigate as necessary to have crisp crops in the morning. Soil should be at 75% of field capacity to assure good turgor pressure and avoid soil compaction due to wet soil. Irrigating 24 hours prior to harvest is often ideal.
   b) Storage crops (e.g., onions, garlic, potatoes, winter squash, etc.): Soil and crops should be thoroughly dry prior to harvest and storage.
4. Factoring in time needed for cooling, cleaning, processing, packaging, labeling, transportation, etc., relative to the labor available to complete specific tasks

C. Considerations for Individual CSA Harvests

1. Define the amounts needed for each full and half share (see Appendix 4, CSA Harvest Amounts for Full and Half Shares)
2. Define total volume of produce needed for a given harvest for all shares (e.g., 50 bunches of carrots, 150 lbs potatoes, etc.)

3. Estimate yield per bed foot (e.g., 200 lbs carrots/100 foot bed) to plan harvest sessions
4. Maximize harvest volume by using specific harvesting techniques
   a) Harvest throughout an entire planting and select for optimal maturity rather than harvesting from one section of a given planting (e.g., sweet corn, tomatoes, fresh beans, cut flowers, summer squash, etc.)
   b) Harvest certain crops (e.g., carrots) all at once from a mature section, with immature carrots culled or bunched in large quantities
5. Maximize efficiency by completing tasks in the field (such as bunching, trimming, etc.)

D. Small Group Field Demonstrations

A review of harvesting and post-harvest skills and practices (see Appendix 1, and Appendix 5, Harvest and Post-Harvest Handling Practices) to be done in the field

1. Assessing the maturity and quality of each crop
   a) Define/describe and provide examples of selection criteria used to determine whether a given crop has reached harvestable maturity
   b) Define how much of a given planting/crop is currently mature
   c) Estimate next harvest interval (for example: more beans ready in three days)
   d) Assess the maturity of subsequent plantings (if available)
2. Tools and techniques used for harvesting each crop
   a) Demonstrate tool safety and efficiency of use when cutting, pulling, or digging specific crops for harvest
   b) Discuss and demonstrate harvesting containers used for each crop
   c) Demonstrate mechanical harvesting techniques (if available)
3. Demonstrate and describe the post-harvest handling for each crop (see Appendices 1 and 5)
   a) Harvest temperature: All crops should be kept cool once harvested by placing in the shade or refrigeration
   b) Washing: Once harvested, nearly all crops require washing by either spraying with water or dunking to remove soil and/or reduce "field heat" (see below). The exceptions to this rule include onions, garlic, hard squash, sweet corn, tomatoes, beans, melons, basil, all berries and tree fruit crops.
   c) Removing field heat: The term "field heat" refers to the heat stored in crops from being out in the sun. In harvest and post-harvest handling you want to reduce/remove the field heat in your crops to ensure better storability and crop quality.
   d) Humidity and post-harvest handling
   e) Post-harvest handling for crop sensitivity to ethylene gas
   f) Demonstrate, describe post-harvest handling of dry storage crops (e.g., onions, garlic, hard squash, potatoes, etc.)
   g) Demonstrate packing/packaging styles by crop (bunching, bagging, stacking, etc.)

E. Packing for CSA

1. Common packing sequence for mid to large CSA operations
   a) Pre-harvest and pack less perishable crops (e.g., tomatoes) and dry crops (e.g., garlic, onions) on the day prior to distribution. Fresh harvest, pack, and distribute highly perishable items on the day of distribution.
   b) Consider using a packing paper sheet (which can be dipped in water multiple times) on top of your CSA pack, to keep vegetables moist in box
2. Packing CSA shares for presentation and post-harvest quality (see Appendix 2)

3. Other forms of CSA pack
    a) Pack your own: Shareholders select produce from bulk with posted quantity list at pick-up site
    b) Pick your own: Shareholders harvest their own produce from field using quantity list
    c) Harvest in bulk: Shareholders divide produce into individual shares and distribute
    d) Harvest prior to day of distribution and refrigerate

F. Harvest Record Keeping

1. The role of harvest records (see Appendix 6, Sample CSA Harvest Record)
    a) Soil fertility management and variety trial assessment tool—tracking yields from a given field or crop variety
    b) Helps to define regional harvest period by recording first and last harvest dates for crops
    c) National Organic Program standards for tracking produce sales to point of origin
    d) Tracks quantities of produce per share for use in making adjustments to share size when yields have been previously low or high
    e) Tracks retail value of CSA shares in order make future price adjustments, if necessary
    f) Useful to compare harvest records against production management records to identify how growing practices impact yields (e.g., seeding, irrigation, weeding, temperatures, etc.)

G. Managing a Harvest Crew

1. What is the critical information that a manager must convey to the harvest crew?
    a) Accurately assessing maturity
    b) Harvesting tools and techniques
    c) Efficiency and safety
    d) Proper ergonomics to reduce chance of injury: bending, lifting, repetitive motion concerns
    e) Post-harvest handling strategy for each crop
    f) Packing for each crop
    g) Food safety considerations, e.g., personal hygiene (hair, skin, nails, contagious illnesses); see Unit 7, Food Safety on the Farm, for additional information

Resources

PRINT RESOURCES

Bachman, Janet, and Richard Earles. 2000. *Post-Harvest Handling of Fruits and Vegetables*. Appropriate Technology Transfer to Rural Areas (ATTRA) *attra.ncat.org/attra-pub/summaries/summary.php?pub=378*

Covers post-harvest practices suitable for small-scale operations, and points out the importance of production and harvesting techniques for improving quality and storability. Various methods for cooling fresh produce are discussed, and resources are listed for further information, equipment, and supplies. Available in print or as free downloadable pdf.

Blanchard, Chris. 2013. *Post-Harvest Handling Decision Tool*. Leopold Center for Sustainable Agriculture and Iowa State University Extension Value Added Agriculture Program. *www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2013-11-post-harvest-handling-decision-tool.pdf*

The information in this guide was developed from case studies of three Midwest farms, and summarizing practices used at another seven farms. Guidelines are offered by different crop types, as each has different considerations.

Flores, Rolando A., and Karen L. B. Gast. 1997. *Storage Option: Fruits and Vegetables*. Cooperative Extension Service, Kansas State University. *www.rivervalley.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=10314*

Provides plans for building several types of vegetable coolers

Growing for Market

Growing for Market is a national monthly newsletter for direct market farmers. Written by growers, it covers all topics relating to growing and marketing produce, herbs, and cut flowers. See: www.growingformarket.com

Hardenburg, Robert, et al. 1986. *The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks*. USDA Handbook No. 66. United States Department of Agriculture, Agricultural Research Service.

Maynard, Donald N., and George J. Hochmuth. 2006. *Knott's Handbook for Vegetable Growers, Fifth Edition*. Hoboken, NJ: John Wiley and Sons Ltd.

An excellent growers' reference text with abundant information and charts on yield, harvest, and post-harvest handling of fruits and vegetables for market farmers.

NRAES, 1992. *Produce Handling for Direct Marketing*. Natural Resource, Agriculture, and Engineering Service (NRAES), NRAES-51.

For growers selling seasonal produce at farmers' markets and roadside stands. Describes post-harvest physiology, food safety, produce handling from harvest to storage, refrigeration, produce displays, and specific handling recommendations for over 40 fruits and vegetables. Available at www.nraes.org.

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Detailed descriptions of proper temperature management for perishables and commercial cooling methods. Complete discussion of design for hydro-cooler and forced-air cooler systems, the two most commonly used cooling methods. 25 graphs and illustrations, 11 color plates, and 15 tables. Available from anrcatalog.ucdavis.edu.

Wills, Ron, Barry McGlasson, and Doug Graham. 2007. *Post-Harvest: An Introduction to the Physiology and Handling of Fruit, Vegetables and Ornamentals, 4th Edition*. University of New South Wales Press,

A comprehensive post-harvest physiology text. Many useful charts and concepts for direct produce marketers to consider.

Wilson, L. G., M. D. Boyette, and E. A. Estes. 1995. *Postharvest Handling and Cooling of Fresh Fruits, Vegetables and Flowers for Small Farms*. Leaflets 800-804. North Carolina Cooperative Extension Service. *www.ces.ncsu.edu/depts/hort/hil/post-index.html*

WEB-BASED RESOURCES

California Certified Organic Farmers

ccof.org

Lists easily accessed USDA National Organic Program (NOP) standards manual, which includes post-harvest treatment considerations

Kansas State University Research and Extension

www.ksre.ksu.edu

Use the search function to access a wide variety of materials on harvest and post-harvest handling, including extensive information on cut flower handling

Organic Materials Review Institute (OMRI)

omri.org

Includes lists of acceptable post-harvest treatments

UC Davis Post-Harvest Technology

postharvest.ucdavis.edu

Includes produce fact sheets, a list of short courses and websites, research activities, a bookstore, newsletter, and links to other useful websites.

UC Small Farm Program

sfp.ucdavis.edu

Use the search function to access information on harvest and post harvest handling on the small farm, including crop-specific information and food safety considerations.

Appendix 1: Handling Information for Fruits & Vegetables

CROP	RELATIVE PERISH-ABILITY[1]	DESIRABLE HARVEST QUALITY	OPTIMUM STORAGE CONDITIONS		CHILLING[2] SENSITIVE?	COMMENTS
			Temp (°F)	Humid (%)		
Beans, Lima	M	Seeds developed and plump with tender seed coats	40-45	95	Yes	Sprinkle lightly
Beans, pole & snap	H	Seeds immature; crisp pods free from blemishes	38-42	95+	Yes	Sprinkle lightly
Beets	M	Roots firm, deep red, 1.5″ to 3″ diameter	32	98-100	No	Sprinkle lightly; remove tops
Broccoli	VH	Green heads, flower buds developed but tight	32	95+	No	Sprinkle lightly
Brussels Sprouts	H	Firm sprouts, 1″ diameter	32	95+	No	Sprinkle lightly
Cabbage	M	Crisp, firm, compact heads	32	95+	No	Sprinkle lightly
Cantaloupes	M	Stem scar at maturity; skin yellowish tan; sweet, firm flesh with deep color	38-41	95+	Yes	
Carrots	M	Tender, crisp, sweet roots, deep orange	32	95+	No	Sprinkle lightly, remove tops; ethylene exposure may cause bitterness
Cauliflower	VH	Heads with compact, white curds	32	95+	No	Sprinkle lightly
Celery	VH	Stalks with crisp and tender petioles no seed stalks	32	95+	No	Sprinkle lightly
Chard & Collards		Leaves fresh, green, young and tender	32	95+	No	Sprinkle lightly
Corn, Sweet	VH	Kernels plump, sweet, milky, tender	32	95+	No	Sprinkle or top ice
Cucumbers		*Pickling:* (1-4″ long), crisp, green *Slicing:* (6″ long), crisp green	50-55	95+	Yes	
Eggplants		Shiny, deep purple skin; seeds immature	50-55	95+	Yes	Sprinkle lightly

CROP	RELATIVE PERISH-ABILITY[1]	DESIRABLE HARVEST QUALITY	OPTIMUM STORAGE CONDITIONS		CHILLING[2] SENSITIVE?	COMMENTS
			Temp (°F)	Humid (%)		
BEndive & Escarole	VH	Leaves fresh, crisp, and tender, free from discoloration	32	95+	No	Sprinkle lightly
Honeydew Melons	M	Surface waxy, white to creamy white in color; blossom-end springy under moderate pressure; characteristic aroma	45-50	95+	Yes	
Lettuce	VH	Heads compact and firm, fresh, crisp	32	95+	No	Sprinkle lightly; ethylene exposure may cause russet spotting
Mustard & Turnip Greens	H	Leaves tender and crisp; plants without flower stalks	32	95+	No	Sprinkle lightly
Onions, Dry	L	Firm bulbs, tight necks, dry leaf scales	32	65-70	No	
Onions, Green	VH	Crisp, green stalks with long white shanks	32	95+	No	Sprinkle lightly
Parsley	VH	Tender, crisp, green leaves	32	95+	No	Sprinkle lightly
Peas, English	VH	Seeds developed, but tender and sweet; pods still green	32	95+	No	Sprinkle lightly
Peas, Snow/Chinese	VH	Crisp, tender, green pods; seeds immature	32	95+	No	Sprinkle lightly
Peppers, Green		Crisp, firm, with shiny appearance	50	95+	Yes	
Potatoes, Irish	M	Well-shaped tubers free from sunburn and other defects	55-70	90	Yes	If washed, dry thoroughly
Potatoes, Sweet	L	Firm, smooth-skinned roots free from growth cracks and other injuries	55	90	Yes	All open surfaces should be well healed
Pumpkins	L	Hard rinds, good color; heavy	50-60	60	Yes	
Radishes	M	Firm, crisp roots; red should be bright red, sizes up to 1.25" in diameter	32	95+	No	Remove tops; sprinkle lightly
Rutabagas	L	Firm roots with smooth surface	32	95+	No	Sprinkle lightly
Spinach	VH	Tender leaves, dark green, fresh, crisp	32	95+	No	Sprinkle lightly

CROP	RELATIVE PERISH-ABILITY[1]	DESIRABLE HARVEST QUALITY	OPTIMUM STORAGE CONDITIONS		CHILLING[2] SENSITIVE?	COMMENTS
			Temp (°F)	Humid (%)		
Squash, Yellow and Zucchini	H	Firm, shiny fruits, 4–6" long	50	95+	Yes	
Squash, Acorn	L	Fruits with hard, dark green skin with small, yellowish	50-60	60	Yes	Trim close, allow to heal
Squash, Butternut	L	Fruits with hard, cream-colored skin	50-60	60	Yes	Trim close, allow to heal
Strawberries	VH	Berries firm, plump and red	32	95+	No	
Tomatoes, Green	H	Solid fruit with light green color, mature seeds, and locular jelly	70	95+	Yes	
Tomatoes, Ripe	VH	Solid fruits with uniform pink or red	50-70	95+	Yes	Avoid storage below 50°F
Turnips	M	Firm, heavy roots with good color	32	95+	No	Remove tops; sprinkle lightly
Watermelons, Whole	L	Mature with good flesh color; flesh sweet and crisp	>55	80-90	Yes	Trim stems close to fruit and allow to heal
Watermelons, Sliced (overwrap slices for protection)	H	Mature with good flesh color; flesh sweet and crisp	32	95+		

[1]Relative perishability under good storage conditions: L = Low, M = Moderate, H = High, VH = Very High.

[2]Chilling-sensitive crops should not be stored below their optimum temperature.

Adapted from Family Farm Series Publications: Marketing for the Small Farmer: Direct Marketing and Quality Control. Used by permission of the University of California Small Farm Center - 5/20/04

Appendix 2: Suggested Display & Storage Groups for Selected Vegetables

Crops within a group are compatible with respect to temperature, humidity, and ethylene sensitivity or production

GROUP 1.
TEMPERATURE = 32°, RELATIVE HUMIDITY = 90-95%, ETHYLENE SENSITIVE OR LOW ETHYLENE PRODUCING

Beets	Cauliflower	Kohlrabi	Radishes
Broccoli	Celery	Lettuce, All Types	Rutabagas
Brussels Sprouts	Swiss Chard	Mustard & Turnip Greens	Spinach, All Types
Cabbage	Collards	Green Onions	Strawberries
Chinese Cabbage	Sweet Corn	Parsley	Turnips
Carrots	Endive & Escarole	Peas, All Types	Sliced Watermelons

GROUP 2.
TEMPERATURE = 32°, RELATIVE HUMIDITY = 65-70%, LOW ETHYLENE PRODUCING

Dry Onions

GROUP 3.
TEMPERATURE = 50°, RELATIVE HUMIDITY = 90-95%, CHILLING AND ETHYLENE SENSITIVE CROPS

Beans, All Types	Eggplants	Peppers	Zucchini Squash
Cucumbers	Okra	Yellow Squash	

GROUP 4.
TEMPERATURE = 50°, RELATIVE HUMIDITY = 90-95%, CHILLING SENSITIVE CROPS THAT PRODUCE ETHYLENE

Honeydew Melons	Muskmelons	Ripe Tomatoes

GROUP 5.
TEMPERATURE = 70°, RELATIVE HUMIDITY = 60-80%, CROPS THAT ARE TOLERANT TO HIGHER TEMPERATURES

Irish Potatoes	Sweet Potatoes	Mature Green Tomatoes	Watermelons

GROUP 6.
TEMPERATURE = 70°, RELATIVE HUMIDITY = 60-80%, CROPS TOLERANT TO HIGHER TEMPERATURES AND LOWER HUMIDITIES

Dry Onions	Pumpkins	Acorn & Butternut Squash	Watermelons

Appendix 3: Estimating Soil Moisture by Feel

SOIL MOISTURE LEVEL (% OF FIELD CAPACITY)	COARSE (SAND)	LIGHT (LOAMY SAND, SANDY LOAM)	MEDIUM (FINE, SANDY LOAM, SILT LOAM)	HEAVY (CLAY LOAM, CLAY)
0–25% No available soil moisture. Plants wilt.	Dry, loose, single grained, flows through fingers. No stain or smear on fingers.	Dry, loose, clods easily crushed and will flow through fingers. No stain or smear on fingers.	Crumbly, dry, powdery, will barely maintain shape. Clods, breaks down easily. May leave slight smear or stain when worked with hands or fingers.	Hard, firm baked, cracked. Usually too stiff or tough to work or ribbon[1] by squeezing between thumb or forefinger. May leave slight smear or stain.
25–50% Moisture is available, but level is low.	Appears dry; will not retain shape when squeezed in hand.	Appears dry; may tend to make a cast[2] when squeezed in hand, but seldom will hold together.	May form a weak ball[2] under pressure but will still be crumbly. Color is pale with no obvious moisture.	Pliable, forms a ball; will ribbon but usually breaks or is crumbly. May leave slight stain or smear.
50–75% Moisture is available. Level is moderate to high.	Color is darkened with obvious moisture. Soil may stick together in very weak cast or ball.	Color is darkened with obvious moisture. Soil forms weak ball or cast under pressure. Slight finger stain, but no ribbon when squeezed between thumb and forefinger.	Color is darkened from obvious moisture. Forms a ball. Works easily, clods are soft with mellow feel. Will stain finger and have slick feel when squeezed.	Color is darkened with obvious moisture. Forms good ball. Ribbons easily, has slick feel. Leaves stain on fingers.
75% to field capacity (100%) Soil moisture level following an irrigation.	Appears and feels moist. Color is darkened. May form weak cast or ball. Will leave wet outline or slight smear on hand.	Appears and feels moist. Color is darkened. Forms cast or ball. Will not ribbon, but will show smear or stain and leave wet outline on hand.	Appears and feels moist. Color is darkened. Has a smooth, mellow feel. Forms ball and will ribbon when squeezed. Stains and smears. Leaves wet outline on hand.	Color is darkened. Appears moist; may feel sticky. Ribbons out easily, smears and stains hand, leaves wet outline. Forms good ball.

[1] Ribbon is formed by squeezing and working soil between thumb and forefinger

[2] Cast or ball is formed by squeezing soil in hand

See also:

USDA, Natural Resources Conservation Service. 1998. Estimating Soil Moisture by Feel and Appearance. Program Aid Number 1619. *www.nrcs.usda.gov/wps/portal/nrcs/detail/mt/newsroom/?cid=nrcs144p2_056492* and *www.ext.colostate.edu/sam/moisture.pdf*

Appendix 4: CSA Harvest Amounts for Full & Half Shares

	HALF SHARE	FULL SHARE
Apples	2-4 each	4-6 each
Basil	1 plant each	2 plants each
Beans	1 pound	2 pounds
Beets	3-4/bunch	5-6/bunch
Broccoli	1 head	2 heads
Bunch Onions	6-8/bunch	12-14/bunch
Cabbage	1 or 1 small	2 or 1 large
Carrots	6/bunch	10/bunch
Chard	6-7 leaves/bunch	12 leaves/bunch
Cilantro	1 small bunch	large bunch
Corn	3 ears	6 ears
Cucumbers	1-2 of each var.	2-4 of each var.
Dill	1 small bunch	large bunch
Eggplant	2-4 each	4-6 each
Fennel	1 each	2 each
Garlic	1 bulb	2 bulbs
Green Garlic	3/bunch	5/bunch
Kale	6-8 leaves/bunch	12-16 leaves/bunch
Kohlrabi	2 each	4 each
Leeks	3/bunch	5/bunch
Lettuce	1 head	2 heads
Melons	1 ea. or 1 small	2 ea. or 1 large
Onions	1 each	2 each
Pears	2-3 each	4-5 each
Peppers/sweet	2 each	4 each
Peppers/hot	2 each	4 each
Plums	4-5 each	6-10 each
Potatoes	1-1/2 - 2 pounds	3-4 pounds
Pumpkins	1 each	2 each
Radish	4/bunch	6-8/bunch
Salad Mix	1/4-1/2 pounds	1/2-1 pounds
Spinach	3/bunch	5/bunch
Squash	2 each	4 each
Strawberries	1 basket	2 baskets
Tomatoes	2 pounds	4 pounds
Watermelon	1 or 1 small	2 or 1 large
Winter Squash	1-2 each	2-4 each
Zucchini	1-2 each	2-4 each

Appendix 5: Harvest & Post-Harvest Handling Practices

Adapted from UC Davis Small Farm Center; used by permission

When do you harvest?

- Harvesting at optimum maturity is key. Crops that are immature lose water rapidly and don't store well, in addition to not tasting their best. Crops that are over-mature can be tough and starchy, like beans and corn, or too soft and easily damaged, like plums. Both immature and mature crops are subject to decay.
- Harvesting during the coolest part of the day is important because high temperatures lead to deterioration in highly perishable crops. The term "field heat" refers to the heat stored in crops from being out in the sun. In harvest and post-harvest handling you want to manage for reducing/taking out the field heat in your crops.
- Harvesting when foliage has dried can be important to minimize the spread of some diseases.

How to harvest?

- It's critical to handle produce gently. Fingernails can easily cut into crops like summer squash and zucchini, which leads to deterioration. The more steps in the harvest handling, the more cuts, bruising, and abrasions that can occur. Decay and shriveling (water loss) result on damaged produce. It's best to eliminate as many steps as possible between harvesting and getting your produce to your members.
- Keep harvest containers clean—to minimize spread of disease you can use water containing 70ppm chlorine to rinse containers. Plastic containers are easier to clean than wooden ones.
- Load harvest containers wisely—don't overpack, this causes bruising. Especially with soft fruit and vegetables like plums, tomatoes, summer squash, stack only two layers high.
- Use sharp tools—this will make your harvesting much easier and faster, especially with crops like salad mix, broccoli, and lettuce.
- Keep produce out of the sun as you harvest—Try to place boxes of harvested produce in the shade as you work—this will minimize wilting and heating of the produce which leads to deterioration.
- Make sure to transport harvest produce gently, whether it's in wheelbarrows, carrying boxes, or driving a truck—avoid vibrations that can cause considerable damage to produce.

POST-HARVEST HANDLING

In from the harvest—what now?

- The first thing is to get the field heat out of your harvested crop and/or to re-hydrate. How this is done depends on the crop. Leafy greens are usually dunked in water; broccoli is often packed with ice for wholesale—but for CSA, dunking in cold water works fine; carrots and beets are hosed down or put through a root washer. Some crops like potatoes store better if they're not washed but stored in a cool, dry place. Garlic, onions, strawberries, and basil are typical crops that should not be washed or they will deteriorate; rather, they should be stored in a cool, dry place. Basil's roots can be soaked in water or wrapped in wet newspaper to retain freshness.

Temperature

- Controlling temperature is the most important thing you can do to slow deterioration and to maintain quality. High temperatures increase decay through water loss. Low temperatures cause chilling injury such as decay, discoloration, loss of flavor.
- See Appendix 1 of this unit and *sfp.ucdavis.edu/pubs/Family_Farm_Series/Marketing_556/directmk-qual/* for a list of ideal temperature ranges for produce storage.

Humidity

- Maintaining a humid or moist environment is important for many crops because water loss will cause wilting and shriveling. Misting produce with fresh water can help retain freshness—this can be done during the post-harvest phase, before the product gets to the consumer, at farmers' markets stands, and CSA pick-up sites. Make sure not to mist crops like strawberries, tomatoes, garlic, onions, etc., as a moist environment for these crops will hasten decay and deterioration. Trimming tops of carrots helps reduce water loss and using plastic packaging for crops like salad mix can provide a moist environment and ensure high quality.
- See Appendix 1 of this unit and *sfp.ucdavis.edu/pubs/Family_Farm_Series/Marketing_556/directmk-qual/* for a list of ideal humidity levels.

Packing

- Packing shed design can be a critical component in any farming operation. Small to mid-size CSA farms will often pack the day of harvest. The boxes are laid out and packed as the crops come in and are washed. Larger CSA farms will harvest the day before distribution and packing is more of an assembly-line. Some use a conveyor belt—one person places the box on at the start, while others fill the box as it passes by, and finally one person packs the boxes into a refrigerated truck at the end of the line.
- Things to think about for the ideal packing shed are –
  - equipment: wash tubs, screens, containers, etc.
  - drainage
  - flooring—you don't want to slosh around in mud while you're post-harvest handling and packing your produce
  - shade—keeping the produce out of the sun is critical
  - flow of packing
  - Once you've washed, sorted, and graded your produce and it's time to pack for CSA, farmers' market, etc., make sure not to overpack or underpack your containers, as both can cause unnecessary injury to produce. Make sure to use clean containers to avoid disease and use the containers that are not damaged. Your stack of freshly harvested pears in the cooler won't look so great if even one box has damaged corners. Also make sure that your containers are well ventilated.

Storage

- Correct temperature and humidity levels are critical. See Appendix 1 for information.
- Ethylene gas—often used to ripen produce in larger operations—is dangerous when it causes unwanted ripening. For example, if you want to store kiwis until June, make sure that they are harvested into plastic bags tied tightly and placed in boxes. If one box rots, the ethylene gas released won't affect the other kiwis in the cooler. Make sure to not store ethylene sensitive and ethylene producing crops in the same place.

  See Appendix 2 of this unit for a list of ethylene sensitive and ethylene producing crops.

Appendix 6: CSA Pack—Presentation & Placement

CROP	PRESENTATION	IDEAL PLACEMENT IN BOX
Apples	Loose or Brown Bagged	Bottom
Basil	Bunched	Top
Beans	Plastic Bagged	Middle
Beets	Bunched	Bottom
Broccoli	Loose	Bottom
BunchOnions	Bunched	Middle/Bottom
Cabbage	Loose	Bottom
Carrots	Bunched or Loose	Bottom
Chard	Bunched	Top
Cilantro	Bunched	Top
Corn	Loose	Bottom
Cucumbers	Loose	Bottom
Dill	Bunched	Top
Eggplant	Loose	Bottom/Middle
Fennel	Loose	Middle/Bottom
Garlic	Loose	Middle/Bottom
G.Garlic	Loose or Bunched	Middle/Bottom
Kale	Bunched	Top
Kohlrabi	Loose	Bottom
Leeks	Loose or Bunched	Middle
Lettuce	Loose or Twist Tied	Middle/Top
Melons	Loose	Bottom
Onions	Loose	Bottom
Pears	Brown Bagged	Middle/Bottom
Peppers/sw.	Loose	Middle/Bottom
Peppers/hot	In Potato Bag	Middle/Bottom
Plums	Brown Bagged	Middle
Potatoes	Brown Bagged	Bottom
Pumpkins	Loose	Bottom
Radish	Bunched	Bottom/Middle
Salad Mix	Plastic Bagged	Top
Spinach	Bunched or Plastic Bag	Top
S. Squash	Loose	Bottom
Strawberries	Basket	Top
Tomatoes	Brown Bagged	Middle
Watermelon	Loose	Bottom
W.Squash	Loose	Bottom
Zucchini	Loose	Bottom

Appendix 7: Sample CSA Harvest Record

Harvest Week:

Date:

Total number of shares:

CROP/VARIETY	FIELD	TOTAL YIELD	FULL SHARE	HALF SHARE	SURPLUS	PRICE(FULL)	PRICE (HALF)
Apples:							
Apples:							
Apples:							
Basil							
Beans: Blue Lake							
Beans: Yellow Wax							
Beets							
Broccoli							
Bunching Onions							
Cabbage: Savoy							
Cabbage: Red							
Cabbage: Arrowhead							
Carrots: Nelson							
Carrots: SugarSnax							
Chard							
Cilantro							
Collards							
Corn							
Cucumber: Marketmore							
Cucumber: Lemon							
Dill							
Garlic							
Kale							
Kohlrabi							
Leeks							
Lettuce:							
Lettuce:							
Lettuce:							

CROP/VARIETY	FIELD	TOTAL YIELD	FULL SHARE	HALF SHARE	SURPLUS	PRICE(FULL)	PRICE (HALF)
Lettuce:							
Melons:							
Melons:							
Onion							
Parsley							
Parsnips							
Peppers:							
Peppers:							
Peppers:							
Plums:							
Plums:							
Plums:							
Plums:							
Plums:							
Potatoes:							
Radish:							
Salad Mix							
Squash: Zephyr							
Squash: Raven							
Squash: Gold Rush							
Squash: Magda							
Squash: Revenue							
Tomatoes							
Other:							
PRICE PER BOX:							
TOTAL HARVEST VALUE:							

UNIT 4

Other Direct and Intermediate Marketing Options

Unit 4.0:

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Unit 4.1:

Direct to Consumers—Farmers' Markets and Roadside Farm Stands 171

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Introduction: Other Direct & Intermediate Marketing Options

UNIT OVERVIEW

Along with Community Supported Agriculture (CSA), there are a number of other direct and intermediate marketing strategies that growers are using to maintain the economic viability of their small farms. This unit introduces students to some of the primary and innovative marketing approaches being used or explored by small-scale producers.

Unit 4.1 – Direct to Consumers—Farmers' Markets and Roadside Stands, provides an overview of the essential considerations for developing and managing direct market sales through farmers' markets and roadside stands.

Unit 4.2 – Selling to Restaurants and Retail, introduces students to the steps involved and the opportunities and challenges faced in selling directly to these markets.

Unit 4.3 – Additional Marketing Options, introduces students to some of the newer strategies people are exploring to expand their reach beyond the more standard ways of reaching customers. These include working with faith-based organizations as well as implementing agritourism ventures and eCommerce strategies. It also briefly reviews intermediate strategies such as farm-to-institution, food hubs, and collaborative ventures.

MODES OF INSTRUCTION

> LECTURES (4 LECTURES, 1–2 HOURS PER LECTURE)

LEARNING OBJECTIVES

CONCEPTS

- Basic steps and considerations involved in direct marketing through farmers' markets, roadside stands, restaurants, and retail
- Considerations and issues involved in direct marketing through agritourism and mail order strategies
- Opportunities available through faith-based congregations and institutions, which represent a largely untapped market for direct produce sales
- Opportunities available through alternative intermediate marketing channels: farm-to-institution, collaborative ventures, and food hubs

General Marketing Resources

Additional topic-specific resources can be found in the References & Resources sections of Units 4.1–4.3

BOOKS

Bills, Nelson, Monika Roth and Jane Maestro-Scherer. 2000. *Direct Marketing Today: Challenges and Opportunities—2000*. Agricultural Marketing Service, USDA. *www.ams.usda.gov/directmarketing/DirectMar2.pdf*

A look at direct marketing options, challenges, and information needs based on a survey of industry participants.

Byczynski, Lynn. 1997. *The Flower Farmer: An Organic Grower's Guide to Raising and Selling Cut Flowers*. White River Junction, VT: Chelsea Green Publishing.

A comprehensive introductory guide to commercial cut flower production, including variety recommendations, cultivation, harvest and post-harvest handling, flower marketing, yield and pricing, woody ornamentals, dried flowers, arranging, profiles of successful growers, and an appendix with production and harvest advice on 100 species. A lovely book as well. Available from Growing for Market at 800.307-8949.

Canadian Farm Business Management Council. 2002. *Marketing on the Edge: A Marketing Guide for Progressive Farmers*. Ottawa, ON.

A comprehensive guide to direct marketing, co-published with the North American Farmers' Direct Marketing Association. 144 pages, paperback. Available through the New England Small Farm Institute Library: www.smallfarm.org.

Grubingers, Vern. 1999. *Sustainable Vegetable Production from Start-up to Market*. Natural Resources Agriculture and Engineering Services (NRAES).

Covers equipment thoroughly, as well as farm planning and business management. Contains a section on grower profiles for 18 crops, including their enterprise budgets. A great overview for farmers starting out or those looking for different angles. Can be purchased from: palspublishing.cals.cornell.edu/

Haakenson, Dan. 1995. *The Small Commercial Garden*. PC-Services.

Detailed information from his own records on designing the garden to grow for sale, marketing, commercial design of necessary structures, planning, growing, harvesting, and intensive advice on basic crops that are the mainstay of any good market garden-no unusual crops. Highly recommended for small market growers.

Hamilton, Neil. *The Legal Guide for Direct Farm Marketing. Second Edition* (online only). Des Moines, IA: Drake University. *directmarketersforum.org/the-legal-guide-for-direct-farm-marketing/*

The author is a successful farmer, attorney, and professor of agricultural law. This comprehensive guide is essential for anyone considering direct farm marketing. Hamilton covers liability, regulations, labor law, processed foods, and meat marketing issues in layman's terms.

Hartman, Harvey and David Wright. 1999. *Marketing to the New Natural Consumer*. Bellevue, WA: The Hartman Group.

A summary of the Hartman Group's research into organic and lifestyle consumer trends. Understanding consumer trends in the food and natural products market can help you succeed in this new marketplace. 267 pages, paperback. Available through the New England Small Farm Institute Library: www.smallfarm.org.

LeRoux, Matthew. 2014 (updated). *Guide to Marketing Channel Selection: How to Sell Through Wholesale and Direct Marketing Channels*. Cornell University Extension, Thomkins County. *smallfarms.cornell.edu/files/2014/07/Guide-to-Marketing-Channel-1ib5phn.pdf*

This document describes the different marketing channels available to new farmers, including wholesale, institutional options and auctions. Also provided is information and exercises to help choose the best channel, or combinations of channels.

Macher, Ron. 1999. *Making Your Small Farm Profitable*. North Adams, MA: Storey Books.

Covers marketing and balanced farm management for the beginning or experienced farmer. See: *www.smallfarmtoday.com*

Olson, Michael. 2010. *Metro Farm: The Guide to Growing for Big Profit on a Small Parcel of Land*. TS Books.

Thorough and fun to read, this book generates a million ideas and helps you chart your course for creating a new small farm enterprise.

Overview—Managing Legal and Regulatory Risk for Diversified Family Farms (Workbook 6). From Risk Management Training for Diversified Family Farmers. USDA Risk Management Agency, Farm Services Agency and Farm and Agriculture Collaborative Training Systems. *caff.org/wp-content/uploads/2010/07/Workbook_6.pdf*

Based on a workshop, this document explores important considerations for choosing a business form, signing a contract, and setting up human resource structures

Rosenzweig, Marcie A. 1999. *Market Farm Forms: Spreadsheet Templates for Planning and Tracking Information on Diversified Market Farm*.

Developed to help with planning, planting, and income diversification. The book explains how to enter your farm's information into the templates, and what the calculated data tell you. Cross-platform CD works seamlessly with Excel. Computerless farmers can use the printed forms with a pencil and calculator. 100 pages plus diskette. Order from Full Circle Organic Farm, 3377 Early Times Lane, Auburn, CA 95603. E-mail: fullcircle@jps.net.

Rowell, Brent, Tim Woods and Jim Mansfield. 1999. *Marketing Options for Commercial Vegetable Growers*. University of Kentucky, College of Agriculture, Cooperative Extension ID-134. *www2.ca.uky.edu/agc/pubs/id/id134/id134.pdf*

Publication exploring various marketing options for vegetable crops producers.

Schwenke, Karl. 1991. *Successful Small-Scale Farming: An Organic Approach*. North Adams, MA: Storey Publishing.

This book goes beyond growing crops to show everything you need to know—including which direction to begin plowing your fields, machinery you might not need, how to pull up old fence posts, and other info you missed from your farming grandparents!

USDA Sustainable Agriculture Network (SAN). 2004. *Marketing Strategies for Farmers and Ranchers*. *www.sare.org/publications/marketing.htm*

"This 20-page bulletin offers snapshots of the many alternatives to marketing commodities through conventional channels. Describes how to break into farmers markets; establish pick-your-own operations and farm stands; begin entertainment farming; open a Community Supported Agriculture (CSA) farm; join or start a cooperative; sell to restaurants or through mail order and the Internet; how to process and direct-market meat; and ways to add value to farm products."

Western Extension Marketing Committee. 2003. Western Profiles of Innovative Agricultural Marketing: Examples from Direct Farm Marketing and Agri-Tourism Enterprises. Cooperative Extension of the University of Arizona, Publication AZ1325. *ag.arizona.edu/arec/wemc/westernprofiles/westernprofilesbookweb.pdf*

Provides 17 case studies of successful innovative direct farm marketing enterprises.

PERIODICALS

American Vegetable Grower/American Fruit Grower

www.meistermedia.com/publications/american-vegetable-grower/

A subscription magazine for produce growers and marketers. Meister Publishing.

Growing for Market

www.growingformarket.com/

A very useful national monthly newsletter for direct market farmers. Covers production and marketing of vegetables and flowers.

The Packer

www.thepacker.com

A business newspaper for the produce industry.

Small Farm Digest

A subscription newsletter published three times a year by the Cooperative State Research, Education, and Extension Service, United States Department of Agriculture (USDA). Discusses issues affecting today's small farmers. Small Farm Digest is available on the CSREES home page: www.csrees.usda.gov/newsroom/newsletters/smallfarmdigest/sfd.html.

Small Farm News

sfp.ucdavis.edu/pubs/SFNews/

The Small Farm Newsletter is a quarterly publication of the UC Davis Small Farm Center. The newsletter features farmer and farm advisor profiles, research articles, farm-related print and web resources, news items and a calendar of state, national and international events.

ARTICLES

Fairchild, L. 2002. *Fresh Trends: A 2002 Profile of the Fresh Produce Consumer.* Lenexa, KS: Vance Publishing.

Jewett, Jane G., Beth Nelson and Derrick Braaten. 2007. *Marketing Local Food*. Minnesota Institute for Sustainable Agriculture. *www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_305240.pdf*

A comprehensive and useful guide to marketing local food. A very clear and useful overview with several case examples.

Wisconsin Department of Agriculture, Trade and Consumer Protection. 2008. *Wisconsin Local Food Marketing Guide. mosesorganic.org/attachments/productioninfo/08wimarketguide.pdf*

An extensive overview for marketing local food. It includes direct and intermediate sales options, as well as covering issues related to pricing, licensing, food safety and market development.

Green, Diane, Colette DePhelps, and Cinda Williams. 2008. *Protecting Your Farm or Ranch: A Guide for Direct Farm Marketing in Idaho*. Rural Roots Inc. *www.ruralroots.org/Resources/directmarketing/directmarketingguide.asp*

This on-line guide offers guidance for managing risk when doing direct marketing.

WEB-BASED RESOURCES

Alternative Farming Systems Information Center

www.nal.usda.gov/afsic/index.html

A comprehensive listing of electronic resources addressing the following subject areas: Regulation, Laws, and Legislation governing organic production and trade; How-to guides on Marketing, Business Planning, and Sample Enterprise Budgets; Guides to Data, Suppliers, Outlets, and Event; Industry and Data Sources; Market and Consumer Studies; Support Organizations. Compiled by Mary V. Gold of the National Agricultural Library in association with the Agricultural Research Service of the U.S. Department of Agriculture.

ATTRA—National Sustainable Agriculture Information Service. Direct Marketing. Business Management Series

attra.ncat.org/marketing.html

This site contains extensive listings of concise online publications addressing all aspects of direct marketing and alternative marketing arrangements including; marketing of organic products, institutional buying relationship, cooperatives, value added, selling to restaurants, agricultural tourism, farmers' markets and CSA. It also offers tip sheets on working with various marketing channels including retail grocery stores, institutions, produce distributors, produce brokers, packing houses, restaurants and wholesale buyers at terminal markets.

Cornell Small Farms Program

smallfarms.cornell.edu/resources/marketing/

They have an number of excellent articles on marketing methods and strategies

Direct Marketing Resource Guide Online Database

www.sare.org/publications/dmrg.htm;
wsare.usu.edu/marketing/search.cfm

This extensive annotated listing includes practical, high quality resources such as print publications, videos, and web resources that will help growers meet their direct marketing goals. The resources are organized into 9 categories including: Farmers' Markets; Community Supported Agriculture; Agricultural Cooperatives; Farm-to-School/Selling to Institutions; Direct Marketing Livestock; Roadside Stands/Markets; Selling

to Restaurants; and Value-Added Production/ Marketing.

eXtension

www.extension.org/pages/59456/marketing-and-food-systems-in-organic-production

This site has a number of documents and videos that offer information about direct marketing.

Farms Reach—Marketing & Sales Toolkit

www.farmsreach.com/welcome/marketing-sales/

Field Guide to the New American Foodshed

foodshedguide.org

The New American Foodshed is considered to be the newly emerging local and regional markets that are springing up for agricultural operations. This website based guide offers information to those starting farming and ranching businesses, as well as their advisors, to identify information helpful for entering these markets. The site includes case studies of success new market entry, planning tools and an overview of the New American Foodshed.

Know Your Farmer-Know Your Food Compass and Map

www.usda.gov/wps/portal/usda/usdahome?navid=KYF_COMPASS

A project of the USDA, the "Know Your Farmer-Know Your Food" website aims to continue to build local food systems, by providing a variety of resources to farmers, farmer groups and communities.

New England Small Farm Institute

www.smallfarm.org/main/for_new_farmers/

This site has a section for new farmers. This section contains resources for exploring the small farm dream, land linking information, new farmer Q&A and a number of other resources listed by topic. There are resources and farmer Q & A that focus on marketing.

Organic Agricultural Products: Marketing and Trade Resources

www.nal.usda.gov/afsic/pubs/OAP/OAP.shtml

A collaborative program of the USDA Agricultural Research Services and the National Agricultural Library to provide marketing and trade information for organic agriculture products. Contains information on: Regulations, Laws and Legislation; How-to Guides; Guides to Data, Suppliers, Outlets and Events; Industry Data Sources; Market and Consumer Studies; Support Organizations; and a listing of appendices containing USDA National Organic Program standard for certification, production, labeling and marketing.

Penn State Extension—Marketing

extension.psu.edu/business/farm/marketing

This site has several resources for farmers on marketing outlets, market research, direct mail marketing, social media, web presence and niche marketing.

Produce Marketing Association

www.pma.com

Home page of the Produce Marketing Association. Lists conventions, other events, links to the web pages of major produce companies including organic.

UC Small Farm Center

www.sfc.ucdavis.edu

The UC Small Farm Center (SFC) serves as a clearinghouse for questions from farmers, marketers, farm advisors, trade associations, government officials and agencies, and the academic community. The SFC maintains a library of books, scientific and popular journals, reports, directories, and periodicals covering production, marketing, and policy issues. SFC publishes manuals, proceedings, pamphlets, leaflets, and a quarterly newsletter that includes news of upcoming events, publications, topical issues, and profiles of farmers and farm advisors. The SFC organizes and coordinates statewide conferences, workshops, and symposia and supports advisors, farmers' markets, and farm organizations in regional and local programs.

USDA Agricultural Marketing Service (AMS) - Farmers Markets and Local Food Marketing

www.ams.usda.gov/AMSv1.0/ —then choose "Farmers Markets and Local Food Marketing" from the left hand column.

This site provides an extensive list of online resources relating to direct and local marketing

USDA AMS Market News Service

www.ams.usda.gov/marketnews.htm

Provides current U.S. price and sales information. One of the best sources for daily to weekly reports for all kinds of commodity prices, bids, imports and exports in the U.S., from dairy, feedstuffs, fruit and vegetables, futures, grains, hay, livestock, meat, poultry, tobacco. Reports cover both domestic and international markets. Other reports include information on volume, quality, condition, and other market data on farm products in specific markets and marketing areas.

4.1

Direct to Consumers –Farmers' Markets and Roadside Stands

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Lecture 1: Farmers' Markets

A. The Rationale Behind Direct Marketing

1. Capturing a greater percentage of the food dollar and improving cash flow: Direct marketing can be an effective strategy in improving the economic viability of small- and medium-scale farms. By marketing directly to the end consumers, farmers can capture 100% of the consumer food dollar (minus costs of production), instead of the smaller percent derived from wholesale marketing arrangements.
2. Marketing and business planning: Despite the advantages of direct marketing, careful business planning and attention to detail at every step of the farming and marketing process are necessary to be successful. The following lecture outlines many critical considerations for small-scale growers interested in direct marketing through farmers' markets.

B. Advantages of Farmers' Markets for Growers

1. A farmers' market is an arrangement where more than one farmer installs portable displays in a central location for the sale of farm produce. By congregating, multiple farmers with different and complimentary offerings are able to draw a greater number of customers than if selling independently.
2. Farmers' markets offer an opportunity for small-scale farmers who do not have the volume or variety to supply a farm stand or other daily market a chance to participate in a larger market venue one or more times per week
3. Farmers' markets can also provide the opportunity for geographically remote farms to bring their produce to urban markets
4. Farmers' markets can provide an opportunity for farms to concentrate more on production and selling, leaving advertising and marketing considerations to the farmers' market management organization
5. Farmers' markets can often drive wholesale markets by introducing customers to the farmer as well as his or her products
6. Direct customer feedback – The farmers' market is an excellent place to test new varieties and find out about varieties customers would like to have available
7. Farmer-to-farmer knowledge exchange – The farmers' market is a valuable place to meet other growers, get new ideas about production and marketing, and learn about creative presentation

C. Farmers' Markets: Organization and Management

1. Most farmers' markets are organized as nonprofit organizations. In some cases a sponsoring nonprofit agency (e.g., chamber of commerce) may host a farmers' market as a side project or, in some larger urban areas, nonprofits exist for the sole purpose of managing farmers' markets (e.g., New York Green Markets). Markets can also be run by municipalities (e.g. the city of Santa Monica).
2. Producer-driven farmers' markets – In other instances core vendors might form a board of directors who develop the market and oversee the market rules
3. Farmers' market manager – Market managers are usually hired to oversee the market during hours of operation, enforce the rules, promote the market through advertising, and collect vendor fees
4. The farmers' market board of directors (or sponsoring agency) is generally responsible for establishing vendor guidelines. Critical issues to be covered in vendor guidelines include –
   a) The amount of space allocated to each vendor

b) The cost of space for each vendor – Some markets have a per market day stall fee and others collect a percentage of each vendor's per market day sales. Money collected should go towards advertising and to pay the market manager's stipend.

c) Rules for balancing the specific types of products sold by the market vendors and allowing new vendors into a market – Market managers should try to provide as many types of local food products as possible, but mechanisms to prevent oversupplying particular items to the point where the business is spread too thin should be implemented. Policies should also be established regarding craft vendors and prepared food vendors.

d) Rules regarding the origin of produce sold by vendors –

i. Some markets have a "producer only" rule (i.e., vendors must have grown all of the food that they bring to market)

ii. "Certified farmers' markets" are those markets that are certified by a local or state agency to be selling products produced solely by the vendors represented at the market. This rule prevents vendors from buying produce on the wholesale market and reselling it at a retail mark-up.

- California Certified Farmers' Markets require vendors to have a State of California Certified Producers' Certificate. These are issued by County Agricultural Commissioners, and require an inspection of your farm to verify the products listed on your certificate are indeed produced on your farm. The certificate must be displayed in each vendor's stall every market day. Contact your County's Agricultural Commissioner to apply for this certificate.

iii. Other markets find that it is useful for both the consumers (by increasing market selection) and the vendors (by providing more sales) if vendors are allowed to supplement their produce with other locally grown products. These markets need very clear policies on what can be purchased and resold by vendors, and also how this produce is labeled for the consumer at the market. Some markets allow a percentage of a vendor's sales (e.g., 20%) to be derived from another farm, provided that farm is also local and provides a membership fee to the market. Both "producer only" and markets with other rules must have an enforcement policy to ensure that vendors adhere to the rules. Larger farmers' market organizations often conduct inspections of farmers' fields to ensure that the produce they bring to market originated on the vendor's farm.

5. Insurance – In some cases markets require that each vendor be insured for off-farm market sales. Most markets also have an insurance policy that covers the market in particular.

D. Choosing and Applying to Farmers' Markets

1. Before choosing a farmers' market, there are several things to explore

a) Decide how far you want to travel – then see what markets are available in that area. To locate markets in your desired region, try your local or state Ag Extension office, or the USDA website at *www.ams.usda.gov/farmersmarkets.* Also try *localharvest.com.*

b) How many markets do you want to sell at? Or how many days can you be off the farm? Can you do two markets in one day?

c) Check to see who has available space. In some areas there is limited or no space available. It will be hard to impossible to get into big, long-running markets. Smaller and newer markets are likely to provide more access.

d) Learn about the customer base and potential. How many customers does it have? Is the market located in a busy spot? Is there parking? Who attends the market? Are there other businesses nearby that might sell similar products?

e) Find out about how the market runs. For example, who runs the market? Who establishes the rules? Does the market advertise? Does it have fees for vendors? What are the market rules? Can you share a booth with another farmer? If this is allowed, it can save on costs for new farmers.

f) How does your cropping plan fit into the market? Do you have something to offer that isn't already in abundant supply? Do you need to grow some different crops to participate meaningfully?

g) Does the market participate in EBT or special programs like SNAP (food stamps) with the incentive program? Is this part of the farmers' market nutrition program?

h) The exploration can be done by talking to the market manager and spending time in the market

i. Remember that market managers are gatekeepers—so making a good first impression is important. It is always a good policy to email or call first, and not expect they will have time to talk to you at the market. Find out when they have availability to talk.

ii. To demonstrate your commitment to selling at the market, have your Certified Producers Certificate (in CA) and a completed farmer's market application before you even go and talk to the manager—to show your commitment to selling at the market

iii. There are tools available to review the markets you visit (see page 24 of MacNear and Kelly, 2012)

2. Applying to a market

a) Applications may ask questions about what you intend to sell, your crop plan, who will be staffing the market space, etc.

b) You may be asked to show a copy of your liability insurance. Check with your local Farm Bureau office, as they may be able to provide insurance coverage and a lower rate.

c) Contract – a market contract will usually provide basic information about the type of insurance needed, how disputes will be resolved, penalties for rule violation, and an agreement that you will follow local, state, and federal laws (though you will likely need to be aware of these yourself, they will not necessarily spell all of them out for you)

E. Selling at the Market

1. Quality – it is important to offer high quality products. Fruits, vegetables and flowers should be fresh, clean, and tasty.

2. Presentation – As farmers' markets can potentially provide concentrated periods of high-volume sales, how an individual market display appears to customers is very important to successful marketing. Important considerations –

a) Displays at the farmers' market are one of the most important factors in a successful marketing effort. Although growing quality produce is essential, produce must then be cleaned, packaged or bunched, and displayed in a way that customers find attractive. This point can't be overstated.

b) Using wooden display crates and baskets can make a huge difference in enhancing produce displays. Although plastic crates are probably the most efficient type of container for handling and transporting produce, plastic generally is less appealing on the display. Using plastic containers to transport items that will be transferred onto tables, shelves, or into attractive wooden crates or baskets makes sense.

Apple crates are stackable for transport if not overfilled. They can then be tipped on their side with the produce spilling out for a feeling of abundance when making the displays. Stacking apple or other wooden crates two or more crates high on their sides can make striking tiered vegetable tower displays. Wooden bushel baskets can also be attractive in displays, but they do not transport as easily.

c) Attractive packaging and unitizing (forming bulk produce into a unit) can be a good idea for some types of crops. Peck and half-peck bags for apples, pulp containers for berries and cherry tomatoes, mesh bags for onions and potatoes, plastic bags for topped carrots and beets are all examples of unitizing. This method can make it easier for customers to select their purchases, and it may also encourage them to purchase more volume than they otherwise would. Selling bunches of root crops and greens is another method of unitizing.

When using this method provide full units in order to create a sense of abundance and value. Also, don't provide only unitized items. Some people want only very small quantities, or they want to try a little bit of lots of varieties. In general the more choices you can give your customers, the more satisfied they will be.

d) Provide clear and easy to read signs that display the prices for each item. Some customers want to know what different items cost without needing to ask for help. Also if your product is certified organic you should indicate "organic" on the label of each item. If you have a mix of conventional and organic products be sure to clearly label which products are organic and which are conventional, and ensure the products do not co-mingle by having separate baskets or bins for each item.

3. Pedestrian traffic – The flow of pedestrian traffic at the farmers' market booth must be considered and planned out. Is there an easy traffic flow from the entrance to the paying area? Does this traffic pattern draw people past the maximum number of product displays? Are point-of-purchase items located near the register?
4. Displays of perishable items
   a) Perishable items need special attention. At the farmers' market, displaying these items on vertical shelving and then manually pouring water over the greens and bunch crop display racks during the course of the market can be very effective. Shade must also be provided using umbrellas or tents.
   b) Some farm products such as eggs, milk, cider, frozen meat, etc. will need coolers or freezers in order to be stored and displayed safely. At farmers' markets this can be a challenge due to a lack of electricity. Some markets are now providing electricity to vendors so that coolers and freezers can be plugged in. Otherwise, ice can be used to keep these products cool. Be sure to stay abreast of the latest food safety requirements when it comes to displaying these items.
5. Customer service
   a) When helping customers it is important to be friendly, respectful and courteous, even to hostile customers. People who enjoy interacting and talking to people about the products being sold often enjoy farmers' market vending. At the market, vendors should be more neatly dressed than usual. Preferably a farm T-shirt or farmers' market T-shirt should be worn in order to establish professionalism and help customers identify the vendors. When ringing up customer orders, sales can be increased by asking customers "will that be all?".
   b) Using the same staff every week can help build relationship and familiarity
   c) Choosing outgoing and friendly staff at the market will help to increase customer engagement and retention. Train staff about the farm's story and growing practices, as it will also help provide more connection with the customers.
   d) Get to know as many customers' names as possible. This shows that you care about them and their business.
6. Paperwork and accounting- you need to keep good records. Paperwork also includes the load list for the farmers' market manager. It's good to start with your opening inventory and fill it out at the end with your closing inventory so you have a handle on how much product you actually sold and what kind of return you should have in your cash box at the

end of the day. This is also important for organic certification, which requires you to keep a record of your sales.

a) CERTIFICATION NOTE: Don't give away your only copy of the load list. One of the most common challenges farmers have with their organic certification is forgetting to keep harvest and sales records. The load list can serve as your harvest record and your inventory at the end of market can serve as your sales record, both of which you will need to present at your organic inspection.

7. Transportation and set up
   a) Producers selling at farmers' markets require a portable display system and a vehicle capable of carrying the load. The type of vehicle should be carefully considered.
   b) Vehicles must accommodate both the load of produce to be sold at market and the benches and tables that make up the displays. Consider designing a truck shelving system that holds the produce load in transport, and then transforms into the display structure upon arrival at the market. Many vendors at farmers' markets use box trucks, vans, or trucks to transport produce. Open pickup trucks can be detrimental to many types of produce due to wind and sun exposure.
   c) Display arrangements should be easy to set up and take down (as light as possible), effective at showing off the produce and farm products, and efficient at using the limited space that is often allocated to each vendor at busy markets. Vertical tiered displays help fit more produce into the same ground space and can be visually exciting for the customer.
   d) A shelter or EZ up tent is useful. It protects your products, you, and the customer from the sun and rain.
   e) When loading for farmers' markets, a system should be established so that necessary supplies are always on hand when needed. Developing a checklist that is used every time loading occurs can help you remember important supplies. Sign-making supplies should always be included.
   f) Most farmers use county certified digital scales that can calculate prices. Be aware that your scale has to be registered with the weights and measures department.
   g) Bags should be provided. However, some cities and markets require that bags be sold, in order to encourage people to bring their own and cut down on waste. Check with the market manager for requirements for your market.

F. Growing Crops and Managing the Farm for Farmers' Markets

1. Growing mixed produce for farmers' markets can be extremely challenging. A large variety of products attract customers, and growers who offer a wide diversity of crops are often the most successful. For vegetable farmers, growing a wide diversity of crops can be challenging due to differing crop cultural requirements and equipment needs. The following are suggestions to help organize a farm to successfully grow a wide diversity for a farmers' market display –
   a) Design the growing system to accommodate all of the possible crops. Have standard beds and spacing systems that accommodate all of the possible crops, even if spacing compromises have to be made on some of the crops. Often row spacing per bed can be relatively standardized, and plant density can be accomplished by adjusting in-row spacing. This allows use of standardized cultivation strategies.
   b) Provide a diversity of varieties within crops. Tomatoes, peppers, winter squash, and tree fruits are all good examples of crops where this strategy can be used. Offering many varieties can greatly enhance consumer appeal without increasing labor requirements, as crop varieties often have similar cultural needs. Make sure popular crop varieties are always available (according to season).
   c) Keep careful planting records by making maps of varieties as you plant

d) For most crops, differences in appearance (color or shape) make the varieties easy enough to distinguish. For varieties that look the same, customers will need to be educated about differences in taste and texture or it will not be helpful from a marketing perspective.

2. Managing harvests for direct marketing (see Unit 3.6, CSA Harvest and Post-harvest Handling for more information)
   a) Managing harvest for farmers' markets requires careful planning prior to each harvest. Harvest plans should show a grid of the crops to be harvested and the breakdown for each market. Harvest totals should then be tallied for each crop.
   b) Harvest should be done in an efficient order starting in the morning with the most heat-perishable crops. Use of standard stackable containers is recommended in order to both quantify the amounts picked and to ease the movement of produce.
   c) One or more people should be stationed in the packing shed once the first crops are harvested each day. This person is in charge of cleaning and packing the produce for the markets. In general, produce for farmers' markets can be packed into reusable plastic or wooden crates, as the empties can easily be returned to the harvest operation once the produce is stocked.
   d) Any time packing can be accomplished in the field in a clean and neat way, labor will be saved. E.g., lettuce, greens, cole crops, and any bunching crop can be field packed.
   e) It is important to stay abreast of food safety practices for harvest and post-harvest handling (e.g., boxes should not touch the ground)

G. Pricing Strategies

1. Establishing fair and reliable pricing strategies is essential for successful vending through farmers' markets. It is important to keep in mind there is a balance between covering your production costs with a fair profit, and the customer's willingness to pay.
2. The most important initial consideration is to know (as accurately as possible) the cost of production for each item. This is easier said than done, as it can be remarkably difficult to track exactly how many inputs and how much labor go into any particular crop. However, establishing record systems that give the most accurate idea of production costs for each item is important. Prices should then be set to at least cover these costs. Don't forget to account for shrinkage and other losses. Base yield expectations on long-term averages that include both good and bad crops, as this will give a more realistic picture of costs.
3. Another factor to use in pricing is to see what others are charging. However, you don't have to charge what your neighbor, or the grocery store, is charging as the quality of your products may differ significantly.
4. Provide a mark-up that covers the cost of either purchasing (where this is allowable) or growing a product, and then 30–50% for profit
5. Some farmers sell certain crops as "loss leaders" either at or below cost to attract customers, who then spend money buying other things that more than make up for the poor return on the loss leader. However, consistently undercutting other growers may lead to conflicts, and disrupt the market's general pricing structure. The farmers' market manager is in part responsible for minimizing competition and preventing "price wars." Growers and market managers should work to ensure that everyone receives close to retail or premium prices.

H. Advertising and Customer Communication

(See also Unit 5.0, Marketing Basics, and Unit 6.1, Building Community with Social Media and On-Farm Events)

1. Advertising is an art as much as it is a science. On farms the profit margins are often slim, and it seems that there is always something to spend meager profits on that is more important than buying ad space. However, effective advertising and consumer awareness are key to maintaining and improving sales. Free and low-cost methods of advertising should be used as much as possible, and paid advertising should also be considered.
2. Writing a newsletter for customers can be a great way to communicate with them. Farmers' market organizations and individual vendors should consider providing a newsletter. Use newsletters to tell people about the farm or market, and how to store, preserve, and prepare local produce. Provide recipe ideas, and highlight special events and crop availability. Different farms and markets publish newsletters on seasonal, monthly, biweekly, and weekly schedules.
3. Providing recipes at the market, particularly for less common crops, can give people ideas on how to cook vegetables and thus increase sales
4. The internet is an important marketing tool. Farmers' market organizations and individual vendors should consider a basic web site that provides background information
   a) Content—Provide farm, crop, seasonal information, and directions to the farmers' market. A web page should be linked with local farming nonprofits and related food groups. The web can also be used in more savvy ways to allow pre-ordering of produce by customers, web-based bill paying, and sales of vendor products by mail order.
5. Providing samples of your produce (see Growing for Market 2009, and Woods and Hileman 2012 for more information)
   a) Samples can be a great way to attract customers and generate interest in new items. They not only help a customer decide on quality and taste, they also initiate an important relationship between the grower and customer.
   b) At most markets, cut samples are only allowed if kept under cover and served with toothpicks. However, giving whole items such as fruit or vegetables like tomatoes can circumvent rules for cut products, and still provide customers with good sample of your produce.
   c) Rules about samples vary by state and even by market. Ask the market manager about rules. If none exist, follow good safety practices to both keep customers safe and build their confidence.

I. Money Management and Customer Service at the Farmers' Market

1. Money management – Cash
   a) Vendors should have a money management system when helping customers at markets. Some farmers prefer money pouches so that they can move around the booth and make change for anyone on the spot. This also helps prevent theft attempts. Other farmers use a money box, which can help organize coins in addition to providing a place to store sign-making supplies and calculators.
   b) Be sure that financial transactions can be made efficiently. Price items so that they can be added up quickly in your head and bunch group items so that they add up to even sums. Keep a calculator as part of your farmers market supplies.
   c) Vouchers
      i. The Farmers' Market Nutrition Program (FMNP) is a federal program providing a benefit to low income families (Women, Infants and Children – WIC) and seniors (Seniors Farmers Market Nutrition Program). The benefit can be between $20 and $50 a year (depending on the state) in vouchers to purchase fresh fruits, vegetables

herbs, and honey at farmers' markets. How this process works differs by state and sometimes by rules at a particular market. Check with the market manager to see if these are accepted, and how they are handled (see USDA 2012 below for more information).

ii. To get a list of information by state, see: *www.nafmnp.org/state-programs*

iii. To get information for California famers' markets, see: *www.cdfa.ca.gov/SeniorFarmersMrktNutritionPrgm/*

2. Electronic Sources (see Growing for Market, 2009. *Selling at Farmers Markets: Ideas and Information To Make Your Venture a Success* in References & Resources for more information)

a) SNAP Benefits (previously known as food stamps)

i. SNAP benefits are an important way to provide access to fresh fruits and vegetables for people experiencing a limited income. They also provide farmers with a broader customer base.

ii. These benefits are now primarily provided in an electronic format, meaning that to receive them a machine must be used. Some markets purchase or lease machines where benefit recipients can go and receive vouchers to use at the market. They require access to electricity and phone lines and are often expensive (though wireless machines are available but at a cost of $800-$1,000). Therefore, they are more likely to be used by a market than a vendor, though individual vendors can get their own. There are differing strategies for reimbursing the farmer when using the market-based EBT machine. One method is that the customer swipes the SNAP EBT card with the market and they are given tokens to purchase products from a vendor. Check with your market manager to see if this program exists and how it operates.

iii. Currently, smartphones and other handheld mobile devices generally cannot accept EBT, as they are not compliant with the required security measures for protecting customer information. Personal identification numbers (PIN) are required for each transaction. Currently only one company has developed software that FNS has allowed to be used at farmers' markets. It is likely that new software will be approved in the future for this purpose.

b) Credit and debit cards

i. Being able to accept credit and debit cards allows customers more ways to pay for your product. Having methods for accepting them has been shown to increase sales.

ii. There are several options for accepting credit and debit cards. If a market uses an EBT machine, they may be able to take customer credit/debit cards and reimburse individual vendors. Individual vendors can also purchase their own credit card terminals, or use apps available for smart phones and other wireless computer devices.

iii. Note that despite the advantage they provide, there are costs for accepting credit cards. Credit card companies generally charge a flat fee, and then a percentage of each sale. The extra charge cannot be funneled to the customer. Debit cards often charge a flat fee, and that fee can be charged to the customer.

c) Since technology changes quickly, visit the Farmers Market Coalition website for updates. The Coalition provides the latest news related to farmers' markets. See: *farmersmarketcoalition.org/*

Lecture 2: Roadside Farm Stands

A. Roadside Farm Stands

1. Roadside farm stands are usually operated on the farming location by a single farm operation. Some farms are able to devote their entire production to a single farm stand outlet, but in many cases farms operate a retail farm stand in addition to other marketing arrangements such as wholesale, farmers' markets, or community supported agriculture (CSA). Other variations include multiple farms cooperating to grow for a single stand and off-farm stand locations.
2. Many of the specific recommendations for running farmers' markets also apply to roadside stands and are outlined in Lecture 1, Farmers' Markets

B. Legal Considerations for Farm Stands

1. Before opening a farm stand you must determine that such agricultural retail ventures are compatible with county or city zoning
2. Liability insurance must be secured prior to opening a farm stand. Most farm insurance policies can be arranged to cover retail sales from the farm premises.
3. Most towns require health inspections and scale inspections for retail food operations. In California your scale has to be registered with the county's department of weights and measures; check your county listings for contact information.

C. Structures, Displays, and Infrastructure for Farm Stands

1. A farm stand's appearance is critical to successful marketing
   a) Farm stands need to be both functional for the grower/vendor and inviting to the customer
   b) Structures should be attractively designed to fit into the farmscape. If possible, production fields should be nearby in order to create the association of purchasing with agriculture and farming, as many Americans have an appreciation for farming and rural life.
   c) Structures should be as attractive as possible. Using wood construction, flower gardens, and landscaping can make your stand into an appealing destination.
   d) If at all possible, locate parking areas to the side of the stand. Vehicles and parking lots tend to be unattractive. Try to arrange things so that parking areas do not dominate the landscape.
   e) Locate stands in such a way that product can easily be moved from the packing area to the retail area. If possible, design everything to be at the same level or with ramps so that product can be moved easily using two-wheel hand trucks, carts, and pallets. If packing doesn't occur near the stand, design a loading area and back room to accommodate back stock and deliveries.
   f) Walk-in cooler storage is generally necessary for storing back stock. Insulated cold rooms and old refrigerated truck bodies can both be good options.
2. Creating attractive displays inside the farm stand is one of the most important factors in a successful farm stand venture. See Lecture 1 for produce display ideas.
3. Checkout systems at farm stands – Small stands often use self-serve money-box systems (sometimes called "honor tills"). This can work well provided customers are honest. Advantages are reduced labor costs for staffing the stand. Disadvantages are that there is no one to answer questions, assist customers, or watch and prevent theft. Larger-volume stands usually hire one or more people to stock and cashier.

D. "Purchasing-In" Produce and Value-Added Products

1. Some stands sell only produce and products grown or made on the farm. Many other farmers find that it is not economically sensible to grow all of the possible crops that ideally would be offered. Growers will therefore purchase additional produce and/or other products to supplement produce grown on the farm.
   a) Example: Many small-scale farmers find it unprofitable to grow sweet corn on a small scale, but find that sales of other produce are compromised if sweet corn is not offered. In response, small-scale growers will often purchase fresh corn from other growers producing sweet corn at a larger scale and resell it at their farm stands.
2. When purchasing produce for resale, farm stand business owners must establish guidelines for sourcing products. Some local growers only purchase in certified organic or locally-produced products or both. Providing as much information as possible to stand consumers regarding the origin and growing practices is suggested, as many consumers now seek to support regional economic viability in agriculture.
3. Supplementing produce grown on the farm with other products can greatly enhance customer interest and therefore the economic viability of farm stands. E.g., bread, local honey, maple syrup, local milk, crafts, jams, pickles, etc., can expand the farm stand's offerings. Some stands add a processing kitchen and make their own value-added products from farm produce (e.g., preserves), while others simply sell the products of other businesses. Another option is to rent space in a commercial processing kitchen in order to make value-added products for a farm stand.
   a) Sales of product that is purchased and resold should be tracked and inventoried. For self-serve stands a weekly inventory of "grocery" type products can help keep track of sales categories. For staffed stands, a register system should be able to keep track of product sales by category.

E. Pricing Strategies

1. Establishing fair and reliable pricing strategies is essential for successful farm stand marketing
2. Defining costs of production – The most important initial consideration is to know (as accurately as possible) what your production costs are (see Lecture 1, Farmers' Markets for more information)
3. Mark-up – Provide a mark-up that covers the cost of either purchasing-in or growing a product, and then 30–50% for profit
4. Some farmers sell certain crops as "loss leaders" either at or below cost in order to attract customers, who then spend money buying other things that make up for the poor return on the loss leader

F. Special Marketing Strategies

Using special marketing strategies can help enhance farm stand marketing efforts. Using the web, providing farm stand membership options, and using pick-your-own crops in conjunction with the usual farm stand offerings are all options that can be added to increase direct market sales.

1. The internet – The internet is an important marketing tool. At a minimum, establish a basic website that provides background information on the stand and farm, crops and seasonal information, hours of operation, and directions to the farm . A web page should be linked with local farming nonprofits and related food groups. Many local chamber of commerce or tourism departments are also listing "farm trail maps" to encourage agro-tourism. Contact your local chamber of commerce or state tourism agency to see if they have such a listing. The website can also be used to allow pre-ordering of produce by customers, web-based bill paying, and sales of farm stand products by mail order. See Unit 5.0, Marketing Basics, for more ideas on how to get started with setting up a basic website.
2. Farm stand memberships – Farm stand memberships integrate the economic support of a community supported agriculture (CSA) project with the freedom of food choices of farm stands. This arrangement offers the consumer more options than a traditional CSA, while still providing the farm with guaranteed sales and up-front operating capital. Like a CSA arrangement, farm stand memberships also offer the consumer a feeling of involvement with and support of the farm.
    a) How farm stand memberships work: Like CSA, most farm stand memberships involve the member paying a lump sum to the farm in advance of the season. The member then has credit that can be used over the course of the season. In most cases a slight discount is provided compared to the retail prices normally paid by customers. A careful record-keeping system is needed in order to keep track of the memberships. Sending a regular newsletter to members can be a good way to remind people of the farm stand and encourage the use of the prepaid credit over the course of a season.
3. U-Pick operations – U-Pick operations for popular berry, fruit, and other crops such as beans, peas, and pumpkins can be a profitable undertaking. For this to work the pick-your-own operation fields ideally will be located near the farm stand, or there will be a way to get people parked, to the field, and back out to the stand to pay. Cart or hay rides can also be used to transport people to the field, particularly in the case of apples or pumpkins, when the picking trip is often as much of an outing for the customer as it is a way to harvest food. Sometimes a separate pay station is established in the field, but this is not as useful at encouraging customers to also buy other stand products before or after they pick.

G. Advertising and Customer Communication

1. Advertising is an art as much as it is a science. Advertising is very often a sound investment in your business, as consumer awareness is key to developing, maintaining, and improving sales. Free and low-cost methods of advertising should be used as much as possible, and paid advertising should also be considered. See Unit 5.0 and Unit 6.1 for more information.
2. Signage – Good street signage is perhaps the most important initial advertising consideration for a farm stand. Clear signs that state the farm's name, along with specific product signs, can help get people into the parking lot. Before building signs, it is important to check with the town, as most towns have rules and restrictions about what size and type of signs can be installed. Types of signage include –
    a) Trail blazing signs – These direct people from busy roads as appropriate. In many cases barns can provide a good space to install large signs with the farm's logo.
    b) Changeable chalk board or magnetic lettering signs – These can also be useful for grabbing the attention of drivers, particularly if they are updated regularly

3. Writing a newsletter for customers can be a great way to communicate. Use newsletters to tell people about the farm, how to store, preserve, and prepare seasonal produce, provide recipe ideas, and highlight special events and crop availability. Newsletters can be sent to farm stand members, e-mailed to a larger mailing list, and also provided to customers at the stand. Different farms publish newsletters seasonally, monthly, biweekly and weekly.
4. Providing recipes at the farm stand, particularly for less common crops, can give people ideas on how to cook vegetables and thus increase sales.

H. Off-Site Farm Stands

1. In some cases a farm is simply too remote from a busy road or population center to successfully support an on-farm stand. In other cases an off-farm stand can help reach a wider market of consumers. Some farms have lots of machinery, pesticide residue, or other concerns that preclude having an on-farm stand.
2. Off-site stands can be successful if arranged carefully. Produce transport is the biggest obstacle. In some cases additional duplicative infrastructure such as property and phones will be needed. This may make the start-up process more capital intensive and financially risky than an on-farm location. Nevertheless, location and convenience for the consumer are of key importance in the success of farm stands, so locating off-farm might be worth the inconvenience in the long run.

Resources & References

These resources are directly related to farmers' markets and roadside stands. Please see the direct marketing resources at the beginning of Unit 4 for additional materials.

BOOKS

Corum, Vance, Marcie Rosenzweig, and Eric Gibson. 2001. *The New Farmers' Market: Farm-Fresh Ideas for Producers, Managers and Communities*. Sustainable Agriculture Research and Education.

Provides extensive information in a clear, nuts-and-bolts manner. Contains invaluable insight and advice for both those selling at market, and those organizing them. It can be purchased from www.sare.org.

Ishee, Jeff. 1997. *Dynamic Farmers' Marketing: A Guide to Successfully Selling Your Farmers' Market Products*. Bittersweet Farmstead.

An informal book dedicated solely to the topic of selling at farmers' markets. Save two years of trial and error just by studying and implementing the tips found in this book.

Robinson, Jennifer Meta, and J. A. Hartenfeld. 2007. *The Farmers' Market Book: Growing Food, Cultivating Community.* Quarry Books.

The Farmers' Market Book examines this national phenomenon through the story of the market in Bloomington, Indiana, and considers the social, ecological, and economic power of farmers' markets generally.

Wills, Ron, Barry McGlasson and Doug Graham. 2007. *Post-Harvest: An Introduction to the Physiology and Handling of Fruit, Vegetables and Ornamentals, 4th Edition*. University of New South Wales Press.

A comprehensive post-harvest physiology text. Many useful charts and concepts for direct produce marketers to consider.

PERIODICALS

Growing for Market

www.growingformarket.com.

A very useful national monthly newsletter for direct market farmers. Covers production and marketing of vegetables and flowers. P.O. Box 3747, Lawrence, Kansas 66046. Phone: 785-748-0605, Fax: 785-748-0609.
E-mail: growing4market@earthlink.net

Small Farm News

www.sfc.ucdavis.edu/pubs/SFNews/news.htm

The Small Farm News is a quarterly publication of the UC Small Farm Center. The newsletter features farmer and farm advisor profiles, research articles, farm-related print and web resources, news items and a calendar of state, national and international events.

ARTICLES

Bachmann, Janet. 2008. *Farmers' Markets: Marketing and Business Guide*. ATTRA-NCAT.

www.attra.ncat.org/attra-pub/farmmarket.html

This document summarizes what it takes to start a farmers' market, as well as to participate in one. The final appendix list all the farmers' market associations by state, which is a useful reference for new farmers hoping to find a new market.

Briggs, Suzanne. 2012. *A Survey of Farmers Market SNAP Incentive Programs: Lessons, Challenges and Trends*. Farmers Market Coalition.

farmersmarketcoalition.org/resource/a-survey-of-farmers-market-snap-incentive-programs-lessons-challenges-and-trends/

California Certified Organic Farmers. 2012. *Organic Marketing 101: A Guide for Getting your Products to Market*. Santa Cruz, CA.

Provides an overview of the different options for farmers to market their organic products. It includes a section on farmers' markets.

Growing for Market, 2009. *Selling at Farmers' Markets: Ideas and Information to Make Your Venture a Success*. Fairplain Publications, Inc. *www.growingformarket.com/downloads/20090706/download*

This special report by Growing for Market offers basic advice for selling at the farmers' market, as well as more specific information such as how to price products, provide safety for customers and money, use credit and debit cards, how to make effective bouquets and strategies for food sampling.

Horwitz, Simca, and Jennifer Hashley. 2008. *Plain Language Guide to Selling at a Farmers Market*. New Entry Sustainable farming Project, Tufts University. Boston, MA. *nesfp.nutrition.tufts.edu/downloads/guides/PL_FarmerMarket.pdf*

A simplied presentation for farmers to learn about how to participate in a farmers market.

Jewett, Jane G., Beth Nelson, and Derrick Braaten. 2007. *Marketing Local Food*. Minnesota Institute for Sustainable Agriculture. *www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_305240.pdf*

This document has a case study of a farmstand operation, as well as other information about direct marketing enterprises.

MacNear, Randii, and Shelly G. Keller. 2012. *New Farmer's Guide: Cultivating Success at Farmers Markets*. Davis Farmers Market Association.

www.davisfarmersmarket.org/new-farmers-guide

A thorough guide for a new farmer to access and sell at farmers markets. Though aimed at CA growers, it is a very useful document.

USDA. 2012. *Senior Farmers' Market Nutrition Program*.

www.fns.usda.gov/wic/SFMNP-Fact-Sheet.pdf

Describes background and the basics of the nutrition program vouchers for seniors.

USDA Food and Nutrition Service. 2014. Supplemental Nutrition Assistance Program. *Learn how you can accept SNAP benefits at Farmers' Markets.*

www.fns.usda.gov/snap/ebt/fm.htm

Woods, Timothy, and Miranda Hileman. 2012. *Best Practices for Sampling at Farmers Markets: A Practical Guide for Farmers Market Vendors*. Agricultural Economics—Extension Publication No. 2012-19. Department of Agricultural Economics. University of Kentucky. *www.ca.uky.edu/cmspubsclass/files/extensionpubs/2012-19.pdf*

WEB-BASED RESOURCES

California Federation of Certified Farmer's Markets

www.cafarmersmarkets.com

An information clearinghouse on certified farmers' markets in California. Includes comprehensive information on certified farmers' markets; links to locate farmers' markets in a given area; product-specific listings of associations and organizations; links to information on agriculture and trade policy, and much more. The California Federation of Certified Farmer's Markets is a statewide nonprofit membership organization of California Certified Farmers' Markets.

California Department of Food and Agriculture Regulations

www.cdfa.ca.gov/cdfa/pendingregs

California Department of Food and Agriculture Regulations (CDFAR) is a California state agricultural agency with divisions of Animal Health & Food Safety Services; Fairs and Expositions; Inspection Services; Marketing Services; Measurement Standards; and Plant Health and Pest Prevention Services. The web site contains links to the services and programs of the above agencies as well as links to county agricultural commissioners and official statements and policies of the USDA, FDA, and CDFAR on current events in agriculture.

Farmers Market Coalition

farmersmarketcoalition.org

Provides current news, updates, and very relevant resources and articles to those participating in farmers' markets, with a national focus.

Farmers' Market Manager Resource Center

www.wvu.edu/~agexten/farmman2/manageres.htm

Many resources for promoting fruits and vegetables. Farmers' Market Coloring Book. Courtesy of USDA.

Farmers' Market Resources for Vendors

www.wvu.edu/~agexten/farmman2/frmmrktres.htm

Information on diversifying your products, new crops growing tips, and seed sources, organic certification, and more.

Maine Federation of Farmers' Markets

www.mainefarmersmarkets.org/

A nice site with lots of links to markets and market resources.

4.2

Direct Marketing to Restaurants and Retail Outlets

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Lecture 1: Direct Marketing to Restaurants & Retail Outlets

(Adapted from: Organic Marketing 101, 2012; Roos, 2010; Iowa State University Extension, 2008; Bauchmann, 2004; Wisconsin Local Food Marketing Guide, 2008; Feenstra et al., 2003; and Green, 1999)

A. Overview

1. Selling to restaurants and retail establishments is not necessarily direct to consumer marketing. It is considered intermediate marketing—where the farmer is selling to a specific buyer who will re-sell the product. However, selling to restaurants and retail establishments is direct in the sense that the farmer needs to have personal relationships with the buyer, who is an end user, and market themselves more actively than with a distributor or wholesaler.
2. Marketing to restaurants and marketing to retail outlets have many things in common, including conducting research, initiating and maintaining good relationships with the chef/buyer, and careful crop planning to meet the quality, reliability, and consistency needed to serve these markets

B. Related Trends

1. The use of locally-produced, seasonal, and certified organic produce and food products is growing in popularity among chefs and high-end restaurants. Examples: Chez Panisse Restaurant and Café in Berkeley, California; Greens Restaurant in San Francisco, California; L'Etoile in Madison, Wisconsin.
2. Reasons chefs and restaurants are buying directly from farmers
   a) Perceived quality and freshness of the foods
   b) Good relationships with the producers
   c) Customer requests for local products
   d) The availability of unique or specialty varieties of produce and/or products

C. Advantages of Direct-to-Restaurant Sales

1. Higher return on products sold may lead to increased income for growers
2. Developing relationships with local businesses
3. Selling directly to local chefs/restaurants is among the alternative marketing opportunities that may help to build a diverse, stable regional food economy, and encourage a more sustainable food and agriculture system

D. Challenges of Direct-to-Restaurant Sales

1. Distribution and delivery can be challenging for chefs and growers. Chefs often find that availability, variety, and timeliness of delivery are obstacles to purchasing locally grown foods. Getting the right product in the right quantity at the right time is key to developing and maintaining successful direct-to-restaurant marketing relationships.
2. Limited seasonal availability and variety are also barriers to using local foods. The use of season extension (such as greenhouses) is a way that growers can supply the necessary products that restaurants desire.
3. Often involves low volume and frequent sales of the highest quality produce, which may involve extensive delivery demands and associated costs

4. For small-scale growers attempting to sell to large restaurants, supplying adequate volume can pose greater challenges for direct marketing. Collaborating with other growers and crop planning with the restaurants are ways to address issues of supplying adequate volume.
5. High turnover and the loss of accounts may occur. A chef with whom one had developed a strong relationship may move on and accounts may be lost.
6. A restaurant may close or tight finances at a restaurant may result in late payments
7. Product packaging, labeling, and processing facilities to meet state and national health and safety regulations may require additional capital expenditures on the part of the grower(s). Working with other growers may offset the necessary recapitalization costs. Be sure to keep current with packaging and labeling laws. Labels must contain farm name, location, unit amount, country of origin, and certifying agency for certified organic products.

E. Research Potential Stores and Restaurants

1. Review the following questions to determine which stores and restaurants are right for your business:
   a) Who are the clientele? Do you appear to share a similar philosophy as the establishment? Who are the people you need to talk to? What is a good time to reach them to set up an appointment?
   b) Restaurants
      i. Have a meal there. What is on the menu? Are local food or farms promoted? Are foods offered seasonally or year round? What are the signature features of the restaurant? Identify who the owner is, the chef, the managers, etc.
   c) Retail
      i. What does the produce section look like? Is it inviting? Will your product fit? How is the produce handled?
      ii. In smaller stores, the person to contact is often the produce manager. But in larger stores it can be a regional buyer. Be sure to identify who buys for the prepared food department.

F. Making Contact

1. Contact the appropriate person—the chef or person in charge of food procurement. Find out a good time to meet with them to discuss the possibility of selling your product to them. The first communication and first contact are extremely important.
   a) Restaurants: Never call them during meal service (check on service hours before calling)
2. Be prepared for the first meeting with the chef or buyer
   a) Come prepared with the following questions—
      i. What are your aesthetic expectations for produce? (For the chef, they may process your produce in such a way that the presentation isn't as important as it otherwise might be. For retail buyers, aesthetics can be very important, but may vary in importance depending on the customer base.)
      ii. Delivery: Do you have delivery hours? Who is in charge of taking deliveries? Where do you take deliveries?
      iii. Ordering: When are the best days and hours for placing orders? Is there a cut-off time? Is it helpful to send in a list of what is available via phone, email, fax? Do I need to contact someone in particular?
      iv. Packaging: Do you have packaging standards? How would you like the produce packaged? Do you use returnable plastic containers (RPC's)?
      v. Communication: What is your preferred method of communication on an ongoing basis: email? Phone? Fax? And how often?

vi. What are your payment terms? (Net 30, 60 days, etc.)
vii. What is your preferred frequency of delivery and how flexible with deliveries can you be?
viii. Specifically for chefs
- What storage capacity and options do you have at your kitchen? What size delivery do your prefer and with what frequency?
- What are your size and quality preferences for your kitchen?
- Would you accept a substitute if a product is not available? If so, what might be an acceptable substitute for another?
- Do you offer a seasonal menu or do you need the same products year-round?
- Are you willing to pick up product from a farmers' market?
- Do you want the product pre-washed? Trimmed? Bunched or loose?

b) Things to bring with you
i. The "story" of you farm (i.e., where the farm is located; the history of the farm; the type of operation; farming practices; who is involved in the farm, etc.). Stories and "memorable moments" are great to plan ahead of time and share. Bring photographs of the farm or ranch to share or any promotional materials you may have.
ii. Samples: Make sure there is enough to share with others, such as the produce department staff at a retail establishment
iii. A list of the products you will have for sale for the season or year, in what units (by pound, bunch, etc.), how much, and when (see Wisconsin Local Food Marketing Guide 2008, p 168 in General Marketing Resources for a sample schedule)
iv. Pricing: Know what it is you hope to get. It is not useful to ask the chef or buyer what they are willing to pay. If possible, know the cost of production for your crops and have a price in mind. It will make negotiations stronger.
- Retail: It is also useful to do research on both wholesale and other retail prices for products similar to yours

v. Retail: Bring a copy of your organic certificate and be sure to put your organic certificate number and state organic program registration number (for California) on your availability list

G. Maintaining Good Relationships With a Chef/Buyer

1. Being reliable and professional is key to selling to restaurants and retail establishments
   a) Consider getting agreements in writing. This is the best way to ensure you both are clear about what is expected from each other. Be sure agreements cover the price, quantity or product per week, size and other packaging requirements, standards for quality, ordering and delivery plans/schedule, and any other requirements discussed.
   b) Be consistent about making contact at an agreed-on time every week to find out what they need (never during dinner service!)
   c) Don't commit to provide something until you are sure you can follow through
2. Notify the restaurant as soon as possible if there are shortages in what was ordered or if the delivery will be earlier or later than scheduled
3. Provide advance notice about what is available. Find out the best timing for doing so.
4. Schedule a winter visit to do crop planning with chef/buyer. See what crops they need and are interested in—be flexible about what you might plant for them.
5. Be professional and consistent with your paperwork. Your invoice/bill of lading should include the buyer's name and address as well as your farm's name and address, the amount of product delivered, the price, the total due, and the terms of payment. Both you and the receiving party should sign the invoice—an unsigned invoice can mean an unpaid invoice.

6. Restaurants
   a) Give chefs a wholesale break at the farmers' market if they run short
   b) Try to grow something unique for a given restaurant
   c) When you have a business meeting, hold it at one of your client's restaurants
7. These relationships aren't built overnight—it may take a few years to develop them fully. It takes time to learn preferences, plan crops and harvesting techniques.

H. Ongoing Activities

1. Grow more than you think you need so you can select the best produce
2. Keep up-to-date on food trends
3. Grow high quality product. Quality is more important than yield.

I. Case Studies

1. Bauchmann, 2004, provides four case studies on direct sales to restaurants. See: attra.ncat.org/attra-pub/summaries/summary.php?pub=266
2. Nalo Farms: Servicing high-end restaurants. Western Profiles of Innovative Agricultural Marketing: Examples from Direct Farm Marketing and Agri-Tourism Enterprises. See: *ag.arizona.edu/arec/wemc/westernprofiles/westernprofilesbookweb.pdf*

Resources & References

PUBLICATIONS

Bachmann, Janet. 2004. *Selling to Restaurants: Business and Marketing*. ATTRA Publication #IP255. National Agricultural Information Service (ATTRA). *attra.ncat.org/attra-pub/summaries/summary.php?pub=266*

Provides a concise overview of the marketing opportunities and challenges faced in selling produce to chefs at high-end restaurants. Includes multiple case studies and related resources for direct marketing. Available online in html and pdf format: www.attra.org/marketing.html.

California Certified Organic Farmers. 2012. *Organic Marketing 101: A Guide for Getting your Products to Market*. 2012. Santa Cruz, CA.

Provides an overview of the different options for farmers to market their organic products. It includes a section on restaurants and retail.

Feenstra, Gail, Jeri Ohmart, and David Chaney. 2003. *Selling Directly to Restaurants and Retailers*. University of California Sustainable Agriculture Research and Education Program. *www.sarep.ucdavis.edu/cdpp/selldirect.pdf.*

Derived from a discussion with over 50 growers and agricultural professionals gathered at the 2002 California Farm Conference to discuss marketing to restaurants and retailers. This concise (5 page) publication outlines the participants' responses to a series of practical questions about how to develop and maintain direct market sales to restaurants and retailers. Addresses the following: Whom to first talk with when attempting to develop a new marketing relationship with a restaurant; what are the main talking points to make in your first contact; what research to do before approaching a restaurant contact; and how to maintain good standing with buyers.

Green, Diane. 1999. *Selling Produce to Restaurants: A Marketing Guide for Small Acreage Growers*. Sandpoint, ID: Green Tree Naturals.

A concise guide to direct marketing to restaurants for small-scale growers. Includes chapters on: selecting restaurants; what to grow; deliveries and sales; working with caterers; working with other growers; market surveying; and sample letters to use for approaching restaurants. Available from: www.greentreenaturals.com.

Iowa State University Extension. 2008. *Local Food Connections: From Farms to Restaurants*. ISU Extension. *www.extension.iastate.edu/Publications/PM1853B.pdf*

A concise 4-page publication outlining the marketing opportunities with restaurants. Addresses the following: market size and opportunity; restaurant expectations; seasonality and the availability of produce; produce volumes; packaging and labeling; orders and payments; marketing strategies; doing necessary research; preparing to meet with chefs/buyers; making commitments; working with non-profits and cooperatives to market products to restaurants.

Roos, Debbie. 2010. *Marketing to Restaurants*. North Carolina State University Cooperative Extension. *growingsmallfarms.ces.ncsu.edu/growingsmallfarms-marketingrestaurants/*

PERIODICALS

Growing for Market

www.growingformarket.com

A very useful national monthly newsletter for direct market farmers. Covers production and marketing of vegetables and flowers. P.O. Box 3747, Lawrence, Kansas 66046. Phone: 785-748-0605, Fax: 785-748-0609. E-mail: growing4market@earthlink.net.

Marketing Your Produce

A compilation of the best marketing articles that appeared in Growing For Market, 1992-1995. Chapters include information on specialty produce, selling to restaurants and/or supermarkets, farmers' markets, CSAs, and expanding your market. Ends with a list of recommended books. See ordering information, above.

4.3

Additional Marketing Options

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Supplement: Case Study of a Faith-Based Community's Relationship with a Community Supported Agriculture (CSA) Farm 209

Lecture 1: Additional Marketing Options

A. Overview

There are several other marketing strategies that can be used as a primary way to sell your products, or as a strategy to diversify your income. This lecture reviews the direct marketing opportunities available through faith communities, and through agritourism and eCommerce. Intermediate marketing strategies of farm-to-institution, collaborative ventures, and food hubs are also introduced.

B. Faith Based Options

1. Faith-based groups represent another opportunity for marketing crops to consumers and institutions
   a) Farmers can establish a CSA relationship with a congregation or set up a farm stand to coincide with regularly scheduled religious services or religious school
   b) Congregations represent organized communities that meet regularly and have basic infrastructure for a CSA drop
   c) Congregations may want to have the drop serve only their members, or they may be open to having the larger community pick-up at their site (e.g., church grounds)
   d) Staff or parents of religious schools and camps can also be the customer base for a CSA
   e) Farmers seeking to set up a relationship with a local congregation can start by contacting the lay leaders or relevant committees or "ministries." These might include the health ministry, social action committee, or environmental committee. Alternatively, working with an enthusiastic congregant to approach the board, professional clergy, or administrative staff can be an effective first step.
2. All of the major religious groups in the U.S. have teachings on values related to food
   a) The motivation for faith-based groups and their members to purchase local, sustainable and/or organically grown produce may go beyond environmental and health concerns to reflect religious precepts and values
   b) Different faith traditions talk about "creation care," "stewardship of God's creation," and "reverence for life." Congregations have implemented recycling, composting, energy conservation and, to a lesser degree, policies emphasizing consumption of local and sustainably grown produce.
   c) Many faith-based groups are focused on hunger relief and social justice
   d) Some congregations have members pay a few dollars extra for their weekly shares and use the extra money to subsidize low-cost shares for needy members of their community
   e) A farm connected to a religious congregation can host members for farm tours and in some cases festivals or religious ceremonies
3. Buying locally provides faith groups an opportunity to put their values into practice
   a) Several national religious groups including HAZON, a Jewish group, and National Catholic Rural Life have promoted CSA projects and consuming locally grown food
   b) This movement for "Congregational Supported Agriculture" has grown over the last several years (see Supplement: Case Study of a Faith-Based Community's Relationship with a Community Supported Agriculture (CSA) Farm)
   c) Schools and camps affiliated with religious movements may have a strong mission-related interest in promoting stewardship values
4. Faith-based groups run schools, retreat centers and camps that can purchase farm products

a) Faith-based schools, retreat centers, and camps can purchase directly from a farmer
b) Some of these institutions will not have the same low-cost requirements for food purchases that some public schools and camps have
c) Some congregations, schools, and camps with excess land lease it to a farmer for production. This can be marketed on-site and to the broader community (see Unit 9.0, Land Tenure Options and Strategies, for information on leasing land).

C. Agritourism

Adapted from: Jewett, J.G., B. Nelson and D. Braaten. 2007; Comen and Foster's (n.d.) ; see also Unit 6.1, Building Community with Social Media and On-Farm Events

1. What is Agritourism?
   a) Agritourism can take many forms, but generally includes entertainment, educational or tourism-based activities that take place on the farm
   b) Examples: harvest festivals, barn dances, petting zoo, outdoor recreational activities (camping, hiking, canoeing, mountain biking, etc.), u-pick operations, school and educational activities or tours, classes (food preparation, floral arranging, etc.). (There are extensive lists in George and Rilla, 2011.)
2. Reasons for creating an agritourism operation
   a) You enjoy community contact and connection
   b) It can potentially provide another income opportunity, as well as keep family members working on the farm
   c) The farm can be more involved in community activities
   d) Agritourism allows for creative expression
3. Potential drawbacks
   a) This effort requires extensive community contact
   b) Requires meeting more local and state regulations; having more insurance
   c) The agritourism venture may not particularly amplify the farming venture. One study showed that as the agritourism portion of the farm increased, the farming enterprises did not necessarily grow in tandem (see Comen and Fosters, n.d.)
   d) An agritourism effort can demand constant attention, and limit privacy
   e) Having the public on the farm increases liability concerns
4. Connecting with customers
   a) A good website is key and probably the easiest way for a beginning farmer to connect with customers. See Unit 5.0 and Unit 6.1 for more about creating a website and other social media outlets for your farm.
5. Getting started—things to explore
   a) What is your motivation for doing an agritourism project? Are you looking to improve profits/meet the bottom line? Have a way for other family members to stay on the farm (not look for outside work)? Provide a service to the community? Build your connection to new and continuing consumers?
   b) What does your farm and local area have to offer? What assets can you build on? Is there a lake on the property for canoeing? Other local historical activities that you could connect with and contribute to?
   c) Location: Where you are located in relation to population centers has an impact on what you can do. Farms that are farther away might best support a bed-and-breakfast operation, where people are willing to drive to it. If the farm is closer to a town or city, it could be more conducive for offering classes to school-aged youth or the community in general.

d) Talk to other farmers who are doing agritourism operations – Learn what the pitfalls are, how much time it takes to implement and manage these operations, how to do things successfully, and potentially find ways to work cooperatively.
e) Think about how much time you want to or are able to devote to different efforts. Hold a yearly barn dance or harvest festival to contain most of the activity to a point in time? Have an archery range that is open every week?
f) Explore local and state ordinances for the activities you are considering
g) Think about a risk management plan for having people on the farm—what will you do if someone gets hurt?
h) Ensure you get appropriate insurance coverage

6. Elements of successful operations – Comen and Foster's (n.d.) research identifies a list of traits for successful agritourism enterprises, both from the literature and interviews/site visits
   a) Location – It is helpful to have a farm that is located on main travel corridors or driving routes. Having a farm that is close to other types of attractions will also encourage more visitors.
   b) Financial analysis – It is important to track expenses and sales for each enterprise or activity, and to know what the break-even point is
      i. Understanding the customer and their needs/interests – Understand what the customer is looking for, and adapt where it makes sense to do so. Get information through market research and listen to the customer while they are at the farm.
      ii. See Jolly and Reynolds (2005) for study results of California consumer interest in agritourism
   c) Strong community connection – Having this connection provides a customer base, and particularly one that can spread interest by word-of-mouth. It also allows for relationships to develop for continued market research feedback. Connecting with tourism groups, cooperative extension, and local officials who are interested in supporting tourism can be a great support.
   d) Adding value to products – Including sale of products, such as processed foods grown on site or from nearby, can be another way to meet customer needs and get repeat sales
   e) Product development – Those that listened to their customers, either through direct interaction, feedback from staff interaction, or information from market studies, were the most successful. This allowed farmers to tell their story to customers in a way that addressed customer interests and was based on the farm's primary assets.
   f) Strong social skills – These skills are needed for maintaining regular customer relations throughout the visit to the farm. It includes having relationship skills that help a bond develop, and to navigate issues that arise.
   g) Role of the family – Family support (partners or multiple generations) was helpful to move an enterprise from a small to mid-sized operation
   h) Continuous learning – A key component of success was a passion for continual learning. This learning could happen in a variety of ways, from market research, reading books or trade magazines, visiting other operations, attending workshops or conferences, or hiring consultants where necessary, etc.

D. Establishing an eCommerce Site

1. What is an eCommerce site?
   a) An eCommerce site is where products can be sold and bought over the internet
   b) This strategy can be a useful additional marketing strategy for farmers—it can help find new customers and better serve some existing ones

2. Advantages
   a) Extends your reach to people who are not in your region – Could be good for growers in more isolated regions
   b) Extends your reach to a broad customer base – Anyone who is on the web
   c) Fewer needs for physical infrastructure
   d) Hours worked can be more flexible – Filling orders from online communication can be done outside regular work hours
3. Potential issues or disadvantages
   a) Inventory (volume) – It may be difficult to anticipate sales volumes and in turn maintain freshness of your produce
   b) Security issues with online transactions
   c) Packaging issues – Both expense and some customers won't find it sustainable. Will you transport products long distances? What is the shelf life of your product and will it sustain transport?
   d) Shipping costs/fuel costs escalating and likely to continue doing so
4. Connecting with customers
   a) A good website is key and probably the easiest way for a beginning farmer to connect with customers. See Unit 5.0 and Unit 6.1 for more about putting together a web page.
   b) Social media – Use Facebook, Instagram, Twitter, and other social media to post pictures of your latest crops. This is a cheap and easy way to share photos of your latest harvest or share about your farming methods with your customers. See Unit 5.0 and Unit 6.1 for more information about using social media to promote your farm.
   c) Connect with local farming or environmental organizations to help publicize your service and target desired customers base.
5. Unique issues selling food online
   a) Customers can't see, touch, or taste it, potentially making purchasing decisions more difficult. To address these issues, try the following:
      i. Photography is key for communicating the qualities of your products—such as their freshness and appeal. It can be difficult to take good photos of food. If the pictures are unappetizing, they do not help you. See *www.photography.com/articles/techniques/how-to-take-pictures-of-food/*
         - Ensure photos are clear and in focus
         - Focus on getting the texture that you want to accentuate. This might be the smooth skin of a plum, or textured surface on a head of broccoli.
         - Have the background be a contrasting color, so the product you are selling pops out
         - Take the pictures close up
         - The food needs to show shadow for it to look three dimensional. Play with lighting to get this effect, and to see how the food looks best. Sometime having light come from behind can create an interesting glow.
      ii. Good product descriptions are another key component. It is important to both entice the customer, but also provide them with clear and accurate information so they are ultimately satisfied with what they get. This will help avoid returns of products and increase repeat sales.
         - Include everything your customer might want to know about the product. This will avoid returns and decrease up-front questions.
         - Describe the qualities of the product(s) that will resonate with your customer base (organic, free-range, etc.)
         - Ensure the content is easy to read

6. Design your website
   a) You don't need to become a web design expert to have a professional-looking website. You can design your website using templates through a website design service such as shopify or big commerce. These are relatively low cost services that provide basic designs to help you get started with a basic website and ecommerce space.
      i. *www.shopify.com*
      ii. *www.bigcommerce.com*
   b) The main way to take orders and payment is through your website
      i. Connect to Paypal or other such exchange sites for taking payments
   c) Use an intermediary site to sell your products
      i. Local Harvest – A site listing farms that sell their products directly, also takes orders for individual farmers to sell their products through mail order: *www.localharvest.org*
      ii. Local Direct is another site that both connects consumers to farms, and provides online ordering of products by individual farmers: *www.localdirt.com*
7. Other things to consider
   a) Packaging
      i. What to use to ship your products? Perishable produce and glass jars need special handling. Additionally, the organic consumer may be more likely to be conscious of not using larger amounts of packaging materials.
      ii. Refrigeration – Will your product need to be kept at a certain temperature during transport?
   b) Shipping – Who to use? How will customers receive your product? Pick up at a designated location or will you ship directly to address provided?
   c) Tracking orders – What process will you use to ensure orders are shipped?
   d) Customer service
      i. Customer satisfaction is vital for an online operation. How will you respond to complaints or returns?
      ii. Include video or written testimonials on your website if possible
8. Case Examples
   a) Annie's Jellies and Jams: *agmarketing.extension.psu.edu/begfrmrs/OptStratSmlFrms/UseInternetMrktProd/AnnieJam.pdf*
   b) Papa Geno's Herb Farm: *agmarketing.extension.psu.edu/begfrmrs/OptStratSmlFrms/UseInternetMrktProd/PapaGenoHerbFrm.pdf*
   c) Upland Cheese Company: *agmarketing.extension.psu.edu/begfrmrs/OptStratSmlFrms/UseInternetMrktProd/UplandsCheeseCo.pdf*
   d) Diversified horticulture internet sales: *www.extension.org/pages/59443/video-clip:-internet-sales-from-farmers-and-their-diversified-horticultural-marketing-strategies*
   e) Lodging at the Broodio

      See: Jewett, J.G., B. Nelson and D. Braaten. 2007, p. 40-43: *www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_305240.pdf*
   f) Nordic Ridge Gardens

      See: Jewett, J.G., B. Nelson and D. Braaten. 2007, p. 40-43: *http://www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_305240.pdf*

E. Intermediate Marketing: Farm-to-Institution, Food Hubs, and Other Collaborative Ventures

1. What is intermediate marketing?
   a) It is usually defined as selling to someone who is not the end user (consumer)
   b) This includes selling to distributors, wholesalers, grower-shipper-packers (all discussed in Unit 2.0, Overview of Produce Marketing). It can also include selling to restaurants and grocery stores (discussed in Unit 4.2).
   c) This section outlines other alternative intermediate sales venues that may be of value to beginning farmers, particularly those who want to focus on selling locally or regionally. They are intermediate in that they do not focus on selling to the ultimate customer, but they may involve more work in the marketing activities than selling to a wholesaler. These include institutional sales, cooperatives, and food hubs.
2. Farm to Institution (Jewett et al. 2007)
   a) Institutional buyers include schools, colleges, hospitals, prisons, government, and enterprise dining facilities (e.g., concessions in government buildings and/or Google) and nursing homes
   b) Institutional food service director needs can be very different, and they purchase food in different manners. Some smaller institutions may serve 1,000 meals a week and may be willing to contract with farmers individually to purchase their products. Others may serve 20,000 or 30,000 meals a week, and get their food through a broadline supplier or secondary produce supplier. Some institutions operate through a food service management company that maintains contracts with broadline and secondary suppliers that you could work with.
   c) Find out who does the purchasing (food service director or someone at the food service management company), and in what manner, and plan your pitch accordingly. It may require working through the food service management company. If the institution is self operated (i.e.,does not contract out its food service operation) then reaching out directly to dining leadership and their food buyer would be necessary.
   d) Institutions such as schools or colleges may support buying locally for a number of reasons—this may be a good place to start when exploring institutional markets
   e) Since institutions often need large amounts of product, smaller scale and new farms may benefit by working with other farmers to offer a larger supply. Working through a cooperative venture or food hub (see below) can help.
      i. Selling direct to institutional markets might make more sense for beginning farmers in their 3rd or 4th year of operation than in their first couple of years.
   f) Considerations for working with institutions
      i. Institutions purchase produce year round, and thus farmers can work towards having product available throughout the growing season
      ii. Institutions, such as schools and hospitals, often have minimal facilities and limited number of food preparations staff, so farmers also need to provide produce in a manner that is easy to process and serve
      iii. Prices for products will likely be at wholesale
      iv. Institutional buyers will likely require liability insurance. Requirements will differ depending on the products sold and to whom; e.g., public institutions often have specific requirements. Liability insurance working with institutions can range from one to five million dollars for procurement policy expectations.

3. Cooperative Ventures (Jewett et al 2007)
    a) Collaborative marketing models are a way for small-scale farmers to broaden their customer base by collectively providing larger amounts of product to serve large-scale buyers. While wholesalers and others may play this role in many established venues, local and regional markets are one place where cooperative models may find opportunity and provide value.
    b) Farmer's cooperatives, a more well-known form of collaboration, often involve some or all of these activities: aggregating, processing, distributing, and marketing
        i. Cooperatives are user owned and controlled by the members. Thus, running these cooperatives involves farmers owning and running the marketing/distribution business themselves. It takes a large time commitment to make them work.
        ii. Examples:
            • New North Florida Cooperative: *foodshedguide.org/cases/new-north-florida-cooperative*
    c) For details on how to start a cooperative, see King and DiGiacomo, 2000
    d) A few, or several, farmers collaboratively joining forces to distribute and market their products, without the formal structure of a cooperative, is another strategy
        i. This type of venture could include aggregating product to sell to a wholesaler, running a multi-farm CSA, or operating a farmer-run processing facility
        ii. For more details about starting and operating a collaborative arrangement, see Ochterski 2012
    e) Non-profit ventures provide another model in developing marketing efforts that serve a group of farmers. They don't necessarily require farmers to contribute up-front time and capital. However, the farmers may not have much control over their operations either.
        i. Examples:
            • Heartland Food Network: *www.mnproject.org/food-heartland.html*
            • Pride of the Prairie: *www.prideoftheprairie.org*
    f) Public agencies are another group that can create a marketing effort in support of farmers. As with non-profits, farmers have little to risk up front, but then they may not have much control over the efforts' direction.
        i. Examples:
            • Northwestern Minnesota Local Food Partnership: *www.localfoods.umn.edu/*
            • Superior Grown: *www.nffi.net/superiorgrown/index.htm*
4. Food Hubs (see Barnham et al. 2012)
    a) There are various definitions for food hubs
        i. The National Food Hub Collaboration defines food hubs as follows: "A regional food hub is a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."
    b) Food hubs are not defined by a specific business structure, but more by how they function and their values
        i. Values – These organizations often aim to serve small and mid-scale farms, work closely with farmers to ensure the success of the whole operation, focus on sustainable practices, and aim to have positive impacts on their communities (such as selling in underserved neighborhoods)

ii. Functions – Food hubs tend to a variety of the following
    - Aggregate crops from a variety of farms to distribute to larger buyers
    - Provide a facility or warehouse that may store food before being shipped or picked up from buyers
    - Conduct light processing
    - Provide space for growers to do their own processing/value-added production
    - Packaging or re-packing
    - Branding and promotion of products
    - Own or lease trucks to do their own distribution
    - Some may not have a facility, but work with other established businesses that can provide storage, processing or distribution services

c) Food hubs offer small-scale farmers another avenue to increase sales by selling to wholesale, institutional, or other larger markets, where it would be impossible to serve these markets otherwise. Food hubs may also help small-scale farms in a variety of manners.
   i. Providing or brokering technical assistance on items such as season extension, sustainable practices, production planning
   ii. Providing information on product differentiation, identity preservation, tractability, and branding
   iii. Offering bulk purchasing of inputs, some processing or storage

d) As of 2014, there are 200 food hubs in the U.S., at various stages of development

e) Research from 2011 on established food hubs found that over half considered themselves to be financially viable businesses, but most also noted that this business is precarious, being dependent on very slim margins, the weather, and a perishable product (Barham et al. 2012)

f) For advice to farmers on how to participate with a food hub, see Pressman and Lent 2013

Resources & References

INTERMEDIATE MARKETS

PUBLICATIONS

Alcorta, Marisa, Rex Dufour and Tammy Hinman. 2012. *Tips for Selling to Aggregators/Grower Marketing Coops*. National Center for Appropriate Technology (NCAT). *attra.ncat.org/attra-pub/summaries/summary.php?pub=402*

Barham, James, Debra Tropp, Kathleen Enterline, Jeff Farbman, John Fisk, and Stacia Kiraly. 2012. *Regional Food Hub Resource Guide*. Washington DC: U.S. Department of Agriculture, Agricultural Marketing Service. April 2012. *dx.doi.org/10.9752/MS046.04-2012*

> *This 83-page document produced by a joint effort of the USDA and Wallace Center at Winrock International explores what a food hub is, the impacts of food hubs, their economic viability, barriers to proliferating, and resources to support their development.*

Cantrell, Patty, and Bob Heuer. 2014. *Food Hubs: Solving Local*. Wallace Center Winrock International. *www.ngfn.org/resources/food-hubs/food-hubs-solving-local*

> *This 22-page document offers 5 examples of established food hubs focused on getting local food into local markets. These cases show the differences and similarities of how groups are getting local foods to market.*

Community Food Security Coalition and the Center for Food & Justice Occidental College. 2004. *Farmer Resource Guide: Managing Risk Through Sales to Educational Institutions*.

> *This document explores the different issues associated with farmers selling their products to institutions. It provides suggestions for accessing food service directors, managing supply, conducting distribution and other topics needed for farmers to successfully work with institutions. It also provides case studies of different types of farm-to-institution efforts. $12 plus shipping; order here: www.farmtocollege.org/resources*

Diamond, Adam, and James Barham. 2012. *Moving Food Along the Value Chain: Innovations in Regional Food Distribution*. Washington, DC: U.S. Dept. of Agriculture, Agricultural Marketing Service. March 2012. *dx.doi.org/10.9752/MS045.03-2012*

> *This document provides eight case studies of innovative distribution strategies. One of them is a farmer cooperative model.*

Green, Camille and Nancy Moore. 2013. *Bringing Food to Local Institutions: A Resource Guide for Farm-to-Institution Programs*. National Center for Appropriate Technology (NCAT), June 2013. *attra.ncat.org/attra-pub/summaries/summary.php?pub=261*

> *Provides basic information on the types of programs that exist, and offers several case studies, and lists other resources available to help support these types of program.*

Iowa State University Extension. 2000. *Local Food Connections: From Farms to Schools*. *mofarmtoschool.missouri.edu/files/3.Local%20food%20connections-from%20farms%20to%20schools_IA.pdf*

> *Provides basic information on how to start selling your products to schools.*

Jacobsen, Rowan. 2013. From farm to table: Building local infrastructure to support local food. *Orion Magazine*, November/December 2013. *www.orionmagazine.org/index.php/articles/article/7807*

> *This article highlights a particular Northeast food hub, as well as a couple farmers who use it successfully.*

Jewett, Jane G., Beth Nelson and Derrick Braaten. 2007. *Marketing Local Food*. Minnesota Institute for Sustainable Agriculture. *www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_305240.pdf*

> *A comprehensive and useful guide to marketing local food. A very clear and useful overview with several case examples.*

King, Robert, and Gigi DiGiacomo. 2000. *Collaborative Marketing: A Roadmap and Resource Guide for Farmers*. University of Minnesota Extension. *www.extension.umn.edu/agriculture/business/commodity-marketing-risk-management/collaborative-marketing/*

This on-line manual contains extensive information about starting and operating a collaborative venture. It also includes 10 case studies, which are woven in throughout the document to provide examples.

Lerman, Tracy, Gail Feenstra, and David Visher. 2012. *A Practitioner's Guide to Resources and Publications on Food Hubs and Values-Based Supply Chains: A Literature Review.* Sustainable Agriculture Research and Education Program Agricultural Sustainability Institute, University of California, Davis. *www.sarep.ucdavis.edu/sfs/KYF%20grey%20literature%20review%207.9.12_compressed.pdf*

This document summarizes current literature on food hubs and other value based supply chains (VBSC). It includes sections on why these structures are important, descriptions on current ventures, as well as benefits challenges and best practices.

Ochterski, Jim. 2012. *Collaborative Marketing for Small Farms: Selling and Working Together for Profitability.* Cornell University Cooperative Extension. *smallfarms.cornell.edu/files/2012/05/Collaborative-Marketing-for-Small-Farms-10385vc.pdf*

This document outlines the steps involved in creating a collaborative marketing or distribution arrangement between farmers. It includes how to get clear about your goals, find a business structure, the use of attorneys, common problems and their solutions, and what is needed for success.

Padgham, Jody. 2005. *Cooperatives: Their Role for Farm Producers*. University of Wisconsin Extension. *www.uwex.edu/ces/agmarkets/publications/documents/A3811-3.pdf*

This 2-page document summarizes basic information on farmer's cooperatives—what they are and how to start them.

Pressman, Andy, and Chris Lent. 2013. *Food Hubs: A Producer Guide*. National Center for Appropriate Technology (NCAT). July 2013. *www.acrcd.org/Portals/0/food_hubs.pdf*

This 20-page document provides information specifically to the farmer about working with food hubs. It provides information on how to select one to work with, and what you need to know to work with them effectively. Includes case studies.

Wright, Bill. 2007. *Selling to Institutions*. University of Wisconsin Extension. *www.co.brown.wi.us/i_brown/d/uw_extension/selling_to_institutions.pdf*

This 4-page document summarizes the strategies for selling productions to institutions.

WEB-BASED RESOURCES

USDA-Agricultural Marketing Service—Food Hubs: Building Stronger Infrastructure for Small and Mid-Size Producers

www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateA&navID=WholesaleandFarmersMarkets&leftNav=WholesaleandFarmersMarkets&page=FoodHubsandOtherMarketAccessStrategies

This site offers a variety of resources for food hubs, including links to reports, food hubs in the news, and a working list of food hubs.

AGRITOURISM REFERENCE & RESOURCES

PUBLICATIONS

Chase, Lisa, Robert Manning, and William Valliere. 2012. *Agricultural and Culinary Tourism Literature Review: Summary of Finds and Annotated Bibliography.* Vermont Tourism Data Center, Park Studies Laboratory, University of Vermont. *www.uvm.edu/tourismresearch/agtour/publications/agritourism_lit_review.pdf*

This document contains a nice annotated bibliography, which identifies several studies from the Northeast, as well as nationally, on the topics of agritourism and culinary tourism.

Comen, Todd, and Dick Foster. N.D. *Agricultural Diversification and Agritourism: Critical Success Factors.* The Institute for Integrated Rural Tourism. Draft. *www.uvm.edu/tourismresearch/agtour/publications/Agritourism%20Report.pdf*

This report identifies factors related to success in agritourism, by reviewing research literature, as well as results from interviews and site visits with Vermont farms.

Duffy, Marlow A. 2012. E*xploring Marketing Strategies for Agricultural Tourism Farmers in the Commonwealth of Massachusetts and the State of Vermont*. University of Vermont College or Agriculture and Life Sciences. Department of Community Development and Applied Economics. *www.uvm.edu/tourismresearch/agritourism/publications/Duffy_Marlow.pdf*

Abstract—"This research explores the current marketing strategies for agri-tourism in Massachusetts and Vermont. Questions include, the demographics of agri-tourism farms, operations Massachusetts and Vermont farms are involved in, marketing strategies that have and have not been successful for agri-tourism in Massachusetts and Vermont, and the impact of agri-tourism on Massachusetts and Vermont farms. Results show Massachusetts farms use fewer marketing methods than Vermont farms. Both Massachusetts and Vermont farms agreed they were better off financially from agri-tourism. In Massachusetts, agri-tourism does not have a very positive impact on the quality of the operator or their family's life, whereas it does in Vermont."

George, Holly, and Ellen L. Rilla. 2011. *Agritourism and Nature Tourism in California*. University of California, Division of Agriculture and Natural Resources. Davis, CA. Cost: $25 plus shipping and handling. *sfp.ucdavis.edu/pubs/publications/1/*

This book describes the many facets of agritourism, and provides detailed information for those wishing to start such an enterprise. The contents tools for evaluating whether this method is right for you, creating a business plan, dealing with regulations, as well as creating a risk management plan and marketing strategy.

George, Holly A., Christy Getz, Shermain D. Hardesty, and Ellen Rilla. 2011. California agritourism operations and their economic potential are growing. *California Agriculture*, Vol. 6, No. 2. University of California. *californiaagriculture.ucanr.org/landingpage.cfm?article=ca.v065n02p57&fulltext=yes*

This article summarizes the results of a survey of California farmers involved in agritourism. It summarizes the motivations of farmers for doing this kind of enterprise, what kinds of things people are doing (agritourism activities, promotional activities), profitability, challenges, employees and growth trends.

Jewett, Jane G., Beth Nelson, and Derrick Braaten. 2007. *Marketing Local Food*. Minnesota Institute for Sustainable Agriculture. *www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_305240.pdf*

A very useful publication on direct marketing. It has a substantial section on agritourism.

Jolly, Desmond A., and Kristin A. Reynolds. 2005. *Consumer Demand for Agricultural and On-farm Nature Tourism*. UC Small Farm Center Research Brief. Davis, CA. *sfp.ucdavis.edu/files/143466.pdf*

This report summarizes findings from a survey of people from 2 California counties, examining their interests and behaviors around agritourism.

Krantz, Heidi. Forthcoming 2013. Best practices for agritourism.

"A review of materials promoting best practices for agritourism throughout the U.S. is underway. Findings will be compiled and consolidated and outreach materials will be developed. Materials forthcoming in 2013." Referred to in Chase, Manning, and Valliere. 2012

Liang, Chyi-Lyi. Forthcoming 2014. Impacts of multifunctional operations on long term sustainability and prosperity of small and medium-sized farms and rural communities. University of Vermont.

"Motivated by growth in local foods and multifunctional farms, this study seeks to (1) examine the sustainability of small and medium-sized farms and rural communities in a regional context, and (2) study the impacts of changes in local markets for nontraditional agricultural products and services and their effects on farm entry, transition, and viability and the public and private options for addressing these effects. The purpose of this study is to identify specific strategies and policy options to increase the integration between farms and local communities, and in the process to potentially enhance the long-term viability of rural regions. This study is currently being conducted and findings will be forthcoming in 2014." From Chase, Manning, and Valliere. 2012

Torres, Rebecca Maria, and Janet Henshall Momsen. 2011. *Tourism and Agriculture: New Geographies of Consumption, Production and Rural Restructuring*. Routledge, New York.

WEB-BASED RESOURCES

Agritourism

www.uvm.edu/tourismresearch/agresearch.html

Gives research results and other information by state.

Agricultural Marketing Resource Center

www.agmrc.org/commodities__products/agritourism/

This site has a number of resources for going agritourism – including documents on best practices, lists of associations and networks, risk management and liability, marketing and online references, and zoning and health issues. It also has resources for some specific types of agritourism such as equine offerings, hunting/fishing operations, nature-based tourism, wine tours and rural weddings.

Farm Stay U.S.

www.farmstayus.com/

This website lists farms around the U.S. that provide accommodations. It can be a resource for those thinking of offering this type of service.

UC Small Farm Program—Agritourism

sfp.ucdavis.edu/agritourism/

This website has several resources for farmers considering starting an agritourism venture. There are research studies, books, worksheets to help plan these ventures, etc.

E-COMMERCE REFERENCES & RESOURCES

PUBLICATIONS

Alcorta, Marisa, Rex Dufour, and Tammy Hinman. 2012. *Tips for Selling on the Internet*. National Center for Appropriate Techonolgy (NCAT). *attra.ncat.org/attra-pub/summaries/summary.php?pub=401*

This 2-page tip sheet highlights advantages and considerations for selling products on the internet.

Ernest, Stan, Jay Jenkins, Jennifer Nixon, Connie Hancock, and Glenn Muske. 2011. *Direct Marketing of Specialty Food Products*. University of Nebraska, Lincoln. *eship.unl.edu/directmarketingfood*

This is an online document that gives extensive information and examples of how to do online marketing.

Klotz, Jennifer-Claire V. 2002. *How to Direct-Market Farm Products on the Internet*. United States Department of Agriculture, Agricultural Marketing Service, Transportation and Marketing Programs. Marketing Services Branch. *www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELDEV3101222*

This 50-page report includes sections on why one would market on the internet, and how to set up and market through a web site.

WEB-BASED RESOURCES

SBCD Net

www.sbdcnet.org/small-business-information-center/ecommerce-for-small-business

This website has a good outline for how to set up an ecommerce site.

The U.S. Small Business Administration—eCommerce Resources

www.sba.gov/content/ecommerce-resources

This website contains a number of articles that focus on issues such as complying with rules for privacy, mail orders, disclosing information, advertising and labeling.

SUPPLEMENT

Case Story of a Faith-Based Community Relationship with a Community Supported Agriculture (CSA) Farm

"CSA" can also stand for "Congregational Supported Agriculture"! In 2011, members of the Environmental Action Committee of a congregation in Sonoma County, California (north of San Francisco) wanted to connect their membership with local agriculture. This Jewish congregation was inspired in part by their national movement (the Union of Reform Judaism) challenging member congregations to promote local food. The committee sent out a short Request for Proposals to all of the local CSA farms they could find.

There were 21 farms offering CSA memberships within about 20 miles and 7 of those responded with interest. The committee sent the farmers a short "request for proposals" that asked the farmers to respond to several questions. The committee assessed factors including: variety of crops, price of shares, willingness to engage by educating congregants, available communication (e.g., website and newsletter) and other considerations. Social justice factors, for example 'was the farmer a low-income member of the community?' were not considered in the decision.

The committee circulated an announcement about the CSA opportunity to the membership. Some 20 members indicated interest. When the religious leader of the congregation sent a follow-up e-mail supporting the project, another 30 members indicated tentative interest in joining. The committee decided to try to set up relationships with more than one farm as a way to broaden the support of local agriculture. Ultimately about 25 families purchased shares. Some couples split a share. The first season the congregation worked with two small farms, but after an evaluation, and attrition with one farm, the relationship continued with a single farm.

The group signed a Memorandum of Understanding (MOU) outlining the roles of the farmer and the congregation's administration. It also addressed what would happen if there were various complaints, or conflicts. For example, if a congregant didn't like the variety or quality of produce in the box that week the matter was strictly between them and the farmer. In this case the committee and administration did not get involved with the financial transactions. Congregational members paid directly to the farmers.

The farmer has spoken at the synagogue on two occasions and also hosted a tour of the religious school. Each year the Environmental Committee has promoted additional member sign-ups. After two years the farmer reported that congregational members showed a very low attrition rate compared to the rest of his customers.

UNIT 5.0

Marketing Basics

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Introduction: Marketing Basics

UNIT OVERVIEW

Marketing is often the most daunting task for beginning farmers, and with competition increasing in the organic sector, it has become an even more essential component of a farm's overall business plan. Implementing a successful marketing plan requires a set of analytical and human relations skills that are distinct from but that compliment those used in production agriculture.

Ongoing growth in the organic sector has increased competition in the marketplace (including more and larger companies), but also has increased awareness of, demand for, and opportunities to market organic products. Market research and analysis of farm production and sales records can help the farmer identify profitable products and market outlets. Customer relations always have been, and continue to be central to a successful marketing strategy. Finally, social media technologies, while providing new marketing opportunities, require developing additional skills and time to use them effectively. This section provides an overview of some basic marketing elements.

MODES OF INSTRUCTION

> LECTURES (1 LECTURE, 1–1.5 HOURS TOTAL)

LEARNING OBJECTIVES

CONCEPTS

- The basic elements of marketing, including the 4 P's of marketing: Product, Place, Price and Promotion
- The steps and considerations for establishing a brand and a value proposition
- Marketing communication strategies—which are essential for gaining brand recognition and maintaining customer loyalty to increase sales

Lecture 1: Marketing Basics

A. Marketing Definition

1. Marketing is the process of creating, communicating, and delivering value to customers and managing customer relationships, for the purpose of selling products or services

B. Marketing Objectives

1. Marketing activities come in all forms. To get started, you must first define your marketing objectives by addressing the "4 P's" of marketing: product, price, place, and promotion. The 4 P's represent the sellers' view of the marketing tools available for influencing buyers.
   a) **Product**: What crops and crop varieties will you offer? What are your quality standards? What is your brand name? What kind of packaging or boxes/cartons will you use? What size(s) will you offer?
   b) **Place**: What market channel(s) will you target for your sales (e.g., retail grocery, restaurants, farmers' markets, etc.)? What locations? Where will you hold inventory? See Unit 2.0: Overview of Produce Marketing for details on produce market channels.
   c) **Price**: What price will you set for your produce? Keep records to help you determine your cost of production so you can know what profit you want to target. If at all possible, set the price to cover your expenses and income needs. What are your credit terms?
   d) **Promotion**: Will you offer promotions or discounts? Will discounts be based on volume? Will you engage in paid advertising? Will you develop merchandising materials for buyers to use at the point of sale? Will you engage in community outreach to build a consumer base?

C. Produce Marketing "How To"

1. Produce marketing includes all the steps between the crops being harvested and arriving at the kitchen table. This includes postharvest handling, building relationships with buyers, paperwork and accounting, telling the story of the farm and the farmer, branding and packaging, and promotion and advertising to the end consumer.
2. One of the first tasks is to determine what customers you want to target and through what means. You may ask yourself: "How do I choose a profitable customer segment?" or "How do I know a customer's needs?" This will take a little research on your region and the target market channel you have in mind.
3. **Step one: Determine your target population, market channel(s), and marketing regulations**
   a) Consider what demographic you want to target, i.e., scale, urban vs. rural, education level, income level, culture, religion, the presence of competition, etc. Are you looking to establish a niche market in an upscale grocery store or do you prefer to work in a farmers' market that reaches the working class in the urban core of a city?
   b) Visit the market channel you plan to target and see who shops/eats there. Walk through the produce section of the retail grocery store. Walk the farmers' market at different times of day. Eat at a restaurant that you see as a prospective customer, etc. See what people are buying, what prices they are paying, what products are present and what products may be missing.
   c) Government policies: learn the market regulations for your market channel, identify issues around access to markets, and barriers to entering a market channel. For example, is a business license required to operate a roadside stand? Is a producer's certification required to sell at a Farmers' Market?
   d) Food safety: Does the market channel you're exploring require a certified food safety plan/GAP certification? See Unit 7, Food Safety on the Farm, for more on this topic.

e) See Unit 6.1, Building Resilience into your Small Farm Marketing Plan, for a comprehensive list of market analysis questions

4. **Step two: Evaluate demand for your product**
   a) Talk with potential buyers/market managers and find out if and when they have a need for the crop you are considering growing and if not, what produce they may be looking for and in what quantity, over what period of time
   b) You should have an agreement with a buyer before you plant the crop. You don't want to learn at harvest time that the market you had in mind already had 5 vendors for that same item and has no interest in sourcing from you.
   c) If you are introducing a new item to a market, work on developing a roll-out strategy with your buyer, offering promotions and samples to help introduce your product to customers. Start small and establish communication with buyers early.
5. **Step three: Develop your brand and value proposition**
   a) Once you have identified your target customer segment, you'll want to develop a brand and value proposition that speaks to their needs
   b) Branding and value proposition definitions
      i. **Brand**: A brand is a name, term, sign, symbol or design intended to identify a seller's offering with competitive distinction. A brand conveys a meaning to a particular kind of customer about a company and its products relative to the product's attributes and benefits, and the customer's values, culture and identity.
      ii. **Value proposition**: A value proposition is a promise to deliver significant value to the market through specific products and services with meaningful differentiation from competition. Your value proposition is the reason why a prospective customer should buy your product. It contains elements of the Four P's that contribute most to differentiated competitive value. The value proposition statement—
         - Explains how your product solves customers' problems or improves their situation (relevancy)
         - Delivers specific benefits (qualified value)
         - Tells the ideal customer why they should buy from you and not from the competition (product differentiation or uniqueness)
         - Is easy to read and understand/should be in the language of the customer.
         - Consists of:
            - Headline: what is the end-benefit of your offering, in one short sentence. Can mention the product and/or customer. Should be an attention grabber/include impact statement.
            - Subheading or a 2–3 sentence paragraph. A specific explanation of what you do/offer, for whom and why is it useful/ who benefits, etc.
            - 3 bullet points. List of key benefits, varieties, attributes.
            - Visual. Images communicate much faster than words. Show a picture of your farm, produce or an image reinforcing your main message.
      iii. Sample impact statements
         - "Your purchase keeps harmful pesticides out of the environment" (*ponoinfusions.com*)
         - Organic farming creates healthy soil without the use of synthetic fertilizers
         - Certified Organic products are GMO- free
         - Organic farming promotes wildlife and biodiversity, supporting larger populations beneficial insects like bees and other pollinators

iv. Sample value proposition statement

- **Traditional Medicinals** – "From the corners of the earth, to the bottom of your teacup, we're preserving tradition and creating a sustainable future. For over 30 years we have been making herbal teas blending the ancient art of traditional formulating with the most modern methods to ensure you a consistently reliable and good tasting cup." (*http://traditionalmedicinals.com/*)
- **Jacobs Farm** – "Founded in 1980 as a small organic family farm, Jacobs Farm remains committed to benefiting people and the environment for generations to come. Over sixty varieties of herbs and edible flowers grace our northern California coastal farmlands." *(http://www.jacobsfarm.com/)*
- **Pinnacle Organically Grown Produce** – "Phil and Katherine Foster farm 250 acres of C.C.O.F.- certified organic fruit and vegetables on two ranches near San Juan Bautista and Hollister, California. We have a diverse range of crops, marketing up to 60 produce items at the peak of the season. We sell at the farm on Saturdays, at farmers markets, through local retail stores, local wholesalers, and several national wholesalers. We strive to maintain the Pinnacle label's high quality by treating our workers, our products, our land, our community and our planet with utmost respect." *(http://www.pinnacleorganic.com/)*

v. Questions to ask when establishing your brand and value proposition:

- Why should a prospective customer buy from you rather than any of your competitors?
- What differentiates you from other farmers? Are you certified organic? Do you have other certifications like food safety, kosher, halal?
- Who is your labor? What is their connection to your operations? Do you follow sustainable labor practices or participate in a union?
- What is your unique farm story? Why do you farm? How long have you been farming? Where is your growing region? In what ways are you a good steward of the land?
- What is your relationship to the community? Do you support your local food bank? Sell to schools or other institutions for their meal programs? Host field trips for school children? Offer education programs to inner city youth? Provide internships for aspiring farmers?
- What crops do you produce? What is your harvest season? Are there unique benefits of your specific crop (health, environmental, etc.)? Is the crop particular or unique to your growing region? Are you growing any heirloom varieties or crops that have significance to certain cultural or religious groups?

c) ***Instructor's Note:*** Ask students: "What are your favorite produce brands and why?" Print pictures from the internet of popular brands to inspire discussion.

d) Devices to identify and differentiate the brand:

i. Slogans: e.g.,

- "Like a good neighbor, State Farm is there"–State Farm Insurance
- "Nothing runs like a Deere"–John Deer Tractors
- "Just do it"–NIKE
- "Where there's happy, there has to be Heinz"–Heinz
- "Picked at the Peak of Perfection"–Green Giant

ii. Brand names: establish your own brand name for your produce, e.g., "Pinnacle Organically Grown Produce" is from Phil Foster Ranches. The brand name (Pinnacle) can be labeled on all boxes and on produce tags to identify your produce in the marketplace.

iii. URLs: If you have a website, be sure to include it on your boxes and all printed materials
iv. Logos: Design a unique logo that represents you unique operation
v. Characters: Use a unique font to display your farm name
vi. Criteria for selecting a brand: Memorable, meaningful, likeable, transferable, adaptable and protectable

e) Marketing advantages of a strong brand
i. Improved perceptions of your product
ii. Greater customer loyalty to your product
iii. Less vulnerable to competition
iv. Less vulnerable to crisis
v. Larger margins – Customers are willing to pay a premium for brands they trust, this can add to profit margins
vi. Increased customer loyalty
vii. Brand extension opportunities – Ability to add your brand to value added products, on restaurant menus, etc.

6. **Step four: Communicate your brand and value proposition to your target customer segment.**

a) To establish your brand you must consistently communicate your brand and your value proposition to your buyers and target customers. Brand recognition comes about through a consistent communication strategy that integrates use of your farm logo, and farm name on all materials related to your farming operation. This includes your boxes and packaging materials, your paperwork (including availability lists, invoices, Bills of Lading, website, newsletters, etc.). It helps to choose a specific font or symbol to display your farm name and consistently use it on all printed and electronic materials so that buyers begin to recognize you even on a subconscious level. Your value proposition should be listed on all marketing communications tools including your website, newsletters, and social media sites.

b) Today there are multiple ways to communicate with your customer. Advertising is an art as much as it is a science. On farms, the profit margins are often slim. Meager profits are seldom best spent buying ad space. However, effective advertising and consumer awareness are key to maintaining and improving sales and building customer loyalty. Free and low-cost methods of advertising should be used as much as possible, and paid advertising should also be considered.

c) ***Instructors Note:*** Ask students "What are ways you see produce being advertised or promoted?" Then review the different ways available listed below.
i. **Find advertising opportunities.** Advertising can be paid or unpaid; traditional forms include billboards, magazine articles, trade journals, community bulletins, etc. Find out if your market has some kind of regular communication with customers. Many retail grocery stores provide a regular ad or newsletter. Farmers' markets may write e-newsletters to regular patrons, etc. Find out what it takes to get your farm featured in these communications.
ii. **Use the media.** Harnessing the media to generate free press for the farm is an essential strategy. Learn to write a press release and send releases to TV, radio, and newspaper outlets. When the media reporters show up or call, give them time, attention.. A good news story about your farm is worth much more than the same space devoted to paid advertising.
iii. **Write a farm newsletter.** Providing a newsletter for customers can be a great way to communicate with them. Use newsletters to tell people about the farm and how to store, preserve, and prepare local produce. Provide recipe ideas based on crop

availability, and highlight special events on your farm. Providing recipes to your customers, particularly for less common crops, can give people ideas on how to cook vegetables and thus increase sales. You can publish newsletters on a seasonal, monthly, biweekly, or weekly schedule. This strategy is often used for a CSA but it can also be effective to put a short note in a wholesale produce box, or post a stack of newsletters at a farmers' market or farm stand.

iv. **Provide samples of your produce.** Offering samples can be one of the best ways to get customers hooked on your produce. Let them try it and experience its quality for themselves. Be sure to find out and follow the rules (proper sanitary protocols) regarding sampling at your marketing outlets. Some retail grocery stores may invite you to offer samples to customers on a busy Friday afternoon. Farmers' markets generally allow you to offer samples at your booth. Also don't forget to bring samples when you meet with restaurant owners or retail produce managers as part of your sales pitch to them!

v. **Establish a website for your farm.** The internet is an important marketing tool. Consider developing a basic web site that provides background information on your farm and crop(s).

- **Design your website:** You don't need to become a web design expert to have a professional looking website. You can design your website using templates through a website design service such as Shopify or Big Commerce. These are relatively low-cost services that provide basic designs to help you get started with a basic website and ecommerce space.
  - *www.shopify.com*
  - *www.bigcommerce.com*
- **Develop website content** –
  - Provide farm name, logo/slogan, list of crops that you offer, seasonal information about your production. It is also helpful to provide a link to an electronic map of the location of your farm to help customer know where you are located. If you provide your location, but do not have a farm stand and an "open door" policy, provide guidance about when and under what circumstances people should feel free to visit.
  - Provide links to your organic certifier, local farming nonprofits, and related food groups.
  - The website can also be used to allow pre-ordering of produce by customers, web-based bill paying, and sales of produce and value-added products. See Unit 4.3, Additional Marketing Options, on how to build an eCommerce site.
  - You can also use a website to manage subscription and payment for a CSA. Here are two popular sites that provide software to manage CSAs online.
    1. *www.csaware.com*
    2. *www.farmigo.com*
- Promoting your website
  - Search Engine Optimization (SEO)

    1. You can help draw people to your website through use of key words, like "certified organic" or "sustainably grown" that are easily searchable in search engines such as Google, Yahoo, etc.
- Resources to learn SEO
  - *Search Engine Optimization Starter Guide* by Google
  - *10 Basic SEO Tips* by Business Insider
  - *The Beginner's Checklist for Learning SEO* by SEOMOZ

vi. **Social Media**

- Online networking through social media sites can be an easy, low-cost way to connect with your consumers. You can use social media sites to post pictures, share short updates on what is happening on your farm, and provoke conversations with your customer base. Social media is dynamic and interactive; your result will only be as successful as your dedication to regularly update your site to keep content current, and respond to inquiries in order to continue to draw people back to your site. It has been said that having a site you do not tend is worse that not having one at all.
- For more information on using social media, see Unit 6.2, Building Community with Social Media and On Farm Events
- **Facebook**
  - Facebook is a popular social media forum where you can post pictures, generate a following of customers, and share short snippits about the latest happenings on your farm. You can also post events and a calendar of your harvest.
  - The initial set-up of Facebook business page should take you less than five minutes: Select a logo or image that represents your farm and your brand to place on the front page; write a sentence about your business so people understand what you do; and you're ready to roll
  - To get started post a few pictures of your latest crops or a landscape shot of your farm. Facebook is a cheap and easy way to share photos of your latest harvest or a quick insight about your farming methods with your customers.
  - Update regularly: the best way to get a following on Facebook is by updating your page frequently with content that will draw your customer-base to your page. Add a recipe or a funny story about your trip to the farmer's market.
  - See *www.facebook.com/business/build* for more information about putting together a Facebook business page
- **Twitter**
  - Twitter is an online social networking and micro-blogging service that enables users to send and read "tweets," which are text messages limited to 140 characters. Registered users can read and post tweets but unregistered users can only read them.
  - You can use Twitter to provoke a conversation, share your thoughts about organic farming, or express your excitement about an upcoming harvest
- **Tumblr**
  - Tumblr is a microblogging platform and social networking website founded by David Karp and owned by Yahoo! Inc. The service allows users to post multimedia and other content to a short-form blog.
  - Tumbler lets you post text, photos, quotes, links, music, and videos from your internet browser, phone, desktop, email or wherever you happen to be. You can customize everything, from colors to your theme's HTML.
- **Instagram**
  - Instagram is an online photo-sharing, video-sharing, and social networking service that enables its users to take pictures and videos, apply digital filters to them, and share them on a variety of social networking services, such as Facebook, Twitter, Tumblr, and Flicker. A distinctive feature is that it confines photos to a square shape, similar to Kodak Instamatic and Polaroid images.

vii. **Managing Social Media**

- Often people get overwhelmed with the possibilities and choices for online networking. It's a good idea to test out a few options and see which one you most enjoy doing. Also pay attention to where your customers are. A social media site will only be as useful to you as you regularly update it and engage with your customers, so make sure it's something you will make time for several times per week.
- Also know that online networking services are always evolving. What is popular today may be old news tomorrow. Be sure to monitor which sites are getting the most activity and don't be afraid to try a new emerging networking site.

Resources & References

PRINT RESOURCES

Agriculture and Land-Based Training Association (ALBA). 2012. *Market Planning. Farmer Education Program Resource Guide. www.start2farm.gov/resources/farmer-education-program-resource-guides*

This document, available in both Spanish and English, provides an overview of doing a marketing analysis (conducting both primary and secondary research), as well as addressing the 6-P's of marketing: Product, Price, Place, People, Promotion, Profit.

Community Involved in Sustaining Agriculture. 2012. *Marketing 101 Manual: An Introduction to Basic Marketing Practices.* South Deerfield, MA. *www.buylocalfood.org/upload/resource/Marketing-Manual.2012.pdf*

This 33-page document provides information, as well as worksheets, on creating a brand, developing a marketing strategy, merchandising, and creating a website, as well as how to do social media, press releases and paid advertising.

Cornelisse, Sarah A. 2010. Social media for agricultural business: Facebook. *Value-Added Marketing. extension.psu.edu/business/farm/marketing/social-media/publications/ValueAdded-Facebook.pdf*

This 3-page document identifies how Facebook works, how it can be useful, and things to avoid with it.

Dornhelm, Rachel. 2013. Sonoma county farm uses social media to cut food waste and increase profits. *The California Report*. May 10-12, 2013. *www.californiareport.org/archive/R201305101630/d#sthash.cSdfoI8Z.dpuf*

This article illustrates how one farm used social media in creative ways.

Hubspot. 2012. *How to Use Twitter for Business: A Beginner's Guide. offers.hubspot.com/how-to-use-twitter-for-business.*

This free ebook offers instructions for using Twitter to promote your brand and much more.

Mainville, Denise, Susan Sterrett, and Karen Mundy. No date. *Using the Internet for Direct Marketing.* Virginia Cooperative Extension. Publication 448-505. *pubs.ext.vt.edu/448/448-505/448-505_pdf.pdf*

This publication provides information on creating a website.

Pesch, Ryan. 2012. *Online Strategies for Direct Farm Marketers.* University of Minnesota Extension. *www1.extension.umn.edu/community/retail/e-marketing/docs/online-strategies-direct-farm-marketers.pdf*

This short document explores topics such as how to develop a web presence, create compelling content, and launch a website.

Post, Emily. 2012. *Social Media Tools for Farm Product Marketing.* National Center for Appropriate Technology. *attra.ncat.org/attra-pub/summaries/summary.php?pub=412* Purchase price $0.99.

This 16-page document explores topics such as using blogs/websites, social media, and email based newsletters.

USDA SARE and the Sustainable Agriculture Network. 2003. *Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses.* (Fourth printing 2014). Available at: *www.sare.org/Learning-Center/Books/Building-a-Sustainable-Business*

A thorough introduction to business planning for sustainable agriculture entrepreneurs. Provides sample worksheets for setting goals, researching processing alternatives, determining potential markets, and evaluated financing options. Blank worksheets help the reader develop a detailed, lender-ready business plan or map out strategies to take advantage of new opportunities. Includes many examples of actual business plans. A very user-friendly and value-based approach to business planning.

WEB-BASED RESOURCES

Agricultural Marketing Resource Center (AgMRC) – Market Trends

www.agmrc.org/markets__industries/food/market-trends/

This section of the AgMRC website provides information on trends in diet, food consumptions, foodservice and organic. These trends can be useful for creating a marketing plan.

New England Small Farm Institute

www.smallfarm.org/main/for_new_farmers/

This site has a section for new farmers, which includes articles on market research, market strategies and business planning.

Penn State Extension – Marketing

extension.psu.edu/business/farm/marketing

This site has several resources for farmers on market research, direct mail marketing, social media, web presence and niche marketing.

SBCD Net

www.sbdcnet.org/small-business-information-center/ecommerce-for-small-business

This website has a good outline for how to set up an ecommerce site.

USEFUL TOOLS

ECOMMERCE WEBSITES:

www.shopify.com

www.bigcommerce.com

www.goodeggs.com

CSA WEB TOOLS

www.csaware.com

http://www.farmigo.com/

SOCIALMEDIA SITES

www.facebook.com

www.twitter.com

www.tweetdeck.com (great twitter tool)

www.tumblr.com

www.linkedin.com

UNIT 6

Building Resilience—Small Farm Planning and Operations

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Unit 6.1:

Building Resilience into Your Small Farm Marketing Plan and Building Community with Social Media and On-Farm Events 239

Unit 6.2:

Dynamic Cash Flow Planning 269

Unit 6.3:

Basics of Bookkeeping, Farm Taxes, and Special Tax Issues: Value Added and Perennials 283

Unit 6.4:

Case Study Discussion—Instructor's Guide: When Good Farms Go Bad 313

6.0

Introduction to Building Resilience—Small Farm Planning and Operations

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Introduction to Building Resilience—Small Farm Planning & Operations

UNIT OVERVIEW

This unit is about integrated farm planning. The goal of this approach to planning is to integrate the crop plan, the marketing plan, the financial plan, and the time management plan in order to minimize risk and maximize return.

All businesses have to manage uncertainty, but farmers face significant risks that are beyond their control, including the vagaries of nature, the fiercely competitive global market, land access challenges, and increased demands from local markets for ever-improved food safety plans and marketing materials. The farmer does not know what will happen each year, but over the life of the farm all of these pressures (and more) will surely influence the farmer's success. While larger farmers selling into the undifferentiated commodity market can manage a great deal of production and marketing risk with crop insurance and marketing contracts, small-scale direct-market farmers have to manage their risks with their wits.

As with many things in farming, diversity—combined with planning—is the key. The lectures, exercises, and background scenario presented in Units 6.0–6.4 provide a framework for planning and operating a small direct-market farm to ensure resilience in an ever-changing world.

Unit 6.0 introduces the background scenario for a case study that will set the stage for further discussion throughout all parts of Unit 6. In presenting the case study, the instructor will use a series of questions to initiate discussion of issues related to farm business planning and resilience. In Unit 6.4, the instructor will review the case study as it relates to the material covered in the lectures. Unit 6.0 also includes a list of business planning and operations Resources and a Glossary of Terms.

MODES OF INSTRUCTION

> CASE STUDY SCENARIO (15-20 MINUTES)

The case study presents concepts that will be addressed in Unit 6, including farm business planning, social media, cash flow planning, bookkeeping, and taxes.

Background Scenario for Unit 6—Instructor's Guide: Case Study Introduction

The case scenario described below will be referred to throughout the lectures, as a means to understand how the concepts they are exploring are applied in a concrete situation. The Case Study Review at the end of the unit builds on this scenario to review all of Unit 6.

Read this scenario to students and discuss the questions below in preparation for covering Unit 6.

Bonnie and Clyde purchased a farm with a house, a barn, out buildings and a half-acre of productive blueberry bushes. Both plan to have off-farm jobs. They plan to use their off-farm income to plant more acres of blueberries over the years. They plan to convert the barn into a commercial kitchen to make blueberry jam. They will use the rest of the barn for community events, which will create more customers for the jam. Their friend JJ is going to work full time on the farm. She will plant the rest of the land to row-crops, establish a CSA, sell at the local farmers' market and develop wholesale accounts.

The three friends decide that Bonnie and Clyde will treat their house and land as 100% their personal asset. They will rent the land and barn to the farming partnership. JJ will be the main farmer in the farming partnership and will receive a salary or "guaranteed payment" before the net profit or loss from all farming activity is divided equally. JJ will also get to live rent-free in a beautiful 1957 Spartan Mobile Manor parked near the barn so she can keep an eye on the farm at all times.

They named their farm BeBopABlueBlop Farm and got to work.

Issues: Read the questions in bold below and listen for answers, then share the italicized responses.

1. **Before they get going, how will they know if they have enough money month to month to do what they plan to do?**

   Bonnie and Clyde know they will need to lend money to the farm partnership but they need to plan on how much cash to have available month to month. Creating a financial plan, including a cash flow budget, will help them know how much money they need and when they need it. They also need to plan to see if they have calculated to reach a break-even and then a profitable state; as well as when they expect to become profitable. This will be discussed (e.g., today at ___ am) in lectures from Units 6.1 and 6.2.

2. **Next, JJ needs to set up a basic farm bookkeeping system. What does she need to know to get started?**

   A bookkeeping system is a way of organizing financial information so that it is completely and accurately synthesized into timely and meaningful accounting reports. There is a basic structure and vocabulary to all bookkeeping systems; it includes just seven basic concepts. We will cover this (e.g., tomorrow afternoon) in Lecture 1 of Unit 6.3.

3. **Everyone is (or should be) concerned about accurately preparing annual income tax returns, which are required for all self-employed business people, including farmers. What income is taxable and what expenses are deductible? How will Bonnie and Clyde divide the purchase price of the farm between personal and business use? How will each of them take a fair share of profit from the farm and how will this amount be taxed to them individually?**

   A partnership is a separate tax entity and must file its own tax returns. The partnership will file a tax return showing the income and expense of farming and the amount of net profit (or loss) earned by each partner. Regardless of any profit earned, the partnership does not pay taxes; instead each of the partners will file an individual tax return and pay taxes due on their portion of the net income (or loss) from the partnership after it is added (or subtracted) to any other income they might have. We will discuss this, and several other critical foundational concepts of taxation (e.g., on Wednesday morning), in Lecture 2 of Unit 6.3.

4. **As they look to the future they plan to remodel the barn, plant new blueberry bushes and make blueberry jam. Is there anything different or special about these activities?**

   All of these activities are subject to special tax accounting rules. In Lecture 3 of Unit 6.3 (e.g., tomorrow at 11 am) we will give basic information about special activities that will most likely require professional assistance from a Certified Public Accountant.

5. **How will they account for the income and expense of the community events?**

   Community events may be more valuable as a form or advertising than as a source of additional income to the farm. Sometimes even if an event loses money it benefits the farm by creating goodwill with neighbors and generating new customers, or increasing the loyalty of existing customers. Of course, if things go badly, exactly the opposite can happen. We will discuss on-farm events (e.g., on Wednesday morning) in Units 6.1 and 6.3.

6. **What else should they be thinking about and what can they do to protect themselves against various worst-case scenarios to ensure their operation stays afloat?**

   After the lectures, we will have a chance to review what we have learned by looking at what happened to BeeBopABlueBlop after a few years in operation. We will explore what the partners could have done to plan for more resilience. See Unit 6.4, Case Study Discussion.

Resources & References

PRINT RESOURCES

DiGiacomo, Gigi, Robert King and Dale Nordquist. 2014. *Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses* (Fourth printing 2014). USDA SARE and the Sustainable Agriculture Network, 2003. *www.sare.org/Learning-Center/Books/Building-a-Sustainable-Business*

A thorough introduction to business planning for sustainable agriculture entrepreneurs. Provides sample worksheets for setting goals, researching processing alternatives, determining potential markets, and evaluating financing options. Blank worksheets help the reader develop a detailed, lender-ready business plan or map out strategies to take advantage of new opportunities. Includes many examples of actual business plans. A very user-friendly and value-based approach to business planning.

Fedie, Donald M. and Michael H. Prosser. 1997. *How to Farm for Profit: Practical Enterprise Analysis*. Iowa State Ames, IA: University Press.

"This book introduces basic financial principles, procedures and the enterprise analysis that is widely accepted in other industries, including a discussion of standardized financial reporting and the information derived from this process, such as extent of profitability, sources and uses of cash, and changes in owner's equity for the reporting period. After laying out the procedures for financial reporting, the book presents a farming and ranching operation with five enterprises—cropping, cattle feeding, hog farrow-to-finish, dairy, and calf production, and shows how to analyze each enterprise in terms of income, expenses, and break-even costs." —Missouri Alternatives Center Library

Fitzpatrick, Kathleen and Wallace W. Kravitz. 2010. *E-Z Bookkeeping*. Barron's Educational Series, Inc.

A simple guide to setting up an easy-to-use bookkeeping system and understanding accounting fundamentals.

Grudens Schuck, Nancy, Wayne Knoblauch, Judy Green and Mary Saylor. 1988. *Farming Alternatives—A Guide to Evaluating the Feasibility of New Farm-Based Enterprises*. Ithaca, NY: Cornell University.

A concise and easy-to-use resource for evaluating the feasibility of new agricultural enterprises. Includes self-assessment exercises used to identify and define personal values and goals and their compatibility with a career in agriculture. Also includes assessments of personal resources such as capital, skills, and equipment necessary to succeed in agricultural businesses. Available from www.cce.cornell.edu.

Hamilton, Neil. 2011. *The Legal Guide for Direct Farm Marketing. Second Edition* (online only). Des Moines, IA: Drake University. *directmarketersforum.org/the-legal-guide-for-direct-farm-marketing/*

The author is a successful farmer, attorney, and professor of agricultural law. This comprehensive guide is essential for anyone considering direct farm marketing. Hamilton covers liability, regulations, labor law, processed foods, and meat marketing issues in layman's terms. The contents are now available for free online.

Harris, Philip E. and Linda E. Curry (Eds). 2011. *Tax Guide for Owners and Operators of Small and Medium Sized Farms*. Produced by land grant university tax education foundation, inc. 2011. *ruraltax.org/files/uploads/TaxGuide%20Small%20to%20Midsized%20Farms%202011%2007%2014.pdf*

Hashley, Jennifer, Margiana Petersen-Rockney, Kate Cerretani, and Alissa Wasserman. 2014 (updated). *An Entrepreneur's Guide to Farming in Massachusetts: Fertile Resources, Harvestable Tips, and a Side-Dress of Regulatory Reality*. Lowell MA: New Entry Sustainable Farming Project. *www.bfnmass.org/sites/default/files/uploads/An_Entrepreneurs_Guide_to_Farming_MA.pdf*

This 107-page guide is an accumulation of fact sheets on a variety of topics, including finding a farm, looking for land, financing the farm operation, insurance, record keeping, business planning and taxes.

Kamoroff, Bernard. 2010. *Small Time Operator 2010 Edition: How to Start Your Own Business, Keep Your Books, Pay Your Taxes, and Stay Out of Trouble.*

Contains general information about starting and running a small business, including worksheets and resources.

Lewis, Hannah. 2012. *Basic Accounting: Guidance for Beginning Farmers,* National Center for Appropriate Technology.

This document was created to be easy to use by those with limited or no accounting background. It's goal is to help new farmers grow good bookkeeping habits along with their new farm.

Mullis, Darrell and Judith Handler. 2008. *The Accounting Game: Basic Accounting Fresh from the Lemonade Stand.* Orloff. Educational Discoveries Inc.

This book uses a lemonade stand to teach the basics of financial language and record keeping. Covers all the basics of accounting in a very accessible and entertaining way. Covers the basic language of business concepts such as cost of goods sold, expenses, bad debts, accrual vs. cash methods of accounting, capitalizing vs. expensing, depreciation, and the difference between cash and profit.

Northeast Beginning Farmers Project. 2014. *Goals, Skills and Resources Tutorial.* Ithaca, NY: Cornell University. *nebeginningfarmers.org/farmers/beginning/what-is-your-goal/*

This web-based tutorial provides those just starting a farm tools to think through their values and goals, as well as to identify their resources available for starting the farming venture.

Overview—Managing Legal and Regulatory Risk for Diversified Family Farms (Workbook 6). From Risk Management Training for Diversified Family Farmers. USDA Risk Management Agency, Farm Services Agency and Farm and Agriculture Collaborative Training Systems.

Based on a workshop, this document explores important considerations for choosing a business form, signing a contract, and setting up human resource structures Available online through CAFF: caff.org/wp-content/uploads/2010/07/Workbook_6.pdf

Pinson, Linda. 2007. *Keeping the Books: Basic Record Keeping and Accounting for the Successful Small Business.* Kaplan Publishing.

A simple guide to setting up an easy-to-use bookkeeping system and understanding accounting fundamentals.

Rosenzweig, Marcie A. 1999. *Market Farm Forms: Spreadsheet Templates for Planning and Tracking Information on Diversified Market Farms.*

Developed to help with planning, planting, and income diversification. The book explains how to enter your farm's information into the templates, and what the calculated data tell you. Cross-platform CD (included) works seamlessly with Excel. Computerless farmers can use the printed forms with a pencil and calculator.

Virginia Beginning Farmer and Rancher Coalition Program. 2014. *Introduction to Whole Farm Planning. Virginia Whole Farm Planning: An Educational Program for Startup and Development.* Virginia Cooperative Extension.

This is the first module in a 5-part curriculum for training beginning farmers. It is an excellent document for helping beginning farmers plan and implement their farm business in a holistic manner. There are several worksheets to help farmers think through their dreams, goals, resources, and how to implement their ideas. Many other resources are also identified.

Virginia Beginning Farmer and Rancher Coalition Program. Forthcoming, 2015. *Whole Farm Business Management and Planning. Virginia Whole Farm Planning: An Educational Program for Startup and Development.* Virginia Cooperative Extension.

As part of a larger curriculum from Virginia Cooperative Extension, this module is aimed at helping farmers identify and operationalize financial and other resource goals as part of their overall farm plan.

Wiswall, Richard. 2009. *The Organic Farmer's Business Handbook.* White River Junction, VT: Chelsea Green Publishing.

An excellent and accessible resource, this book gets at efficiencies of production in both the business and farming side of what a grower does. It approaches crop planning from a business perspective and provides enterprise budgets for crops (which can offer ideas for thinking about how much money can be made

from a certain plot of land). Concise—can be read in two days.

White, Gerald B. and Wen-fei L. Uva. 2000. *Developing a Strategic Marketing Plan for Horticultural Firms*. Dept. Agricultural, Resources, and Managerial Economics, College of Agriculture and Life Sciences. Ithaca, NY: Cornell University. *www.nysl.nysed.gov/scandoclinks/ocm43610110.htm*

WEB-BASED RESOURCES

ATTRA – National Sustainable Agriculture Information Service

attra.ncat.org/publication.html#marketing

A service of the National Center for Appropriate Technology (NCAT), this site provides a large selection on resources for managing a farm business. Many documents are free, others have a minimal cost. Topics range from tax information, farm labor management, accounting, how to evaluate a farm enterprise, etc.

The Carrot Project

thecarrotproject.org/farmer_resources

This site provides useful resources on financing, business and financial planning, and legal documents.

Drake University Agricultural Law Center

www.law.drake.edu/academics/agLaw/

Farm Commons (Wisconsin)

farmcommons.org

This organization provides legal resources for farmers, such as guides, checklists, and model documents on topics such taxes, insurance, sales, contracts, land use, safety and workers.

Farm Risk Plans

farm-risk-plans.rma.usda.gov/

This website, run by the Risk Management Agency at the USDA, is a clearinghouse site for materials on managing risk on farms, and other business management issues. They have a library with documents and tools for financial planning, business development, and taxes from a myriad of sources. Other items include crop insurance options for vegetable growers, risk management tools, and calculators for decision-making.

Lafayette County Extension & Agriculture - Access to researched-based information and education

extension.missouri.edu/lafayette/agriculture.aspx

This site includes several excel spreadsheet forms. The Farm Record Book Veggie 2.1 can be used for tracking income and expenses for specialty crop farmers.

Nolo Press

www.nolo.com

Dedicated to helping people handle their own everyday legal matters or make more informed legal decisions, Nolo Press publishes reliable, plain-English books, software, forms, and up-to-date legal information covering almost any legal topic. Includes an extensive list of publications and online articles on the types of legal ownership structures that are available and do-it-yourself manuals on forming sole proprietorships; partnerships; limited partnerships; limited liability companies (LLC); nonprofit corporations; and nonprofit cooperatives. Includes links to other helpful web sites.

Rural Tax Education

ruraltax.org

This site includes sample tax returns for different types of small farms/ranches and ag and rural enterprises. Much of the information is geared to professional tax preparers who may be familiar with tax law generally but unfamiliar with some of the specifics of farm and ranch accounting or value-added production for farmers and ranchers.

Start 2 Farm

www.start2farm.gov/

This is a comprehensive website, created by the Beginning Farmer and Rancher Development Program at the USDA, that acts as a clearinghouse for information for new and beginning farmers. There are sections on successful planning, farm management, and growing your farm. This is an important place to go to find new materials.

Trainers' Resource Guide—Financial Topics

farmbiztrainer.com/

This is an excellent website put together by a group of teachers who do financial and business planning for farmers. The materials are useful both for trainers and the farmers' themselves. There is an extensive list of curricula and other resources related to mentoring, identifying trainees, valuation, and funding. The resources are searchable by resource topic, knowledge level of the trainee, target audience, farm type and resource format.

The Veggie Compass

www.veggiecompass.com/

This is a project at the University of Wisconsin Madison, which includes tools for managing farm profit, made specifically for diversified organic fresh market vegetable growers. It's goal is to provide information on which crops and market channels are most profitable, to improve decision making and financial planning.

6.1

Building Resilience into Your Small Farm Marketing Plan, and Building Community with Social Media and On-Farm Events

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Introduction to Building Resilience into Your Small Farm Marketing Plan

UNIT OVERVIEW

Planning for resilience starts with the farm plan. Lecture 1of this unit offers practical advice on how to approach business planning in the start-up phase of a small farm. The main goal is to encourage students to see holistic business planning as a necessary and integral part of farming. Beginning farmers develop a farm plan suitable to specific soils and climates; this lecture is about how to assess specific marketing opportunities suitable to a particular piece of land the farmer can access and given the individual farmer's specific set of personal assets and resource limitations. People, knowledge, time, cash, and credit are all the precious and limited resources that work with seed, soil, sun, and water to make a profitable farm.

The objectives of the lecture and accompanying group exercise are: 1) to have each student understand the integrated elements of a farm business plan; 2) to have advanced students actually start to write a business plan; and 3) to introduce the concepts of phases of a new farm and the appropriate planning steps to take at each phase.

Another component of resilience is building community support. Many small direct-market farms will be located near their neighbors, possibly in an area that is no longer primarily rural and agricultural. The goodwill of neighbors and the community will be a valuable asset for growing a customer base and for avoiding conflicts. Alternatively, poor relations with neighbors can lead to an endless series of problems, particularly if neighbors are willing to study local zoning ordinances and report every minor violation you may make. Lecture 2 reviews how to build community through both on-line connection—e.g., websites, social media, bar codes—and in-person contacts, such as during deliveries and at farmers' markets. Every interaction is an opportunity to build your market.

Lecture 2 also addresses the issue of on-farm events. If you do a good job of engaging your community through social media and when you are out and about, then it's likely your community will be interested in seeing your farm and learning about what you do. You might find that visitors drop by for an impromptu farm tour. This can be difficult to manage, especially if there are very few workers on your farm. Hosting an on-farm event is a popular way of sharing all that is beautiful and interesting about your farm while creating a sense of community amongst all the different people who may be interested in coming out to learn more about how their food is grown.

On-farm events can be a lot of fun, and regardless of whether they make money, they may generate good will in the community. But as discussed in Lecture 2, it's important to be aware of the potential downside: events take a great deal of time and effort, aren't always profitable, and you can open yourself up to new liabilities when you open your farm to the public.

MODES OF INSTRUCTION

> LECTURES (2 LECTURES, 1 HOUR EACH)

> GROUP EXERCISE (.5 HOUR)

LEARNING OBJECTIVES—LECTURE 1

CONCEPTS

- The rationale behind integrated business planning is to create a resilient farm that is protected from uncertainty by a multi-pronged approach to managing liability and risk
- An integrated plan aligns time management planning and cash flow budgeting with farm, post-harvest, and market planning
- There are different essential components of business planning for start-up, developing, and mature farming enterprises

SKILLS

- Ability to develop a basic 5-part business plan for a start-up farming enterprise including: values and goals assessment, resource analysis, market analysis, market plan, time management plan, farming plan, and financial analysis
- Ability to develop a basic 2-year cash flow budget for a small farm enterprise and assess the economic viability of the operation

LEARNING OBJECTIVES—LECTURE 2

CONCEPTS

- Social media requires actual engagement; it is a two-way conversation, not a one-way dissemination of information
- Customers are increasingly interested in transparency. One way they seek it is on-line, another is by getting to know the farmer. For many, visiting the farm is an important aspect of buying from that farm.
- On-farm events can create community, but they can also damage relations with neighbors
- On-farm events are not always profitable, but they may benefit the farm in other ways

SKILLS

- Ability to understand the pros and cons of a social media strategy
- Ability to think analytically about risk management planning for an on-farm event
- Ability to think about how to evaluate an on-farm event

Lecture 1: A Resilient & Integrated Farm Plan

A. Why Plan?

1. Time and money are scarce resources
   a) Good business planning allows you to analyze the potential financial viability of the proposed farming business and help you to make more informed and strategic decisions that may increase the chances of success and reduce the risk of financial losses
   b) Business planning might also change your mind about entering farming, result in delaying the start of your business until additional resources are secured, or might radically alter your business concept and help you redirect your business plans toward options with greater likelihood of financial success
2. Business planning is just a term for methodical thinking about all aspects of building a new business, including:
   a) Determining the compatibility of farming professionally with personal values and goals
   b) Analyzing personal resources (e.g., skills, funding, available hours, and support network)
   c) Doing basic market research to determine what you can sell, where, for what price, and in what quantity (see also Unit 5: Marketing Basics)
   d) Budgeting time and money to reflect the physical cycle of your farm plan and your proposed marketing plan
   e) Developing ideas about how to communicate the value of your products and your farm and then developing the physical, visual and written resources to brand your products and deliver them to your target customer
   f) Evaluating your ability to understand and comply with all applicable government regulations, and the necessary steps and costs to comply (e.g., zoning restrictions related to your farm, restrictions on who can sell what at the farmers market, or county health permit requirements for on-farm dinners)
   g) Evaluating your ability to comply with the terms of any third party certification you may wish to use—such as the ability to use the USDA Organic label or the ability to participate in a local "Buy Fresh! Buy Local!" campaign
   h) Simultaneously revising your farming/production plan to match your marketing strategy and your time and money budget

      It may take many revisions before all three parts of the plan are in sync. As difficult as it is to sync up your plan on paper; imagine how much more difficult to try to adjust once you get going and then realize that the products you are growing are not popular in your area and you do not have enough hours in the week to harvest and pack and make it to all the markets you need to be at to make enough money to cover rent.
3. How "fancy" does the business plan have to be?
   a) Many "off the shelf" business planning programs are designed to prepare formal documents to be presented to potential investors, lenders, or shareholders
   b) Content matters more than form; save your money on the software, and just get to work

B. Critical Elements of a Business Plan for the Start–up Phase of a Small Farm Enterprise

(see Appendix 1, Sample Business Plan, and Appendix 2, Business Plan Template)

1. Vision, values, and goals
   a) Personal: Determine your personal values and quality of life goals and their compatibility with farming as a profession/occupation. This is a very important exercise (see DiGiacomo et al. 2014, Northeast Beginning Farm Project 2014 and Virginia Beginning Farmer and Rancher Coalition Program 2014 in Unit 6.0, Resources).

b) Business: The specific vision, values, and goals for the business. These must support your personal vision, values, and goals, but they are different. Your personal goal may be to be happy and work outdoors. The goal of your farm business would be to grow and sell food at a profit in a "happy" work environment.

2. Resource analysis and risk assessment

This assessment is an evaluation of the total personal, financial, and natural resources available to apply toward the development and maintenance of the farming business and an honest look at what could go wrong, which resources are at risk, and how you can protect against foreseeable risks

a) **Personal resources:** Do you have health insurance, and sufficient savings to cover a few months' living expenses? If not, you have nothing to protect you or your farm if you get sick or are injured.

b) **Skills assessment:** Identify the skills you have that will benefit the business (e.g., farming skills, marketing connections, etc.) and be sure to make a plan that plays to your strengths. Identify skills you need to develop, such as a basic understanding of bookkeeping, and identify how you will develop the skill, for example through a community college class, by working with a local Small Business Development Center, or by convincing your cousin the accountant to come spend a weekend tutoring you.

c) **Mentors and advisors:** They do not need to be experts; they just need to know you well or care about your success. Your friends, family members, and—if you are lucky—your neighbor the seasoned farmer, are all people who can help you to set and meet realistic goals. They can help you to make good business decisions and kindly point out when you are not making good sense or are straying from your stated goals and values. (Don't worry; it happens to everyone; that is why friends and mentors are so important.)

d) **Liability:** If you borrow money, you are personally liable. If your products make someone sick, you are liable. If one of your workers gets in an accident while driving a farm vehicle, you are liable. If someone gets hurt on your farm, you are liable. If one of your animals gets off your farm and does damage to someone else's property, you are liable. If you are married, your spouse is also liable for your debt. If you are in a business partnership, you are personally liable for the debts of that partnership, as is your spouse—even for something like a car accident caused by your partner.

i. Incorporating your business as a Limited Partnership, or a Limited Liability Corporation, or an S Corporation are all ways to separate business liability from personal liability, to protect yourself and your spouse. Each of these legal structures offers a different level of protection and also has implications for preparing tax returns and paying taxes (see Unit 6.3, Basics of Bookkeeping and Farm Taxes). Remember though—you cannot count on the separate legal structure to protect you from the consequences of truly bad decisions such as driving under the influence or deciding to sell an unsafe product.

ii. Different kinds of insurance:

- Health insurance – In particular be sure you are covered for major injuries to digits and limbs
- General liability insurance – For events such as on-farm visitors, or farm animals that get loose
- Product liability insurance – In case someone gets sick or dies as a result of consuming your product
- Crop insurance may be available for some crops to protect you against crop failures due to natural causes, including weather and disease

The Risk Management Agency (RMA) of the United States Department of Agriculture (USDA) works with private insurance companies to insure many different crops. More information is available from their web site.

Many crops grown on diversified direct-market farms are not covered by RMA programs. Those crops may be eligible for the **Noninsured Crop Disaster Assistance Program (NAP)** administered by the Farm Service Agency (FSA) of the USDA.

Beginning farmers should visit the FSA website to learn more about the program. Be sure to look at **USDA Limited Resource Farmer and Rancher Online Self Determination Tool.** If your household income is at or below the national poverty level for a family of four, or less than 50 percent of county median household for both of the previous two years you will likely qualify.

3. Integrate time budgeting into your farm and market and cash flow plan

   Time is a major constraint and needs to be budgeted as carefully as money. Actually, since you can't borrow time, you need to budget time even more carefully than money (see Appendix 3, Time Management Worksheet).

4. Market analysis (see also Unit 5, Marketing Basics)
   a) Assess what is currently taking place in the market. Questions to investigate include:
      i. Where are the established markets where you might sell?

         Can you get in? Are there requirements for selling there such as being certified organic or having a certified food safety plan?
      ii. Where are the markets that you will have to compete with for customers? What is being sold currently? At what prices?
      iii. How does the quality, price, and availability of what you plan to sell compare with what is currently being sold in the marketplace? How is it being represented to the customer? Is it certified organic? Does it have some other third party certification such as Animal Welfare Approved or Wildlife Friendly?
      iv. How will you differentiate your product in the market? Will you have a label? Will you be certified organic? Will you seek some other third party certification?
      v. Can you identify any unmet demand?
   b) Where should you focus first?
      i. You may know that you ultimately want to have a market base that is 1/3 farmers' market, 1/3 wholesale, and 1/3 CSA, but you might not be able to develop those three market channels simultaneously in your first year
      ii. Which one is the best starting place and how will you use it to start to build the second and third channels? Some farms begin selling at farmers' markets in order to introduce their products into a community and develop a customer following. If you choose a farmers' market as a first step do you know what your second step will be? Are you trying to develop a customer base to start a CSA? Are you trying to cultivate relationships with restaurants?
   c) Is there a marketing niche you can occupy?

      If you do something very specific you might not have a lot of competition—on the other hand there might not be a lot of demand
   d) Identify the regions and channels where you might market your products:
      i. A region is a contiguous geographical area
         - E.g., Central Coast of California; San Francisco Bay Area, Greater Sacramento, etc.
      ii. A channel is a specific marketing outlet
         - E.g., a farmer's market, a CSA, direct to retail, direct to a restaurant or processor, or to a wholesale broker

C. Marketing Plan (see also Unit 5: Marketing Basics, and Part 2, Market Analysis/Marketing Plan of Appendix 1, Sample Business Plan, and Appendix 2, Business Plan Template in this unit)

1. Your marketing plan will be based on what you learned by doing a market analysis. Your market plan answers questions like: How am I going to build my market(s) in my chosen region(s) and channel(s)?
2. You need to consider the specific customers you want to attract, and develop branding messages and materials that speak to them. Moms are not the same as chefs.
   a) What is your one-sentence pitch to a mom?
   b) What is your one-sentence pitch to a chef?
   c) Consider your visual presentation and your marketing and packaging materials.

      Do you have a logo? Does it represent you and your farm? Have you considered if the quality of your packaging materials matches the expectations of your customers?
   d) Are there any regulations restricting what you can put on your labels?

      For produce, you need to be aware of the difference between making statements only you can verify ("It's the best!" or "No pesticides ever") and using a third party certifier to assure your customers that you do indeed speak the truth. If you claim that your product is certified anything (organic, humane, animal welfare approved, kosher, halal, GAP 5-Step, etc.) without actually obtaining the third party certification you are committing fraud against your customers and your fellow farmers and you may be sued or fined.

      Research each and every claim you want to make on your label. Some farmers have spent years in court for making health claims that, while supported by science were not acceptable to the Food and Drug Administration.

      For meat, eggs and dairy, and any manufactured food products such as cheese or jam, check with your state Department of Agriculture. If your product may move across state lines, you should also check with the USDA. All claims such as "cage-free" or "antibiotic free" or "hormone free" must be truthful and not misleading. If you use a term that is regulated or inspected at the state or federal level then you must participate in the state or federal program. For additional assistance with regulations related to labeling, contact your County Extension Agent, or the Niche Meat Processor Assistance Network *(www.nichemeatprocessing.org/)*.
3. Play to your strengths, and acknowledge and address your weaknesses
   a) If you don't like talking to the public, you may prefer to sell wholesale. If your business depends on direct marketing, you need a strategy for selling at a farmers' market.
   b) Alternatively, maybe you can hire an extroverted person to help you with sales. Whatever you do, don't just show up hoping no one will try to talk to you or that you will suddenly overcome shyness.
   c) Practice some customer pick-up lines and think about good props. A photo album of pictures from the farm can be a good way to keep a conversation going or to politely answer questions without having to talk a lot.
4. You may not want to drive an extra two hours to get to the more lucrative farmers' market, but doing so may be the only realistic way to get the restaurants in that area to consider buying directly from you. How will that affect your farming plan? Did you budget for the extra gas?
5. Diversity creates resiliency. How can you diversify your market base so you can survive if one (or two) or your major customers leave? Are all of your customers basically the same? Are they equally likely to leave for the same reasons? If so, maybe consider trying to get a very different sort of customer.

D. Financial Analysis

1. You don't want to spend all your cash and then go looking for credit. Plan which cash you spend and which you borrow. Generally it is easier to get credit to buy equipment than seed. You need to plan accordingly.
2. You need to plan to be ready to borrow. Lenders want to see a business plan with strategies, demonstrated experience, projections of future earnings, solid financial skills, past financial performance, passion, creativity and vision.
3. Start-up cash flow analysis – Define accurately when will you have to purchase supplies and equipment. This should correspond exactly to your farm plan. Price supplies from different sources.
4. Phase-one cash flow analysis – Define when you will start to generate revenue, and what your selling costs and ongoing operational costs will be during the first few years of farming.
5. Revenue estimates will depend on your preliminary marketing plan as well as your estimates of yields and prices. Selling costs include transportation, selling supplies such as bags and boxes, and possibly sales help.

E. Farming Plan and Post-Harvest Handling/Packing

1. **The farming plan, or crop plan,** defines what crops will be grown in what quantities on which fields at what times of year and using what inputs. It must also address food safety risks such as the risk of domestic or wild animals coming into your fields, or the risk of contaminated water ruining your crop. Timelines are essential—and they have to line up with your availability, the availability of labor, your cash needs for each phase of the plan, and your marketing plan.
2. **The post-harvest handling/packing plan** addresses packing, cooling, and storage—all of which are time-sensitive, and all of which have important food-safety implications, and therefore food safety plan components
3. **The farming and post-harvest handling/packing plan** must serve the marketing plan, which is based on the market analysis, and it also has to work within the constraints of climate, soil, water, equipment, labor, hours in the day, and cash in the bank
4. The farming plan is constrained by the financial plan. If you are not in a financial position to establish an orchard, it doesn't matter if there is a great market for apples. (And a great market for apples today does not guarantee that market will still be there in 3-4 years when your new trees come into production.)
5. Consider how you can adapt the farm plan to provide steady income to smooth seasonal cash flow problems
   a) Example: If you can grow vegetable starts inside and sell them early in the spring, it will help generate cash to buy other necessary supplies needed at a time when you might not have other farm income
6. Consider the hours it takes to accomplish each of your farming tasks, and then add time for marketing and administrative tasks, such as ordering the seed and paying the seed bill (see Appendix 3 for a Time Management Worksheet)
   a) Example: It simply cannot take three days to make your planting beds perfect, because the only way to accomplish everything you need to do that week is to get the beds done in 12 hours
   b) Example: If your farm plan says that you are going to use your tractor in February, you need to make sure that you have time to buy the tractor in January or before. If you plan to start selling at the farmers' market in April, you have to get your booth and supplies together in March, as well as ensuring you will have products to sell.

7. A time needs and availability analysis for the first two years of operations is necessary, because the workload on a farm is not spread out evenly. The time analysis must match the cash flow worksheet and the farm plan.
   a) You can borrow money to cover a cash shortfall, but you cannot borrow time. You will either have to hire help or scale back your plans. (Not sleeping is not a realistic or safe option!)
   b) Develop a visual planner/calendar. Get a big calendar and list the major tasks in the weeks that need to be accomplished, with an estimate of how long they will take.
   c) Schedule time for administration and marketing every week. Administration includes depositing checks, writing checks, and recording all your farm income and expenses. Marketing includes calling customers to see what they want this week and to ask if there were any problems with their purchases last week.
   d) Schedule driving time to deliver orders and purchase supplies
   e) Schedule time to accomplish production activities—cultivation, harvest and packing tasks, moving chicken coops, washing and packing eggs, etc.
   f) Do not schedule consecutive 105-hour work weeks. You believe in sustainability and health—remember?

F. How Does Your Business Plan Change Over Time?

1. What will your infrastructure needs be in a few years? If you know you will need to purchase major new equipment or build a packing shed or buy a new cooler, you need to plan now to establish good credit so you can finance those purchases when the time comes.
2. As your business grows, it becomes more important to have efficient systems for recordkeeping, internal communication, managing human resources, etc. Usually these systems are developed in the first few years, and then improved as needs dictate. (It is better to be proactive—even if written procedures seem overly formal at first, rather than to not have a plan and be reactive when a problem arises.)
3. Recordkeeping systems: Any system you develop to get you through the first few years will need to be reviewed for efficiency and accuracy; then updated and expanded as the business grows
4. Internal communication and decision-making processes: As more people are added, this need will make itself known. Again, it is better to take some time to think through the best possible scenarios and set procedures/systems in place to support them.
5. Recruiting, training, and retaining assistance: When employees become a valuable resource, it makes sense to invest in them through salary increases, benefits, housing, and supplemental training
6. Exit strategy: An exit strategy is a formal plan for transitioning out of the business. It might include selling the business, placing a conservation easement on the land, or converting fields to orchards. It is particularly difficult for farmers to transition out of farming and generate retirement income without selling the house and land, and moving off the farm. You start over again, identifying personal goals and values and charting your course towards the next phase of your life.
7. As a beginning farmer, can you identify someone currently working on an exit plan from their farm business, and see about synchronizing your plans to start a farm with their plans to exit? Is there an organization in your region that can facilitate an introduction? Examples include Farmlink in California and Pennsylvania, Landlink in Montana, etc.

Group Discussion Exercise: Kitchen Table Business Planning

DISCUSSION QUESTIONS

Part 1: Business Vision, Goal, Preliminary Resources and Market Analysis

1. **What are examples of business visions and goals?**

Listen for:

- Values, profitability, long term sustainability

2. **What are examples of resources they bring to the venture, and skills they need to develop soon, in order to advance?**

Listen for:

- Network
- Community engagement such as volunteer work
- Mentors
- Continuing education in business skills

3. **What are examples of potential market channels and regions?**

Listen for:

- Specific market channels (wholesale, retail, etc.)
- Specific places or regions

4. **What are some strategies for getting into the markets identified above?**

Listen for:

- Specific marketing message about what makes their farm and product unique
- Understanding of specifically who their customers are—moms, chefs, retailers, etc.

Part 2: Market Analysis / Marketing Plan

5. **How will you research and define each region, and how will you think about prioritizing which market channel(s) to pursue?**

Listen for:

- Ability to identify questions that need more research, such as learning prevailing prices
- Ideas about how to get those questions answered
- Ability to identify what they need to research before they can prioritize:
  - How hard or easy is it to get into a particular farmers' market?
  - How many restaurants buy at that farmers' market?
  - Is the farmers' market on the way to or from any other sale?
  - What other CSAs are in a particular community?
  - What do they charge?
  - What do they typically sell?
  - What else do they offer (farm tours, dinners, etc.)?
  - How much product will be needed to supply a particular account?
- Are there key dates or seasonal considerations for a particular market or product?

6. **How will you match your strengths and weaknesses, and your production capacities and limitations, to the potential marketing plan you are starting to develop?**

Listen for:

- Sales skills/challenges
- Visual presentation skills/challenges
- Capacity to provide a promised quantity/quality on a promised date
- Contingency plans—how will you manage the relationship if you cannot make a promised sale?

7. **What other concrete actions can you take to further develop your marketing plans?**

Listen for:

- Sample price sheets to support cash flow revenue projections
- Develop different scenarios for price and product mix

Part 3: Time Management

8. **What are some of the goals of a time management system?**

Listen for:

- Be able to schedule the appropriate tasks and hours so that things get done in the right sequence and on time
- Avoid crisis management and surprises
- Avoid pulling all-nighters and driving while exhausted
- Use my time and my staff's time efficiently
- Don't drive other people crazy with bad scheduling decisions
- Values! If you value health then there has to be time for sleep and exercise
- Values! If you want to have great customer service you can't be late and sleepy when you deliver

9. **What are some time management tools and techniques?**

Listen for:

- What works? A big twelve-month, eraser-board calendar on the wall.
- Project management software
- Probably not setting a bunch of alarms on your smart phone

10. **What do you need to do to build time management into your plan?**

Listen for:

- A time needs and availability analysis for the first two years of operations
- Check that all of your assumptions match the cash flow worksheet and the farm/handling/marketing plans

Part 4: Farm/Crop/Harvest and Post-harvest Handling Plan

11. **What are you going to go back and change in your farm plan, and what information in your farm plan are you going to bring into other parts of your business plan?**

Listen for:

- Address food safety
- Budget time
- Match when I need to buy things with when I need money
- Match when I have product to harvest with labor availability and marketing supplies availability and marketing plan
- Match when I expect to have product ready to when I show income in my cash flow budget

Part 5: Ongoing Management

12. **Ask the students when they think they will begin to address the following infrastructure development needs:**

a. Ongoing budgeting and cash flow management procedures

Listen for: By end of first year

b. Set up accounting system and develop daily/weekly/monthly bookkeeping procedures

Listen for: By end of first year

c. Find a CPA, decide on entity type, plan for income taxes and future credit needs

Listen for: Before starting and annually thereafter

d. Ongoing review and update of marketing plan

Listen for: Annual review

e. Budget for necessary technology and training

Listen for: Annual review

f. Budget for long term infrastructure needs

Listen for: Annual review

g. Plan for retirement

Listen for: As soon as possible but within five years

Lecture 2: Building Community with Social Media & On Farm Events

A. Social Media

Social media is interactive media that allows people to connect with each other as much as with you

1. Web 1.0 and Web 2.0
   a) Social media corresponds to what some people call "Web 2.0"
   b) Web 1.0 refers to websites that do not have many interactive features. They are like a high tech ad in the old fashioned Yellow Pages—customers can come and get information, but they cannot interact with you or with others.
   c) Web 2.0 is the social web, characterized by sites such as Facebook where many people can talk to each other
2. Easy social media tools for farms
   a) Most CSA customers expect to find their farm or farmer on Facebook
      i. If you value your private friendships on Facebook set up a Facebook page for your farm so you don't have to become Facebook friends with all of your customers
   b) If you are already writing a letter to go in your CSA box consider posting it on a blog site such as Wordpress or Blogger
      i. Allows you to link to other websites and blogs so your customers can see the other farms you work with or the sorts of things you like to read, or learn about some of the political issues you are interested in
      ii. Allows your customers to comment on your letter and to discuss your letter with each other
      iii. Allows you to moderate comments if they are offensive or inappropriate. But remember: you must be responsive; if you shut down reasonable questions or criticism you may do yourself as much harm as good.
   c) If you would rather shoot a quick video than write a letter you are in good company. Video is becoming the most prevalent way to communicate on the web.
      i. Post videos of daily farm scenes on YouTube
      ii. Link to the videos on your website or Facebook page
      iii. Post pictures on Instagram or Tumblr
   d) Twitter, Tumblr, Instagram: Think of them as a way to broadcast your headlines and bring people to your website, Facebook page or blog
      i. If you don't have followers no one sees you. It takes a fairly significant upfront investment to get followers.
      ii. The best way to get followers is to find some accounts for people like you and follow all the people who are following those accounts
      iii. When people follow you, be sure to follow back—but check first to make sure they are not a porn site or something else that would be highly offensive to you or your customer
      iv. Don't stand in the middle of the room talking to yourself! Engage with other people.
      v. When you see something you like, comment
      vi. Respond to questions and articles others post
      vii. Participate in moderated discussions such as AgChat and FoodChat

viii. People use the # or hashtag symbol to categorize conversations. Type the word "farm" into the search function and see what you get back. Then try it with #farm. Try it with "water" and then with #water. Try again with #agwater. Now you can follow some of the people using those hashtags and follow the people following them. Use the hashtag yourself to join the conversation.

3. What social media does well
   a) Social media allows you to connect directly with customers
   b) Social media allows your customers to connect with each other
   c) For farmers who sell through wholesale or to restaurants or caterers this is an opportunity that would not otherwise exist
   d) CSA farmers and farmers' market farmers are already connecting directly with their customers, but social media allows them to extend the connection past the letter in the box or the brief interaction at the farmers' market
   e) It creates transparency—but that cuts both ways:
      i. Nice when your customers sing your praises on your Facebook page
      ii. Not as much fun if they start affirming each other's complaints there
      iii. You can control what you allow to stay on your Facebook page or in the comments section of your blog—but if people notice you pulling down any negative comments they will probably trust you less than if you address the comments directly
   f) To use social media effectively you need to make a real investment of time. If you set up a Facebook page or a Twitter account and do not spend several hours each week you can create the impression of being un-responsive and end up with less customer connection than you had before.
4. What it does not do well
   a) Social media is a strategy, it is not in and of itself a plan
   b) Unless social media is used as a part of an overall marketing strategy it will not in and of itself bring in new customers or open the door to whole new markets
   c) Save you time

B. Bar Codes and Web Sites

1. Mobile technology already allows consumers to use their smart phones to scan QR codes at the grocery store and get information about the product they are thinking about buying
   a) Dole banana has a web site that allows you to enter the barcode number from your banana and go to videos about the specific banana cooperative where that banana came from
2. The Produce Traceability Initiative and other efforts from the produce industry are driving brokers to require barcodes at the case level; soon the requirement will be at the item level. The price of barcode systems will come down, but it will still be time-consuming to implement.
   a) If you have to implement a bar-code system to stay in wholesale markets you may be able to offset some of the cost by increasing the value of your product. How?
      i. By already having a loyal following of customers who will ask for you by name
      ii. By already having content on your website that shoppers can connect to with their smartphones

C. On-Farm Events

1. Why consider holding on-farm events?
   a) Connection: Your customers pay more for "food with a face." Your face. They want to know more about their food, and that means that at some point many of them will want to visit the farm. At the very least they want to think they are invited to visit the farm, since transparency is likely one of the things they are looking for when they choose your products over others.
   b) Profit? Some on-farm events make money, but many do not. Often it takes several years for an on-farm event to become profitable.
   c) Marketing: Even if the event itself loses money, it may create value by increasing your customer base and increasing your customer loyalty. An occasional farmers' market shopper may become a CSA member. A CSA member may bring a friend who becomes a regular farmers' market shopper.
2. Why not?
   a) Liability: Someone could get hurt. Health inspectors and other public officials may come for a visit. Are all of your buildings up to code? Are all of your employees in standard housing and earning minimum wage?
   b) Opportunity cost: It will take a lot of hours. What else could you be doing?
   c) Actual cost: You will have to put out a lot of extra money for advertising, porta-potties, entertainment and food preparation. You may or may not cover those costs with admissions, or extra on-farm sales.

D. Best Practices for On-Farm Events

1. Budget: Even though you may plan to lose money, you can still limit the amount of money you lose by developing a careful budget and sticking to it
2. Plan: People go over budget because they forget to put everything they need into their budget. Think through the whole event carefully, imagining every detail and accounting for every expense in your budget.
   a) Plan early and think about alternative dates. If your event is on a weekend that is popular for weddings you may be competing for rental tables. Could you get a better deal if you moved your event to another weekend? Ask your vendors as you plan your event.
3. Insure: Consider the following questions to help prepare for an event
   a) What if it rains? What if there is a fire on your road? What are the exact terms under which you can cancel on your equipment rental? Plan for these contingencies.
   b) Have you complied with all of the local ordinances about events? Are you prepared for the county health inspector to show up? Do you need a liquor license? Understand what you must know regarding these issues.
   c) What if someone gets hurt on your farm? Talk to your insurance agent about a special "event rider" and your general liability policy.
   d) Do you have people helping on the day of the event who are trained in first aid?
   e) Have you identified particular hazards on your farm (barbed-wire fences, old machines with sharp edges, animals that don't like children, climbable trees, poisonous snakes and spiders)? Take precautionary measures to remove the danger or caution people.
   f) Do you have a plan for what to do if a child is lost?
   g) What is the absolute worst thing you can imagine happening? Could you live with yourself if it happened? What do you need to do to ensure it doesn't happen?

4. Evaluate
    a) Did you make a profit? See Unit 6.3, Basics of Bookkeeping and Farm Taxes. You can set the event up as a special "job" or "class" in QuickBooks and run detailed reports showing how you did relative to your budget.
    b) If you did not make a profit, was the event still worth it for its market-building or community relations value?
    c) How can you measure marketing value? Here are some ways to know.
        i. Your e-mail list grows
        ii. You signed up new customers
        iii. Your farm was mentioned or highlighted on the radio or in the newspaper
    d) How can you measure the value of the event to the community?
        i. Do your neighbors love you more? Or less?
        ii. Did you hire anyone from the community?
        iii. Did you involve community groups and allow them to give information or take a portion of net proceeds in exchange for helping out?
        iv. Did you create a traffic jam?
        v. Did anyone call the cops? Were there any sirens?

Appendix 1: Sample Business Plan

PART 1: BUSINESS VISION, GOAL, PRELIMINARY RESOURCE AND MARKET ANALYSIS

A. Business Vision:

To produce high quality organic products in an environment conducive to my own health, as well as the health of the environment, others who work or play on the farm, and those who consume farm products.

B. Business Goal:

Within 7 years, to net an average of $50,000/year from a total of 1,470 hours in the field, 490 hours marketing, 245 hours spent in research and education, and 245 hours spent administering the business, leaving three weeks for vacation and illness. This schedule is comparable to other successful small business owners, and assumes 49 50-hour work weeks per year.

C. Resources:

1. Skills and Experience:
   a. *Worked in produce purchasing*
   b. *Degree in soil science*
   c. *Equipment/labor utilization process (learned during internship)*
   d. *Field work and classes in bio-controls*
2. Personal Reputation:
   a. *Local recognition*
   b. *Good relationship with local market and local restaurants*
   c. *Used to be on the board of local organization(s)*
   d. *Invited to talk to kids at local school*
3. Circle of Advisors:
   To Do ASAP: Draw up a short list of advisors, have them over for dinner, show them first draft of the business plan, and ask them to be advisors. (Also, get a gift for each.)

D. Potential Market(s):

1. Channels: Examples
   a. Farmers' Markets
   b. Community Supported Agriculture
   c. Direct to restaurants
   d. Specialty caterers – weddings, flowers, special jams for wedding favors
   e. Value-added (e.g., personal label jams, edible flower bouquets, and winter "gift gourds")
2. Regions: Examples
   a. Santa Cruz
   b. Half Moon Bay
   c. Monterey Peninsula
   d. San Francisco

E. Constraints:

1. Capital
2. Time (and distance)
3. Competition from other small farms

4. Downward pressure on all agricultural producers
5. Matching height of production to market demand

F. Strategies for Meeting Goals:

1. Market Analysis/ Marketing Plan: Summarizing the strategic value/key components of Market Analysis and a Marketing Plan
   a. Develop marketing plans by channel and region and implement strategically over time. Motto: "Find a market niche and diversify."
   b. Pursue highest dollar value per effort opportunities first—this means considering where the highest price can be charged (and/or most product sold) and where it is most costly to do business, and weighing the costs and benefits of pursuing new opportunities
   c. Evaluate skills and focus on offering products and services in a way that will maximize revenue in the short run and build the business and secure revenues in the long run
   d. Establish strategic pricing strategies to maximize short- and long-term revenues, smooth cash flow, and create long-term relationships
   e. Establish a "feedback loop" to evaluate how goods and services are received (solicit comments on quality and diversity and service)
   f. Never stop evaluating and adapting
2. Time Management: Summarizing the strategic value/key components of a Time Management Plan
   a. Establish time management / project management procedures to –
      i. Ensure professional and timely delivery of goods and services to clients
      ii. Maximize opportunities to build on good relationships with clients
      iii. Minimize errors and misunderstandings with employees and clients
      iv. Reduce the stress of a hectic work schedule
3. Financial Management: Summarizing the strategic value/key components of a Financial Management Plan (see more at Units 6.2 and 6.3)
   a. Establish budgeting, cash flow management, and bookkeeping procedures (and follow them!)
   b. Include short-term, mid-term, and long-term needs in marketing plan, and budget for necessary technology and training
   c. Update business plan, budgets, and cash flow projections often
4. Farm/Crop Plan:
   a. Serves the marketing plan
   b. Follows the financial plan

PART 2: MARKET ANALYSIS/MARKETING PLAN: SAMPLE

A. Research and define each channel and region and rank according to priority. (Assign task and set due date for completion.)

** Note: "Future potential" means "Will this help me grow my business in the future?" The best example of this would be going to a farmers' market for a year in order to develop a client base to start a CSA in the future.*

CHANNEL Farmers' Markets	**EASE OF MARKETING** HARD =1 EASY = 10	**AVAILABLE $$$** LITTLE =1 LOTS = 10	**COST OF DOING BUSINESS** EXPENSIVE =1 CHEAP = 10	***FUTURE POTENTIAL** NONE =1 LOTS = 10	**SCORE**	**RANK BY HIGHEST SCORE**
CSA						
Restaurants						
Specialty caterers – weddings						
Value-added						

REGION Santa Cruz	**EASE OF MARKETING** HARD =1 EASY = 10	**AVAILABLE $$$** LITTLE =1 LOTS = 10	**COST OF DOING BUSINESS** EXPENSIVE =1 CHEAP = 10	***FUTURE POTENTIAL** NONE =1 LOTS = 10	**SCORE**	**RANK BY HIGHEST SCORE**
Half Moon Bay						
Monterey Peninsula						
San Francisco						

B. Analyze skill set, products, resources, constraints, and goals; match to each market channel/region. (Do this with advisors, assign task and set due date.)

SKILL	MARKETING ADVANTAGE	MARKETING DISADVANTAGE
Perform well at Farmers' Markets	I sell well	But I have not been at that market long
	People see what they get	Prices are low, lots of competition
	Easy for me to go there	Never know what I am really going to sell

KEY: Establish a presence, get loyal customers, find out what they like

PRODUCT	MARKETING ADVANTAGE	MARKETING DISADVANTAGE
Flowers	Beautiful	Unnecessary
	Bring shoppers to my stand	Labor intensive

KEY: Get them to buy the food that goes with the flowers

RESOURCE	MARKETING ADVANTAGE	MARKETING DISADVANTAGE
Farm lease	I can afford	Long drive, hill, cannot have groups of visitors
	Nice barn	

KEY: Maintain relationship and keep an eye on alternatives

CONSTRAINT	MARKETING ADVANTAGE	MARKETING DISADVANTAGE
Lack of equipment	NONE	I spend too much time in the field and not enough time selling

KEY: Get financing and buy the equipment I need

C. Develop plan for market channels:

1. Develop a plan for the top two or three channels and regions. Tailor your message and offerings to that channel/region. (Assign task and set due date.)

EXAMPLE CHANNEL #1 IN REGION:

Farmers' Market in San Francisco

Example Message:

"Everything you need for the week is available right here at the farmers' market, and most of it at my booth. All week long you can remember this beautiful day, and the story I am going to tell you about how hot it was when we picked these melons, and how we went swimming in the creek after and that you got invited to come up and visit sometime."

Sample product mix:

1. Summer fruit (e.g.,melons, tomatoes)
2. Flowers
3. Hard Squash

EXAMPLE CHANNEL #2 IN REGION:

Message:

Product mix:

1.
2.
3.

2. Develop a plan for each channel and region specifying attainable market goals for the channel/region. (Assign task and set due date.)

   Call 5 people a week in each segment/region. Ask five good questions:

   a. Would you advise me to sell in this region or market?
   b. What do you think the critical elements for success will be?
   c. What do you think will sell best there?
   d. Do you have any specific advice for me about breaking into this region or market, or about marketing my particular crop mix?
   e. Who else should I talk to?

   Get leads and take notes. At end of month evaluate marketing plan and determine next steps.

CALL LIST WEEK OF ____/____/____ (DATE)

CHANNEL #1	CHANNEL #2	REGION #1	REGION #2

1.
2.
3.
4.
5.

QUESTIONS:

· _____?

· _____?

· _____?

· Who else should I talk to?

· Besides word of mouth, what other avenues should I pursue in order to establish clients in this area?

3. Develop a plan for each channel and region detailing communication and product mix and pricing strategies (message, event participation, materials) tailored to that channel/region (after first date)

4. Develop a plan for each channel and region with a timeline by month and year for accomplishing marketing goals in the channel/region (after first date)

D. Pricing Strategies

1. Establish strategic pricing strategies to maximize short- and long-term revenues, smooth cash flow, and create good long-term relationships with clients
   a. Short term strategy – base price on competition
   b. Long term strategy – figure out what it costs you to grow and price accordingly
2. To do: Develop sample price sheets to support cash flow revenue projections. Develop different scenarios for price and product mix. (Set date.)

PART 3: TIME MANAGEMENT

A. Establish time management / project management procedures

1. Objectives of time management –
   - Ensure professional and timely delivery of services
   - Maximize opportunities to build on good relationship
   - Minimize errors and misunderstandings
   - Reduce the stress of a hectic work schedule
2. Time management tools and techniques: Need to consider options – software, phone apps, calendars (online, datebook, wall calendar), etc. Define what will work for you, the business?
3. To do –
   - A time needs and availability analysis for the first two years of operations. Make sure that all of your assumptions match the cash flow worksheet and the farm plan.
   - Discuss (options?) by____/____/____(date)
   - Begin (what?) by____/____/____(date)
4. Time management considerations –
   - 52 weeks x 50 hours a week equals 2,600 hours
   - 3 weeks of vacation and sick equals 150 hours
   - There are 2,450 work hours in the year
   - 1 day a week marketing equals 490 hours
   - 1/2 day a week administration equals 245 hours
   - 1/2 day a week research/education equals 245 hours
   - There are 1,470 farming hours left in a year
   - The workload in agriculture is not spread out evenly

PART 4: FARM/CROP PLAN

PART 5: FINANCIAL MANAGEMENT (see also Appendix 1, Sample Cash Flow Spreadsheet and Appendix 2, Cash Flow Spreadsheet Template in Unit 6.2, Dynamic Cash Flow Planning)

A. Financial management:

1. Define budgeting procedures. Discuss by ____/____/____(date)
2. Define cash flow management procedures. Discuss by____/____/____(date)
3. Define bookkeeping procedures. Discuss by ____/____/____ (date)
4. Complete cash flow budget by ____/____/____ (date)
5. Include the following –
   a. Marketing plan: short-term, mid-term, and long-term needs
   b. Budget for necessary technology and training
6. Update business plan, budgets, and cash flow projections often (target month)

Appendix 2: Business Plan Template

TABLE OF CONTENTS OF THE START–UP PHASE BUSINESS PLAN:

Part 1: Vision and Goals for the Business

Personal values and goals: Will be based on a self-evaluation and determination of personal values and goals, which is a separate exercise. Note: See DiGiacomo et al. 2014, Northeast Beginning Farm Project 2014, and Virginia Beginning Farmer and Rancher Coalition Program 2014 in Unit 6.0, Resources.

Business visions and goals: Separate and specific values and goals for the business

Resource Analysis

Skills

Personal reputation

Advisors

Time allocation

Constraints

Part 2: Market Analysis (What's out there? Where should I focus first? Do I see a niche?)

Region

Channel

Marketing Plan (How am I going to build my market(s) in my chosen region(s) and segment(s)?)

Establishing a Niche

Diversifying

Part 3: Time Management Plan

Strategies for tracking time and tasks

Analysis of available time/time flow budget

Part 4: Farming Plan

Serves the marketing plan

Is constrained by the financial plan

Part 5: Financial Analysis

Capital needs analysis

Start-up Cash Flow Analysis

Phase-one Cash Flow Analysis

Template begins on next page

PART 1: VISION, GOAL, PRELIMINARY ANALYSIS

A. Vision:

To produce _____ in an environment that is_____for the benefit of _____

B. Goal:

Within_____ years, to net an average of $____K/year from a total of ____hours in the field, ____hours marketing, ____hours spent in research and education, and ____hours spent administering the business, leaving _weeks for vacation and illness. This schedule is comparable to_____, and assumes _____ workweeks per year.

C. Resources:

1. Skills and Experience:
   a.
   b.
   c.
2. Personal Reputation:
3. Circle of Advisors:
   a.
   b.
   c.

D. Potential Market:

1. Channel:
   a.
   b.
   c.
2. Regions:
   a.
   b.
   c.

E. Constraints:

1.
2.
3.
4.
5.

F. Strategies for Meeting Goals:

1. Market Analysis/Marketing Plan
   a. Summarize the strategic value/key components of Market Analysis and a Marketing Plan
2. Time Management Plan
   a. Summarize the strategic value/key components of a Time Management Plan
3. Financial Management Plan (including Cash Flow)
   a. Summarize the strategic value/key components of a Financial Management Plan
4. Farm/Crop Plan
   a. Summarize the strategic value/key components of Farm and Crop Plan based on known markets and constraints of Financial Management Plan.

PART 2: MARKET ANALYSIS/ MARKETING PLAN

A. Research and define each segment and region and rank according to priority. (Assign task and set due date.)

CHANNEL	**EASE OF MARKETING** HARD =1 EASY = 10	**AVAILABLE $$$** LITTLE =1 LOTS = 10	**COST OF DOING BUSINESS** EXPENSIVE =1 CHEAP = 10	***FUTURE POTENTIAL** NONE =1 LOTS = 10	**SCORE**	**RANK BY HIGHEST SCORE**
REGION	**EASE OF MARKETING** HARD =1 EASY = 10	**AVAILABLE $$$** LITTLE =1 LOTS = 10	**COST OF DOING BUSINESS** EXPENSIVE =1 CHEAP = 10	***FUTURE POTENTIAL** NONE =1 LOTS = 10	**SCORE**	**RANK BY HIGHEST SCORE**

B. Analyze skill set, products, resources, constraints and goals; match to market segment/region. (Do this with advisors, assign task, and set due date.)

SKILL	MARKETING ADVANTAGE	MARKETING DISADVANTAGE

KEY:

PRODUCT	MARKETING ADVANTAGE	MARKETING DISADVANTAGE

KEY:

RESOURCE	MARKETING ADVANTAGE	MARKETING DISADVANTAGE

KEY:

CONSTRAINT	MARKETING ADVANTAGE	MARKETING DISADVANTAGE

C. Develop plan for market segments:

1. Develop a plan for the top two or three channels and regions. Tailor message and offerings to that channel/region. (Assign task and set due date.)

CHANNEL #1 IN REGION:

Message:

Product mix:
1.
2.
3.

Farm Plan:
1.
2.
3.

CHANNEL #2 IN REGION:

Message:

Product mix:
1.
2.
3.

Farm Plan:
1.
2.
3.

2. Develop a plan for channel and region specifying attainable market goals for the channel/region. (Assign task and set due date.)

   Note: Call five people a week in each channel/region. Ask five good questions such as: Would you advise me to sell in this region or market? What do you think the critical elements for success will be? What do you think will sell best there?

   Do you have any specific advice for me about breaking into this region or market or about marketing my particular crop mix? Who else should I talk to? Get leads, take notes. At end of month evaluate marketing plan and determine next steps.

CALL LIST WEEK OF _____/_____/_____(DATE)

CHANNEL #1	CHANNEL #2	REGION #1	REGION #2
1.			
2.			
3.			
4.			
5.			

QUESTIONS:

- _____?
- _____?
- _____?

3 Develop a plan for each channel and region detailing communication and product mix and pricing strategies (message, event participation, materials) tailored to that channel/region.

4 Develop a plan for each channel and region with a timeline by month and year for accomplishing marketing goals in the channel/region.

D. Establish pricing strategies

1. Establish strategic pricing strategies to maximize short and long-term revenues, smooth cash flow and create a good long-term relationships with clients.
   a. Short-term strategy – base price on the prices set by your competition
   b. Long-term strategy – determine the actual costs of production and price accordingly
2. To do: Develop sample price sheets to support cash flow revenue projections. Develop different scenarios for price and product mix. (Set date for completion.)

PART 3: TIME MANAGEMENT

A. Establish time management / project management procedures

1. Objectives of time management –
   - Ensure professional and timely delivery of services
   - Maximize opportunities to build on good relationship
   - Minimize errors and misunderstandings
   - Reduce the stress of a hectic work schedule
2. Time management tools and techniques: Need to consider options: – software, phone apps, calendars (online, datebook, wall calendar), etc. Define what will work for you, the business?
3. To do –
   - A time needs and availability analysis for the first two years of operations. Make sure that all of your assumptions match the cash flow worksheet and the farm plan.
   - Discuss options by_____ (date)
   - Begin implementing time management plan by _____(date)
4. Time management considerations –
   - 52 weeks x 50 hours a week equals 2,600 hours
   - 3 weeks of vacation and sick equals 150 hours
   - There are 2,450 work hours in the year
   - 1 day week marketing equals 490 hours
   - 1/2 day a week administration equals 245 hours.
   - 1/2 day a week research/education equals 245 hours
   - There are 1,470 farming hours left in a year
   - The workload in agriculture is not spread out evenly throughout the year

PART 4: FARM/CROP PLAN

PART 5: FINANCIAL MANAGEMENT (see also Appendix 1, Sample Cash Flow Spreadsheet and Appendix 2, Cash Flow Spreadsheet Template in Unit 6.2, Dynamic Cash Flow Planning)

1. Define budgeting procedures. Discuss by _____/_____/_____(date)
2. Define cash flow management procedures. Discuss by_____/_____/_____(date)
3. Define bookkeeping procedures. Discuss by _____/_____/_____ (date)
4. Complete capital needs analysis by _____/_____/_____ (date). You may use Appendix 1, Sample Cash Flow Spreadsheet, in Unit 6.2, for a list of possible equipment needs. Refer to both the equipment list in the spreadsheet and your specific farm plan for equipment needs.
4. Complete cash flow budget by _____/_____/_____ (date)
5. Include the following:
   a. Marketing plan: short-term, mid-term, and long-term needs
   b. Budget for necessary technology and training
6. Update business plan, budgets, and cash flow projections often. (target month)

Appendix 3: Time Management Plan Worksheet

Please note: the **Time Management Plan worksheet** is an Excel file. You can access it online at: ***casfs.ucsc.edu/about/publications.*** Look for the *Teaching Direct Marketing and Small Farm Viability: Resources for Instructors* link to find Unit 6.1 and the online appendix.

6.2

Dynamic Cash Flow Planning

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Introduction: Dynamic Cash Flow Planning

UNIT OVERVIEW

Cash flow planning is a critical part of developing a sound and resilient farm plan. Setting up financial structures will minimize potential hazards down the road, and lead to a smooth running operation. Through a lecture and step-by-step exercise, this unit explores how to ensure you have the cash resources you need when you need them.

Note to instructor: This unit is designed to be presented using a projector to show the students the design and organization of the cash flow Excel spreadsheet line by line. One of the benefits of using the projector is you can show the formula cells and the input cells and change the input numbers to show how the formula cells carry the changes through the rest of the worksheet. These Excel files can be downloaded free from casfs.ucsc.edu/about/publications (go to the link for Teaching Direct Marketing and Small Farm Viability: Resources for Instructors). They also can be used as a template to develop individual cash flow projections for actual or hypothetical farming operations. Hard copy examples can be found in Appendix 1, Example of a Cash Flow Spreadsheet and Appendix 2, Cash Flow Spreadsheet Template (Excel files).

MODES OF INSTRUCTION

> LECTURE (1 LECTURE, 1 HOUR)

> STEP-BY-STEP EXERCISE (1 HOUR)

LEARNING OBJECTIVES

CONCEPTS

- Lenders look at income and expense in a very particular way. If a farmer wants to finance something like a tractor or a new barn, she or he will need to be able to show ability to make monthly or annual loan payments. Lenders will want to see financial projections that show income and expenses associated with producing agricultural products clearly separated from other sources and uses of cash such as outside savings or employment or owner living expenses.
- Loans for operating expenses are different than loans for long-term assets. Operating loans are expected to be paid back within twelve months and typically charge a higher interest rate; assets loans are typically for a period of years that correlates to the expected life of the asset and typically charge a lower interest rate.
- Most farms need to spend money on farm inputs such as seed and soil amendments some months before they have products available for sale. This requires farmers to estimate income, expense, cash and credit needs on a month-by-month basis so they can plan in advance to have cash or credit available when it is needed.

SKILLS

- Ability to understand the vocabulary of cash flow planning
- Ability to categorize different sources and uses of cash using the vocabulary of a banker
- Ability to visualize a month-by-month cash flow budget, and for advanced students the ability to create a month-by-month budget to identify credit needs

Lecture: Dynamic Cash Flow Planning—Planning For Your Cash Flow Needs

A. Talking to a Lender

1. A lender will use the terms presented in this unit. Be conversant with these terms when approaching any lending agency. If you bring in a cash flow projection that demonstrates you do not understand the difference between "operating expenses" and "loan payment," you are unlikely to get a loan.
2. A lender wants to see that income from operations will cover your basic living expenses and your monthly debt service. If you cannot demonstrate this, you will need to demonstrate how you will self-finance the operation (i.e., show that you have income from an outside job that you will contribute to the business).
3. An operating loan is typically paid back within twelve months and charges a higher interest rate. A typical farm operating loan covers cash shortages between planting and harvest.
4. An asset loan is typically paid back over a few years for equipment, or many years for land or buildings. The interest rate is lower because the lender takes a security interest in the property they are financing. This means they have a legal right to sell the secured property if you are unable to pay the amount due. (If they sell it for more than you owe you will receive the difference back.)

B. Introduction to the Small Farm Cash Flow Spreadsheets (Appendices 1 and 2)

Instructor's Note: Share the Cash Flow Spreadsheet with the class for the rest of the lecture. This can be done as a handout from Appendix 1, or through projecting the Excel spreadsheet version. Note that this exercise assumes a sole proprietorship or a partnership. Some of the terms would be different for a corporation. Business entities and other bookkeeping conventions are covered in Unit 6.3, Basics of Bookkeeping and Farm Taxes.

1. The cash flow spreadsheet allows you to enter your beginning cash investment and your assumptions about monthly inflows and outflows of cash
2. The spreadsheet automatically calculates the summarized activity every month, and you can see, based on the negative or positive balance projected for your checking account at the end of the month, if you need to change your assumptions
3. Entries are made in the yellow cells (they may look tan on a PC)

   The green and blue cells have imbedded formulas

   The white cells identify what information goes in the row or the column

   Column C is for January. There is a column for each month of the year.

C. Components of Small Farm Cash Flow Spreadsheet (see Appendix 1)

1. **Part I Savings**—Savings is included to encourage good saving habits
2. **Part II Business Checking**—All business transactions should go through the business checking account
   a) In this example the beginning balance in the checking account is zero and $10,000 is transferred in from the savings account. (See "Business Checking"/ "Contribution to (From) Savings"/ Jan.)
   b) The section under the Business Checking account ("Ending Balance") summarizes the cash flow activity of each month. IMPORTANT: You will not enter any figures here. All of the cells in this section contain formulas that automatically calculate totals from the figures entered in the worksheet sections described in detail below.

c) Actual hard currency cash income should be deposited along with checks and credit card receipts in the business checking account. Petty cash (cash you keep on hand) should not be substantial enough to change basic cash flow planning. Accounting for petty cash is discussed in Unit 6.3.

d) **Operating Income.** All income generated from the sale of items grown or produced on farm.

e) **Operating Expenditures.** All of the direct expenses associated with growing or raising farm products for sale.

f) **Net Cash Flow from Operations.** This is the critical line. Can you get to a positive cash flow from operations? Or, do you have to borrow to fund operations as well as capital acquisitions?

3. **Part III. Non Operational Sources of Cash (Borrowing).** If you are negative after operations, you will need to borrow or fund your business from personal monies. Allowing your checking account to run negative is not an option. Note: In any month when you see an automatic calculation of a negative amount in your checking account, you need to manually put in the amount of cash you need to borrow to keep your checking account balance above zero.

   Note to Instructor: This is a good thing to demonstrate in class: remove the amount borrowed and show how the predicted bank balances go negative, then re-enter an amount needed to borrow sufficient to keep the balance in the bank account positive with a bit of a cushion.

4. **Part IV. Non Operational Uses of Cash**

   a) **Draws**. Money the owners take out of the business. Note that the owner of a sole proprietorship or a partnership is not paid a salary. The owner pays income taxes based on the total profit or loss of the business regardless of whether the owner takes cash out of the business or leaves the cash in the business. It is important to understand for tax planning purposes that the owner cannot predict the taxes they will owe based on how much cash they took out of the business; instead, they have to look at the profit or loss of the business. Remember, this cash flow projection is for a specific business enterprise—your farm. Your personal budgeting needs to be done separately in order to determine how much cash you need to take out of the business. If you do not have another source of income, and you are going to use this spreadsheet to support a loan application, be sure to show adequate draws because a lender will insist on verifying that you have enough money to live on as well as enough money to pay your loan.

   b) **Asset Purchases.** Assets are things that will benefit the farm for more than one year. They are shown separately from operating expenses. Operating expenses are things like seeds, which are used in a year. Long-term assets are things like tractors and barns, which should be around for many years. Be careful not to skew your cash flow from operations by putting equipment purchases in with operating expenses.

   c) **Contribution to Savings is just money moving from the checking account to the savings account.** The only effect it has is on the available cash in your business checking account. In this example sometimes the farmer borrows money and puts money in savings. This might be a good idea if the farmer is participating in a matched savings program, or just to develop the discipline of always having some savings.

d) **Loan Payments.** This is also in a category by itself, since it is neither operational nor capital. You will need to make payments on your debts according to the terms of the loan (e.g., an equipment loan may require monthly payments, whereas your family may let you pay nothing for the first six months, and then make monthly payments thereafter). Paying debt is critical so that you do not damage your credit. Enter the amount of debt you need to pay each month according to the terms of the loan. Again, be careful not to skew cash flow from operations by putting debt service in with operating expenses.

Instructor's Note: This is a good place to show students how the spreadsheet changes automatically when they change the amounts entered. Delete one of the loan payment amounts and ask students how much they think they can afford to pay back in that month. Enter that amount, then look to see if the predicted ending balance in the bank account is sufficient to cover predicted expenses plus a cushion for errors and unpredicted expenses.

5. **Part V. Operating Income.** This section is to show the detail of sources of income. Enter each major market or each major crop on a row and put your monthly sales projections in each column. You can use a separate worksheet to do detailed calculations based on crop mix, price, and volume to support your entries in this section.
6. **Part VI. Operating Expenditures.** This section is to show the details of your production costs. Enter all expenses associated with crop or livestock production here. Your overall farm plan should provide information to help you determine when your expenses will fall/decline. Shop around and make sure you are using good pricing assumptions.
7. **Part VII. Equipment and Other Long Term Assets.** This section is to show the detail of your equipment needs. Your farm plan should provide information to help you determine when your expenses will fall. Shop around and make sure you are using good pricing assumptions. Use a new row for each piece of equipment, and enter the expected purchase price in the column corresponding to the month you expect to purchase the equipment.

D. Assessing Economic Viability: Can This Farm Succeed?

1. The farm must show positive cash flow from operations, sufficient to cover draws and debt service, in order to be financially viable
2. If you must use outside earnings or credit to fund annual operations, your farm does not have even minimal viability
3. If you have outside earnings to fund personal living expenses and debt service for the farm, you may have a viable plan if you only break even on operations, especially if your main goal is to build equity in land and assets
4. If you need credit but you cannot obtain it, you do not have a viable farm plan

Step-by-Step Exercise: Entering Your Financial Information into the Small Farm Cash Flow Spreadsheet Template

for students

Instructor's Note: This step-by-step exercise should be used with **Appendix 2: Cash Flow Spreadsheet Template**, in developing a cash flow projection and assessing the economic viability of an actual or hypothetical farming operation. Walk through the items below—showing students what it looks like in the actual spreadsheet. You can use a student's financial plan, or have the class create a hypothetical plan, to create numbers to put in the spreadsheet.

Appendices 1 and 2 are Excel files that can be downloaded from casfs.ucsc.edu/about/publications. Go to the link for *Teaching Direct Marketing and Small Farm Viability: Resources for Instructors*. They also can be used as a template to develop individual cash flow projections for actual or hypothetical farming operations. Hard copy examples can be found in **Appendix 1, Sample Cash Flow Spreadsheet** and **Appendix 2, Cash Flow Template** (Excel files).

See Glossary on page 278 for definition of terms used below.

DIRECTIONS:

1. Only make entries in yellow cells.
2. **Do not make any entries in the green or blue cells.** The green cells have imbedded formulas. Show an example in the formula bar.
3. White cells identify what information is in the row or the column.
4. There is a column for each month of the year. For example, show Column C is for January.

   Instructor's note: Data for the following items can be drawn from a student's plan, or have the class offer a hypothetical plan.
5. Initial Investment
   - Start with an entry in cell C4 to show how much cash you have saved up to start the business
6. Start Up Loans, Equipment Loans
   - Make entries in C19 and 20 if you expect to receive loans to start your business. Identify the loans in cells B19 and B20. Enter the money you plan to take out of the business in C24 and 25. Identify loan payments in cells B30 and B31. Enter your loan payments in C29 and 30—you usually will not have a loan payment due your first month of operations.
7. Operating Income
   - Identify major sources of income (such as markets or crops) at B34–B37 (rename these markets or other sources as appropriate). Cells C34–C37 are for your projected income from your first month of operations for each market or crop. These cells should be empty because you won't have any income until you have something to sell.
8. Operating Expense
   - Detail your operating expenses in cells B41–B71. Cells C41–C71 are for your projected operating expenses for your first month in business.
9. Equipment and Other Long-Term Asset Purchases
   - Identify the specific equipment you need to buy in cells B75–B160. Cells C75–C160 are for the equipment you plan to purchase in your first month in business.
10. Summary of Activity
    - When you have entered all of your information for January in rows 19 through 160, go back to the top of the worksheet to look at the summary for the month of January

11. Cash Flow from Operations (Sales less Expenses)
    - Row 12 shows negative cash from operations because you worked but had no sales
12. Non-Operational Sources of Cash (Borrowing)
    - Row 13 shows the cash infused into the business from borrowing
    - Row 14 shows the total cash you had available after operations and borrowing
    - Non-Operational Uses of Cash Row 15 shows the total of: cash taken out of the business by the owners, cash paid on debts owed, and cash paid for capital expenditures
13. Ending Balance
    - Row 16 shows your predicted ending cash balance in the bank-one of the purposes of the worksheet is to plan so this number will never go negative
14. Now you can continue entering information for each successive month. You can enter month by month (column by column) or category by category (row by row).
15. The most important part of the process is to return to the summary and study row 16—Ending Balance (of your checking account.). You cannot leave a negative balance in row 16.
16. Borrowing to cover a deficit—If you are confident of your operational income and expense numbers, and you are planning to borrow each month to fund a deficit, study row 20 and enter there the amount you need to borrow—month by month—to keep row 16 positive. Remember to schedule the REPAYMENT on row 30 in future months, as per the terms of the loan.
17. Changing assumptions about operating income and expense so that you will show positive cash flow: You should start with your best and most realistic estimates of operating income and expense based on your farming and marketing plan. You may need to change your farming and marketing plans based on your initial cash flow projections. If you do this, then you can change the amounts you enter on your cash flow projections. Be sure your numbers are as accurate as possible. Just changing the numbers so that you will come out positive defeats the whole purpose of business planning.
18. About draws (rows 24 and 25): You can show zero draws, or very small draws, to make your cash flow projections look better to you… but a lender will not believe that you can live on a hundred dollars a month. Be prepared to demonstrate to a lender that you have outside income (or the equivalent, something like free rent because you take care of your granddad) and that you are capable of covering your basic living expenses. You may need to show a lender a basic personal budget to convince them that you are being realistic.

Glossary

Capital Expenditures

Expenditures for long-term assets that will benefit the business over many years

Draws

Cash removed from the business for personal use including personal savings

Net Cash Flow From Operations

Operating Income less Operating Expenditures—demonstrates the profitability of the operation before considering debt service, equipment purchases or any personal financial needs of the owner.

Non-Operational Sources of Cash

Cash contributed to the business other than from sales of farm products. Cash contributed from personal savings, from borrowing, or from selling farm assets like equipment.

Non-Operational Uses of Cash

Draws, debt service, capital expenditures

Operating Income

Sales, the income associated with the regular business of the farm. Not income from unusual activities such as a one-time sale of an old piece of equipment.

Operating Expenditures

The direct expenses associated with growing crops for sale. They are period expenses, i.e. they are all used up when the crop is harvested —unlike the expenses of buying a piece of equipment that will last many years.

Appendix 1: Example of Cash Flow Spreadsheet

Note that you can access this Excel file online at **casfs.ucsc.edu/about/publications.** Go to the link for ***Teaching Direct Marketing & Small Farm Viability: Resources for Instructors.***

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
I. Personal Savings or Checking Account														
Opening Balance	10,000	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500		
Contribution (Draw)	(9,500)	100	100	100	100	100	100	100	100	100	100	100		
Ending Balance	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600		
II. Business Checking Account	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Year's Total**	
Beginning Cash in Ckg	**10,000**	1,147	650	445	533	706	881	604	217	553	644	617		
Operating Income	-	-	900	2,600	2,500	4,800	7,200	10,000	10,600	9,800	9,200	4,700	72,300	
Operating Expenditures	(7,597)	(2,397)	(3,005)	(3,367)	(3,727)	(5,025)	(3,877)	(5,287)	(4,164)	(3,109)	(2,627)	(2,269)	(46,450)	
Net Cash Flow From Operations	**(7,597)**	**(2,397)**	**(2,105)**	**(767)**	**(1,227)**	**(225)**	**3,323**	**4,713**	**6,436**	**6,691**	**6,573**	**2,431**	**25,850**	
Cash From Borrowing	40,000	3,500	3,500	4,500	3,500	2,500	-	-	-	-	-	-	57,500	
Subtotal - Cash Available	**42,404**	**2,250**	**2,045**	**4,178**	**2,806**	**2,981**	**4,204**	**5,317**	**6,653**	**7,244**	**7,217**	**3,048**		
Non-Operational Uses of Cash	(41,257)	(1,600)	(1,600)	(3,645)	(2,100)	(2,100)	(3,600)	(5,100)	(6,100)	(6,600)	(6,600)	(2,100)	(82,402)	
Ending balance	**1,147**	**650**	**445**	**533**	**706**	**881**	**604**	**217**	**553**	**644**	**617**	**948**		
III. Non-Operational Sources of Cash (Borrowing)														
Secured Loans (Mortgage or Equipment)	40,000												40,000	
Operating Loans (Personal or other)		3,500	3,500	4,500	3,500	2,500							17,500	
Subtotal	40,000	3,500	3,500	4,500	3,500	2,500	-	-	-	-	-	-	57,500	
IV. Non-Operational Uses of Cash														
Draw _ partner #1	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500	1,000	1,000	1,000	1,000	14,500	
Draw - partner #2									500	500	500	500	2,000	
Total Draws	**1,000**	**1,000**	**1,000**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**16,500**	**16,500**
Asset Purchase	**40,257**	**-**	**-**	**1,545**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**41,802**	
Contribution to Savings		100	100	100	100	100	100	100	100	100	100	100	1,100	
Fixed Loan Payment		500	500	500	500	500	500	500	500	500	500	500	5,500	
Other Loan Payments							1,500	3,000	4,000	4,500	4,500		17,500	
Total Non-Operational Use of Cash	**41,257**	**1,600**	**1,600**	**3,645**	**2,100**	**2,100**	**3,600**	**5,100**	**6,100**	**6,600**	**6,600**	**2,100**	**82,402**	**82,402**
V. Operating Income														
Ukiah Farmer's Market			500	1,000	1,000	1,200	2,400	3,200	3,400	3,400	3,000	1,500	20,600	
Willits Farmer's Market			400	600	400	800	1,200	1,600	2,000	2,000	2,000	1,000	12,000	
Santa Rosa Farmer's Market				800	800	2,400	3,200	4,800	4,800	4,000	4,000	2,000	26,800	
Restaurant				200	300	400	400	400	400	400	200	200	2,900	
Subtotal	-	-	900	2,600	2,500	4,800	7,200	10,000	10,600	9,800	9,200	4,700	62,300	62,300
VI. Operating Expenditures														
Labor, on farm (1 person @$8/hr)	1,120	1,120	1,120	1,120	1,920	1,920	1,920	1,920	1,920	1,280	1,120	1,120	17,600	
Labor, at market (1 person @$10/hr)					600	600	600	600	600	600	600		4,200	
Payroll Tax & Ins (Estimated at 20%)	224	224	224	224	504	504	504	504	504	376	344	224	4,360	
Organic Certification	800												800	
Rent (3 acres @ $350 per acre)	88	88	88	88	88	88	88	88	88	88	88	88	1,056	
Utilities	85	85	85	85	85	85	85	85	85	85	85	85	1,020	
Gasoline/Diesel Fuels	140	140	200	250	250	200	200	225	225	200	140	140	2,310	
Banking/Accounting	150			100									250	
Office Expense	40	40	40	40	40	40	40	40	40	40	40	40	480	
Auto Maintenance/repairs	50			50		100		50	50		50		350	
Auto Insurance			188			188			187			187	750	
Liability Insurance			225			225			225			225	900	
Tractor Maintenance		200						200					400	
Soil Tests	350												350	
Seed	4,000							500					4,500	
Amendments														
Compost			400			400		400					1,200	
Manure			250			250		250					750	
Gypsum			85			85		85					255	
Kelp Meal				200									200	
Fish Meal				150									150	
Liquid Kelp	350												350	
Liquid Fish	200												200	
Biological Innoculants				100									100	
Veggie Mix Meal			100			100		100					300	
Farmers Market Fees				160	240	240	240	240	240	240	160	160	1,920	
Season Extension														
Row Cover				600									600	
Plastic Mulch		300											300	
Miscellaneous														
Plastic Shopping Bags		200		200			200			200			800	
Total Operating Expense	7,597	2,397	3,005	3,367	3,727	5,025	3,877	5,287	4,164	3,109	2,627	2,269	46,450	46,450

Appendix 2: Cash Flow Spreadsheet Template

This spreadsheet template is a companion document to the lecture on **Dynamic Cash Flow Planning** (see *Teaching Direct Marketing and Small Farm Viabililty: Resources for Instructors*, Unit 6.2, Lecture 1)

This spreadsheet allows you to enter your beginning cash investment and your assumptions about monthly inflows and outflows of cash, to determine what you ultimately need to make the business sustainable. The spreadsheet automatically calculates the summarized activity every month, and you can see, based on the negative or positive balance projected for your checking account at the end of the month, if you need to change your assumptions.

Why do a cash flow analysis?

1. It can be a primary decision making tool - to answer questions such as:
   a) Can I afford new equipment? Can I afford to expland?
   b) Is there any way to avoud being really short of cash at a certain time every year?
   c) Where and when am I profitable and how can I expand on that?
2. To show a lender your ability to re-pay a loan.

When to do cash flow analysis?

1. Before you start farming: Should you start farming? What will it take to start and get through the first year? You may have a different cash flow analysis for each of the farm locations under consideration.
2. Every year so that you can see how you are managing for profitability (and stress!)
3. Anytime you consider a change, such as expanding, contracting or re-mixing. Example include:
   a) Adding capacity with a new tractor or hired help
   b) Giving up a lease on marginal land
   c) Changing crop mix, timing
   d) Picking up a new lease

How to use this spreadsheet

1. Make entries in the yellow cells (they may look tan on a PC)
2. The green and blue cells have imbedded formulas
3. The white cells identify what information goes in the row or the column
4. Column C is for January. There is a column for each month of the year

Components of the spreadsheet

Part I. Savings
Part II. Business Checking
Part III. Non Operational Sources of Cash (Borrowing)
Part IV. Non Operational Uses of Cash
Part V. Operating Income
Part VI. Operating Expenditures
Part VII. Equipment and Other Long Term Assets

Appendix 2 (cont.): Cash Flow Spreadsheet

Note that you can access this Excel file online at **casfs.ucsc.edu/about/publications.** Go to the link for ***Teaching Direct Marketing & Small Farm Viability: Resources for Instructors.***

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
I. Personal Savings or Checking Account														
Opening Balance		-	-	-	-	-	-	-	-	-	-	-		
Contribution (Draw)		-	-	-	-	-	-	-	-	-	-	-		
Ending Balance	-	-	-	-	-	-	-	-	-	-	-	-		
II. Business Checking Account	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Year's Total**	
Beginning Cash in Ckg		-	-	-	-	-	-	-	-	-	-	-	-	
Operating Income	-	-	-	-	-	-	-	-	-	-	-	-	-	
Operating Expenditures	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Cash Flow From Operations	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cash From Borrowing	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal - Cash Available	-	-	-	-	-	-	-	-	-	-	-	-		
Non-Operational Uses of Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ending balance	-	-	-	-	-	-	-	-	-	-	-	-		
III. Non-Operational Sources of Cash (Borrowing)														
Secured Loans (Mortgage or Equipment)													-	
Operating Loans (Personal or other)													-	
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-	
IV. Non-Operational Uses of Cash														
Draw _ partner #1													-	
Draw - partner #2													-	
Total Draws	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asset Purchase	-	-	-	-	-	-	-	-	-	-	-	-	-	
Contribution to Savings													-	
Fixed Loan Payment													-	
Other Loan Payments													-	
Total Non-Operational Use of Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V. Operating Income														
Ukiah Farmer's Market													-	
Willits Farmer's Market													-	
Santa Rosa Farmer's Market													-	
Restaurant													-	
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VI. Operating Expenditures														
Labor, on farm (rate x hours)													-	
Labor, at market (rate x hours)													-	
Payroll Tax & Ins (Estimated at 20%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Organic Certification													-	
Rent													-	
Utilities													-	
Gasoline/Diesel Fuels													-	
Banking/Accounting													-	
Office Expense													-	
Auto Maintenance/repairs													-	
Auto Insurance													-	
Liability Insurance													-	
Tractor Maintenance													-	
Soil Tests													-	
Seed													-	
Amendments														
Compost													-	
Manure													-	
Gypsum													-	
Kelp Meal													-	
Fish Meal													-	
Liquid Kelp													-	
Liquid Fish													-	
Biological Innoculants													-	
Veggie Mix Meal													-	
Farmers Market Fees													-	
Season Extension														
Row Cover													-	
Plastic Mulch													-	
Miscellaneous														
Plastic Shopping Bags													-	
Total Operating Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-

6.3

Basics of Bookkeeping, Farm Taxes, and Special Tax Issues—Value Added and Perennials

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Introduction: Basics of Bookkeeping, Farm Taxes & Special Tax Issues—Value Added & Perennials

UNIT OVERVIEW

Whether or not you decide to do your own bookkeeping and taxes, it's important to understand the concepts behind these critical tasks, the importance of accurate record keeping, and the need to be engaged in the finances of the business—even with support from a bookkeeper or accountant. This unit introduces the basics of bookkeeping, taxes, and the special tax issues involved in value-added products, perennial crops such as orchards, and farm improvements such as a new barn. It also looks at the decision making that goes into managing a farm's financial structures, e.g., whether to act as a sole proprietor or form a partnership or other business entity.

The first lecture addresses the vocabulary, definitions, and functions of bookkeeping and using a Chart of Accounts. In the second lecture, students are introduced to the various tax forms specific to farm operations, tax record-keeping methods, planning for tax profit or loss, and business entities such as partnerships and corporations. The instructor and students will read through a 1040 Form, Schedule F, Schedule C, and Form 4562 together to discuss issues such as self-employment taxes, allowable expenses, and categorizing assets and depreciation. Lecture 3 highlights some financial and business structures, and issues specific to producing value-added perennials, such as inventory tracking. Instructor's note: Plan whether to teach Lecture 3 depending on where you are and what sorts of farms your students will likely operate. Lecture 3 is only appropriate for farms likely to have permanent crops (trees or bushes that bear fruits or nuts) or farms that do value-added processing.

MODES OF INSTRUCTION

> LECTURES (3 LECTURES, 1 HOUR EACH)

LEARNING OBJECTIVES

LECTURE 1

CONCEPTS

- Understand that the basic vocabulary of a bookkeeping system starts with five types of accounts: Assets, Liabilities, Equity, Income, and Expense, and that all of the accounts together are listed on a "Chart of Accounts"
- Understand the definitions of Assets, Liabilities, Equity, Income, and Expense
- Understand that the basic functions of bookkeeping are to keep a complete, accurate, and timely accounting of all financial activity so that the farmer can make decisions, pay bills on time, and file income tax returns

SKILLS

- Ability to read and understand a Chart of Accounts for a farm business
- Ability to categorize different activities using the Chart of Accounts
- Ability to assess the importance of bookkeeping and ability to consider the relative costs and benefits from keeping the books themselves or hiring a bookkeeper

LECTURE 2

CONCEPTS

- Understand the basic requirements for filing a farm income tax return
- Understand that there is a difference between farm income and expense, and other income and deductions for the individual farmer

CONCEPTS (cont'd)

- Understand why simply minimizing taxes owed is not always in a farmer's best interests
- Understand why the most important documents to have to substantiate your income tax returns are often a diagram of your farm and a calendar recording your business activities
- Know that the most valuable resources to learn more about farm taxation are the IRS's Publication 225 and the website RuralTax.org

SKILLS

- Ability to identify a Schedule F and a Schedule C and the ability to relate the lines for income and expense on those two forms back to the concepts covered in the prior lecture on bookkeeping and the Chart of Accounts
- Ability to plan to incorporate income tax concepts into routine bookkeeping procedures
- Ability to assess the importance of income tax preparation and to consider the relative costs and benefits from learning to prepare your own tax returns or paying for professional assistance

LECTURE 3

CONCEPTS

- Understand when you have to get an accountant: When you buy a farm, when you plant permanent crops, when you undertake major new construction such as a remodel of a barn
- Understand that food manufacturing is a fundamentally different business than farming. Your farm may include both; your tax returns must appropriately reflect all of your business activities.
- Understand that planting permanent crops or self-constructing major assets requires very complex accounting

Lecture 1: Basics of Bookkeeping

Bookkeeping is an essential task—but it isn't for everyone. As a farmer you may choose to hire a bookkeeper, but you still need to understand the basic way a bookkeeping system operates so you can read and understand the reports your bookkeeper generates. You may choose to hire a bookkeeper directly, or to work with a Certified Public Accountant to set up a system for your farm and hire and train a bookkeeper. If you like working with numbers you may find that learning about bookkeeping is a valuable way to improve your ability to think analytically about farm finances.

Permanent crops such as orchard trees and fruit-bearing bushes, and animals such as dairy goats are subject to special accounting treatment and special tax treatment not covered in these materials. Additional information on those advanced farm accounting topics is available in the IRS Farmer's Tax Guide (Pub 225) and at ruraltax.org.

A. Chart of Accounts

A Chart of Accounts is a list of all the accounts in use by the business. It includes the name of the account, the account number for systems using numeric codes to identify accounts, and most importantly the type of each account. There are five possible types of accounts: Asset, Liability, Equity, Income, and Expense.

1. If you use QuickBooks or any other system, it is imperative you understand the differences amongst the major types of accounts. This means that you have to understand these five definitions:
   a) Assets stick around
   b) Expenses go away
      i. If you build a new fence, you expect it to stick around. It is an asset.
      ii. If a fence rail breaks and you replace it you are sort of back where you started, the broken rail and the old nails (not to mention your time) "went away."
      iii. The cost of the new board and the new nails (and labor, if you paid someone else to do the work) is an expense. You would not need to add a new account in either case because the new fence would be called "farm equipment" and fence repairs would be "property repairs and maintenance."
   b) Income is yours
   c) Liabilities belong to others
      i. If you get paid for selling product, or for renting your land to someone else, it is income. If you take out a home equity loan and deposit $10,000 cash into your business, it is a liability.
      ii. If you have a new loan, you would need to set up a new liability account, and you would specify whether it is a short-term loan (due in one year or less) or long term (due in more than a year)
   d) Equity is what's left over for you
      i. In QuickBooks there are default equity accounts called Beginning Balance Equity and Retained Earnings. Beginning Balance Equity automatically calculates the difference between beginning assets and liabilities. In a partnership you will want to set up each partner with an equity account. "Retained Earnings" is the QuickBooks default account for your annual profit or loss—note this is not the proper accounting term for annual profit or loss for a sole proprietorship or a partnership.
      ii. When you take regular living expenses out of the business checking account and put them in your personal checking account, you should record the transaction to an equity account called Draws. For a partnership, each partner should have a draw account.

The money you take out of the business is not necessarily your profit—it may be more than your profit (unsustainable) or less than your profit (because you are reinvesting part of your profit back into your business)

iii. If you want to track personal expenses through your business you can set up a few draw accounts, for example: Draws-health and medical, or Draws-mortgage payments

iv. You should try not to pay personal expenses from the business account. Your life will be much simpler if you keep your living expenses separate.

2. Unless you are incorporated and on your own payroll, your own labor is never recorded directly on your farm books
   a) You see it each month on a Profit and Loss statement as the difference between income and expense or "Net Income"
   b) You also see it on the first day of the new year when your income and expense accounts go back to zero and your equity account is bigger or smaller depending on if you had "Net Income" or a "Net Loss"
3. If you have years of net income and you leave most of that cash in the business, then you will see your equity in the business grow
   a) If you take the cash out of the business to pay yourself, then, even though you may have good income, your equity in the business will not grow. This might be ok if your personal equity in things like a house or a retirement account is growing.
   b) If your equity in your farm is going down every year then you are either losing money each year, or taking too much money out of the business, or both
4. Recommended structure for QuickBooks Chart of Accounts
   a) Do not use the QuickBooks default Chart of Accounts
   b) Do not use any sub accounts, other than as recommended below
   c) Use a tax return schedule F to give you an idea of what categories to use for farming expenses, and a Schedule C to give you an idea of what categories to use for general business expenses
   d) In general, you want to use the fewest number of accounts that will give you a meaningful and accurate picture
   e) Ask yourself:
      i. Did the IRS ask for this information (by putting a line for it on the Schedule C or Schedule F?)
      ii. Will I ever use this information to make a decision?

> **Instructor's Note:** Use Handout "Chart of Account" for this exercise (see Appendix 1, Sample Structure for QuickBooks Chart of Accounts)

5. The Structure of the Chart of Accounts is:
   - Assets
   - Liabilities
   - Equity
   - Income
   - Production Expenses: Sub-accounts
   - Marketing Expenses: Sub-accounts
   - Administration Expenses: Sub-accounts
   - To Be Allocated: Sub-accounts—ONLY IF NEEDED

6. Set up your expense accounts under one of the three accounts; Production, Marketing, or Admin (and To Be Allocated if needed)
    a) This will allow you to look at these aspects of your operation separately. You may end up with three "supplies" accounts, but they will all represent fundamentally different kinds of supplies.
7. In addition to the Chart of Accounts, QuickBooks allows two additional markers: Jobs and Classes
    a) You can set up jobs and classes to keep track of other important aspects of your operation
        i. Possible jobs: Fields or plantings or individual animals or a flock of chickens
        ii. Possible classes: Crops, livestock enterprises, or value-added products.
        iii. You could make a certain field a job and bell peppers a class and get special reports on how well you utilized a certain field or how well your bell peppers did relative to other crops
        iv. You could make each new lamb a job and record essential information, and also make meat a class and then run special reports on the individual animals, and on the segment of your business overall
        v. Jobs or classes are also a good way to separate out on-farm events
            • You want to know how much the events cost you but you do not want to set up new accounts to track all the expenses because the reports will be hard to read and it will crowd out the essential information your accountant or banker wants to see
8. Use the chart of accounts to tell a simple story about the whole farm and to share with your accountant and banker.
9. Use jobs and classes to give yourself and your partners more nuanced information to make internal decisions.

B. Entering Activity

1. The best way to learn is just to get out your checkbook and credit card statement for January and enter everything that happened as best you understand it
    a) When you are done, go to reports and look at various reports and see if they make sense to you. You will learn which reports you like, and you may find mistakes you made if you find a report that is obviously wrong.
    b) Reports that you should look at every month are: The Profit and Loss and the Balance Sheet
    c) Once you have entered January and reviewed it, enter the next month; then keep going one month at a time until you are in the current month
    d) In addition to looking at reports each month, you should get in the habit of looking at the same reports at the end of every three-month period and thinking about how the year is progressing
    e) You can compare reports to the same quarter of the prior year and you can compare year-end reports from one year to the next
2. Bank and Credit Card Statements
    a) Each month you should reconcile your physical bank and credit card statements to your QuickBooks accounting
        i. This is the single most important thing you can do to ensure you have recorded everything correctly—at least in terms of dollars in and out if not in terms of putting everything in the exact right account

ii. There is a module in QuickBooks that is very easy to use, but you must follow these three rules:
    - If you do not balance, and QuickBooks offers to balance for you say, "no"! You need to find the mistake. QuickBooks is just offering to hide your mistake, which will make it that much harder to find and fix it later.
    - When you balance, print out the reconciliation statement and keep it with your bank statement. QuickBooks overwrites the prior statement every month, and of all the records you keep, proof that you balance your bank every month may be the most important.
    - Do it as soon as possible every single month. As much as possible, designate a regular time and place for a person to do this. Likely there is one person among the partnership who inclines more toward this task, but it is important that he or she write down or explain procedures to someone else. This has to be done before it feels overwhelming, and it can't not get done!

3. Billing
   a) When you make a sale on account, create an invoice using "Accounts Receivable"
   b) Then, when you make a deposit, use the "receive payments" function to match the amounts you received to the amounts you billed
   c) QuickBooks will maintain accounts for each of your customers and you will be able to print and view a variety of reports with information about your sales
4. Paying Bills
   a) You can enter all your bills in "Accounts Payable" and then pay them all through the "Accounts Payable" module
   b) This is the most accurate way to keep your books. It is helpful if you need to manage your cash flow very carefully and cannot afford to pay bills before they are due.
   c) QuickBooks will maintain detailed vendor reports showing all the bills you have entered and paid or not paid
      i. This can be very useful if you ever become confused about what you have and have not paid to a regular supplier
   d) Alternatively, you can bypass the "Accounts Payable" section and just use the "Write Checks" section to enter your bills as you pay them. This means your reports will not necessarily show amounts you owe but have not yet paid.
5. Payroll
   a) You can do payroll through QuickBooks or through a payroll service such as ADP or Paychex
      i. Although a payroll service may seem expensive, it is very time consuming to do your own payroll. Most people make a lot of mistakes at first, then spend even more time fixing mistakes, and often pay fines. So actually the professional services are not that expensive; using one can be a wise, cost-effective choice.

Lecture 2: Basics of Farm Taxes

A. Overview of Federal Income Taxes

> **Instructor's Note:** Use current versions of these forms as handouts for this section. They are available from ***www.irs.gov/Forms-&-Pubs***

1. Filing responsibility
   a) Any self-employment gross income
   b) Any self-employment net income greater than $400 is subject to self-employment tax
   c) Any loss (will offset current taxable income and certain deductions can be carried forward to offset future income)
2. Other uses of the tax return
   a) Your tax return may show that you qualify for the earned income credit, a special payment (or a negative tax) intended to help low-income people get started in new jobs or businesses. The earned income credit may automatically pay taxes you owe, or it may even come to you in the form of a tax refund check even if you did not pay taxes.
   b) You will usually need to provide three years of tax returns when applying for a loan
   c) Copies of tax returns are needed for participation in various federal programs
   d) You may need to verify that you are current with tax filing and payment to participate in government programs such as student loans or crop insurance
   e) Preparing a tax return is a good way to take stock of your business at the end of the year
3. Decision scenarios
   a) There are many different options for recording certain kinds of income and expense. Some choices will increase your net profit and some will decrease it. When you have a choice to make—keeping in mind you may want to be able to apply for a loan—should you:
      i. Maximize profit?
      ii. Minimize profit?
      iii. Strike a middle course and try to have your taxable net be as close as possible to your actual cash net profit?
   b) There is no one correct answer to these questions: It depends on the individual's circumstances and goals. This is why the financial decision-making can never be fully outsourced to an accountant or taught as a strict set of rules. A business owner needs to be actively engaged in the financial health of the business no matter how much support they may hire from an expert. A good analogy would be that even though we may sometimes rely on the expert advice of a physician, we cannot outsource our fitness and diet goals.
4. Record requirements
   a) Calendar showing the business purpose of business use of a car or of meals and entertainment
   b) Map or diagram showing how the property is divided between business and personal use
   c) Bank Statements
   d) General Ledger: This is the record of all the transactions posted to all of the appropriate accounts—in QuickBooks it is called "Account Detail"
   e) Receipts—important, but note: They are not actually the most important documents
   f) Additional records if Hobby Loss rules may apply

i. Hobby loss rule says if you lose money for five years in a row, then, instead of the IRS assuming you intended to make money (but weren't very good at it), you have to be able to prove to the IRS that you intended to make money (but weren't very good at it). This additional proof you would need for the IRS includes things like a marketing plan, and continuing education—things that show you took your business seriously and made efforts to modify your operation to improve profitability. One way to show this would be to keep a copy of your annual business plan and update it each year to reflect what you learned in the prior year.

5. Entity selection: You should decide what sort of entity to form in consultation with a Certified Public Accountant because there are significant tax consequences to your decision. Below are definitions of the different types of entities you might consider (for more information on Entity selection, see Unit 9, Land Tenure Options).
   a) Sole proprietorship: Just an individual working at his or her own business
   b) Partnership: Two or more individuals working together at their own business
      i. The partnership files a tax return but does not pay taxes. Instead, the income and expenses on the partnership tax return "pass-through" the partnership to the partners, who report them on their individual tax returns. The partners will each individually file tax returns and pay taxes on the "pass-through" income, or deduct the "pass-through" farm loss against other earned income.
      ii. Partners are personally liable for the debts of the partnership. That means you can lose your house, and your spouse's wages can be garnished.
      iii. You do not have to do anything to become a partnership—anytime two people are in business together they are automatically a partnership for tax purposes
      iv. But you SHOULD have a written partnership agreement that spells out your mutual expectations about:
         - How much each contributes initially
         - How much each may take out of the business and under what circumstances
         - How to share profit and loss
         - When a partner can be required to contribute to the business
         - How to let a partner out of the business in the event of death, injury, or voluntary withdrawal
      - How a partner's spouse, children, and other heirs will be treated
   c) Corporation: A corporation gives you limited liability so that you will not lose your house or have your spouse's wages garnished to pay the debts of the farm
      i. Generally, a small farm will choose to be an "S Corporation," which operates much like a partnership for tax purposes in that the S corporation does not pay taxes; instead, the shareholder's share of income and expense passes through the corporation and is reported on the individual's individual return
      ii. All shareholders in an S Corporation are treated equally—they may not own equal shares, but they all have decision-making authority proportional to the shares they own
      iii. A C Corporation pays taxes and the owners of the corporation also pay taxes. This form of corporation is almost never appropriate for a small farm.
   d) A Limited Liability Company or LLC is another type of partnership that gives some of the liability protections of a corporation, but allows for some of the unequal distributions of decision-making power and profit sharing that do not work well in an S Corporation. An LLC is often a good way for parents to pass farms to children, since it allows the parents to retain all of the decision-making authority while starting to vest some ownership in the next generation.

e) Non-profit Corporation. Educational farms are often operated by not-for-profit entities. Non-profit management and accounting is very complex, and is not covered in this course.

6. Read through the 1040 in class
   a) Federal Form 1040 – Page One
   b) Personal Information
   c) Filing Status
   d) Single, Married, MFS, Head of Household
   e) Dependents
   f) Wages
   g) Investment and Retirement Income
   h) Self-Employment
      i. Schedule C - OR
      ii. Schedule F for FARM/RANCH
      iii. Schedule E for income from partnerships and S corporations
   i) Subtract Special Adjustments
      i. Retirement, Health Insurance, etc.
      ii. Adjusted Gross Income
   j) Federal Form 1040 – Page Two
      i. Itemized Deductions (Schedule A)
      ii. OR Standard Deduction for Single, Married, or Head of Household
   k) Note there are different types of taxes:
      i. Income Tax
      ii. Self-Employment Tax (calculated on Schedule F or Schedule C)
      iii. Tax Credits (negative tax—note: There is a credit for on-farm fuel used)
      iv. The Earned Income Tax Credit (EITC) works best for Head of Household. The EITC goes up as income goes up, up to about $15,000:
      - then goes down as income goes up;
        - and is gone at around $30,000
      - So, sometimes more income will give you a bigger EITC
      - And sometimes less income will give you a bigger EITC
      - Only earned income counts

7. Read through Schedule F in class:
   a) Schedule F – Farm Income
   b) Sales of Products Purchased
   c) Sales of Products Raised
   d) Other Income
   e) Farm Expenses
   f) Cultivation
   g) Harvest

   Note that the Schedule F has not been updated in many years. It has categories for a conventional commodity farm. Just because the other expense categories are not pre-printed does not mean you cannot use them. Use the line for "Other" to list your other expenses. It is common to attach a separate page to continue a list of other expenses. You can get ideas about other expenses on the Schedule F by looking at the Schedule C.

8. Read through a Schedule C in class to identify the pre-printed expenses on the Schedule C that you would also expect to have on a farm
    a) Office expenses, e.g., telephone and postage
    b) Marketing expenses, e.g., meals and entertainment
    c) Vehicle Expense: There are two methods to choose from—"Actual" and "Mileage." Each one has its advantages and specific record-keeping forms and requirements. You cannot switch back and forth.
9. Depreciation is reported on Form 4562—this is relatively complex, and one of many reasons not to do your own taxes!
    a) Major Asset Categories
        i. Not depreciable: Land
        ii. 36 months: Software
        iii. 5 year: Computers
        iv. 7 year: Most other movable equipment, movable fixtures
        v. 10 year: Trees, vines, single purpose agricultural structures
        vi. 15 year: Land improvements
        vii. 27.5 year: Residential rental buildings
        viii. 39 year: All other buildings, including non-movable leasehold improvements
    b) Types of depreciation
        i. Straight line over category life
        ii. Modified Accelerated Cost Recovery System (MACRS) use tables by category life
        iii. Alternative Cost Recovery System (ACRS) use tables by category life—can be important for some farms; see section 11(c)
        iv. Section 179 "Bonus Depreciation" allows full deduction for equipment in year of purchase
10. Shared Use of Farm and Personal Assets
    a) Allocate based on appraisal
    b) Determine value of property
    c) Determine value of components: House, barn, road, septic, prime land, marginal land, permanent crops (trees, vines)
    d) Determine value of farm components and personal components, and the total percentage of each
    e) Use the percentage to allocate shared expenses such as mortgage interest, property taxes, and utilities

f) Allocation example:

Allocation Example

Per Appraisal page 1				Personal	Farm	
Purchase Price	300,000					
Value of House		155,000		155,000		
Value of Barn		20,000			20,000	
Value of Ag Well and Improvements		8,000			8,000	
Value of Apple Trees		7,000			7,000	
Value of Land		110,000				
		300,000	equals purchase price			
Breakdown of Land per below:						
Value of Prime Ag land	75,000				75,000	
Value of marginal farm land	21,000				21,000	
Value of Homesite	11,000			11,000		
Value of access and unfarmable	3,000		(2/25 = .08 = personal)	240	2,760	
	110,000	**agrees with above**		166,240	133,760	300,000
				55%	**45%**	
Allocation Data per appraisal page 3-4						
Total Acres	25					
Acres of prime farmland	15		Value per acre	5,000		
Acres of marginal farmland	7		Value per acre	3,000		
Acres of Homesite	2		Value per acre	5,500		
Acres of Access and unfarmable	1		Value per acre	3,000		

g) How to use allocation
   i. Farm assets (well, trees, etc.)
   ii. Allocation percentages for:
   - Mortgage interest
   - Property Taxes

   iii. Utilities, if no separate meter

h) What about an office in the home?
   i. Will require more detail on allocation sheet
   ii. Asset information for Tax Depreciation Schedule

Instructor's Note: Use the "Sample Chart of Accounts" as a handout for this section. This is located in Appendix 1 and is also found online at ***casfs.ucsc.edu/about/publications***; click on the ***Teaching Direct Marketing & Small Farm Viability: Resources for Instructors*** link

11. Maintain a list of assets owned by the farming operation.

    Why? Required for income taxes and county property taxes.

    a) Description
    b) Purchase date
    c) Purchase amount
    d) Depreciation taken to date (accumulated depreciation)
    e) Major repairs that extend the life of an asset are additions to the original asset (e.g., a rebuilt engine)

12. Other Farm Expenses
    a) Education related to your business—this is a necessary business expense!
        i. Magazines, newspapers, books
        ii. Classes, workshops, or conferences, including travel and lodging
        iii. Note: Does not include education that gets you into a whole new line of work
    b) Promotion, including on-farm events
        i. E.g., extra porta-potties, music, banners, etc.
    c) Business gifts
        i. Remember: You must be able to show the business relationship—but everyone eats and thus is a potential customer, so this should not be hard to do!
    d) Business Meals and Entertainment
        i. Subject to 50% limitation, includes entertainment in your home (e.g., a dinner party)
        ii. Document each event in your calendar, and include the business purpose of the relationship (who, what, why, when, and where)
    e) Meals and incidentals while away from tax home
        i. Allowed if for a period substantially longer than a regular workday (a period reasonably requiring an additional stop to eat and rest, i.e., a dinner break in addition to a normal breaks and lunch)
        ii. They are subject to the same 50% limitation for meals
        iii. When you travel to a distant farmers' market or to take a class, you may claim a "per diem" deduction for your meals instead of keeping receipts. Use the amounts in annual published tables www.gsa.gov/perdiem.
        iv. You usually get over $30 a day!

B. Special Tax Rules (see more at Lecture 3)

1. Uniform Capitalization Rules, IRS Code Section 263A or "UNICAP" applies to:
    a) Value-Added Products (e.g., wine, apple-sauce, almond butter, tinctures)
        i. There are special rules for value added activities such as making blueberry jam
    b) Self-Constructed Assets (Establishing Permanent Crops)
        i. There are special rules for perennials; crops with a pre-productive period in excess of one year such as blueberry bushes, grape vines, fruit or nut trees. These special rules are the subject of Lecture 3.

C. Conclusion

1. Find a Certified Public Accountant who specializes in farms. Beware of the special rules for self-constructed assets including permanent crops and value-added processing (see Lecture 3).
2. Teach yourself: IRS Publication 225 is updated each year and available on the IRS web site or you may order it for free from the IRS. The website RuralTax.org is run by the Land Grant Tax Education Foundation and also has excellent information including sample returns.
3. Hint: The best farmers do both

   Best resources for more information:

   - IRS Publication 225 The Farmer's Tax Guide
   - RuralTax.org

Lecture 3: Special Issues—Value Added & Perennials

Instructor's Note: Plan to teach Lecture 3, or not, depending on where you are and what sorts of farms your students will likely operate. Lecture 3 is only appropriate for farms likely to have permanent crops (trees or bushes that bear fruits or nuts) or farms that do value-added processing.

A. Tax Definition of Farming Activity

1. Farming activity includes all activity necessary to bring agricultural products to the state in which they are generally marketed in your local area
   a) Tomatoes are generally marketed as harvested unprocessed tomatoes. In your local area heirloom tomatoes may usually be sold in cardboard boats. In that case for you the cardboard boats would be a normal farm marketing expense.
   b) BUT—Even if you normally cannot sell all of your tomatoes in an unprocessed form and have to make tomato sauce at peak season in order to avoid waste, there is generally a market for whole tomatoes, so when you start making tomato sauce, you have crossed the line between farming activities and manufacturing activities
2. If you visit a vineyard and winery, you may think of it as one business. If you saw their tax returns, though, you would see that they report the farming activity associated with growing the wine grapes as farming activity (generally reported on Schedule F) and the manufacturing and marketing activity associated with making and selling the wine as other non-farm activity (a Schedule C for an individual sole proprietor).
   a) The vineyard and the winery act as if there is a sale between them and the price of the grapes is the prevailing price for grapes of that quality in that region. Actual money may or may not be involved. The books of the vineyard show a sale and the books of the winery show a purchase. This allows the winery to include the value of the grapes in the calculation of the value of the wine inventory.
3. For tax purposes, this means the income from the grapes can be used to qualify the farmer for some of the special (beneficial) tax treatments available to farmers but the additional income associated with the wine cannot
4. Should you set up a separate business because you sometimes sell some tomato sauce at the farmer's market?
   a) There is a de minimus exception to the rule requiring you to calculate your self-manufactured inventory, for activities that make up only about 2% of your total activities
   b) If you start getting much above that, you need to start thinking about a plan for coming into compliance with the rules, since it will be much easier to develop a system while your business is small

B. Tax Requirements for Inventory and Grown or Constructed Assets

1. Capitalizing Manufacturing Costs to Inventory

   Remember, when you spend money it may be for an annual type expense or for an asset. Inventory is an asset, so there are special rules for how to value the asset based on what it cost you to create it.
   a) Manufacturing is adding value to raw materials and creating an inventory of goods available for sale

i. In a simple situation, you buy stuff and make it into other stuff and sell it. You report total sales as total income, you report all of your expenses as deductions, and you pay taxes on the difference.

ii. In a more realistic example, you buy stuff and make it into other stuff and then you sell some of it. What you would like to do is show total sales as total income, all your costs as deductions, and the difference as your taxable income or loss. The only problem that the IRS has with this is that you still own valuable inventory. You cannot deduct the costs associated with the inventory you still have.

You have to hold those costs as an inventory asset and then you can deduct them in the year when you sell the inventory. This is called the "matching principle" in accounting. It means you should always try to "match" income in the same year with the expenses that generated the income.

b) Example:

Back when you were in the tie-dyed T-shirt business, things were pretty simple. T-shirts cost a dollar each, and when you got back home early on New Year's Day you had 100 T- shirts left. You bought $100 worth of dye in the spring and about a quarter of it is left. Your year-end inventory is $125. You add up all of your expenses, subtract $125, and you have your manufacturing cost for the year.

Life got a bit more complicated when you bought the goats and started making eight different kinds of herbed cheeses with aging periods from a month to a year.

c) A simple inventory system will track the following:

i. Quantities manufactured, "Work in Process" or "WIP"

Be careful to track conversions and changes in units of measurement.

For Example: 20 ***gallons*** *of milk and 180* ***pounds*** *of cheese.*

ii. Costs at each stage of the process

Each time you convert quantities, you apply costs.

For Example: You go from pounds of bulk cheese to ounces of packaged cheese and you apply the costs of labor and packaging. Packaged cheese costs more than bulk cheese.

iii. Quantities Available for Sale (and where they are if you sell on commission) and Quantities Sold

It would be great if "Inventory Available for Sale" less "Sales" equaled "Ending Inventory," but it won't because some will be given away and eaten and some will get spilled or spoiled or will evaporate. These amounts are calculated at each stage of inventory as "spillage" or "shrinkage" or "samples."

iv. Year-End Actual Inventory

The more product you have in inventory at the end of the year, the less you can deduct on your tax return.

If you subtract what you know you sold from what you know you made, and call that ending inventory, you will overstate ending inventory and not account for the **deductible** costs of inventory that was given away for promotional purposes, or that was lost to spillage or spoilage.

If you have a perishable product, you need to track inventory in batches rather than on a calendar year, so that you will know spoilage rates on each batch.

d) Example

Example: The Really Simple Goat Cheese Farm's Inventory Calculations:

1. 20 gallons of milk turns into 180 pounds of bulk cheese
2. The 20 gallons of milk cost $120 and the labor to turn it into bulk cheese was 10 hours at $10 an hour or $100
3. 180 lbs of bulk cheese is WIP, valued at $220, or $1.23 per lb.
4. Add herbs, $25 and four hours of labor, $40
5. WIP is now $285 or 1.59 per lb.
6. Packaging costs $300, plus labor of 20 hours = $500 total
7. Conversion from bulk pounds to packaged ounces is 16 ounces/lb LESS SPILLAGE. You package to 4-ounce containers and when you are done you have 684 of them. Your TRUE conversion rate includes spillage of approximately 5%. You need that number to manage production efficiency.
8. Inventory Available for Sale is now 684 four ounce packages at $285 + $500 = $785 total value. Each 4-ounce package cost you $785/684 or $1.15.
9. You give away 200 containers of cheese for promotional marketing efforts
10. You find a store, and take 100 containers there on commission
11. You sell 50 at the farmers' market
12. Calculated Inventory Available for Sale is now 684-350 or 334, still valued at $1.15 each
13. Actual Physical Count is 328. The store reports that they dropped 10, sold 50, and still have 40 available for sale.
14. Spoilage was 334-328+10=16
15. The value of your ending inventory is 328+40=368 x $1.15=$423
16. **Deductible costs are total costs $784 less ending inventory $423 = $361**
17. **Alternative calculation:** *(difference is rounding)*

Cost of product sold	100 + 50 + 50 = 200 sold × $1.15 =	230
Cost of promotional products	100 × $1.15	= 115
Cost of spoilage	16 × $1.15	= 18
Deductible Costs	**230 + 115 + 18**	**= 363**

e) Systems
   i. If you are going into a value-added business, you need to plan to scale up to a bar-code system as soon as possible. Not only will it make your accounting easier, most retailers will require you to have barcoded products.
   ii. The manual system described here is to help you understand the concepts. It is probably only appropriate to use in the experimental, start-up phase of your business; it will likely not serve you once your business is mature.
   iii. QuickBooks will work only if you understand these concepts and track quantities and conversions separately. You will likely need professional help to set up any inventory system, even a simple system using Excel and QuickBooks.

f) Exercise/Discussion
   i. What would a simple inventory calculation for blueberry jam business look like?
   ii. What are the inputs to jam? *Blueberries, jam jars, labels, sugar, pectin, lemon juice*
   iii. What are the phases of manufacturing? *Cooking, canning, labeling, packing*
   iv. What are the quantity conversions? *Pounds (or tons), gallons, pints, and half pints*
   v. How are the jars of jam packed? *E.g., cases of 12*
   vi. Do you keep inventory by case or by jar? *Both, i.e., 12 cases and 10 jars*
   vii. How do you track samples you use to promote sales? *Segregate cases designated as "Samples" as "Samples Inventory" and keep track separately from "Inventory Available for Sale"*

2. Self-Constructed Assets (including permanent crops)
   a) If you purchase a building, you record it on your books at the purchase price, and you take a depreciation deduction each year for a fraction of the purchase price
   b) If you buy an orchard, you do the same thing, allocating the purchase price between land and trees, and then taking a depreciation deduction each year for 10 (or 20) years for 1/10th (or 1/20th) of the value
   c) If you build a building or plant an orchard and you do your own bookkeeping, you probably would not make a special effort to separate the costs associated with the building materials and the labor from your other farming costs. At the end of the year your books probably would not show that you own a new building or a young orchard.
   d) For tax purposes, you always need to separate construction or permanent crop development costs from normal operating costs
      i. You need to report a new asset on your tax return, valued at the sum of the costs of all the labor and materials
      ii. You also need to allocate a percentage of your other operating costs (e.g., insurance and electricity) and overhead (e.g., rent, bookkeeping) to the self-constructed asset
      iii. Once the asset is "placed in service" you may deduct the costs of the building or orchard through a fractional depreciation deduction each year
      iv. Permanent crops are considered "placed in service" the first year you can sell the crop for $1 more than the cost of harvesting, as long as that is longer than the statutory pre-productive period determined by the IRS
   e) In the case of planting a permanent crop with a pre-productive period in excess of two years, there are special rules
      i. First, the IRS decides what constitutes a permanent crop with a pre-productive period in excess of two years
      ii. Second, the general rule is that you must capitalize all cultivation costs associated with the pre-productive crop from the time of planting until the time you get a harvestable crop (and for at least two years)

iii. Third, almost everyone qualifies for the exception to this rule, which means you can deduct your expenses but you must know how to make a valid election on your tax return in order for the exception to apply
   - As long as you are not planting almonds or citrus, and you are eligible to be a cash basis taxpayer, you are eligible for the exemption
   - There is no exception for any amount of almonds or citrus
   - People who make too much money cannot take the election, but anyone making that much money already has a CPA; the cutoff is $25,000,000 (25 million!) of gross revenue

iv. The election is made by doing two things:
   - Deduct the cultivation cost of your pre-productive crop on your tax return
   - Take special depreciation, under the Alternative Depreciation System (remember this from the prior unit on depreciation?) on any assets acquired for any business you own, during any year for which you want a valid election

3. To summarize:
   a) You must capitalize (not deduct, but may depreciate) all costs associated with building a building or planting a permanent crop
   b) If you plant almonds or citrus, you must also capitalize all of the pre-productive cultivation costs of the orchard or grove
   c) If you plant other permanent crops, you need to take a special (reduced) depreciation rate on any assets purchased between the time you plant and the time you get a marketable crop (at least two years from planting)
   d) Best resources for more information:
      - IRS Publication 225 The Farmer's Tax Guide
      - RuralTax.org

Exercise / Discussion: How does this apply to Bonnie and Clyde and JJ?

Listen for:

1. When they remodel the barn, they will need to capitalize those costs.
2. When they plant new blueberry bushes, they will need to capitalize the costs of the blueberry plants, and they will either need to capitalize the growing costs of the blueberry bushes for two years or elect alternative depreciation on any other assets they purchase during that two year period.
3. They must develop an inventory system for their jam business. They may not include the jam business in their farm income; instead they need to report farm income and jam income separately on their partnership tax return.

Appendix 1: Sample Structure for QuickBooks Chart of Accounts

Account Name	Account Type	Explanation
Main Farm Checking	BANK	NOT your personal checking account. Yes, you must have a separate business checking account
Petty Cash	BANK	This isn't really a bank account; it is a coffee can or an envelope. But treat it like a checking account for purposes of recording money spent and replenished. **Example #1:** Employee takes a $20 and returns $20 worth of receipts to the coffee can. You use the receipts to record $20 worth of expenses (gas, office supplies etc.) and cut yourself a check for "cash" for $20. Then the cash comes out of the farm checking account and goes into the coffee can. **Example #2:** You decide you need to increase petty cash from $100 to $200. Write a check for $100 payable to "Cash" and record it as a "transfer" in QuickBooks. You end up with $100 less in your checking account (correct) and $100 more in your coffee can (also correct). NOTE: If the employee spends their own money, then when you reimburse them you either use petty cash (replace a $20 with their receipts), or bypass petty cash by writing them a check and recording the expenses according to their receipts (gas, office supplies, etc.).
Farm Savings Account	BANK	NOT your personal savings. Yes, it can be useful to keep a savings account for your farm business in addition to your farm checking account. There are things that a savings account can do for you that a checking account cannot. They may earn interest (albeit miniscule in these times) and have other banking advantages (e.g., situations exist where banks charge a fee on multiple deposits into a checking account, but not a savings account).
Accounts Receivable	ASSET	Created by entering individual sales into Quickbooks billing module. Accounts receivable increases when you make a sale to be paid on credit and decreases when you receive the cash payment. When you enter an account receivable through the billing module you will also identify the sales account to increase to record the sale on account. When you receive the payment through the billing module accounts receivable is decreased (you are no longer owed money) and cash in the checking account is increased (you have deposited a check).

Account Name	Account Type	Explanation	Sample Structure QuickBooks Chart of Accounts
Farm Equipment	ASSET	Be sure to keep a separate list of individual assets in Excel. You need the list for income tax purposes and for county property taxes. QuickBooks just keeps a running balance. Do NOT make each piece of equipment a separate account or sub-account, it will make your standard reports hard to read, and it will be difficult to fix. Your opening entry is for the beginning fair market value of all equipment contributed into the business. Thereafter, when you buy a piece of equipment, the purchase price decreases cash (or increases accounts payable), and also increases the running total in the Equipment account. When you sell a piece of equipment, the sales price increases cash, and the asset account is reduced by whatever value you have for the equipment you sold. The difference between the sales price and the amount in the equipment account is recorded to an "Other Income" type account called "Gain or Loss from Sale of Equipment." It is important to keep these types of sales separate from the regular sales of farm products because: 1) including it with income from crop sales would distort your crop income, and 2) The income tax treatment is different.	
Farm Vehicles	ASSET	As above, keep vehicles separate from other equipment. They are treated differently for tax purposes.	
Structures	ASSET	As above, keep structures separate from other equipment. They are treated differently for tax purposes. See notes on perennial crops if you build the structure yourself.	
Perennial Crops	ASSET	See section on perennial crops.	
Farming Supplies	ASSET (This is really an inventory account but it is probably simpler to manage it as an asset account.)	This is your year-end inventory of soil amendments, gloves, hand tools, flashlights, chicken wire, etc. You only need to adjust it each year at year's end. Here is a simple way to record a reasonable amount of inventory and expense each year. Simple Method: All of your supplies expenses to the expense-type account called "Supplies" during the year. Then in November and December (or the last months of your tax year if you are on a fiscal year), post your last supplies purchases of the year to the asset-type account called "Supplies" instead. Those last purchases represent your year-end inventory of supplies on hand. The total in your supplies expense account represents all the supplies you purchased and used during the year. In January (or the first month of your fiscal year), use a journal entry to move your prior year supplies from the asset account to the expense account. This is a decrease (credit) to the supply **asset** account for the total balance in that account, and a corresponding increase (debit) to the supplies **expense** account for the supplies you purchased at the end of the prior year. For tax purposes, you are deducting the last few supplies purchases of the current year in the following year. This should basically correspond to how you actually use your supplies. If your situation is not at all represented by this simple method, you should see an accountant to develop a more appropriate method.	

Account Name	Account Type	Explanation	Sample Structure QuickBooks Chart of Accounts
Computer Equipment	ASSET	As above, keep computers separate from other equipment. The tax treatment of computers is different.	
Office Equipment	ASSET	As above, keep office equipment separate from other equipment.	
Market Equipment	ASSET	You are not required to keep marketing equipment separate from farming equipment, but you may find it helpful to do so.	
Marketing Supplies	ASSET (As noted above with respect to Farming Supplies, this is really an inventory account but it is probably simpler to manage it as an asset account.)	This is your permanent inventory of bags, boxes, jars, labels, twist ties etc. You only need to adjust it at year's end. Here is a simple way to record a reasonable amount of inventory and expense each year. **Simple Method:** Record all of your supplies expenses to supplies expense during the year. Then in November & December record your last supplies purchases of the year to this account rather than to supplies expense. In January, use a journal entry to move your prior year supplies from the asset account to the expense account. This is a decrease (credit) to the supply **asset** account for the total balance in that account, and a corresponding increase (debit) to the supplies **expense** account for the supplies you purchased at the end of the prior year. For tax purposes you are deducting the last few supplies purchases of the current year in the following year. This should basically correspond to how you actually use your supplies. If your situation is not at all represented by this simple method, please consult an accountant to develop a more appropriate method.	
Intangible Asset—Logo & Label Design	ASSET	Your logo is a special kind of asset; an intangible asset. It is amortized rather than depreciated—really the same thing with a different name, but recorded separately on the tax return.	
Accumulated Depreciation	ASSET	Year End Journal Entry: Debit Depreciation Expense, Credit Accumulated Depreciation for the total depreciation deduction taken on your federal tax return.	
Accounts Payable	LIABILTY	Created by entering individual payables into Quickbooks payables module. When you enter individual accounts payable you also indicate the expense or asset account that was increased by the purchase. Later, when you use the payables module to record payments cash is decreased by the amount of checks written and payables are also decreased because the amounts are no longer owed.	
Operating Loan	LIABILTY	This is typically a loan that is due within 12 months	
Long Term Loan	LIABILITY	This type of loan is typically paid down through monthly or annual payments over several years	
*Opening Balance Equity	EQUITY	Quickbooks uses this account to balance certain entries. Do not make an entry to this account unless advised by your bookkeeper or accountant.	

Account Name	Account Type	Explanation	Sample Structure QuickBooks Chart of Accounts
Capital Contribution—Partner 1	EQUITY	Partner #1's contribution to the business (may be cash or equipment)	
Capital Contribution—Partner 2	EQUITY	Partner #2's contribution to the business (may be cash or equipment).	
Draw—Partner 1	EQUITY	Cash Partner # 1 takes out of the business. Careful! This cash is not income, but a draw and as such, it is simply a change in Equity; it may not have any relationship to taxable income. Even if you do not take cash out of the business, you may owe income taxes on the profit made by the business.	
Draw—Partner 2	EQUITY	Cash Partner #2 takes out of the business. Careful! This may not have any relationship to taxable income. Even if you do not take cash out of the business you may owe income taxes on the profit made by the business.	
*Retained Earnings	EQUITY	Quickbooks uses this account to balance certain entries. Do not make an entry to this account unless advised by your bookkeeper or accountant.	
Wholesale Sales	INCOME	Set up each of your accounts as "customers" in Accounts Receivable. Also note that new FDA regulations require you to be able to establish your percentage of wholesale versus direct sales in order to determine how the regulations apply to your farm. This is true even if you are currently exempt from FDA regulation, because you need to be able to show that you are exempt. You can also analyze income vs. marketing expenses (travel time and mileage, packaging and labeling required for this type of market).	
Farmers Market Sales	INCOME	You might consider setting up each market as a sub-account of this account, or as a class or job. See discussion below.	
CSA Shares	INCOME	Set up each of your members as a "customer" in Accounts Receivable. You can use the billing module to bill them for renewals and to track contact information.	
On-Farm Sales	INCOME		
Restaurant & Catering Sales	INCOME	You will also want to set up each of your accounts as "customers" in Accounts Receivable.	
School Tours	INCOME	Farm income that is not related to sales of farm products is OK until it becomes substantial, they you might start to think of it as a separate business and you will need to create a separate set of books and consult with a tax adviser about the income tax treatment.	
Administration	EXPENSE	Do not post anything to this account; make all of your administrative expenses sub accounts of this account.	
Administration: Bank Charges	EXPENSE		

Account Name	Account Type	Explanation
Administration: Books & Subscriptions	EXPENSE	Invest in your education! You may deduct expenses associated with maintaining and improving your knowledge needed to farm. This includes things like basic accounting or cooking classes but would not include things that qualify you for a whole new profession as an accountant or a chef.
Administration: Conferences & Education	EXPENSE	
~~Administration: Donations~~	EXPENSE	NO! Almost anything you are solicited to pay out of the farm is a promotional expense (getting your name and logo in front of potential customers is a type of advertising called "Promotion"; see below). So "sponsoring" a "fun-run" and getting your name on a t-shirt is a marketing expense even though the event benefits a charity. The expense is fully deductible as a farm expense. If a charitable deduction is totally unrelated to farming (e.g., for girls' literacy in Afghanistan) then it is a PERSONAL Expense. It should not be paid out of the farm account, since it does not promote the farm. The donation should be made by the individual farmer and it will be deductible on the INDIVIDUAL tax return (and it may not be as "deductible" as you think).
Administration: Insurance	EXPENSE	
Administration: Interest	EXPENSE	
Administration: Membership Fees	EXPENSE	
Administration: Office	EXPENSE	Office supplies and most any other random administrative expense like stamps or registering your domain name, a good catch-all account.
Administration: Professional Services	EXPENSE	Accountant and Attorney
Administration: Payroll	EXPENSE	Office staff salaries
Administration: Payroll Taxes	EXPENSE	Payroll tax expense for office staff
Administration: Payroll Service	EXPENSE	Even though the payroll service is for all payroll, put 100% of the expense of the service here because the service is administrative.
Administration: Depreciation	EXPENSE	Once a year entry, usually given to you by your accountant to record your tax deduction for depreciation.
Farming Costs	EXPENSE	Do not post anything to this account; make all of your farming expenses a sub account of this account.

Account Name	Account Type	Explanation	Sample Structure QuickBooks Chart of Accounts
Farming Costs: Land Rent	EXPENSE		
Farming Costs: On-farm Fuel	EXPENSE	Also, keep track of the gallons of fuel you use on and off-farm because you can get a tax credit for on-farm fuel used.	
~~Farm Costs: 1984 Tractor~~	EXPENSE	NO! Do not use this account. If you want to track operating costs and maintenance for an individual piece of equipment use a job or a class. The more accounts you set up the longer and harder to read your reports become. See discussion below.	
Farming Costs: Custom Hire or Custom Farming	EXPENSE	Remember if someone "custom hires" you then set up an income account called "Custom Hire" or "Custom Farming."	
Farming Costs: Equipment Rental	EXPENSE		
Farming Costs: Repairs & Maintenance	EXPENSE		
Farming Costs: Seeds & Plants Purchased	EXPENSE	Careful! See section on perennials if you are planting trees and other crops with a pre-productive period of more than a year.	
Farming Costs: Soil Amendments	EXPENSE		
Farming Costs: Advice & Testing	EXPENSE	PCA, Soil and water testing, etc.	
Farming Costs: Replacement Animals	EXPENSE	Replacing breeding stock.	
Farming Costs: Animal Feed	EXPENSE	Feed purchased off-farm. If you want to keep track of feed grown and fed you will need to do that outside of Quickbooks.	
Farming Costs: Veterinary & Other Animal Health	EXPENSE		
Farming Costs: Hand Tools	EXPENSE	An easy way to handle hand tools is to keep a certain amount in farming supplies inventory, and expense a certain amount each year. Even though the hand tools last more than a year, once you get going, replacing them becomes a pretty constant expense. As you grow you might want to also slightly increase the amount of hand tools in farming supplies inventory each year to reflect your growth.	
Farming Costs: Irrigation	EXPENSE		

Account Name	Account Type	Explanation	Sample Structure QuickBooks Chart of Accounts
Farming Costs: Waste Disposal	EXPENSE	This could go under Administration or Marketing, depending on which part of the business you think generates the most waste. It doesn't really matter where it goes.	
Farming Costs: Payroll	EXPENSE	Gross farming wages before payroll deductions.	
Farming Costs: Payroll Taxes	EXPENSE	Employer's portion of payroll taxes paid on farming wages.	
Marketing Costs	EXPENSE	Do not post anything to this account; make all of your marketing expenses a sub account of this account (see examples below).	
Market Costs: Marketing Supplies	EXPENSE	Boxes, bags, twist ties, labels, etc.	
Marketing Costs: Meals & Entertainment	EXPENSE	You must keep a personal calendar showing the business purpose of your business meals and entertainment. You may only deduct 50% of the expenses recorded here. You may deduct here the expenses of groceries purchased to cook a meal at your home to host a potential customer. You may deduct the cost of a meal out or a ticket to a sports or entertainment event if you hosted a potential buyer. You must be able to establish the business purpose of the event.	
Marketing Costs: Off-farm Gas	EXPENSE	Remember, you get a tax credit for gallons of gas used on-farm. This is to pay back the taxes you pay for each gallon of gas used on public roads. Be sure to point this out to your tax preparer too!	
Marketing Costs: Organic Certification	EXPENSE		
Marketing Costs: Promotion	EXPENSE	Sponsoring local events or joining farm advocacy groups when your farm is acknowledged by name. Expenses associated with on-farm events such as farm-visits or farm field days with food and entertainment included. You may also deduct the cost of gifts to customers and other people important to your business (such as your landlord, mentor-farmer, accountant or banker). Go ahead; be generous in acknowledging the people who help you to succeed.	
Marketing Costs: Utilities	EXPENSE	If you have a cooler, likely most of your utilities go to that. IF you pump a lot of water, most of your utilities may go under farming; otherwise, utilities may go best under Administration for office utilities. For most small operations it will not matter where you put it.	
Marketing Costs: Basic Processing	EXPENSE	Hulling, off-farm packaging, drying, making flower bouquets or wreaths. See section on perennials and inventory.	
Marketing Costs: Cut & Wrap	EXPENSE		
Marketing Costs: Supplements	EXPENSE	Supplements purchased from other farms to round out CSA boxes etc.	

More on Chart of Accounts and Other QuickBooks Tools

Less is more! This is not a comprehensive list, but you should not need to add a lot of additional accounts. Before you add new accounts, ask yourself: "Who cares?" "Does the government require this information?" "Does my organic certifier need to know this?" Perhaps most importantly, "Will having this information (separate, rather than lumped together) help me make better farm business management decisions and have a more successful business?"

The more accounts you have, the longer it takes to do basic bookkeeping and the less valuable your summary reports. Use the memo field to enter detail about each transaction, but don't get carried away with over-categorizing your expenses. If the information will not help you to make a decision, it probably does not need to be separated.

In addition to the Chart of Accounts, you have two additional markers in QuickBooks: **Jobs** and **Classes.**

You can set up jobs and classes to keep track of other important aspects of your operation. Jobs are a good way to account for something temporary like a particular event or a particular flock of chickens. **Classes** are a good way to account for a whole sector of your business, like crops, and eggs. When you print financial statements in Quickbooks the accounts read down and the classes will read across, so you could see different farmers markets side by side, or supplies and labor expenses for crops and eggs side by side. You can also set up sub-classes so you could have all farmers markets as a class and each farmers market as a sub-class. This helps to keep your basic chart of accounts as simple as possible. If you add all your farmers markets as accounts then you will see all that detail every time you run an Income Statement. An Income Statement should be a useful summary report. If you want detail you can run a report showing jobs or classes. Think "short–but–wide"—keep your chart of accounts short (i.e. just farmers markets, restaurants, wholesale and CSA) and let your detail spread out to the right using jobs or classes. That way you can compare different parts of your business and you will not need to give your tax preparer an overly long and complicated chart of accounts from which to prepare your tax return.

Possible jobs: Fields or plantings or individual animals or a flock of chickens, or a particular farmer's market or a particular restaurant. Possible classes: Crops or products. You could make a certain field a job and bell peppers a class and get special reports on how well you utilized a certain field or how well your bell peppers did relative to other crops. You could make each new lamb a job and record essential information and also make meat a class and then run special reports on the individual animals, and on the segment of your business overall. Jobs or classes are also a good way to separate out on-farm events. You want to know how much the events cost you but you do not want to set up new accounts to track all the expenses because the reports will be hard to read and it will crowd out the essential information your accountant or banker wants to see.

Use the chart of accounts to tell a simple story about the whole farm and to share with your accountant and banker. Use jobs and classes to give yourself and your partners more nuanced information to make internal decisions.

6.4

Case Study Review—When Good Farms Go Bad

Introduction 315

Case Study Review 317

Introduction: Case Study Review—When Good Farms Go Bad

UNIT OVERVIEW

In reviewing the case study together, the instructor and class will address many of the issues presented in Units 6.0–6.3 and apply them to a farming operation.

OBJECTIVES:

1. Understand problems that can emerge in small-scale diversified farming and marketing operations
2. Integrate learning about how to apply business planning, cash flow, accounting, and tax issues from the curriculum into real situations

ACTIVITIES:

1. Either read or hand out to the class the follow-up story for Bonnie, Clyde, and JJ (see next page "Case Study: When Good Farms Go Bad"). It includes the 2-paragraph introduction from Unit 6.0 as a refresher before presenting the rest of the case.
2. Discuss: What could the partners of BeeBopABlueBlop have done differently to protect themselves?
3. Listen for the following items. If no one offers any of the items, share it with the class.
   - Kitchen safety training
   - Local health inspection rules
   - Health insurance
   - Food safety for on-farm meals
   - Food safety for manufactured food
   - Permits for on-farm meals and events
   - How did they justify spending so much time on full moon jams?
   - Properly permitted buildings
   - Minimum wage violations
   - Payroll tax violations
   - Diversifying your markets—not relying too much on one customer
   - Corporate status instead of general partnership status
   - Understanding when to get a CPA to help with your taxes
   - Understanding your liability insurance and getting special coverage for special events
   - Clear agreements about personal and business assets
   - Clear agreements about how a partner or shareholder can leave the business
4. Further discussion: Encourage students to share stories of farm missteps or failures and discuss how more planning could have made the farm more resilient

Case Study: When Good Farms Go Bad

Introduction

Bonnie and Clyde purchased a farm with a house, a barn, outbuildings, and a half-acre of productive blueberry bushes. Both plan to have off-farm jobs. They plan to use their off-farm income to plant more acres of blueberries over the years. They plan to convert the barn into a commercial kitchen to make blueberry jam. They will use the rest of the barn for community events, which will create more customers for the jam. JJ is going to work full time on the farm. She will plant the rest of the land to row crops, establish a CSA and sell at the local farmers' market and develop wholesale accounts.

The three friends decide that Bonnie and Clyde will treat their house and land as 100% their personal asset. They will rent the land and barn to the farming partnership. JJ will be the main farmer in the farming partnership and will receive a salary or "guaranteed payment" before the net profit or loss from all farming activity is divided equally.

They named their farm BeBopABlueBlop Farm and got to work.

Five years later…

Bonnie and Clyde invested part of their salary into planting another acre of blueberries each year. They also remodeled the barn and put in a kitchen. JJ has become locally famous for her full moon jam parties. People come from all around to help her make jam while local musicians jam and then there is dinner and dancing. She has developed a 20-person CSA and sells at the farmers' market once a week.

JJ's biggest client is the La Casa Saigon, the famous fusion restaurant downtown. She sells them all of her flowers and herbs and most of her vegetables. This is why she has been able to focus on the full moon jam parties instead of growing the CSA and expanding to new farmers' markets.

JJ does all the bookkeeping for the farm, and, after using a CPA for the first year to learn what forms to use she took a tax class and started preparing the farm tax returns on her own. She does not find it difficult; she enters all of her expenses in the expense accounts in QuickBooks every week and she balances her bank statement every month so she knows her books are accurate. At the end of the year she uses Turbo Tax to transfer all of her expenses from her QuickBooks to the right line on the farm tax return.

The farm is busy, though, so she has taken on an apprentice—a young man who wants to start a farm of his own one day but wants to learn from someone else first. In exchange for helping out with labor such as weeding and harvesting, Robert gets to live in the hayloft above the barn and use the commercial kitchen and learn other aspects of farming from JJ and Bonnie and Clyde when they are around.

It was a good life. Then things started to go wrong.

It was the full moon jam of August, and the kitchen was jamming. JJ and a guest were carrying a giant vat of boiling water across the kitchen and JJ slipped. JJ broke her arm and the guest's arm and leg were scalded. While Bonnie drove JJ and the guest to the hospital, Clyde and Robert jumped into the kitchen to direct the dinner preparations. After dinner there was dancing as usual but people left early.

The next afternoon while JJ napped (on painkillers) and Bonnie and Clyde were taking her place at the farmers' market, the health inspector showed up. Fortunately Robert was there to show the health inspector around the kitchen. It turned out several guests had been admitted to the hospital for food poisoning, and they had all been at the full moon jam.

The health inspector inspected the kitchen and shut it down. It was not built to code and the violations were too many to count. He also condemned the entire inventory of jam and issued a fine for failure to obtain a permit for the on-farm dinner. When he saw that Robert was sleeping in the loft above the kitchen he condemned Robert's living space as well and called the labor standards department. An hour later an auditor from the labor department showed up and asked Robert how he was compensated. Robert explained his arrangement. The labor auditor issued a fine for sub-standard labor housing and failure to pay minimum wage, and called the state and federal payroll auditors to let them know that there were payroll tax violations at BeeBopABlueBlop Farm.

Meanwhile at the farmers' market, Bonnie and Clyde ran into Jaun Nygn, the owner of La Casa Saigon. Jaun told them he had heard that lots of people got sick at the full moon jam and he was no longer going to purchase from BeeBopABlueBlop.

A month later it was September and JJ still had her arm in a cast. Robert had quit. There was no money to pay for help with harvest because La Casa Saigon had not purchased anything in a month. The fines from the health inspector and the labor department were huge, and then one day the Sheriff showed up and served Bonnie with notice that she was being sued by the man who was scalded at the full moon jam.

Bonnie had a small inheritance from her grandmother, but her lawyer told her that since BeeBopABlueBlop was a general partnership, Bonnie could lose all of her personal assets. It turned out JJ did not have health insurance, and the general liability policy for the farm did not cover the guest because the accident happened during a special event; the policy specifically excluded activities other than the normal activities of farming.

In October JJ opened the mail and found a notice from the IRS income tax division notifying her of an audit. She later learned that someone had called the IRS tip line to report their suspicion that she had not treated her blueberry plantings or blueberry jam business appropriately. She took her QuickBooks and tax returns to the local CPA and came back with a sick stomach and a headache. Her CPA had told her that every single tax return she had filed for the past four years was wrong, and that all of the partners would owe back income taxes as well as interest and penalties on the back taxes for all the time that the back taxes were owed and not paid. The CPA estimated it would cost about $1,000 per year to fix the mistakes, calculate the correct tax, and file the amended tax returns.

In November, Clyde decided he could not take the stress of farming anymore. He announced that he wanted out of the partnership and demanded that JJ and Bonnie cash him out of his 1/3 interest. When he and Bonnie went to meet with their accountant they learned that they did not have a written agreement about who owned the blueberry bushes they had planted over the past four years. It was not clear how much the partnership would need to pay to cash Clyde out. Not that it mattered since there really was not any cash at that point except for Bonnie's small inheritance from her grandmother.

UNIT 7.0

Food Safety on the Farm

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Introduction: Food Safety on the Farm

UNIT OVERVIEW

For a variety of reasons, including the demands of buyers and insurance companies, food safety has become a major concern in farming operations. Federal regulations governing food safety on the farm are still developing, but even in their absence, all growers should be aware of and employ practices that minimize the risk of food-borne contamination. This unit introduces the concept of food safety, and the steps involved in the developmnent of a food safety plan based on "good agricultural practices" (GAPS).

The first lecture discusses some of the reasons behind recent food safety concerns, reviews the categories of microbes and the pathogens most involved in food contamination, and discusses the need for a food safety plan and the current status of the federal Food Safety Modernization Act (FSMA).

Lecture 2 discusses potential sources of pathogens, practices that minimize risks of microbial contamination, and the use of logs, checklists, and standard operating procedures in implementing and tracking good agricultural practices. The concepts of conservation and biodiversity on the farm as they relate to food safety are also introduced, along with third party audits and sources for help in developing a food safety plan.

MODES OF INSTRUCTION

> LECTURES (2 LECTURES, 1 HOUR EACH)

LEARNING OBJECTIVES

CONCEPTS

- Food safety as it applies to farming operations
- Sources and types of microbial contamination
- Goals of a food safety plan and the use of good agricultural practices (GAPs)
- Food Safety Modernization Act (FSMA) and its potential impact
- Assessing and minimizing risks of microbial contamination on the farm
- Importance of biodiversity considerations
- Sources of help in developing a food safety plan

Lecture 1: Introduction to Food Safety, Risks of Microbial Contamination, & Food Safety Plans

A. What Is Food Safety and What Are the Risks?

1. According to the USDA Food Safety and Inspection Service, food safety is defined as "A suitable product which when consumed orally either by a human or an animal does not cause health risk to consumer." There are three potential sources of health risks caused by food:
   a) Chemicals – Improperly stored, handled, or used chemicals can be a source of contamination. Examples of chemicals used in food production include: fertilizers, sanitizers, synthetic and non-synthetic pesticides/herbicides/fungicides, equipment lubricants, cleaning agents, etc.
   b) Physical – Examples include screws, glass, hair, staples, wood, jewelry, insects, etc.
   c) Microbial (biological) – Examples include viruses, bacteria, parasites, and fungi
      i. Microbes that are disease causing are also referred to as pathogens. Illnesses caused by eating foods that are contaminated with microbes are referred to as foodborne illnesses (or food poisoning).
      ii. When it comes to food safety, all three sources are important to understand from a risk perspective, but microbial contamination is the biggest concern. This is in part because human sensory system cannot see, taste, smell, or feel pathogens, whereas we can often detect chemical/physical contamination. The Centers for Disease Control estimates that 1 in 6 people are sickened nationally each year from food borne pathogens (source: *http://www.cdc.gov/foodborneburden/)*.

B. Why is Food Safety Becoming Such a Big Issue?

Fresh produce is often eaten raw—there is no "kill-step" or action taken to kill bacteria/pathogens (in contrast to milk, for example, where pasteurization is used as a "kill step" to eliminate pathogens). Produce that is not cooked is therefore considered higher risk for pathogens than those fruits and vegetables that are cooked. Since produce has been eaten raw in the past, why has food safety become a more pressing concern? There is no single answer; instead, a number of factors have contributed to heightened awareness of risks related to fresh produce.

1. Recent outbreaks of foodborne illnesses related to on-farm practices (e.g., spinach-based E. coli O157:H7 outbreak in 2006 and cantaloupe-based Listeria outbreak in 2010) have led to more focus and due diligence from producers to ensure they are doing what they are saying to ensure food safety
2. Changing environmental factors
   a) Putting more constraints on agricultural production
      i. More urban pressures are creating more stress on the environment: e.g., development infringes on both wildlife habitat and on farmland, pushing farming onto former wild lands, and leading to a potential increase of wildlife activity on farms.
      ii. Increased competition for the same diminishing resources: e.g., water is becoming more and more valuable as sources are limited and droughts affect supplies; therefore, the quality of water available for agricultural/food production use may at times be questionable.
   b) Microbial pathogens have adapted to changing environmental conditions; many have become resistant to antibiotics.

3. Changing science leads to more knowledge, understanding, and awareness
   a) Advances in science and technology have led to more finite detection of both chemical and microbial presence in the environment. Contaminants were once measured at ppm (parts per million), but now tests can be done to find evidence of contaminants at ppb (parts per billion) or ppt (parts per trillion).
      i. Most contaminants are expressed as ppm—which if expressed as a percent would be 0.0001%; another way of looking at it is that you have 1 milligram added to 1 liter of liquid. This is the unit of measurement the government uses to express exposure standards and create guidelines to protect the public from harmful substances that can cause serious health effects.
4. Human immune systems have become more sensitive
   a) Years of conditioning to a "clean" environment and exceptional water quality have led to greater sensitivities with respect to our bodies' ability to deal with foreign agents such as bacteria. This is why national standards for contaminants may at time differ from international standards. For example, most North Americans would fall sick if they were to drink tap water in developing countries; however, for the most part those living in such countries are able to drink the water without getting ill.
   b) Antibiotic resistance has developed due to misuse and abuse of antibiotics (e.g., the use of antibiotics to treat viral infections that don't respond to antibiotics)
   c) More virulent strains of pathogens have adapted to the changing environment/stresses
   d) Those with weak or compromised immune systems are more susceptible / vulnerable to food borne pathogens. Those with underdeveloped immune systems (such as babies), those with "tired" immune systems (those over 60 years of age), and those with compromised immune systems (e.g., HIV positive and diabetics) are more vulnerable to pathogens than middle-aged adults. Middle-aged adults can unknowingly carry pathogens and transfer (cross-contaminate) anything they come in contact with. Symptoms of food borne pathogens resemble those of a cold or flu; upset stomach, nausea, vomiting and diarrhea.

C. Microbes: An Overview

1. Thousands of microbes (organisms too small to see with the naked eye, e.g., bacteria, viruses, parasite) are naturally present in our everyday environment. They can be found all around us in the soil, the air, on our skin, in our water, etc. Microbes include those bacteria that cause disease.
2. Microbes simplified:
   a) Microbes are either anaerobic (not requiring oxygen to live or grow) or aerobic (requiring oxygen to live and grow)
   b) Microbes can be divided into 3 general categories:
      i. The Good – Added to food to add flavor, create texture, and preserve
         - Naturally found in our intestines to aid in food digestion.
         - Used in food processes (commonly used in making cheese, wine, beer, etc.)
         - Introduced in foods to help with human functions (e.g., bacterial cultures in yogurts)
      ii. The Bad – Spoil or make the food go "off/bad"
         - Mold on bread
         - Souring of milk
      iii. The Ugly – Microbes that cause illnesses (also known as pathogens). Illnesses can range from mild cases of diarrhea/vomiting to life-threatening cases involving hospitalization and in some cases death.

- People who are more susceptible to falling sick or have a higher chance of serious reactions include: pregnant women, older adults, person with chronic illness and/or who are immuno-compromised, and children under 5 years of age

c) Some viruses (e.g., Hepatitis A and Norovirus) can also be spread via food if the handler is carrying the virus. People who are infected may not show any symptoms until they have had the virus for a few weeks.

3. To multiply, microbes need the following:
   a) Water/humidity/moisture
   b) Food/nutrients – Often readily available in the environment in which bacteria thrive
   c) Temperature – Warm is better than cold in most cases
   d) Source/host – Anywhere that pathogen/bacteria can survive (i.e., humans, food contact surfaces, harvesting tools, soil, etc.)
   e) Time – Under ideal conditions, bacteria double every half hour
      i. How they spread: Some microbes are naturally occurring in the environment (e.g., in soils) while others occur under certain environmental conditions (e.g., damp, dark locations that are hard to clean can easily harbor microbial pathogens). Microbes can spread from a host or source via direct contact (e.g., when an infected person handles food, or contaminated water comes in contact with food), via airborne transmission, or through contact with an inanimate object (e.g., from contaminated water to tools, which can then spread the microbes to food).

D. Pathogens of Particular Concern

Several pathogens are of particular concern due to their role in food-borne illness (for more information, see Forsythe 2010 in Resources)

1. E. coli: Bacteria that lives in both human and animal intestines. Although most strains of E. coli are harmless, some can make you sick.
   a) E. coli O157:H7 is of particular concern, as only a few cells are needed to cause illness. This bacteria can tolerate a wide range of conditions and therefore can easily thrive in many agricultural environments. It can quickly cause illnesses among young children, the elderly, and those with a compromised immune system. It may cause bloody diarrhea, abdominal pain, vomiting, and sometimes kidney failure and even death. E. coli O157:H7 makes a toxin called Shiga toxin and is known as a Shiga toxin-producing E. coli (STEC). There are many other types of STEC, and some can make you just as sick as E. coli O157:H7 (source: Foodsafety.gov). Both large- and small-scale operations have been the source of produce-related outbreaks.
2. Salmonella: Bacteria prevalent in the GI tract of many animals, including birds, mammals, reptiles, and insects. Route of transference for Salmonella is usually fecal oral contamination (usually food or water contaminated by feces).
3. Listeria monocytogenes: Bacteria found in soil and water and some animals, including poultry and cattle. Listeria can also live in food processing and packing areas / facilities. It has a tendency to collect and thrive in cracks in the floor and drains.
   a) Unlike many other bacteria, Listeria can grow even in the cold temperature of a refrigerator. Listeria monocytogenes can grow without oxygen (anaerobic) in temperatures that range of 1-45°C (34-113°F) and survive in high-salt foods (25.5%). It is killed by cooking at temperatures above 260°C (140° F) and pasteurization.
4. Shigella: a family of bacteria that can cause diarrhea in humans. People with shigellosis shed the bacteria in their feces. The bacteria can spread from an infected person to contaminate water or food, or directly to another person. Getting just a little bit of the Shigella bacteria into your mouth is enough to cause symptoms.

a) Shigellosis is an infectious disease caused by Shigella and is most commonly seen in child- care settings and schools. Shigellosis is also a cause of traveler's diarrhea, from contaminated food and water in developing countries (source: Foodsafety.gov). Examples of crops that infected consumers with Shigella include: cilantro, green onions, parsley and lettuce, to name a few. Shigella was introduced into these crops either as a result of water contamination or human (fecal-oral route).

5. Note that although the above-mentioned pathogens are most often cited as playing a role in food-related illnesses, there are a number of other pathogens associated with produce-related outbreaks of illness, including Campylobacter, Cyclospora, and Giardia.

E. How Do We Address Food Safety?

1. As good stewards of the land, we are also good stewards of the produce we grow. Good food-handling practices throughout the supply chain (from the field to the plate) protect against foodborne illnesses. Improper handling, preparation, and storage can all result in foodborne illnesses. Although there is no such thing as zero risk, risk can be minimized.
   a) At the farm level, adopting good agricultural practices, or GAPs (see sidebar below and more about GAPs in Lecture 2, Assessing and Minimizing Food Safety Risks) and conducting proper risk assessments can help with minimizing the risk of contamination. Both of these components are key elements of a food safety plan.
   b) Food safety does not begin and end at the farm level. Anyone involved in food production, e.g., in a home/community garden, must understand the various levels of risks associated with their practices and how they impact food safety. Similarly, anyone involved with food preparation, whether it is in a restaurant or home environment, must be familiar with good practices associated with preparing, handling, and storing food.

GAPS (good agricultural practices): Practical and reasonable practices that can be adapted or adopted on the farm/garden to reduce/minimize the risk of physical, chemical, and microbial contamination. GAPs should be documented; without documented it is difficult to prove what you did and when (see Appendices for examples of forms used for documentation). Just as each farm and/or operation is unique, each GAPs plan is also unique, as it is tailored to be operation specific.

F. What Is a Food Safety Plan and Why Do I Need One?

1. A food safety plan is an evolving, written plan that considers each operation's uniqueness, and highlights the operation's key risk areas and what is being done to minimize the potential risk. This document provides evidence that you are "Saying what you are doing, and doing what you are saying."
2. Whether or not you currently need a food safety plan may depend on the commodity or product you produce (see below), your buyer(s), the end user, the insurance company providing your farm insurance, and/or current regulations and policy. Be aware that although your operation may not currently be required to have a food safety plan in place, this situation is fluid and may change (see below on the Food Safety Management Act, or FSMA).
   a) Most buyers, particularly at the retail level, have broken produce into high, medium, and low risk categories:
   - High Risk = E.g., leafy greens, herbs, green onions, sprouts, cantaloupes (melons), tomatoes, nuts and berries (specifically strawberries, raspberries, and blackberries)
   - Medium Risk = E.g., peppers, cucumbers
   - Low Risk = Items that are typically cooked before eaten. E.g., potatoes, asparagus, artichokes, etc.

3. A number of growers already have a food safety plan for their operation, often in response to requirements of distributors, wholesalers, and other buyers (e.g., restaurants, local stores). At an international level it is seen as a non-tariff barrier to entry; nationally, many major retailers, food service providers, and manufacturers are demanding not just a plan, but also 3rd party verification of the plan (some operations may have multiple 3rd party audits, as there is currently no one standard audit protocol that meets every buyer's requirements). At the local level there is a growing demand to recognize the importance of understanding food safety and implementing good agricultural practices (GAPs).
4. There is no one set plan, policy, or regulation that identifies what needs to happen regarding a food safety plan; rather it is a moving target that most likely will continue to evolve as more research on how food is contaminated becomes available.

The Food Safety Modernization Act

The current policy/regulation driving change in the industry is the U.S. Food and Drug Administration (FDA) Food Safety Modernization Act (FSMA). Although it was signed into law in 2011 it is still being developed and as of this writing, is not yet finalized.

What is FSMA and what does it mean for food producers?

The Food Safety Modernization Act (FSMA) is the first major overhaul of our nation's food safety practices since 1938, and it includes new regulations for produce farms and for facilities that process food for people to eat. FSMA authorizes new regulations that will affect certain growers and certain facilities. Specifically, FSMA mandates the establishment of:

- Standards for produce production (Produce Rule), and
- Food safety measures for facilities that process food for people to eat (Preventive Controls Rule).

The rules outlined in FSMA are not yet law—FDA is in the process of developing them. In 2013, they released what was effectively a "first draft." In response, thousands of organizations, experts, growers, and eaters weighed in with comments on the draft rules aimed at fixing FSMA so that our nation can have a safe and sustainable food supply.

The National Sustainable Agriculture Coalition, *sustainableagriculture.net,* is a good resource for up to date information on the progress of the FSMA's development and its potential impact on small- and medium-scale operations.

What does the Produce Rule Establish?

(Source: *http://www.fda.gov/downloads/Food/GuidanceRegulation/UCM345226.pdf)*

- Science-based minimum standards for the safe growing, harvesting, packing and holding of produce on farms, particularly in the following major areas:
- Worker training and health and hygiene
- Agricultural water
- Soil amendments of animal origin
- Domestic and wild animals
- Equipment, tools and buildings
- Sprouts
- It covers fruits and vegetables in the raw or unprocessed (natural) state.

It does not apply to produce that is:

- Rarely consumed raw (e.g., potatoes, turnips);
- Grown for personal consumption; or,
- Destined for commercial processing, such as canning that will adequately reduce microorganisms of public health concern.

Preventive Controls Rule

(Source: *http://www.fda.gov/downloads/Food/GuidanceRegulation/UCM345224.pdf)*

Would revise the definitions for the following:

- Critical control point
- Food contact surfaces
- Microorganisms
- Plant
- Safe moisture level
- Sanitize

FSMA is currently going through a review and comment period, the first revisions were made and it is now its second iteration. The regulation is targeted to be finalized by October of 2015. For more up to date information see the Food and Drug Administration (FDA) website:

www.fda.gov/Food/GuidanceRegulation/FSMA/ucm247559.htm

5. Although it may not be required and some grower/producers may be exempt from the policy/regulations, food safety is everyone's responsibility and good practices should be understood and adopted by everyone throughout the supply chain, including the end consumer. The key to all food safety plans is to understand the risks and put strategies/protocols/policies and monitoring in place to minimize the risk of contamination. The point of the plan is to ensure that only those production methods that minimize the risk of contamination are followed.
6. Food safety practices and GAPs are not limited to the farm, but should be practiced by anyone who is producing/growing food for consumption
7. Anyone along the supply chain may be asking for a food safety plan (buyers, including wholesaler distributers, food service, farmers markets, retail stores, processors/packers); however, the consumers (you and me as the final customer) expect our purchase to be safe.

Lecture 2: Assessing & Minimizing Food Safety Risks

A. Where Do Pathogens Come From? Assessing and Minimizing the Risks and Developing Good Agricultural Practices (GAPs)

Pathogens that cause food-borne illnesses can come from a number of sources, including the intestinal tracts and feces of wild and livestock animals (mammals), cross contamination between humans and animals transferred to produce, time and temperature mismanagement, and poor personal hygiene. Pathogens can enter the food supply in the field, or during harvest, packing, storage, or transport.

In assessing an operation's food safety-related risks, there is no "one size fits all": each operation must be carefully evaluated based on its own unique setting and situation, and the appropriate steps to ensure food safety applied. The following may not apply to every operation and therefore should only be considered as examples of risk-based questions and Good Agricultural Practices (GAPs). See Appendix 1, Farm Risk Assessment Checklist, for additional details.

1. Water
   a) Depending on the source and how water is used or stored, water can be a carrier and vehicle for transferring pathogens. *E.coli, Salmonella* and *Cyclospora* are examples of pathogens that may be found in water; each has been identified as the cause of foodborne-illness outbreaks associated with produce.
   b) Water is used in various ways both on the farm and in the garden, including but not limited to: irrigating, chemical application (via fertigation, pesticides/herbicide/fungicide applications, and sanitation), washing tools/equipment, washing and cooling produce, ice making. Note that water quality, including chemical composition, can impact the effectiveness of chemicals.
      i. Know and document the source(s) of water and its intended use.
      ii. Test the water source(s) for fecal coliform and generic *E.coli.* Note that generic E. coli is used as an indicator organism and only indicates the presence of fecal contamination. Frequency of testing should be based on the level of risk associated, as dictated by the water source and how it will be used. Water that will be in direct contact with produce, e.g., post harvest spray, sanitation, or wash water should be potable from a microbial standpoint. City water does not need to be tested by the farmer; the water service can provide the needed test results—usually online or at their main office. If you're going through a food safety audit you will need to have the test results (generic *E. coli* at this time) on file.
         - Generally speaking, risk levels decrease moving from: Surface water ↪ uncovered well ↪ covered well ↪ city water
      iii. Surface water sources should be thoroughly examined (via risk assessment) to understand all potential sources of contamination including upstream and adjacent land use.
2. Soil and soil amendments
   a) Healthy, fertile soils are naturally home to many organisms, including microbes. Growers often amend the soils with manure (raw or composted*), compost, and other amendments such as lime (calcium carbonate) or gypsum (calcium sulphate). *Note that according to the EPA, composted manure must attain temperatures of 131ºF-149ºF for at least three days and must be been turned at least 5 times in a 15-day period.

b) Manure/compost is often readily available to use as a source to help increase soil organic matter and add nutrients. However, improperly handled, stored and/or treated manure or manure-based compost can be of major concern with respect to food safety, as animal feces are a source of microbes and pathogens. Proper management can reduce contamination risks (see also Managing Manure Applications, *ucfoodsafety.ucdavis.edu/files/26444.pdf)*. Be aware of the following:

i. Source of manure? (Chicken, horse, steer, mushroom, etc.)

ii. Where is it stored? And, how?

iii. How, when, and where is it used?

- Are there requirements for specific days to harvest after manure has been applied? (see below)
- Where and who is recording this?
- Who is verifying that crop is not harvested prior to the intended day?
- Are there specific instructions for employees who may come in contact or track this with their shoes/clothing? What are the instructions?
- How and where is equipment/tools treated/washed upon application? Who is responsible for this?

c) If using raw manure, it should be applied at least 90 days prior to harvest for those crops not touching the ground or 120 days prior to harvest for crops in contact with the ground. The longer the interval between application and harvest the better. Note that these number of days to harvest are based on California Certified Organic Farmers' requirements; other certifying organizations may have different requirements.

3. Wildlife and rodents

a) Wildlife and rodents can shed pathogens in their feces

i. Wildlife is a natural part of the environment in which we farm. Risks have to be evaluated based on findings in the operation and nearby activity that could be a source of cross contamination. Some of the most common type of wildlife found or seen in fields include flocks of birds, deer*, rodents, and wild pigs. As part of risk assessment, the following should be included:

- How and when is wildlife/rodent presence monitored? What are they looking for: tracks, droppings, trampling etc.?
- Is there any significant risk of cross contamination from nearby activity (e.g., flocks of birds moving between your operation and an adjacent cattle feedlot)?

(*Deer in California have not been found to be a source of *E. coli* 0157:H7)

ii. Rodent activity may be more difficult to monitor. It is important, however, that growers evaluate whether rodent activity is occurring, and if so, where, and why.

- Ensure that containers, tools, and equipment used to harvest are located in an area where they will not be contaminated and are not stored on the ground in the fields.
- Ensure your property is well maintained, e.g., grass is kept short to limit/prevent rodent habitation (but see below re: conservation and biodiversity considerations); avoid clutter; keep materials off the ground—store drip tape, irrigation pipes, etc., on pallets; maintain adequate spacing between storage pallets/materials in order to complete visual monitoring of any potential activity

4. Domestic animals and livestock

a) Just like wildlife, domestic animals and livestock can host pathogens in their gut. It is important to keep them out of production, packing, and storage areas. Particular care and consideration should be given when domestic animals are unwell and have diarrhea.

b) Other considerations include the location of livestock activities relative to production fields and access to water sources. Livestock operations upstream or upwind from crop fields may pose a risk.

5. Human activities (hygiene and illnesses)
   a) People are not always aware of the potential for transferring pathogens as a result of their behavior and practices. Developing this awareness and good food safety/hygiene habits is critical, and is especially important when people are directly handling produce (e.g., harvesting or packing). People must consider their activities and potential impact on food safety: training and education are key to reducing the risk of contamination.
   b) What aspects will the employees be trained in? Who is conducting the training? When does the training take place? How often will the training occur? Here are some examples of training considerations and practices (see also Appendix 2, Employee Training Policy and Instructions):
      i. Hand Washing –
         - Who is required to use the hand washing units?
         - How are they meant to be used? Wet hands? Apply soap? Lather and scrub front and backs of hands (minimum 20 seconds)? Rinse? Dry with paper towel (taps shall be turned off with paper towel). Point out that gloves and/or hand sanitizer are not a substitution for hand washing. Reusable gloves must be washed and follow the same policy as hand washing.
         - When is it necessary to wash hands? (Before entering the field, after a break, after using the toilets, after smoking, after coughing/sneezing directly into hands)

      ii. Illnesses/cuts, wounds and blood (see Appendix 3, Injury/Illness Log)
         - What is someone supposed to do in the case of illness/cuts:
            - Who do they go to for help?
            - Where is the first aid box?
            - Where and who is recording what happened and how it was dealt with?
         - What happens if equipment/tools/containers become contaminated?
   c) Visitors – All visitors should understand and comply with the farm policies with respect to hygiene, illness and limitations of access. Visitors should understand that in order to access certain areas they will need to be accompanied by someone involved in the operation.
      i. GAPs would require visitors to sign-in, acknowledging that they are made aware of the visitor policy (see Appendix 4, Visitors Policy and Log Sheet, for an example). Although a sign-in system may be difficult to institute depending on the type of operation (e.g., U-pick, agri-tourism), it is good to have posters/signage that states what is required of visitors as it applies to food safety.
   d) Cross-contamination: How is daily activity a potential for cross contamination? E.g., consider movement between production and non-production fields. Is there any activity in either location that could be a source of contamination?
   e) Break/eating areas: Are there separate and designated areas (with a posted sign), including designated smoking areas? Are people using these locations? Gum/candy should also be limited to break areas.
   f) General hygiene: Regular cleanliness, including trimmed and clean nails, long hair is tied back, where necessary hair/beard nets are worn, clean clothes, coughing/sneezing into shoulder vs hand.

6. Harvest and Post-Harvest (packing, storing, transporting; see also Appendix 5, Pre-Harvest [GAPs] Checklist)
    a) Harvest and Post Harvest: As discussed above, take into consideration human hygiene/ illness, wildlife, and rodents, as well as the following:
        i. Harvest:
            - Where is harvested product kept in the field, prior to reaching its intended destination? Should it be covered?
            - Are harvested product containers stacked? If so, do they ever have direct contact with the ground, or are they stored on something to prevent ground contamination (i.e., pallets)?
            - Tools, Equipment/Containers
                - Who is cleaning the tools/equipment?
                - How often?
                - Where are they cleaned and stored?
                - What water source is used to clean?
                - Before using are they being inspected (for cracks, breaks or other damage), if so by whom?
                - Where do employees leave used, dirty, or blood- contaminated tools? Who do they report blood-contaminated tools/equipment to?
        ii. Post-Harvest:
            - Storing
                - Once the product comes in from the field, where and how is it being stored? Cooler? Refrigerator? Reefer? Barn/shed? Covered area?
                - How clean is this area? How is pest activity being monitored in the area?
            - Packing
                - What are they packed into? Where is packing taking place? How is the equipment being cleaned and sanitized? How often? What is the water source?
                - Is product washed? What water source is used? Is it flumed? Is a chlorination/ sanitation step added, if so, how often and at what rate?
        iii. Transporting – Both from the field to packinghouse, and to final destination
            - When are vehicles and other transport means inspected?
            - Who is to inspect them, e.g., for cleanliness, pest activity, functionality, cross contamination?
            - Where is this inspection information recorded and by whom?
            - What happens if they are not clean?
7. Land use (previous and adjacent)
    a) What is happening around us can also be a potential source of contamination
        i. Always evaluate the location itself and its activities such as:
            - Are there any livestock? Where is their location relative to crop-producing regions?
            - Is there any surface water? Where is it located and is it potentially being contaminated by either something specific to your operation or from anything happening upstream?
                - Manure leachate?
                - Chemical contamination from improper use/storage of chemicals?
                - Livestock access or extreme wildlife activity in and around water or water source?
                - Location of portable toilets and hand washing units?
                - Storage of trash, old batteries, etc.?

ii. Understand what is happening on nearby or adjacent properties and the risk of potential contamination from adjacent land use
    - Surface water contamination from upstream?
    - Feedlots nearby?
    - Manure storage near property line
        - Are they covered?
        - Leaching? Blowing manure dust?
    - Animal barns
        - Vents blowing towards crop?
    - Riparian and greenbelt areas
        - Are there animal feces coming onto your property?

iii. Setbacks/Buffers
    - What requires setbacks or buffer zones?
        - Between fields, yours and your neighbors
        - Between crops
    - Is there a hedgerow or windbreak that can prevent or minimize dust from blowing into your growing area?

iv. Barns
    - Do barns hosting livestock have vents with downspouts on them?
    - What happens if dust is blowing across the field into crop area?

v. Flooding
    - Has flooding occurred? When was the last flood? What is happening in and around the flood area that could lead to contamination of the growing area?
    - Risks increase with feedlots, garbage dumps, animal husbandry operations, factories, etc.

8. Chemicals
    a) Who is to apply/handle chemicals?
    b) How and where are they stored? Who has access to the storage?
    c) Chemical/Spray Application
        i. How is the application equipment calibrated?
            - How often?
            - By whom?
            - Where is this documented?
        ii. What water source is used?
- Where are the filling stations?
        iii. Where and how is the chemical mixed?
        iv. How are records kept and who verifies appropriate days to harvest intervals were satisfied?
        v. How and where is the equipment cleaned?

B. Developing a Food Safety Plan

1. As discussed above, in order to develop a food safety plan or implement GAPs, growers must first understand what their risks are throughout the complete growing cycle, from soil preparation prior to planting to transporting final product(s). A number of tools are used to help growers understand/evaluate the risks and develop a plan based on minimizing risks specifically for each farm. These tools may include:

a) Process Flow Diagram – Used to understand what is happening throughout the operation (step by step)
b) Risk Assessment / Hazard Analysis – Defines what potential biological (microbiological), chemical and/or physical risks may exist at different steps from production to shipping. See Appendix 1 for examples.
    i. After identifying the potential risks that may exist, it is important to understand and document what if any action could be taken to prevent or minimize the potential of any contamination occurring.
c) Standard Operating Procedures (SOPs) – Designed to ensure that everyone (staff, visitors, and owners) follows the same set of rules/procedures. SOPs provide details about a certain activity and who, what, when, where and how it should be carried out to reduce the risk of that specific activity contaminating product. Examples of SOPs may include:
    i. Employee training
    ii. Equipment cleaning
    iii. Blood contamination of product
    iv. Cleaning blood-contaminated tools
    v. Cleaning food contact surfaces
    vi. Storing product
    vii. Storing packaging material
    viii. Water sampling for irrigation/wash water

    (Note: Some plans may include SSOPs; these refer to sanitation standard operating procedures, which are SOPs that are specific to cleaning)
d) Policies
    i. Hygiene and produce handling
    ii. Disposing of blood-contaminated product
    iii. Reporting Illness / Injury
    iv. Visitors
e) Record keeping – Helps to prove (verify) that the appropriate steps were taken to minimize risk; records are verified/monitored to ensure ongoing prevention or risk reduction
    i. Checklists and Logs – E.g., training, visitors, pesticide application log, pH and chlorination monitoring of wash water, soil amendment application, harvest, cooler storage temperature, shipping, cleaning (tables, surfaces, transport vehicles, etc.), cleaning and servicing of sanitation units (hand wash stations and toilets), pest monitoring, during harvest, pre-harvest, etc. For examples see Appendices.
    ii. Letter of Guarantee – E.g., compost, packaging material, new equipment, 3rd party pest management program, contract chemical application companies, etc.

    Collectively these tools provide evidence that risks have been evaluated and steps are in place to help monitor, prevent, or minimize risks: your food safety plan is a "Say what you do, and do what you say" written description of your farm operations..

2. Your food safety plan/GAPs plan will change over time, either as your practices evolve change or as tools, technology, or science evolve. It is essential to evaluate the plan and policy at least once a year to ensure information and material is current. Logs and policy forms should be dated to demonstrate ongoing changes and updates.
3. Other production methods and food safety
    a) Food safety and GAPs apply to all forms of agricultural or food-producing methods including:
        i. Organic production

ii. Greenhouse production
iii. Agritourism
iv. Agroforestry – Including alley cropping, silvopasture, forest farming
v. Wild harvest/collecting

4. Conservation considerations
   a) Some requirements imposed by produce buyers have led to impacts on efforts to improve biodiversity and minimize farming's effects on wildlife. These impacts have included removing on-farm conservation plantings, such as hedgerows and grassed waterways, and destroying wetlands and other vegetation surrounding fields.
   b) Work by the Wild Farm Alliance (*wildfarmalliance.org*) and other organizations concerned with farming and wildlife has shown that a healthy, diverse ecosystem combined with careful management can minimize the presence and spread of pathogens that cause foodborne illness. E.g., see Resources for a link to the Wild Farm Alliance's *A Farmer's Guide to Food Safety and Conservation: Facts, Tips and Frequently Asked Questions.*

C. Third Party Audits: Who Can Help with Developing a Food Safety Plan

Preparation for food safety audits—resources online and various agencies

- Onfarmfoodsafety.org
- Primus Lab website – Has templates
- ABC Farm Food Safety – Template

Mock Audit – Some agencies willing to perform a food safety mock audit at no cost

- Community Alliance with Family Farmers (CAFF) food safety program provides this to its members

Audit certification – Annually

- CDFA $92/hr. plus travel (2013)
- NSF $600 plus travel (2013)
- Primus Lab $400 plus travel (2013)

  Special price given when three or more farms in a 75-mile radius sign up for an audit appointment at the same time

Resources & References

PRINT RESOURCES

McSwane, David, Richard Linton, Anna Graf Williams, Nancy Rue. 2008. *Essentials of Food Safety and Sanitation, Fifth Edition.* Prentice Hall.

Forsythe, Stephen J. *The Microbiology of Safe Food, Second Edition.* 2010. Wiley-Blackwell.

> *This detailed (496-page) volume reviews the production of food and the level of microorganisms that humans ingest, covering both food pathogens and food spoilage organisms.*

Anu Rangarajan et al. 2003. *Food Safety Begins on the Farm: A Grower Self Assessment of Food Safety Risks.*

> *The assessment is designed to guide growers through the process of identifying risks particular to their operation, developing appropriate solutions, implementing good agricultural practices and developing a farm food safety plan. Available for purchase at: www.gaps.cornell.edu/educationalmaterials.html*

Wolfe, Pamela, and Rex DuFour. 2010. *An Illustrated Guide to Growing Safe Produce on Your Farm.* National Center for Appropriate Technology (NCAT).

> *This 20-page publication discusses ways farmers can reduce produce contamination risk, which creates a safer food system and increases consumer confidence in their own products and farm at the same time.*

Available for purchase at: *attra.ncat.org/attra-pub/summaries/summary.php?pub=350*

Wild Farm Alliance. 2013. *A Farmer's Guide to Food Safety and Conservation. wildfarmalliance.org/resources/FS_Facts_Tip_FAQ.htm*

> *This free publication describes basic factors that affect the survival and movement of food borne pathogens on the farm, and how healthy diverse ecosystems can help to keep pathogens in check. A set of frequently asked questions addresses everything from wildlife and compost issues, to CSA visitors on the farm. Another section gives tips on how to have a successful food safety inspection, and the resources list includes links to web pages where your auditor can learn about the co-management of food safety and conservation.*

WEB-BASED RESOURCES

California Leafy Greens Marketing Agreement (LGMA) Food Safety Practices

> www.caleafygreens.ca.gov/food-safety-practices
>
> *Describes food safety practices developed by California's leafy greens marketing board.*

California Certified Organic Farmers (CCOF)

> www.ccof.org/certification/food-safety-services
>
> *CCOF offers its members a variety of food safety services; the website includes a section on frequently asked questions about food safety issues.*

Center for Produce Safety (CPS)

> www.centerforproducesafety.org/
>
> *Based in Davis, California, the CPS provides science-based research on food safety topics.*

Centers for Disease Control and Prevention – Food Safety

> www.cdc.gov/foodsafety/
>
> *Information on a variety of food safety topics, including foodborne illness and outbreaks, antibiotic resistance, and microbial risk assessment.*

Commodity Specific Food Safety Guidelines for Cantaloupes and Netted Melons

> www.fda.gov/downloads/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/ProducePlantProducts/UCM365219.pdf

Commodity Specific Food Safety Guidelines for the Fresh Tomato Supply Chain – 2nd Edition July 2008

> www.fda.gov/downloads/Food/GuidanceRegulation/UCM171708.pdf

Commodity Specific Food Safety Guidelines for the Production, Harvest, Post-Harvest, and Processing Unit Operations of Fresh Culinary Herbs

www.fda.gov/downloads/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/ProducePlantProducts/UCM365142.pdf

The above web-based publications provide food safety practices and guidelines for various commodities. They are most appropriate for large-scale operations but include useful information on topics such as harvest practices, field packing, and greenhouse practices of interest to all growers. All are available free online.

Community Alliance with Family Farmers (CAFF)

www.caff.org

CAFF advocates for California's family farmers and sustainable agriculture, and provides resources on food safety.

Cornell University – Good Agricultural Practices and Produce Safety Alliance

www.gaps.cornell.edu/

producesafetyalliance.cornell.edu/

Cornell University's Department of Food Science hosts the National Good Agricultural Practices (GAPs) Program website, with the goal of reducing microbial risks in fruits and vegetables by developing a comprehensive extension and education program for growers and packers. Includes links to educational materials, courses, collaborators, a database of research material, and much more. The Produce Safety Alliance (PSA) website provides science-based information on food safety, and offers factsheets, newsletters, and a listserv to stay up to date on Food Safety Modernization Act (FSMA) information, research, and educational opportunities.

Farm Commons

farmcommons.org

This website offers tools and resources about legal matters to farmers. The site includes resources and documents pertaining to food safety.

Food Safety Modernization Act (FSMA) Proposed Rule for Produce Safety

www.fda.gov/Food/GuidanceRegulation/FSMA/ucm334114.htm

Information on the status of the proposed Food Safety Modernization Act (FSMA), including fact shets and presentations, actions to date, and the Federal Register Notice.

Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables Contains Nonbinding Recommendations 1998

www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/ucm064574.htm

Although somewhat dated, includes detailed information on minimizing microbial risks from water, manure and municipal solids, and farming activities such as harvesting, packing, storing, and transporting fresh produce.

Postharvest Technology Research and Information Center, University of California, Davis

postharvest.ucdavis.edu/

postharvest.ucdavis.edu/producefacts/

This center aims to reduce postharvest losses and improve the quality, safety and marketability of fresh horticultural products. Offers postharvest produce fact sheets in several different languages.

US Food and Drug Administration Guidance and Regulation

www.fda.gov/Food/GuidanceRegulation/default.htm

Contains FDA guidance and regulatory information with links to Federal Register documents. You can also access information about food safety programs, manufacturing processes, industry systems, and import/export activities.

Wild Farm Alliance

wildfarmalliance.org/resources/food_safety.htm

The Wild Farm Alliance website offers a variety of resources that address farming with food safety and habitat conservation in mind. Includes a webinar on food safety and conservation, and the latest research findings.

Appendix 1: Example of Farm Risk Assessment Checklist

Farm Name: _____ Date: _____

Farm Location: _____ Completed by: _____

If the answer to the question falls in the shaded box, a **Corrective Action** is needed to demonstrate what is done to prevent or minimize contamination. (Corrective Actions examples: monitoring, policies, training, covering items, cleaning etc. . . .)

	YES	NO	N/A	Corrective Action
LAND USE (History and Adjacent)				
Has the land previously been used for mining, animal husbandry, industrial or waste storage purposes?				
Are septic tanks/fields, waste disposal and drainage systems well-constructed and maintained?				
Are there any water bodies (creek, irrigation/drainage ditches, river, slough) running through your property?				
Do animals/livestock have direct access to water bodies on your farm?				
Are there any water bodies (creek, irrigation/drainage ditches, river, slough, lakes) adjacent to your property (including in neighbor properties)?				
Do animals/livestock have direct access to water bodies your property and/or adjacent properties?				
Has this property flooded in the last year?				
Does activity on adjacent land to growing area pose a risk to crop(s) or water source(s)?				
Are there measures in place (barriers, drainage, setbacks, buffers, hedgerow, windbreaks etc…) in place to minimize drift or leaching of manure, poultry dust, or pesticides from adjacent farms?				

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	YES	NO	N/A	Corrective Action
WATER				
Is each water source that comes in direct contact with crop or with crop contact surfaces tested for fecal coliforms / generic *E.coli?* (Including water used for chemical application.)				
Are agricultural water storage containers used for hand washing, spray water or equipment cleaning, etc… cleaned prior to first use and have lids that close?				
Is well(s) maintained, covered and in good condition?				
Is the water used to clean harvest tools and harvest equipment from a tested water source?				
MANURE / COMPOST				
Is manure/compost stored on property in a way that minimizes crop, water and equipment, fuel and chemical contamination?				
Are process records (or a letter of guarantee or certificate of analysis if purchasing) available demonstrating that proper composting measures were followed?				
Is field stored manure/compost located to prevent leaching and drifting?				
Is the source of the manure known and is the application made at least 120 days before harvest for crops grown on the ground and 90 days for crops not immediately touching the ground?				
Is manure applied using a method that minimizes manure contact with crop and crop parts?				
Are records of application date, rate and method available?				

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	YES	NO	N/A	Corrective Action
CHEMICAL APPLICATION (PESTICIDE, FERTILIZERS, SANITIZERS, CLEANING AGENTS, ETC. . . .)				
Is chemical application equipment well maintained at all times and calibrated at least once a year?				
Are chemicals stored in a leak-proof locked cabinet, in a well-ventilated area (barn/shed) away from food and food contact surfaces; with warning signs on doors?				
Are chemicals stored and used according to label specifications?				
Are there legible labels on all chemicals?				
Are chemical application records available?				
Are there records available that demonstrate pre-harvest intervals are observed prior to harvesting crops?				
Are empty chemical containers disposed as per label and regulations?				
Do chemical applicators have the appropriate licenses and training?				
DOMESTIC / WILD ANIMALS AND LIVESTOCK				
Do domestic animals or livestock have access to fields that are producing or will be producing this season?				
Is wildlife activity monitored and is there a pre-harvest policy in place that specifically considers intrusion in fields ready for harvest?				

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	YES	NO	N/A	Corrective Action
EMPLOYEE TRAINING (HEALTH, HYGIENE AND HARVEST				
Is a training program and policy that covers good hygiene, harvest and handling practices in place?				
Are there adequate number of clean and replenished toilets and hand washing units available for employees to use?				
Are there records of cleaning and replenishing supplies for toilets and hand washing units?				
Have employees been instructed as to what happens in case of illness, cuts, open wounds/sores and blood on equipment/produce?				
Do employees know what to do with product if it may have been contaminated by wildlife/domestic animals?				
Are readily understandable signs posted (and in good conditions) to instruct employees and visitors of good hygiene practices?				
Is the field free of debris and garbage with trash cans (with lids) located to prevent contamination?				
Do employees know where the designated eating areas are?				
HARVEST TOOLS, EQUIPMENT, CONTAINERS AND BUILDINGS				
Are harvest tools, equipment and containers stored to prevent contamination?				
Are these tools, equipment and containers are used for the sole purpose of harvest?				
Is the produce delivery vehicle visibly inspected to ensure it is clean prior to loading produce?				
Is the produce delivery vehicle only used to deliver produce?				
Are the buildings which are used to store produce or produce contact surfaces (equipment, containers, packaging etc….) being cleaned and monitored for pests?				

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	YES	NO	N/A	Corrective Action
TRACEABILITY				
Are chemical application and manure application pre-harvest intervals observed prior to harvesting?				
Is there a system in place to enable tracking of specific product from the field to where it was shipped?				
Can inputs used on the crop or in the field be traced back to the supplier?				

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Appendix 2: Example of Employee Training Policy & Instructions

Employee Illness, Disease and Injury

- ❍ Persons able to transmit, or suffering from, a contagious disease and/or illness transferable to food (e.g., Hepatitis A, Salmonella, *E. coli* O157:H7) and those with a temporary illness (e.g. diarrhea, nausea or vomiting) are advised to see a doctor and stay at home
- ❍ Employees are trained on the role and responsibility they play in preventing the contamination of crops
- ❍ Open wounds are immediately treated and covered with a waterproof dressing (e.g. rubber gloves)
- ❍ Report illnesses and injuries as soon as they occur

Employee Glove Use

- ❑ *Check if gloves are <u>not</u>* used *and proceed to the next sub-section*
- ❍ Gloves are made of rubber, nitrile, polyethylene, polyvinyl chloride, polyurethane or cloth
- ❍ Hands are washed, before gloves are put on and after they are removed
- ❍ Gloves are replaced when ripped or worn out
- ❍ Gloves are removed when leaving the work area and replaced upon return or, if reusable, washed (using proper hand washing technique) after being put back on

During Harvest

- ❍ Only harvest using clean tools, equipment and into clean containers
- ❍ Always inspect to ensure there is no wildlife or animal contamination (ie. droppings / trampling)
- ❍ Product contaminated with blood is discarded
- ❍ Harvest containers are used solely for harvesting
- ❍ Other:

Additional

- ❍ _____
- ❍ _____
- ❍ _____
- ❍ _____

Employee Hand Washing

- ❍ Hands are washed:
  - Before beginning work each day
  - Before entering the harvesting area
  - Before putting on gloves (if used)
  - After every visit to the restroom
  - After breaks, meals, smoking
  - After hand-to-face contact (e.g., coughing, sneezing, blowing nose)
  - After applying sunscreen and insect repellant
  - After using the phone
  - After handling garbage
- ❍ Hands and reusable gloves are washed using proper hand washing techniques:
  - Wet hands
  - Lather with soap
  - Scrub well (20 secs)
  - Rinse
  - Dry hands with paper towel
- ❍ Gloves are not worn as a substitute for hand washing

Other

- ❍ Employees adhere to the following:
  - Always use toilet facilities
  - Never spit in the crop growing area
  - Only eat, smoke, drink, chew gum, spit or use tobacco products in areas designated to these activities
  - Put personal effects in designated areas (i.e., weatherproof clothing, boots, lunches etc…)
  - Use garbage cans
  - Leave tools in designated areas (including at breaks and before entering toilet facilities
  - Never take tools / gloves into toilet facilities

Security

- ❍ Employees will report any strange or suspicious activity in or around the facility
- ❍ Employee will report any suspicious materials and/or chemicals

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Appendix 3: Example of Injury / Illness Log

Example of Injury/Illness Log

Date	First Aid Attendant	What Happened	How it was treated	Product / Materials were Contaminated		Comments / What happened to tools & product if contaminated
				YES	NO	

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DATE MODIFIED: AUGUST 5, 2014

Appendix 4: Example of Visitors' Policy & Log

Welcome to: _____

Our Food Safety Policy at _____ ensures that all the crops we grow are produced for our customers under strict food safety guidelines. All visitors must comply with the following Visitor Rules.

All visitors must:

- ✓ Remain in the area they are given permission to be in
- ✓ Wash hands before entering crop growing area / packing area
- ✓ Not chew gum / eat / smoke / drink other than in designated areas
- ✓ Follow the instructions given to them
- ✓ Remove jewelry
- ✓ Where clean shoes (should not be visibly dirty or soiled) or cover shoes prior to entering
- ✓ Not touch or handle anything that they do not have permission for
- ✓ Sign in below to indicate they are informed of and understand the visitor policy:
- ✓ _____

_____

DATE	NAME	COMPANY

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Appendix 5: Example of Pre-Harvest (GAPs) Checklist

"No" answers require a corrective action.

Crop(s) Inspected: _____ Date: _____

Farm Location and Blocks: _____ Checked by: _____

INSPECTION	YES	NO	N/A	Corrective Action
ADJACENT LAND USE				
Activity on adjacent land does not pose a risk of contamination to the growing area.				
SITE				
Flooding has not occurred so far this season either natural or irrigation related.				
No strange or suspicious activity is observed (broken gates/locks, unusual tire tracks etc…).				
Growing area is free of animal (wild and domestic) intrusion including droppings, carcasses, tracks, trampling etc…				
The site is free of excessive garbage.				
WATER				
A tested safe water source is used for chemical applications made close to or during harvest.				
CHEMICALS / MANURE / COMPOST				
Appropriate days to harvest are observed between application and harvesting of crop.				
Are stored to prevent or minimize contamination of crop, water source, harvesting equipment, tools & containers				
HARVEST TOOLS, EQUIPMENT & CONTAINERS				
Are clean prior to use.				
Are washed and cleaned using a tested and safe water source.				
HYGIENE AND HEALTH				
Toilet and hand washing facilities are in good working order.				
Employees are following good hygiene and harvesting practices.				

In the event that feces or carcass from fauna are found in the produce growing area, the area around the feces or carcass will be marked or flagged and:

a) During a period of 3–7 days prior to harvest, the feces or carcass will be marked and a three-foot buffer determined. The produce in the marked area along with the feces/carcass will be collected in trash bags with disposable gloves and tools and deposited in the county land fill dumpster.

b) During the period of 8 or more days prior to harvest, the feces or carcass will be collected with appropriate gloves, tools and trash bags and deposited in the county land fill dumpster.

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Appendix 6: Example of Standard Operating Procedure (SOP) Form

Standard Operation Procedures (SOPs) are step-by-step descriptions of specific tasks. Individual tasks should each have their own SOP. The document is meant to be concise and easy to read, and it is best to start each step in an SOP with an action verb.

SOPs can be used to train employees as well as provide them with a reference document. Before writing an SOP, understand who the audience is (those who will perform the task), and task's intent.

A standardized form ensures that all the necessary material is included in each SOP. There is no set template—you can design the form in a way that works for your operation.

Below is a sample SOP form:

<table>
<tr><td colspan="2">NAME: Proper Hand Washing SOP</td><td>CREATED ON: Nov. 13, 2013</td><td>LAST MODIFIED: Aug. 14, 2015</td></tr>
<tr><td colspan="4">PURPOSE: To minimize the risk of microbial contamination</td></tr>
<tr><td colspan="2">WHO PERFORMED THE TASK?
All Employees and Visitors</td><td>WHERE IS THE TASK PERFORMED?
Washrooms and
Hand Wash Stations</td><td>WHEN IS THE TASK CARRIED OUT?
• After any potential contamination
• Upon returning to work</td></tr>
<tr><td colspan="2" rowspan="2">EQUIPMENT / TOOLS / SUPPLIES:
• Soap
• Water
• Single-use Paper Towels</td><td rowspan="2">RECORD / FORM USED:
Pre-Harvest Checklist
Facilities Cleaning Log</td><td>CREATED BY: Name</td></tr>
<tr><td>MODIFIED BY: Name</td></tr>
<tr><td colspan="4">PROCEDURE:
1. Wet hands
2. Apply soap
3. Lather and scrub (for at least 20 seconds)
4. Rinse (with water running down the hands)
5. Dry with a single-use paper towel
6. Throw paper towel in garbage</td></tr>
</table>

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UNIT 8.0

Farm Employees and Innovative Models for Interns and Apprentices

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Introduction: Farm Employees & Alternative Models for Interns & Apprentices

Please note: This unit is intended to introduce new and beginning farmers to issues around hiring or obtaining extra labor on a farm, and having on-farm interns/apprentices. Although it discusses state and federal laws, employee laws, and related tax issues, it is not intended to take the place of getting legal or tax guidance. Additionally, laws change and can be interpreted differently. We suggest that prior to bringing on interns/apprentices and/or employees, farmers check with a lawyer and other applicable professionals.

UNIT OVERVIEW

While many beginning farmers may start their new business using only their own labor, they will generally need help for the farm to grow and become profitable. It is important to understand the legal requirements for hiring employees and working with apprentices and interns.

Lecture 1 will familiarize students with employee protections—the federal and California state employment laws as they pertain to small farms. Most other states have employment laws administered through the state government in a manner similar to California. Generally, workers are entitled to minimum wage and overtime pay, and employers are subject to penalties for violating the law. There are limited exceptions for family members and some agricultural workers and trainees. This unit will look carefully at how the law treats on-farm internships and apprenticeships. These relationships are often viewed by both parties as something other than employment, but most of the time federal and state law requires an "intern" or "apprentice" to be treated as an employee under the law.

Lecture 2 looks at the obligations of an employer. In addition to complying with federal and state minimum wage laws, employers must also pay federal and state payroll taxes on time and comply with applicable state and federal safety standards to protect workers, such as carrying workers compensation insurance. Other federal and state rules cover requirements to keep certain types of records and to provide employees with certain notices.

Lecture 3 covers emerging alternative models for affordable and legally compliant farm apprenticeships: (1) working with an accredited educational institution to develop a registered apprenticeship program, (2) sub-leasing part of your land to an aspiring farmer, and (3) starting a separate business—a farm-school—and seeking funds to offset the costs of training provided to employees.

MODES OF INSTRUCTION

> LECTURES (3 LECTURES, 1 HOUR EACH)

LEARNING OBJECTIVES

CONCEPTS

- Farm employers who have anyone else unrelated to them working on their farm are likely subject to federal and state employment laws.
- There are federal and state laws to protect workers with minimum hourly wages and mandatory overtime pay.
- Federal and state law governs the definition of protected employees and allows for few exceptions. Employers who break the law are subject to steep financial penalties.
- Employers are obligated to pay federal payroll taxes and in many states, including California, state payroll taxes. For federal purposes, misclassifying a worker as an independent contractor will result in owing back payroll taxes assessed with interest and penalties. California imposes an additional $10,000 per incident fine.
- Federal and state laws obligate employers to maintain a safe working environment. In California and many other states, employers are also required to carry workers compensation insurance to cover employees who are injured at work.
- Employers are required to keep records and to inform employees of their rights.
- Although the law covering employees and employers is strict, there are some alternative ways to structure an internship or apprenticeship. The alternatives may save money in the long run, but they may be difficult to set up and administer.

SKILLS

- Understanding of minimum wage and overtime protections for workers.
- Ability to distinguish between an employee and an independent contractor, and an understanding of the consequences of misclassification.
- Understanding of the basic obligations of an employer: verifying immigration status, paying minimum wage, complying with overtime rules, paying payroll taxes on time, and maintaining a worker safety program.
- Familiarity with options for managing payroll reporting and other compliance requirements.
- Familiarity with options for structuring an internship or apprenticeship program.

Lecture 1: Farm Employees—Definitions & Employee Protections

Portions of this lecture are based on Alcorta, Beckett, and Knox 2013, California Guide to Labor Laws for Small Farms (see Resources and References)

A. Obtaining Help on the Farm

1. An informal apprenticeship model has been a common method for both training new generations of farmers and providing help on the farm, particularly for small-scale farmers. However, many of these situations are considered employee/employer relationships under labor laws.
2. It is very important to understand the definitions of different types of work relationships (employers, employees, independent contractors, apprentices, volunteers, etc.), employee protections and employer obligations when bringing people in to help work on your farm

B. Employee Protections—Introduction

1. Discussion questions:
   a) What does it mean to be an employee? Who is an employer?
      i. The legal test defining whether someone is an employee (as compared to an independent contractor) has to do with control. In a typical employee/employer relationship the employer controls which tasks the employee will perform as well as how and when the tasks will be performed. In contrast, in a typical independent contractor relationship, the contractor retains the autonomy to figure out all of the "what, when and how" decisions, and simply delivers a particular result by an agreed upon time.
   b. Why does it matter?
      i. As a farmer, or any type of business owner, you need to understand that people who work for you may have the rights of employees even if neither of you think of the relationship as an employment relationship. You may have legal obligations as an employer regardless of what you call, or how you pay, the people who work for you. Most importantly, failure to comply with employment laws, knowingly or unknowingly, can result in severe financial penalties in the event of an audit. Federal and state employment laws protect workers in a number of significant ways including minimum wage and overtime pay, and workplace safety standards. Employers who do not follow the law are subject to significant fines and penalties. Also, since the government collects payroll taxes on employment wages, the government has a financial interest in ensuring that employers do not avoid their obligations by misclassifying employees as independent contractors.
   c. Is there anything besides employee/employer and independent contractor?
      i. Yes, but it is up to the person benefiting from the labor to prove why the relationship is something other than employee/employer. In other words, the presumption will usually be that the relationship is between employer and employee and thus subject to all employment laws.
2. First we will discuss the basics of federal and state employment law and then we will cover some exceptions that might be useful to small-scale farmers

C. State and Federal Laws

1. Minimum wage and overtime laws
   a) The Fair Labor Standards Act (FLSA) of 1938 is the Federal law establishing minimum wage, overtime, recordkeeping, and youth employment standards
      i. This is the federal law—for many smaller farms state law rather than federal law applies—but state law will provide the same or higher levels of protection for workers
   b) Most states have laws setting minimum wage, overtime, recordkeeping, and youth employment standards for businesses operating within the state
      i. For quick links to your state's minimum wage laws, see: *www.dol.gov/whd/minwage/america.htm*
   c) Although federal payroll taxes are deducted from an employee's wages, the taxes go towards the employee's Social Security and Medicare account, so they are a form of future protection to benefit the employee
      i. This is another reason the law leans heavily towards the presumption that a worker should be paid as an employee unless there is strong evidence to the contrary
   d) Most employees must be paid overtime according to the applicable state or federal law. The Federal Labor Standards Act (FLSA) exempts some farmworkers from minimum wage and overtime; for more information see the Department of Labor Compliance Assistance Resources at: *www.dol.gov/compliance/topics/wages-agricultural.htm.*
   e) California labor law overtime rules and exemptions for agricultural workers are complex and depend on the specific job. For example, field workers may be treated differently than packing house workers.
      i. The California Department of Industrial Relations sets wage orders. Currently Wage Order 14 applies to field workers and Wage Order 13 applies to packing house workers. Office work, even if on a farm, is not subject to any of the ag-related exceptions from overtime. For specifics see: *www.dir.ca.gov/dlse/FAQ_OvertimeExceptions.htm.*
   f) In California, an employer may pay less than minimum wage:
      i. To an immediate family member,
      ii. To a person enrolled in an apprenticeship program registered with the California Department of Industrial Relations Division of Apprenticeship Standards, and
      iii. For the first 160 hours of employment of a person who has no previous similar or related experience to the job
         • But "not less than 85% of minimum wage rounded to the nearest nickel"
   g) On many small farms a common practice is paying interns or apprentices a stipend rather than an hourly wage
      i. In California, and most states with strong worker-protections, the stipend must be greater than or equal to the minimum wage (including overtime pay requirements) to which the intern or apprentice is entitled
      ii. Even if a state has a special exemption for farm trainees for purposes of federal payroll taxes, the IRS will consider most interns or apprentices "statutory employees" and require the employer to pay federal payroll taxes on the wages (applicable minimum wage with overtime, or the prevailing local rate) that should have been paid. See Unit 6.3, Basics of Bookkeeping and Farm Taxes, for more information on payroll taxes.
   h) The value of meals and lodging provided may count towards minimum wage:
      i. But only with a written agreement between the employer and the employee
      ii. For federal purposes the amount must be "reasonable"

iii. California sets specific limits. Detailed information is available at: *www.edd.ca.gov/* and in the California Employer's Tax Guide (DE 44).

i) The six criteria and italicized text below are taken directly from a fact sheet published by the U.S. Department of Labor Wage and Hour Division (U.S. Department of Labor, 2010). For federal purposes trainees (including interns and apprentices) are only exempted from minimum wage protections (and employers are only exempted from payroll tax obligation) if all of the following are true:

i. *"The internship, even though it includes actual operation of the facilities of the employer, is similar to training which would be given in an educational environment;*

ii. *The internship experience is for the benefit of the intern;*

iii. *The intern does not displace regular employees, but works under close supervision of existing staff;*

iv. *The employer that provides the training derives no immediate advantage from the activities of the intern; and on occasion its operations may actually be impeded;*

v. *The intern is not necessarily entitled to a job at the conclusion of the internship; and*

vi. *The employer and the intern understand that the intern is not entitled to wages for the time spent in the internship.*

If all of the factors listed above are met, an employment relationship does not exist under the FLSA, and the Act's minimum wage and overtime provisions do not apply to the intern. This exclusion from the definition of employment is necessarily quite narrow because the FLSA's definition of "employ" is very broad."

j) Students who are enrolled in an accredited university or college are subject to this six-point test.

i. It may be easier to establish that the activities are primarily educational and not for the benefit of the farmer—but it is not automatic

k) Discussion questions

i. How might you structure an internship program so it meets the criteria of the laws governing these situations?
   - How would you show benefit to the intern?
   - How would you structure training so it is similar to that provided in an educational environment?
   - How can you show the intern works under close supervision of existing staff and is not doing labor that the farmer would otherwise pay someone to do?
   - How can you show that the farmer does not receive an immediate advantage from the activities of the intern? How can you show how farm operations are occasionally impeded by interns? How do these two factors balance out?

ii. What might happen if you accept an internship or apprenticeship for less than minimum wage?
   - Could you later report the farmer and get back wages? (Yes.)
   - Could the farmer be forced to pay significant wages and back taxes with interest and penalties? (Yes.)

iii. What do you know about historic and current abuses of farm-laborers? How do you think protecting farm-laborers should or should not relate to enforcing labor laws on interns and apprentices?
   - If you think the law should be applied differently because of the learning and training component, do you think farm laborers have equal opportunities to become interns or apprentices and learn management skills?

2. Independent contractors are not employees
    a) There is no "bright line" test to distinguish between an independent contractor and an employee. It is important, however, that you identify your workers in the correct category.
    b) Unlike an employee, an independent contractor must file her or his own income tax returns and report income earned as an independent contractor generally as "self-employment income"
    c) If you hire an independent contractor you must report annually to the IRS (on form 1099) any amount paid to a single person in excess of $600 per year
    d) In the event on an audit, either because of a worker's complaint or independent action by state or federal tax agencies, the auditor will attempt to determine if your independent contractors should have been paid as employees. The key factor is the amount of control each person has over the execution of the work. Criteria will include considering if the person:
        i. Filed an income tax return showing your payments to them as self-employment income;
        ii. Provided her or his own tools and equipment;
        iii. Determined her or his own work schedule, and worked largely without supervision;
        iv. Had multiple sources of similar income (for example a business providing specialized pruning services for a number of farms).
        v. Other factors that will be considered include the location of the work; the duration of the relationship between the parties; whether the hiring party has the right to assign additional projects to the hired party; the extent of the hired party's discretion over when and how long to work; the hired party's role in hiring and paying assistants; and whether the work is part of the regular business of either party
        vi. None of these factors is determinative; they are indications of control and independence.
    e) If most of the questions above are answered "yes," the person will likely be considered an independent contractor. If not, the farm may owe back payroll taxes and other penalties because the person should have been treated as an employee.
    f) Since 2012 California has imposed a penalty of up to $10,000 per employee per pay period for each incident of an employer willfully misclassifying an employee; in other words, for each pay period in which the person should have been paid on payroll but was instead paid as an independent contractor.
    g) Discussion questions
        i. How would a typical apprentice or intern answer the questions regarding whether someone is an independent contractor (which are listed above under item 2)
        ii. What would you do if a farmer offered to pay you as an independent contractor for an internship or apprenticeship?
        iii. What do you think you would learn from someone who knowingly or unknowingly breaks a law that could have such serious consequences?
3. Volunteers
    a) There is no exception for volunteer labor at a for-profit business. A farmer who uses "volunteers" could end up owing back wages, payroll taxes, penalties, and interest.
    b) Not-for-profit businesses and organizations must also comply with applicable federal and state labor laws, but there is more flexibility for incorporating volunteer labor
    c) Charitable, religious, or faith-based organizations exempt from federal taxation under IRS Code Section 501(c)(3) may use volunteer labor under some circumstances

d) For federal purposes a volunteer performs service for civic, charitable, or humanitarian reasons, without any expectation of compensation. Volunteer labor is exempt from the employer/employee labor laws described above.

e) State law will generally follows federal law in determining if work is exempt as "ordinary volunteerism." The factors to consider are:

   i. Is the entity that will benefit/receive services from the volunteer a nonprofit organization?

   ii. Is the activity less than a full-time occupation?

   iii. Are the services offered freely and without pressure or coercion?

   iv. Are the services of the kind typically associated with volunteer work?

      • Note that this factor will be the most difficult to demonstrate when the services are routine farm labor such as weeding or harvesting

   v. Have regular employees been displaced to accommodate the volunteer?

   vi. Does the worker receive (or expect) any benefit from the entity to which it is providing services?

f) Many farms host schools or educational non-profits for hands-on learning. Volunteers may assist at such events. This is in the spirit of the law if the volunteers are associated with the school or the visiting non-profit and not with the ordinary for-profit activities of the farm.

g) Organizations such as Senior Gleaners harvest crops that would not otherwise be harvested and give the harvest to food banks. In this case the farmer does not profit from the labor and the food bank, a not-for-profit civic charity, receives the benefit. The labor is volunteer labor and the volunteers are not entitled to any of the protections due to employees.

Lecture 2: Employers' Obligations: Taxes, Safety, Workers' Compensation, & More

A. Hiring an Employee

1. Determine legal immigration status
   a) United States Citizenship and Immigration Services web page will have current resources and tools for employers
      i. You can download the I-9 form from the U.S. Citizenship & Immigration Service (USCIS) www.uscis.gov/i-9, or request it by calling 1-800-870-3676
      ii. Keep the I-9 for 3 years from the date of hire or 1 year after they stop working for you, whichever is later. You do not need to send this form to anyone, but will need to produce it if requested by a U.S. government official.
2. Comply with minimum wage and overtime laws as discussed in Lecture 1, Farm Employees and Innovative Models for Interns and Apprentices
3. Pay state and federal payroll taxes
4. Comply with health and safety regulations including regulations covering farmworker housing if you provide housing
5. Comply with other reporting and notification requirements

B. Payroll Taxes

1. Managing Your Payroll
   a) Commercial payroll services generate payroll checks with all applicable deductions; and prepare, file, and pay all applicable state and federal payroll taxes and reports as they are due.
      i. Employer provides the payroll service with secure electronic access to the bank account so the service can transmit payroll taxes electronically as required
      ii. Employer transmits hours worked for each employee in time for the paychecks to be issued according the payment schedule selected;
         • electronically or
         • by phone
      iii. Payroll service assists employer in acquiring all the appropriate documentation to set up a new employee for payment
      iv. Payroll service usually provides other materials to assist employer with various labor compliance requirements and sends regular newsletters updating employers on changes to laws or tips for safety, etc.
      v. A payroll service can be used with or without the services of a bookkeeper or an accountant, and can work well with QuickBooks or other accounting programs (see also Unit 6.3, Basics of Bookkeeping and Farm Taxes)
   b) QuickBooks offers a compromise between a payroll service and doing everything yourself. You can calculate taxes and net paychecks using the program and pay for online support to prepare deposits and quarterly and annual reports.
   c) Understand that specific rates, forms, and dates are subject to change, so if you do your own payroll you will need to constantly check for changes to applicable laws; one of the best benefits of a payroll service is receiving their updates on these changes.
   d) No matter how you manage your payroll, you will need to understand the deduction for meals and lodging. The rules may be different for payroll and income tax purposes than for calculating state minimum wage.

i. For federal purposes, the value of meals and lodging provided for the convenience of the employer are not included in taxable wages. Provided for the convenience of the employer means things like needing the employee on the premises regularly at night to keep an eye on livestock, or providing a lunch and dinner because town is too far away to drive there and back on a break.

e) You will likely find that a payroll service, or at least a supported software program, is an economical investment. But if you choose to manage your payroll yourself there are a variety of publications available at the Internal Revenue Service website, the Federal Department of Labor website, and the equivalent counterparts at the state level.

2. Federal payroll tax requirements

a) Federal payroll taxes are discussed in detail in IRS Publication 15 (Circular E – Employer's Tax Guide) and Publication 51 (Circular A – Agricultural Employer's Tax Guide). There are many options for various levels of professional and computer assistance to help you calculate payroll taxes and comply with reporting and depositing requirements. We will discuss these options later. For now we will just introduce the basic concepts.

i. The IRS definition of agricultural laborers only includes field labor. Hours spent working in the office or packing shed, or driving delivery, or selling at the farmers' market are not agricultural labor hours.

b) The Federal Insurance Contributions Act (FICA) tax includes two separate taxes:

i. Social Security tax. The current tax rate for social security is 6.2% for the employer and 6.2% for the employee, or 12.4% total. Social Security tax is only charged on wages up to the applicable wage base limit. In 2013 the base is $113,700.

ii. Medicare tax. The current rate for Medicare is 1.45% for the employer and 1.45% for the employee, or 2.9% total. There is no current wage base limit for Medicare.

- Check with the IRS each year for changes

c) Note that self-employed people pay both portions of the tax calculated on net earnings from self-employment reported on IRS Schedule C for most business or Schedule F for self-employed farmers. It is called the "Self- employment Tax" and is calculated in addition to income tax.

i. A self-employed farmer deducts ordinary and necessary business expenses, including wages and payroll taxes paid to others, to arrive at net self-employment income subject to the Self-employment Tax

- A self-employed farmer does not pay wages to herself/his self and does not include Self- employment Tax payments when remitting payroll taxes to the IRS

d) Usually employees also have a portion of the Federal Income Tax withheld from each paycheck in addition to the mandatory Social Security and Medicare tax withholdings. There are various reasons why an employee would not have Federal Income Taxes withheld. The employee notifies you of how much to report by giving you an IRS Form W-4. You use the information on the W-4 to calculate the amount to withhold from each paycheck.

i. You may receive a notice from the IRS requiring you to withhold additional amounts from an employee's check to cover back taxes or other federal debts

e) As an employer you become a trustee for your employees and the IRS. The money you withhold is not yours. It is due to the IRS and may create a federal benefit for your employee. Failing to timely remit money withheld from an employee's paycheck and due to the IRS is treated as a serious offense and penalties and interest begin to accrue daily as soon as you are late.

f) Payroll tax deposits must be made electronically and are due either monthly or semi-weekly depending on your prior year's total payroll.

g) In addition, you must file IRS Form 941, Employer's QUARTERLY Federal Tax Return on or before April 30, July 31, October 31, and January 31.

h) Several additional reports are due January 31, and may be applicable to your farm:

i. Form 940, Employer's Annual Federal Unemployment (FUTA) Tax Return

ii. Form 943, Employer's Annual Federal Tax Return for Agricultural Employees

iii. Form W-2, Wage and Tax Statement to report wages, tips and other compensation paid (due to the employee)

- In addition, you have until February 28th for paper filers and March 31st for electronic filers to file a Form W-3 and copies of all W-2 forms with the Social Security Administration.
- Careful! Though no tax is due with the W-2s and W-3, there are penalties for late or inaccurate forms.

i) Before you can begin withholding, paying, and reporting you need to apply for an Employment Identification Number (EIN) using IRS form SS-4. You can find it at IRS.gov or have one sent to you by calling 1-800-TAX-FORM.

3. State Payroll Tax Requirements

a) State payroll tax requirements vary, but follow a similar structure

b) The California Employment Development Department (EDD) administers state payroll tax payment and reporting requirements. Detailed information and rates are available at: *www.edd.ca.gov* and in the California Employer's Tax Guide (DE 44).

c) Employers must notify the EDD

i. within fifteen days of paying over $100 in wages in a calendar quarter

ii. within twenty days of hiring or rehiring an employee

- The start-of-work-date is the first day services were performed for wages. Submit a Report of New Employees form online or by mail. See the "Required Filings and Due Dates" section on the EDD website for more information.
- Based on this filing you may receive a notice from the state requiring you to withhold additional amounts from an employee' paycheck to cover child support or back taxes

d) State Disability Insurance (SDI) must be withheld from each employee's paycheck each pay period

e) California assesses an Unemployment Insurance Tax and an Employee Training Tax (ETT) on the employer only (you may not deduct any portion of these taxes from your employee's paychecks)

f) Most workers will have Personal Income Tax (PIT) withheld from paychecks to pay towards any state income tax they may owe at the end of the year

g) The value of meals and lodging provided to employees for the employer's convenience

i. is not included in gross wages to calculate personal income tax;

ii. is included in California gross wages to calculate California payroll taxes

C. Creating a Safe Environment for Your Workers

1. Workplace safety standards

a) The Federal Occupational Safety and Health Act (OSHA) applies to all American employers and may be administered concurrently with a stricter state law. Employers with fewer than ten employees have modified requirements. OSHA is administered by the Occupational Health and Safety Administration of the US Department of Labor. Check the website often for current and useful information: *www.osha.gov*

i. OSHA standards include specific safety and training requirements for farm employers, including:

- Providing sanitary toilets, hand-washing facilities, and shade,
- Providing training about good hygiene practices,
- Keeping records of trainings, injuries, and illnesses at the workplace, and
- Specifically for farm employers in some states (including California), maintaining a Heat Illness Prevention Program.

b) Most states have enacted their own workplace safety laws, which are administered in a similar manner to federal law. States may provide more protection than the federal law, but not less.

c) The California Occupational Safety and Health Act (Cal OSHA) applies to all California employers. Similar to the federal law, employers with fewer than ten employees have modified requirements. Cal OSHA is administered by the Division of Occupational Safety and Health (better known as CalOSHA) within the California Department of Industrial Relations. Check the web site often for current and useful information: *www.dir.ca.gov/dosh*

d) Heat Illness Prevention Program
   i. All California employers are required to comply with the Cal/OSHA Heat Illness Prevention Standard including:
      - Training: Employees and Supervisors must all be trained about heat illness prevention
      - Water: Employees must be provided with enough fresh water in order to drink at least 1 quart per hour, and employers must encourage them to do so
      - Shade: Employees must be provided with shade, and encouraged to take a rest in the shade for at least 5 minutes before any feelings of illness occur. Employees should not wait until they feel sick to cool down.
      - Planning: Employers must develop and implement written procedures for complying with the Cal/OSHA Heat Illness Prevention Standard
      - More information and resources for how to develop a program, workshops and meetings, and free consultation services from Cal/OSHA can be found on their website: *www.dir.ca.gov/dosh/HeatIllnessInfo.html*

e) Farm employers are also generally required to maintain an Injury and Illness Prevention Program, including a Heat Illness Prevention Program
   i. An injury and illness prevention program must be in writing and must identify on-farm hazards and provide guidance on employee illness and injury avoidance
   ii. Employers are required to keep records of trainings, injuries, and illnesses (see also Unit 7.0, Introduction to Food Safety)

f) Every place of employment is subject to unannounced state or federal OSHA workplace inspections. Unannounced inspections may occur in response to a report of an industrial accident, a complaint about an occupational safety and health hazard, or as part of an inspection program targeting industries (such as farming) that have a high rate of occupational hazards, fatalities, injuries, or illnesses.
   i. You have a constitutional right to request an OSHA inspector (or indeed any federal, state, or local government official) obtain a warrant prior to entering your property. Should you choose to exercise this right, remember to be respectful of people who are working to administer the law and ensure the health and safety of vulnerable workers. They in turn should respect your right to exercise a protection guaranteed to you by the 4th Amendment to the US Constitution. You do not need to offer any explanation for why you are exercising a constitutional right. If the official has a valid reason to believe that there is an imminent threat to public health or safety she or he may enter without a warrant, and you should seek legal counsel at once.

ii. If you are targeted by an OSHA inspection and believe you may be cited for violations, you should notify your attorney immediately

2. Workers' compensation
   a) Workers' compensation is a regulatory form of insurance designed to offer prompt payment to injured employees. Employers pay into the system, and in the event of a work-related injury the injured employee will have medical and rehabilitation expenses paid and may also receive temporary or permanent disability payments, or death benefits for dependents, based on lost wages.
      i. Workers' compensation insurance also limits an employer's liability in the event of a workplace accident
      ii. Similar to the discussion above regarding payroll taxes, an injured worker may be considered an employee for worker's compensation purposes even if the person is paid as an independent contractor
      iii. If an independent contractor or other non-employee is injured on the farm, the farm may be liable for more than what worker's compensation would pay, because the injury is not covered by the worker's compensation system
   b) Most states require employers to carry workers' compensation insurance. Small business and agricultural exemptions vary by state.
      i. California requires all employers to carry workers' compensation insurance. You must also provide information about workers' compensation protection to your employees at the time they are hired. Find the most current Time of Hire pamphlet at: *www.dir.ca.gov/dwc/dwcrep.htm#2*
   c) Workers' compensation insurance limits liability in the event of a workplace accident
      i. This means the injured employee generally cannot sue the employer or other co-workers for damages beyond the amounts paid by worker's compensation insurance. The only exception would be if the employer knowingly and recklessly endangered the employee.
      ii. If a California employer does not have workers' compensation insurance and an employee is injured, medical treatment and other benefits are paid by the Uninsured Employers Benefit Trust Fund administered by the California Department of Industrial Relations (DIR). The DIR will then begin enforcement and collections actions against the uninsured employer for reimbursement and fines and may also issue a stop work order in addition to imposing fines.
   d) Typically workers' compensation insurance is available through private insurance companies
   e) For more information about the California program contact the DIR Division of Workers' Compensation at *www.dir.ca.gov/dwc*
3. Other employer obligations: Posting, recordkeeping, notification
   a) Federal laws require employers to display certain employment-related posters describing employees' legal rights in an area that is frequented by employees such as a break room, locker room, or bathroom
   b) Most states, including California, have similar requirements
   c) Posters must be posted in a conspicuous place at the worksite. The federal and state governments will send you these posters for free, but you generally have to contact the appropriate government agency to request them. If you use a payroll service to help you comply with notice requirements, they will typically provide the necessary information and materials.
   d) Federal Posting Requirements
      i. Employee Rights Under the Fair Labor Standards Act
      ii. Notice—Migrant and Seasonal Worker Protection Act

iii. A complete list of federal workplace posters and an explanation of who must post them is available online at: *www.dol.gov/oasam/programs/osdbu/sbrefa/poster/matrix.htm*. Free posters can be obtained through the same website.

e) California Workplace Posting Requirements
   i. Similar to federal requirements. Information available at: *www.dir.ca.gov/wpnodb.html*

f) Required records
   i. Generally, you should keep three to seven years' worth of records sufficient to document your compliance with all applicable rules and regulations
   ii. Records for each worker should include the worker's name, Social Security number, hours worked, wages paid, taxes withheld, and trainings and workplace injuries received
   iii. The Migrant and Seasonal Agricultural Workers Protection Act has additional requirements, but any payroll system should comply with the level of detail required for migrant and seasonal workers. The specific requirements are to show: rate of pay, total hours worked each day and each week, the date that wages were paid, and the period of time covered by the payment.

g) Paystub notification
   i. California requires you to provide employees with specific information with each paycheck, called an itemized wage statement. The penalty for failure to comply is $250 per employee per incident for the first violation and $1,000 per employee per incident for subsequent violations.
      - Many other states have similar requirements
      - A payroll service will provide compliance with paystub notification rules. The required information on the itemized wage statement, includes:
        – Name and address of the employer
        – Dates of the pay period
        – Employee name and last 4 digits of social security number
        – Hourly rates with corresponding hours worked at each different rate
        – All piece rates paid during that period, and number of pieces paid at each rate if applicable
        – Total hours worked by employee for that period
        – Gross earnings for the pay period
        – Total deductions for the pay period
        – Net earnings for the pay period

Lecture 3: Innovative Models for Apprenticeship or Internship Programs

A. Registered Apprenticeship Programs

1. A registered apprenticeship program is one avenue to having apprentices on a commercial farm. The key concept of a registered apprenticeship training program for farm apprentices is that it combines paid-on-the-job learning on the farm with related instruction (which is usually set up with an accredited educational institution). A registered apprenticeship sets standards for learning and accomplishment, and in some cases provides funding to offset the employer's training costs or to assist the trainee with tuition or housing to enable them to complete the training.
   a) It does not do much to alleviate an employer's cost, but it may greatly enhance the quality of the learning experience for the intern/apprentice and may help the qualifying educational institution with whom the farm is partnering to obtain funds to support their efforts to provide academic support to beginning farmers
2. Federal and state law provide for registered apprenticeship programs and provides funding to assist businesses and organizations interested in creating and running such programs
3. State and regional programs may receive federal, state, or industry funding to administer the program and to provide financial assistance to local program participants
4. A program must have an organized, written plan embodying the terms and conditions of employment, training, and supervision, including provisions for:
   a) Instruction in technical subjects related to the occupation;
   b) Periodic review and evaluation of the apprentice's performance on the job and in related instruction;
   c) Granting of advanced standing or credit when applicable; ability to transfer an apprenticeship from one program to another; and recognition for successful completion.
5. Additional financial and technical assistance opportunities vary by state. Some states offer tax credits, others offer grant funding.
6. In California, employers may work with qualified educational institutions to develop a registered apprenticeship program. Apprentices are paid according to minimum wage and overtime requirements, and state funds are available to compensate the employer and the educational institution for training costs.
   a) The California Department of Industrial Relations (DIR), Division of Apprenticeship Standards (DAS) oversees 500 apprenticeship programs around the state in the trade industries, including plumbing, electrical, masonry and carpentry. In 2011, DAS approved the first organic farming apprenticeship program in the state, a program in Marin County through the College of Marin and Fresh Run Farm.
7. Registering an apprenticeship program does not change the requirement to comply with minimum wage and overtime requirements – except, as in the case with Fresh Run Farm/ Marin College, the program may qualify you for the short term "trainee" exemption and allow you to start an apprentice at slightly below minimum wage.
8. See California FarmLink, 2013 in the Resource and References section for a case study of the Fresh Run Farm/Marin College program. This document also contains examples of other types of apprenticeship arrangements.

B. Landlord-Mentor

1. The more experienced farmer serves as both landlord and mentor
2. The beginner farmer leases a small plot of land from the more experienced farmer and operates an independent farm business, including filing her or his own income tax returns for self-employment income or loss
3. The parties will need a written lease agreement addressing all of the following:
   a) The exact piece of land to be leased (this may work best with a simple map attached), the lease rate and terms, any common areas the lessee can access, any private areas the lessee is explicitly asked not to enter without permission
   b) Inputs and supplies. The beginning farmer may purchase his or her own inputs and supplies, but one of the advantages of the mentorship relationship may be allowing the beginning farmer to buy small quantities from the established farmer who may have more experience in what to buy and who may receive a better deal for ordering larger quantities. Questions to consider are: the price the established farmer will charge, any limitations on amount and frequency of beginning farmer purchases, and the expected time for the beginning farmer to reimburse the mentor-farmer.
      i. Regardless, the beginning farmer will need to maintain a full set of records to document their own business expenses for income tax purposes
   c) Water and utilities are commonly either charged at a pro-rata share or included in the per/acre cost of the lease. The lease needs to specify which.
   d) One of the other major advantages to the beginning farmer from a lease-mentor agreement is the ability to access the mentor-farmer's equipment. It is important to establish mutual expectations about equipment use.
      i. Is equipment use charged separately or included in the per/acre rent? If charged separately, how? Perhaps based on hourly usage?
      ii. Which equipment is available when?
      iii. Will fuel and maintenance expenses be included in the equipment rent? What happens if the beginning farmer breaks something?
   e) Another advantage of the lease-mentor model is it may provide the mentor farmer with extra product, and the beginning farmer with access to more established sales channels. The agreement and expectations should be part of a written agreement.
      i. Beware that sales between two farms may also require additional compliance under the standards set by the National Organic Program and new, proposed food safety rules currently in development by the Food and Drug Administration

C. Create a Second Business: a Farm School

1. Farming is the business of growing food or raising animals for food, fuel, or fiber
2. Education is a separate business. Income from providing educational services is not considered income from farming even if the education takes place on a farm.
3. Some farms with robust apprenticeship programs have established a second business as a farm school; a for-profit educational center for training farmers. The school has an agreement with the farm business regarding access to land and equipment. Students pay tuition that is income to the farm-school business. The farm may also choose to hire students to perform labor – in which case all of the employment rules and regulations discussed above are followed.
   a) Tuition payments compensate the farmer for the cost of providing training, and establish a clear understanding that the aspiring farmer will receive training, not merely the opportunity to work for free
   b) Wages paid to students for their labor keep the farm in compliance with the law

4. Each of the two separate businesses needs a full and separate set of accounting records "books"
   a) A separate checking account for each
   b) A separate chart of accounts and general ledger accounting for income and expenses for the two businesses separately
5. The two businesses need a written agreement regarding shared expenses. This can take the form of a memo kept with the accounting records explaining which expenses are "farm school" which are "farm" and which are "shared."
6. For shared expenses, one or the other of the two businesses can pay all the expenses during the year and at the end of the year the other business can write a reimbursement check
7. The school also needs to have a separate lease agreement with the farm covering expectations about when and where education occurs on the the farm, and perhaps explaining what services the farming operation will provide to the school (for example, access to viewing and participating in daily activities on the farm). The school should pay some amount to the farm to compensate for access to the operation and services rendered.
   a) This payment does not have a tax effect, since both businesses are owned by the same person or people. The purpose is to establish that the two businesses are indeed separate. A sloppy short-cut without careful separate records could be construed by labor or tax officials as a scheme to avoid paying for labor. It is important to have curriculum and financial records to demonstrate a legitimate separation between the tuition charged by the school and the wages paid by the farm.
8. For income tax reporting purposes, a sole proprietor will report the farm- school income and expense on IRS Schedule C and the farm will report income and expense on IRS Schedule F
   a) A partnership, LLC, or an S-Corp will report teaching income and expense as ordinary income and expense and farm income and expense on a Schedule F
9. Another possibility is for the Farm School to be operated by a non-profit organization or educational institution. In this case there is a service agreement as described above and the farmer simply receives a payment for services rendered. The farmer would report this as "other farm income" on Schedule F of the annual income tax return.

Resources & References

PRINT

Alcorta, Marisa, Jessy Beckett, and Reggie Knox. 2013. *California Guide to Labor Laws for Small Farms*. National Center for Appropriate Technology & California FarmLink. *www.californiafarmlink.org/storage/documents/CA-Guide-update-3-2014.pdf*

> *Apprenticeships and internships have long been a strategy to provide both new farmers with training while getting help on the farm. However, the way many of these apprenticeships operate breaks state or federal labor laws. This guide provides an overview of what is needed to have a legal apprenticeship in California, how to hire employees, and how to provide for their safety. Employer taxes and other obligations are also discussed.*

California FarmLink. 2013. *California FarmLink Apprenticeship Resource Series*. *attra.ncat.org/attra-pub/summaries/summary.php?pub=462*

> *This document is a companion to California Guide to Labor Laws for Small Farms. It provides case studies regarding California labor law.*

Hayes, Kathryn, Eric Toensmeier, Judith Gillan, and Miranda Smith. 2005. *Cultivating a New Crop of Farmers – Is On-Farm Mentoring Right for You and Your Farm? A Decision-Making Workbook*. Belchertown, MA: The New England Small Farm Institute.

> *This 49-page manual was designed to help farmers who are contemplating developing a mentoring program on their farm. It offers worksheets to explore whether the farm operation is good fit for a mentoring situation, if the farmer is ready to be a host, and how the trainees may affect the farm operation and context. $20 from www.smallfarm.org/main/bookstore/publications/*

Heyman, Amanda N., and Jennifer Jambor-Delgado. 2012. *Farmers Guide to Farm Employees: Federal and Minnesota Labor and Employment Law for Small-Scale Family Farm*. Saint Paul, MN: Farmers' Legal Action Group, Inc., August 2012. *www.flaginc.org/wp-content/uploads/2012/08/20120813-MILE-Guide-interactive-Jan14.pdf*

> *This 178-page document provides comprehensive information on the rules around hiring and paying workers on a farm.*

Jambor-Delgado, Jennifer and Amanda N. Heyman. 2013. *Farmers' Guide to Farm Internships: Federal and Minnesota Labor and Employment Law.* Saint Paul, MN: Farmers' Legal Action Group, Inc., February 2013. *www.flaginc.org/wp-content/uploads/2013/05/Farm-Intern-Guide-FINAL-w-covers.pdf*

> *This 173-page guide provides extensive information on how to legally have interns on your farm in Minnesota.*

Jones, Doug. 1999. *Internships in Sustainable Farming: A Handbook for Farmers*. Cobleskill, NY: Northeast Organic Farming Association New York. *www.nofany.org/sites/default/files/internshiphandbook.pdf*

> *This 16-page document explores if being a mentor is a good choice for you, how you select and train trainees, how to provide a quality learning situation, addressing labor regulations, and housing issues.*

Smith, Miranda. 2005. *The On-Farm Mentor's Guide – Practical Approaches to Teaching on the Farm*. Belchertown, MA: The New England Small Farm Institute.

> *This 196-page guide provides a comprehensive look at the benefits and drawbacks to providing on-farm mentoring. It also provides extensive instructions to those who choose to provide this service, including how to design you program, implement teaching, address housing, and recruit trainees. It also provides worksheets to make decision making and trainee management easier, and 40 pages of additional resources. $35 from www.smallfarm.org/main/bookstore/publications/*

U.S. Department of Labor. 2010. Fact Sheet #71: Internship Programs Under The Fair Labor Standards Act. Wage and Hours Division, April 2010. *www.dol.gov/whd/regs/compliance/whdfs71.htm*

VIDEO

Workers and Employees: Understanding the Farmers' Responsibilities. 2014. Farm Commons. *farmcommons.org/workers-and-employees-understanding-farmers%E2%80%99-responsibilities*

This 2-hour video of a webinar discusses legal issues regarding various labor arrangements, such as with volunteers, trade-labor, interns and employees.

WEB-BASED RESOURCES

Division of Occupational Safety and Health – State of California (Cal/OSHA)

www.dir.ca.gov/dosh/

This site provides information on California health and safety laws, and provides information on compliance.

Farm Commons (Wisconsin)

farmcommons.org

This organization provides legal resources for farmers, such as guides, checklists, and model documents. They have a sample farm employee handbook, checklists for hiring employees, instructions to create a worker share program, and other documents.

Farm Employment Labor Services FELS (California)

www.fels.net

This is a subscriber organization, related to the California Farm Bureau Federation. It serves it members by helping them work within labor laws and dealing with labor relations.

Farmers Legal Action Group FLAG (Minnesota)

www.flaginc.org

This non-profit organization is dedicated to providing services to family farms, and keeping the farmers on the land. They provide publications and information on labor issues, as well as taxes, contracts and a variety of other issues.

Internal Revenue Service

www.irs.gov

The IRS website has a wealth of resources. Local offices also offer free printed copies of many useful publications and may offer webinars and workshops.

U.S. Department of Labor - Compliance Assistance Resources

www.dol.gov/compliance/topics/wages-agricultural.htm

This section of the Department of Labor's website provides an overview of how to be in compliance regarding wages paid in agriculture.

U.S. Department of Labor - Wage and Hours Division

www.dol.gov/whd/

The Wages and Hours Divison provides need tools to observe with the laws this division oversees, which includes minimum wage, overtime, agricultural employment and several other topics. They provide information to both employers and workers.

U.S. Department of Labor – Occupational Safety and Health Administration (OSHA)

www.osha.gov

This OSHA site provides information on health and safety laws and provide publications to assist employers in providing a safe work environment.

Sustainable Economies Law Center SELC (San Francisco, CA)

www.theselc.org

This organizations provides legal tools and assistance to build community resilience and such as helping communities develop sustainable food sources.

UNIT 9.0

Land Tenure Options and Strategies

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Introduction: Land Tenure Options & Strategies

UNIT OVERVIEW

Affordable and secure access to land is crucial for assuring both the economic viability of small-scale agriculture and the adoption and use of sound land stewardship practices. In order to help beginning farmers secure long-term land tenure in the face of development and increasing land prices, new and innovative options for land tenure must be explored. This unit introduces students to a range of strategies that may be used to secure affordable access to land. Although the focus is on those farming or seeking farmland in California, this information will also be useful in other regions.

Lecture 1 examines the challenge of finding affordable farmland, and outlines various land tenure options, including leasing and purchasing, and alternative models such as community land trusts and shared ownership arrangements.

Lecture 2 offers "how to" information on finding land and developing a lease agreement. It also identifies government programs that offer help to beginning farmers who are looking for land and improving farmland.

MODES OF INSTRUCTION

> LECTURES (2 LECTURES, 1–1.5 HOURS EACH)

LEARNING OBJECTIVES

CONCEPTS

- The importance of land tenure to the success of small-scale agriculture and sound land stewardship
- Advantages and disadvantages of various conventional and alternative land tenure options
- Mechanisms of various conventional and alternative land tenure options
- Methods for finding land
- What to look for in a lease

Lecture 1: Land Tenure Options & Alternative Models

A. Land Tenure, Small Farm Viability, and Land Stewardship

1. Securing a clear, predictable and affordable land tenure arrangement is the foundation of economically viable small farming operations. "Tenure" comes from the Latin "to have or to hold." The tenure agreement guides planning for the size and type of agricultural operation.
2. Without long-term tenure agreements, implementing sustainable farming practices on the farm may be difficult to justify economically. However, an expensive land purchase may not be practical or even advisable.
3. Short-term agreements are common for new and small vegetable operations. This can be a strategy for building a track record, testing markets, and confirming commitment to farming as an independent business.

B. The Farmland Affordability Challenge

1. Land speculation/development has increased the selling price of many agricultural lands to a level beyond the productive capacity of agriculture for most small-scale vegetable and fruit operations
2. High returns on the sale of agricultural land to development, high operating expenses, and low returns for agriculture products have resulted in widespread sale and conversion of prime agricultural lands to residential and commercial development. In addition, non-agricultural buyers have bid up prices of rural land formerly used for farming. These include estate buyers building large homes and people seeking a "rural retreat." As a result, there has been a decline in the number of small-scale family farming businesses.
3. Many farmers can no longer afford to own the land they farm due to the price of land being based on a speculative real estate market or rural estate values, rather than the agricultural land value
4. In order to help beginning farmers secure long-term land tenure in the face of development and increasing land prices, new and innovative options must be explored

C. Agricultural Leases

1. Leasing property is a common strategy for beginning farmers
2. Types of leases
   a) Cash rental or Lease
      i. Tenant pays a set cash rate per acre per year. Payment schedules can vary—yearly, 2x/year, quarterly, monthly, etc.
      ii. A long-term lease of 5 to 30 years may be the optimal tenure agreement for many farmers with limited financial assets. However, it is crucial to protect oneself to the degree possible from changes in ownership impacting the lease. In signing a cash lease, the beginning farmer is calculating that for the term of the lease he or she will be able to cover a fixed payment to obtain land tenure. The funds are due to the landlord regardless of whether the farmer has a good year, a bad year, or gets the operation going later than planned.

iii. Establishing a fair lease rate: Cash-rent leases can be negotiated based on agreed understanding of local agricultural market value. The California chapter of the American Society of Farm Managers and Appraisers provides an annual review of lease values by crop and land type for most California counties.
See: *www.calasfmra.com*

iv. Factors influencing lease rates: Rates will depend not only on the quality of soil and availability of water, but also on outbuildings, irrigation systems, and other infrastructure

v. Today, farmers establishing their own operations are often 30–40 years old or more. A 30-year lease is appropriate to meet their goals of farming until retirement age, but it may be difficult to secure a lease of that length.

b) Crop Share

i. Crop-share defined: A crop-share agreement or share-rent is a means for compensating a landowner for use of their land while sharing the risk. Payment may include a share or percentage of crop, for example 20% of the walnuts harvested, or a percentage of the gross or net income.

ii. A crop share requires a level of trust between lessee and lessor that may include sharing financial or tax records. By agreeing to pay the landlord based on how much crop comes in, the beginning farmer will owe more if they have an abundant harvest and less if there is a poor yield.

iii. Determining the percentage fair to both parties can be done based on knowledge of the "going rate" for leases or through worksheets spelling out the specific contributions of each party. Paying rent by committing a share of the crop may help entice a landowner to lease when the going rate for a cash rent is not significant. A crop-share lease looks almost identical to a cash lease except in the payment section, where the share is described rather than a fixed lease amount.

iv. A crop-share lease can provide tax advantages to a landlord over a cash lease

c) Ground lease

i. A ground lease is the most "permanent" type of lease. It can range from 40 to 99 years. It is usually at least 10 years longer than a mortgage. They are not longer than 51 years in CA.

ii. It is similar to commercial real estate situations, e.g., where a mall developer owns the mall structure, but has a long-term lease with the landowner. The developer can sell the buildings to others, and even the lease itself.

iii. The long-term nature of this lease provides enough time to justify major infrastructure/improvements

iv. Doing a ground lease properly requires extensive amount of time, negotiation, and legal description to ensure a fair and functional lease agreement

v. Example of a ground lease

- Nonprofit owning land; farmer holds 99-year renewable ground lease and owns improvements
- The nonprofit owning the land may be a conservation/agricultural land trust (e.g., Genesee Land Trust in New York), a community land trust (e.g., Cold Pond Community Land Trust in New Hampshire), or other nonprofit (e.g., Equity Trust)
- The farmer has truly long-term tenure—even perpetual tenure—without having to purchase land; pays a ground rent based on agricultural value, not on value for other uses

- The farmer can purchase existing buildings and other improvements on the land at the commencement of the lease; the purchase price can be based on the agricultural value of the improvements, not on their market value. The farmer can invest in and own other improvements over time. If the farmer wants to give up the leasehold, he or she can sell the improvements to another farmer for a price that is limited by the terms of the lease to an affordable level.
- In some cases, CSA farms have mobilized donations from CSA members to allow a nonprofit to purchase land that is then leased back to the CSA farmer. In other cases, CSA members have purchased a conservation easement with purchase option, while the farmer purchased the remaining farm value.

d) Lease-with-option to buy
   i. A clause in the lease giving the lessee the first option to buy if for any reason the property will be going on the market is important for protecting a young farmer's investments in the land. First "option to purchase" can be included as part of a lease agreement, whether payment terms are cash or crop-share.
   ii. "Right of first refusal" is another method, though less strong than an "option to purchase." If owner sells they must notify tenant in writing, then the tenant can buy at a price that owner lists or tenant can match any 3rd-party offer within a time limited specified in the lease agreement.
   iii. However, having these options means little if the beginning farmer has not positioned himself or herself to be able to exercise the option. In other words, having the right to buy the farm only makes a difference if one can get financing for purchase in time to exercise the option.

e) Alternative lease models
   i. Many different types of entities have farmland available for lease. These entities include: Public agencies, park systems, land trusts, school districts, churches, businesses/corporations.
   ii. These leases are often publicized only briefly or through their own established networks in the agricultural community. Enquire with the entities about availability.
   iii. A proactive beginning farmer should contact the offices of such organizations to enquire with appropriate program staff
   iv. While a significant wait period may be required, to get approvals from the relevant agency or board, once a lease is obtained an agreement running 2–5 years with the opportunity to renew may be possible
   v. The availability of infrastructure including wells, barns, and fencing will vary considerably. There also may be stricter land use requirements (organic, conservation).

D. Purchasing Agricultural Land

1. **Purchase with conventional financing**

a) The standard means of purchasing a farm: This involves borrowing the money from a willing lender, making an offer on the land, and eventually purchasing the farm by making payments to the bank/lender
   i. A lender may ask for up to 20% down, and they will want to see a business/farm plan, as well as cash flow, to support the loan. A good to moderate credit rating is also important.

b) However, purchase with conventional financing is increasingly difficult for beginning farmers (see above re: the farmland affordability challenge)
   i. As land prices increase it is becoming more and more difficult to support land payments from the proceeds of small-scale agriculture

ii. Agricultural lenders typically require a demonstrated track record of successful farm business management
iii. A track record of successful farm business management in conjunction with a credible cash-flow projection is used to determine whether or not an agricultural lender will provide financing
iv. The lender will analyze the applicant's ability to make an adequate income from the specific piece of land they seek to purchase

c) Variation on fee-title purchase suitable for purchases of relatively small acreage (i.e., 2–15 acres)
i. Seek financing assistance from a mortgage broker or bank as a single-family residence
ii. By demonstrating significant income from off-farm sources based on a track record of maintaining an off-farm job, the purchaser may qualify for a home loan
iii. This may allow the purchaser to obtain a lower interest rate. This also circumvents the hurdle of demonstrating significant farm management experience.

2. **Purchase through an "owner financing" / installment sale**
a) An installment sale or land contract sale is an agreement through which the seller (original owner) of the land agrees to finance the sale to a new buyer. The new buyer moves onto the land and begins making payments directly to the seller/owner based on an agreed-upon interest rate and other terms. This approach may result in a large "balloon" payment to finish paying off the seller.
b) Advantages to new farmer: This approach can benefit a beginning farmer because they would not have to approach a commercial or governmental lender for a traditional loan, which is often difficult or impossible to secure for new and limited-resource farmers
c) Advantages to seller: The seller, in turn, benefits by limiting their capital gains and income tax liability. In addition, if the seller finances the sale ("carries the note") through an installment sale and the beginning farmer defaults, the land goes back to the seller, who can then select a new buyer.
d) It is important to negotiate fees with either a realtor or lawyer in order to put together a purchase agreement that will pass legal muster
e) Mitigating disadvantages to the seller: The USDA's Farm Service Agency has a "Land Contract Pilot Program" through which sellers can be guaranteed payments by the government for 10 years (approved in the 2008 Farm Bill).

3. **Purchase of land protected by sale of agricultural conservation easement(s)**
a) Explanation of a conservation easement from the Land Trust Alliance, excerpted:
i. "The most traditional tool for conserving private land, a "conservation easement" (also known as a conservation restriction) is a legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values. It allows landowners to continue to own and use their land, and they can also sell it or pass it on to heirs.

"When you donate a conservation easement to a land trust, you give up some of the rights associated with the land. For example, you might give up the right to build additional structures, while retaining the right to grow crops. Future owners also will be bound by the easement's terms. The land trust is responsible for making sure the easement's terms are followed. This is managed through "stewardship" by the land trust.

"Conservation easements offer great flexibility. An easement on property containing rare wildlife habitat might prohibit any development, for example, while an easement on a farm might allow continued farming and the addition of agricultural structures. An easement may apply to all or a portion of the property, and need not require public access." Source: *www.landtrustalliance.org/conservation/landowners/conservation-easements*

b) **Types of Easements**
   i. Standard easements: These limit development and subdivision of the property. They may limit "footprint" of the farming operation. They may limit the size of a single-family house to ensure the farmer is not priced out of the market.
   ii. Affirmative easements: These may call for continued farming, require organic cultivation or specific crops. There should be a definition of what constitutes reasonable efforts to meet the conditions.

c) The easement is recorded with the deed, and future owners are bound by its terms in perpetuity. The land remains privately owned and on the tax rolls. With an Agricultural Conservation Easement (ACE), a land trust or government agency maintains the development rights, while the farmer owns the farming and water rights and all other private property rights including exclusive use.

d) A farm transaction with an ACE can take place in three basic ways:
   i. Private buyer purchases land at full cost and then sells the easement
   ii. A governmental or non-profit organizations acquires the land and then sells it at a reduced value after recording a conservation easement
   iii. The private buyer and easement holder work in sync to do a "simultaneous transaction." Some agricultural land trusts are seeking farmers increasingly as partners or "conservation buyers" who can help facilitate acquiring land to be protected. Farmers can proactively do outreach to land trusts.

e) How beginning farmers may benefit from the sale of conservation easements
   i. Reduced out-of-pocket price paid to owner due to compensation by land trust for the sale of the ACE
   ii. Reduced tax burden due to reevaluation of property value based not on speculative value of land but on productive agricultural value
   iii. Reduced inheritance tax due to reduced appraised value of property
   iv. Acquiring ACE-protected land from a governmental or nonprofit agency may provide a longer time-frame than purchasing, in comparison to the public real estate market; the farmer can use this time to put together financing
   v. Provides conservation of agricultural and/or wild lands in perpetuity
   vi. A donated easement can offset taxes
   vii. Sale of an easement can serve as a down payment

f) Who supports the purchase of conservation easements?
   i. California Department of Conservation, USDA Agricultural Conservation Easement Program, many local governments and hundreds of private land trusts are supporting the purchase of conservation easements on agricultural lands (see Resources)

E. Alternative Models

1. **Community land trust and land pooling**

a) A community land trust (CLT) is a nonprofit organization that owns real estate to benefit the local community by enabling long-term low cost ownership. The organizations are democratically controlled and serve to provide long-term housing and farmland tenure.

b) A CLT encourages good land stewardship and makes land more affordable because the common land is held by a trust as land designated for the broader community's use while individual families or farmers hold long-term leases on a plot of land

c) Because CLTs are able to provide long-term leases, they have the ability to preserve affordability over a long period of time. Land is removed from the speculative real estate market and held in trust by a democratically structured nonprofit.

d) The value created from the labor applied to the land (agriculture crops and buildings) is private equity and becomes a liquid asset to the persons who are investing time and resources in the infrastructure value. This asset is exchangeable in the market place with limited equity potential that is defined by each CLT.

e) Generally a CLT is organized as a tax-exempt 501(c) 3 nonprofit organization. In some cases a 501(c) 2 is established as a title holding company to administer property leaseholds that would jeopardize the tax-exempt status of the 501(c) 3.

2. **Shared ownership models: Legal partnerships, corporations, and limited liability companies (LLC)**

a) In forming a partnership, corporation, or limited liability company (LLC) chief considerations include –

i. Which legal entity is best for shared ownership? Based on how various investors choose to share ownership of property, decision-making, and risk/liability, one can determine the best legal entity to hold title to the land.

ii. Example: One group may choose to have "silent partners" who invest cash but do not have a say in day-to-day operations of the farm. Some partners may have more off-farm assets than others and therefore might be taking on an unequal level of risk if the farm were sued.

iii. Comparative advantages can be explored through various Nolo Press publications (www.nolo.com) or speaking with a lawyer

b) The LLC has become popular over the last several years as a means of meeting many goals of shared ownership while limiting bureaucratic requirements, liability, and costs. One option is for an LLC to own land and lease it back to a farm entity. This may offer several advantages –

i. Multiple investors can share ownership in the form of shares or stock in the land asset

ii. With an LLC one owner can choose to sell his or her shares at any time and other members can either buy the departing shareholder out or find another investor to purchase those shares. This allows the land to continue to benefit LLC shareholders regardless of changes in the personal goals or financial situation of one individual.

iii. By leasing land to the farming entity, the shareholders are assured the opportunity to gain equity, and to obtain income tax advantages from deducting mortgage interest

iv. In addition, this type of entity can be used to separate decision making between active farm managers – who need to be involved in day-to-day production and marketing decisions – and absentee land-owning shareholders

v. Much of what is described here as benefits of an LLC can also be attributed to other forms of incorporation or partnership agreements

vi. For additional descriptions and comparative advantages over other forms of incorporation or partnership agreements, see Nolo Press's "Types of Ownership Structure." Available online at www.nolo.com.

3. **Limited liability company ownership with lease to nonprofit entity**

a) Many individuals in a new generation of aspiring farmers who did not grow up on farms or expect to inherit land have become interested in hybrid private/nonprofit farm entities. If educational tours and similar activities will be a core part of the business plan, this strategy may have merit, as a nonprofit entity will typically find it easier to obtain grants for program expenses that include rent, but not capital expenditures for land.

b) Farming and nonprofit administration require very different skill sets. For this reason it is crucial to keep priorities straight, as starting up either a nonprofit organization or a productive farm demand significant time and resources.

Lecture 2: Finding Land, Signing a Lease, & USDA Programs

A. Finding Land

1. **Finding the right property – this can be difficult for a new farmer**
   a) There is not an abundance of good available farmland and there are a lot of people looking for it (see Lecture 1, B. The Farmland Availability Challenge). Thus, those with more resources are more able to secure it.
      i. Lease rates are increasing in many places
   b) Knowledge about available land is often found in established farmer networks. These networks allow growers to know when parcels of land may open up soon, and allows them to pursue that piece of property to expand their own operations. Thus, these opportunities are harder for newer farmers to both find and secure.
2. **Before beginning, know what you are looking for**
   a) Before you look for land, be clear about the parameters and criteria that are important to you
      i. Follow your farm business plan/farm plan and your search parameters (see Unit 6, Building Resilience: Small Farm Planning & Operations, for more on business/farm planning)
      ii. What are your needs for land?
         - What are your acreage needs, current and future?
         - Based on your intended crop types, what are your needs for soil, location, climate (regional, local, micro)
         - Based on your marketing plan, what are your needs for access/distance to markets, suppliers, services and labor and other jobs?
      iii. While a short-term lease may include an inexpensive per acre price in comparison to similar properties, the distance from housing or markets may mean that transportation costs and travel time outweigh the "bargain" represented by the lease price
         - Is there affordable housing nearby?
         - What are your water needs, based on crop/product needs, source, quantity, quality, infrastructure, cost?
3. **Strategies to find available land**
   a) Contact FarmLink-type organizations throughout nation. They are available to help new farmers find land. They have been cultivating relationships with older farmers and landowners for some time and have opportunities you might not hear about elsewhere.
   b) Look on the "fringes" – beyond the normal avenues for finding land. Since there is a network in place that knows about available land, it often goes to those already farming within that network. It takes some work to find properties outside of that loop.
   c) Be willing to use multiple small plots to start out
   d) Look for houses with extra acreage
   e) Ask friends and family
   f) Check Craigslist
   g) Other farmers—they often know more about . . . .
      i. Bigger ranches with unused parcels
      ii. Who's retiring or moving off land

h) Online-based groups and listservs
    i. Rare Fruit Growers
    ii. "Meetup" Group
    iii. Google Groups
i) Google Maps: the satellite view can show plots of land that appear unused in peri-urban or suburban neighborhoods. Then these areas can be explored further.
j) Use the Assessor's Office if you've identified a parcel to get contact information
k) Place a classified ad

4. Other resources for finding, assessing, and securing land
    a) Mentors and experienced farmers – they can offer feedback on a parcel of land you've identified and strategies for securing it, as well as ideas for where to look to find it in the first place
    b) Online groups and guilds – these can help you find current or retired farmers to talk to
    c) Real estate brokers, appraisers, irrigation district officers, Co-op Extension farm advisors, Title company officers (property maps, APN maps), American Society of Farm Managers & Rural Appraisers (www.calasfmra.com) and Attorneys can all provide different kinds of guidance about what is good land, feedback about leases, people to talk with to find land, etc.
5. **Working with professionals and landowners**
    a) Good business etiquette is important
        i. Be professional and prepared. Treat all the contacts with these people as business meetings or transactions. Do your homework. Present yourself in the best light.
    b) Get help when needed. Contact specialists (listed above) if you have questions or concerns.
    c) Landowners and farmers are looking out for their best interests
        i. Work towards a sustainable agreement that works for everyone involved

B. Signing a Lease

1. See Lecture 1, C. for descriptions of various types of agricultural leases
2. Why have a written lease?
    a) Verbal agreements are problematic
        i. A verbal agreement – valid in California for 1 year
        ii. While some beginning farmers have planted crops on a "handshake" or verbal agreement this is unadvisable. The details of a verbal agreement may not all be remembered, or even clearly understood in the first place.
    b) A lease agreement gets everything on the table up front
        i. It requires that all parties clarify and share their goals and expectations
        ii. Written agreement should have everything clear and straightforward
        iii. Even if the land is being offered for free, a written agreement is important. If the landlord only requires an occasional box of vegetables for compensation, that can be attractive. However, months into the lease that same landowner may make unreasonable demands about controlling noise, limiting water use, or maintaining aesthetics.
        iv. It also provides legal protection to both parties, and can be used in conflict resolution.
    c) Leases are important for various transactions and situations, such as working with the following departments or organizations
        i. Agricultural Commissioner (Certified Producer Certificate)

ii. Organic Certification Agency
iii. NRCS cost-share programs
iv. Lenders
v. Court System

b) Professional assistance

Please note: All land tenure agreements should be documented in writing and well understood by all of the parties involved in the transaction. This typically requires outside professional assistance.

3. Steps to signing a lease
   a) Sample leases
      i. Review sample leases to understand the clauses and terminology—and see what is possible and useful in a lease. You can find these from farm link organizations, attorneys, or internet searches.
   b) Hold lease meetings with landowner and professionals
      i. Have face-to-face discussions about what should go into the lease. It can be useful to use a good sample lease as a starting point. It may be helpful to include a 3rd party in lease meetings.
   c) Third party reviewers
      i. It can be very helpful to have a 3rd set of eyes review the agreement, such as a farm link organization, lawyer, experienced farmer, or other knowledgeable professional
   d) Lease rates
      i. It is important to ensure you are paying a fair rate. To attempt to do so, here are the land factors that should be considered:
         - Soil type
         - Crop(s) to be planted
         - Water and utilities
         - Location: What is the access to markets and services?
         - "Plug and Play": Is ground ready?
         - Housing, equipment, and infrastructure
      ii. However, the "Market Rate"—what are people paying in the area for what crops—often can trump everything
   e) Lease rates for animal production
      i. These lease rates should be lower than vegetable production ground. They are based on: Acreage; stocking rates, share leases, sometimes using complicated formulas.
   f) Acres to be leased
      i. Landowners may not always be clear about the exact number of acres they are leasing. Although they may know the total acreage of a property, once there is a house on it, roads, and subdivided fields, the subsections size may not be clear. It is not unusual for a landowner to assume they know the acreage of a segment of their property, but to have overestimated the actual size. There are also instances where the overestimation is intentional. Thus, it is important to ensure that the size of the acreage the landowner is offering is accurate.
      ii. Strategies for assessment:
         - Measure by hand
         - Hire a professional
         - Use Google Earth/Maps
         - Consult Assessor's office maps

iii. Keep in mind that the acreage you are leasing may ultimately be reduced by roads, vehicle storage, etc. Thus, if you plan to farm on 5 acres, you may need to lease a property larger than that to have an equipment shed, post-harvest processing area, etc.

4. Elements of a good lease
   a) Property map
   b) Term
   c) Rent (crop share or cash)
   d) Late rent
   e) Deposit
   f) Use: What is being grown or raised
   g) Organic?
   h) Maintenance and repair: Identify who is maintaining and repairing everything (such as buildings fences, roads, etc.), who will pay for it, and what is the process
   i) Utilities and water: Who pays for these, whose name they are in, how they are measured if not separate meters
   j) Describe irrigation system and maintenance in detail
   k) Shared well/utilities: Should have a detailed explanation
   l) Exit clause if water is no longer available in quantity or quality
   m) Alterations – this is a legal term for making changes to a lease. It is important to have a provision that lease terms can be changed if both parties agree.
   n) Assignment or subletting
   o) Liability insurance
   p) Dispute resolution
   q) Option to renew and "evergreen" option (continuous renewal)
   r) Sale of property: Lease should stipulate what happens if property sells or the landowners dies
   s) First right of refusal
   t) Option to buy
   u) Conservation easement
   v) Termination clause
   w) Contact information
5. **Lease Term**
   a) *The lease term should match crop* timing. In California, the maximum agricultural lease is 51 years.
   b) Short-term
      i. A short-term lease is a safe structure within which to test a new farm business. It is good for annual row crops and grazing.
   c) Medium-term
      i. A medium-term lease (3–5 years) is good for attracting investment, allowing a deepening of relationships (markets, employees, neighbors, etc.), if you are growing alfalfa and other perennial crops.
      ii. It is also a useful term if you see a subdivision looming (in 1–5 years)

e) Long-term
    i. A long-term lease (7–50 years) is important for vineyards, orchards, high-infrastructure operations. This allows for deeper stewardship, and can also become an appreciating and transferable asset.

C. How Can the USDA Help New and Beginning Farmers?

1. Farm Service Agency (FSA)
    a) Direct farm ownership loans
    b) Guaranteed farm ownership loans
    c) Land Contract Program
    d) Interest-assistance
2. Natural Resources Conservation Service (NRCS)
    a) Cost-share programs for landowners AND tenant farmers, e.g., the EQIP

Resources & References

Please note: As mentioned in Lecture 2, all land tenure agreements should be documented in writing and well understood by all of the parties involved in the transaction. This typically requires outside professional assistance.

PRINT RESOURCES

Choices Magazine – Farmland Values Edition. *www.choicesmagazine.org/choices-magazine/theme-articles/farmland-values/theme-overview-farmland-values*

This edition of Choices Magazine *offers several articles exploring trends and issues with farmland values/prices and markets.*

Christian, Diana. 2003. *Creating a Life Together: Practical Tools to Grow Ecovillages and Intentional Communities*. Gabriola Island, BC, Canada: New Society Publishers.

Several chapters dedicated to collective and cooperative land tenure models. Provides several thorough case studies on shared ownership models and guidelines on how to select the most appropriate legal entity for holding land titles.

Farmers Guide to Securing Land, California FarmLink (forthcoming). California FarmLink. *www.cafarmlink.org*

Geisler, Charles, and Gail Daneker (eds.). 2000. *Property and Values: Alternatives to Public and Private Ownership*. Washington, DC: Island Press.

Brings together scholars, attorneys, government officials, community development practitioners, and environmental advocates to consider property rights issues and how to create new and more socially equitable forms of land ownership.

Ruhf, Kathryn Z. 1999. *Farmland Transfer and Protection in New England: A Guide for Entering and Exiting Farmers*. Belchertown, MA: New England Small Farm Institute.

Information on farm transfer and secure tenure for the next generation of New England farmers. Useful for farm families and service providers involved in farmland access, transfer, and protection. Email nesfi@igc.org.

Ruhf, Kathy, Annette Higby, Andrea Woloschuck et al. 2004. *Holding Ground: A Guide to Northeast Farmland Tenure and Stewardship*. Intervale Foundation (VT) and the New England Small Farm Institute.

This comprehensive guide offers models and mechanisms, other than outright ownership, for securing tenure on farmland in any U.S. region. Holding Ground opens doors to new tenure models and provides practical information to help you craft innovative, successful tenure agreements that address the needs of both parties—and of the land itself.

Schwartz, Steve, Lindsey Lusher Shute, Sophie Ackoff, and Eleanor Kane. 2013. *Conservation 2.0 – How Land Trusts Can Protect America's Working Farms*. National Young Farmers Coalition. *www.youngfarmers.org/reports/conservation2.0.pdf*

This report explores the current state of conservation easements and land trusts in the U.S. It summarizes findings from surveys, focus groups and interviews with land trust professionals.

Weaver, Becca, Leigh Kalbacker, and Chelsea Bardot Lewis. 2012. *Finding, Assessing, and Securing Farmland: A Plain Language Guide from the New Entry Sustainable Farming Project*. Lowell, MA: New Entry Sustainable Farming Project.

This 35-page document is designed for beginning farmers who are ready to find land. It provides needed information, as well as questions to help new farmers find the clarity they need on a variety of issues, that will help make the land acquisition process more successful.

Winig, Ben, and Heather Wooten. 2013. *Dig, Eat and Be Healthy: A Guide to Growing Food on Public Property.* Oakland, CA: ChangeLab Solutions. *http://changelabsolutions.org/publications/dig-eat-be-healthy*

This 48-page publication offers useful information for growing food on public land. It outlines how to identify public agencies to work with and assess good growing sites, and discusses different types of agreements and important information to include in them. Also highlighted are issues and suggestions for growing food on public school properties.

WEB-BASED RESOURCES

American Farmland Trust

www.farmland.org

The web site for American Farmland Trust, a national organization working on farmland conservation models.

Beginning Farmers

www.beginningfarmers.org/finding-land-to-farm/

They have listings of all US Landlink programs, links to other resources for finding land, as well as national and state land listing services.

California Chapter of the American Society of Farm Managers and Rural Appraisers

www.calasfmra.com

While this site is designed for professional appraisers, realtors, and others, you'll find much valuable information including average costs of land for sale or lease. The information is categorized by crop and California county.

California Department of Conservation Division of Land Resource Protection—California Farmland Conservation Program

www.consrv.ca.gov/DLRP

California Farmland Conservancy Program (CFCP) encourages long-term, private stewardship of agricultural lands through the voluntary use of agricultural conservation easements. The CFCP provides grant funding for projects that use and support agricultural conservation easements for protection of agricultural lands.

California FarmLink

www.cafarmlink.org

This site provides information about California FarmLink services and programs as well as case studies on farm transfer models and links to other helpful sites. Sample language from which to develop legal land tenure agreements are also available through California FarmLink and other organizations.

Conservation Fund

www.conservationfund.org

Forges partnerships to protect America's legacy of land and water resources. Through land acquisition, community initiatives, and leadership training, the Conservation Fund and its partners demonstrate sustainable conservation solutions emphasizing the integration of economic and environmental goals.

Equity Trust Incorporated

www.equitytrust.org

The Equity Trust Incorporated offers a number of programs that emphasize creative approaches to land tenure, including a CSA/Agriculture program that intends to "introduce a new constituency to alternative land tenure models, enroll them into partnerships with land trusts and raise the standards of agricultural land preservation to include better protections to keep farmland in active use and maintain its affordability to future farmers." Includes listing of resources.

FarmLASTS – Land Access, Sucession and Tenure and Stewardship

http://www.uvm.edu/farmlasts/

This website is an online manual, which is the product of a national multi-year project initiated in 2007. It includes research reports and recommendations, an agricultural land tenure curriculum, and proceedings from a land tenure conference from 2009.

Federation of Southern Cooperatives Land Assistance Fund

http://www.federationsoutherncoop.com/

The Federation of Southern Cooperatives Land Assistance Fund provides offers numerous programs and services, including land assistance, a credit union and cooperative marketing. Their mission is to help foster self-supporting communities and help with land acquisition and retention for African Americans and all family farmers.

Growing New Farmers

www.growingnewfarmers.org

Growing New Farmers is a community of new farmers and service providers organized through the New England Small Farm Institute. This web site will assist the spectrum of beginning farmers, from those assessing whether they want to get started to those finalizing business plans. Though created for farmers in the Northeast it has a wealth of information for California farmers, including worksheets, articles, and a user-friendly question and answer section.

Institute for Community Economics

www.iceclt.org/clt/

ICE, founded in 1967, is a national organization that promotes the just allocation of resources in communities in ways that address the needs of low-income families. Through technical assistance, financial support, and advocacy, ICE builds the capacity of a national network of community land trusts (CLTs) and other locally controlled organizations for permanently affordable housing and community economic development. Contains extensive resources on the Community Land Trust model of land and housing ownership.

International Farm Transition Network

www.farmtransition.org

This web site has links to many state and regional program that help connect beginning and aspiring farmers with opportunities to gain land tenure, connect with mentors.

Land for Good

www.landforgood.org

The site provides a variety of resources including case-studies associated with land access.

Land Trust Alliance

www.lta.org

The Land Trust Alliance web site will help you access local land trusts that may be of assistance in acquiring lands for lease or sale.

Marin Agricultural Land Trust

www.malt.org

Founded in 1980 by a coalition of ranchers and environmentalists to preserve farmland in Marin County, California, MALT acquires agricultural conservation easements on farmland in voluntary transactions with landowners. The MALT web site contains many online articles on agricultural conservation easements, sample conservation easements, and multiple case studies of agriculture land preservation through the sale of conservation easements.

National Young Farmers Coalition (NYFC)

www.youngfarmers.org

The NYFC provides a land access section on their website, which provides case studies, resources for finding land, workshop listings and other documents.

New England Land Link Program

www.smallfarm.org/nell/nell.html#pub

NELL is a program to help farmers and landholders locate and transfer farms in New England.

New England Small Farm Institute (NESFI)

www.smallfarm.org

Established to support beginning farmers and sustainable small-scale agriculture in New England, the NESFI provides extensive resources for the beginning farmer, including technical assistance and training programs; access to financial resources; access to land through the New England Land Link Program; and support in accessing markets.

Nolo Press

www.nolo.com

Dedicated to helping people handle their own everyday legal matters or make more informed legal decisions, Nolo Press publishes reliable, plain-English books, software, forms, and up-to-date legal information covering almost any legal topic. Includes an extensive list of publications and online articles on the types of legal ownership structures that are available and do-it-yourself manuals on forming sole proprietorships; partnerships; limited partnerships; limited liability companies (LLC); nonprofit corporations; nonprofit cooperatives. Includes links to other helpful websites.

Sustainable Communities Network (SCN)

www.sustainable.org

The SCN is for those who want to help make their communities more livable. A broad range of issues is addressed and resources are provided to help make this happen.

United States Department of Agriculture Natural Resources Conservation Service (NRCS) Farm and Ranch Lands Protection Program

www.nrcs.usda.gov/programs/frpp/

The Farm and Ranch Lands Protection Program provides matching funds to help purchase development rights to keep productive farmland and ranchland in agricultural uses. Working through existing programs, USDA joins with State, tribal, or local governments to acquire conservation easements or other interests from landowners. USDA provides up to 50 percent of the fair market easement value. The USDA NRCS Farm and Ranch Lands Protection Program web site provides resources on this federal easement program. Note: With the 2014 farm bill this program is expected to be renamed the Agricultural Conservation Easements Program (ACEP), be prepared to refine your web-search accordingly.

General Resources

This manual contains resource sections to directly support each unit. Listed below are some resources that don't necessarily support a given lecture, but offer either a broad array of useful information or other specific topics that may be useful to instructors and students alike.

Exploring Farming

Hayes, Kathryn, Judith Gillan, Eric Toensmeier, and Michelle Wiggins. 2009. *Exploring the Small Farm Dream: A Decision-Making Workbook, 2nd Edition.*Belchertown, MA: New England Small Farm Institute. *www.smallfarm.org/main/for_new_farmers/exploring_the_small_farm_dream/workbook/*

This manual can be purchased from the New England Small Farm Institute, and supplemental materials can be accessed for free at the url listed above. All of these materials are intended to help would-be farmers decide if farming is indeed the career for them, and if so, help them take their first steps. The supplemental online materials provide a number of useful tools assessing personal, environmental, and other resources needed to farm.

General Websites & Information for Beginning Farmers

Beginning Farmers

www.beginningfarmers.org

The website was developed to serve beginning farmers, farm educators, policy makers and activists. It provides an extensive array of information on farming topics, and a regularly updated blog with current information on policy, jobs, research and other issues facing those in agriculture.

Choices Magazine – Beginning Farmer Rancher Edition

www.choicesmagazine.org/choices-magazine/theme-articles/innovations-to-support-beginning-farmers-and-ranchers

This edition of Choice Magazine offers several articles relevant to new and beginning farmers, including a discussion of challenges, Farm Bill resources available for beginning farmers, innovations in supporting new farmers and others.

The Greenhorns – A Field Guide for Beginning Farmers – Wikispace

fieldguideforbeginningfarmers.wikispaces.com/

This on-line guide pulls together information to help new and young farmers get the resources they need. Topics include education, access to land, capitalization, how to get started, marketing, community, and many more.

Northeast Beginning Farmer Project

nebeginningfarmers.org

Created by Cornell University, this site provides a great variety of resources for new and beginning famers.

Start2Farm

start2farm.gov

The beginning farmer/rancher platform is host to a library of resources developed through the USDA Beginning Farmer and Rancher Development Program. The site is a project of the National Ag Library of the USDA in partnership with the National Farm Bureau Foundation.

Virtual Grange

virtualgrange.org

A project of the Stone Barns Center, the Virtual Grange connect beginning farmers from around the country to share ideas and solutions to problems. They provide forums, tutorials, current agricultural news, and notices for conferences, workshops and other education opportunities. It is also place to find advice from more experienced growers.

National Educational Resources and Programs

The Land Grant University Extension System

The Extension System is a nationwide, noncredit educational network. Each U.S. state and territory has a state office at its land-grant university and a network of local or regional offices. These offices are staffed by one or more experts who provide useful, practical, and research-based information to agricultural producers, small business owners, youth, consumers, and others in rural areas and communities of all sizes.

Local Extension System Offices

www.csrees.usda.gov/Extension/

This website can be used to find your local office.

eXtension

www.extension.org

eXtension is the online access to Land Grant University Extension resources.

Regional Farm Financial and Risk Management Education Centers

www.csrees.usda.gov/nea/economics/part/farm_part_centers.html

There are 4 of these centers nationwide.

Sustainable Agriculture Research and Extension (SARE)

www.sare.org/State-Programs/State-Program-Webpages

SARE is a special emphasis program providing federal research funds to collaborative research projects hosted at state Land Grant institutions. There are contact points in each state and U.S. territory.

National Center for Appropriate Technology/Appropriate Technology Transfer to Rural America

attra.ncat.org

NCAT/ATTRA hosts an outstanding storehouse of accessible materials for new and beginning farmers and ranchers; including Spanish language resources and a hotline to talk to an expert adviser.

National Agricultural Law Center

nationalaglawcenter.org

The National Agricultural Law Center is a project of the USDA National Ag Library, and provides agricultural law research and information nationally.

National Immigrant Farming Initiative

www.immigrantfarming.org

The National Immigrant Farming Initiative focuses on increasing the ability of immigrants to successfully farm.

National Associations

American Farm Bureau

www.fb.org

The American Farm Bureau is the largest membership organization representing farmers and ranchers. They have a DC Headquarters, active independent local organizations in most counties and all states, and young Farmers and Ranchers programs at the local, state and national level.

The Black Farmers and Agriculturalists Association (BFAA)

www.bfaa-us.org

BFAA addresses to the issues of Black farmers which has both national and state-specific chapters.

National Farmers Union (NFU)

nfu.org

The FNU is a national advocacy organization with a DC Headquarters with active independent local membership in most states. They run a national leadership program for beginning farmers and ranchers available to diverse candidates on a competitive merit-based application process.

National Family Farm Coalition (NFFC)

nffc.net

The NFFC is a national advocacy organization with it's headquarters in DC. They are primarily focused on family farm economic competitiveness. While their activities are not generally beginning farmer/rancher specific, they will focus on beginning farmer/rancher specific legislation and programs and did a "Mentoring Report & Toolkit" to address beginning farmer/rancher issues.

National FFA (Formerly Future Farmers of America)

ffa.org

The FFA works with high-school students to provide educational enhancement for future farmers and ranchers. Their headquarters is in Indiana, and they have branches in every state.

National Grange

nationalgrange.org

The National Grange is a membership advocacy organization They are headquartered in DC and have independent active chapters at the local and state level.

National Sustainable Agriculture Coalition (NSAC)

sustainableagriculture.net

NSAC is a national advocacy organization with member organizations from many states. They do not have a beginning farmer/rancher specific focus unless there is beginning farmer/rancher specific national legislation – in which case they provide excellent coverage of political developments.

National Young Farmers Coalition

youngfarmers.org

The National Young Farmers Coalition is a national membership organization which provides education and advocacy.

National Young Farmer Educational Association

nyfea.org

This organization provides national leadership development for young farmers. They are headquartered in Alabama and have participation from many other states.

Rural Coalition/Coalición Rural

ruralco.org

This organization, headquartered in Washington, D.C., is a political advocacy group working on behalf of minority farmers and ranchers.

Women, Food and Agriculture Network (WFAN)

www.wfan.org

WFAN is a group of women involved in all types of roles within sustainable agriculture (farmers, landowners, advocates, students, others) who are interested in creating a more sustainable food system through providing each other with connection, support and information.

Urban Farming and Gardening Resources

American Community Gardening Association

www.communitygarden.org

This organization provides information and resources for urban farms as well as community gardens.

Growing Power

www.growingpower.org

Growing Power focuses on creating community food systems through operating urban farms, sharing with others how to grow food in an urban setting, and providing education and technical assistance to farmers.

Resource Centres on Urban Agriculture and Food Security (RUAF)

www.ruaf.org

RUAF is an international organization devoted to supporting urban agriculture worldwide through research, projects, publications and trainings.

Urban Agriculture – University of California, Division of Agriculture and Natural Resources

ucanr.edu/sites/UrbanAg

This website provides information and resources for those wanting to start urban farms and gardens.