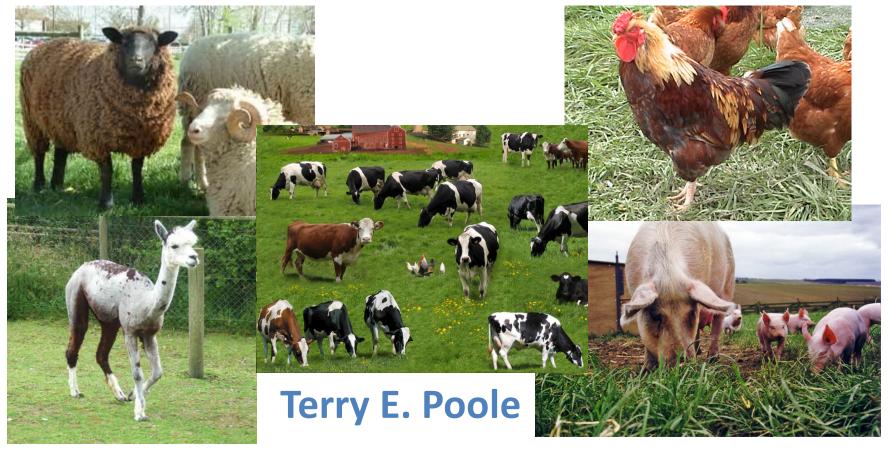
Adding Animals to Your Farm





Principal Agent Emeritus

University of Maryland Extension



BARNYARD IN YOUR BACKYARD

A Beginner's Guide to Raising Chickens, Ducks, Geese, Rabbits, Goats, Sheep, and Cows







Old McDonald's Syndrome

- One of the great things about living in the country is having enough land to raise farm animals.
- Typically the first thing many new farm owners will do, when they settle on their farm, is to add some animals.
- Adding animals, without some prior thought and planning, is not recommended.

- There is no substitute for the sight and sounds of animals on your farm to make the hubbub and stress of working down the road go away.
- Farm animals, to some degree, are at the heart of the personal sanctuary many seek, when leaving the urban sprawl behind.



- Farm animals require daily attention.
- This forces the farmer into daily chores to care for the animals, which offers a time for relaxation and quiet enjoyment away from the stresses of the office.
- In exchange for the farmer's care, farm animals will provide eggs, meat, milk, and fiber that are unadulterated.



- Farm animals have recreational value, since many new farmers have young children that they would like to enroll in 4-H. Farm animals provide great avenues for 4-H projects.
- State and county fairs are another recreational opportunity that farm animals provide. Great

fun can be had through the competition of showing animals.

- Educational value to children is another benefit, since caring for animals is an ongoing learning process involving animal husbandry and small business management.
- This educational process with animals includes procreation, birth, and death.
- Caring for animals helps to build a since of responsibility with children.

Some Negative Considerations

- Farm animals require constant care and attention. When an opportunity to get away for a few days pops up, a feeling of being tied down can happen, if a sub for the caretaking cannot be found.
- Having to deal with manure, odors, noise, flies, and maybe complaining neighbors should be considered.

Education is Essential

- Once a decision has been made on what animals are going to be added to the farm, learn as much as possible about the care and marketing of these animals.
- There are lots of books and websites available for learning about all types of farm animals.
- Subscribe to breed publications, network with others, join clubs/associations, attend county fairs, and tour

farms when available.

Finding Stock

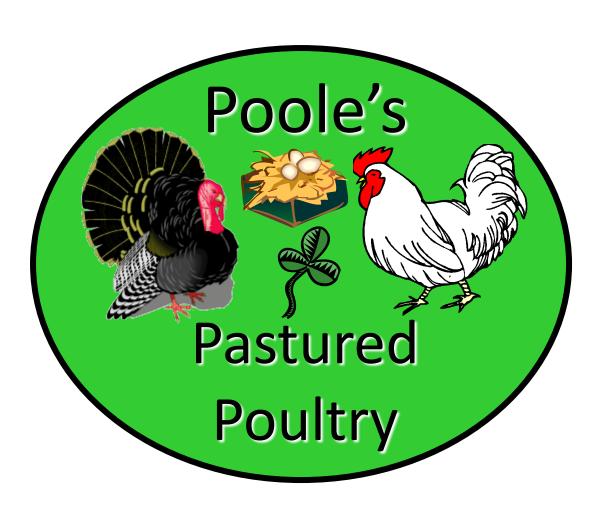
- Local networks like county and state breed/species associations, or clubs would be great places to find stock to buy that would be adapted to the region.
- National breed/species associations generally have a national directory of members, where stock can be purchased as well.
- Livestock auctions are not considered great places to purchase animals.

Before Animals Arrive

- Make sure everyone in the family is onboard with taking care of the new animals.
- Establish caretaking responsibilities among the family members.
- Check zoning regulations or neighborhood covenants on raising farm animals.
- Prepare the animal facilities.
- Install appropriate fencing.
- Inform all of the neighbors.



Free-Range Poultry Enterprises



Adding Chickens

- Raising poultry requires less startup capital, land, and equipment than other comparable enterprises.
- There is a consistently strong market for fresh, farm-raised eggs and meat birds.
- In addition to layers and meat birds, other poultry enterprises include turkeys, ducks, geese, and

game birds.

The Free-Range Chicken Alternative for Small Farms

• The birds are raised in a non-stressed environment.

* they are not crowded

* they have a natural diet of grains, forage, and bugs

* they have plenty of fresh air and sunlight









Alternative Poultry Production Techniques

Free-range

Pastured poultry

- Semi-intensive
- Yard and crop
- Innovative





Free-Range

- Refers to operations using moveable housing and access to pasture.
- In free-range operations, portable houses or pens are moved regularly so that chickens may forage grass, seeds, and insects.



Pastured Poultry

- Term used to describe a modification of freerange.
- A field pen is used where the grazing area and bird density are strictly controlled.
- Birds are pastured in floorless pens and moved daily usually in a rotation following cattle.

10 x 12 x 2 Holds 75 – 100 birds

Semi-intensive

- Refers to permanent housing with access provided to a yard or pasture.
- Birds in this system should be rotated to different yards, otherwise they will quickly turn a yard into bare soil.





Yard and Crop

- A catch-all term referring to poultry operations that do not include a formal plan for rotating pasture or have no pasture access at all.
- Birds are allowed to roam the farm at will, shutting up only at night for protection.

Yummy, chicken.



Innovative

 Birds forage fallow land in a floorless pen which is moved daily.



- Birds feed on weeds, seeds, and insects, as well as depositing manure on the ground.
- The field will be rotated to crop production the following season.



The area can be fenced in, if you don't want to have to have cages.



Free-Range Poultry Enterprises

- Table birds (meat)
- Layers
- Turkeys
- Ducks
- Game birds









Table Birds

Oh no, it has mad chicken disease!

- Fryers
 - * young birds less than 4 lb.
- Broilers
 - * weigh 4-5 lb. dressed weight
- Roasters
 - * young birds 5-10 lb.
- Capons
 - * males castrated at 3 wks. and sold at 7-11 lb.

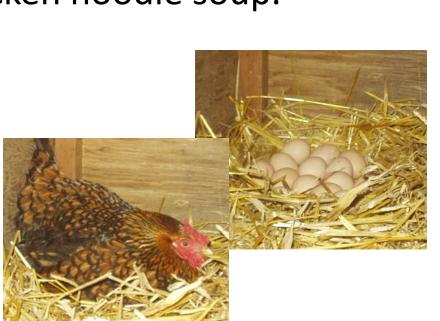
Table Birds

How about free delivery?

- Laying hen with eggs
 - * In-production hen is

harvested and her unlayed eggs are displayed with her. Used for chicken noodle soup.

- Stewing hen
 - * Old retired hen.
- Pieces and parts
 *valued added.



Starting Out

I'm tired of being your maid!

Hey Poole, we need our litter changed.

- Chicks
 - * Least expensive way
 - Less likely to bring in disease
 - * Require most care
 - * Get chance to know them and they you
- Started Birds
 - * Good deal if you can find them
 - * Good for laying flock, saves feeding unproductive birds



Starting Out

Fate of old chickens.

- Mature Birds
 - * Most expensive
 - * Fewest surprises
 - * Actual age is unknown
 - * Disease could be a problem

I stay in shape, Poole will never guess my age.



Housing Chicks

- Rooms need to be very weather tight; cold, drafty, and damp spaces are lethal to chicks.
- For heating, some use a combination of red infrared 250 watt electric brooder lamps and propane infrared heaters.
- However, woodstoves, light bulbs, or other things can work.

Housing Chicks

• The temperature at the floor should be 90° F the first week.

- The temperature can be dropped an average of 5° F / wk. after that.
- Chicks can handle freezing temps at 3 wks., the decreasing temps help them to get ready.

Housing Chicks

- Provide more room for the birds as they grow.
- If warm enough, the birds can be moved to pasture at 2-4 wks.

 Salatin waits until 4-6 wks., it really depends on the weather.
- When the birds are ready to stand the nighttime temps without piling, they are ready.

Some Thoughts

 The business is a yeararound operation. The market is especially strong in winter.





- Egg production drops off as day length shortens unless supplemental light is added.
 - *this is difficult in pastured poultry operations.
 - *egg business income is enough to justify the expense of adding lights.

Housing



- Eggmobile
 - *broiler pens can be modified with 6 ft. nest boxes hanging on the enclosed sides to accommodate 6 partitions on a side (12x12x12). A 3-4 in. high board can be put in front to keep the chickens from scratching out bedding.

Housing

- Eggmobile (con't)
 - *one nest box is needed for every 4 hens.
 - *community nest boxes (4x2x12) will serve 40-50 hens.
 - *the eggmobile can house 40-50 hens.



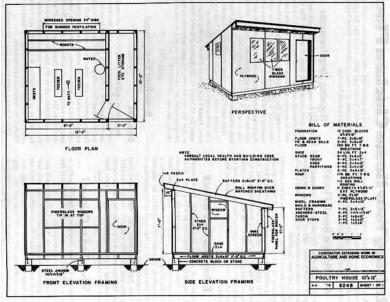






Housing

- Pole building layer house
 - *more true free-range than pastured.



- *standard 30x40 ft. pole building, insulated can house 600 hens, or 350 hens and 400 pullets at a time.
- *600 layers will average 245 dozen eggs per week (70% rate of lay).

The Laying Flock Housing

- Pole Building Layer House (con't)
 - *perimeter fence 1,000 ft² or larger area around the building and sub-divide this into 4 or more paddocks around the entire building.
 - *the chickens will be rotationally grazed through the paddocks around the building.

The Laying Flock Feeding

- How you market your eggs/birds will affect how you feed your birds.
- Most commercial mixes contain preservatives and meat by-products from animals that died prior to and during slaughter.
- If you use a natural diet and let your customers know this and why you have to charge more for your eggs, you'll make money.

Don't

Lighting

- *layers need 14 hours of light/day.
- *egg laying will cease with the decreasing day length of fall and winter.
- *supplemental lighting with a time clock is important.
- *set the clock to come on at 5:30 a.m. and to go off at 9:30 p.m.



The Laying Flock



- *using started pullets may limit you to using one of the hybrid breeds.
- *there are some breeds that produce white, or brown eggs; decide which you want to produce.
- *if you are willing to raise your own pullets, there are more options.
- *you could then look at the dual purpose breeds.









- Rhode Island Reds, White Rocks, and Hampshire Reds are duel purpose breeds.
- They lay fairly well, are deep bodied and yield a fairly meaty carcass.
- The Production Red is a genetically improved Rhode Island. It's a better layer, but a smaller bodied bird.

 The White Leghorn is the queen commercial layers. It's a 3 lb. bird and lays over 300 eggs/year.



- The Cornish Cross is the king of meat birds.
 It's a cross between the double-breasted
 Cornwall chicken and the White Rock.
- Virtually all of the broilers in the U.S. are Cornish Cross.



- The marketability of the Cornish Cross needs to be considered when selecting a breed.
- Most of the public are not used to tougher, narrow breasted types of chicken.
- Niche markets can be developed, however for the other birds of your choice.







- The Cornish Cross does take management to raise, since it was developed for factory production.
- The old non-hybrid breeds are hardy and mortality runs close to zero.
- The non-hybrid birds take 12 weeks to reach 4 lb.
 rather than 8 weeks like the Cornish Cross.
 Longer production times yield less palatable birds
 and lower profit.

This can't be our son!

- Purebreds vs. Hybrids
 - * This is a big decision
- Hybrids
 - * Will be more efficient in egg and meat production
- Purebreds
 - * Will produce consistent offspring, if you decide to develop your own replacement flock.

Watch out for those oddball breeds.



- Turkey production is more seasonal than chickens.
- Much of the management is the same as with chickens.
- You will need 1 acre/year of good pasture for each 100 turkeys.
- Turkeys should be rotated to new ground yearly in a 3-year rotation to avoid disease and parasites; the rotation should not follow chickens.



- 50 birds is a good number to start with.
- Typically, you should order 15% more birds than you need.
- They are fragile and there are usually some runts, or weaklings that do not make it.
- Turkeys are more fragile than chickens until their immune system develops at about 22 weeks.
- They consume more feed than chickens.

- Poults (young turkeys) can be purchased from a hatchery.
- There are several breeds of turkeys.
- The Broad Breasted Bronze is a breed that has done well in free-range operations; however success within breeds can vary between hatcheries.
- Brooding your own turkeys is exactly the same as with chickens.

- Poults should be kept inside until 8 weeks of age.
- Turkeys require a higher protein feed than chickens.



- Cannibalism problems will develop if protein is low.
- Purina Game Bird Starter is recommended.

- Most people want birds averaging 16-17 lb.
- Overall, orders will range for birds between 10-26 lb.



- Typically, the production period is about 24 weeks.
- You need to regularly check the weights of your birds in October, so that you can get them to desired weight by Thanksgiving.

Another Good Poultry Production Idea

 What about producing free-range game birds, geese, or ducks?





- There some restaurants that would love to be able to offer free-range raised game birds such as pheasant and quail to their customers.
- The production of these birds would not be too different from raising chickens.

Game Bird Production



- Game birds, being wild species, will need more open space than domestic poultry.
- They are more fragile than domestic poultry and are more prone to health problems and cannibalism.
- Game bird chicks are also more expensive to buy.
- Their skin is more delicate which makes them more difficult to process.

Game Bird/Other Poultry Production

 Game birds have a longer production time than domestic birds.



- All of this makes game birds more costly to raise.
- Ducks and geese are very good grazers and will do well in a free-range operation.
- Ducks and geese are more difficult to process because the oil in the feathers makes it more difficult to remove them.

Game Bird/Other Poultry Production

- One last thing to mention, the big catch to raising game birds is that they are regulated by the government.
- In order for you to raise game birds, you will have to obtain a permit from the Department of Natural Resources.
- This is not an impossible task, but it is something that you will need to do before you begin production.

Adding Goats

- They are inexpensive to maintain, require simple housing, do not take up a lot of space, and are easy to handle and transport.
- There are breeds that can be raised to produce milk, meat, or fiber.
- Goats are opportunistic eaters that will eat pasture or browse, so they are not as picky as other grazers

with pasture quality.

Breeds and Breeding

- Crossbreeding is recommended in most commercial livestock programs. Crossbreeding results in hybrid vigor.
- Hybrid vigor is the superiority of the crossbred offspring to the average parents.
- Crossbreeding combines the desirable traits from more than one breed.



South African Boar



- Introduced to the USA in 1993.
- Considered to be only true meat goat.
- Bred for superior body conformation, high growth rate, and fertility.
- They are large framed with short, white hair on their bodies and black or brown markings on their heads and necks.
- Adult males range 250-290 lb., females 140-200 lb., and yearlings 80-180 lb.

Spanish



- Spanish, Brush goat is a catch-all term for goats that do not fit any particular breed standard.
- Also called wood, hill, briar, or native goats, they have been bred for adaptability.
- They have stronger resistance to parasites and are more likely to bred out-of-season than other goats.

Myotonic



- Also known as Tennessee Fainting, Wooden-leg Nervous Goat, Fall-Down or Stiff Leg goat.
- It draws its names from the fact that it faints, or stiffens when startled or frightened.
- The fainting can be a management nuisance, however the breed is considered desirable for meat production due to its extended breeding season and good muscle to bone ratio.
- An attack usually lasts about 10-20 seconds.

Kiko



- The Kiko goat was developed in New Zealand after 20 years of intensive selection of feral goats.
- It is thought to be a vigorous, hardy, large frame, and early maturing animal that does not need pampering.

Pygmy



- Also known as the West African Dwarf Goat.
- It was introduced into the USA in the early 1960's for biomedical research and petting zoos.
 Over 30,000 registered in USA.
- Though small and slow growing, it has some potential for meat production due to its out-ofseason fertility and compact body style.
- It will breed all year with frequent twinning.

Nubian



- The Nubian is the most popular breed of dairy goat in the USA with over 100,000 registered.
- It is distinguished by its long, pendulous ears and Roman nose.
- Developed as a dual-purpose goat, tracing its origin back to North Africa.
- They are docile and have enough genetic variation in the breed to select for meat-types.

Alpine



- Also known as Saanen, Toggenburg, and Oberhasli. Collectively it is known as the Swiss dairy goat.
- Along with the LaMancha are considered to be too leggy in conformation for use as meat goats.
- However their crosses are widely used in the industry and they will continue to have a role in the meat goat industry.

Angora and Cashmere



- These breeds are not very suitable for meat production.
- They are small-framed and produce smaller litters than other goats.
- Some specific crosses with them may prove suitable for meat production.

Breeding and Reproduction

- The normal breeding season for goats is August to March, however some individuals will cycle at other times during the year.
- Goats are seasonal breeders. They experience multiple heat cycles during the fall of the year when the day length is short.
- The heat period averages 21 days. The doe will be receptive to the buck for 12-48 hr.

Breeding and Reproduction

- The gestation period for a goat is about 5 months or 150 days.
- Goats typically give birth to 1 to 3 kids, however quadruplets are not uncommon.
- Does should give birth in a clean environment, such as a well-rotated pasture, or a stall with fresh bedding.
- Few does require assistance during delivery.

Nutrition and Feeding

- Feed costs have been estimated to account for about 70% of the total cost in a meat goat enterprise.
- Nutritional needs of goats vary according to weight, age, stage of growth, or breeding cycle.
- The nutritional needs can be met by a variety of feedstuffs and feeding programs.
- There is no perfect feed or feeding program for goats.
- Feeding is based on availability of feedstuffs.



Nutrition and Feeding

- Pasture should comprise the majority of the diets of meat goats.
- When pasture cannot supply the bulk of the nutritional needs, suitable forage substitutes have to be found. This can be expensive.
- There is a question as to whether goats can be grain fed profitably.
- The amount of pasture needed per goat varies to the quality of pasture.

Fencing and Housing

- For the most part, fencing will be the largest capital expense in the meat goat enterprise.
- The two types of fencing to be used are exterior (perimeter) fencing and interior fencing.
- The exterior fence needs to keep goats in and predators out. Goats can be prey to dogs, coyotes, and bears.
- High tensile wire is considered to be the best.
- Woven wire fences will work, but are expensive.



Housing and Fencing

- Board fences can be made suitable for goats if electric wire is used along with it.
- Temporary electric fences are suitable for goat interior fences.
- They are inexpensive, easy to install and facilitate pasture rotation and parasite control.
- Goats have to be trained to respect electric fencing.



Health and Management

- The most common health problem affecting meat goats is internal parasites.
- Pretty much all healthy goats have internal parasites (worms) in their guts.
- Worm management can best be achieved through a combination of timely deworming and

pasture management.

 Frequent dewormings can be expensive and can lead to the development of worm resistance.

Adding Sheep

- They can be raised for milk, meat, or fiber.
- They are much easier to handle than other farm animals.
- They require little room, are fairly easy to care for, and can even be trained to come when called.
- They can do well grazing on very average pasture.



Choosing a Breed

- Evaluate the reasons for adding sheep to the farm.
- Select a breed that will best fit these reasons, which may be for milk, meat, or fiber.
- Another reason may be for show.
- Another reason may be as a family pet. If so, a wether (castrated male)
 - makes the best pet.

Columbia

 They are large animals that produce heavy, dense fleece and fast-growing lambs. They have a calm temperament and are easy to

handle.



Corriedale

 Noted for their long, productive lives, they are large, gentle sheep developed as dual-purpose animals (wool and meat).



Dorset

• The Dorset is considered to be one of the best choices for the first-time Sheppard. They are medium-sized and gentle. They are easy to lamb and are available in polled and horned types. They are fine producers of both meat and wool.



Hampshire

• It is the largest of the meat-type sheep breeds. They are gentle, which makes them popular with children.



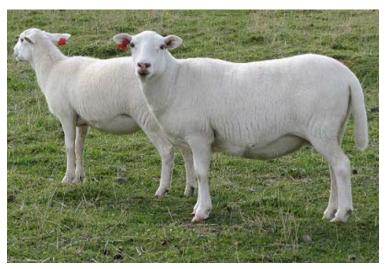
Suffolk

 A large breed of sheep that produces a very high quality meat. They can be headstrong and difficult to handle. Suffolk rams are often used to breed with ewes of other breeds for hybrid slaughter lambs.



Katahdin

• This is an easy to raise meat breed that has hair instead of wool. They do not require shearing, are gentle, mild tempered, and can tolerate extremes in temperature. They are also easy to lamb, have few health problems, and have a natural resistance to parasites.



Polypay

 They are a large, gentle-tempered breed, with a superior lamb production often producing twins. They produce quality meat and wool and a milking ability.



Romney

They are a gentle breed that make great pets.
 Their long, soft fleece is ideal for hand spinning and produce good market lambs.
 They are best suited to cool, wetter

environments.



Tunis

• It is an old breed going back more than 3,000 years. They are medium-sized, hardy, and docile. Their medium-heavy fleece is popular with spinners. They thrive in warm climates and breed well in hot weather, often

producing twins.



Fencing

- Installing fencing around the sheep pasture should be the first priority, since it will be needed to keep the sheep in and predators out.
- The best fence for sheep is either smooth electrified fence or non-electrified woven fence.
- The non-electrified woven fence will keep sheep in, but will need to have some electrified wires run through the outside to keep predators out.



Shelter

- Sheep and lambs need shelter only in bad weather, such as heat, cold, rain, and snow.
- They will be satisfied with a south-facing runin shed that offers some shade and is well

ventilated.

 They are perfectly happy to be out in the pasture grazing.

 Sheep are a little more quirky with breeding than other animals. The ewes need to be "flushed" prior to being bred.

 Flushing involves either putting the ewes to fresh, lush pasture, or being fed a small

amount of grain, or both.

 Flushing increases ovulation and the number of eggs produced.

- 9 out of 10 births of lambs go without a problem, but sometimes an abnormal lambing position can occur.
- Most shepherds keep baby monitors in the jugs (lambing pens) to listen for sounds of a ewe in distress as she begins the birthing process.
- Knowledge in how to deal with breeched births is essential.



 New born lambs require a little more attention than other newborns on the farm.

 This care includes snipping and dipping the umbilical cord and stripping the ewes teats as there can be a waxy plug that needs to be

removed before the lamb

can nurse.

 Lambs will need to have their tails docked and ram males will need to be castrated.



Feeding

- Sheep, like goats and cattle, are ruminants, where the bulk of their feed should come from forage.
- Feed for mature ewes and rams should consist of pasture, salt, a mineral/vitamin supplement, and water.
- As long as they have enough forage and water, adult sheep will be properly fed.



Feeding

- Salt and mineral supplements can be put into sturdy boxes that won't tip over or hung.
- Never feed sheep mineral or salt supplements intended for cattle. These may contain copper that is toxic to sheep.

Health

- Lambs should be vaccinated against disease at an early age.
- Sheep are vaccinated against diseases that affect lungs, the digestive system, and the reproductive tract.
- Like goats, internal parasites (worms) are a

constant threat, so good internal parasite management is essential.

Adding Cattle

- Cattle can be raised for breeding (selling calves), meat, dairy, back grounding calves, and raising replacement heifers.
- Some farms simply want to raise a few cattle for their own use for meat and milk.
- As ruminants, cattle will get the bulk of their nutrition from forages.



Choosing a Breed

- There are many, many breeds of cattle, and which you choose will depend on what is expected from the animal (milk, meat, or show).
- Some small farm operators have opted to raise
 - rare, or uncommon cattle breeds. This falls in line with the "not competing the larger farms" objective.



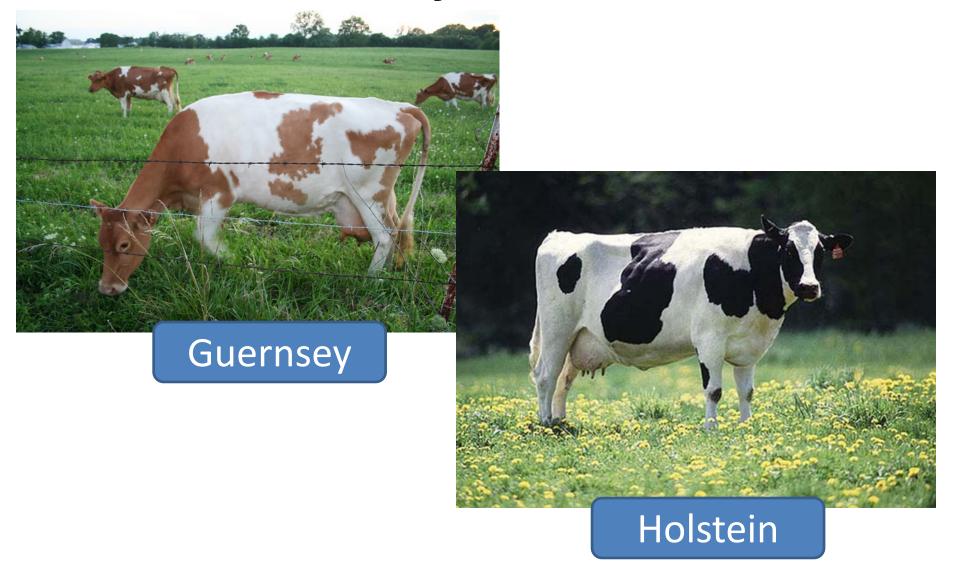
Dairy Breeds





Brown Swiss

Dairy Breeds



Dairy Breeds



Jersey



Milking Shorthorn

Beef Breeds: British



Black & Red Angus



Dexter



Belted Galloway

Beef Breeds: British



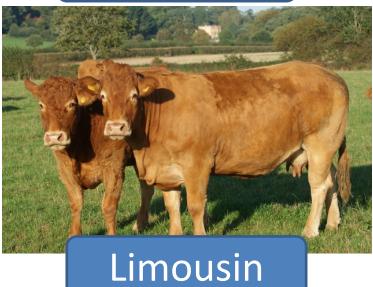
Traditional and Polled Herefords



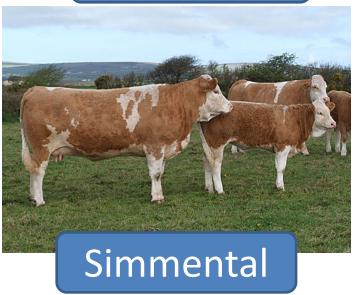


Beef Breeds: European









Beef Breeds: Other



A decent of wild cattle left by early Spanish settlers.

Fencing



- Unlike the smaller animals, fencing only needs to keep the animals in, predators are not usually a problem.
- The perimeter fence should be a multi-strand high tensile wire fence, which some electrified strands. This insures that the animals stay on the farm.
- Interior fencing, for pasture management, can be as simple as a single strand of electrified wire.



Shelter



- Cattle do not need very much in the way of shelter; they are perfectly happy grazing around the pasture.
- During harsh winter weather, a south facing wind block will usually be enough shelter.
- Some producers prefer a south facing run-in shed for use when calving time arrives.





- Cattle can be bred on the farm by using artificial insemination or by the old fashion way of using a bull.
- Decisions on breeding will depend on what the enterprise is on the farm, such as raising purebred cattle or breeding for hybrid traits.
- In freezer beef operations, crosses are often used to develop a better beef carcass.



Feeding



- Cattle feeding really depends on the cattle enterprise and the animal at that moment in time.
- Most of the time, the average animal can do very well on good pasture, salt, and mineral/vitamin mix.
- Fresh dairy animals, lactating beef cows, and finishing cattle require the most nutrition.
- Other categories include weaned calves, dry cows, back grounding steers and heifers.



Feeding



- Cattle are pretty flexible with feed in that they can be fed pasture, haylage, hay, and silage.
- They can also be fed with a wide range of byproducts, such as brewers grain, cottonseed meal, soybean meal, etc.
- They will also do well grazing grain fields after harvest; they will cleanup dropped ears of corn and forage on the fodder.

Make sure you have a good livestock transportation vehicle.



Other Animals of Note

- Other species of animals that could be added to the farm include horses, pigs, rabbits, alpacas, etc.
- Many Ag producers, both on large and small farms, will have different species of animals on the farm, so it is okay to mix species.



Nutrient Management

- Nutrient management is a law in the State of Maryland.
- You will be required to have a NM plan if you make \$2,500 or more in gross farm income, or if you have 8 animal units.

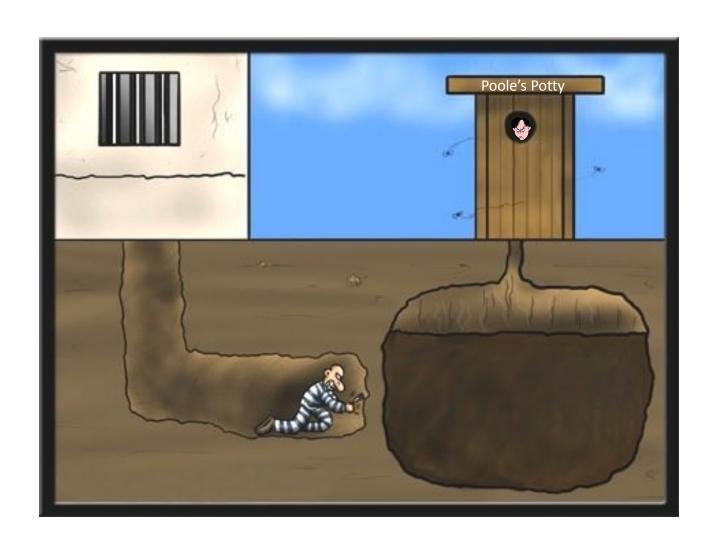
1,000/

An animal unit is 1,000 lb.

Nutrient Management

Poultry Manure	Moist.	Nutrients (lb/ton)
	%	$N P_2O_5 K_2O$
Fresh layer	75	27 22 16
Layer, in pit (yr.)	50	23 52 45
Broiler/shavings	50	25 35 25
(7 weeks)		
Broiler/shavings	25	36 33 41
(4 months)		

Do not underestimate the importance of good nutrient management planning.



Good luck with your farm animals.

