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This presentation is part of an educational modular program designed to provide new and beginning farmers and ranchers with relevant information to initiate, improve and run their agricultural operations



United States Department of Agriculture
National Institute of Food and Agriculture

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Beginning Farmer and Rancher
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Pastured duck production



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Why raise ducks?

- Ducks are easy to raise
- They do not require elaborate housing
- They are good foragers and can obtain a large portion of their food from forage
- They are very resistant to diseases and can tolerate cold wet weather very well
- Many people seek duck eggs for cooking baked goods
- They can also control pests in the farm



Duck breeds



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Campbell ducks



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Some duck breeds

Breeds	Characteristics	Examples
Lightweight	<ul style="list-style-type: none">• High egg production• Excellent foragers• Poor to Fair mothers• Flightier & Fliers	<ul style="list-style-type: none">• Campbell• Welsh Harlequin• Runner
Medium-weight	<ul style="list-style-type: none">• Dual purpose – eggs & meat• Moderately fast growth rate• Good foragers• Fair to good mothers	<ul style="list-style-type: none">• Magpie• Ancona• Cayuga• Orpington• Swedish
Heavy weight	<ul style="list-style-type: none">• Meat production• Rapid weight gain• Moderate layers• Calm temperaments• Home bodies if well fed• Variable mothering ability	<ul style="list-style-type: none">• Appleyard• Aylesbury• Muscovy• Pekin• Rouen• Saxony



American Livestock Breeds Conservancy ALBC

- Most duck breeds are considered endangered by the American Livestock Breeds Conservancy (**ALBC**)
- They can be classified as: Critical, threatened, watch, recovering or in need of study

The ALBC website contains information about the different breeds and they can help you find breeders



Duck breed comparison

Breed	Temperament	Body Weight (grams)	Annual egg production ¹	Mothering	Bluish eggs
Black Swedish	Calm	140-180	130-180	Fair	20%
Black runner	Nervous	90-115	100-180	Poor-fair	70%
Blue runner	Nervous	90-115	100-180	Poor-fair	70%
Blue Swedish	Calm	140-180	120-180	Fair	85%
Buff	Calm	140-180	130-180	Fair	85%
Cayuga	Calm	135-170	130-180	Fair	83%
Chocolate runner	Nervous	90-115	100-180	Poor-fair	86%
Fawn and white runner	Nervous	90-115	100-180	Poor-fair	86%
Jumbo Pekin	Very calm	250-380	140-175	Poor	85%
Golden 300 Hybrid layer	Average	125-165	200-290	Fair	93%
Grimaud Hybrid Pekin	Calm	225-350	150-200	Poor	89%
Khaki Campbell	Nervous	100-130	165-210	Good	87%
Mallard	Calm	60-70	60-120	Very good	90%
Pekin	Calm	200-380	140-220	Poor	89%
Rouen	Calm	140-200	35-120	Good	87%
Welsh Harlequin	Very calm	125-160	150-200	Good	75%
White Crested	Nervous	170-200	100-130	Poor-fair	83%
White Layer	Average	125-165	200-290	Fair	93%

¹The lower number are if no artificial lights are used. The higher number are if artificial lights are used to maintain 17 hours of light a day



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Light weight breeds

Campbell & Welsh Harlequin

- Closely related to each other
- Very adaptable to a range of climates
- Obtain purebred stock that has been selected for egg yield
- ALBC Status
 - Campbell: WATCH
 - Welsh Harlequins: CRITICAL





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Light weight breeds

Runners

- For a long time they were known as Indian Runners
- Come in many colors
- Very active foragers
- Herd-able
- ALBC status:
 - WATCH



Medium weight breeds

Magpie & Ancona

- Closely related to one another
- Eggs white, tinted, blue, green or spotted
- Best foragers and best layers of this group
- Dress cleanly
- ALBC status
 - CRITICAL



Medium weight breeds

Cayuga

- American breed
- Once a significant dual purpose farm duck. Replaced by Pekin in 1890s
- Eggs are initially almost black and they lighten up to clear grey, blue, green, or white
- ALBC status
 - RARE





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Medium weight breeds

Orpington

- Also known as “Buff”
- Excellent dual purpose bird
- Eggs are white or tinted
- Weighs 7 – 8 pounds
- Dress well
- ALBC status
 - RARE





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Medium weight breeds

Swedish

- Eggs white, tinted, blue, or green
- Weighs 7 – 8 pounds
- ALBC status
 - WATCH





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Heavy weight breeds

Silver Appleyard

- Most active foragers and best layers of the Heavyweight breeds
- Purported to produce more flavorful meat w/ less fat than more rapid growing Pekin
- Eggs white
- Weighs 8 – 9 pounds
- ALBC status
 - CRITICAL





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Heavy weight breeds

Aylesbury

- 35 – 125 eggs per year
- Eggs white, tinted, or green
- 9 – 10 pounds
- White skinned
- ALBC status
 - CRITICAL





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Heavy weight breeds

Muscovy

- Fly and roost
- Quiet breed – don't quack
- Broody
- Aggressive in crowded conditions; claws
- Many strains – vary dramatically
- Meat is lean; can resemble beef or ham
- Living wild relatives, native to Mexico, Central & South America
- ALBC status
 - Not rare





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Heavy weight breeds

Muscovy ducks

- The Muscovy ducks occur naturally in different parts of the country and has been added to the list of birds protected by the Migratory Bird Treaty (50 CFR 10.13)
- Thus, since 2010 the possession and sale of Muscovy ducks is regulated by 50CFR 21.14 and 21.25
- Call the USFWS office closest to you to obtain information regarding specific regulation in your area



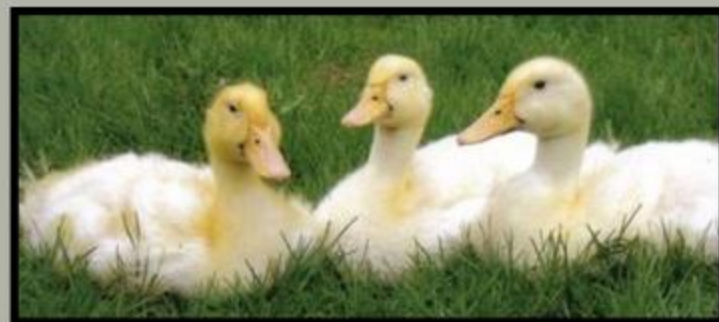


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Heavy weight breeds

Pekin

- 125 – 225 eggs per year
- 9 – 10 pounds
- Popular market duck since arriving from China
- Hardy, rapid growth rate, high feed efficiency
- Calm temperament
- ALBC status
 - Readily available. Used in commercial production.





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Heavy weight breeds

Rouen

- 35 – 125 eggs per year
- 9 – 10 pounds
- Market duck prior to Pekin
- Excellent roaster
- Production & exhibition strains
- ALBC status
 - WATCH



Heavy weight breeds

Saxony

- 190 – 240 eggs per year
- 8 – 9 pounds
- Active forager
- Adapts well to many environments
- ALBC status
 - CRITICAL





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Choose a breed that fits your goals and needs





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Duck production

- Egg type ducks
- Meat type ducks
- Dual purpose ducks

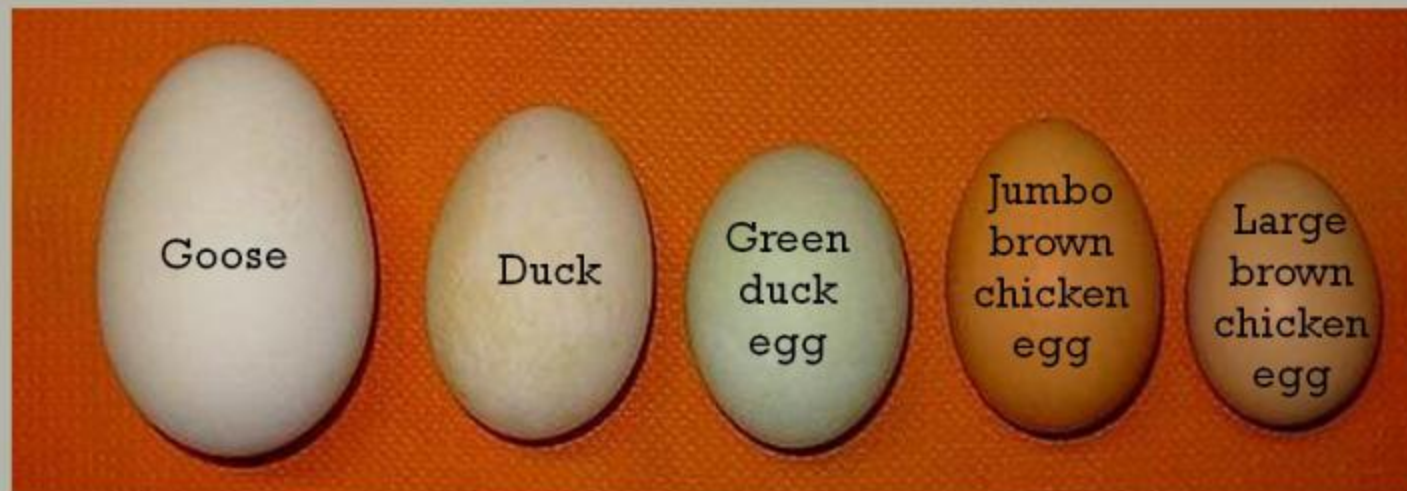




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Egg Type Ducks

- Smaller birds
- Better ability to fly





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Meat Type Ducks

- Larger bodies
- Can't fly very well
- Genetics and nutrition affect size



Practical aspects of duck production



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Getting started

- There are online hatcheries that sell several breeds of ducks
- In some hatcheries the minimum order are two ducklings so you can choose how many you want to start with
 - It is important to let the post office know that you are expecting live animals in the mail and then go to pick them up as quickly as possible
 - When they arrive, you need to open the box at the post office to make sure all your birds are there and they are ok
 - If there are any problems, a postal employee needs to sign your claim





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Getting started

- The ducklings are shipped in cardboard boxes designed to keep them warm while allowing fresh air inside
- Although some hatcheries use small boxes designed for 25 birds, many can use boxes that fit up to 100 birds in them
- Try to find a hatchery or producer near to your farm instead of shipping birds across the country



Getting started

Most duck breeds are considered rare

- Many breeds are hard to find in this country
- Many breeds lack uniformity
- There are wide variations in conformation and productivity
- What can you do?
 - Test stock from different sources
 - Talk to other duck breeders to find a good source of eggs or ducklings
 - You should consider producing your own breeding stock
- The American Livestock Breeds Conservancy (ALBC) can help you to find and obtain breeding stock for different duck breeds



<http://www.albc-usa.org/>



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Brooding

- Most information about brooding chickens can be used as a guide for brooding ducklings
- You will need to prepare everything before the ducklings arrive
 - Heaters should be on 12-24 hours before they arrive to make sure that the area is warm
 - Feed and water must at least be room temperature
 - Be prepared to check them at least twice a day for the first few days
 - Be prepared for some mortality within the first week (4-5% is normal)





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Optimum temperatures for ducks



Age of days	°F	°C
1	86	30
7	81	27
14	73	23
21	66	19
28	59	15
35	55	13
49	55	13
Developing breeders	55	13
Laying breeders	55	13



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Brooder

- The brooder needs to be in an area free of drafts, with a source of heat, and feed and drinking water located near the heat source so that the ducklings learn to drink and eat as soon as they are placed in the brooder
- It is helpful to dip their bills in the feed and drinking water to get them to eat and drink
- An important note is that the brooder will stink... you need to consider this when you are choosing the place for the brooder





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Brooder

- Ducklings grow very fast!
 - Ducklings go through a lot of water. They mix their food with water so that they can swallow it
 - This usually involves wiggling the food in the water along with some splashing and spilling
 - The traditional waterers used for chickens are only good for a few days because as they spill the waterer keeps filling and they keep spilling water out
 - But during the first few days it is important to make sure that the ducks cannot get into the water and drown
 - A shallow plate or dish is a better option for them
 - The water gets soiled very quickly so you will have to change it often





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Brooders

- The smooth skin of ducks is not as tough as the chickens so they need soft flooring and bedding choices
- They drink and excrete more water than chickens or turkeys
- Their droppings contain over 90% moisture. It is important to maintain litter floors in dry condition
- This will require the addition of fresh bedding on top of the wet or soiled bedding and when necessary, cleaning out all the old litter and replacing with fresh litter
- They are usually kept in the brooders for about 3 weeks (weather depending)



Outdoor access

- There are four very important things to consider when selecting an area to house the ducks:
 - **Noise**
 - **Smell**
 - **Water availability**
 - **Cleanliness**





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Noise

- Ducks are loud!
- Depending on the situation you can hear them for up to 2 miles around
- Do not locate ducks where they will disturb you or your neighbors
- Try to plant screening walls between your ducks and your neighbors





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Smell

- Ducks will produce a lot of wet manure
- Use deep bedding in holding areas. In some areas it will be advisable to remove the top few inches of the soil and replace them with sand to control the wet manure and the smells
- Manure will build up around watering and feeding areas, so make these mobile or use deep bedding





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Water

- When the ducks are kept in semi-confinement, they usually spend most time outdoors during the day
- The waterers should be located outside as far from the house as possible
- This will reduce tracking water to the litter inside





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Waterers for ducks

- Waterers designed for chickens and turkeys are usually ok for ducks, as long as the size of the duck's bill is considered
- Ducks can be trained to use nipple waterers
- If waterers are located indoors where the floor has litter, the waterers should be placed on a wire-mesh screen to reduce wetting of the litter
- For starting and growing ducks, provide a minimum of about 1 inch (2.5 cm) of linear watering space per duck. Increase this to 5 inches (5 cm) per developing and laying ducks.
- If nipple waterers are used, provide 15 nipples per 100 ducks for starting and growing and 20 nipples for developing and laying ducks (starting ducklings always need access to regular waterers until they learn to drink from nipple waterers)





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Raising ducks on open ponds

- Ducks may be kept successfully on open ponds, provided a nearby dry sheltered area is available
- Ducks kept on ponds may obtain part of their food from plant and animal life in and around the pond, but supplementary feeding will be necessary
- In warmer areas, it is common to combine duck raising on ponds with fish farming
- The number of ducks must be controlled to prevent an over-supply of nutrients and overgrowth of plant life which will cause depletion of oxygen in the water and kill the fish





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Raising ducks on open ponds

- It is important to install protections around the pond to avoid erosion of the pond walls and banks





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Ducks need water

Ducks use water to:

- Groom, preen, and bathe
- Drink
- Help swallow food, especially dry food
- Breed
 - The water will get dirty very quickly (depending on the number of ducks you will have to change it daily or twice a day)



They don't really need a large swimming area but they will appreciate a small pool to bathe and dip their food

The water needs to be close to the feeder



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Ducks need water

- It is important to make sure that there is some rock or board to help them get in and out of the water
 - Especially important for little ducklings that could drown
 - Keep them out of the water until they are fully feathered
- Wet ducklings can get too cold and die



- In shallow pools the water can get very hot in the summer
- In winter it is important to make sure that their water is not frozen
- Consider excluding the ducks from the pond or pool during very cold weather to avoid disease



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Cleanliness

- Their water source needs to be kept as clean as possible to avoid bacteria growing in the water
- Their feces have a lot of water so it is important to cover the ground with sand or deep litter to absorb all the moisture
- If they are in pasture they will need to be moved often to reduce exposure to the soiled areas





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Ducks on pasture

- There are two main options to keep your ducks on pasture
 - Fences
 - Portable pens

In both cases, the animals will have to be moved to new pasture every day or so





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Moving The Flock

- If you decide to keep them on a fenced paddock, it is always better to have somebody to help you move the flock
 - It takes time to train them to move where you want them to go
 - And even then, there might still be a couple that try to go in another direction
 - Some farmers have a shepherd dog, like a border collie dogs, to help move them





Nutrition

- Despite tradition, ducks should not be fed bread, chips or crackers
 - Not only these foods are not nutritious but they can pollute ponds and can attract rodents and other pests
 - The best diets include grains like: cracked corn, wheat, barley, oats, milo, birdseed
 - They also enjoy fruits like grapes (cut in small pieces), frozen peas or corn (defrosted), chopped lettuce, vegetable trimmings or peels (shopped)
 - Earthworms
 - Duck feed pellets or poultry starter pellet are available at farming or agricultural supply stores



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Nutrition

- Ducks are very sensitive to toxins from molds (aflatoxins and mycotoxins)
- If you are feeding chicken feed you need to be aware that not all medications approved for chickens are approved for ducks
 - Always ask for non medicated feed
- In general, producers recommend a crumble, pellet or mash for the ducks





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Nutrition

- Ducks consume a large amount of land and aquatic plants
- They will also eat insects, larva, worms, slugs and small fish
- Prefer to forage when the ground is wet—ideal to put them in pasture areas which are too wet to be grazed
- If they are kept as part of a multi species foraging system, they will scratch the cow and horse manure to look for bugs





Health problems

- Ducks have greater resistance to most diseases and parasites than most domestic fowl
- As a consequence medicated feeds are not as necessary as it is for chickens and turkey
- Some of the most common diseases in ducks are:
 - Colibacillosis (infection with *E. coli*)
 - Fowl cholera (infection with *Pasteurella multocida*)
 - Salmonellosis (different serotypes of *Salmonella*)
 - Necrotic enteritis (multiple factors involved in the disease)
- Consult with your veterinarian if you suspect of these or any other diseases



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Sensible feet

- Ducks have very sensitive feet that can be injured by thorns, brambles and burrs in the pasture
- They can also burn their feet on hot concrete surfaces or develop frostbite
- Any lesion on their feet can quickly get infected



Bumblefoot in ducks
(bacterial infection)



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Biosecurity

- To prevent the entrance of any disease to your flock keep all incoming animals in isolation for at least 2 weeks
- Limit the entrance of visitors to the areas where you keep the ducks
- Clean all feeders and waterers often as well as the pond or pool. Avoid having puddles around and move the animals often to avoid frequent contact with their feces



Always make sure that they have
clean fresh water available



Keep in isolation any animal that
appears to be sick

Biosecurity

Raising ducks and chickens together is not recommended

- Ducks and chickens have different nutritional and husbandry needs
- Ducks are very resistant to diseases and carry pathogens that generally don't cause problems for the ducks but can cause serious problems for your chickens
- Also, the ducks tend to keep a wet environment while the chickens prefer a dry place
- If you want to keep ducks and chickens together you should keep them both in pens and keep them in different parts of the farm



Predators

- There are many predators that will go after your ducks:
 - Rats, snakes, raccoons, possums, crows will eat duck eggs
 - Hawks and crows will eat ducklings
 - Dogs, cats, coyotes, foxes will prey on adult ducks



It is a good idea to give the ducks some kind of shelter to protect them at night





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Harvest

- Eggs
 - Hens will begin laying at 16-24 weeks, depending upon genetics, diet, and season
- Duck meat
 - Depending on the breed, diet and season, ducks should be ready for market (2.5 kg or 5.5 lbs) at 8-10 weeks
 - Pekins and Aylesburys are usually ready at 7 weeks, while Muscovies can be ready at 11 weeks
 - Older ducks are more difficult to process



Harvest

- One of the main problem with processing ducks is that it is hard to get all the feathers off the skin
 - After putting the carcass through a plucker there are usually still many feathers
 - One option is to dip the carcass in a vat of wax and when the wax gets cold you can peel the wax off with the feathers
 - Another option is to skin the carcasses and sell only skinless carcasses



Duck breasts



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