

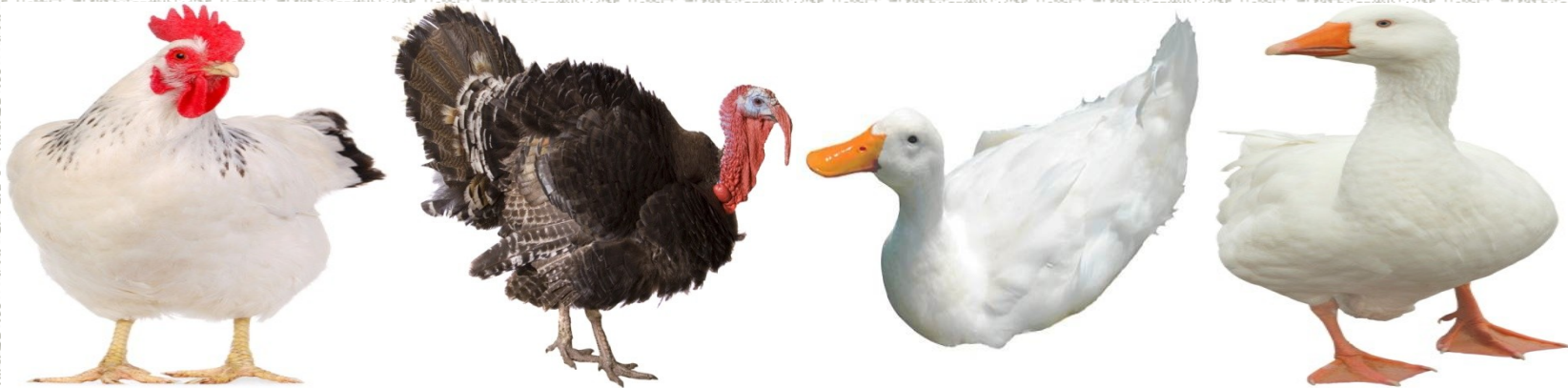


Poultry farming

Introduction

Chicken, turkey, duck and goose are all types of birds called poultry.

They are reared for meat.





- **Poultry is the class of domesticated fowl**

(birds) farmed for their meat, eggs or feathers

- These most typically are members of the orders

Galliformes (such as chickens and turkeys), and Anseriformes (waterfowl such as ducks and geese).

- Chicken is the most popular poultry species

utilised for both meat and egg production.

What types of poultry are there?

Geese



Chickens



Turkeys



**Ratites-Ostriches,
Emus**



Ducks

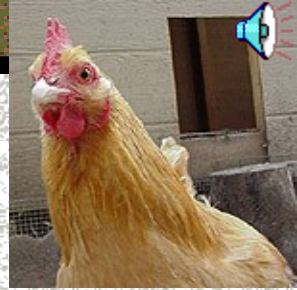


Game Birds





Chickens



- Chickens make up the largest sector of the poultry industry.
- Consumption of chicken in the U.S. is rising every year.

Why?

- Chicken is **LOW** in fat, **HIGH** in protein and **LOW** in cholesterol when compared to meats such as pork and beef.
- There are several breeds of chicken used to produce different products and types of eggs.

Poultry Terms to Know

Broiler- used mainly for meat. A broiler is a chicken is 6 to 7 weeks of age and weighs 4 pounds when it is sent to market.



Pullet- a young female chicken



Layer- a mature female chicken that produces eggs. Most can lay 300 eggs/year.



Poultry Terms to Know

Vertical Integration-raising, processing, and distributing poultry is now one continuous chain. A large company is composed of smaller companies that carry out all the processes from manufacturing to distributing. For example, Con Agra is one large company, but they hire growers, hatcheries, distributors, and processors.



1. Hatchery



2. Growout

3.
Processing



4.
Distribution



Breeder farm

Eggs are laid by broiler hens (parent flock).

Male chickens are called cockerels and female chickens are called pullets or hens.

Male turkeys are called stags and female turkeys are called hens.

The eggs are collected and sent to the hatchery.





Hatchery

The eggs are incubated at the hatchery. They are kept warm, until the chicks start to hatch out of their shells.

Chickens hatch at around 20 days and turkeys hatch at around 27 days.

Baby chickens are called chicks.

Baby turkeys are called poults.

The hatched birds are then sorted and transported to Rearing farms.





Did you know?

When a chick hatches it can live healthily for up to two days without being given any food or water. This is because it still has nutrients in its stomach from when it was inside the egg.

This is why chicks do not need food or water when they are being moved to the rearing farm.



Rearing farms

The baby birds are reared in special large houses, which provide them with water and a special diet.

These houses are cleaned before each new arrival of baby birds.

Trained staff look after the birds in the houses every day.

If the birds are ill, special medicines given in their food or water.

The birds are reared until they reach their required weight.





Catching

Once the birds reach their required weight they are transported to the processing plant.

Trained staff called 'catchers' catch the birds and put them in special containers called modules.

Catching is carried out quietly and with care to avoid unnecessary stress and to prevent injury to the birds.

The modules are then loaded into lorries and taken to the processing plant.





Processing Plant

Here the birds are processed and packaged.

After the birds have been processed they are weighed, and then either left whole or portioned.

The meat is then packaged and labelled ready to be delivered to restaurants, shops and supermarkets.




Summary

Poultry includes birds such as chicken, turkey, duck and goose.

A breeder farm, hatchery and rearing farm are all involved in the life cycle of poultry birds.

Hygiene is very important during all parts of poultry farming to prevent diseases



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- Today 2,500 local farm families produce almost 600 million chickens.
 - The chickens are processed and prepared for market in 12 processing plants owned by four of the nation's top poultry companies.





Egg Producers

Layers

- Chickens that are raised to produce eggs
- Some can lay over 300 eggs/hen/year
- White egg producers
 - Small in size
 - Eg. White Leghorns- white plumage
- Brown egg producers
 - Larger birds that are not as economical as Leghorns
 - Eg. Rhode Island Reds- dark red plumage



Meat Producers

- Chickens used for meat production are called Broilers
- Emphasis placed on the ratio of feed to meat produced
- Butchered at a young age
- Birds used for meat production are usually commercial crosses
 - Example: White Plymouth Rock females mated to Cornish (English class) males



PRINCIPLES OF POULTRY HUSBANDRY

- **Use of good quality and right class of stock**
- **Provision of good housing**
- **Maintanance of good health**
- **Nutrition for economic performance**
- **Good stockpersonship**
- **Maximum use of management techniqes**
- **Use of records**
- **Good marketing practice**



Use of good quality and right type/class of stock

- Use stock known to be of good quality and of the appropriate genotype for the commodity to be produced
- Select a genotype suited to a given management situation and/or produces a commodity suitable for a particular market

BREEDER FARM SEQUENCE

The breeder farm produces fertile eggs that will be hatched in a hatchery according to the following sequence:

- Brooding
- Growing
- Housing
- Mating
- Egg collection
- Incubation and hatching
- Chick sexing
- Chick rearing and marketing



Brooding

- Male and female chicks are usually reared separately until about 4-5 weeks of age.
- They are then reared so that they can work out who is boss (adjust the peck order).
- They are then less likely to fight with one another later on





Growing

- The growing period for layer breeders is from 5 to 20 weeks of age, about four weeks less than for meat breeders.
- Feed is restricted to prevent feed wastage and to improve egg production
- Restricted feeding begins at about six weeks of age and continues until birds have commenced laying



Housing

- Usually raised on litter floors
- Transferred to specially designed breeder sheds, also with litter floors, when about 18-22 weeks.
- Sheds usually divided into small sections to minimize fighting.
- Nests placed so that the hens are attracted to the dark areas of the nest to lay their eggs.





Mating

- Cockerels will mate with a number of hens (about 10%)
- Cockerels can be fed a cheaper diet than hens and it's a common practice to have additional cockerel feeders in a shed placed at a greater height than those containing hen feed.

Egg collection

- Fertile eggs are collected after laying ASAP.
- Eggs can be cleaned when collected by wiping with a dry cloth or steel wool.
- Fumigation by formaldehyde gas is carried out ASAP after collection, usually at the farm or sometimes at the hatchery



"I don't need a warrant!"



Incubation and hatching

- The first 18 days:
 - Eggs are placed on special trays which can be tilted through 90 degrees, from side to side in the **setter**.
 - The temperature and humidity of the air are controlled so that conditions inside each egg are suitable for the growth and development of the chick.
- On the 18th day:
 - Eggs are transferred to **hatchers**
- On the 21st day:
 - All chicks have hatched
 - They are taken to a special room and removed from the hatcher tray.
 - They are then placed in chick boxes ready for





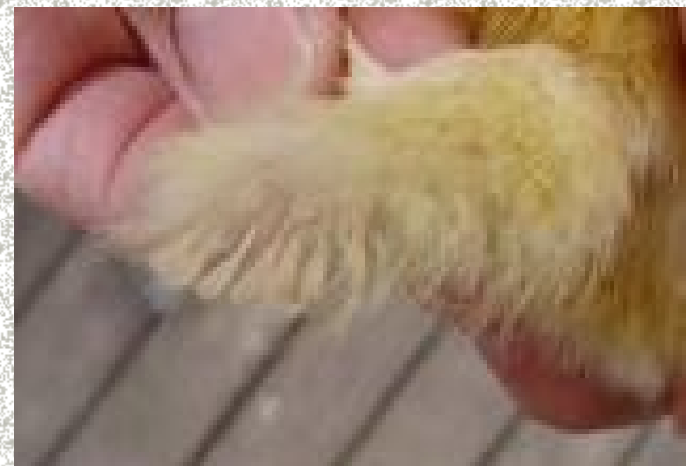
Chick sexing

- Layer strain chicks are always sexed, as the females are kept while the males are killed.
- Breeders are usually sexed, as only one sex of each breeder strain is kept.
- Meat chickens are normally left unsexed, as both sexes are usually reared together



Separation of male and females chicks can be done by:

- Visual examination, (called vent sexing) either by checking the structures in the chick's vent with the naked eye or by inspecting the internal sexual organs with a special lamp.
- Most breeds can now be sexed by checking the feather colour or the degree of growth of wing feathers.



Chick keeping and marketing

- Transported in chick boxes
- Chicks must be kept warm and ventilated
- Let chicks eat and drink as soon as possible
- Feed and water available to them at all times.





LAYER FARM SEQUENCE

- **Brooding (day-old to 6 weeks)**
- **Growing (6 to 20 weeks)**
- **Adult layer (20 to/up to 78 weeks)**
- **Egg collecting and grading**



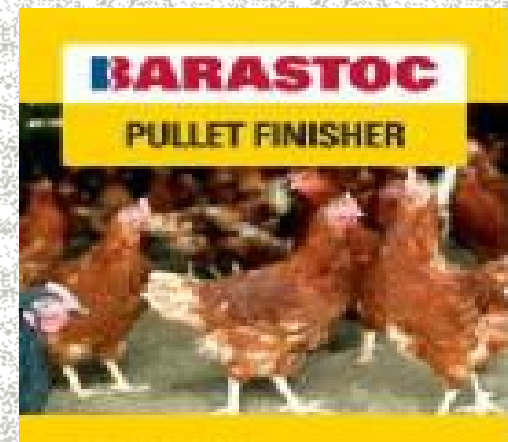
Brooding (day-old to 6 weeks)


- Chicks need some additional heat up to six weeks
- Chick starter feed rich in protein and energy



Growing (6 to 20 weeks)

- Feed contains less protein and energy
- Beak trimming
- Vaccinations
- Restriction to feed supply
- Pullets are usually moved into their laying quarters, at 16-18 weeks of age





Adult layer (20 to/up to 78 weeks)

- Adult hens are fed carefully and kept in a house at 21-28oC
- Hens can need more nutrients just before and during their peak production than at other times è phase feeding.





Layer Cages





Egg collecting and grading

- Most eggs are laid in the morning
- Collected regularly and transferred to an egg room to check for weight and damaged shells
- Separated based on weight by an egg grader.
- Packed into cartons for sale



Present Status of the Industry





World Poultry Distribution

Chickens 14,857 million	
China	3771 million
US	1830 million
Brazi.	1006 million

Ducks 917 million	
China	636 million
Vietnam	57 million
Indonesia	28 million
Thailand	27 million

Turkeys 243 million	
U.S	88 million
France	42 million
Italy	25 million



Largest Producers

- in the world are China
- the countries of the former Soviet Union
- United States



World chicken population

- 1.China (3,860,000,000)
- 2.United States (1,970,000,000)
- 3.Indonesia (1,200,000,000)
- 4.Brazil (1,100,000,000)
- 5.India (648,830,000)
- 6.Mexico (540,000,000)
- 7.Russia (340,000,000)
- 8.Japan (286,000,000)
- 9.Iran (280,000,000)
- 10.Turkey (250,000,000)
- 11.Bangladesh (172,630,000)
- 12.Nigeria (143,500,000)



Thank You for your kind attention