



POULTRY and PIG SCIENCE

CHICKEN LAYER FARMING MANAGEMENT

CHICKEN LAYER PRODUCTION

PRODUCTION FACTORS:

- ❖ BREED SELECTION
- ❖ HEALTH CONTROL
- ❖ HOUSING SYSTEM
- ❖ FEEDING SYSTEM & PROGRAMS
- ❖ EGG PRODUCTION SYSTEM
- ❖ BIOSECURITY PROGRAMS
- ❖ SANITATION & HYGIENE
- ❖ TRANSPORTATION
- ❖ HUMAN RESOURCE DEVELOPMENT
- ❖ ECONOMICAL ANALYSIS

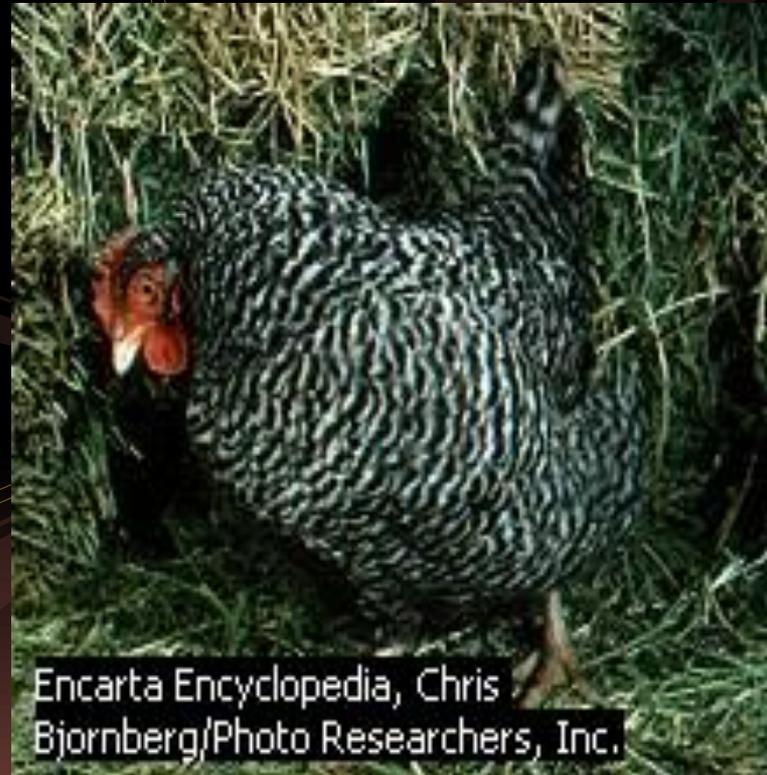


RHODE ISLAND RED HEN

PLYMOUTH ROCK HEN



Encarta Encyclopedia, Chris Bjornberg/Photo Researchers, Inc.



Encarta Encyclopedia, Chris Bjornberg/Photo Researchers, Inc.

Management of Layers (Laying birds)

■ Stages of Life:

1. **Pullet chicks: day-old to 8weeks (fed on chick mash)**
2. **Growing stage: 8-20weeks (Point of cage – 12 to 14 weeks & Point of Lay (POL) – 14-16weeks. (fed on grower's mash)**
3. **Laying stage: 20 to 72weeks (fed on layer's mash)**
 - Birds should be transferred to the laying quarters (deep litter or battery cages) at 15 to 17 weeks old. The pen must have been cleaned, disinfected and made to rest for about 2 days.
 - Birds are transferred in well-aerated crates in the morning or evening.
 - The birds should be without feed for 4 to 6 hours before being transferred.

Advantages & Disadvantages of Battery Cage

Advantages

- More pullets may be kept/unit area in battery cages that are 3 or more tiers high.
- Broodiness is eliminated
- Culling (removal of unproductive birds) is made easier.
- Less feed may be required per dozen egg.
- Eggs can be collected less frequently

Disadvantages

- The initial capital outlay is higher because of the cost of the cages and house construction.
- Higher percentage of blood spots in eggs
- Internal egg quality drops off more quickly
- Fly problems are higher with the cage system

Management of layers (Provision of Nest Boxes)

- Nest boxes are provided for layers that will be maintained on deep litter.
- Nest are preferably lined up near side of the pen away from the sun ray.
- Wood shavings should be placed on the floor of the nest box to protect the eggs against breakage and to produce clean eggs.

▪ **SIGNS OF ONSET OF LAYING**

1. Birds will start to cackle (make noise with their throat)
2. The combs and wattles will be bright red and when touched, the bird will tend to stoop.

Routine Management Operations on

Layers

- Dead birds are removed to prevent contamination of other birds that may peck on them.
- Fresh feed is added to the stale feed in the trough.
- Water troughs are moved out and thoroughly cleaned and replenished with clean and cool water.
- Eggs should be collected at least 3 times a day; once at 8-9am, 12-1pm & 4-5pm. Frequent collection of eggs prevents egg breakages and help keeps eggs clean.

Note: 1. Eggs collected should be kept in egg trays or cartoons and should be packed with the small end down.

2. Cracked eggs, leakers and thin-shelled eggs should be kept separate after gathering.

3. Eggs should not be stored for longer than 2 weeks at room temperature to avoid spoilage.

Occasional Management Operation

- **Culling:** This refers to the removal of sick, injured, unproductive and poor producing birds from the flock.

The advantages derivable from culling of birds are:

1. Prevention of spread of diseases.
2. Increase in the quality of the stock.
3. More space is allowed for the remaining birds.
4. Increase in profits principally by reducing feed required to produce a dozen eggs.

Culling Chart

Part	Laying	Not laying
Pubic Bone	Thin, spread apart (takes 3 to 4 fingers)	Blunt, rigid & close together (takes 2 or less fingers)
Vent	Large, smooth, moist	Small, shrunken & dry
Abdomen	Full, soft, pliable	Contracted, hard, fleshy
Comb	Large, smooth, bright red, glossy & soft	Shriveled, dry, dull and scaly
Ear lobes and wattles	Smooth, soft	Rough, dry

Note: Inactive birds are not laying. Birds that have small and dry vent are either not laying or poor producing



Correct method of catching and carrying poultry
(Click on images for larger version)



Holding a hen in a comfortable position



Checking a hen for laying status by measuring the spread of the pubic bones



Checking a hen for laying status by examining the colour and condition of the vent

Management of Breeders

- Chickens are also kept as breeders for production of day-old chicks
- Breeding stock should be reared far apart from other poultry stock. Breeder may either be for the production of broiler chicks for meat production or for the production of pullets for egg.

NB. Most of the mgt. principles discussed for chickens also apply.

Additional Mgt. & Feeding Principles

- ✓ Breeding chickens are mainly reared on floors. From the rearing to adult stage, they are given more floor space, more feeds and water.
- ✓ To prevent indiscriminate mating, males and females are managed separately till maturity.

✓ The recommended ratios between males and females in the flock are:

■ 1 male to 12 females – for light birds

✓ Additional Mgt. & Feeding Principles

■ 1 male to 8 females – for meat-type birds

✓ Breeders may be revaccinated for IBDV at 14-16 weeks of age.

✓ If movement to a separate layer house is necessary, they are moved at 10 to 12 weeks. Movement at a young age prevents stress and ensure possible breaks in *Mycoplasma gallisepticum* and *Mycoplasma synoviae* clean status.

✓ The enclosure where the birds (males & females) are kept (though separately) should be made of wire netting so that the birds can see and get used to themselves.

✓ The males should be introduced into the female pens about one hour before dark in order to allow little time for fighting that may ensue.

✓ Note that cockerels (male birds) attain peak fertility at 24 to 26 weeks of age. **Only intact males are used for breeding.**

✓ The first eggs for incubation should be collected at least 2 weeks after the onset of egg production. Hatching eggs weighing between 50 to 54g should be collected and fumigated immediately.

✓ The diets of the males and females are changed to breeders diets (15% CP & 2850kcal/kg ME) at maturity (24th week for male and Point of Lay for female)