

UNIT:4TH (ANIMAL
HUSBANDRY &
POULTRY)

Poultry
Breeds/Culture

POULTRY CULTURE

Poultry includes various breeds of fowls, domestic ducks, guinea fowls, turkeys and geese. Poultry breeding has been originated in India initially for cock fighting and later for eggs and meat, an old and useful art developed in ancient India. Domestication of fowls or poultry farming can be said to be an old Indian technology used as a common practice for more than 5000 years in India. The original red and silver jungle fowl, from which many modern breeds of poultry originated, have their ancestral home in India. Poultry keeping in India has been a rural cottage programming. The rural and common village hens require very little care and attention and lay eggs. However, the egg laying capacity of a rural hen is much lower than that of the other hens produced and developed on scientific pattern.

Though the poultry farming has been an old enterprise, it had been much irregular and unplanned. The planned and scientific programming of poultry husbandry has developed in last century only. As a result of scientific knowledge, the number of eggs and egg production rate has accelerated and the quality of chicken in either respects, for production of meat as well as the egg, has considerably improved. Though the poultry farming has Indian ancestry the production of eggs, poultry birds, per capita income from the poultry and improvement in races, is the lowest in India.

The rapid industrialization, urbanization and educational programmes of the Government has increased the living standards of Indian people and changed the thinking also. The ever increasing population can not rely only on grains for its subsistence and poultry farming has much relevance in this context. Now the demand for eggs and chicken in the country has given birth to a variety of pure and imported breeds, bred for higher egg production, rapid growth and good quality of meat.

Poultry breeding needs a personal care and attention. In India it is mostly in the hands of those who are economically poor or illtrate. The rate and quality of egg, therefore, is not up to the mark hence profit is also marginal. Now the Government is also taking interest and financial programmings are there to improve it. A good poultry farmer should have proper knowledge about the breed, profit and loss, principles of mating, systems of breeding and culling of poultry birds.

7.1. COMMON BREEDS OF POULTRY

Various breeds of poultry have been categorized on the basis of the places of their origin. Jungle fowl has its ancestral home in Asia, but cross-breeding has given rise to many breeds. As a result, there are about 100 breeds and many more varieties of chickens are these.

The breeds of poultry we know today are generally agreed to have originated from several species of wild fowl, principally the Indian jungle fowl (*Gallus bankiva*).

Through evolution and human selection, standard breeds emerged from different parts of the world. Originally most selection was done for ornamental characteristics such as colour and body type. Today, poultry are one of our main food sources. While selection and breeding has improved laying qualities and the amount of meat produced, many of the standard breeds have been neglected in favour of cross-breeds, because no single breed has all the desired traits.

In addition, there are certain exotic breeds (imported breeds acclimatized to local conditions) that are popular in India and are widely used for chicken, eggs and meat productions as well as for upgrading the common Indian breeds. These can be grouped into American, Mediterranean, English, Asiatic and Indian breeds.

7.1.1. AMERICAN CLASS

The birds in this class have clean yellow shank and red ear lobes. Majority of them lay brown eggs. These are dual purpose breeds good for meat and egg laying both. There are about 200 varieties of breeds in American class of birds, but out of them only a few have been acclimatized in Indian environment and are used in commercial purposes. The common birds are Rhode Island red, New Hampshire, Vindote and Plymouth Rock.

A. Rhode Island Red

Characteristics

Rhode Island Reds are a good choice for the small flock owner. Reds handle marginal diets and poor housing conditions better than other breeds and still continue to produce eggs. They have following characteristics:

- (i) They have rectangular, relatively long bodies with deep breast and flat back (Fig-1).
- (ii) The earlobes and eyes are reddish.
- (iii) The plumage is red.
- (iv) The red colour fades after long exposure to the sun.
- (v) The legs and feet are well developed having yellow and brown colour.
- (vi) The wings have black colour in primaries as well as secondaries.
- (vii) They are relatively hardy, probably the best egg layers of the dual purpose breeds.

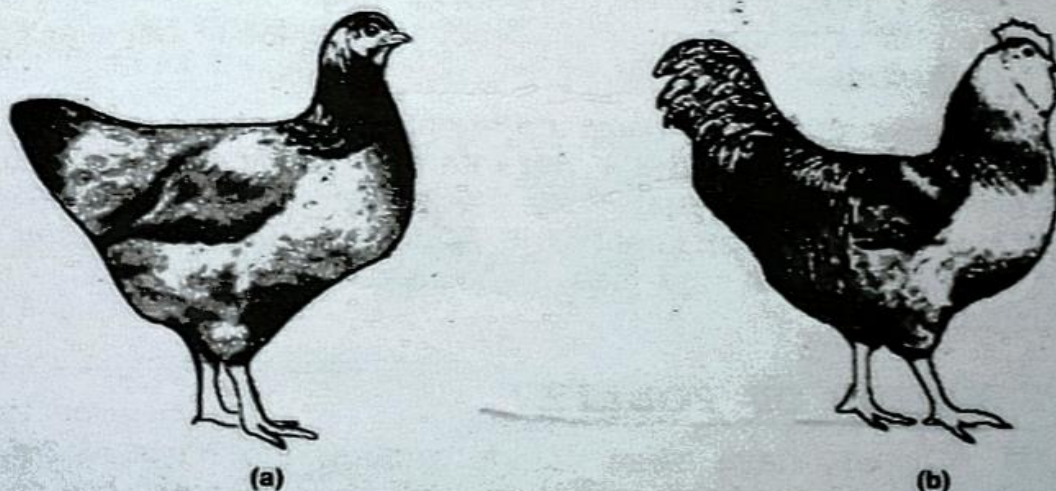


Fig. 1. (A) Rhode island red hen ; (B) Rhode island red cock.

(viii) They are one of the breeds where exhibition qualities and production ability can be successfully combined in a single strain.

(ix) Some "Red" males may be quite aggressive.

(x) Brick red females are not used for breeding because this is not in keeping with the characteristics of the breed.

Even the undersized birds with black in their body feathers (called "smutt") are not used for breeding. However, black in the main tail and wing feathers is normal. Most Reds show broodiness. This characteristic however has been partially eliminated in some of the best egg producing strains. The Rose Comb variety tends to be smaller, but should be of the same size as the Single Combed variety.

Varieties : There are two varieties of Rhode island red.

1. Single Comb
2. Rose Comb

Single comb variety is more common.

Standard weight of cock is 5 kg, hen 3kg, cockeral 4 kg and pullet is 2.5 kg

Skin Colour : Yellow.

Egg Shell Colour : Brown

Use : It is a dual purpose medium heavy fowl; mainly used for egg production than the production of meat because of its dark coloured pin feathers and its good rate of lay.

Origin : It was developed in the New England states of Massachusetts and Rhode Island. The ancestors of this breed are Malay game fowls and red Shanghai fowls. They are popular in England, Canada and USA. They are one of the best among breeds introduced in India. It was from the Malay that the Rhode Island Red got its deep colour, strong constitution and relatively hard feathers. They are developed for dual purpose and as fancy fowl also.

R. Plymouth Rock

7.1.3. MEDITERRANEAN CLASS

The origin of these breeds is in European Countries along the Mediterranean sea, Italy in particular. The characteristics of this class are:

- (i) They are small sized fowls without feathers on shanks.
- (ii) The ear lobes are white or creamy and combs are large.
- (iii) They are good layers, mature early and have higher fecundity.
- (iv) They lay white-shelled eggs and are non-sitters.
- (v) They have low food requirements and are economical.
- (vi) The most common breeds of this class are Leghorn, Minorca, Ancona *etc.*

✓ A. Leghorn

It is a small, spritely, noisy bird with great style.

The leghorns like to move about. They are good foragers and can often glean much of their diet ranging from over fields and barnyards. They have following characteristics :

- (i) The head is small with green coloured ear lobes (Fig. 7).
- (ii) The leghorns are capable of considerable flight and often roost in trees if given the opportunity.
- (iii) The leghorn has relatively large head furnishings (comb and wattles) and is noted for egg production.
- (iv) The leghorns rarely go broody.

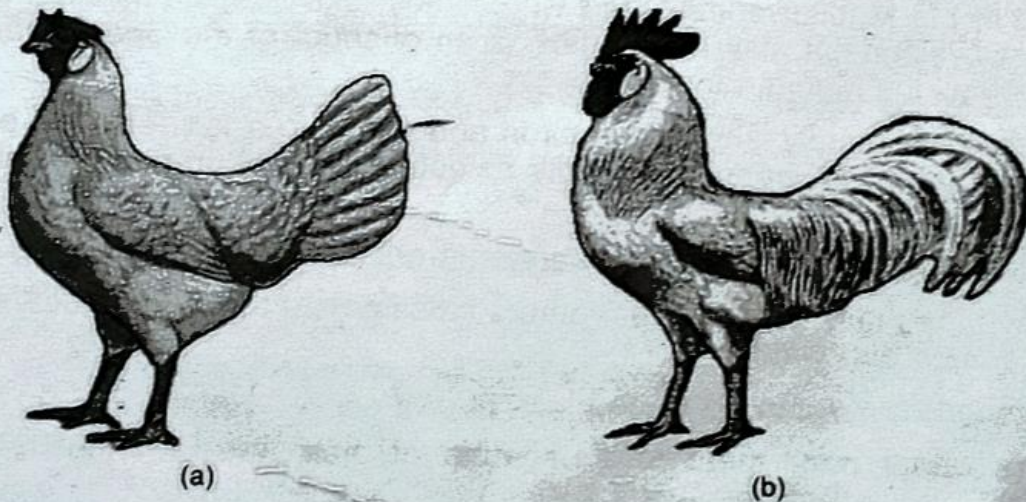


Fig. 7. (a) Leghorn hen ; (b) Leghorn cock (Sources : Internet).

- (v) The fowls of this breed may be white, brown, black or buff.
- (vi) White and brown leghorn varieties are not good for meat, but are good layers.
- (vii) White black variety is not good layer.

They are further distinguished on the basis of the comb *i.e.*, whether single comb or rose comb into following varieties.

- Single Comb Dark Brown
- Single Comb Light Brown
- Rose Comb Dark Brown
- Rose Comb Light Brown
- Single Comb White
- Rose Comb White
- Single Comb Buff
- Rose Comb Buff
- Single Comb Black
- Single Comb Silver
- Single Comb Red
- Single Comb Black Tailed Red
- Single Comb Columbian

Standard weights : Cock 2.7 kg; hen 2 kg; cockerel 2.3kg; pullet-1.8 kg.

Skin colour : Yellow.

Egg shell colour : White.

Use : An egg-type chicken, Leghorns figured in the development of most of our modern egg-type strains.

Origin : Leghorns take their name from the city of Leghorn, Italy, where they are considered to have originated.

B. Minorca

It originated in the Mediterranean area where they take their name from an island off the coast of Spain. Development may have been as an offshoot of the Spanish breed. Minorca is the largest among all the Mediterranean breeds.

Good Minorcas are stately, impressive birds and can give a fair return in eggs, although in recent years, they have not been intensively selected for that purpose. Their characteristics are:

- (i) They have long, angular body that appear larger than they are (Fig. 8).
- (ii) They have long tails, large wide feathers closely held to narrow bodies. Minorcas have relatively large combs and wattles.
- (iii) The plumage colour can be white black or buff.
- (iv) They are rather poor meat fowl because of their narrow angular bodies and slow growth.
- (v) Minorcas rarely go broody, are very alert and fairly good foragers.

Due to decline in its egg laying capacity, this breed is now not very popular in India. Based on plumage colour and the type of comb, there are several varieties of this breed :

- Single Comb Black
- Rose Comb Black
- Single Comb White

- Rose Comb White
- Single Comb Buff

Standard weights : Cock-2 kg; hen-1.5 kg; cockerel-1.5 kg; pullet 0.7 kg.

Skin colour : White.

Egg shell colour : White.

Use : Developed for the production of very large chalk-white eggs, the Minorca is today principally an exhibition fowl.

7.1.5. INDIAN OR INDIGENOUS CLASS

They are small slow growing birds with poor rate of egg production. They are designated by different local names in various states of India.

A large number of fowls found in India vary widely in colour, shape and size. They are collectively called as "desi" fowls.

As they are produced by inbreeding, the hens are not of good quality and are poor layers.

The following varieties of desi fowls are found in India.

A. Aseel

It is distributed throughout India, but best quality aseels are found in Lucknow and Rampur (U.P.) and in Hyderabad. It is one of table birds known for its fighting quality. The main characters are:

- It has stout round and short body with broad breast and straight back.
- It has small pear shaped comb, beak and legs are strong.
- Tail is small and drooping. It has thick and long neck, bright red wattles, compact ear lobes and well set eyes.
- Plumage may be black, white, red and mottled. It is not good layers but have good parental qualities, high stamina and fighting qualities.

There are many varieties of this breed found throughout India.

Standard body weight :

Cock	4 kg
Hen	3 kg
Cockerel	3.5 kg
Pullet	2.5 kg

B. Chittagong or Malay

It is found in Eastern India and originated in Chittagong (Bangladesh).

It is a large strong hardy and quarrelsome bird that grows very fast. The characters of this breed are:

- It has small pea comb, long head and neck.
- It has long yellow beak, small red earlobes and white eyes.
- The wattles are red and small.
- Legs are yellow and featherless, plumage is short and glossy.

(v) It is good layer and possesses heavy flesh.

Standard weight is :

Cock	4.5 kg
Hen	3.2 kg
Cockerel	3.4 kg
Pullet	2.8 kg