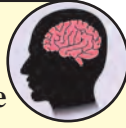


## 5. POULTRY BREEDS

### Can you recall ?



1. The types of Indian Pure breeds
2. The importance of backyard poultry and poultry industry in India
3. The meaning of poultry

- The term poultry is used as synonymous to chicken, includes a number of avian species such as chicken, quail, duck, turkey, geese and guinea fowl domesticated for economic purposes.
- There are four species of wild or jungle fowl
  1. *Gallus gallus* (Red jungle fowl)
  2. *Gallus iafayettii* (Ceylon jungle fowl)
  3. *Gallus sonnerattii* (Grey jungle fowl)
  4. *Gallus various* (Javan jungle fowl).
- The relative contribution of these few species to the formation of modern domestic breeds still remains controversial. While some believe that all the present day domestic breeds of poultry are originated from red jungle fowl (*Gallus gallus*). Others are of the opinion that two or more of the four existing wild species of fowl are responsible for the same.

### Remember...



- The term 'class' is used to designate groups of breeds, which have been developed in certain regions.

- A breed refers to a group of domestic fowls with a common ancestry, and having similarity in shape, conformation, growth, temperament and shell colour of egg.
- Variety is a subdivision of breed distinguished either by colour pattern or shape of comb or type of feather pattern.
- Strain is a group of birds within variety that has been bred by one person or firm for some time and has more or less uniform characteristics and capabilities.

### Do you know ?



- Within a breed there may be several varieties.
- A breed or a variety may have several strains or lines identified by a given name and produced by a breeder through at least five generations of closed flock breeding.

### 5.1 CLASSIFICATION OF POULTRY BREEDS

#### Internet my friend



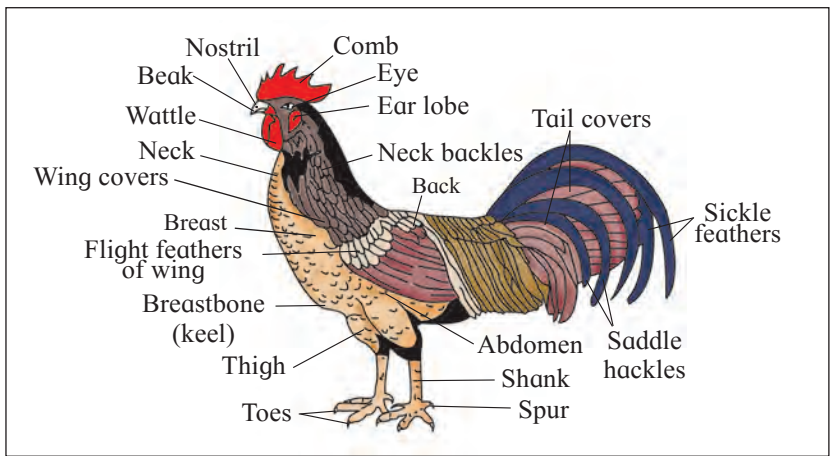
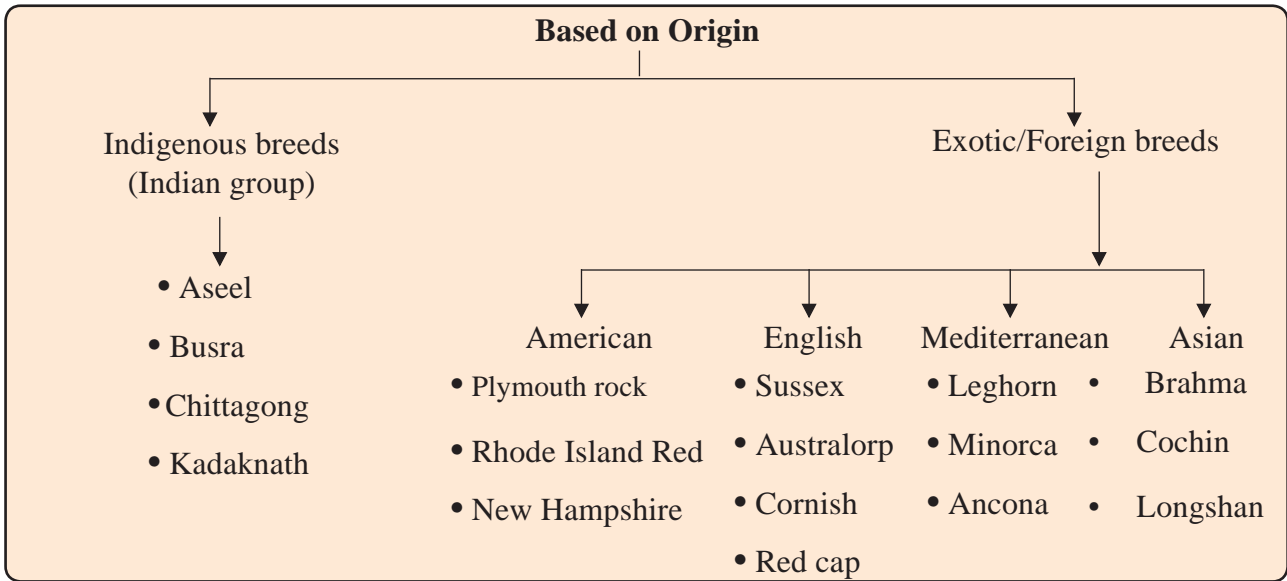
Breeds used for egg production and broiler farming.

**A. On the basis of origin :** Poultry breeds are classified as American, Asiatic, English and Mediterranean on the basis of origin.

### Do you know ?



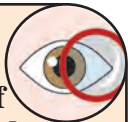
- English origin breeds are known for their excellent fleshing properties.



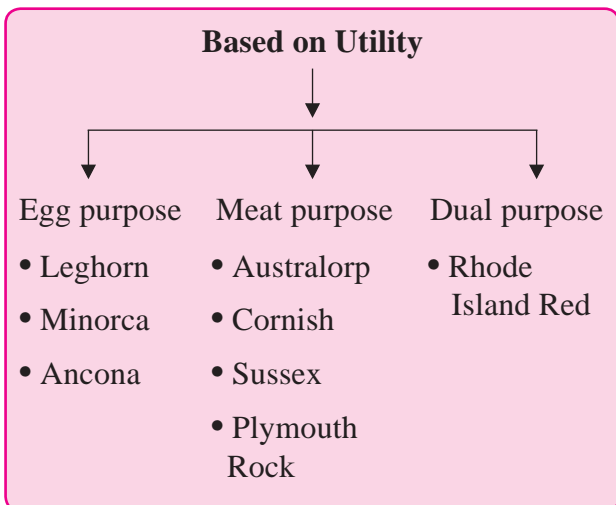
**Fig. 5.1 External body parts of Fowl**

**B) On the basis of Utility / Purpose :** Fowls are often classified based on the purpose for which they are developed such as egg type, meat type and dual purpose (for both egg and meat).

**Observe**



- **Observe the features of commercial strain maintained in your locally.**



**5.2. INDIAN BREEDS**

A large number of fowls of different sizes, shapes and colours, resembling the jungle fowls, are found all over India. Aseel, Chittagong, Busra and Kadaknath are only four pure breeds of fowls in India.

**5.2.1 Aseel**

Aseel, which means real or true, is the name given to an indigenous breed of fowl known for its noble qualities of fighting.

**Habitat:** The best specimens of the breed although rare, are encountered in parts of Andhra Pradesh, Uttar Pradesh and Rajasthan.

**Prominent characteristics**

1. The most popular varieties are Brown (Teekar), Red (Peela), White (Nurie), Black (Java), Black and Red (Yakub).



**Fig. 5.2 Aseel**

2. Aseel is well known for its pugnacity, high stamina, majestic gait and dogged fighting qualities.
3. They possess small and firmly set Pea comb. In both the sexes comb and wattles are bright red.
4. Head is short but broad and deep. The beak is stout and strong.
5. The face is long and slender and not covered with feathers.
6. The eyes are compact, well set and present bold looks.
7. The neck is long, uniformly thick but not fleshy.
8. The body is round and short with a broad breast, straight back and close set strong tail root.
9. Wings are small in size carried close to the body.
10. The legs are strong, straight and well apart.
11. Egg shell colour is light brown.
12. Standard weights ( Kg.) : Cock 4 to 5, Hen 3 to 4, Cockerels 3.5 to 4.5, and pullets 2.5 to 3.5.

**Economic importance**

1. The breed is well known for its quality meat.
2. Hen is a good sitter and efficient mother
3. The annual egg production is 80-90.

**5.2.2 Kadaknath**

Kadaknath is also known as “Kalamasi”, meaning the fowl is having black flesh

- **The common country hen, the desi is the best mother for hatching, a good forager but a poor layer.**

**Habitat:**Kadaknath is a native bird of Jhabua and Dhar districts of Western Madhya Pradesh reared by the tribal people.

**Prominent Characteristics**

1. The commonly available varieties of Kadaknath are Jet-black, penciled and golden
2. The adult plumage varies from silver and gold spangled to bluish black without any spangling.
3. The skin, beak, shank, toes and soles of feet are slate like.
4. The comb, wattles and tongue are purple.
5. Intense black coloration is also seen in most of the internal organs, skeleton, muscle, tendons, nerves and blood.
6. Standard weights (Kg):- Cock : 1.5 kg, Hen : 1.0 kg



**Fig. 5.3 Kadaknath**

### Do you know ?

Flesh of Kadaknath is black in colour due to deposition of black pigment, melanin.



### Economic importance

1. This fowl is useful as backyard poultry.
2. The overall production potential of Kadaknath is much higher than any other native birds of the country.
3. Flesh is having distinct delicious taste and also medicinal value.
4. The annual egg production is 90-100.

### Remember...

Meat of Kadaknath is known for its high protein (25 %) and low fat (0.73 – 1.03%) content.



## 5.3 EXOTIC BREEDS

### 5.3.1 Egg purpose – White leghorn

**Origin and Habitat :** The breed is originated in Italy. Today, white leghorn is one of the most popular breed throughout the plains of India.

#### Prominent characteristics

1. Out of 12 varieties, only three are popular- Single comb white, Single comb buff and Single comb light brown.
2. Leghorn is characterized by active, compact and light body, long back, prominent breast in force blending pretty carriage, long shanks and small head with wheel set comb and wattles.
3. The shape of comb is quite important. The single comb of the male should be of medium size and should stand erect, with five uniform, deeply serrated points. The front point of the female should stand erect, but the remainder of the comb should gradually slope to one side.



Fig. 5.4 White leghorn

4. All the varieties have yellow beaks, skin, shanks and toes.
5. Standard weights (kg) - Cock 2.6, Hen 2.0, Cockerel 2.0, Pullet 1.8.

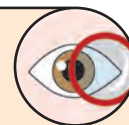
### Economic importance

1. The egg production is 280 - 300 eggs per year.
2. The breed is the most popular and World's number one egg producer.

### 5.3.2 Dual purpose – Rhode Island Red

#### Observe...

- Characteristics of Mediterranean class are white ear lobes, relatively large combs, clean shanks, yellow or white skin, tight feathering, non-broodiness, early maturity and white shelled eggs.



**Origin and Habitat :** Rhode Island Red is developed in Rhode Island in America after crossing with the Red Malay game, Brown Leghorn, Shanghasis and Wyandotte.

#### Prominent characteristics

1. The bird has some what long, rectangular body, which is also broad and deep.
2. The back is flat and the breast is carried well forward.

3. The plumage is rich dark or brownish red in covers, evenly distributed over the entire surface, and is well glossed.



**Fig. 5.5 Rhode Island Red**

4. The wing when spread shows black both in primaries and secondary. The tail coverts, sickle feathers, and main tail feathers are also black. In lower neck feathers of the female, there is also slight black marking at the base.
5. The colour of the breed is, brownish red, but buff, white and brown are not uncommon.
6. Colour of egg shells is brown to dark brown.
7. There are two varieties of RIR namely Single and Rose comb. In both varieties skin and shanks are yellow and the ear lobes are red. The single comb is more popular.
8. Standard weights (kg) - Cock 3.8, Hen 2.9, Cockerel 3.4, Pullet 2.5.

#### **Economic importance**

1. It is a good layer and also meat yielding breed.
2. The annual egg production is 200.

#### **5.4 COMMERCIAL VARIETIES**

The majority of present day chickens used as egg layers and broilers are crossbreds. The hybrid broilers and layers developed for backyard farming are as given below

#### **5.4.1 Giriraja**

1. It is dual purpose variety resembles to desi breed developed by KVAFSU, Bidar.
2. It is suitable for all weather conditions.
3. These birds can be reared similar to that of commercial broiler in a large scale.
4. Egg colour is brown similar to desi chicken with 55-60 grams weight.
5. They are good for free range and can be fed with locally available materials.
6. Weight (kg) : Adult male (40 weeks) : 4.0 – 5.0 kg, Adult female : 3.0 – 3.5 kg.
7. The annual egg production is 140 - 150.



**Fig. 5.6 Giriraja**

#### **5.4.2 Grampriya**

1. This is multicoloured variety developed at Director of Poultry Research, Hyderabad.
2. There are two varieties, white is very good for egg production and the coloured considered as a dual purpose.
3. This variety is good for free range farming.
4. They have lower predator threat.
5. They are moderate in body weight with longer shanks.

6. They are hardy and their livability is very good.
7. They start laying at an age of 175 days.
8. Egg colour is brown with 55-60 gm weight.
9. The annual egg production is about 230-240 eggs in intensive and 150-160 egg under backyard condition.



**Fig. 5.7 Grampriya**

**Just Do it**

Compare production performance of improved backyard poultry breeds namely Giriraja, Grampriya and Swarnadhara.



**5.4.3 Swarnadhara**

1. This is new hybrid dual purpose variety developed for all weather conditions by KVAFSU.
2. These birds resemble to desi chicken.
3. They escape easily from predators, because of lesser body weight.
4. They mature by 160 – 170 days and lay 180 – 200 eggs in 280 days.
5. Egg colour is brown similar to deshi chicken with 55 - 60 gram weight.
6. Adult male (40 weeks) weight is 3.5 to 4.0kg, and adult female weight is 2.5 - 3.0 kg.



**Fig. 5.8 Swarnadhara**

**Table No. 5.1 Comparative Production Performance of Improved Backyard Poultry Breeds**

Sr. No.	Characters	Giriraja	Grampriya	Swarnadhara	Local
1	Weight at 8 weeks (kg)	1.6 - 1.9	1.1 - 1.2	1.1 - 1.2	0.7 - 1.0
2	Survival rate (%)	95 - 97	-	95 - 97	87 - 92
3	Age at first egg production (days)	170	175	170	270
4	Egg production per annum (Nos.)	140 - 150	230 - 240 in intensive 150 - 160 in backyard	180 - 200	60 - 70
5	Average weight of each egg (gm)	55 - 60	55 - 60	55 - 60	35 - 40
6	Live weight of adult birds (Kg)	3.5 - 4.5	2.5 - 3.0	3 - 3.5	2-2.5

## EXERCISES

### Q.1 Fill in the blanks

- ..... breed is most popular and World's number one egg producer.
- Giriraja is a commercial variety developed for ..... purpose.
- Meat of ..... breed is known for its high protein and low fat content.
- ..... is the best example of dual purpose foreign breed of poultry.
- ..... is the best table and game purpose Indian breed.

### Q.2 Match the pairs.

Group A		Group B	
1)	American	a)	Brahma
2)	English	b)	Ancona
3)	Mediterranean	c)	Plymouth Rock
4)	Asian	d)	Basra
5)	Indian Breed	e)	Cornish

### Q.3 Identify the odd one out.

- Meat purpose breed - Australorp : Sussex : Minorca : Plymouth Rock : Cornish
- English origin breed - Cornish : New Hampshire : Red Cap : Australorp : Sussex
- Indian pure breed - Aseel : Basra : Chittagong : Giriraja : Kadaknath
- CARI BREED - Sonali : Priya : Dhanraja : Grampriya : Debendera

### Q.4 State True or False.

- Flesh of Aseel is black in colour.
- Grampriya is the popular variety in backyard condition.
- Italy is the origin of White leghorn.

- Swarnadhara variety developed by Director of Poultry Research, Hyderabad.
- Average egg production of White leghorn is 280-300 eggs per year.

### Q.5 Answer the following questions in brief.

- Write economic importance of Kadaknath Breed.
- Give characteristic of Rhode Island Red.
- Enlist the meat purpose poultry breeds.
- Write the characteristics of White leghorn.
- Which are the most popular eggs purpose varieties in backyard condition?

### Q.6 Answer the following questions in details.

- Enlist egg purpose breeds of poultry and write in detail origin, habitat, morphological characteristics and importance of White leghorn.
- Discuss in detail origin, habitat, prominent characteristics and importance of Aseel.
- Classify poultry breeds on the basis of origin and utility. Write in detail origin, habitat, prominent characteristics and importance of Rhode Island Red.