



# Poultry genetic resources in India

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**R**ed jungle fowl, (*Gallus gallus*) is considered as the common ancestor of the present day domestic birds. It was domesticated in Harappan culture of Indus valley around 2000BC. Interestingly the first domestication of poultry was not for meat but for sports. The Aryans invaded India and included chicken in their culture.

In India there is a rich availability of diverse poultry germplasm. Though there are 18 recognized breeds of poultry, the various types and subgroups present a good variety of genetic material. Many of these types/ breeds are on verge of extinction.

**1. Aseel:** The game bird of the country is world wide recognized. Originated in Andhra Pradesh it is found in almost all regions of the country. The breed is a pure game breed and is known for its pugnacity, fighting quality, high stamina and majestic gait. The skin is yellow and the bird is having good meat quality. Pea shaped combs, long and slender face, broad breast with scanty feathering are some of the characters of the breed. Other parts of the body are close feathered. Plumage colours are black, white duck

wing, black and red and mottled. Adult males weigh upto 6 kg and females 2-4 kg.

**2. Ankaleswar:** As the name indicates the breed is originated in Ankaleswar region of Gujarat. The birds are single combed, hardy and small. The eggs are also very small. Ankaleswar breed is famous for their disease resistance.

**3. Bursa:** The birds are low producers. They have deep body and light feather. The original breeding tract is Gujarat and Maharastra.

**4. Brown Desi:** Uttar Pradesh is the place of origin. The birds are with single comb. They are moderate layers. Plumage is light and brown.

**5. Chittagong:** Maly is the other name for the breed. North Eastern states of the country are the breeding tract. Chittagong birds are hardy and pugnacious. They have small pea comb, long head, yellow beak and small wattles. Adult birds are strong and hardy with a quarrelsome temperament. The breed possesses characteristics of the game birds. Plumage color include buff, white, black, dark brown and grey. Males weigh 3.5 kg to 4.5 kg and females 3 to 4 kg.

**6. Daothigir:** The breed is reared by the Bodo community of Assam. The birds are heavy and are known for high juvenile growth. They have single comb, long neck and legs. The plumage is glossy and lustrous. Daothigir are good fighters. Males weigh 2.5 to 3 kg and females 2 to 2.5 kg.

**7. Favourala:** The favourala birds have habitat of Kashmir valley. They have the ability to thrive in very low temperatures. Even in sub zero temperature and cold winter of the Kashmir these birds survive. They are small sized with small comb and wattles. The comb is feathered and is a peculiarity of Favourala breed. Plumage is red and black. Males weight 2 to 2.5 kg and females 1.5 to 2 kg.

**8. Frizzle fowl:** They are seen in coastal region and also in north East parts of the country. Rachis of feathers is curved due to presence of dominant frizzle gene. Plumage look curly and heat dissipation is increased. Hence they are better adapted to tropics

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especially in arid zone.

**9. Ghagus:** Breeding tract is Deccan plateau of Andhra Pradesh and Karnataka. The Ghagus is reared by nomadic tribes. These dual purpose birds are also good mothers. Shank is feathered, neck is thick, comb single and small, wattles are also small. The birds are said to have a bag like appearance. Plumage is glossy and some birds have whiskers. Body weight of males is in between 2.5 to 3 kg and females 2 to 2.5 kg.

**10. Kadaknath:** The other popular name for the breed is Kalamasi. Habitat is Madhya Pradesh. The deposits of melanin pigment in skin, beak, shank, sole of feet and in internal organs gives the birds a peculiar dark appearance. Even tongue, comb and wattle show purplish hue and shining blue tinge of earlobes is a character of the breed. The dark meat is supposed to have medicinal properties. Eggs are light brown in colour. Birds are small and adult males may weigh upto 1.5 kg and females 1 kg.

**11. Kalasth:** The origin of the breed is Chittoor district of Andhra Pradesh. The birds resemble Denki breed of poultry. But they are smaller with lustrous plumage. Kasath area poor layers. Adult males weigh 2-2.5 kg and females 1-1.5 kg.

**12. Miri:** The birds are reared by Mising (Miri) tribe Lakhempur district of upper Assam. They are small sized birds and are medium layers. Colour is black

**13. Naked Neck:** Hot humid tropical regions of the country from Mumbai to the Kerala coast is the habitat of the birds. As the name indicates the neck is naked with only a tuft of feathers in front of neck above the crop. Plumage colour and body size vary widely. General feathering is also reduced. This reduced feathering in turn help the birds for better heat dissipation mechanism. The naked neck birds are better producers than other local birds and the egg size is also big. Body weight of males is around 2 kg and that of females is 1.5 kg.

**14. Nicobari:** Andaman and Nicobar islands is the habitat of the breed. They are scavenging birds. Nicobari is hardy, short legged medium sized birds. The plumage is brown Body is round and compact with stout neck. The birds are good layers among the native stock. Disease resistance is also said to be better than those of indigenous birds of Andaman and

Nicobar islands

**15. Punjab Brown:** Origin is Punjab and Haryana. The birds are with yellow beak, legs and feet. Plumage colour is brown. Eggs are also brown. Male weighs 3-4 kg and females 2-2.5 kg.

**16. Tellichery:** Origin is Kerala. The skin is black. The meat is known for its medicinal properties. Plumage colour black to grey or variable. Eggs are tinted.

**17. Teni:** They are found in all parts of the country. Teni birds are small and are active foragers and excellent sitters. They can tolerate high temperatures and hence are adapted to hot climate. Adult males weigh 2 kg and females 1 kg.

**18. Titri:** Small birds with black and white plumage. The beaks and legs are yellow. They are poor layers. Males weigh 2 kg and females 1.5 kg.

Most of the genotypes possess their own characters which are having some economic importance. Birds with colour plumage are preferred for gourmet markers and hence deserve attention. Genes associated with feather distribution like naked neck, frizzle and silky need consideration because of their association with heat dissipation in tropical poultry production. Dark meat seen in some chicken breeds due to extensive deposition of Melanin in muscles and internal organs is highly valued for its dietetic value and medicinal properties. Adaptability of local chicken to unfavorable environment is stated to be high and needs attention for conservation.

It is high time that these natural germplasm is identified and evaluated for their merit. It can be safely assumed that there will be a lot more of unknown genetic material available in the country which may also need immediate attention.

### References

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