



Backyard poultry Farming: A way to empower India's rural people

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Introduction

Indigenous or native breeds of poultry are playing an important role in rural economies in most of the developing and underdeveloped countries. They play a major role for the rural poor and marginalised section of the people with respect to their subsidiary income and also provide them with nutritious chicken egg and meat for their own consumption. According to the Indian government's National Action Plan for Egg & Poultry-2022 (NAPEP), backyard poultry accounts for 20 percent of India's poultry sector, which is worth over ₹800 billion (around £8.5 billion). Across the country, around 30 million farmers are engaged in backyard poultry, estimates the 19th Livestock Census of India. While India's per-capita chicken meat consumption is around 3kg per year, compared to the world average of 17kg, the consumption of poultry meat has been very low in rural pockets. The main reason is the low purchasing power of people living in these areas. One of the primary objectives of popularising backyard poultry farming in rural India is to provide better income opportunities to the poor farmers and people from indigenous communities living in remote areas. Among its benefits is that it can help make rural women economically and socially empowered and can address the issues of food insecurity and malnutrition. Going by standard nutritional requirements, half an egg a day is optimal for an average healthy person, which translates into 180 eggs per person per year. But the present availability is around 69 only.

Backyard poultry farming primarily involves country chicken birds. In India some of the important breeds/varieties which have been documented are Aseel, Ankaleshwar, Busra Chitagong, Daothigir, Denki, Ghagus, Haringhatta black, Kadaknath, Kalasthi, Kashmir Faverolla, Miri, Punjab Brown, Tellichery, Titri, Teni, Nicobari, Naked neck, and frizzle fowl. Besides this many nondescript desi poultry breeds are reported. Raising of local poultry birds in backyard is an important source of

livelihood for the rural people. In this regards popularisation of backyard poultry is essential in India to ensure increasing access to protein and nutritious food at an affordable price in rural India.

Importance of local breeds in backyard poultry farming system

Indigenous or native breeds of poultry in developing countries like India have more diverse use and benefits to household. This is because the commitment of an individual/community to a particular spiritual being, deity or season, and traditional and/or religious festivals is evaluated by the quality of the offering that satisfies special morphological features of the chicken demanded by the receiver. They are part of balanced farming system and have vital roles in the rural households as a source of high-quality animal protein and emergency cash income and play a significant role in the sociocultural life of the rural community. Products from rural poultry farming fetches high price compared to those from intensive poultry farming. Almost double the rates of brown shelled eggs in the local market. Birds reared under free range conditions give eggs and meat of low cholesterol concentration compared to those produced under intensive poultry farming. Lessens protein malnutrition in susceptible groups like pregnant women, feeding mothers and children.

Some important breeds which are suitable for backyard farming system: Several Indigenous poultry and its crosses were developed to meet the demand of backyard poultry farming depending on the specific need of people of the region which are given follows:

Vanaraja

It is a dual-purpose variety developed by the Project Directorate on Poultry Hyderabad for free range farming in rural and tribal areas. Males weigh about 1.2 to 1.5 kg at 10 weeks and females lay about 120-140 eggs in laying year. It is well known for its Attractive feather colour, disease resistance, better survival rate and large brown egg resembling desi egg.



Gramapriya

It was developed by the Project Directorate on Poultry based in Hyderabad. Gramapriya is a layer type variety. The bird has the production potential of 230-240 eggs in a year and can lay 160-180 eggs in free-range conditions with minimum supplementary feeding. The males weigh around 1.2 to 1.5kg at 15 wks. of age. The bird has coloured plumage and lays bigger (57-59g) and brown eggs. Due to hardy nature its livability is high.



Karaknath

The original name of the breed seems to be Kalamasi, meaning a fowl with black flesh. However, it is popularly known as Karaknath. The eggs are light brown. The day-old chicks are bluish to black with irregular dark stripes over the back. The adult plumage varies from silver and gold-spangled to bluish-black without any spangling. The skin, beak, shanks, toes and soles of feet are slate like in colour. The comb, wattles and tongue are purple. Most of the internal organs show intense black colouration which is pronounced in trachea, thoracic and abdominal air-sacs, gonads and at the base of the heart and mesentery. Varying degrees of black colouration are also seen in the skeletal muscles, tendons, nerves, meninges, brain etc. The blood is darker than normal blood. The black pigment has been due to deposition of melanin. The flesh although repulsive to look at, is delicious. A medium layer, lays about 80 eggs per year. The bird is resistant to diseases in its natural habitat in free range but is more susceptible to Mareks disease under intensive rearing conditions. (Source: Dr.Acharya, Handbook of Animal Husbandry)



Aseel

Asil chicken (also spelled Aseel or Asli) is an ancient breed of chicken from India. Asil chickens are originally kept for cockfighting, but nowadays they are also kept for ornamental purposes. Asil chickens are very skilled in fighting. They have wide and very beautiful chest. Their body structure is very good and they become very strong. Legs and neck of Asil chicken are very long compared to other common chicken breeds. Asil hens are not good layers. Hens lay a few eggs and their eggs are also small. There are many varieties of Asil chickens available. Depending on the variety, the color of feathers can be black, red or mixed. They have a small pea comb. Most of the Asil chicken varieties are big in size and very hardy. Diseases are pretty less. On an average an adult Asil rooster weights about 3kg – 4kg, and an adult hen can weight about 2.5kg – 3kg.



Krishibro

It was developed by the Project Directorate on Poultry (ICAR), Hyderabad. It is a multi-coloured commercial broiler chick. Attain body weight by 6 weeks of age with less than 2.2 feed conversion ratios. The survivability of this bird up to 6 weeks of age is around 97%. These birds have attractive colour plumage and are well adapted to tropical weather conditions. The commercial Krishibro has highly resistance against the common poultry diseases like Ranikhet and Infectious bursal disease. Due to its hardy nature, it is well adapted and better survivability.



Giriraja

Giriraja breed of chicken suited for mixed and backyard farming developed by Karnataka Veterinary, Animal, and Fishery Sciences University in Bangalore. Females lay 130-150 eggs per year, with each

egg weighing 52-55 grams. The eggs have a good hatchability (80-85 per cent), and enable farmers to raise their own stock. Their shells are brown in colour and thicker than that of other commercial eggs. The bird's exhibit better growth compared to local varieties. Being good scavengers, they feed on a variety of insects and green foliage. They can also be fed on farm and kitchen waste.



Swarnadhara

Swarnadhara is a hybrid chicken breed developed at department of Avian Production and Management (DVPM), Hebbal, Bangalore. It is a Hardy bird having high egg production potential along with better growth compared to other local varieties and are suited for mixed and backyard farming. The bird can be reared for its eggs and meat. Hens attain a body weight of about 3 kg and the cocks about 4 Kg by 23rd week. They lay about 180-190 eggs in a year. The eggs have good hatchability (80-85 per cent). The eggshell is brown in colour and thicker than that of other commercial eggs. They can be raised as free roaming birds and can be fed with locally available materials.



Jharsim

The variety is developed under All India Co-ordinated Research Project on Poultry Breeding, Birsa Agricultural University, Ranchi. The name Jharsim is derived from Jhar for Jarkhand and sim meaning hen in tribal dialect. These birds have attractive multi-colour plumage. The birds weigh 400-500g at 6 weeks and 1600-1800 g at maturity under backyard system. The age at first egg laying is 175-180 days and egg weight are 52-55g at 40 weeks of age. The birds have the potential to lay 165-170 eggs

and under backyard system. This variety can provide higher supplementary income and nutrition through both egg and meat to rural/ tribal population of the state.

Cari Nirbheek (Aseel Cross)

Aseel is well known for its pugnacity, high stamina, and majestic gait and dogged fighting qualities. The name Aseel appears to have been given to this indigenous breed because of its inherent qualities of fighting. Andhra Pradesh is said to be the home of this important breed. The best specimens of this breed, although rare, are encountered with the fanciers and the people engaged in cock-fighting show throughout the country. Aseel is larger in built with noble looking and dignified appearance. The standard weight varies from 3 to 4 kg for cocks and 2 to 3 kg for hens. Age at sexual maturity 196 days with annual egg production 92 and egg weight at 40-week 50 gm.



Cari Shyama (Kadakanath Cross)

It is locally known as "Kalamasi" meaning the fowl having black flesh. Jhabua and Dhar districts of Madhya Pradesh and the adjoining districts of Rajasthan and Gujarat spreading over an area of about 800sq. miles is considered to be its home tract. These are mostly reared by tribals, adivasis and rural poor. It is considered to be a sacred bird and offered as sacrifice to Goddess after Diwali. The colour of the day-old chicks is bluish to black with irregular dark stripes over the back. The flesh of this breed though black and repulsive to look at, is considered not only a delicacy but also of medicinal value. The tribal uses Kadakanath blood in the treatment of chronic disease in human beings and its meat as aphrodisiac.



The meat and eggs are reckoned to be a rich source of protein (25.47% in flesh) and iron. Its Body weight gain at 20 weeks 920 gm, age at sexual maturity 180 days, annual egg production 105, egg weight at 40-week 49 gm, fertility 55% with 52% hatchability.

UPCARI (Frizzle Cross)

Unique scavenging type birds developed with native breed base, having typical desi fowl look, better tropical adaptability and disease resistance, exceptional growth and production performance. Best suited breed for backyard system of poultry production. Four varieties of UPCARI birds suitable for different agro-climatic conditions are available viz Kadakanath x Dehlam Red, Aseel x Dehlam Red, Naked Neck x Dehlam Red and Frizzle x Dehlam Red.



Management of backyard poultry birds

Local poultry breeds exhibit superior adaptability in their habitat and possess the ability to survive, produce and reproduce on low plane of nutrition and sub-optimal management. In backyard poultry farming, the feed cost is considered to be minimum. The birds collect the required protein, energy, minerals and vitamins etc. From snails, termites, leftover grains, crop residues and household wastes. Feed ingredients like broken groundnut straw and wheat grains can also be given to the chicks. The chicks may be supplied with extra concentrate ration @30-60 gm/day/chick with supplemental calcium sources like lime stone powder, dicalcium phosphate (DCP), stone grit, shell grit at 4 to 5 grams/bird/day for better performance. Floor space 1 sq. ft. per bird must be provided to avoid overcrowding. Supply of fresh air to the chicks is highly essential. Brooding will cause depletion of oxygen and build-up of carbon dioxide, ammonia etc., the airtight curtains should be avoided. Trimming of beak is an important managemental practice to prevent cannibalism and wastage of feed. Beak trimming is a sensitive operation and it should be done by trained people. The beak trimming is done at 3rd week and one third of upper beak should be trimmed. The litter should be stirred at regular intervals depending on the environmental temperature, humidity, ventilation fecal moisture content, quality of water system. The night shelter should have good



ventilation and protection from predators and plenty of clean water should be made available. The birds must be vaccinated against Marek's and Ranikhet diseases. There should be periodic deworming at 3-4 months intervals.

Conclusion

The importance of native breeds of poultry birds for rural economy in India is very high. They are part of balanced farming system that have vital roles in the rural households as a source of high-quality animal protein and emergency cash income and play a significant role in the sociocultural life of the rural community and woman empowerment. One of the most important positive characters of native chicken is their hardiness, which is ability to tolerate the harsh environmental condition and poor husbandry practices without much loss in production. The native breed chickens are the reservoir of genomes and major genes for improvement of high yielding exotic germplasm for tropical adaptability and disease resistance.

