



Review Paper

Backyard Poultry Farming In India: A Call for Skill Upliftment

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Abstract

Poultry farming has become a remunerative business and pre-eminence over all other livestock enterprises in the developing countries. It carries a scope for quick and large profit. In recent years, backyard poultry production has been extremely emphasised in sustaining and enhancing rural livelihoods. In this farming, birds are kept in low-input and low-output system and can easily be managed by women and children of the households. Now-a-days as there is growing concern about meeting of per capita requirement of protein for rural citizens of India, poultry meat and especially eggs have been proved to be the best and cheapest solution to this. Though India has shown a tremendous growth in poultry production over decades, rural poultry farming is still lagging behind and always found neglected. As it is the best alternative for the small scale farmers to their subsidiary income with negligible input, this farming system needs an upliftment. Therefore the sole objective of this review is to focus on various aspects of backyard poultry farming in rural India including basic understandings, its advantages, different government schemes and some technical tips for better management practises which the authors think will raise more awareness among farmers, researchers and Government organisations.

Keywords: Backyard, Poultry, Skill, Rural, Upliftment.

Introduction

In the previous years, the livestock sector has become one of the fastest growing segment in Indian agriculture, and within livestock sector, the poultry husbandry has occupied a pivotal position both in providing employment as well as in contributing a substantial proportion to the national GDP. In a developing country like India, growth in the livestock sector can definitely contribute to poverty reduction, as the largest share of the rural poor depends on livestock for their daily livelihoods. It has also been observed that the demand for the animal protein source is increasing rapidly in developing countries^{1,2}. If we analyse the Government reports, the egg production at the beginning of 12th five year plan touches 69.73 billion with a per capita availability of around 57 eggs and the poultry meat production is estimated to be 2.68 million tonnes for the year 2012-13³. The quantum leap in these production parameters can be attributed to adoption of a scientific commercial production system. Though major share of the poultry products come from commercially reared improved breed birds, indigenous source of poultry eggs and meat are always appreciated for their taste and texture, in both rural and organised developed markets. Market studies show prices per kg live weight for these birds can be 50–100 % higher than that of industrially produced birds⁴. Though rural backyard poultry is the most potent source for subsidiary incomes for landless poor farmers, it has always been neglected. This is in spite of the fact that their products carry a much higher price than that from commercial poultry.

There are plenty of evidence to demonstrate the role of rural backyard poultry husbandry in elevating the food and nutrition security of the poorest households and reducing the livelihood insecurity⁵⁻⁷. Backyard poultry is a potent tool for upliftment of poor because it requires hardly any infrastructure set-up. Besides income generation and poverty reduction, Rural backyard poultry can provide nutrition supplementation in the form of valuable animal protein.

Backyard poultry production; a simple definition

Mandal *et al*⁸ described nicely while giving a definition to backyard poultry production system. According to them it is a low input or no input business and is characterized by indigenous night shelter system^{9,10}, scavenging system^{11,12}, with little supplementary feeding^{9,10,13}, natural hatching of chicks¹⁴, poor productivity of birds^{15,16}, local marketing^{9,10,17} and no health care practice^{9,10}.

Backyard poultry in Indian Scenario

Poultry development in the country has taken a quantum leap in the last three decades. The development owes to various factors which include growth in income and urbanization, progresses in processing technology and improvements along the marketing chain¹⁸⁻²⁰. The OECD-FAO Agricultural Outlook 2008-2017²¹ has estimated that Indian demand for poultry products will be enhanced at 4.8 percent where as the supply of poultry products will grow at 5.2 percent per year over the decade which is faster

than for any other type of animal product. The production of agricultural crops has been rising at a rate of 1.5–2% per annum, where as eggs and broilers has been shown to rise at a rate of 8–10% per annum²² but the growth has been mainly restricted to commercial poultry. According to a report from USDA, the commercial poultry sector grew at 18.6 percent per year from 1997 to 2002 and faster growth is expected to be continued in the coming years²³⁻²⁷. The Government of India recognizes that growth in the poultry sector has so far could not be able to contribute much to poverty reduction and improved nutrition. The reason is best analyzed in a research report by Ciamarra and Otte²⁸. According to them, statistically a landless poor agricultural family unit keeps 1.2 non-descript low yielding local birds in the backyard, which would sum up into an average flock size of 8 to 9 birds per poultry keeping household. Such backyard flocks only make a very negligible contribution to rural livelihoods, as the net income per bird per month ranges from Rs 4 to 13, with respect to a rural poverty line set by the Government of India at Rs 356 per month²⁸⁻³¹. But it has also been reported in favor of Indian rural backyard production that in an unpredictable market with respect to the availability of grains and animal proteins and their prices, poultry farming serves as an inexpensive and reasonable source to get highly nutritious food items at low cost. It is because of the low input requirements to poultry care in backyard system²⁸.

Conventional and improved varieties of backyard poultry birds

In rural poultry farming, birds are raised under a traditional extensive unscientific scavenging system without special management practices of feeding or housing and the flock size ranges from 5 to 50 birds. In rural areas, chicken reared in backyard are generally Desi type which are low producing with respect to egg and meat³². The desi chicken breeds adopted in free-range backyard conditions for centuries contribute about 11% of total egg production in India³³. Their contribution to the total egg output was stagnant for the last few decades due to their low productivity i.e. annual egg production: 50-60 nos. Usually non-descript desi birds are reared but in some areas, local breeds and crossbreeds derived from them are also reared. Specific improved varieties of birds are now available for rearing for meat or eggs and few varieties for both (dual purpose). Rural poultry farming should involve rearing of improved chicken varieties under free range, semi intensive or intensive conditions³⁴.

Understanding the importance of backyard rural poultry farming in India, several research organizations have developed different backyard chicken varieties which have successfully been reared by farmers from many parts of the country. These improved varieties include Gramapriya, CARI-nirbhic, CARI-Shyama, Vanaraja, Gramalaxmi and Nicobari. Out of these the first four are of dual purpose whereas rest are egg type³⁵.

Rural Backyard Poultry Development; A centrally sponsored scheme

This is one of the components of Poultry development schemes carried out by Central Government, India. The exclusive beneficiaries for this scheme are from Below Poverty Line. This is one of the initiatives the Govt. has taken to mainly enable them to gain subsidiary income and nutritional support for livelihood. During 2013-14, around 40 crore has been sanctioned which covered for assistance to nearly 1.66 lakh BPL beneficiaries. Under Rural Backyard Poultry Development program, since introduction in 2009-10, till date funding has been done to include around 6.13 lakh BPL beneficiaries³.

Advantages of backyard poultry farming

A lot of advantages are there for which rural poultry farming should always be backed up by Government and non government organisations. Some are described here³⁵: i. Gives employment to the rural small scale and marginal farmers. ii. Provides additional income to the rural households. iii. Aids in enhancing the soil fertility in backyards (15 chickens produce 1-1.2 kg of manure/ day). iv. Products from rural poultry farming fetches high price compared to those from intensive poultry Farming. v. Provides egg and meat with almost no or very less investment through backyard poultry farming in free range system. vi. Birds reared under free range conditions give eggs and meat of low cholesterol concentration compared to those produced under intensive poultry farming. vii. Lessens protein malnutrition in susceptible groups like pregnant women, feeding mothers and children.

Women in Rural poultry production

Ogunlade *et al.*³⁶ reported socio-economic status of women involved in rural poultry production. According to them, Poultry raising is a very familiar activity among rural women in many countries. Women have been considered to be the predominant owners of rural poultry³⁷. Most women in the rural areas rear the indigenous types of domestic fowl in extensive system of poultry production³⁸. Backyard poultry production serves as a small scale business for generating income controlled by women. The enterprise provides regular income using little inputs and the production can be solely managed by women in the household³⁹. Although rural poultry production cannot contribute any large income, it represents a very familiar skill to most of the poor women and it can help them in moving into a positive spiral of events that may lead them to elevation of their socio-economic status^{36,40}.

Managemental aspect; some technical tips³⁵

For the purpose of egg production different improved breeds like Vanaraja, Gramapriya birds can be reared in small numbers (10-20) in free range conditions if plenty of natural feed resources are available. But for production of meat, they can be

reared in large number under intensive or semi-intensive conditions which requires provision of all inputs similar to commercial broilers. These birds need to be reared under proper nursery management up to 6 weeks and later they may be released in free range after 6 weeks of age

Management of small chicks

To maintain the required body temperature these chicks need brooding during first 6 weeks of age and this also helps in protecting themselves from predators. Low cost brooding materials like Metal or wooden material can be used for the purpose of brooding. Electric bulbs (2 Watts/ chick) can be used as a heat source. Chick guard can be used to restrict the movement of the chicks near by the heat source. Under brooder about 7-10 sq. inches space/chick is recommended

Housing is also important for poultry management. Poultry house can be constructed with low cost materials like bamboo, wooden planks, polythene sheets etc which will be easily available and need minimum expenditure. Complete balanced feed which can satisfy all nutrient requirement i.e. minerals and vitamins should be given. Feeder and waterer should be made in such away that feed and water will be easily accessible to all the birds. Fresh and clean water should be available at all times which will help in proper growth of the birds. Birds should be vaccinated against several diseases like Marek's disease, Ranikhet disease, fowl pox etc. it will develop immunity against these diseases.

Management of adult birds

After attaining 6 weeks of age, the birds can be kept in free range system. These birds are let free in day time for foraging and only at night time shelter is given to them. Night shelter should have good ventilation, adequate light and protection from predators. Clean drinking water should be provided before letting them out from the night shelter. Under free- range conditions generally the birds meet their protein requirement through scavenging, but, the risk of energy deficiency is common. Therefore, feeding the birds with some locally obtainable cereals (like maize, bajra, jowar, broken rice, with equal parts of rice polish or rice bran) is always advantageous to prolong the production under free- range conditions⁴¹. Calcium can also be given as supplement which helps in improvement of health and also plays an important role in egg production. Periodic cleaning of night shelter is essential. Proper deworming should be done at 2-3 months interval.

Conclusion

As most of the poor and marginal farmers have very limited capital assets and they mostly depend on poultry farming for their livelihoods, growth of the rural poultry sector can definitely contribute to poverty alleviation in India. Perhaps there is poor awareness among the governments on the potential

of small scale poultry production in sustaining poor people's livelihoods. Because of this government support towards improvement of rural poultry farming system is trivial. Therefore it is very much necessary to raise awareness about this activity. Besides reduction of poverty it will help in nutritional improvement especially in vulnerable groups. It can not only give employment to the rural small scale and marginal farmers but can also play an important role in women empowerment.

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