



Role & Scope of Back Yard Poultry Farming in Odisha

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Introduction

The total poultry population in Odisha is 27.4 Million in 2019, increased by 37.95% over previous Census (19.9 million in 2012). As per Basic Animal Husbandry and Fisheries Statistics (2017), Odisha ranks 11th among Indian States in egg production and 13th in meat production. In Odisha, the egg production/annum is 1974.47 million and per capita egg consumption/annum is 46 numbers (2016-17) (Odisha Economic Survey, 2017-18, Govt. of Odisha). Approximately 7 lakhs of eggs per day is being produced from backyard poultry. The total meat production/annum is 176 TMT out of which poultry meat production/annum= 82 TMT and per capita meat consumption/annum is 3.86 kg (2016-17) (Odisha Economic Survey, 2017-18, Govt. of Odisha; Annual Activity Report 2017-18, Govt. of Odisha).

Backyard Poultry Farming

The indigenous poultry population of Odisha is 57,17,851 (19th Livestock Census, 2012). Odisha stands 10th in terms of indigenous poultry for households and number of households maintaining indigenous poultry after North-Eastern states, West Bengal and Jammu & Kashmir. Fourteen (14) out of 30 districts are tribal dominated and backyard poultry rearing is common practice influencing their socio-cultural life. Backyard poultry also plays significant role for adding sustainability to the livelihood of poor farmers. It constitutes an important livelihood component of rural household in Odisha. About 30% of rural households are involved in poultry rearing and the flock size ranges from 5-25. The backyard poultry farming not only provides the much needed animal protein to the rural poor but also acts as a source of readymade cash to the urgent need of the poor family. It also provides unemployed youth and women a profitably earning. Besides, the native poultry has importance to rural culture and tradition. The native chicken in Odisha thrives and produces with irregular supply of feed and water and with minimum healthcare support. Though local chickens are slow grower and poor layers of small sized eggs, they are, however, ideal mothers and good sitters (Dessie, 2003), excellent foragers, and hardy in nature (Darwish et al. 1990) and possess natural immunity against common diseases (Mitambo, 2000; Dessie et al. 2013). Traditional backyard chicken production has significant contribution to sustainable livelihood of millions of rural people in Odisha. Backyard poultry farming requiring hardly any infrastructure set-up is a potent tool for upliftment of the poorest of the poor. Besides income generation, rural backyard poultry can improve food self-sufficiency, increase employment of women and bridge the gap between demand and production of eggs and meat. Small scale poultry production has the potential to stimulate

the economic growth of resource poor households. It can enhance house hold food security and contribute to poverty reduction through provision of supplementary food, income and employment. Native chicken like *Hansli*, *Khairi*, *Kabri*, *Gujuri*, *Dumasil*, *Kalua*, *Vezaguda*, *Dhinki*, *Phulbani*, *Kalahandi* and *Khadia* are extensively reared by the rural people of Odisha for fulfilling their socio-economic and cultural needs (Singh et al., 2002). In 2018, the native Hansli chicken population has been registered with ICAR-NBAGR.

For ethnic tribal groups and communities, indigenous poultry are of special interest because of their socio-religious use. Plumage colour and sex of the bird differ from one purpose to another. The chickens are usually sold either for table purpose or as game birds for fighting. The fighting cocks fetch a premium price usually 2 to 3 times higher than those which are sold for table purpose. The requirement of fighting cocks, however, is limited and that too at festive occasions. Main interest of the poultry farmers having backyard poultry is not production of eggs as returns are very low from sale of eggs. They hatch all their eggs and sell them as birds. This small holder poultry production is not capital intensive and requires minimal use of land, labour and capital. As the investment is very low, poultry keeping in backyard gives very high return.

Advantages of backyard poultry production

The growing demand for egg and low investment in backyard sector provides opportunity for the rural people for more gainful employment opportunities. Development of backyard poultry sector can reduce the high infant and mother mortality rate through restoration of nutritional status of the rural population. The indigenous/ native poultry birds exhibit superior adaptability in their habitat and possess the ability to survive, produce and reproduce on low plane of nutrition and sub-optimal management. The inputs required are very small as they scavenge their feed requirements and are raised with little veterinary care. The production system is similar to organic production which may be the competitive advantages of backyard system over commercial poultry production. People have a preference for eggs and meat of indigenous poultry compared to those of farm-bred chickens; consequently eggs and meat from local birds are sold at a premium price. They possess the ability to protect themselves from predators. All the local birds show broodiness and hatch their own chicks making the system auto-generating. Cock fighting is a popular sport for the ethnic tribes and the local birds are superior to exotic birds in fighting. Rural farmers prefer rearing birds with coloured plumage on religious and cultural grounds. The droppings of the birds increase the soil fertility.

Constraints in backyard poultry production

The backyard poultry farming sector has not yet been exploited to its maximum production potential. The main reason is high mortality rate due to lack of vaccination and low immune status of birds due to low-level of nutrition. There are more chances of parasitic infestation in backyard poultry birds unlike commercial chickens which do not live long and housing is thoroughly cleaned between batches. The resource poor farmers in the tribal districts are unable to adopt the improved poultry rearing practices due to lack of technical knowledge, lack of suitable germplasm, high cost of inputs, inadequate veterinary support and poor extension services. Increased awareness in the prevention and treatment of parasites in chickens would lead to better welfare standards and increased production. The use of integrated pest management has been suggested which involves animal husbandry measures together with bio-pesticides, biological control and vaccination. Backyard chickens, continuously subjected to disease, heat stress, predators, poisoning and infighting has a precarious existence. It would be prudent to take up vaccination against the most common diseases like Ranikhet Disease (RD), Fowl Pox, etc. and also de-worming against

parasitic infestation. Due to un-organized marketing infrastructure, poultry farmers get comparatively less money for their produce. The organized backyard poultry will provide an avenue for resource-poor farmers to increase production, improve their livelihoods, reduce malnutrition and thereby, contribute to the goal of overall poverty alleviation. Predation by wild cats and other wild animals is a problem in most of the villages situated either near or within the forest area. Great variation is observed among the villages for scavenging area and those with higher scavenging areas get more money from the sale of their birds which are healthy. In order to overcome this problem, it is necessary to take up scientific rural poultry production programmes by introduction of low input technology dual purpose birds, adoption of scientific farming with proper nutrition, health care and also various linkages through poultry co-operatives. The traditional backyard poultry producing 40-50 eggs per annum and weighing 1.5 kg in 6-7 months is less remunerative than modern backyard poultry farming, which encourages rearing of low input technology (LIT) improved poultry varieties which grow at a faster rate (1.5-2 kg in 2-3 months) and produce 130-180 eggs per annum. For dual purpose, improved chicken varieties are *Chhabro*, *Vanaraja*, *Giriraja*, *Girirani*, *Kuroiler*, *Rainbow Rooster*, etc. Improved broiler chicken varieties are OUAT synthetic broiler (*Pallishree*), *Black Rock* etc. For egg production, improved varieties such as *Grampriya*, *Kalinga Brown*, *Krishilayer*, *CARI Gold*, etc. are available.

Scope in backyard poultry production

Odisha becomes the first state to declare poultry as agriculture. The Poultry Development Policy has been implemented in the State from 2016-17. Several Government schemes are functioning in the state to increase egg production from 54.08 lakhs to 100 lakhs eggs per day, increase poultry meat production from 82 TMT to 100 TMT per annum and to make backyard poultry a popular and viable subsidiary farming activity in rural area. Introduction of egg in Mid-Day Meal (MDM) programme further increases the scope of poultry farming. Odisha State Poultry Producers Co-operative Marketing Federation Ltd. (OPOLFED), a State level apex poultry cooperative organization, functions at Bhubaneswar to popularize poultry products and develop a market for them. The OPOLFED has undertaken marketing of eggs and chicken meat and production of chicks. State Govt. farms are in the process of strengthening to meet the requirements of day-old chicks of low input technology birds for backyard farming. NABARD and APICOL has been supportive to promote investment in the State in various priority areas through a host of Government Sponsored Programmes and Central Govt. Subsidy Schemes and Venture Capital Fund for Poultry. Through STEP programme, several Women Poultry Projects are functioning to promote backyard poultry farming. Several private sector hatcheries e.g. Eastern Hatcheries Ltd., Suguna Poultry Ltd., Amrit Hatcheries Ltd. are also promoting broiler and layer farming. Transfer of knowledge is carried out through 31 Krishi Vigyan Kendras (KVK) situated in different districts of the state, University Extension Block Programme (UEBP), Information and Communication wing, Distance Education, Video Project and Agricultural Technology Information Centre (ATIC) of Odisha University of Agriculture and Technology (OUAT). There are 8 State Poultry farms functioning in the State under Central assistance. In order to boost backyard poultry in the State, assistance was provided to BPL beneficiaries in 30 districts with centrally sponsored plan scheme under NLM. Assistance to State for Control of Animal Diseases (ASCAD) scheme is implemented to control economically important diseases of poultry by way of immunization. The Odisha Biological Products Institute, Bhubaneswar, an ISO 9001:2008 certified institute had produced different life saving bacterial and viral vaccines for protecting the poultry birds in the state. Strengthening of disease surveillance is being carried out by Animal Diseases Research Institute (ADRI), Phulnakhara, Cuttack.

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Future Perspectives in Poultry Sector

Conservation of local poultry breeds along with improvement for traits like meat and eggs will increase their competitiveness with the commercial poultry sector to survive in the market. In order to improve egg production, there is a need to record the performance of individual hens for egg production. Since most of the small holder poultry farmers are poor, government should extend assistance to improve the poultry farming system. Through regular exhibition of local poultry birds, the local breeders/ associations should be recognized and encouraged for their work. The Government should facilitate in promoting the backyard poultry farming through individuals/ self-help groups by ensuring availability of day-old chicks at an affordable price. This requires massive awareness campaigns/ training on basics of poultry production at different levels to attract and encourage rural farmers from the State. Extension support for health care, input supply, market linkages and other aspects should be readily available at village level. The people should participate in the health care and breed development programme. Small packs of vaccine containing preferably 50 or less doses of the vaccine should be made available to reduce wastage and make it economical for farmers. Research and strategy focus should be to increase per capita availability of egg and meat by augmenting productivity and also to efficiently utilize poultry wastes for renewable energy or other purposes to get rid off pollution.

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