



Indian Poultry industry- glimpses of Kerala situation

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India's poultry industry has registered remarkable progress in production and technology during the past three decades. India ranks 4th in the world in respect of egg production and 19th in broiler production. We can see in the country a diverse kind of production enterprises starting with the household type of poultry in the rural areas as subsidiary occupation to high input and management intensive poultry enterprises in the private sector.

Many of the rural based poultry units are essentially based upon the local fowls. Such units usually have a very limited number of birds varying from 20-100 and, by and large, are kept as means to supplement the household income. Most of the units are run by agricultural landless labour, small and marginal dry land farmers etc. Such units essentially depend upon local materials, often the birds essentially scavenging on the field locally available in the rural areas. The birds are generally hardy and are tolerant to many diseases. The marketing of products, namely eggs or meat are confined to the local areas, if found surplus to domestic

consumption.

On the other extreme, we have large-scale poultry enterprises managed as a centralised enterprise. Such units generally have their own hatcheries, have been producing their own feeds and include well-established in-house veterinary healthcare services. Many of the large industrial type of enterprises also do undertake contract poultry production with other progressive poultry farmers, providing the basic materials - be that in terms of chicks of improved genetic stocks, healthcare, feeds and undertaking centralised marketing. Many of these input and management intensive poultry units are more or less, similar to large-scale commercial units elsewhere in the world. Entrepreneurs from Tamil Nadu are currently engaging the poultry farmers in certain areas of Kerala on contract poultry production.

The productivity per bird whether in terms of layer or broiler given the total flock population and the quantities of egg or broiler meat produced in the world undoubtedly indicate that there is tremendous potential that the country still has to achieve productivity levels seen in other advanced poultry countries. Accuracy of the available statistical information does pose a problem as there is varying estimates of different agencies in terms of total number of birds or in terms of production. Nevertheless, the trends are clearly discernible and accepted by all.

A very significant aspect, therefore, in terms of challenges facing the poultry industry in the coming years, is to substantially improve the productivity. Production in industrial type of poultry enterprises in the private sector are comparable with those being obtained elsewhere but for the industry on the whole including the decentralised household / backyard production system, the improvement in productivity is a major issue. With the changes in the economic scenario in the country, it is quite likely that significant changes in the real wages in the rural areas will occur and the cost of feed ingredients, the cost of provision

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of healthcare including the veterinary biologicals will all significantly increase in the coming years. It is only through improved productivity that we can assure the economic viability of the poultry enterprises. Even in the case of backyard poultry enterprises, whatever supplemental income the poultry unit owner is able to derive would depend upon the cost at which the product is produced and the realization he is able to fetch.

As the market access improves through development of adequate all the year round communication and transport facilities integrating rural and urban market, it is likely to happen that too large a price differential in terms of products between local areas and national markets will tend to disappear. This can only bespeak even more cogently of the need for improving the economic viability of the rural poultry units which contribute around 30% of egg output in the country.

In the case of smaller back-yard type of poultry enterprises, the state has to play a more direct role in the promotion of poultry enterprises, through ensuring availability of improved bird types specially acclimatized to the rural poultry environment. Necessarily, this may mean trying to optimise production per unit and to produce the bird types which can do well even in the rural conditions. In such circumstances, it is advisable to rear crossbreds, which have the potential to produce 180 eggs and attain a body weight of about 1200 g in 4-5 months with no inputs. Dr.Y.Yamada, the past President of the World's Poultry Science Association (WPSA) at the XIX WPC at Amsterdam pointed out that "high-tech system which dominates the poultry industry of the developed countries is not necessarily appropriate and may not work in densely populated developing countries" and this is specially true for India and particularly Kerala. Moreover, while formulating any development plan aimed at refinement of rural poultry production in India, the pointer given by Swanson et al. (1984) "in traditional farming systems it is more important to minimise the risks than to increase outputs" has to be borne in mind.

Kerala scenario

In contrast to the phenomenal growth of poultry in the southern states of India, poultry production in Kerala remained largely as a back-yard venture with a few deep litter units scattered throughout the state. Involving of the masses in egg production continues

to be the order of the day. The surplus eggs after household consumption are being sold out to local vendors and the receipts being the personal income of the women members of the family. Such units do contribute to the families' food and nutrition. The estimated output of meat from backyard units is well above 4000 metric tonnes per annum. The thrust of approach to poultry development by the Government agencies is primarily directed to foster poultry production among economically weaker sections.

The growth of poultry population during the past 35 years in Kerala was approximately 200% with an overall mean annual growth of 5.6%. Co-ordinated efforts on the part of Kerala Agricultural University (Poultry Science Division), State Department of Animal Husbandry, Kerala State Poultry Development Corporation and Districts and Grama Panchayats have been the pivotal point of productivity enhancement in the rural poultry scenario. Poultry Science division of the Kerala Agricultural University plays the significant role as the primary breeder, State Animal Husbandry Farms, the role of multiplying agencies of the crossbreds and the District / Grama Panchayats, organising the chick nurseries from where partly grown crossbred chicks reach the households. Such birds have been dewormed at 6 weeks of age and given protective vaccination against Ranikhet Disease at 7th week of age. As such the housewives need to give only medicines for deworming at bi-monthly intervals.

The first crossbred which underwent extensive home farm and field tests was Austra-whites evolved in the University Poultry Farm, Kerala Agricultural University, Mannuthy.

Recently, another crossbred was multiplied with the help of the Project Directorate on Poultry, Hyderabad (ICAR) and has been named as 'Gramapriya'.

The major differences being in the plumage colour pattern and body weight. The eggs of both Gramalakshmi and Gramapriya having tinted shells fetch a premium price in comparison to white-shelled eggs. Two Poultry villagers were also established in Thrissur district under the Peoples Planning Programme. The results have been quite encouraging.

Homestead cages for chicken

A centre of the All India Co-ordinated Research Project on Poultry Improvement for egg production was established at Mannuthy (Kerala) by the Indian



Council of Agricultural Research in 1976. The prime objective of the project was to evolve a commercial layer of high production potential in order to meet demand for eggs in the country.

After 15 years of research, Poultry Scientists of Kerala Agricultural University succeeded in evolving a commercial hybrid egg layer in 1990. 'Indian Layer Mannuthy 1990 (ILM 90)' was assigned a popular name 'Athulya' by the Kerala Agricultural University.

During the past one decade scientists continued their efforts to refine the pure lines with the result parent lines of 'Athulya' have been distributed within Kerala and outside the state in large numbers.

In addition to making refinement in the conventional backyard system of egg production, an attempt was made in try out production of eggs in the homesteads making use of Athulya in homestead cages. The results have been quite encouraging and many urban/periurban areas within the State have taken up cage system of egg production in the homesteads which is a complimentary system for boosting egg production in the state.

The contribution of poultry income to total state income in Kerala continued to be around 1.8 per cent, while at the all India level it was around 0.85 per cent only.

Chicken meat production

Recent survey (1998) revealed that poultry meat consumption accounts for 1.29 kg out of the total meat consumption of 5.28 kg per capita per annum. It was also revealed that the share of poultry meat is on the increase and has been estimated that by 2015 Kerala's need will be over 1 lakh metric tonne of poultry meat. The changing life styles, eating habits urbanisation, feat of cholesterol content in red meat and income level have accelerated the growth in demand for poultry meat. Many of the educated unemployed youth in the state had taken up broiler farming as a way of living during the past one decade. Most of the units do take in 200-250 chicks at weekly/fortnightly intervals. These units are really eco-friendly as the manure obtained from such units is ploughed back to the soil where coconut farming/banana cultivation is on in the adjoining areas. The annual demand of poultry meat in the state is around 40,000 M. tonnes.

Only less than 50% of the requirements is being produced within the state. There are more than 4000 broiler production units with a capacity to produce

200 lakh broilers in a year. There are 22 hatcheries in the state with an estimated output of 2.50 lakh one-day old broilers chicks. Requirements in excess of broiler chicks produced within the state are met by private hatcheries located outside the state.

Suggestions and strategies

The pattern of food production should be "land saving crop husbandry" and "grain saving animal husbandry". It is in this context, backyard/rural poultry production is of paramount importance. In order to strengthen this programme we have to aim at bringing behavioural changes, mobilizing rural people, encouraging group activities and imparting training on various aspects of backyard/rural poultry farming.

Kerala Agricultural University through its Centre for Advanced Studies in Poultry Science has to strengthen scientific application of breeding technologies for evolving birds/refining birds suited for the backyard based on data collected from backyard units. The state Department of Animal Husbandry must take fresh look at the infrastructure facilities available in different Regional Poultry farms and then decide on the optimum number of parent stocks that can be kept for the production of cross-breds for the backyard units. Such farms have to be necessarily managed by veterinarians with a sense of involvement and commitment.

In each district, the chick nurseries have to be revitalized and based on the requirement of the district panchayat/block panchayat/Grama panchayats, hatches taken out and given to chick nurseries. The Grama panchayats and other agencies have to work in close collaboration so that at 8 weeks of age of the chicks, the birds are distributed to the households.

Short duration (2 days) training programmes for the housewives of Grama panchayats have to be conducted by the respective veterinary surgeons as to how best to manage the birds in the backyard including deworming procedure and vaccination against Ranikhet disease. Self-help groups have to be formed at Gramapanchayat levels by the women fold.

In the broiler sector, the Kerala State Poultry Development Corporation has to involve itself in a big way in integrating broiler production and marketing including processing and production of value added products. Thus the challenges of exploitation of the farmers of the state by agencies from outside the state can be squarely met.