5 STRATEGIES FOR DEVELOPMENT OF ANIMAL HUSBANDRY IN ASSAM

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Animal husbandry is a sub-sector of agricultural economy and plays a significant role in rural economy by providing gainful employment, particularly to the small and marginal farmers, women and agricultural labourers. Livestock production in Assam is predominantly the endeavour of small holders. Almost 90 per cent of the rural households keep livestock of one species or the other. Livestock farming is practised traditionally mostly for agricultural operations. Milk production is secondary to agricultural operations. There are hardly any commercial livestock farms in the rural areas although in the periphery of cities and towns a few commercial dairy farms exist.

The paper aims at examining the various issues related to livestock production vis-à-vis the development of animal husbandry sector in Assam, and to identify the constraints and strategies to be adopted for better growth and development of livestock production and productivity in Assam.

Livestock Resources

Livestock in the state is highly livelihood-oriented and is generally owned by small and marginal farmers and landless agricultural labourers. The livestock is basically a component of production system, contributing to sustainable agricultural systems. The livestock population in the state is very large in numbers but its productivity is very low compared to other parts of the country.

The composition of livestock population of Assam consists of 63.4 per cent cattle followed by goat (21 per cent). Buffaloes accounts for 5.8 per cent while the share of pig is 8.62 per cent and of sheep is the lowest, i.e. 0.66 per cent. Assam does not have any economically important breeds of livestock except the indigenous bullock (2.06 million) on which most of the agricultural operations depend. The indigenous cows are of poor reproductive efficiency. All the breeds of livestock are native to Assam. Efforts are necessary to upgrade the indigenous cattle, goat and pigs through infusion of exotic/Indian breeds of cattle, goat and pigs. There are
3.69 lakh of crossbred cattle (Jersey x local) in Assam, which is a negligible proportion of the total cattle population. The buffaloes in Assam are mostly of swamp type. About 1.8 lakh male buffaloes are used for cultivation of paddy, drawing carts and logs of timber. No river-type buffaloes are found in rural Assam. Swamp buffaloes are poor in milk production and are good source of buffalo meat production but, this has not yet been exploited commercially. Goat is very popular all over the state. It adapts quickly to harsh environment and has high reproductive efficiency, fair milk yield and excellent meat quality.

Pigs are reared predominantly by the tribals. Pork is getting popularity day by day. The ‘Desi’ pigs are poor in productive and reproductive efficiency. There is tremendous scope of improvement of this ‘Desi’ pigs by crossing with exotic pigs like Hampshire, Berkshire etc. in the region.

The detailed pattern of growth of livestock population is provided in Bhowmick and Kalita in this volume. The man-animal ratio is very high in Assam as compared to the national figure. In 1987, per 100 persons there were 50.2 cattle, 3.9 buffalo, 0.50 sheep, 10.2 goats and 4.2 pigs in Assam and the same in other states in N.E. India is 46.4, 3.7, 0.6 and 6.9 respectively while the respective figures at all-India level are 27.8, 10.17, 13.1 and 1.15. The 1999 livestock census shows that there are 35.8 cattle, 3.24 buffaloes, 0.37 sheep, 11.95 goat and 4.83 pigs per 100 persons. The reduction in number of cattle may be due to overwhelming increase in human population. The man and animal competition also affected man-animal-land ratio. There are 4.53 livestock per ha of net-sown area in 1999 compared to 5.2 in 1987 (Jain and Dhaka, 1993). It appears that there is higher concentration of livestock in Assam as compared to national level.

**Livestock Rearing System**

By and large, cattle, buffalo, sheep and goat in Assam are reared under traditional system (extensive) of management, i.e. the animals are let loose throughout the day and in the evening they are tied in animal shed made of locally available materials. In contrast to rural areas, around the cities and towns intensive management system is generally practised particularly for the crossbred cattle meant for milk production. The cows are housed throughout the day and night. The animals are stall-fed with cut grasses and tree leaves along with feeding roughage and concentrates. Community grazing system is rarely seen even in rural areas. The disappearance of at large number of village grazing reserve (VGR) and professional grazing reserve (PGR) due to increasing human population pressure adversely affected the livestock sector.
Feed Resources

The production of livestock, particularly that of ruminants, depends on the availability of quality feeds and fodder. Good quality grass/fodder helps in increased production on milk and meat at a cheaper rate. The cultivation of quality grass/fodder is rare and the quantity is inadequate. Because, the smaller land holdings are devoted to cultivation of food crops on first priority and the cultivation of fodder gets lower priority.

Animal Productivity

Production of milk, meat, eggs are minimal in Assam. The availability of milk is 89 grams and of meat 20 grams per day and only 22 eggs per person per year in the year 1999-2000. The pattern of production during the period 1985-86 to 1999-2000, shows an increase in production of 35 per cent, 40 per cent and 45 per cent of milk, eggs and meat respectively. However, the demand for these products is much larger than the production.

The basic reason for such a low production is the absence of good breeds of cattle, buffalo, goat, pigs and poultry coupled with shortage of concentrate feed and green fodder.

Constraints

The major constraints hindering the development of animal husbandry in Assam are listed below:

1) Lack of stated policy on animal breeding and other strategies on livestock development in Assam

2) The effective technology intervention on Artificial Insemination has not been fully put into gear. Except cows, other species of animals have not been covered under A.I programme

3) Absence of quality breeds of animals, all the animals are nondescript types resulting in poor animal productivity

4) Acute shortage of feed concentrate and green fodder is the root cause of the poor performance as the genetic potentiality of an animal cannot be exploited fully in the absence of proper nutrition

5) High animal density is a management deterrent

6) Small land holding size limiting cultivation of fodder. The entire land is put under crop production for human consumption

7) Lack of perception of farmers’ to real need and poor research focus and planning. Poor linkage between the concerned government
department and the agricultural university resulting in poor feedback from the field of veterinary to the university. This has created a void in the research focus and planning

8) In adequate monitoring of field works, feedback on failure, rate of adoption of the scientific knowhow imported through various trainings

9) There is no compound feed manufacturer in the whole of the N.E. India. As a result the utilization of non-conventional feed resources could not be maximized

10) Presence of fragmented, unorganized market for all livestock products, which involves chains of middlemen who reap the actual benefit depriving the real producers of their rightful share

11) Poor perception of the farmers towards livestock production as a viable alternative

12) Recurrence of flood causes high incidence of parasitic disease mostly in ruminants

13) Inadequate surveillance and monitoring of infectious and contagions diseases

**Strategies**

1) There is a need to evolve a comprehensive livestock development policy in the state involving the Agricultural University, Department of Agriculture, Department of Industry and the Department of Animal Husbandry and Veterinary

2) Genetic improvement of the indigenous non-descript animals through crossbreeding with superior germplasm and the subsequent inter-se-mating with FIS. Selective breeding of some indigenous breeds of livestock could be an easier option

3) Upgrading the indigenous buffaloes through improved breeding of animals of Indian origin

4) Availability of quality breeding animals/birds to the livestock farmers is to be ensured.

5) Utilization of straws/crop of cereals and food crops with suitable treatment

6) Introduction of urea molasses blocks in rural areas

7) The Government should encourage establishment of compound feed manufactures unit to exploiting of non-conventional feed resources, land to produce economic ration

8) Suitable plan and strategy for cultivation of green fodder in the fallow land
9) Facility for A.I and pregnancy diagnosis at farmers door needs to be located
10) Activation of A.H. extension service to make farmers familiar with the scientific practices
11) Exploitation of modern tools for enhancing productive and reproductive performances in cattle through ETT may be taken up in the cattle breeding farm, Barpeta where pure bred jersey cattle are maintained
12) Timely prophylactic measures and emergency of services for treatment of livestock
13) Establishment of organized networks of market so that the livestock farmers get due share for their products
14) Intensive epidemiological studies of the livestock diseases particularly the infectious diseases should be under taken to plan programme for control and eradication

Conclusion

The key to better livestock production is the availability of quality animals, quality feed and fodder and effective disease control measures. There should be a comprehensive policy approach to deal with the above key factors. The fallow land needs to be exploited for cultivation of green fodder and the utilization of non-conventional feed resource may augment the feed supply situation. The coordination and collaboration approach in programe implementation by the Assam Agricultural University, State Animal Husbandry and Veterinary Department and State Agricultural Department should be a priority activity.

Though modern biotechnology tools for improved livestock production are available in India, applicability of biotechnology tools in rural areas are yet to be assessed and standardized. Cross breeding of indigenous animals with superior germplasm, through A.I. in extensive manner will surely improve the livestock scenario of Assam. Access to information and motivation of farmers towards A.I of cattle and other species are the need of the hour.