

Livestock Production and Their Important Constraints in Dairying

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Abstract

The livestock has a unique place in Indian agriculture. It includes cattle, buffalo, sheep, poultry and fish. It contributes to about one fourth of our gross national product. It provides us with milk, draft power, hide, skins, bones, hooves, manures, fuel, meat, egg, wool, honey, wax, fish etc. With one-fourth of world bovine population, India produces only 8 per cent of world milk. Compared to developed countries our per capita consumption of egg and chicken is much less. Our pig population is one of the lowest in the world. Thus, our livestock are poor producers. The reasons are many. About half of the cultivated area is under arid and semi-arid region where agriculture depends mostly on livestock.

Keywords: *Milk, protein, livestock, dairy, income, fuel, Agriculture, production etc.*

I. Introduction

Livestock is a prominent sector among agriculture and allied activities in India. Lack of scientific management and prejudices of a large section of populace regarding rearing of poultry birds, consumption of egg and its meat are some of the causes of low poultry production. Pigs are still reared by poor section of society under little care to the animals. Apiculture is of recent development in India. Probably because of preference of a vegetarian diet and of regional habit, fish production is still at low ebb.

But with the present scientific knowledge, it is possible to increase the milk production of 50 per cent. India has already shown tremendous growth of poultry industry and with improved methods of feeding, breeding, disease control, it is possible to enhance further. Growth of pig population is very rapid one can get 65-85 per cent of live wt. return. It requires small investment on building, etc. So farmer can make profit from it through a proper feeding and disease control measures. Country has got a vast variety of flora sufficient to maintain a large number of bee colonies for producing more honey and wax. We have exploited only a fraction of the 1.62 m ha of fresh water area and 2.02 m ha of brackish-water area suitable for fish farming. So there is a lot of scope to increase our fish production.

Therefore, livestock sector is a prominent sector among agriculture and allied activities in India. In 1997-98 livestock alone contributed to 25 per cent of total value of agriculture GDP. This has increased gradually from 14 per cent in 1980-81. On the other hand, the contribution of agriculture sector to Gross Domestic Product (GDP) decreased from 35 per cent in 1980-81 to 26 per cent in 1997-98. The annual rate of growth in GDP from livestock and agriculture in these years are 7.3 per cent and 3.1 per cent respectively.

Production and population trends

India has witnessed White Revolution attributing manifold increases in milk yield during the post independence era. Milk production in the country has enhanced from 17 million tones during 1951 to 81.5 million tones during 2000-01 and India has become number one in milk production during 1998 after surpassing USA. The target for the 10th Five year Plan though not yet analyzed would be of the order of 100 million tones. The value of milk and its products during 1998-99 was reported to be Rs.8,22,640 million, which accounted for 21 per cent of agricultural output during that year putting milk as the highest contributor to agricultural sector. Milk has become major agriculture produce contributing about 7 per cent to the GDP of India. According to an estimate, the milk production of our country would be 1165 million tones during 2009-10 considering a growth rate of 4 per cent in milk production. Total livestock population is 535.78 million in country showing increase of 4.6 percent over livestock census 2012. (Source : DAHD, GoI, 20th livestock census)

The highest number of our bovine population (209 million cattle and 92 million buffaloes) has placed India at number one position in global scenario of milk production. In India milk production is predominantly the domain of landless laborers, small and marginal farmers who generally keep 1-2 milch animals under mixed farming system. The small holders have about 70 per cent of the total milch animals. Most of them are living in rural areas having inadequate facilities/infrastructure at their disposal and access to various services and market. Majority of the animals are reared on crop residues. Further, small and marginal farmers own almost 78 per cent

of total land holding. Nearly 72 per cent of families owning milch animals are landless, small and marginal farmers. It has been estimated that during 2000, there were about 69 million breedable cattle and 43 million breedable buffaloes in our country.

Thus, dairy farming is visualized by the farmers in the country as part of an integrated agricultural system where dairy and agriculture complement each other. As cross 20th century, it is appropriate to look back at what India's dairy industry has achieved and also look forward to the 21st century, its challenges and opportunities.

India, the current leader in the dairy world, rank first in milk production level of 209.96 million tones of milk growing steadily at a compound annual growth rate of 6.2 per cent milk production in India is by the domain of small holders in 2020-21 from 146.31 million ton in 2014-15. Some 70 million farmers maintaining a milch herd of 108 million heads of cattle (64 million buffaloes) make this possible. Buffalo contributes largest to the milk pool with about 46.5 million tonnes (55per cent) followed by indigenous cows with 18.3 million tonnes (24 per cent) and crossbred cows with 13.5 million tonnes (16 per cent). Goat contributes 4.2 million tonnes (5 per cent)..(Source : DAHD, GoI)

The growth in productivity indicated the successful launch of cross breeding programme, which resulted in an increase in the population of crossbreds with high milk yielding capacity. During Operation Flood, Cross breeding of low yielding indigenous breeds with high-yielding exotic breeds has been widely acknowledged as a valuable strategy to improve animal productivity.

India has emerged as the major milk producing country, notwithstanding the poor productivity of native cattle whose milk yield averages about 445 kg for cow 811 kg buffalo per lactation. Average milk yield of a crossbred lactating cow in 1993-94 was 5.8 per day, several times more than that of indigenous cow. In the eastern and northeastern states, the milk yield is till very low at 30-40 per cent of the national average. Lactating crossbred cows comprise 14.2 per cent of total lactating cows and contributed 57 per cent of total milk of the world. Its high calcium content makes a much stickier curd and it alone can produce good quality Mozzarella cheese. Despite being an important milch species, the buffalo has not received much attention in breed improvement.

Constraints

In spite of spectacular growth of dairy sector after operation flood with suitable policy interventions, there are some missing links in development that act as deterrent for future growth as mentioned here under. The productivity of our milch cattle is very low (1.5lit/animal/day). The advantages of buffalo have not been fully realized. Quantitative and qualitative, shortage of fodder resources – As much as 10-15 per cent increase can be recorded in the existing milk production through adequate feeding of bovine population. There is under – nourishment heifer calves, which to calf mortality, infertility, delayed conception. Only 10 per cent of the milk produced is in the organized sector, leaving a remaining portion in the hands of milkmen, providing chances of adulteration and exploitation. The marketing infrastructures relating to transportation, processing, packaging and distribution of milk from production centres (rural area) to consumer centres (urban areas) are ill-equipped.

Pesticide/insecticide residues, adulteration with synthetic products, low keeping quality, bacterial contamination and lack of brand promotion will be detrimental for Indian dairy products marketed across the sea. The latest technologies such as use of BST (Bovine Somato Tropin) E.T. (Embryo Transfer) etc. have not been applied to its full potential. As a result, it remains an academic exercise in most part of our country.

Important constraints in livestock production are-

- poor genetic potential of indigenous cattle.
- Shortage of feeds & fodders.
- Lack of scientific knowledge of farmers.
- Lack of proper knowledge of health & diseases control of animals .
- Shortage of land for livestock.

Dairy being a part of fragmented industry requires high capital investment to break this barrier of being fragmented either in processing technology or in the specialized logistics and ware housing.

Future Policies

A survey conducted reveals that Indian consumers are moving towards value added rich diets like milk and milk products compared to cereals, pulses, vegetables, fruits, meat and fish. The nutritional and economic demand for dairy products may aggravate further due to the increasing awareness among the people about the nutritional qualities of dairy products, increase in per capita income and rapid urbanization. The planners, policy maker in Government and Industry may concentrate on the following options for fine-tuning the dairy production, processing industry and trade to meet both domestic and global demand.

Institutional trainings and short courses for livestock owners can be managed by strengthening the human resource and increase the vet services at village level.

Low productivity is an important constraint in dairying :hence intensified efforts should be focused on cross breeding programmers, to produce high yielding cows/buffaloes. Artificial breeding of animal should be given due importance. Similar to AI, ET should be made more commercially applicable and cow/buffalo embryos should be made available to farmers at reasonable cost. Productivity enhancement to make milk production remunerative.

II. Conclusion

Undoubtedly, the major challenge for the dairy sector in India is to increase milk production in order to meet the increasing demand resulting from the almost more. The adoption of appropriate technologies for production, procurement, processing and marketing after the unique environmental, social, economic, political and cultural environment for social and economic development of our country. Now dairying has become an important secondary source of income for millions of rural families

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