



## Swot Analysis of Dairy Sector Development in Tamil Nadu

### KEYWORDS

dairy sector - swot analysis - implications

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**ABSTRACT** An attempt was made to analyse the strength, weakness, opportunities and threats of the dairy sector to develop a strategic plan. Dairying provides security to farmers, especially when agriculture fails. Dairy farming is essential to millions of poor households across the country not only as a source of income but also as a major source of protein, supplementary nutrition, fertilizer, fuel and a store of wealth. The estimated milk production, which was 49.90 lakh tonnes during 2001-02, has increased to 68.34 lakh tonnes during the beginning of 2011-12. The per capita availability of milk per day has increased from 219 gm during 2001-02 to 279 gm during 2011-12. Based on the strength, weakness, opportunities and threats of the dairy sector in Tamil Nadu, policy implications were framed. Price policy model should be developed and procurement price of milk should provide the dairy farmers remunerative price. Oestrus synchronization, Embryo transfer techniques would be highly beneficial to the dairy farmers and the government may initially provide them at subsidized rate till the farmers realized the importance of these techniques. Supplementation of mineral mixture and fodder development would help the dairy animals to utilize their genetic potential to their optimum level and there by increase the milk production and hence dairy farmers should be made aware about various dairy development programmes and fodder cultivation practices through conduct of awareness and mass contact program.

### INTRODUCTION

Animal husbandry and agriculture are synergistically involved and are the important source of income and employment in rural areas. Among them, dairying provides security to farmers, especially when agriculture fails. Dairy farming is essential to millions of poor households across the country not only as a source of income but also as a major source of protein, supplementary nutrition, fertilizer, fuel and a store of wealth. During early days, farmers reared indigenous or native breeds of cattle which had low production capacity. To improve the milk production and productivity of dairy animals, Central and State Government took initiatives through implementation of various dairy development programmes over the years. To have effective strategic planning, SWOT analysis of the sector is essential. Hence in this paper an attempt was made to analyse the strength, weakness, opportunities and threats of the dairy sector to develop a strategic plan.

### DATA AND METHODOLOGY

The data for the study was collected from secondary sources like Economic survey of India (various issues), Policy note on Animal Husbandry in Tamil Nadu (various issues) and the Statistical Hand Book of Tamil Nadu. The collected data were subjected to conventional analysis in the form of percentages.

### RESULTS AND DISCUSSION

#### Livestock Economy of the Country

The livestock sector is one of the fastest growing segments of the agricultural economy in India. It contributes nearly 29.7 per cent of the total value of agriculture GDP and accounts for about 4.07 per cent of the total GDP (Economic survey, 2010-11). The overall growth of livestock sector is steady and is around 6 per cent and this has been achieved despite the fact that the investment in this sector was not substantial (less than one per cent of the total outlay of plan expenditure). During 2010-11, livestock sector contributed 121.84 million tonnes of milk, 63.02 billion eggs, 42.99 million kg wool, and 4.83 million tonnes of meat. India ranks first in the world in milk production, which went up from 17 million tonnes in 1950-51 to 121.84 million tonnes in 2010-11. (Economic

survey, 2011-12) The per capita availability of milk has also increased from 112 grams per day in 1968-69 to 281 grams in 2010-11. The productivity of the cattle crossbred, cattle indigenous and buffalo are 6.87, 2.14, 4.57 kg of milk/ day/ animal and the productivity of poultry is 211 eggs/annum/ layer during the year 2009-10. In spite of India's position as highest producer of milk, productivity per animal is very poor. It is only about 987 kg/lactation as against world average of 2,038 kg/lactation.

India is rich in livestock genetic resource. There are 27 recognized breeds of cattle and seven breeds of buffalo in our country. As per the livestock census 2007, India possesses 529.7 million livestock and 648.8 million poultry birds. The total bovine population in the country is 304.77 million accounts for 57.54 % of total livestock of the country. Out of total bovine, cattle accounts for 65.31 % (199.08 million) and buffalo accounts for 34.56 % (105.34 million). The total population of sheep and goat in India are 71.56 and 140.54 million numbers. The poultry sector encompasses a range of farming systems from highly industrialized and export-oriented at one end to backyard, small and marginal model (or systems), addressing livelihood issues at the other end. The per capita availability is around 53 eggs per year in the year 2010-11. Exports of poultry products were around Rs. 372 crore in 2009- 10 as per the Agricultural and Processed Food Products Export Development Authority (APEDA).

#### DAIRY DEVELOPMENT IN TAMIL NADU

During the year 2010-11, the gross value of output of livestock in the State is Rs. 22018 crores at current prices. Livestock sector contributes about 2.58 % of Tamil Nadu's Gross State Domestic Product (GSDP) and that to the agriculture and allied activities is 24.80%. The annual compound growth rate of the value of output from livestock sector is significantly high at 13.46 per cent (From 2001-02 to 2010-11).

#### Dairy cattle Population scenario in Tamil Nadu

As per the 18th livestock census, the total livestock population of the State is 307.59 lakhs, accounting to 5.81% of the country's livestock population. The cattle population

of 111.89 lakhs accounts for 36.38% of total livestock in the State. Cattle comprises 84.78% of the total bovines (131.98 lakhs) reared in the State. The exotic, crossbred, native pure, non descriptive and other graded cattle account for 3.03%, 62.95%, 6.44%, 25.20%, and 2.38% respectively to the total cattle population. Buffalo comprises 15.22% of the total bovine population and 6.53% of the total livestock in the State. The Murrah, Toda, Other Graded and Non descriptive buffalo accounts for 12.28%, 2.51%, 23.60% and 61.61% respectively to the total buffalo population of 20.09 lakhs. The total sheep and goat population of the State is 172.66 lakhs, accounting for 46% sheep and 54% goats. The total sheep and goat population accounts for 56.13% of total livestock in the State.

**Milk Production scenario in Tamil Nadu**

The estimated milk production, which was 49.90 lakh tonnes during 2001-02, has increased to 68.34 lakh tonnes during the beginning of 2011-12. Likewise the estimated egg production, which was 4,223 million numbers during 2001-02, has increased to over 11,514 million numbers during 2011-12. The annual meat production in the state was 461 thousand tonnes during the year 2009-10. The productivity of the cattle crossbred, cattle indigenous and buffalo are 6.39, 2.78, 4.25 kg of milk/ day/animal and the productivity of poultry is 219 eggs/annum/layer during the year 2009-10.

**Food security through dairy sector in Tamil Nadu**

The per capita availability of milk per day has increased from 219 gm during 2001-02 to 279 gm during 2011-12. During the same period the per capita availability of eggs per annum has gone up from 68 numbers to 171 numbers. As per the Indian Council of Medical research (ICMR) recommendation, the per capita requirement of milk should be 250 grams per day and 180 numbers eggs per annum. Tamil Nadu contributes 18.27% of egg, 8.78% of meat and 5.61% of milk production and stands 2nd in egg and 5th in meat, 8th in milk production in the country.

**SWOT ANALYSIS OF DAIRY SECTOR IN TAMIL NADU**

**Strengths**

- Urbanisation, burgeoning population, raise in per capita income and change in food habits which leads to increased consumption of milk
- Good network of A.H.Department
- Change in the Government thinking and policies which favour livestock sector
- Proven technologies
- Regular source of income

**Weakness**

- Lower productivity of Animals
- Administered price
- Frequent disease outbreaks
- Weak Extension network
- Unscientific practices
- Small and scattered herds

**Opportunities**

- Higher population of poor breeding / anestrus / unproductive cows and buffaloes
- Existing scenario of prolonged inter-calving and dry period for cows and buffaloes in field conditions
- Missed heat in cows and buffaloes
- Increased demand for milk
- Dairy food processing
- Rich animal bio-diversity

**Threats**

- Negative consequences in cross breeding programme
- Socio-cultural and psychological inhibitions
- Dwindling fodder resources(CPR)
- Employment Shift from farming to non-farming sector
- Labour shortage and high wage rate in dairy farming

**STRATEGIC PLANNING**

MAJOR DRIVING FORCE	STRATEGY	EXPECTED OUTCOME
Milk price fixing Decontrol of Government role in market forces – Price Policy	Price policy model – Based on the cost of production of Milk	Retention of Dairy farmers and improved milk production Expansion of dairy farming activities
Breeding Technology Artificial Insemination Oestrus synchronization Technique Embryo Transfer	Artificial Insemination-Proper heat Detection Oestrus synchronization Technique (Cost -Rs.1000/-) Female calf Embryo Transfer	Increased conception rate from 30% to 60% Animal Value would be improved by 3- 4 folds Productivity could be improved from existing level (40-60%) Increased milk production and increased monetary benefits from dairy farming
Feed and Fodder	Balanced Feeding with Concentrate, green fodder and dry fodder. Supply of mineral mixtures through Veterinary Dispensaries.	Balanced feeding alone could bring about an increase of 30 per cent in milk production. The economic viability of dairy farming depends upon the feed and fodder which accounts for more than 60 per cent of the production cost.
Infrastructure development (Extension network, Marketing facilities, Organised Sector, Food Processing etc..)	Creation of strong network of Extension workers as in Agri. Expanding the level of fluid milk marketing level of organized sector from currnt 30 % to 60% by proving infrastructural facilities such as transport, road, creation of cold chain facilities Training of dairy farmers on value addition and food processing technologies	Intangible and indirect but crucial for the success of all other strategies Food processing is in initial stages in India now. Initial estimates shows that it has the potential to employ 22 million people by 2030.
Veterinary Delivery System - Human manpower requirements	Currently, the state Animal Husbandry Department has strength of 2734 veterinarians. In addition, TCMFP has 206 veterinarians for providing public veterinary services. Assuming 'one calf per year' for the crossbred cows introduced and prolificacy rate of 1.6 per small ruminant distributed, around 50 veterinarians need to be inducted additionally every year. No. of Veterinarians Required (@ 1 Vet/ 5000 cattle units) - 5,406 (oppili, 2012).	To execute the all the strategic interventions mentioned above strong manpower network with adequate knowledge is indispensable and would definitely increase the profitability of dairy farming by improving the milk production in the state and also by reducing the incidence of diseases.

**CONCLUSION AND POLICY IMPLICATIONS**

- Price policy model should be developed and procurement price of milk should provide the dairy farmers remunerative price
- Oestrus synchronization, Embryo transfer techniques would be highly beneficial to the dairy farmers and the government may initially provide them at subsidized rate till the farmers realized the importance of these techniques
- Supplementation of mineral mixture and fodder development would help the dairy animals to utilize their genetic potential to their optimum level and thereby increase the milk production and hence dairy farmers should be made aware about various dairy development programmes and fodder cultivation practices through conduct of awareness and mass contact programmes
- Mineral mixture and Feed unit may be established by the Government for improving the supply of good quality feed and mineral mixture on optimum price
- Fodder seed bank has to be established at regional and village level for uninterrupted supply of fodder seeds / seedlings
- Drought resistant and High yielding fodder may be popularized
- Grazing land may be improved and protected to help landless livestock farmers
- Balanced feeding alone could bring about an increase of 30 per cent in milk production. The economic viability of dairy farming depends upon the feed and fodder which accounts for more than 60 per cent of the production cost.
- Provision of necessary infra structural facilities would provide the necessary impetus for the dairy farmers to pursue value addition and dairy processing activities and thereby increase their income by several times. Hence serious efforts should be taken by the government to create these facilities gradually so as to capture the momentum.
- Creation of human manpower is the necessary vital link for the successful of any development programme and hence revamping the veterinary delivery system in the state is highly essential.
- Incentives may be given for progressive dairy farmers
- Augmenting dairy animal population through buffalo calf programme and heifer rearing programme

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