A STUDY ON MAJOR ISSUES AND CHALLENGES OF DAIRY FARMERS IN INDIA

Dr. Macherla Bhagyalakshmi*
Assistant Professor, Department of Professional Studies, Christ(deemed to be university).

ABSTRACT:
India is undoubtedly the leader in white revolution. India has the credit of having highest population of cows and buffalo in the world. Since Indian independence dairy industry is showing steady and robust growth. Dairy sector has seen a huge improvement in supply chain and milk processing facilities. Despite of robust growth, cattle farmers have not adopted modernization and are facing multiple challenges. In this article an attempt has been made to discuss different challenges of Indian dairy industry and tried to analyze challenges through frameworks like SWOT Analysis and Porter Five Force Model.

KEYWORDS: Challenges, Dairy farm, Cattle farmer, SWOT analysis, Porter Five Force Model.

INTRODUCTION:
Milk was a commodity for charity in our country and was not a marketable commodity in the Ancient times. There has been a Phenomenal change in the outlook and attitude of the people towards milk and at present and has grown to a stature of a dairy industry. Dairying became a subsidiary of agriculture and now gained economic importance and ushered white revolution after Green revolution. Dairying has been a backbone of our men and women on country sides and playing a critical role in the economic development of rural India by satisfying the needs of urban India. Dairy industry is of crucial importance to India. Our country is the world’s largest milk producer, accounting for more than 13% of worlds total milk production. It is the world’s largest consumer of dairy products, consuming almost 100% of its own milk production. Dairy products are a major source of cheap and nutritious food to millions of people in India and the only acceptable source of animal protein for large vegetarian segment of Indian population, particularly among the landless, small and marginal farmers and women. Dairying has been considered as one of the activities aimed at alleviating the poverty and unemployment especially in the rural areas in the rain-fed and drought-prone regions. In India, about three-fourth of the population live in rural areas and about 38% of them are poor. In 1986-87, about 73% of rural households own livestock. Small and marginal farmers account for three-quarters of these households owning livestock, raising 56% of the bovine and 66% of the sheep population. According to the National Sample Survey of 1993-94, livestock sector produces regular employment to about 9.8 million persons in principal status and 8.6 million in subsidiary status, which constitute about 5% of the total work force. The progress in this sector will result in a more balanced development of the rural economy. The total amount of milk produced has more than tripled from 23 million tonnes back in 1973 to 74.70 million tonnes 26 years later in 1998 and is 187.7 million tones in 2018-19.

The tremendous rise in milk production is primarily the fallout of the dairy farming policy reflected in Operation Flood. Following the success of dairy farming policy, the Government has set up a dairy processing policy, reflected in the Milk and Milk Products Order. In addition, the Government uses a variety of import restrictions to protect its domestic dairy market. The huge volume of milk produced in India is consumed almost entirely by the Indian population itself, in
a 50-50 division between urban and nonurban areas. Increasingly, important consumers of the dairy industry are fast-food chains and food and non-food industries using dairy ingredients in a wide range of products. Indian dairy industry is one of the important industries for India. India is world’s largest milk producer. India dominates about 13% of world milk production and India consume about its 100% of production. Milk is a cheap source of protein for large vegetarian population living in India.

OBJECTIVES:
1. To Understand and Highlight the Importance of Dairy Industry.
2. To identify the Challenges Encountered by the Indian Dairy Industry.
3. To analyze the challenges through the frameworks like SWOT Analysis and Porter’s Five Force Model.

LITERATURE REVIEW:

Market-Oriented Smallholder Dairying Research – Working Document III by Mohammad A. Jabbar, Emmanuel Tambi and Gary Mullins of International Livestock Research Institute (ILRI), Nairobi, Kenya, March 1997 The dairy industry in the developing countries has a number of specific features which distinguish it from the other sectors of agriculture and have particular implications for marketing (Jaffee, 1995; Schelhaas, 1995). into a more stable, longer-storable form. The quality of milk depends on farm management practices, and milk is potentially subject to adulteration, so strict and comprehensive quality regulations may be necessary when marketing involves more than direct delivery by producers to consumers. Second, the vast majority of the dairy farmers are small-scale producers, who produce milk as a source of regular cash income. Dairy production is a labour-intensive enterprise, and dairy marketing activities often provide substantial employment. However, because of asset fixity (high percentage of fixed costs), dairy enterprises often respond to market changes and incentives in a limited and gradual way. Third, milk can be used to make a wide range of high quality palatable and nutritious products, which often imply substantial value added over the cost of the raw material. When production and consumption points are far apart and demand increase rapidly, processing of dairy products becomes very important.

Dairy Co-operatives and Milk Marketing in India: Constraints and Opportunities by K. Rajendran and Samarendu Mohanty published in the Journal of Food Distribution Research 35(2) July 2004 Operation Flood and dairy co-operatives emerged in India as the largest rural employment scheme, enabling the modernization of the dairy sector to a level from where it can take off to meet not only the country’s demand for milk and milk products but can also exploit global market opportunities. This study reviews the existing status of milk marketing and dairy co-operatives in India and provides recommendations to meet future challenges. The results of the study indicate that 80 percent of the milk produced by the rural producer is handled by an unorganized sector and the remaining 20 percent is handled by an organized sector. It is found that the dairy co-operatives play a vital role in alleviating rural poverty by augmenting rural milk production and marketing. Involvement of intermediaries; lack of bargaining power by the producers; and lack of infrastructure facilities for collection, storage, transportation, and processing are the major constraints which affect the prices received by producers in milk marketing. Milk quality, product development, infrastructure support development, and global marketing are found to be future challenges of India’s milk marketing.
India’s Dairy Sector in the Emerging Trade Order by Brajesh Jha of Institute of Economic Growth, Delhi-110007 2005 (India) The growth of dairy sector during the last three decades has been impressive. A set of government policy which created suitable price environment for domestic milk production, is believed to be the key behind this impressive growth; the price-based supports are however untenable in the new trade order. With trade liberalization decreasing trend in real price of milk is already evident; this may have different implications for major constituents of the dairy sector. Implications would also vary across regions since a disaggregate analysis of the dairy sector presents considerable disparity in its growth. Present study by adopting the economic surplus approach assesses effect of import liberalization for the state of Haryana, Uttar Pradesh, West Bengal, Maharashtra, and Tamilnadu. The effect of import liberalization depends on the world price of milk products, world prices are generally low in the Oceania countries and imports at such a low price has increased consumers’ benefits, increase in consumers’ benefits is significantly higher than the losses to the producers causing increase in the aggregate benefits. The study further quantifies the loss in employment because of free imports of milk products at low price. The study found that the effect of import liberalization has been significantly higher for the coastal states as compared to the land-locked states of the country. The study finally discusses some ways to protect the long run interest of India’s dairy sector without falling foul of the WTO.

Strategies for Sustainable Dairy Production in India (Indian Dairyman 2006) “The industry’s major contribution in providing newer avenues for employment, both direct and indirect, and its role in improving the nutritional standards of our people also add to the importance that needs to be attached to this sector during the 21st century.” The contribution of dairy animal is widely recognized. Our country is blessed with vast dairy resource. Dairy farming involves a group of interaction of many factors that influence production & reproduction, environment and management. Dairy cooperatives cover about 60,000 villages all over India and only 12-14 per cent of total milk production is canaled through organized sector. Concerted efforts should, therefore be directed towards unorganized dairy farmers by providing necessary inputs and make them to adopt newer milk production technologies. India has become the world’s largest milk producer but its share in the world milk trade is very minimum. An attempt to identify problems of the farmers and to resolve the same for improving the export earning and higher returns to dairy farmers is discussed in this paper. Various tips have also been given for efficient identification and formulation of dairy husbandry.

The vegan dairy [15] Helen Lightowler and Jill Davies, Nutrition & Food Science, Number 3, May/June 1998, pp. 153–157, MCB University Press · ISSN 0034-6659 (2010) Discusses the non-dairy alternatives to milk and dairy products. Looks at a range of products suitable for the “vegan dairy” and compares the nutrient profiles with those of traditional milk and dairy products. The paper concludes that vegans should choose non-dairy alternative products which have been fortified. The way forward is to expand the range of fortified “vegan dairy” products, to increase the availability of these foods and, in time, to reduce their price.

CHALLENGES OF INDIAN DAIRY FARMER

- High Cost of Milk Production

Indian milk producers have to reduce the cost of milk production. The main reason of the high cost of milk production is due to average milk yield of Indian cattle is much less i.e. 987 kg/year compare to 6273 kg/year in Denmark, 5289 kg/year in France, , 5938 kg/year in Canada, 5462
kg/year in United Kingdom, 7038 kg/year in USA and 11000 kg/year in Israel. So farmer of other countries have to spend much times less in compare to Indian farmers. Reason behind high production of milk is not climate. Israel has climate of 47C – 45C in summer and in winter it as 4C- 5C. So this high yield has been achieved through proper feed, water management and housing, apart from superior quality germplasm. Israel cows have archive this much high milk yield by giving up high fat content. Then also per capita fat production of Israel is higher than India.

- High Cost in Milk Handling and Marketing

In India dairy penetration is much less. Majority of milk is collected by private players and either sold to private dairies or to other member of channel. Milk passes through several level till it reach to pasteurization facility in dairy. After milk reaches to daily milk also passes through several distribution channel this also increase cost of milk. Whole process has double the milk price. In Gujarat cooperative dairy purchases one litre of milk from farmers at the rate of 25 to 28 Rs/litre. And consumer due to high milk handling cost these dairies sell milk at the rate of 48 to 52 Rs/litre. However there is good scope for reducing the number of agencies handling the milk to reduce the cost of handling and it is possible to significantly reduce the retail price of milk.

- Poor quality milk due to unhygienic milk handling

Main reason of poor quantity of milk is due to unhygienic and poor condition of animal farms and dairies. Even due to high demand in foreign country we cannot export such poor quality of milk product. Many times Indian milk products get rejected in foreign nations due to unhygienic milking milk contains high number of microbial count. Reasons behind the quality affected in India are due to poor health of animal, polluted water and food and Unclean surrounding in farm. So it is necessary to consider all this challenges in improving milk production. Currently most of the milking animals are not screened on regular interval of time. So there is lots of chances that some diseases can transmitted to human beings. Farmers use antibiotics and chemical drugs to increase the production of milk this will also affect the quality of milk. These issues can be avoided by regular screening of animals in animal husbandry and also maintaining history records of health, feed etc. Quality of feed should be checked regularly. There must be pollution control in the feed and water used in cattle farms.

SWOT ANALYSIS OF INDIAN DAIRY AND FARMERS

Strengths

- Large number of livestock population is vital asset for Indian dairy industry. Sustainable reproduction can assure future supply and will continue to propel industry growth.
- Indian milk animal has very low milk productivity; there is a huge scope of improvement in terms of milk productivity of animals.
- With continues growth in economy there is a growth in the income of middle class population this result in to high purchasing power.
- In India milk consumption is a part of people’s daily dietary habit this assure steady growth in milk demand
- Cheap labor availability of low cost fodder in form of farm residual keeps the cost of milk production low
• India has well developed cooperatives structure and large number of milk cooperatives help farmer in getting proper milk price.

Weaknesses
• Penetration of cross breeds and high yielding animal are limited and Indian dairy farmers have large number of low milk yielding animals.
• Veterinary education has not percolated to the last man who is involved in the Dairy industry.
• Lack of road connectivity and poor infrastructure are major challenge for dairy farms in terms of supplying their raw milk to processing facility.
• Majority of dairy farmers are unaware about modern scientific dairy farming techniques, clean milk production and integrated supply chain.
• Low growth rate, low returns on investment, lack of research, lack of reliable milk production data are reason that investor are not willing to invest in dairy farming

Threats
• Urbanization, Industrialization and excessive grazing have put pressure on grazing lands. Result into complete degradation of grazing land.
• Crossbreeds have created threat many valuable indigenous cattle breeds. Adulteration, Synthetic milk etc. has decreased milk buyer’s confidence. Eventfully milk consumers can shift to other options.
• Substitutes like soya milk; coconut milk etc. can replace farm cattle milk.
• Middleman are still controlling majority of milk procurements. Serious steps should be taken to reduce that.
• There is a gross lack of awareness among farmers about the quality parameters, including microbiological and chemical contaminants as well as residual antibiotics.

Opportunities
• With opening up of Indian economy milk producer has huge opportunity to sell products in global market
• High economy growth has created opportunity to invest in dairy farmers.
• Forward integration with milk cooperatives can improve the productively and profitability of dairy farmers
• Cooperative animal rearing and animal hostels can unlock the potential
• Dairy farm can adopt new technologies that can improve productivity, operations and profitability

PORTER'S FIVE FORCE MODEL FOR INDIAN DAIRY FARMERS

1. Competition in the industry
• Many countries like Israel, Denmark and New Zealand has started low cost milk production and low cost milk and milk product exports this has created pressure on milk prices in India
• A cattle rearing is common profession in India, majority of farmers has adopted cattle rearing as there secondary profession. This is a main cause of cut throat competition and stagnancy in milk prices.
• Many religions organization has started dairy farms (Gavu Shala). This has intensified the competition.
Conclusion: Indian dairy farms have always seen cut throat competitions.

Opportunity: By adopting modern technology and good governance dairy farmers can reduce cost of milk production. This will help them to position themselves ahead of others.

2. Potential of new entrants into the industry
   - With the increase in milk prices in urban India MNC and corporate start cattle farms with huge capital investments.
   - Milk processing units can do backward integration by developing own cattle farms.

Conclusion: Thus there is high potential of new entrance in Indian dairy farm business.

Opportunity: Milk producer can form own cooperatives and integrate themselves with milk processing companies to reduce the threat from new entrance.

3. Power of Suppliers
   - Dairy farms usually grow fodder in their own farms.
   - Dairy farms can easily get veterinary facility from milk cooperatives and governments institutes

Conclusion: Indian dairy farms have high bargaining power over their suppliers.

Opportunity: As bargaining power of supplier is limited dairy farms can leverage their procurement and relies on external supplier to increase milk production.

4. Power of Customers
   - Milk has very short life span so milk producer has to sell milk at the rate given by milk buyers.
   - Operation cost of running animal husbandry is very high so milk producers sell milk immediately in order to avoid cash crunch.
   - Cost of holding milk in milk chillers is very high and it is not affordable for small farmers so they have to sell milk immediately.

Conclusion: Dairy Farms have very less bargaining power over their customers.

Opportunity: Dairy farms can do forward integration with milk buys or they can from their own cooperatives to hold and sell milk. So by forward integration they can reduce bargaining power of customers.

5. Threat of Substitutes
   - Milk from Soya and coconut can be threat to Indian dairy farms. With help of modern technology manufactures has started producing cottage cheese, paneer and other milk products form Soya milk.
   - Other substitute product like low cost vegetable ghee is a potential substitute of Ghee.

Conclusion: New research and developments has increase the threat of milk substitutes.

Opportunity: Low cost production, Organic dairy farming, retaining high nutrients value in milk and adopting modernizing dairy farms can reduce the threat of substitute products
SUGGESTIONS
From this article there has been identified some of the suggestions that help the Indian Dairy Farmers to get more yield in milking, earning good price for the milk etc.

- Milk producer can form own cooperatives and integrate themselves with milk processing companies to reduce the threat from new entrance.
- To achieve high yield in the milk production the farmers have to concentrate more towards maintain cross breeds animals with high milking capacity instead of maintaining more animals with less milking capacity.
- Dairy farmers in India should take proper care of the health of the cows and buffalo through proper feeding, Water management, Hygienic atmosphere, Housing, regular health check – ups of the animals.
- To reduce the retail price and to earn good amount for the milk sold by farmer, there should not be multiple agencies in handling the milk.
- Should focus on Co-operative animal rearing and animal hostels to unlock the potential of Dairy.

CONCLUSION
Indian is one of the highest milk producing country then also per capita milk production in Indian is much low compare to other milk producing county. India is not able to meet its local milk demand. The average milk production per cow and buffalo per year in India is too low. The cost of milk in India is too high. Indian cattle farm is working on very low efficiency. Due to lack of knowledge, lack of proper medical history the mortality of cattle is too high. Cattle farmer also face problem in maintaining vaccination and health history of his livestock. Other major challenges of dairy industry are inefficient supply chain and traditional way of rearing cattle. For the revival of industry now it become necessary to adopt modernization in cattle farms, Increase the use of technology and shifting towards organized way of cattle rearing.

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