



Problem and prospects of dairy industry in India

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India ranks topmost in milk production with a total production of 127.9 MT milk (BAHS, 2013). Contribution to milk production by buffalo, cow and goat in 2010-11 was 51%, 45% and 4%, respectively. India reached to this stage in milk production because of several reasons including crossbreeding, artificial insemination, operation flood etc. However, in comparison to other milk producing countries of world, individual productivity of our dairy animal is very low. Average milk productivity of buffalo and indigenous cow in India is 4.58 and 2.2 kg/day, respectively. India became largest milk producing country due to the efforts of millions of small holder producers and several other policy matters. Therefore, in India dairying is still a part of rural life instead of industry.

There are many of problems existing in Indian dairy industry. These problems as well as their solutions are being discussed in this article.

Problems for Indian Dairy Industry:

- Productivity of Indian dairy animals is lower compared to other country.
- Lack of scientific livestock feeding practice.
- Inadequacy and unavailability of livestock health care.
- Improper milk marketing facilities and uncertain price of milk for producers.
- Lack of infrastructure for milk collection, transportation, processing.
- Lack of veterinary and extension services.
- Milk losses due to lack of cold chain facilities.
- Lack of milk production standards and clean milk production practices.
- Fewer private companies on large scale due to lack of incentives for them.

Policy environment for Indian dairy industry: Dairy sector in India falls under the state subject for policy matters and it is a part of agriculture. However, national policies related to livestock formulated by the central government while their implementation is also taken care by respective state governments. Following table describes the various livestock development programmes of our

country.

Other livestock development programmes:

Military dairy farms:

- Earliest attempts at dairy development during British rule.
- To ensure the supply of milk and butter to the colonial army.
- First MDF set up at Allahabad in 1913.

Key village scheme: (1951-52) :

- Was launched during the First Five Year Plan (1951-56).
- Initially covered a population of 10,000 breedable cows and buffaloes at National level.
- Artificial Insemination (A.I.) was introduced first time at national level with this scheme.
- It was condemned due to its limited coverage (10% stock) and insignificant contribution.
- Aspects like nutrition, disease prevention and health were not given due consideration.
- Later it was merged with ICDP.

Intensive cattle development programme:

- To fulfill the lacuna of KVS the new programme ICDP was launched.
- Serious steps to meet growing urban milk demand were taken.
- Animal health and breed improvement remained common elements in the project.
- Cross-breeding was launched at national level to improve productivity of native cow.
- Each ICDP covered population of one lakh cow and buffalo population.
- All inputs necessary for milk producer were provided.
- Areas where ICDP existed, KVS were merged into ICDP while area where ICDP did not exist, KVS was continued.

Operation flood: (1970-96) :

- Milk producers' co-operatives established and modern technology made available.
- Broad objectives: to increase milk production and

Table 1 : Main livestock development programmes currently in operation in the country

Sr. No.	Name/ title	Year	Main focus/features
Central sector scheme			
1.	Central Herd Registration Scheme (CHRS)	1962-63	<ul style="list-style-type: none"> - To register elite cows and buffaloes of important native breeds - To provide incentive for calf rearing - 4 centers at Rohtak, Ahmedabad, Ajmer and Ongole
2.	Central cattle breeding farms: Suratgarh: Tharparkar Chiplima (Orissa): Red sindhi Almadhi (T.N.): Murrah Dhamrod (Guj): Surti -1968 Hessaraghatta (Karnataka): H.F. Sunabeda (Orissa): Jerssey		<ul style="list-style-type: none"> - Progressive genetic improvement for milk production - Production and distribution of superior pedigreed bulls - Preservation of indigenous germ plasm - Production of upgraded crossbred animals
3.	Central sheep breeding farm	1968-70	<ul style="list-style-type: none"> - Situated at Hissar (Haryana) - Produce and disseminate rams to various state farms for cross breeding and genetic stock up gradation.
4.	Central Frozen Semen Production and Training Institute	1969	<ul style="list-style-type: none"> - Situated at Hessarghata (Karnataka) - Production of frozen semen of cattle and buffaloes - Training to in-service veterinary professionals
5.	Animal Quarantine and Certification Service (AQCS)	Delhi-1969 Chennai-1974 Kolkata- 1975 Mumbai-1981 Banglore Hyderabad	<ul style="list-style-type: none"> - To prevent the ingress of any Exotic Livestock Diseases into India - All imported livestock products need to be checked strictly by Technical body (AQCS) after arrival as unwanted, undeclared, restricted and prohibited items.
6.	Milk and Milk Product Order (MMPO)	1992	<ul style="list-style-type: none"> - To maintain quality of milk and to provide regulation of production, procurement and distribution. - Producing >10,000 lit/day require registration
7.	Dairy / poultry venture capital funds	2004-05	<ul style="list-style-type: none"> - Financial assistance provided as loan to rural/urban beneficiaries under a bankable project. - Establishment of small dairy farms-Ten animal unit - Entrepreneur's contribution - 10% - Interest free Loan provided by GOI - 50% - Bank loan at interest - 40%
8.	National Institute of Animal health	2006	<ul style="list-style-type: none"> - Situated at Bagpath (U.P.) - To act as a licensing and regulatory authority on Standard and Quality of Veterinary Vaccines/ Biologicals
9.	Dairy Entrepreneurship Development Scheme	Aug 2010	<ul style="list-style-type: none"> - New name of Dairy / poultry venture capital funds - Setting up modern dairy farms for clean milk - Encourage calf rearingchanging unorganized sector - 25% subsidy to General and 33.33% for SC/ST
10.	National Dairy Plan	2011- 12	<ul style="list-style-type: none"> - To increase productivity of milch animals - Production of high genetic merit (HGM) bulls - Strengthening existing Semen Stations - Viable doorstep AI delivery services - Ration Balancing and Fodder Development Programme - Village based milk procurement systems

Table 1 contd...

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Centrally sponsored schemes			
1.	National Project for Cattle and Buffalo Breeding (NPCBB)	Oct 2000	<ul style="list-style-type: none"> - Over period of 10 yr, in two phases each of 5 yr - Introduction of superior bulls for breeding - Promotion of private mobile AI service - Quality control of semen banks
2.	Livestock Insurance Scheme	2005-06	<ul style="list-style-type: none"> - To provide protection to cattle rearers from loss of animals due to death and to demonstrate the benefit of insurance - Crossbred and high yielding cattle and buffaloes (>1500 lit/lactation) are being insured at their current market price - Market price of animal assessed jointly by beneficiary, authorized veterinarian and insurance agent - Rate of premium 4.5% for annual and 12% for 3 year policies. - Premium of the insurance is subsidized to the tune of 50% - Subsidy provided to a max. of 2 animals/beneficiary - Ear tagging used for identification of animal
3.	National Rinderpest Eradiation Programme	1 st in 1954 Revised programme in 1992	<ul style="list-style-type: none"> - Supported by FAO - India declared free from RP infection in June 2006 - This is the first animal disease that the OIE has recognized as having been eradicated from India
4.	Assistance to state for control of animal disease (ASCAD)	-----	<ul style="list-style-type: none"> - Assistance provided by GOI to State for control of economically important diseases of livestock and poultry by way of immunization, strengthening of existing State Vet Biological Production Units, strengthening State Disease Diagnostic Lab, holding workshops / seminars and in-service training - 75:25 sharing basis between the centre and state
5.	Integrated dairy development programme (IDDP)	1993-94	<ul style="list-style-type: none"> - To develop milch cattle - To provide technical input - To ensure milk procurement - The scheme was modified during March 2005 as 'Intensive Dairy Development Programme' (IDDP)

Table 2 : Programme in three phases

Indicator	Phase I (1970-81)	Phase II (1981-85)	Phase III (1987-96)
Number of milk sheds covered	39	136	170
Co-operative societies set up (Thousands)	13.3	34.5	34.5
Milk procurement (million kg/day)	2.56	5.78	10.99

augment rural incomes

- National Dairy Development Board- 1965 (Anand) and Indian Dairy Corporation-1970 was main implementing agency.

- The programme was implemented in three phases:
Milk and Milk Products Order (MMPO) 1992 : In order to ensure adequate milk availability MMPO, 1992 was launched. It regulates entry in to the dairy industry by providing a system of registration for new units and providing standards of safety and hygiene for dairy units.

Plants producing between 10,000 to 75,000 liters of milk per day or manufacturing milk products containing between 500 to 3750 tons of milk solids per year need state registration. When the volume exceeds 75,000 liters of milk per day or 3,750 tons of milk solids per year, registration with central authority is necessary. The validity of registration certificate issued is for a period of five years.

The Government made some important amendments to the MMPO in 2002 including making processors to

procure milk from any area of their choice.

National Dairy Plan : It was proposed in 2007-08 by National Dairy Development Board (NDDDB) to increase the country's milk production to meet the projected demand of 180 million tones by 2021-22. The main emphasis here is given to increase the productivity of milch animals and thereby increase the milk production to meet the rapidly growing demand for milk to help provide rural milk producers with greater access to the organized milk processing sector.

SWOT analysis of Indian dairy industry:

Strengths:

- Enhanced milk production with consequently increased availability of milk processing.
- Improved purchasing power of the consumer.
- Improved transportation facilities for movement of milk and milk products.
- Increased availability of indigenously manufactured equipment.
- Large no. of dairy plants in the country.
- Vast pool of highly trained and qualified manpower available to the industry.
- India is having best buffalo breeds and highest buffalo population which offer immense potential for growth and development of dairying.

Weaknesses:

- Lack of appropriate technologies.
- Tropical climate conditions.
- Erratic power supply.
- Lack of awareness for clean milk production.
- Underdeveloped raw milk collection systems in certain parts of the country.
- Seasonal fluctuations in milk production pattern.
- Regional imbalances of milk supply.
- Species – wise variation in milk quality received by dairy plants.
- Poor productivity of cattle and arable land.
- Scarce capital for investment in the dairy development programme on a priority basis.
- Absence of proper data records which is essential for preparing development programme.
- Dairy development programs have not been fully implemented as per the needs of the region in different agro – climatic zones.
- Lack of marketing avenues for the dairy produce.
- Non-availability of software for preparing needed dairy schemes / projects.
- Lack of infrastructure for offering dairy business management programmes.

Opportunities:

- Greatly improved export potential for milk products of western as well as traditional types.
- Established and expanding market for traditional dairy products.
- Increasing demand for fluid milk as well as value added production.
- Byproduct utilization for import substitution.
- Employment generation.
- Growing demand for milk and milk products.
- Liberalized policies in dairy sector.
- Availability of large resources of unconventional feeds and folders.
- Availability of diverse germ plasma with unique features like heat tolerance, disease resistance, draft ability and ability to survive and produce under stress conditions.
- Availability of animal production technologies for faster development and effective implementation.
- Integrated structure of marketing for milk and milk products.
- Integrated structure of livestock marketing through regulated markets.
- Improved collection of data on contract basis through agencies.
- Market information intelligence system for milk and milk products.
- Development of software for project formulation for dairy enterprise.

Threats:

- Introduction of foreign products in Indian market.
- Increasing chemical contaminants and residual antibiotics in milk.
- Poor microbiological quality of milk.
- Export of quality feed ingredients particularly cakes under the liberalization policy.
- Deficiency of molasses, a rich source of binding agent in feed industry and constituent of urea molasses mineral lick.
- Excessive grazing pressure on marginal and small community lands resulting in complete degradation of land.
- Extinction of the indigenous breeds of cattle due to indiscriminate use of crossbreeding program to enhance milk production.
- The liberalization of the dairy industry is likely to be exploited by multinationals. They will be interested in manufacturing value added products. It will create milk shortage in the country adversely affecting the consumers.

Received : 14.07.2017

Revised : 16.10.2017

Accepted : 01.11.2017