

CHAPTER - I

CHAPTER - I

INTRODUCTION

1.1 INTRODUCTION

Agriculture forms the backbone of the Indian economy. Agriculture is the source of livelihood for over 70 percent of population. Now 32 percent share of agriculture in the national income. According to the Indian census figures, 69 percent of Indian population is engaged in agricultural. The role of agriculture in the field of international trade is very important, 70 of Indian exports depend upon agriculture.

The unemployment problem is very serious in general and rural area is particular. Under employment or disguised unemployment in the rural sector and the existence of urban unemployment among the educated class and uneducated class is more serious. According to Minhas, Jain and Tendulkar group (1994-95) 39.4 percent population unemployed.¹

The agriculture is known as gamble in the monsoon. Agriculture is unable to provide full time employment to all the labourers. Moreover per capita cultivable land has declined, presently it is less than 0.17 hectare due to growth of population, and land resulted in sub-division and fragmentation of holding. The role of agriculture in the raw material is very important. Industrialisation depends upon

agricultural. Agriculture provides various types of raw material to the industrial sector. Therefore, last five decades agriculture occupies a place of pride being the largest industry in the country.

As the size of land holding is very small and uneconomic, there is a need of subsidiary occupation to agriculture like dairying, poultry keeping, sheep rearing, cattle breeding. Thus, subsidiary occupation provided more employment and income throughout the year.

According to 1991 census 67.4 percent of the labour force was employed in the primary sector. Agriculture observing 64.9 percent (livestock, fishing, forestry etc.) 1.9 percent mining and quarrying a mere 0.6 percent. Therefore the need of subsidiary occupation.²

1.2 DAIRY AS SUBSIDIARY OCCUPATION

Subsidiary occupation like poultry keeping, sheep rearing, cattle breeding, goat-keeping etc. provided a continuous income to the agricultural farmers, landless labours. Hence, dairy plays a vital role in the rural economy. Dairy and animal husbandry helps to tackle the serious problem of unemployment. Dairy development is being used as a poverty eradication measure i.e. providing additional employment under I.R.D.P.

The dairy as a subsidiary occupation gives not only additional income from milk but also provides required bullock power for the cultivation of crops and manure for farms. Indian farming is becoming

uneconomic due to the heavy pressure of population. Therefore, they can not get adequate income. Hence, they could not solve their economic problems. Dairy activity provided them an extra source of income and ultimately helps them to increase the standard of living.

The dairy sector today provides some 70 million-farm families the triple benefits of nutritive food; supplementary income and productive employment for family labour mainly women. Clearly a subsidiary occupation for rural people.³

1.3 BRIEF HISTORY OF DAIRY

Indian dairy industry has a long history. Milk has an important role in human life. In human diet, milk is very important. It has been a part and parcel of Indian culture and civilisation from the ancient time. In addition, remains so even today. Our religion has recognised the importance of cattle in the economy and well being of people. That is why they treated cow to the level of mother. Therefore, protection of cow is as an integral part of their religion and culture.

Cow is very important part of our religion. According to Mahatma Gandhi, "The cow is a person of pity". According to Manu, "Cow killing is an upapataka". According to Islami Gorakshan "Cow milk is the chief cause of recovery and health. Ghee is a medicine and beef is a disease. Cow milk is the means to cure diseases. Butter is the medicine,

flesh is the disease". Hence, Hindu call the cow as "Kamdhenu" and it is described so in Hindu mythology.⁴

Dairy plays a very important part of improving the economy of our country. Milk is very important part of human diet because in the milk content like S.N.F. and fat is very useful to human body. In India there are nearly 40 percent people are vegetarian therefore they prefer milk and milk products.

The dairy industry has a long historical background i.e. 6000 years B. C. Remains of swiss lake include skeletons of cattle and cheese making equipments that date back to 4000 years B.C.⁵ Some farmers kept animals like buffaloes, cow, sheep, goat, poultry. They use it for their own family purpose. However, surplus milk and milk products they sold in the city, town or village also. In this way the dairy occupation started in India.

1.4 DAIRY INDUSTRY BEFORE INDEPENDENCE

Indian dairying was not developed before independence. Compared to Denmark, England, Canada etc. The growth of urbanization in India provided an opportunity to develop milk-producing centres near cities and towns. Therefore, that milk could reach the consumers in a fresh condition twice a day. The military farms started the first large-scale dairy farm in the 1891 at Allahabad and

development of more dairy farms led to the creation of the post Indian dairy export in 1920.

Keventers started modern dairy farm in Calcutta, Darjeeling, Aligarh and Shimla to supply milk and milk products to the ruling community. A military creamery was established in 1915 at Anand (Gujarat). Before 1947, 60 farms in India during this period. Some cross breeding work was taken up in and around the civilian and military dairy farms. One of such institute namely the "Imperial Institute of Animal Husbandry and Dairying" was established in the Bangalore. In 1923, at Bangalore with sub station of Karnal and Wellington. This institute later on involved into present "National Dairy Research Institute" (N.D.R.I.).⁶

1.5 DAIRY DEVELOPMENT IN INDIA SINCE INDEPENDENCE

After independence, the foundation for dairy development in India was laid last five decades. No specific provision was made in the core of the first five year plan for dairy industry development. But a comprehensive programme for increased milk production was initiated in many stages. The National Dairy Research Institute was shifted to Karnal (Haryana) in 1955. During the first five year plan 27 schemes for dairy development and milk supply to towns were taken up at total cost Rs. 70.1 million out of it 60 million was provided for establishment of Aarey Milk Colony in Bombay. Aarey Milk colony sold

milk in the glass bottled without processing. It was supplied door to door direct to the consumers. Private dairy started namely "Polsons Ltd." at Anand and Edward Keventers at Aligarh for meeting the limited demand for western type of dairy producers like Butter, cheese etc.

Amul started the first large-scale milk factory in 1954 at Anand with the assistance of U.N.C.E.F. for production of milk powder. Butter etc. with co-operative base. An expenditure of Rs. 190 million was allocated during the second five year plan to finance the central and state dairy schemes with the aim of supply of good quality milk to urban area. New 36 projects were initiated of which 15 projects were started during the second five year plan.

The programme for the third five year plan at a cost of Rs. 358.5 million included 55 city milk supply schemes, setting up of 14 dairy project factories, completion of 21 spill over schemes of second five year plan, establishment of four cattle feed factories, dairy equipment, dairy training and research work.

The fourth five year plan provided for the expansion of 62 dairy schemes, completion of 33 projects of the third five year plan establishment, 4 product manufacturing factories, 24 new milk supply schemes and organization of milk marketing for urban consumption. Introducing the national policy of crossbreeding by use of the Artificial Insemination (AI) technique was adopted. 68 cattle development

projects started. During subsequent years a massive dairy development programme "Operation Flood" was initiated and implemented under the N.D.D.B.⁷

1.6 PRESENT POSITION OF INDIAN DAIRY

Indian dairy rank is first, 196 million cattle and 80 million buffaloes total 276 million cattles in 1998-99 in India. About 51 percent of Asia and 19 percent of world bovine population. According to the F.A.O., Economic, and Social Development Report, Indian milk production has increased from a near 17 million tonnes in 1951 to 74 million tonnes in 1998. These are now 15.5 percent of world milk production per capita availability of milk 220 gm/day. Animal productivity is very poor it is only 987 kg per lactation. In developed country 2038 kg per lactation as world average.⁸

Table No. 1.1
Milk production 1997-98 of major dairying country
(In million tonnes)

Name of the country	Milk production	
	1997	1998
India	71	74
U.S.A.	71	71
Russia	34	33
Newzealand	11	11
Australia	9	10
Germany	27	27
U.K.	14	14
France	24	24

Source. Indian Dairy Man, September, 1999

Indian dairy rank is first according to above milk production data.⁹

1.7 DAIRY DEVELOPMENT POLICY

A) OPERATION FLOOD-I (1970-81)

Operation flood programme was developed to meet the requirements of liquid milk in the metropolitan cities of Bombay, Calcutta, Delhi and Madras. Although the dairy industry developed on modern and co-operative line of "Anand Pattern" obtained all India and international recognition, it did not capture the attention of farmers at all India level until the operation flood programme started in 1970. The Operation flood started by the inspiration of Dr. Virgis Kuriyan. A total of 126 Kt of skimmed milk powder and 42 Kt of butter oil at an international value of Rs. 419 million was imported as a gift under the world flood programme for recombination and sale as recombined milk worth Rs. 954 million. The money so generated was ploughed back for the development of all factors of dairying in 10 states and union located around the four major cities such as Delhi, Bombay, Madras and Calcutta.¹⁰

The objectives of the Operation Flood-I

1. Increasing the capacities of the city milk plant and establishing new plant.
2. Stable supply of milk to consumers at all times.

3. Developing a basic transportation and storages network to facilitate regional and seasonal balancing of milk supply and demand.
4. Organising milk procurement system based on co-operative.
5. Raising standard of dairy farming by improved programmes of feeding and management, animal breeding, veterinary service, feed supply.¹¹

Those days 18 percent co-operative union was formed under the operation flood programme, which included 1,80,422 villages, 2.6 million members and total milk procurement of 2.78 million liters per day. According to the N.D.D.B. animal health, centres extended over 11800 villages through 172 regular mobile veterinary units. In the 1985-86, 3.4 million milk producers through the country have adopted "Anand Pattern".

B) OPERATION FLOOD - II (1981 TO 1985)

The Operation Flood largely succeeded in building up the essential infrastructure for nation wide dairy development. Due to Anand Pattern employment generation rise and per capita earning rise.

The Operation Flood second started on July 1, 1981 to July 30, 1985. Co-operatives in 150 districts of the country to cover about 10 million rural milk producers. The broad objective of Operation Flood - II were -

1. To enable 10 million families of rural milk producers spread out in 155 districts and to build a viable self-sustaining dairy industry by mid 1985.
2. To enable to milk produce to rear a national milch herd of about 15 million cross breed cows and upgraded buffaloes.
3. To establish a national milch grid which links the rural milk shed to the major demand centres with an urban population of about 150 million.
4. Infrastructure required supporting available national dairy industry.
5. To enable milk and milk products to form an appropriate part of stable nutritionally adequate national diet.¹²

Currently estimated at an average per capita availability of 180 grams of milk per day to be achieved for a population of 750 million during 1980.

During second Operation Flood, milk production in the country would go up from 6.9 million liters day to 10.3 million litres and Rs. 1165.4 million actually spent on various activities.

C) OPERATION FLOOD - III (1985 TO 1990)

The duration of Operation Flood III was five years coinciding with 7th five-year plan period 1985-90. The total outlay during Operation Flood of Rs. 6,812.9 million. 156 milk sheds of the country to develop strong farmer's organizations enabling them to manage their milk procurement, processing, marketing and input supply function.

During Operation Flood III, phase of 11.2 million litres per day processing and 200 tonnes per day drying capacity, along with matching fat handling capacity would be required. Facilities for processing fluid milk by Ultra High temperature (UHT), aseptic packing system for long shelf life will be built to enable the modern dairy plant to cover distant market.

About 42692 village milk producers co-operative societies covering almost 4489 thousand milk producers will contribute mainly the country has also launched a Technology mission for dairy development through improved breeding, health care and fodder development.

Due to Operation Flood I, II and III nearly 91.70 lakh rural families who are primary members of the milk co-operative and who by their income from milk are progressively able to improve their standard of living.¹³

1.8 NINTH PLAN AND DAIRY INDUSTRY

The post GATT world is reflected in the Report of Working Group on animal husbandry and dairying for the formulation of the Ninth five year plan. Animal health diseases management the main point of view of livestock owner reduce the economic losses. The sanitary and phyto-sanitary measures introduced in the New World Trade Agreement. In the Ninth Plan, mostly requirements have been specified for livestock products while livestock be free from diseases. Without ensuring this quality consideration, Indian livestock exports can be severely restricted. It could appear to be right time to initiate in the 9th Plan a very large programme for controlling major livestock diseases. The proposed outlay on Animal Health in the 9th Plan is Rs. 552 crores and dairy development Rs. 485 crores. 70 million farm households with little or no land. For this the yield of milch animals would has to be upgraded.

Mostly in 9th Plan non-Operation Flood areas the integrated dairy development project would be further strengthened out side the non-Operation Flood hilly and backward districts. It could use model of the "Anand Pattern" of co-operative dairying for this purpose and outlay proposed for it Rs. 200 cores.

In the 9th Plan dairy development of the programmes are marketing, buffalo milk products, commercial dairy heads, credit supply etc. these programme are introduced in 9th plan and total Rs. 1965 crores proposed expenditure.¹⁴

1.9 OPERATION FLOOD IN MAHARASHTRA

A) OPERATION FLOOD – I

The Operation Flood programme was started in Maharashtra State in 1970. The tenure of this programme was for ten years. Therefore, the programme came to end on 31st March 1981. The National Dairy Development Board sanctioned 25 crores for the Operation Flood programme. Only 18 crores of rupees was made available for it. This amount was spent on establishing dairies in the Kolhapur and Jalgaon districts of the Western Maharashtra. Dairy development programme was started by these scheme in the two districts. Besides this the expansion programme for Aarey and Varali dairy projects were established. An in Kurla the mother dairy established under government sector.¹⁵

B) OPERATION FLOOD – II

The Operation Flood – II was started from the 1st April 1981 upto 31st March 1985. In this second phase Kolhapur, Jalgaon, Solapur, Aurangabad, Jalna, Osmanabad, Latur, Buldhana, Pune, Nasik, Beed, Yevatmal, Sangli, Dhule, Satara, Chandrapur, Bhandare, Raigah,

Ratnagiri, Ahmednagar and Vardha etc. these 21 districts were included in this Operation Flood – II. For this second phase N.D.D.B. had sanctioned 90 crores. Actually 16.10 crores were made available. Out of this amount, Jalgaon and Kolhapur districts the projects of milk powder and cattle feed were established. The expansion programme of Katraj dairy project in Pune district and in co-operative sector the Mahanand dairy project of 4 lakh litres capacity milk processing unit was established in Mumbai.¹⁶

C) OPERATION FLOOD – III

The third Operation Flood was started in Maharashtra from 1st April 1985. The N.D.D.B. sanctioned Rs. 77 crores for it. However, out of it only Rs. 18.14 crores were made available until March 1990. The amount has spent on the 21 districts involved in the Operation Flood – II phase. The funds sanctioned by N.D.D.B. were proved fruitful for the implementation of various programmes in developing area.

The Maharashtra Government vide its letter No.F.P. 2592/(50192) O.F.I. dated 6th June 1992 declared that the special Karnadhar Committees are established to submit the project report for district and Taluka level milk unions. These project reports will be useful in preparing state level master plan for milk industry. The district level Karnadhar Committees has already completed the project report of their district. The plan for the period of 5 years by taking into consideration the milk

collection, processing, distribution and creating high quality cattle have been submitted to the state level Kamadhar Committee. The state Karnadhar Committee have prepared the state level master plan for milk development. The N.D.D.B., State Dairy Development Board, State Co-operative Milk Union, State Development of Animal Husbandry checked the Karnadhar Committees report and approved it in their meeting held on 25th August 1992.

According this report 21 district of Amaravati, Nagpur, Mumbai, Nasik, Pune region have been included in this third phase of Operation Flood.¹⁷

Chart No. 1.1

The Chart showing the implementation of Operation Flood in Maharashtra

Period of Operation Flood Programme	Amount sanctioned (Rs.)	Amount available (Rs.)	Achievements of Operation Flood Programme
1970 to 31 st March 1981	25 crores	18 crores	Dairy development programme in co-operative basis in Jalgaon, Kolhapur. and Govt. level Aarey and Varali expansion programme and Kurla mother dairy established.
1 st April 1981 to 31 st March 1985	90 crores	16.10 crores	The funds sanctioned for 21 districts in co-operative sector milk powder and cattle feed industries and expansion of Katraj dairy in Mumbai 4 lakh litres milk processing unit established at Kurla.
1 st April 1985 to 1 st April 1990	77 crores	18.14 crores	These funds were sanctioned for the 21 districts included Operation Flood – II and spent on them.

Source : Dudhache Antorange, 1992 Dairy Publication, Bombay

REFERENCES

1. S. K. Misra, V. K. Puri, "Indian Economy", Himalaya Publication, September 1999.
2. S. K. Misra, V. K. Puri, "Indian Economy", Himalaya Publication, September 1999.
3. Dairy India, 1997, p.8
4. L. L. Sundaram, "Cow Protection in India", Fellow of the Royal Economic society of London, Madras, 1927.
5. P. N. Gavade, Economics of dairy enterprise, unpublished M. Phil. dissertation submitted to the Shivaji University, Kolhapur, 1986.
6. P. N. Gavade, Economics of dairy enterprise, unpublished M. Phil. dissertation submitted to the Shivaji University, Kolhapur, 1986.
7. Indian Dairy Man, September, 1999
8. Indian Dairy Man, September, 1999
9. Indian Dairy Man, September, 1999
10. Sacheti, "Milk and it's products", Project co-ordinator, N.C.E.R.T., New Delhi, pp 1-8

11. Sandip K. Bhatt, "Indian Co-operative Review", Issue of Co-operative dairying in India, Oct., 1994, pp.177-180
12. Sandip K. Bhatt, "Indian Co-operative Review", Issue of Co-operative dairying in India, Oct., 1994, pp.177-180
13. Sacheti, "Milk and it's products", Project co-ordinator, N.C.E.R.T., New Delhi, pp
14. Dairy India, 1997, p. 147,148
15. Dudhache Antorange, 1992, Dairy Publication, Bombay
16. Dudhache Antorange, 1992, Dairy Publication, Bombay
17. Dudhache Antorange, 1992, Dairy Publication, Bombay
18. Dudhache Antorange, 1992, Dairy Publication, Bombay