Chapter 6
Indian economy is mainly based on agriculture as nearly 80 per cent of the population is engaged directly or indirectly in it. However, agriculture of itself is unable to provide full time employment and to generate sufficient additional income to the people for their comfortable well being. Hence, dairying constitutes an important activity of the rural population, mostly as a subsidiary occupation. The National Commission on Agriculture also observed that, next to agriculture, dairying is the most important subsidiary occupation. In India more than 80 per cent of the cattle population is in rural areas and about 76 per cent of the rural population is contributing towards milk production.

Dairy farming along with crop husbandry as mixed farming provides continuous income and employment to all the members of a family, as dairying is labour intensive. Dairy development has been acclaimed as an effective instrument capable of bringing about speedy economic and social transformation of the weaker sections of the rural community.

Recognising the multipurpose role of dairying in rural economy in the recent past and to save the milk producers and consumers from middleman's exploitation, both central and state governments have launched many programmes. One among such programmes is 'Operation Flood' (The White Revolution). Under this programme incentives in the form of fodder seeds, veterinary services, assured marketing and remunerative prices for milk etc. were provided to the member dairy farmers of milk producer's co-operative societies.

The incentives for producing more milk have been provided by the introduction of several dairy schemes. But the production is one end of the economic problem, the other being marketing and distribution. Dairy co-
operatives in India have considerably influenced the marketing and distribution of milk along with its production to improve the socio-economic status of the producers through dairy development programmes in the country. These co-operatives were established and spread throughout the country under Operation Flood Programme (OFP), which started during 1970's. In Lucknow district of U.P.; Anand-type dairy co-operatives were established during 1983-84 under Operation Flood Programme phase II.

The present study on "Impact of Dairy Co-operatives on Income and Employment of Weaker Sections in the Area of Operation Flood Programme in district Lucknow (U.P.)" has been conducted with the following specific objectives.

(i) To study the existing resource structure and its allocation in different enterprises of the sample households.

(ii) To analyse the economics of milk production and cost of production per litre of milk.

(iii) To know the consumption, utilisation and marketed surplus of milk.

(iv) To study the impact of dairy co-operatives on milk production, productivity, employment and income of the households under study.

(v) To find the problems of milk producers and the officials of the producer's co-operative milk union regarding dairy enterprise and to put forth suggestion to surmount them.

Following hypotheses were formulated and tested for the purpose of this study.

1. The cost of milk production per litre is less in case of dairy co-
operative members.

2. The per capita consumption of milk is higher in case of members as compared to non-members and increases with increase in the size of land holding.

3. The marketed surplus of milk is higher in members as compared to non-members.

4. The dairy co-operatives facilitate in enhancing the milk production and productivity.

5. The dairy co-operatives help in increasing the income of the households.

6. The dairy co-operative is inducive in increasing employment opportunities.

A three-stage sampling technique was adopted in selection of milk collections routes, milk producer's co-operative societies and the milk producer households.

All the seven milk collection routes established by the Lucknow Producers Co-operative Milk Union Limited were taken for the purpose of present study, and these seven routes together form the first stage sampling unit. Out of 274 milk producer's co-operative societies, whose standing was at least two years of establishment and functioning, 20 societies were selected randomly on the basis of proportion of their number falling in each milk collection route and the milk producer's co-operative societies form the second stage of sampling unit. The stratified random sampling method was adopted in selection of a sample of 200 households (100 members and 100 non-members). Stratification was done by dividing the households into three categories, namely landless labourers, marginal farmers and small farmers.
Thus, with due consideration of proportion 10, 57 and 33 member households and 8, 76 and 16 non-member households were selected under landless, marginal and small farmers category, respectively. These households form the third and ultimate unit of sampling.

Both primary and secondary data were collected for the purpose of this study. However, this study was mainly based on primary data. The primary data were collected from the selected households through survey method with the help of pre-designed and pre-tested schedules and questionnaires. The accuracy of data was ensured by establishing a close rapport with respondents who were interested during the course the investigation. The primary data were collected for the agricultural year 1998-99. The necessary secondary data used in the proposed study were obtained from village records, milk producers Co-operative societies, Lucknow Producers Co-operative Milk Union Ltd., P.C.D.F. Ltd. and also from journals, bulletins, reports and other published sources.

To achieve the objectives and proving the hypothesis of the study, collected data were compiled and tabulated systematically to facilitate the analysis and interpretation of data.

Average and percentage were also worked out, as and when required. In most of the cases, simple tabular analysis was followed to attain the purpose of the study.

Besides the above, following Linear and Cobb-Douglas Production Function, measures in farm profit, financial test ratio's were also employed to analyse the economics of milk production and impact of dairy co-operatives on production, consumption, utilisation and marketed surplus of milk.

During the course of field survey following limitations were observed
Due to illiteracy of households, the individuals were found reluctant and shy in supplying the information.

The information gathered was subjected to the memory of the households as they did not maintain any records regarding their farming practices.

Most of the respondents were found suspicious and afraid of furnishing the information pertaining to investment and income etc. as they suspected that they might be subjected to some kind of taxation or the other.

In order to maintain the reliability of data collected during the fieldwork the criss-cross method was found useful. Various kinds of cross checks were made to ensure the reliability of the information gathered.

Besides the above, this study was limited up to the milk shed area of the Lucknow district covering 100 members and 100 non-members households.

The district Lucknow was selected purposively, while the households were selected by using stratified random sampling methods.

The district Lucknow is situated in the middle part of the state of Uttar Pradesh. Almost all the area of the district was found plain with a slight slope from North to South.

Agriculture is the principal occupation of the inhabitants of Lucknow district and about 78 per cent of the farmers possess marginal holdings, 15 per cent possess smallholdings, about 6 per cent medium holdings and about 1 per cent of them possess large size holdings. Heavy loam, light and sandy loam, sandy to sandy silt and clay soils are found in the district as a whole.
The district has 834 revenue villages, 507 Gram Sambas and only 7 towns. It is administratively divided into 4 Tehsils namely Malihabad, Bakshi Ka Talab, Mohan Lal Ganj and Lucknow.

As per 2001 census published in daily newspaper "Danik Jagaran" dated Jan 28, 2002. the total population of the district was 3681416. Of which, 2342239 population belong to urban and 1339177 belong to rural areas, i.e. 63.62 and 36.38 per cent respectively of the total population. The density of the population as per 2001 census was 1447.10 persons per square kilometre.

The district has 251853 ha total reported area. Of this, 4.53 per cent area is under forest, 3.99 per cent barren and uncultivated land, 9.49 per cent area put to non-agricultural use, 3.67 per cent cultivable waste land, 1.24 per cent permanent pasture land, 1.20 per cent area under miscellaneous trees and groves etc. 19.75 per cent fallow land and 56.13 per cent net cultivated area. About 84.00 per cent of the cultivated area is under irrigation.

Out of the total milk animals cow consists 36.51 per cent, buffaloes 38.60 per cent and goats about one fourth (24.89 per cent). In case of draught animals number of bullocks found more than the number of he-buffaloes in the district as a whole.

The district enjoys a fairly developed network of banks. The Bank of India was the lead bank of the district. 307 branches of different banks were functioning in the distinct as a whole. The district had a network of 415 milk producer's co-operative societies, covering 22.45 thousand milk producers' households.

Resource structure and its allocation of the sample households has given the impression of average economic status. The average size of
cultivated land was found to be 0.54 ha in marginal farmers and 1.44 ha in small farmers category in case of members. It was 0.60 ha in marginal and 1.63 ha in small farmers category in case of non-members. The overall size of cultivated land was 0.78 ha and 0.72 ha in member and non-member households respectively. The landless labourers neither owned no land nor they were cultivating land of others. The family size was 4.90, 6.14 and 7.15 in landless, marginal and small farmers category, respectively in case of members with corresponding figures of 6.51, 6.45 and 9.45 in case of non-members. The family size showed an increasing trend with increase in the farm size in case of members, while, the family size was highest in small farm size category followed by landless in case of non-members. The percentage of family members in the age group of 18-60 years was highest in each category both in member and non-member households followed by the family members in the age group of under 14 years. The percentage of dependants in member households was highest followed by number of helpers in each category. The overall percentage of earners, helpers and dependent was 24.72, 33.39 and 41.89 per cent, respectively in case of member households. In case of non-member households these percentages were 23.38, 34.49 and 42.13, respectively. It indicated that the labour resources available in the family in each category were below 30 per cent in members and below 25 per cent in non-member households.

The percentage of litrate members had an increasing trend with increase in the farm size both in member and non-member households. Out of the litrate members, only 3.46 per cent have obtained graduate and higher degrees in case of members while, it was 3.17 per cent in case of non-members. None of the members had attained graduate and higher degrees in case of landless labourers category both in member and non-member households. It showed that the educational status of family members in each category both in member and non-member households was not good.
As regards the land utilization, out of the total geographical area, the percentage of net sown area was 87.93 and 85.44 in marginal and small farmers respectively in case of members. The corresponding figures were 84.85 and 85.31 per cent in case of non-members. The percentage of irrigated area to total cultivated land was 88.89 in marginal farmers and 86.81 in small farmers category in case of member households. It was 88.33 and 85.89 per cent in marginal and small farmers category respectively in case of non-member households. The percentage of irrigated area had a decreasing trend with increase in the farm size both in members and non-members. The analysis revealed that the overall irrigated area was 87.18 per cent in members and 87.50 per cent of the cultivated area in non-members. The major crops grown on the farms under study were rice, jowar, bajra, maize, pulses, fodder crops, wheat and potatoes. Wheat crop occupied highest percentage of area of the total cropped area followed by rice in both members and non-members. Fodder crops also occupied a good proportion of the total cropped area in member and non-member households but the hectareage of fodder crops was double in case of member households as compared to the non-members. The overall cropping intensity was 178.21 per cent and 163.89 per cent in case of member and non-member households, respectively. The cropping intensity reflected that the farm efficiency, in general, was comparatively better in case of members than that of non-members.

The overall number of milch animals was 4.49 and 3.97 in case of member and non-member households, respectively. The study had given a remarkable point that the total number of milch animals kept by landless labourers was highest in both member and non-member households. The overall percentage value of land was about 74 in members and about 77 in non-members households. The percentage value of livestock including the
value of milch animals ranked second *i.e.* about 10 per cent in member households and the percentage value of farm building ranked second in case of non-member households.

The costs and returns structure on dairy enterprise is an important aspect for milk producers, consumers and policy makers to provide an effective linkage between the milk producers and consumers for fixing the price of milk rationally. Hence, the analysis of economics of milk production of buffalo and cow milk separately was essential in both member and non-member households. Before working out the economics of milk production, the number of milch animals per household has been worked out and it has been found that overall number of buffaloes and cows per household was 1.27 and 1.14 respectively in case of member households, corresponding figure were 1.11 and 0.93 in case of non-member households. The overall per farm value of fixed investment was Rs 28177.92 in case of member households. Out of this, Rs 16336.99 and Rs. 11840.93 were invested in milch buffalo and cow, respectively. The total value of fixed investment per animal was Rs 12863.77 and Rs 10386.78 in case of buffalo and cow, respectively. In case of non-member households, the overall value of fixed investment per farm was Rs. 20999.48. Out of this, Rs. 12223.95 and Rs. 8775.53 incurred in buffalo and cow respectively. The value of per milch buffalo and cow was Rs. 11012.57 and Rs. 9436.05 respectively, while the total value of milch animal was Rs. 20448.82.

The total expenditure made by the studied milk producers per day per buffalo round the year average came to Rs. 32.26, Rs. 34.36 and Rs. 35.29 in landless labourers, marginal and small farmers category, respectively in case of member households. The corresponding figures were Rs. 31.77, Rs. 34.48 and Rs. 34.95 in case of non-members. Round the year average total cost had an increasing trend with increase in the farm size. No significant difference was observed between member and non-member
households. The total cost incurred in daily maintenance of a milch cow was Rs. 24.75, Rs. 28.43 and Rs. 28.81, respectively in landless, marginal and small farmers category in case of members as against Rs. 24.32, Rs. 24.93 and Rs. 25.53, respectively in case of non-member households.

The total cost per cow per day, on overall basis increased with increase in farm size and it had a significant difference in case of members and non-members, which amounted to Rs. 28.17 and Rs. 24.93, respectively. The maintenance cost of a buffalo was highest as against the maintenance of a cow both in members and non-members. The share of variable and fixed cost in total cost in case of per buffalo came in the ratio of 83.18:16.82 in case of members and 85.72:14.28 in case of non-members. The per cow per day share of variable and fixed cost in total cost was 83.67:16.33 in case of member and 83.07:16.93 in case of non-member households. It was a remarkable point that concentrates formed a major component almost in each category used in maintenance of buffalo and cow both in members as well as non-members. Dry and green fodder fed to the milch animals being taken together and when treated as one component appeared second highest almost in each category in case of member and non-member households.

The season-wise analysis indicated that the highest cost of milk production per day per milch animal was found in winter season both in case of members and non-members. It is because of the fact that better feeding and management practices were adopted by the milk producers to obtain more milk production during this season.

The overall gross income per day per buffalo was Rs. 48.66 in case of member households, while, Rs. 44.02, Rs. 48.45 and Rs. 50.24 were obtained from per milch buffalo by the landless labourers, marginal farmers and small farmers respectively. The corresponding figures were Rs. 40.15, Rs. 43.30 and Rs. 44.41 in case of non-member households. Whereas the overall
gross income per day per buffalo was Rs.42.94. The gross return had increasing trend with increase in farm size both in member and non-member households. It also indicated that gross return per milch buffalo is higher in case of members as compared to the non-member households. The overall amount of net profit was significantly higher in case of member households than the non-member households.

The per day per cow gross income was Rs. 33.78, Rs. 39.64 and Rs. 41.32 in case of landless labourers, marginal farms and small farmers category, respectively, while, the overall gross income was Rs. 39.84 in case of member households. The corresponding figures were Rs. 30.13, Rs. 32.68 and Rs. 34.20 in case of non-member households. While, the overall gross income per milch cow per day was Rs.32.63. The gross return per cow per day was found in an increasing trend with increase in the farm size both in member and non-member households. The net profit per cow per day was significantly higher in case of member households as compared to the non-member households. There was a remarkable point that the gross income and net profit per day per milch buffalo was higher as compared to per milch cow in each category of both the members and non-members.

The input-output ratio had an increasing trend both in buffalo and cow milk production in case of member households. In case of non-member households, the input-output ratio was highest in small farmers category followed by landless labourers and it was lowest in marginal farmers category for buffalo milk production while, it had increased with increase in the farm size in case of cow milk production. The input-output ratio indicated that member and non-member small farmers earned more profit from buffalo and cow milk production.

The overall amount of cost of milk production per litre for buffalo and cow milk was Rs. 7.89 and Rs. 6.23 respectively in case of member
households, while the corresponding figures were Rs. 8.92 and Rs. 6.70 in case of non-member households. The cost of buffalo and cow milk production per litre was higher in case of non-member as compared to the member households. The analysis also revealed that cost of buffalo milk production per litre was higher as compared to the cow milk production both in member and non-member households.

Seven independent variables such as, number of lactation \(x_1\), length of lactation \(x_2\), previous dry period, \(x_3\), dry fodder \(x_4\), green fodder \(x_5\), concentrates \(x_6\), and grazing hours \(x_7\) had been explained and taken into consideration for functional analysis.

Both the models were fitted by using the method of least square. The estimated values of the parameters a's and b's and the value of coefficients of multiple determination \(R^2\) and \(\overline{R}^2\) for buffaloes and cows for different categories of households separately for members and non-members had been worked out and no regression coefficient was found to be significant for Linear and Cobb-Douglas functions in case of member landless households. However, the value of \(R^2\) showed that 74 per cent of the variation in the buffalo milk production in this category was due to all seven independent variables in case of linear, while in the case of Cobb-Douglas 83 per cent of the variation in buffalo milk production was due to those independent variables. The remaining 26 per cent of the variation in Linear model and 17 per cent of the variation in Cobb-Douglas model were due to other unassignable factors.

In the case of member marginal households, the regression coefficients \(b_1, b_3, b_5\) and \(b_6\) were highly significant in both the models Linear and Cobb-Douglas, while regression coefficients \(b_2, b_4\) and \(b_7\) are non-significant, showing that the number of lactation, previous dry period, green fodder and concentrates play important role to affect the buffalo milk yield.
The analysis also revealed 87 and 86 per cent variation in linear and Cobb Douglas models, respectively in buffalo milk yield in case of member marginal households were due to the seven independent variables but the regression coefficient of number of lactation, previous dry period, green fodder and concentrates were highly significant in both the models, while the remaining other variables had not significant effects.

In case of non-member land less labour households, there was no significant effect of the seven independent variables on buffalo milk yield under both the models because no regression coefficient was significant. In case of non-member marginal households, the similar result was obtained as was seen in the case of member marginal households because the regression coefficient for \( b_1, b_3, b_5 \) and \( b_6 \) were highly significant in both the models. In case of non-member small households the regression coefficient of dry fodder and concentrates were significant in Linear model, whereas the regression coefficient of lactation length, previous dry period, dry fodder and concentrates were significant in the case of Cobb-Douglas function. The coefficient of multiple determination in both the models was found to be 88 per cent showing that the variation in buffalo milk yield among non-member small size households was due to seven independent variables under study, while the remaining 12 per cent variation was due to other unassignable causes.

The regression coefficient was found to be mostly negative for Liner model in case of member landless labourers. No regression coefficient in this model was significant but in Cobb Douglas Model, for the same category, the regression coefficient for previous dry period and concentrate was positive and significant. Whereas, the regression coefficient for other variable were not significant. 99 per cent of variation in cow milk production for both the models are due to seven studied independent variables, which was clear from the value of \( R^2 \). Among non-members landless, the regression
coefficient for both the models were not significant. The value of $R^2$ was also less in both types of model.

For member marginal farmers the regression coefficient for green fodder, concentrates and grazing hours were highly significant in both the models. In Linear model, in this category, the 90 per cent variation in cow milk production was due to these seven independent variables where as 10 per cent variation was due to other causes but in Cobb-Douglas model 92 per cent of the variation in cow milk production was due to the seven independent variables under study and 8 per cent of the variation was due to other reasons. In non-member marginal farmers category, the regression coefficients for green fodder and concentrates were significant in Linear model but in Cobb-Douglas model, the regression coefficients for number of lactation, previous dry period and concentrates were found significant.

For the member small size farmer category, the regression coefficient for concentrates in Linear model was highly significant but the other variables have no significant effect on cow milk production. In case of Cobb-Douglas model the regression coefficient for concentrates was highly significant, whereas the regression coefficients for number of lactation and dry fodder were significant only in non-member small size category and no regression coefficient was found to be significant in both the models. Major variation in cow milk production under both the models was due to independent variables under study. Only 2.00 per cent and 1.00 per cent of the variation in linear and Cobb-Douglas models respectively was due to other unassignable variables.

The overall quantum of milk production was 10.70 litres and 7.72 litres in case of member and non-member households respectively. Out of this, the proportion of buffalo and cow milk production was 51.87 per cent and 48.13 per cent, respectively in member households the corresponding
figures were 55.18 per cent and 44.82 per cent in case of non-member households. It indicates that more than 50 per cent milk yield was from milch buffalo. Out of the total milk production about 24. per cent milk was consumed by the family members in case of member households, while it was about 29 per cent in case of non-member households. Overall marketed surplus of milk was about 76 per cent of the total milk production and about 71 per cent in case of member and non-member households respectively. Indicating thereby that non-member households consumed more milk as compared to the member households.

The overall percentage of milk consumed in different form were 61.24, 11.63 and 27.13 as drinking, tea and coffee and Dahi and other milk products in case of member households. The corresponding figures were 63.84, 8.93 and 27.23 in case of non-member households. It indicates that non-member households consumed more milk in the form of drinking as compared to the member households followed by milk consumed in the form of Dahi and other milk products both in members and non-member, while, the member families consumed more milk in the form of tea and coffee as compared to the non-members. Per capita milk consumption was found to be 0.41 litres per day in members and 0.32 litres in non-members.

The marketed surplus of milk was sold to milk producer's co-operative societies, milk vendors and other consumers by member households whereas non-members sold to milk vendors and consumers only. The quantity of round the year average marketed surplus was 6.45 litres 7.92 litres and 8.97 litres in case of landless labourers, marginal and small farmers, respectively in member households. In case of non-members round the year average of marketed surplus was 7.65, 5.62 and 3.74 litres per day per household in case of landless labourers, marginal and small farmers,
respectively. The trend of marketed surplus was just opposite in case of non-member households. On overall basis members had more quantity of milk as marketed surplus (8.12 litres) than non-members (5.48 litres). Among members, landless households sold 93.18 per cent surplus milk to milk producer's co-operative societies, only 3.72 per cent to milk vendors and 3.10 per cent to individual consumers while the corresponding figures for marginal households were 96.09, 1.89 and 2.02 per cent as against 96.99, 1.11 and 1.90 per cent for small farmers. The non-member households sold their surplus milk to milk vendors in increasing proportion with increase in the farm size whereas landless, marginal and small farmers sold 80.52 per cent, 84.87 per cent and 91.44 per cent milk in this manner consequently the proportion of milk sold to individual consumers by these categories was found in decreasing order (19.48, 15.13 and 8.56 per cent, respectively).

The impact of dairy co-operatives on milk production per day per household revealed that the member households obtain more milk from their milch animals i.e. 10.70 litres in case of member households as compared to non-member households i.e. 7.72 litres. The per day per household milk production was also higher in marginal and small farmers category in case of member households as compared to the non-member households. While in case of landless labourers evidently the milk production per day per household was 8.77 litres and 7.42 litres in non-member and member households respectively. It is because of the fact that the Non-member landless labourers reared more number of milch animals. As regards the productivity per milch animal it was highest in each category during all seasons in case of member households as compared to the non-member households. The overall production was 4.44 litres and 3.79 litres in case of member and non-member households respectively.
The overall quantum of farm business income, family labour income, net income and farm investment income was Rs. 11468.22, Rs. 9423.96, Rs. 6577.76 and Rs. 8622.02, respectively in buffalo milk production in case of member households. The corresponding figures were 7325.11, 5797.69, 3524.80 and Rs 5052.22 in case of non-member households. In cow milk production the farm business income, family labour income, net income and farm investment income was found to be Rs. 8700.65, Rs. 7219.33, Rs. 4851.72 and Rs. 6333.04, respectively in case of member households. Corresponding figures were Rs. 5577.16, Rs. 4480.74, Rs. 2613.76 and Rs. 3710.18 in case of non-member households. It indicates that all of the income measures were highest in case of member households as compared to the non-member households. It also reflected a good impact of dairy cooperatives on member households.

The financial test ratios were also worked about for indicating the strong or weak point in buffalo and cow milk production. The gross ratio which indicates profit margin for the business as a whole was found to be about Rs 0.73, Rs. 0.71 and Rs. 0.70 in case of landless labourers, marginal and small farmers category, respectively in case buffalo of milk production in member households. While the corresponding figures were 0.79, 0.80 and 0.79 in case of non-member households. The gross ratio in cow milk production came about Rs 0.73, 0.72 and 0.70 in landless labourers, marginal and small farmers category, respectively in member households, while the corresponding figures were Rs 0.81, 0.76 and 0.75 in case of non-member households. These values indicate the total expenses per Rupee of gross income on the respective categories. In nutshell, it can be said that, taking test ratio in to account, the milk production as more economically feasible more or less in each category in case of member households as compared to the non-member households.
The benefit of employment accrued to the milk producers in different categories has been worked out in the form of man days employment and found that 106, 131 and 140 man days were employed in landless labourers, marginal and small farmers category respectively in case of member households while the overall man days employment was 126. The corresponding figures were 129, 104 and 87 in case of non-member households and the overall number of man days employment was 107. It indicates that dairy co-operatives played an important role in creating more opportunities for the employment.

Thus the hypotheses conceived at serial number 1 to 6 have all been proved finally.

Problem faced by the milk producers relate to improper, breeding, feeding, animal health and management problems associated with ill housing, unclean water and indifferent care along with financial and marketing difficulty poor breeding stock, insufficient artificial insemination, facilities are main problems in breeding programme under feeding and poor nourishment, irrational concentrates mixture, near absence of salt and minerals in the feeding schedule or other drawbacks, epidemic and endemic diseases, infections and lack of medical facilities are health and hygiene problems. In sufficient and unhealthy surroundings for housing the cattle, unsafe water and untimely as well as indifference in care are responsible causes for lower productivity. For combating these problems weeding of non-descript and useless cattle, sufficient facilities of pedigree bulls, frozen semen, artificial insemination facilities, adoption of modern biotechnological procedures may come to rescue. Feeding can be improved by growing more fodder crops of high nutritive value along with provision of
high value concentrates mixture with sufficient amount of minerals and salts as per requirement of animals. Thus, the societies can help the households by timely supply of quality seeds of fodder and feed crops.

Good health of animals can be maintained by the provision of prophylactic measures and timely veterinary aids to ailing animals through the network of veterinary hospitals and paravets along with sufficient medicine stock and surgical facilities. Clean, airy and well-ventilated cattle sheds are also needed. Safe water along with sufficient and timely routine care of animals falling ill will have also to be seen.

Non-availability of timely loan facilities and profitable marketing also are important hurdles before the milk producers. These can be overcome by the provision of easy access to timely funding by way of loans to the farmers and the involvement of maximum number of households in the membership of milk producers co-operative societies. However, misuse of loans and irregular supply of milk to the society by member are to be safeguarded.

Main problems before the officials of the milk union are related with the irregular and insufficient milk supply to satisfy the urban milk need, mal-practices at the level of producers responsible for deterioration of the quality of the milk, unclean milk, late payment of prices and bonus, untimely supply of good seeds and quality feeds by the dealers, insufficiency of veterinary staff in the union. Appropriate training of members and employees, strict administration, provision of sufficient staff (specially veterinary) and timely supplies (seeds, feed and medicines etc.) and avoiding various pressures in the functioning of the milk co-operative union should be insured.