CHAPTER - V
SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSIONS

This chapter is devoted for giving summary of findings made from the study and offering suitable suggestions to reduce the risk and challenges faced in the value chain of the dairy business. The findings are based on the different tools of analysis such as Percentage Analysis, Chi-square Analysis, Friedman Test, Average Score Analysis, Factor Analysis and Discriminant Function Analysis.

5.1 FINDINGS OF THE STUDY

- Findings related to the milk collection and procurement shows that majority of the long term operating societies are found in Salem (58.1%). Source of buying milk is mainly from members (74.3%) in Gangavalli district. Procurement of milk is mainly done through collection centres both in the morning and evening.

- It is interesting to observe that highly significant association exists between taluk and factors like operating term of the society, source of buying milk, milk collection time and methods of procurement. This shows that various taluks have same source, time of collection and methods of milk procurement.

- Regarding the quantity of milk collected per day, it is found that as far as the cow’s milk is concerned majority of the respondents (48.8%) opined that they collect Above 40 liters per day in the morning and 48.6% of the respondents agreed that they collect the same quantity in the evening. This shows that collection of cow milk is almost the same quantity in the morning and evening.

- In the case of buffalomilk, however the quantity collected is more in the category of Below 30 liters in the morning (37.4%) as compared to 39.5% who collect above 40 liters in the evening. This shows that cow’s milk is collected more in the morning, where as the collection of buffalo milk is more in the evening.

- It is interesting to observe that SNF is considered as the Ist factor for milk procurement from farmers followed by purity and fat content.
• Majority of the respondents (69.3%) agree that adequate technology is available to judge the quality of milk and this is found high in Attur.

• Findings related to milk supply shows that number of producers supplying milk are less than 100 and maximum quantity of milk supplied by a producer is upto 1000 litres of milk.

• It is interesting to note that the most influencing factor for rejection of milk from the suppliers is found to be Low quality. However majority (53.1%) of them stated that milk was not rejected by Aavin.

• The main mode of transport is through Aavin’s chilling vehicle and the time gap between collection and supply of milk is 2-5 hours.

• Findings related to payment and price for the milk shows that the average price paid for cow’s milk is Rs 24-26 and for buffalo milk is above Rs.32. The payment to farmer is done on a weekly basis.

• An analysis of the risks and challenges faced in the dairy business shows that the major problem faced is perishability during transport (67.96 score). Other major risks are lack of adequate space (57.22 score) and latest technology (53.33 score).

• It is interesting to observe that the major reason behind dairy farmers registering in Aavin is instant payment (26%) and Government enterprise status (21%).

• The respondents expect an increase in procurement price (51.4%) and availability of loans (17%) and direct procurement of milk (10.5%).

• Factor analysis about the risks and uncertainties faced in the dairy business shows the major risk factors causing risk and uncertainty. Mainly 5 factors are identified:
  • Quality factors
  • Price factors
  • Lifestyle and consumer preference factors
  • Seasonal and demand factors
  • Administrative and operative hurdles

• Mean score and Friedman’s Test analysis shows the major risk variable in each of these factors:
**Quality:** Respondents agree that the “Quality” risk is faced by them due to the processing and lack of transportations and infrastructural facilities. This along with adulteration leads to greater perishability and low quality of milk.

**Price:** The analysis about the Price factor shows that Prices paid by Aavin are not remunerative and price fluctuations during shortages are the prominent risk factors affecting dairy business.

**Lifestyle and consumer preference factors:** Tough competition from private brands, lifestyle changes and uncertain consumer demand, are found to be the riskiest variables in this fact.

**Seasonal and demand fluctuations:** The risk which is prominent in this factor are Uncertain demand of processed milk, seasonal fluctuations affect supply, processing and profits and the satisfactory reliability of milk.

**Administrative and operative hurdles:** It is found that the major risks are the unavailability of guidelines from the Government and societies about diseases and quality techniques. They also feel that labour problems are creating a great risk.

- Average score and ANOVA analysis shows that there is no significant difference found between the Quality related risk factors and gender, age, source of buying milk, collection and procurement methods. This shows that irrespective of these demographic differences among the respondents, the risk perception about quality factors are same.

- It is also interesting to observe that a significant difference is found in the Quality factors and respondents of different taluks, educational qualification and the operating years of the society. This shows that various taluks have different quality relating challenges found in the dairy business. Thus most educated respondents are more aware about the risk in the quality aspects in dairy business and the quality aspects are good or satisfactory in the societies operating for a long period – more than 5 years.
• It is found that there is a significant difference regarding the Price factors and taluks, gender, educational groups and the operating years of the society. However, no significant difference is found among the respondents of various age, source of buying milk and collection and procurement methods regarding the Price factors. Thus it is clear that respondents of various age groups agree that prices are not satisfactory. It is also clear that irrespective of the source of buying and collection and procurement methods, respondents agree that societies make them prompt payment.

• Findings about the third factor—Lifestyle and consumer preferences show that there is no significant difference in the lifestyle related factors— and the respondents in different Taluks, gender and milk collection time and procurement methods. However, the respondents of different age, educational groups and years of operating of the society shows a significant difference in their opinion about the Lifestyle and consumer preferences risk factor.

• Therefore it is found that regarding the private brands, the opinion of the different society respondents differ as per the years of operation. This also shows that irrespective of milk collection time and procurement methods, respondents agree that the private brands are competitors and are better than co-operative brands.

• It is found that regarding the fourth risk factor of seasonal and demand fluctuations, there is a significant difference among the respondents of various demographic profile. This shows that different taluks and groups of respondents have the different seasonal pattern and trend. Thus it is evident that various respondents have different opinion regarding the seasonal and demand risk factors.

• Level of agreement among the respondents regarding the various risk factors are analysed and the findings shows that the level of agreement was maximum among the respondents in Omalur taluk, female respondents, of
below 30 years, who are graduates, and in those societies which are operating for less than 5 years.

- A highly significant association between the level of agreement of risk factors and the demographic details like taluk, age, education, operating years of the society and source of buying milk is found. Irrespective of the differences in these, respondents agree with the risk involved in dairy business.

- It is interesting to note that no significant association between the level of agreement of risk factors and gender, milk collection time and procurement method. Thus it is clear that opinion about the risk factors differ among the respondents as per gender, and milk collection and procurement time and methods.

- Discriminant analysis finds that 2 major risk factors viz. seasonal and demand fluctuations and price factors relating to dairy business creates a discrimination between the respondents who have and who do have the knowledge about the risk factors.

  Using canonical Discriminant function the function has been set as

  \[ Z = -2.982 + 0.076x + 0.173y \]

  \[ X = \text{Price} \]

  \[ Y = \text{seasonal and demand fluctuations} \]

  This analysis also shows that 3.1\% of the respondents are in the category of having adequate knowledge and 94.5\% are in the category of not having adequate knowledge.

  83.4\% of the discrimination in the groups is due to seasonal and demand fluctuations factors.

  Price factors result in the discrimination of about 40.8\% only.

- Binary Logistic regression model shows the difference in the knowledge about the technology of the respondents according to their gender. Thus knowledge about the availability of adequate technology to judge the quality of milk is assessed. 26\% women have knowledge about the technology and 66.4\% of men have the same. Further it is interesting to note that there is a
high relationship between gender and knowledge about the technology to judge the quality of milk.

5.2 SUGGESTIONS AND RECOMMENDATIONS

Based on the findings of the study the following suggestions are made:

- The respondents opine that maintaining the quality of the milk is a major problem in the dairy business. Producers can develop suitable technology and infrastructure to cope up with this risk.
- Adequate latest technology to judge the quality of the milk can be installed in the dairy co-operative societies.
- The farmers and the suppliers must be educated about the technology available and the usage.
- The members of the society can be given proper support regarding the guidelines about the disease control, feed, and other veterinary services.
- Since the respondents stated that the prices paid by the society are not remunerative, societies can take further measure to provide good prices.
- By providing good prices they can win over the competitors – Private brands, in getting milk.
- The study revealed that seasonal and demand fluctuations are the major risk factors in the dairy business. Producers can develop suitable processing technology and infrastructure to cope up with this risk.
- Lack of exercising proper management practices by co-operative societies in favour of their attached firms is a major marketing constraint. This creates a hindrance in the collection, processing and distribution of the milk. This can be set right by undertaking marketing initiatives and also enhancing the distribution aspects.
- The financial problems is another challenge faced by the farmers. The societies also suffer from the problem of recovery of loan they had provided to the members. This prevents them from providing further loans. The recovery of previous loans can be made on along term basis at a lower rate of interest. Adequate institutional credit can be provided at low rate of interest.
• Due to the busy schedule of the farmers, lack of co-ordination and co-operation is also a major constraint. Societies can hold regular meetings for the members and this will enable to provide a platform for them to meet and improve their co-ordination.

• To beat the competition from private brands, the societies should ensure regular purchase and supply of fresh and pure milk to their customers at reasonable price.

• To cope up with the seasonal demand fluctuations societies can employ additional man power for milk collection and transportation during busy season of the agricultural year.

• To increase the productivity during the non seasonal period, it is necessary to provide proper input services like high quality cross-breed of milk cows along with required number of cattle feed, fodder and mineral mixture, veterinary care and management etc.

• Expansion of co-operative societies can be done in various forms. Sub –units of co-operative societies can be established near by the residence of the farmers ,so that they need not face any difficulty in regular supply of milk to the concerned society .

• More societies can be established in new areas where milk trading is executed by private traders only.

• Thus the need of the hour for the co-operative societies to face the risk and challenges in their supply chain is to adopt both short and long term producer friendly prescriptions that are capable of managing all types of constraints and risks faced by the dairy farms in expanding milk production together with the expansion of new co-operatives in new areas and also to bring about co-ordination and co-operation among the members.
5.3 CONCLUSION

The dairy supply chain is highly a riskier business challenge to deal with. No matter what the precautions taken, risks and uncertainties can’t be ruled out from the industry. Since it is not possible to avoid them, a proper risk redressal mechanism could at least minimise the impact. The high risk areas like seasonal demand fluctuations and price and finance related risks are to be addressed soon while low risk areas like lifestyle and administrative factors can be sort out at ease. A basic priority for the dairy industry is to ensure that products distributed to the customers are safe and suitable for consumption. Thus quality matters are very important for a perishable commodity like milk. An efficient and effective supply chain management operation could provide for hygienic measures throughout the supply chain by adhering to the proper food value requirements.