Policy Implications
Chapter - 7

POLICY IMPLICATIONS

The dairy industry in Shimoga district has an important role in the Karnataka states agro economy. Due to the rapid pace of its growth and the shifting food demand patterns in favour of dairy products due to changing incomes and urbanization. The dairy industry has strong welfare under switching on the vulnerable groups in the rural areas. It also helps in correcting the gender bias and empowers women.

The WTO has thrown up opportunities for export at the same time presenting a covert threat of cheaper imports, which can affect the welfare of lakhs of dairy farmers who depend critically on it for a livelihood. To cope with the challenge and convert this into an opportunity, modernization of dairy farming is of paramount importance. Being a food item, adhering to quality standards is imperative at both the domestic and international level as consumers are turning quality conscious.

The hallmark of Indian dairy farming is that it is built on a base of a multitude of small dairy farmers with one or two dairy animals who pool their milk everyday and they receive weekly payment for the same by this occupation. The dairy plays an important role in the lives of marginal farmers without dairy their living conditions would have worse with very few alternatives.

If the white revolution has become a reality in India, it is primarily because of the cooperative sector development. The strong organization of farmers under the umbrella of MPCS who collect process and distribute the milk in the milk deficit urban areas has gone a long way in fostering dairy development in Shimoga district and the country. The total production per household was highest under
large farmer category. However, productivity was highest among landless
category followed by large, small and marginal farmer categories.

The retention for domestic consumption among milk producers was high as
50 per cent of the milk produced under large farmer category, while it was around
25 per cent for landless and marginal farmer category. The small farmer consumed
33 per cent of the milk produced in their farm.

The large farmer category used the highest amount of labour measured on a
per farm and per animal basis. It was observed that the landless and marginal
farmers did not hire any labour and relied on family labour to rear the dairy
animals. However, the small and large farmers hired labour around 12 and 40 per
cent of their labour requirement respectively. The chief labour component was
feeding which accounted for around 55 per cent followed by the washing of
animals and cleaning of the shed which accounted for around 26 per cent. Female
labour was prominent among all categories especially among the landless
category.

It is important to note that the women contribute significantly for dairy
farming activities. It is evident that the women contribution for dairying is higher
than that of the men. Comparison was made across categories of all the activities
of feeding, washing and cleaning of shed milking and marketing of milk and
health care of animals. Dairying can also serve as veritable means of empowering
women in rural areas.

The average cost of production per liter was highest for local cows
compared to cross breed and buffaloes in all the milk zones in Shimoga district.
High cost of production per liter for local cows was due to the lower yields
compared to cross breed which was almost three times more, buffaloes in some
zones performed better with slightly higher yield compared to local cows.
From the study on inputs used in dairy farming it is clear that more green fodder is used more for cross breed animals, whereas buffaloes and local cows were reared more with dry fodder.

Of the determinants of milk production in different Taluks in Shimoga district. The uses of inputs such as green fodder and Concentrates have the potential to increase milk output in low output category farmers significantly. Overuse of labour though widespread is not of economic significance as dairy employs the surplus family labour who otherwise are engaged in household work. Shift in technology either from buffalo or indigenous cow to cross breed cattle brought about a sizeable total percentage gain in milk yield. This calls for a judicial policy of increasing output in step with demand with a substantially smaller number of animals. This will help in reducing the use of resources and greatly enhance efficiency, which will be reflected in a lower cost of production. The enhanced cost competitiveness will enable the state to compete in the global market place.

The highest amount of capital is required by the marginal farmer category which accounts for ever 32 per cent of the capital requirement of the different Taluks of Shimoga district followed by capital by small farmers, landless and large farmers. The notable feature is that the highest capital requirement for purchase of cross breed cows is among the landless farmers followed by small and marginal dairy farmers.

Modernization will not only bring about a quantum leap in production but will also increase the competitiveness of dairy farmers, especially the smaller categories in Bhadravathi, Hosanagara, Sagar, Thirthahalli and Shimoga regions in Shimoga district. They will be in a position to achieve cost effectiveness and produce quality milk, which conform to the sanitary and photo-sanitary standards of global trade. But the results do not show any market changes either in the herd.
composition or on the input requirement. Though number of milch animals is likely to grow, the existing resources would be sufficient to support its growth. However, management practices and infrastructure facilities should be improved.

The study reveals that cross breed cows concentrates and efficiency were significant. Number of cross breed animals has direct effect on the total output green and dry fodder was not significant. Increased use of concentrate would increase output to a certain extent. Augmenting the efficiency level could increase the output level in the different taluks in Shimoga district.

Modernization also requires the optimum replacement of herd from time to time. The stage of replacement varies from taluk to taluk depending upon the composition of the herd size.

The economic viability of dairy farming has been indicated and the investments are highly productive and yield very high rates of return. The investment proposed to be made will result in a paradigm shift in milk production in Shimoga district. This will call for setting up of adequate processing and handling facilities in the private co-operative sectors to absorb the surplus production.

The overall effect of globalization has been studied to assess the gains and losses to the producers as well as the consumer. The net effect has been estimated as a transfer of income from urban areas to rural areas which is a desirable phenomenon. This will lead to investment in the dairy sector, which will bore tool (augur) well for sustained growth and modernization. It will result in a huge increase production that will have to effectively market for which market development to be has pursued vigorously all taluks in Shimoga district.
Young Calf Protection

Dairying holders must take precautionary measures to calves. Today’s calf is the tomorrow’s cow. Therefore, farmers should not leave young calf with Oxen, Buffaloes and Boyce. In this direction, following steps are important:

- Farmers also should take precautionary measures about the pregnant cows. And should take certain decisions about contact the veterinary doctors for young calves.

- It is also essential to clean the newly born calf by hot water and it is also necessarily to clean the waste (Kasa) by the surface of the newly born young calves.

- First Aid is also essential for newly born young calf. It is necessary to cut the placenta by 2 inches from the stomach. And tie the cuttings of placenta from Iodine mixed Twine. Clean the nose, mouth and surface of the calf from the small piece of cloth.

- It is essential to feed the “cow’s new and fresh milk” (Ginna milk) to the new born calf. Cow’s new and fresh milk is one of the creative gifts to the young calf from the cow’s milk. Dairying holders should feed the “cow’s new and fresh milk” to the young calf within 1-4 hours from the born.

- The newly born calf should be separated from the cattle, buffalo and ox.

- Milk feeding to the newly born and young calf is very essential. Twice a day milk feeding to the calf should continue up to 3 months of the born calf.

- It is also necessary to give Warmine tablets for one week to the new born calf.

- It is also important to give light food to young calf daily. In this context dairying holders should give green leaves, cleaned water, and dry concentrates to the young calf daily.

- Provide free walk and run the young calf from light sunshine and should clean the surface of the body and leave the calf in sunshine and brush the body.
• Inject the medicine to avoid contagious diseases to the calf from the veterinary consultation.

• Expect the growth rate of the calf and take care on young female growth stage of calf. It is essential to give nutritious food, green grass and concentrates to the young female calf.

• To undertake the ‘Artificial Insemination’ for one year old cow. Examine and contact the veterinary doctors for ‘Artificial Insemination’ for one year old cow consumed is also very essential. These steps should be taken for newly born and young calf.

Summary of rules for milking

By adopting the following procedure the quality of milk can be improved:

1) The milch animals should be sound in health and free from disease.

2) Keep milch animals as clean as possible; periodically clip any loose long hair from their hind quarters.

3) Wash the milch animal’s udder before each milking and dry with clean, soft, wet but well squeezed-out piece of khaddar cloth.

4) The byre (cow shed) should be clean, well-heighted, well ventilated and drained. Dust and dirt should not hang in its atmosphere and feed and bedding, unless moist should be made after milking.

5) The milk should be neat, tidy and free from all communicable diseases. The hands and clothes should be clean with nails clipped short and he should wear clean over-alls during the milking period.

6) The milking pail should be clean and well-rinsed in clean water previously steamed, team less milk pails with rounded bottoms which are particularly covered to minimize surface of milk exposed to dirt and dust from outside are the best to use.

7) Remove the first few steams of force-milk in a strip cup and do mix it with other milk.
Chapter-7 

8) Dry and full-hand method of milking should be insisted upon. This should be followed by stripping to remove all milk from the udder.

9) Milking should be done quickly, quietly and thoroughly without any discomfort or annoyance to the animal.

10) Observe regular hours in milking.

11) Animals should be treated with kindness.

12) Milk should not stand in the stable longer than is absolutely essential.

13) Keep the milk house clean and free from flies and dirt.

14) Keep proper milk records of all animals.

15) Strain milk through a clean cloth, keep it covered and cool it as quickly as possible.

India continues to be the largest producers of milk in the World with a total production of 91 million tonnes in 2005-2006 and the contribution of milk alone was higher than paddy, wheat and sugarcane in the year 2003-04. Yet the per capita availability of milk at 261 grams per day during 2010-11 is still very low.

Some of the important initiatives that are needed

- Promotion of appropriate cross breeds while conserving indigenous breeds of livestock.
- Establishment of livestock marketing system
- Promotion of rural backward dairy farmers in to a Dairy Co-Operative Marketing Setup is needed.
- Development of co-operative Dairy Farms.
- Enhancing Livestock extension services in village areas.
- Provision of an insurance package to avoid distress and enhancing Livestock’s insurance for the dairy farmers.
- Enhancing loan facilities to the dairy farmers through the Nationalized Banking Institutions is also needed.
Findings and Suggestions

In this concluding chapter the problems encountered by dairy farmers and useful suggestions to alleviate are made. The five Taluks of Shimoga district has more than 72 per cent of people depending upon agriculture. Their secondary occupation is the maintenance of Dairy units. Cost and returns of milk productions, comparative study of cost benefit analysis. Current and future supply of and demand for milk Factor influencing milk production, feed and fodder problems marketing and some facilities required by farmers to make dairy enterprise as a rewarding one.

1. Paddy, beetle-nut and chilies, sugarcane, banana, jowar, maize and ragi and groundnut are cultivated as main crops in these 5 taluks. Chief source of fodder item is the paddy straw. The proportion of food crops and commercial crops cropped area are 62 per cent and 38 per cent respectively.

2. The average size of dairy animal pre-farm is 5-00, out of 5-00 per cent 1.50 per cent of animals are yielding milk and 1.40 per cent of animals are in dry. As the survey report emphasized that the 30 per cent of farmers have local cow and 18.50 per cent of farmers have cross breed cows and 38.50 per cent of farmers have buffaloes among five taluks of Shimoga district.

3. The local cow and cross breed cow have a lactation of 224 days and 310 days respectively buffaloes average lactation period estimated as 275 days.

4. The yield of local cow and cross breed cow is estimated at 448 liters and 1226 liters 794 liters milk yield for buffaloes in all the five taluks in Shimoga district per year.

5. The average cost of production of local cow and cross breed cow and buffalo was predicated as Rs. 9.24, Rs 5.89 and Rs. 8.60.
6. The percentage of net profit on total income for Indigenous cow, cross breed cow is estimated as 27.6 per cent and 41.10 per cent and 44 per cent in the sample of dairying farmers among the five taluks of Shimoga district.

So, it is most economical to maintain buffalo and cross breed in these taluks, where as the maintenance of local cow and cross breed buffaloes. So, it is economically good to maintain buffalo than cow in these Taluks.

7. 44 per cent of farmers sell milk to the milk producer's co-operative societies. And 24 per cent of farmers sold milk to local vendors. Therefore co-operative dairy development is very useful to farmers among these Taluks in Shimoga district.

8. The quantity used for personal domestic consumption is 25 per cent and 75 per cent of total milk production is sold for commercial purpose.

9. Nearly 45 per cent farmers are in need of loan facilities, 28 per cent of farmers are in need of technical help and fodder help. Veterinary medial help are needed by the farmers are respectively and remaining 27 per cent requires training or sample of dairy units are essential to the dairying of these Taluks.

The overall study investigated that milk production is a subsidiary enterprise and it is profitable under small farm conditions. Under small farm each dairy owner has a chance of improving his dairy animals by means of introducing new technology and introducing new breeds into his dairy unit.

The present research study has been conducted with the objective of finding out how dairying sector in different taluks in Shimoga district can be made possible by providing facilities to dairy sector through government. The research study thus carried out has analyzed several issues connected with this objective and has made many observations in the form of research findings. In the process of research work many problems have been identified and the following suggestions are offered as remedial measures.
In the first instance, it is known that the success of white revolution and it has become a reality to overcome this deficiency of milk is to provide from different Taluks from Shimoga district is also a contribution to white revolution.

In a male dominated social system prevailing in India it is quite but natural that women have very high level of confidence and therefore they have been able to better. The women role is higher than the male in Indian dairy industry and five Taluks in Shimoga district also. In other words male members must have a free hand to participate actively in dairy industry of five Taluks in Shimoga district.

By nature women are timed and not freely mixing in their nature of dairy farming in some parts of Shimoga region. Women also hesitate to sale and collect freely in milk amounts. Where almost all the collection of milk amounts are men. It is very useful for men to make use milk amount for unauthorized ways. It is of women’s nature of hesitation and shyness by creating an atmosphere for male domination in dairy industry in Shimoga region. This must be eliminated.

A large number of male and female dairy holders in five Taluks in Shimoga district are either with no education or with less education.

Accordingly, they do not know the basic methods of cost of production of milk feed and fodder mix, decision making, loan facilities of dairying. Therefore, it is very essential to ensure male and female literacy and provide necessary education of dairy holders.

At present male and female members of dairying must be provided with such training which enhances their dairying cultivation, cleaning, milk marketing and reducing cost of milk, suitable herd’s cultivation and health care dairying.
animals also. This requires a lot in which members of dairying need sufficient training.

- It is better not to hold training in far off places of dairying. On the other hand, if the training Program is held in nearby places undoubtedly more number of dairy holders will be participating in them. If the dairying training program is in distant places they make excuses by giving personal and familial reasons and try to avoid attending the training programs.

- Legislations may be enacted to check and slaughtering of cows, bulls and bullocks in different regions of India. For this to create an approach of worship of cows and buffaloes by the citizens and they treat cows and buffaloes as domestic animals. Citizens should not give torture for cows and buffaloes. The dairying holders discharge their dairying duties and cows and buffaloes cultivation with full of patience and show their greater responsibilities on these animals.

- The cows and buffalo's exhibition, Cow Sammelan and Mela must have start by the mutt, agency and some association, and create an opportunity to display the different local, exotic cow, buffaloes and bullocks to the common people. And create sympathy and people realize the strength of cultivation to increase by each and every family and that should give happiness to the family and realize.

- Extending the concept and importance of milk through the training, advertisement in news and telecommunication. The common people should know the importance of milk and its nutritive value. They should know the knowledge of milk sugar percentage, fats percentage, milk proteins minor constituents, vitamins and minerals, colostrums and dairy products. This will definitely helps to cultivate and domesticate cows and buffaloes in their family.
- It is better to introduce the utility of cattle, bulls and buffaloes in day to day activities of human life. When dried dung is converted into cakes which are used as major source of fuel in rural areas. Fresh dung is used in biogas plants to provide gas for cooking and heating. Biogas is produced by the anaerobic fermentation of biomass. Apart from using dung and urine of cows and buffaloes can also be used for biogas production.

- The dairying holders of all taluks of Shimoga district must be made more confident about the domestication of cows and buffaloes.

- The Malnad Dairying farmers should take precautionary measures on livestock's from tail cut creepers and plants while cows and buffaloes rearing in the forest areas.

- Farmers and dairying holders should take care on livestock's from poisonous leaves eating's like Broad Bean leaves and Plastics are definitely collapse the life of livestock’s.

- The Government should increase animal hospitals and curing centers. In spite of extension and opening of animal husbandry and animal hospitals the dairying holders, farmers and others have not obtaining better exposure and this is because of their own weakness inhibition and negligence. They seem to have aversion and are not willing to protect up responsibilities of their cows and buffaloes. They should take help from these facilities. The modification would be essential to remove lactose from milk. A lactose free modification would be beneficial to millions of peoples who are lactose-intolerant and therefore cannot digest milk containing lactose.

- People should reserve at least 10 square meter of land for the cultivation of Bovine Population in each and every family. Land Reservation is very essential for survivor of bovine population. For this purpose each family should reap at least 3 kg seeds by 10 square miters of reserve land. Then we can definitely grow 25 kg of feed and fodder the livestock cultivation.
Domesticate the different Breeds of bovine population in dairy farming. Dairy farmers should cultivate breeds like Kankrej, Grolav, Sahiwas, Hariyana breed, Gir breed, Red Sindhi, Krishnavally, Bargoor, Khilare, Ongole, Amruth mahal, Malnad Gidda, Devani cows and different breeds of buffaloes in the dairy farming. This will contribute to speed up white revolution.

Cow culture education and cow syllabus and importance of livestock cultivation should be introduced in the elementary education in the school. The people should start cow’s eagerness procession and prepare guiding principles upon livestock population. Certain planning is essential for the protection of livestock’s life.

The importance of livestock population should be analyzed with scientific method. There is a need to open a Kamadenu University for the development of livestock population.

Give encouragement to cow culture industries and provide market facilities and suitable price for livestock cultivated products like, Ghee, Cheese, Curds, Butter and Milk in internal and international market.

Planting of the feed and fodder trees are also essential to the livestock population. Dairy farmers should plant trees like Subabul, Halivana, Nugge, Chogate, Agase tree plants in the corner of the lands and waste fields. This will raise sufficient feed and fodder to the bovine population.

Dairy farmers should store the sufficient dry foods, concentrates, feeds and fodder. This can be helpful to the livestock population for rainy, winter season and some emergency condition.

The collection of feed and fodder is also main objective of the Dairying farmers for livestock cultivation farmers should collect dry concentrates from agricultural crops and collect after cutting the plants is available from the waste lands (Kalda, Forest Grass).
Farmers and dairying holders must know the decision about the disease caused livestock. And he should learn the features of disease caused livestock.

Dairy farmers should separate healthy cattle and buffaloes from disease caused livestock's.

Cowshed should be clean.

Systems of breeding should be good. Dairy farmers should follow the natural or artificial breeding if necessary.

Plan should be formulated for increase milk production and induce disease resistance in cattle and buffaloes also.

Government should open Dairy farming centers in taluk level also.

Provide intensification of livestock production systems wherever is possible.

Efforts should be made to promote stall-feeding and cross breeding.

A good understanding and information on the customer side is also important.

In conclusion it may be remarked that development of dairying in different Taluks in Shimoga district helps to achieve progress in Economic development, so that it can increase National income. If dairying holders take active work and suitable animal care, sympathy with regard to cows, bulls and buffaloes they can receive and contribute a lot to the all-round development of their family, regions and nation also. Dairying holders must be provided with better knowledge, training facilities and animal care taking centres at all levels. Efforts must be made to bring about a thorough transformation in their attitude and mind set. Only then the process of efficient dairying work becomes meaningful and realistic. The Dairying work is not impossible but requires committed and dedicated efforts. The research has shown that the process of dairying needs to be carried forward and not halted.