

# **EMPOWERMENT OF WOMEN THROUGH WOMEN DAIRY CO-OPERATIVES**

By

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2000HS97D**

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requirements for the degree of:*

**DOCTOR OF PHILOSOPHY  
IN  
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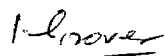
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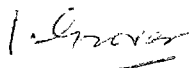
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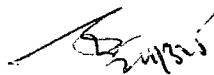
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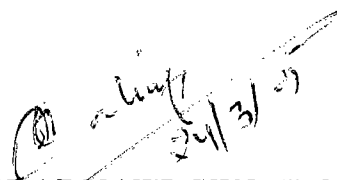
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*A petal from this small flower  
to the feet of my pujae  
Maa & Papa who made me fragrant  
who gave a perfect tune to my music  
who gave courage to try my own path  
who made me accept both victory and strive of life  
who gave me the spirit to stand through my endeavours  
who made me understand the thoughts of millions*

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Hisar  
January, 2005.

*Rajni Pandey.*  
[RAJNI PANDEY]

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## CHAPTER – I

### INTRODUCTION

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*"Just as a bird cannot fly with its one wing only,  
a nation will not march forward if the women are  
left behind".*

*Swami Vivekanand*

Agriculture along with livestock constitute an integral part of the production system and is the main stay of the Indian economy. It supports nearly two-third of the work-force. Indian agriculture is a symbiosis of crop and livestock production, a way of life, a tradition, which for centuries has shaped the thoughts, the outlook, the culture, the social and economic force of rural life. This sector is and will continue to be central to all strategies of socio-economic development of the country. Indian agriculture is known for its multi-functionalities of providing employment, food, livelihood, social security, family bondage, nutritional and ecological securities. Since independence the agriculture sector has made rapid strides by taking the annual food grains production from 51 million tonnes in the early 1950's to over 210 million tonnes in 2004-05. Over the years, agriculture has become a relatively unrewarding profession due to generally unfavourable price regime and low value addition in the food chain. A large majority of the Indian farmers hold small and marginal size holding while the size of the land holding is on a decline. The contribution

of the agriculture sector to gross domestic product is on a gradual decline over the years from 48.7 per cent in 1950, 35 per cent in 1980-81 and 25 per cent in 2004-05. At the same time, animal husbandry has shown greater potentialities of growth and livelihood sustainability in the agricultural economy. An increasing need is being felt for diversification of farming enterprises for greater profitability. Animal husbandry is an enterprise which in combination with crop production gives income throughout the year. In areas when farm income is low and unsustainable, supplementary income from dairy enterprises can serve as a cushion to the farmers. These enterprises not only supplement the income but also go a long way in increasing human labour employment and productivity.

Today, in India livestock sector is a prominent sector of agriculture and allied activities with Livestock alone contributing to 25 per cent of the total value of agriculture GDP (Kadirvel, 2004). The annual rate of growth in GDP from livestock and agriculture in these years are 7.3 and 3.1 per cent, respectively. Dairy sector ranks first among the individual agriculture commodities in terms of total value of production. The value of milk output and its products is Rs. 70,000 crore and that of dairy industry as a whole is Rs. 1,05,000 crore. Dairy farming is visualized by the farmers in the country as part of an integrated agricultural system where dairy and agriculture complement each other.

It is appropriate to look back at what India's dairy industry has achieved and also look forward to the 21<sup>st</sup> century, its challenges and opportunities. India, the current leader in the dairy world, ranks first in

milk production with a production level of 84.5 million tonnes of milk growing steadily at a compound annual growth of 4-5 per cent. Milk production in India is by the domain of small holders, some 70 million farmers maintaining a milch herd of 108 million heads of cattle (64 million cows and 44 million buffaloes) make this possible.

Dairy development in India has been acclaimed world over as one of modern India's most accomplished developmental achievement. The states of Gujarat, Maharashtra, Uttar Pradesh, Haryana, Rajasthan, Andhra Pradesh, Karnataka and Tamil Nadu are surplus in milk production. Productivity performance of dairy industry across the country has registered an annual growth of 17.1 per cent with highest market share of 23.5 per cent for Maharashtra followed by Gujarat (17.2%) (Kadirvel, 2004). The consumption pattern indicates that 45 per cent of milk is consumed in liquid form, while butter milk/separated milk (butter and ghee) constitutes 34 per cent. The balance is in the form of milk powder, ice-cream, cheese and other products.

### **Historical development of dairy cooperatives**

For decades, dairying in India meant keeping one or two cattle in the house. Under colonial rule, milk colonies were established to supply milk to armed forces and city dwellers and a post of Milk Commissioner was created. The legendary Anand Milk Union Limited (AMUL), a success story, the ANAND pattern of dairy cooperatives, had its beginning in 1946 in the district of Kheda in Gujarat. During 1959-60, the government started Intensive Cattle Development Project (ICDP) that focused on providing

artificial insemination and veterinary services to the milk producers. In early 1950's, dairies located in urban areas were mainly government owned, without efficient procurement and distribution system. The milk sheds were also not tapped properly. Even in 1960's dairy development remained fairly depressed. There was no incentive to the producer. Planned development of the dairy sector started with the launch of the First Five-Year Plan in 1951. Policies and programmes under the First Three Five Year Plans were inadequate to influence milk production and milk output continued to be stagnant. The Plan Holiday between the Third and Fourth Plans saw some of the most momentous policy initiatives by the government for dairy development.

Milk production in rural milk sheds through milk producers' cooperatives and movement of processed milk to urban demand centres became the main issue of government policy for dairy development. The much needed linkage between producers and the consumers had been established resulting in a white revolution. Policy linkage involved pricing structure, procurement and marketing system, breeding, cattle feed, disease control and veterinary services. The launching of technology mission by the Government of India in 1987 is another major milestone for dairy development in this country.

### **White revolution**

Operation Flood proposed by National Dairy Development Board (NDDB) restructured the milk markets in India. Operation Flood I laid the foundation for modern dairy industry in India. There was a viable

self-sustaining growth of producer controlled dairy cooperatives. The Operation Flood II and Operation Flood III that followed showed commendable achievements in the dairy sector. When the third phase was over, the benefits that had reached the small dairy farmers included sustained increase in production (4-5% growth per annum) raising the capital availability of milk to nearly 220 g, dependence on commercial imports of milk powder, marketing mechanism improved providing assured outlet for milk producers and quality milk for consumers, the quality of milch animals improved, and national wide network of professionally managed cooperatives established. This model also proved to be the best mode for women empowerment leading to economic independence especially of poor rural women. These women in turn incurred expenses on goods and on children's education apart from household nutritional security.

At the end of operational Flood III, 72, 744 District Cooperative Societies in 170 milk sheds having a total membership of 93.14 lakhs had been organized (Kadirvel, 2004). As per World Bank experts opinion for an initial investment of Rs. 200 crores in Operational Flood II, the net return per year to the rural economy had been Rs. 24,000 crore. No other major development programme the world over has matched such an input-output ratio.

### **Women in Dairying**

Dairying is an occupation that supports the livelihood of many women, especially the rural poor in India. Almost 70 per cent of the dairy farmers are either landless or small/marginal farmers, who own only one

or two cattle. Landless families who depend on livestock to some extent or completely, form a relatively large proportion in India (Orskov, 1993). Farm women play an important role in animal husbandry. Their participation in animal husbandry activities are to the extent of 80-90 per cent. They have high participation in operations of harvesting and chaffing of fodder, feeding animals, rearing of calves, bathing of animals and cleaning of sheds, taking sick animals to hospitals, treatment and also milking of animals..

Milch animal is an economic resource of a family. However, possession of dairy animals means not only more increased income, it also means status, being busy and occupied, food and nutritional security, and an opportunity to take some control over one's own life. The women have a greater control over this resource, compared to other resources like land in the village. The ownership of this asset increases the confidence and self-worth of women (Ramaswamy *et al.*, 1999) thereby leading to empowerment. It opens up to them an occupation within the village itself that generates more value both economically and socially. This profession can be handled successfully even with low literacy skills. By raising incomes, an apparently simple single commodity project can have multiple beneficial effects, including nutrition, education (especially of girls), and job creation (Candler and Kumar, 1998), and bring rural transformation (GOI, 2001). A study by the World Bank also indicated the clear benefits that Operation Flood had for women and children, for those landless people who own or have been able to purchase a milch animal, it has been a

boon (Candler and Kumar, 1998). Rearing milch animals gives a new life to the landless households who are deprived of other resources for prosperity (Sreeramulu, 2001). It offers the only alternative for many a landless family, as they are mostly unskilled and illiterate.

Introduction of better yielding breeds has also helped families to venture into this enterprise. Agricultural labour, the predominant work of the poor in rural areas, is being gradually strengthened by dairying, especially in case of women. The demerits of agricultural job impel the women to think of an alternative and dairying is the one that provides a range of opportunities (Rao, 2001). Substantial contribution by ordinary women folk has played a major role in ushering the white revolution.

Cattle rearing for milk is an important occupation of the landless rural poor across the country. Small scale dairy enterprise is diverse in nature. For example, it is different in the urban and rural areas. Private/vendor marketing is common in urban areas, whereas cooperatives have a more prominent role in the rural areas. Dairying is more of a woman's job in rural areas. The commercial dimension of cattle rearing is more evident in urban areas whereas in rural areas the social dimensions of cattle keeping have a greater relevance and meaning.

The study by Ramkumar and Rao (2001) among the landless cattle owners in Pondicherry revealed that cattle rearing is an important occupation for majority of the rural landless families, who survive below the poverty line. Literature indicates the predominant role of women in the management of cattle. Patel (1998), Ahuja (2000), Bravo-Bauman

(2000), Rao (2001) and Ramkumar and Rao (2001) looked into the distribution of benefits from the cattle women rear and their contribution to poverty alleviation at household level. Other studies focused on the impact of cattle related schemes, especially the Operation Flood and revealed their potential (Shukla and Brahmankar, 1996; Kumar and Candler, 1998).

The National Agricultural Policy (2000) has included "Women Empowerment" as one of the objectives. It is recognized that it is dairying which fits into the framework of rural economic activity and social change compatible with inherent jobs performed by the women. In 1983, the Andhra Pradesh Dairy Development Cooperative Federation Limited (APDDCFL) the implementary agency of operation flood in the state of Andhra Pradesh initiated a women focused approach to increase the active participation of women in dairy cooperatives. Realizing the importance of the integration of women in dairy development various non-government agencies have been taking initiatives in sensitizing the women's role potential in dairy cooperatives at all levels to achieve the purpose what the government has given focal attention in Agriculture Policy, 2000.

These agencies are Women Dairy Project of different State Federation viz. Bihar Women Dairy Project under Compfed (The Bihar State Cooperative Milk Producers' Federation Ltd.), SEWA, Ahmedabad, Bhagwatula Charitable Trust (BCT), Andhra Pradesh Milk Federation, Orissa Milk Federation (OMFED), Haryana Dairy Milk Federation, etc..

### **Present Scenario of Women Dairy Cooperatives (WDC)**

In present scenario dairy cooperatives have been considered as one of the most important measure for improvement in the marketing mechanism of milk in rural areas and empowerment of rural women by providing effective marketing facilities to the producers and enabling them to get remunerative prices for their milk. Planners in India have been targeting women in dairy cooperatives as a tool to bring out socio-economic transformation. Women, the key figure in dairying contribute more than men folk as approximately 85 per cent of those involved in dairying are women. Women also have close bondage with animals as they consider them as part of their family. Women are more knowledgeable about behaviour, characteristics and health aspect of these animals. With this background that women could play a crucial role in making dairy development sustainable a beginning was made in the eighties to involve women in dairy cooperative societies as this a measure would facilitate change in status from non-earner to an earning member. Various studies from time to time have documented the significant role of women in dairy activities mainly of collecting fodder, watering, feeding, grazing, cleaning as well as collecting dung, milking, bathing and cleaning cattle sheds.

Women focused approach was advocated as a part of the strategy under which sufficient number of women dairy cooperative societies (WDCS) were formed at village level with the point of view that WDC would provide a source of additional income and an organized platform to seek personal, social and other grievances. WDC was considered as the

nucleus for multifarious activities concerning women development. The three tier structure i.e. societies, unions and federations were conceived to act as a powerful medium not only to implement a number of poverty alleviation and awareness generation programmes but also to carry out suitable messages to its members. The major emphasis in the WDC projects has been on to utilize WDC as a nucleus for programmes and activities concerned to women development. In short, the objectives of WDC was that the rural women will not only benefit economically through the project but formation and management of village level cooperatives and training in scientific management of milch animals would enable them to learn by inferences and provide for capacity building.

**Winner of the prestigious Magsaysay Award, Mrs. Ela Bhatt,** highlights the need for giving women their due place in dairy development. For their empowerment and economic well-being, women's access to training in modern dairying and cooperative management is essential.

The employment of women is an index of their economic and social status in society. The membership in most of India's 70,000 village level Dairy Cooperative Societies (DCS) is heavily dominated by men. However, the picture is now gradually changing in favour of women. Efforts are on to give women their due place in dairy development. Presently, some 2,476 all women DCS are functioning in the country in selected states. Out of 9.2 million total membership in DCS, 1.63 million are women (18%), while women constitute less than three per cent of total board members.

**The women's Dairy Cooperative Leadership Programme (WDCLP)** was launched in 1995 as a pilot programme with the objective

of strengthening the dairy cooperative movement by significantly increasing women's participation as active members and as leaders in the governance of cooperative societies, unions and federations. In some states, the Ministry of Human Resource Development (HRD), Government of India, provides financing for cooperative milk producers' unions which implement the "**Support to Training and Employment Programme**" (**STEP**) Programme. Under this programme, dairy cooperatives are formed with membership as well as the management entirely composed of women milk producers. Considering WDC as an agency of women development WDC project was launched in Haryana in the year 1998. The entire structure of WDC is seen as capable of bringing about social and economic gain. The social gains for exploited sections of society are expected to be high. The trust of WDC formation in Haryana has been utilizing women positively for dairy production and to change their own status from non-earners to earning members.

### **Women Dairy Cooperative in Bihar**

In Bihar state, Bihar Women Dairy Project was taken up under the Seventh Five-year Plan for augmenting income of rural families by directly involving rural women in dairying activities. Comfed is the implementing agency for this project. Project is functional in various districts mainly under Mithila Milk Union and Barauni Milk Union. Primary Women's Dairy Cooperative Societies with exclusively women members and managers have been set up. Necessary financial help is provided to the societies/individual members by various agencies for purchase of crossbred

animals and other dairy related activities. Compfed and its affiliated milk union provide the necessary organizational and marketing assistance for functioning of women dairy cooperative societies. The cooperatives carry on procurement, processing and marketing of milk to ensure continuous supply of milk to provide remunerative return to the producers. In addition to this various services like veterinary services, cattle feed , artificial insemination and insurance facilities are also provided to the members. Thus, dairy cooperatives as an agency of women development holds potential in improving the status of women involved in this enterprise.

Keeping the active role of women dairy cooperatives in empowerment of women, the present study was undertaken with the following objectives:

1. To investigate the profile and entrepreneurial traits of beneficiaries and non-beneficiaries in women dairy co-operatives.
2. To investigate the resource system support availed by beneficiaries and non-beneficiaries in women dairy co-operatives.
3. To ascertain the role of women dairy co-operatives in empowerment of women and to isolate the factors affecting empowerment.
4. To analyse the managerial effectiveness of women dairy cooperatives at the grassroot level.

### **Scope of the Study**

The present study would be immensely helpful to the development planners, policy-makers, practitioners, researchers, scholars in general and those involved in women oriented programmes in particular. The study

provides guidelines for successful implementation of women dairy cooperative scheme.

The assessment of empowerment of women on various parameters would be helpful in formulation of future training programmes covering the areas wherein the women beneficiaries had low techno-know-how and low human development skills.

The findings emerging out of present study would provide an insight to the implementing agency i.e. state level federation of milk producers and milk plant officials about the extent of change and level of empowerment created by women dairy cooperatives on quality of life of women beneficiaries and its impact on their families and communities.

The major constraints which act as a stumbling block for successful running of cooperative society in a smooth manner have been identified. If checked with concerted and sincere efforts these would be helpful for making the societies more viable and useful to its beneficiaries.

#### **Limitations of the Study**

1. The present investigation has been undertaken by a student researcher, which has its own limitation of resources, particularly time, money and mobility.
2. The study was limited to a sample of 200 beneficiaries, 60 non-beneficiaries and 40 office bearers. The generalization of the results will be limited only to those geographical areas which are similar to the area of investigation.

3. Lack of infrastructure facilities and remoteness of the region has set up barriers in probing into more dimensions of research. However, considerable care and thought has been exercised in selecting variables so that all the objectives of the study could be satisfactorily fulfilled.
4. Further, the findings of research study are based on the recall response of the respondents. Hence, the objectivity of the study is limited to recall ability on furnishing the required information.
5. All the women dairy cooperative societies operational in the selected districts could not be incorporated in the sample due to limited time. Therefore, the researcher had to confine this study to only eight cooperative societies.

## CHAPTER – II

### REVIEW OF LITERATURE

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Brief resumes of past researches conducted in the areas pertaining to present study have been incorporated in this chapter. With a view to associate the relevance of these researches to the present study, the reviews have been presented under the following heads:

- 2.1 Profile and entrepreneurial traits of entrepreneurs
- 2.2 Resource system support availed by entrepreneurs
- 2.3 Entrepreneurship, empowerment and development ✓
- 2.4 Empowerment of women under development projects and programmes ✓
- 2.5 Factors affecting participation and empowerment in developmental programmes
- 2.6 Dairy cooperatives and women
- 2.7 Constraints faced by members of dairy cooperatives
- 2.8 Managerial effectiveness ✓

#### **2.1 Profile and entrepreneurial traits of entrepreneurs**

An entrepreneur is the main character in an entrepreneurial drama. His traits such as knowledge, skill and judgement account heavily on her/his successful career. Moreover, entrepreneurs' maturity through age, experience and knowledge helps him to make best use of all available resources for running the enterprise. A combination of entrepreneurial traits may be pre-requisite for an entrepreneur.

## **Age**

Younger persons are generally more energetic, change prone, progressive and innovative than the older ones. However, there are inconsistent evidences in the literature as regards the influence of age on entrepreneurial behaviour in general and women entrepreneurs in particular (Shah, 1985; Singh and Gupta, 1985; Singh *et al.*, 1986; Naik *et al.*, 1990; Ramamurthy and Krishna Kumar, 1990; Takshak, 1990). The best age for entry into such innovative establishments was observed to be between 20 to 40 years (Ramamurthy and Krishna Kumar, 1990). The same trend was true in United Kingdom where the average age of female entrepreneurs reported was 32.7 years and for male entrepreneurs as 39.3 years (Birley *et al.*, 1987). The relationship of age with input, service, delivery system and output was found significant (Bhardwaj, 1982). However, the starting of entrepreneurship by entrepreneurs belonging to minority community was dependent on their age and those who belonged to minority community started their business at a later age (Decarlo and Lyens, 1989).

## **Education**

Education is an important instrument for increasing and bettering the chances of employability and empowering women to think for themselves, become confident and also develop the capability of recognizing more accurately the area of exploitation. In spite of inadequacies, education has made a definite impact. It opens up an arena in which women can compete with men and prove their independent identity. It, ultimately, leads them to become more adventures. Education has been reported as a crucial factor for developing modern

entrepreneurship as it accelerates the entrepreneurial spirit (Mc Clelland, 1961; Rao and Nafziger, 1970; Bogaert *et al.*, 1972; Nandy, 1973; Hundal, 1977; Histrich, 1985; Ramaswami, 1985; Shah, 1985; Singh and Gupta, 1985). Majority of the entrepreneurs were graduates (Histrich, 1985; Shah, 1985; Singh and Gupta, 1985; Singh *et al.*, 1986; Bowen and Histrich, 1988). Every entrepreneur look at entrepreneurship with a differential perspective depending upon his/her education (Singh and Gupta, 1985). The women with higher educational qualifications took it as a challenge of doing something new while others with moderate education could not think of it beyond a tool of earning money. It is probably because well qualified entrepreneurs had more access to technical resources, facilities, expertise, training, marketing support and investment as compared to uneducated ones (Shah, 1985; Monds, 1990). On the other hand, a reverse trend was observed in rural areas with small scale entrepreneurs and where majority of the respondents were illiterate followed by those having low level of education (Bhardwaj, 1982; Takshak, 1990; Vidyulata, 1990).

### **Knowledge**

Knowledge is one of the important component of human behaviour. It plays a major role in the covert and overt behaviour of human beings. Once knowledge is acquired, it produces changes in the thinking process of an individual which would lead to further changes in the mental aptitude. The knowledge of the existence of an innovation can create motivation for its adoption (Rogers, 1983). Knowledge is a pre-requisite of a good business ( Singh, 1981; Naik, 1989; Devadas and Sujit, 1990) and is becoming a critical entrepreneurial success factor (Meng, 1990). Awareness

and education about the policy and programmes are also essential features to develop entrepreneurship (Shah, 1985). This idea of knowledge being an important element in success of women entrepreneurs was confirmed by Management Development Institute (1982) in Punjab, Himachal Pradesh and Uttar Pradesh. The promotional institutions also exploited this entrepreneurial trait to focus their operations either on better off entrepreneurs or only those, which were endowed with knowledge and took initiative to approach this institution.

The urge to possess essential know how that should be consonant with imperatives of a new industrial structure has been missing in the Third World (Gamage, 1990). These findings were confirmed by several researchers (Singh, 1982, 1983; Shah, 1985; Singh and Gupta, 1985; Sharda, 1989; Devadas and Sukit, 1990). In general, Indian women entrepreneurs showed lower degree of knowledge about assistance available from various helping agencies and developmental institutions and therefore, lagged behind in developing their entrepreneurial abilities due to non-awareness of facilities offered to them.

### **Experience**

Though not pre-requisite and essential but experience plays a crucial role for successful development of modern entrepreneurship (Rao and Nafziger, 1970; Naik, 1989). An entrepreneur learns the tricks of the trade and expertise over experience (Jyotibha, 1990). The beginners generally lack rules of thumb and benchmark characteristics essential to recognize good opportunities (Timmons *et al.*, 1985). Through general learning and experience one can become expert in opportunity selection and hence

technical and business experience accelerates the entrepreneurial spirit (Mc Clelland, 1961; Bogaert *et al.*, 1972; Nandy, 1973; Hundal, 1977; Ramaswami, 1985; Naik *et al.*, 1990; Mead, 1991). This characteristic of experience associated with entrepreneurship has been found lacking in Indian entrepreneurs (Shah, 1985), where majority of the respondents (50%) had very low years of experience and the rest fell in the low experience category.

### **Other entrepreneurial traits**

Apart from the above mentioned traits, a large number of entrepreneurial characteristics have been observed showing significant association with the entrepreneurial development and performance. Some of the identified ones are presented in the following paragraphs:

#### **Characteristics Scientists who observed their effects**

Innovativeness	Weber (1947); Habinson (1956); Schumpeter (1961); Gaikward (1978); Hisrich (1981); Ronstadt (1985); Shah (1985); Akhouri (1990); Naik <i>et al.</i> (1990)
Problem solving	Hagen (1962); Shah (1985); Akhouri (1990)
Risk taking	Mc Clelland (1961); Young (1971); Gaikward (1978); Shah (1985); Akhouri (1990); Devadas and Sujit (1990); Jyotibha (1990); Naik <i>et al.</i> (1990); Vidyulata (1990).
Managerial skill	Atkinson <i>et al.</i> (1960); Hoslilz (1960); Young (1971); Hisrich (1981); Naik (1989); Devadas and Sujit (1990); Gamage (1990)
Creativity	Schumpeter (1961); Kunkel (1963); Gregg (1985); Longanathan (1988); Sharma (1988); Akhouri (1990).
Perseverance	Kunkel (1965); Redlick (1972); Longanathan (1988); Sharma (1988); Akhouri (1990); Devadas and Sujit (1990).

Decision making	Knight (1921); Seetharama (1987); Naik (1989); Cox and Jenning (1990); Jyotibha (1990); Naik <i>et al.</i> (1990).
Hard working	Kunkel (1963); Robblor (1987); Sharma (1988); Cox and Jenning (1990); Naik <i>et al.</i> (1990).
Intuition	Hagen (1962); Gaikward (1978); Cox and Jenning (1990)
Communicability	Gregg (1985); Akhouri and Mishra (1990); Cox and Jenning (1990); Devadas and Sujit (1990); Naik <i>et al.</i> (1990).
Independentness	Mc Clelland and Winter (1969); Rao and Mehta (1978); Gregg (1985).
Insight	Kunkel (1963); Longanathan (1988); Sharma (1988); Naik (1989).
Confidence	Knight (1921); Kunkel (1963); Robblor (1987); Longanathan (1988); Shama (1988); Naik <i>et al.</i> (1990).
Foresightedness	Knight (1921); Young (1971)
Competition	Gregg (1985); Naik <i>et al.</i> (1990)
Judgement, tacts, courtesy, honesty, cooperativeness	Naik (1989)
Adaptability	Naik (1989); Naik <i>et al.</i> (1990)
Frugality	Ray (1990)
Enthusiasm	Kunkel (1963)

## 2.2 Resource system support availed by entrepreneurs

The role of resource system variables in the overall entrepreneurial scenario has been reported to be highly significant (Akhouri, 1985;

Srivastva and Bist, 1987; Rao and Alagandhi, 1989; Naik *et al.*, 1990; Sharma, 1990). The resources and facilities viz., financial, raw material, machinery and equipment, technical guidance, marketing, etc., always serve as the pre-requisite requirements/tools for achieving the desired goals in any enterprise (Wilkening, 1958; Naik *et al.*, 1990; Sharma, 1990). This had been proved by Wilkening (1958) where the particular objectives could not be achieved despite the fact that all except this system were quite supporting. The incentives and support extended through government and private sector agencies as input advance resulted in outstanding achievements. The resources can be grouped into two: the personal resources including ones own strength and weaknesses in the form of knowledge, experience, education, etc., and the external including finance, machinery and equipment, raw material, marketing and technical facilities and other infrastructural facilities. The opportunity exists in the society but few of us are sensitive enough to avail (Akhouri, 1985; Shah, 1985). Entrepreneurship is more developed in urban areas as compared to rural probably because of existing easy availability of basic resources. Hence, success of any enterprise depends heavily upon easy availability of various resources. The various resource system variables identified are discussed separately in the following paragraphs of this section.

### **Finance**

Finance plays a vital role in the process of economic development of any business. In an economy of equilibrium, an entrepreneur rearranges productive factors more efficiently, causing structural changes in the economy which lead to development and it is possible only through finance

(Schumpeter, 1961). Therefore, financial support is imperative for establishing and running any type of enterprise (Bhardwaj, 1982; Sinha, 1983; Rao, 1986; Longanathan, 1988; Mohammad and Alias, 1990; Takshak, 1990; Vidyulata, 1990). Lack of finance has been found causing hurdles at almost every stage of an enterprise. The problem of finance, particularly in the initial stages, is very common especially in the developing countries. Moreover, under the prevailing circumstances one would opt for supply leading advances to stimulate innovation and economic development. Bhardwaj revived and strengthened the logic of Schumpeter which provided theoretical support and rationale for credit institutions and development banks. The close relationship between financial intermediation and economic development was established. According to them the increase in per capita income would result in rapid growth in financial assets than in national wealth or national production. Later, many researchers from USA, UK, Japan and many other countries substantiated this theory.

### **Training**

With the changing concept that entrepreneurs are not born but made, training has assumed a significant importance in entrepreneurial development. Studies have reported that certain traits and characteristics in every human being stay dormant and get highlighted only when the situation so warrants (Singh and Verma, 1990). So the training on entrepreneurial development helps a person to become aware of such qualities present in him and develop them constructively (Rao and Nafziger, 1970; Shah, 1985; Sharma, 1988; Rao and Alagandhi, 1989;

Jyotibha, 1990; Mohammad and Alias, 1990). Many studies have revealed that there are inadequate training facilities for women entrepreneurs specially in the rural areas (Sinha, 1983; Gupta, 1984; Rao, 1986; Loganathan, 1988) and some of them are not relevant to the need of the clientele. Entrepreneurship training should focus in developing a viable man as compared to developing an enterprise and merely skill acquisition. Some of the researches have also reported that the entrepreneurs running the business did not have any type of training prior or after the start of their unit.

### **Machinery and equipment**

Besides training and finance, availability of raw material and adequate marketing facilities along with basic machinery and equipment are main determinants of the success of an enterprise. Lohn (1990) the women entrepreneurship award winner from Germany reported that prerequisite for small companies are good equipments and qualified personnel. It is in line to the views of Indian Cooperative Union (1980).

### **Marketing**

Marketing occupies a strategic place in present day economic system and it is vital for the success of any enterprise (Varadappan, 1976; Loganathan, 1988). Inadequate marketing facilities are one of the main difficulties faced by women entrepreneurs (MDI, 1982; Mohiuddin, 1987; Naik *et al.*, 1990; Takshak, 1990; Vidyulata, 1990).

### **Raw material**

Non-availability of raw material is a constraint to the entrepreneurs specially at the initial stages (Varadappan, 1976; Bhardwaj, 1982; Takshak, 1990; Vidyulata, 1990).

Anuradha (2004) reported that majority of the respondents stated that reasons for joining Swa-Shakti Project were to have personal money income (96.7%), had interest in income generation activities (100.0%), would get to know more people (87.5%) and easy availability of inputs like raw material through SHG (43.3%).

### **2.3 Entrepreneurship, empowerment and development**

Dipak De (1986) identified entrepreneurial qualities as risk taking, future oriented, goal oriented, hard working, persistent, set goals and realistic step by step sub goals, drive for independency, ability to exploit situation, success orientation, quick decisions, opportunity seeker, competitive, innovative, likes challenges, dynamic leadership and profit maker. It was further reported that socio-economic status, education, source of information utilized and progressive values influence characteristics of the entrepreneurs.

Devada (1990) stated that women's contribution to national development is crucial and multidisciplinary. Therefore, it is essential to evolve a pragmatic and realistic approach to women's development.

Nikhade and Patwardhan (1990) assessed the participation and economic contribution of home makers to total family income in Nagpur city. One-third of home makers were engaged in preparation of the various types of eatables : papad making (11.25%), halwa preparation (8.75%) and grinding of chillies, spices, turmeric powder, etc. (7.50%). Maximum home makers (73.75%) were engaged in stitching and knitting. One-fifth (22.50%) of home makers were engaged in the preparation of crafts and other items. Highest average income of homemakers was from the crafts (Rs. 724.00) followed by preparation of eatables (Rs. 494. 44 per month).

Takshak (1990) acknowledged that entrepreneurship development is considered as a venture for employment generation through promotion of small business and it holds the key to successful socio-economic development in the country.

Kumar and Rahul (1991) expressed that all the respondents were satisfied with the working of DWCRA scheme as it provided regular employment and income to women.

Singh (1991) stressed that the self sphere, socio-psycho-sphere, resource and support system variables significantly affect the entrepreneurial performance. Thus, entrepreneurship could be developed through planned and structured motivational training.

Pravathi *et al.* (1994) suggested that there are lot of chances to improve women participation by way of motivation and encouragement for entrepreneurial activities.

Joshi (1996) revealed that women empowerment would also improve the health status. Enhancement of women's education and promotion of women mobility will enable them to take decisions about reproductive health and availment of health services by them. Besides, women should be empowered to take decisions about the number of children, use of family planning methods and their own reproductive health care. Moreover, economic empowerment of women is very important for raising their status in the society.

Gain (2001) expressed that for empowering women economically we need to enlarge her choices and access to various opportunities and also build her capacity for taking up successfully income generation

activities and compete successfully in the market. Lower the economic strata the family belongs to higher is the involvement of women in supplementing family income. Her options are limited owing to the lack of mobility, insufficient skills and lesser access to finance. Adoption of appropriate strategies and approaches by institutional agencies for mainstreaming them through various economic activities by addressing their needs is needed to make them equal partners in development.

Gupta (2001) undertook an investigation into the production and marketing aspects of various enterprises undertaken by farm women entrepreneurs under Central Sector Scheme (CCS) for Women in Agriculture. It was found that women entrepreneurs had successfully taken up dairy and bee-keeping enterprises. The net income from sale of milk per annum was found to be more than Rs. 40,000 in case of 47.27 per cent of the respondents and Rs. 25,000 to Rs. 40,000 in case of 40.00 per cent dairy entrepreneurs. The net income from sale of honey per annum was found to be Rs. 3000 in case of 69.01 per cent and only 12.60 per cent had more than Rs. 5000 per annum as their income from sale. Marketing practices adopted by majority of respondents included market survey before sale, sale of products through intermediaries in case of milk and direct to consumers in case of honey.

Sudarshan (2001) reported that women are important economic agents. The first step is to make visible this contribution. The next step is to improve the quality of women's work, their earnings and their opportunities.

#### **2.4 Empowerment of women under development projects and programmes**

National policy on education (1986) suggested certain strategies to empower women. Accordingly, women are being empowered through collective reflections and decision making. The parameters of empowerment are positive self image, critical thinking, group cohesion, decision making, equal participation and economic development. The plan also pointed out the need for a holistic approach towards development of women.

Chatterji (1988) reported that Global conference on women's empowerment highlighted the empowerment as the surest way of making women as partners in development.

Jena (1989) observed that the National Perspective Plan for Women (1988-2000) views women as an important component of national development and emphasizes integration of women into the main stream of national economy, while ensuring equality and social justice for them.

Quisumbing (1995) report that women's incomes are more strongly associated with improvements in children's health and nutritional status than are men's income.

Pattanaik (1996) found that government grass root functionaries (women) from the department of health, education, social welfare, rural development, etc., working at the village level may explain to the women panchayati members about the importance of their respective department and village level institutions.

Nagarjan (1998) stated that empowerment is power that stems from new knowledge and skill acquired, action taken and their inner strength gained from educational experiences.

Bhagyalakshmi (2001) concluded that India has taken several measures “including legislation to ensure the full development and advancement of women, for the purpose of guaranteeing them the exercise and enjoyment of human rights and fundamental freedoms on basis of equality with men”.

Bina (2001) views that secure and effective land rights are of critical importance for women’s welfare and empowerment. But achieving this will need concerted efforts by gender-progressive NGOs, especially women’s groups as well as by those within the government who are concerned about women’s empowerment, poverty and equitable development.

Jayanti (2001) conducted that years of neglect and discrimination against the girl child cannot be turned around in a day. However, careful planning on the part of the government to raise educational levels across the country with the cooperation of the civil society will result in the empowerment of women.

Kant (2001) observed that the process of women’s empowerment is multidimensional. It enables women to realize their full potential and empower them in all spheres of life. Empowerment as a concept therefore encompasses political empowerment, economic independence and social upliftment.

Pillai (2001) reported that currently almost a million women occupy position as members and chairpersons in the three-tier Panchayati Raj structure introduced by the 73<sup>rd</sup> Constitutional Amendment. This is a significant number and cannot but transform things in what was till recently a static rural society.

Seema (2001) reported that a pilot programme to field test an innovative model of development is the initiative in food security based improvisation for empowerment of landless women agricultural workers through interactive capacity development and convergence of other suitable agencies.

Sethi (2001) suggested that an atmosphere of positivity, hope, encouragement and enthusiasm has to be created which would lead to increasing access of women to all the benefits created by development efforts.

Sharma (2001) reported that slight increase in the number of women is the first hope that women's empowerment programmes are having some material impact on condition of women.

Singh (2001) observed that women development means the opportunity and ability provided to women to assess their rights and fight for justice. Development also means real improvement in the socio-economic conditions of women. Those in authority should have the will to enforce all development programmes which if done in right earnest can go a long way in empowering women.

Suguna (2002) concluded that the Central Social Welfare Board (CSWB) has been implementing the programme of working women's hostels for several decades. These hostels provide a secure living environment for women who are working away from their homes. The CSWB has always been committed to the cause of women's empowerment and this commitment is reflected in the formulation of its programmes and support services that it provides for women in special circumstances.

## **2.5 Factors affecting participation and empowerment**

Dhillon (1980) reported that in majority of cases decision were jointly taken and women played an important role in decision concerning farm and home.

Sonarikar (1984) reported that the various factors determining the employment of women were economic, social, cultural, personal, educational and technological in nature. Government and other agencies had played an important role in making women aware of various opportunities in the field of employment.

Regiana (1990) stressed that empowerment of women is strengthening of their innate viability. It can be done through acquiring knowledge, power and expression. Power is not to dominate but power to reduce helplessness. It is a sense of internal strength and confidence to face life, the right to determine choice in life the ability to influence a social process that affects their lives. Empowerment of women are endowed with the capacity and opportunity to influence the direction of social transformation.

Srinath (1992) through an action research study evolved features of empowerment which include self perception, perception of role of women in society, decision making, economic independence, innovativeness, desire to improve present living conditions, attitudes towards group action and communication behaviour.

Sharma (1993) while studying constraints faced by beneficiaries in adoption of income generating activities reported that among credit facilities, complicated credit procedure and lack of finance for purchase

pf inputs were reported by beneficiaries of Krishi Vigyan Kendra, Training Institutes, Training-cum-Production Centres. Low and discriminatory wages, unassured income from the project, lack of risk taking ability were commonly felt economic constraints.

Tan (1995) reported that lack of access to productive inputs such as credit and land are linked to women's poverty as are the inequalities between men and women in the economy. In this context, the two strategies adopted by the government to address poverty provide assistance, mostly through credit in establishing income generating projects and to protect the natural resources from which the poor derive their income.

Bhagnia (1996) concluded that majority of beneficiaries reported improper distribution of loan and lack of capital money as the major economic barrier in adoption of economic projects. Seventy-five per cent of beneficiaries felt lack of guidance for availing credit facilities and complicated procurement procedure as major input barrier. Some beneficiaries reported parents and family objection to working in group project and interaction with male person as the socio-cultural barrier. Most women observed no provision of remunerative price in the local market and difficulty outside the village as marketing barriers.

Sharma (2000) reported that money saved should be used effectively while facilitating this is very important. Idle money does not grow. How you channelise the funds needs an attitude shift, in orientation and marketing opportunities.

Kusum (2001) concluded that all law is not justice and all justice need not be law. Law and justice have to supplement and complement each other to effectively empower women.

Mehendale (2001) found that in final stage, women's empowerment can be considered as "complete" only when women as a collective group no longer require any positive discrimination or reservation. It is a happy sign that lot of young women have started expressing that they would prefer to come up in life on the basis of merit rather than through reservation.

Rao (2001) found that the knowledge, skills and inputs obtained as 'distant' learners could be of immense use to women in consolidating their role in decision-making. They can embark on measures for capacity building among other disadvantages. Women organize well in the neighbourhood, formulate livelihood strategies and ensure protection against vulnerabilities.

Shyam (2002) revealed that the social network of our society is so designed as to keep women dependent on men in all spheres of life.

## **2.6 Dairy co-operatives and women**

Saini and Sidhu (1977) found that the increase in the returns to fixed farm resources when dairying was incorporated as a general farming enterprise was 61.14, 55.76 and 68.22 per cent on the small, medium and large farms, respectively. It was concluded that incorporation of dairying into general farming results leads to more stable income to the family.

Huria and Acharya (1982) reported that social benefits of dairying under the cooperative system appear substantial. The increase in income of the poor classes through dairying does have the effect of improving their nutritional status.

Murlimanohar and Sudarshan (1982) found that forward caste, middle or upper middle class peasants with an ideal background of farm ownership were the real beneficiaries. They were not only in a position to invest their money and also utilize the opportunities extended by banks and other agencies. They contributed to highest production of milk and more employment in primary or subsidiary fields.

Bowonder *et al.* (1987) revealed that dairy development has contributed positively to improve the economic and nutritional status of the rural areas. The lower income groups i.e. landless class and owners of marginal farmers in rural areas derived positive benefits from dairy development in terms of food intake and income even during the lean months.

Biradar (1988) concluded that the beneficiaries who had made dairying their main occupation spent more time on dairy production and income from dairying significantly contributed to the total income of respondents, particularly to the poorer ones. Due to adoption of dairy farming, the assets of beneficiaries improved significantly. The personal characteristics of milk producers like age, education, caste, size of family and occupation of households were found to be the determining factors for dairy development.

Hirevenkanagoudar *et al.* (1988) concluded that more than 56 per cent farmers of Karnataka Dairy Development Cooperation(KDDC) were found to get 50 to 75 per cent of their family income from dairy enterprise, whereas 60 to 87 per cent of non-KDDC farmers were getting only 25 per cent of their family income from dairy enterprise.

Inmake *et al.* (1989) concluded that due to better resource conditions, the large sized societies had given maximum benefits in the form of cattle feed supply, loan to members and veterinary aids to beneficiaries than the small and medium size societies.

Punj Rath (1989) reported that dairy farming has proved a powerful instrument to further economic progress and social change in rural areas of India. It also has tremendous potential for the creation of mass employment opportunities in these areas for those with limited education and can, therefore, be an important means for the alleviation of poverty. As women perform 70 per cent to 80 per cent of dairy work, it is natural that they should be the main beneficiaries. However, there is much evidence to suggest that this is not always so. As a result a woman focused approach has been initiated to increase the active participation of women in dairy cooperatives. The consequences have not only been to improve women economic position but also to assist them in breaking down the barriers created by feudal traditions and poverty.

Singh and Chhatraj (1989) conducted a study of Kissan Cooperative Milk Union in Ramghat in Nadia district of West Bengal, where in dairy cooperatives had positive impact on milk production, consumption and marketing of surplus milk by member households. They suggested that the members of cooperative societies should be increased by covering non covered villages and household families for their economic development.

Sinha and Rangonathan (1989) conducted a study of Milk Producers Cooperative Union in Coimbatore. The study revealed that majority of the members prefer to maintain a minimum of three milch animals so as to enable them to supply milk regularly to the milk society for getting supplementary income throughout the year to meet the day to day expenses.

Thakur *et al.* (1989) studied that establishment of milk cooperatives and dairy development had a beneficial impact on the socio-economic conditions of farmers.

Mitra *et al.* (1990) conducted a study in rural Andhra Pradesh to develop the level of individual women from various backgrounds in rural areas as to their involvement in dairy production. The profiles indicate that there is a definite and important difference in the asset base for dairying between women of different socio-economic backgrounds. This has serious implications for productivity, risk bearing, income and labour input. The establishment of cooperatives and formalization of milk transactions may also deprive women of the control over cash income from dairying which they may previously have had. Multi-class, mixed cooperatives do not allow for easy participation by the poor or by women. All women multi-class cooperatives do not appear to create opportunities for poor women producers to increase their participation. Poor women producers' interests within cooperative have to be very strongly promoted.

Somjee and Somjee (1990) studied the effect of four major Indian dairy cooperatives (Amul Cooperative in Kaira District, Dudhsagar in Mehsana District, Sumul in Surat District and Sabar in Sabarkantha District) on rural development. The Amul cooperative, comprising >1000 villages, opened up remote rural communities to various commercial and industrial ventures within Kaira district. The social status of member households within the cooperatives also changed over the years, more marginal and small landholders are now members.

A study was conducted in 100 households belonging to the Milk Producers' Cooperative Society, Vilanganoor, Thrissur, India, to assess the extent of physical involvement of men and women of the family in different aspects of dairying. In housing and feeding of cattle, which are adopted within the household, a reasonably effective involvement of women was observed. In selection, breeding and treatment of animals which require outside contact, involvement of men was significantly higher. There was no significant difference between men and women in their physical involvement in milking (Anil *et al.*, 1992).

It has been established that dairying is a woman's domain in India but, although women constitute 27.1, 17.7, 15.0 and 11.0 per cent of the membership of dairy cooperatives in Tamil Nadu, Himachal Pradesh, Gujarat and Bihar, respectively, they account for only 2.2 per cent of the membership in Haryana. Data were collected from 100 randomly selected female members of dairy cooperatives in Karnal (Haryana) to identify problems faced by women in the cooperatives. The most common problems identified by respondents were lack of knowledge about government help and subsidies, lack of knowledge about the advantages of a dairy cooperative society, lack of finance for purchase of animals, lack of credit facilities for purchase of animals and lack of timely instructions. Infrastructural and personal/familial problems tended to be ranked lower than educational, communication and economic problems (Kaushik and Singal, 1992).

Kumar and Murthy (1992) reported that the dairy cooperatives have contributed in generating more income and employment to the dairy

farmers. The income earned from dairying was more by the members of societies than non-members. It was also found that agricultural labour and non-agricultural labour earned more income from dairying than small farmers earned from crop production. The employment created members was significantly more compared to non-members.

Kumar and Murthy (1992) concluded that the income earned from dairying was more by the members of societies than non-members. It was also found that agricultural as well as non-agricultural labour earned more income from dairying than small farmers who earned more in crop production.

Naidu and Babu (1992) conducted a case study on 40 families (small and marginal farmers) in Parameswaramangalam village, Tanil Nadu, India who supplied milk to the local milk producers cooperative society, participated in a study of the impact of the dairy cooperative on income and employment. Income of marginal and small farmers, respectively increased by 25.5 and 22.5 per cent from Rs. 3260 and Rs. 6570 before to Rs. 4090 and Rs. 8050 after joining the cooperative, total income increased correspondingly by 14.6 and 10.5 per cent to Rs. 9120 and 21080 and the proportion of total income obtained through dairying increased from 40.0 and 34.5 to 44.8 and 38.2 per cent. Employment opportunities in dairying, either full or part-time, are greater for women than for men and more full time employment has been created amongst marginal than amongst small farmers.

Rani *et al.* (1992) reported that women dairy cooperative societies had made a positive and significant impact on the levels of production,

consumption and marketed surplus of milk. Cooperative societies played an important role in providing marketing facilities for the milk produced by their members.

Bulatao *et al.* (1993) revealed that in Philippines women in dairy cooperatives were proving to be able dairy managers and women technicians were proving to be of considerable assistance to the cooperatives. Women involved in dairying were found to make strenuous efforts to maximize the resources within their reach despite the difficulties faced.

In 1979, the Philippine Dairy Corporation was chartered as the lead agency to undertake dairy development. Heavily dependent on the government, the project collapsed when all forms of assistance to the dairy sector were suspended in 1986. This policy was subsequently reversed in 1988 and women actively participated in the preparation of a dairy plan that would wean dairy development from government and organize small holder farmers into cooperatives as the foundation of the industry. While the situation does not constitute an overwhelming success, there has been a steady implementation of a definite programme aimed at establishing a small farm cooperative based on dairy industry. Women are proving to be able dairy managers and women technicians are proving to be of considerable assistance to the cooperatives. Women involved in dairying have made strenuous efforts to maximize the resources within their reach despite the difficulties faced and examples are given of their involvement at different levels (Bulatao *et al.*, 1993).

Kaushik and Singal (1993) reported that dairying is women domain in India. But banking account of women in Haryana is only 2.2 per cent.

This is because the women had lack of finance for purchase of animals and lack of timely instructions.

Kaushik and Singal (1993) revealed that most beneficial aspect of dairying as perceived by the women was that any quantity of milk can be supplied to the dairy cooperative society, followed by regular payment made for milk supplied. Another benefit that emerged was the feeling of confidence among the beneficiaries.

Tripathi and Kunzru (1993) found that there was significant difference in the productivity levels of dairy animals as well as employment status of rural women between members and non-members of dairy cooperative system. Productivity of dairy animals increased with the adoption of a greater number of dairy farm technologies such as A.I., vaccination of animals, cultivation of green fodder and feeding green fodder or concentrates, simultaneously it also generated employment for rural women.

The data in study conducted by Tripathi and Kunzru (1993) were collected from 192 rural women owning dairy animals from 12 village of two blocks of Bareilly district, Uttar Pradesh, India. Of these, six villages were members of a dairy cooperative. Significant differences in the productivity levels of dairy animals as well as employment status of rural women were found between member and non-member dairy cooperative systems. Productivity of dairy animals increased with the adoption of a greater number of dairy farm technologies such as AI, vaccination of animals, cultivation of green fodder and feeding green fodder or concentrates, proportionately also generating employment for rural women.

A positive and highly significant relationship was found between productivity of dairy animals and employment status of rural women.

Gupta (1994) revealed that on average, about 51 per cent of income which is derived from dairy farming, was the highest percentage being earned by the landless labourers. On an average, 194 man-days of employment are generated through dairy farming and it is a joint family affair where each member has a different responsibility such as fodder collection, milking, marketing of milk, etc. In addition, dairying was helpful to improve the nutritional status of the family.

Kunzru and Tripathi (1994) carried out a study in 12 villages of Bareilly district in Uttar Pradesh, India, on 96 rural women dairy farmers who were members of the dairy cooperative system (MC) and 96 rural women dairy farmers from non-member villages (NMC). In both the MC and NMC systems, all the respondents owning land were cultivating green fodder. All other technologies were found adopted at higher levels in MC systems than in NMC systems. Approximately, 23 per cent of respondents of the MC system fell into the high level of overall adoption against approximately 5 per cent of respondents in NMC system. Further, mean scores of adoption with regard to all the five technologies investigated were found to be higher in MC system. Correlation analysis revealed a positive and highly significant relationship between adoption and family education status, family land holding, innovation proneness, orientation towards competition, level of aspiration, knowledge level, attitude towards dairying, attitude towards dairy cooperatives and attitude towards augmenting productivity of dairy animals.

Mishra (1994) reported that there is nowadays widespread concern in gender studies over women's exploitation, oppression and domination by the patriarchal Nepalese society. The focus here is on gender in milk producer associations (production, processing and marketing) in peasant farm households. Data from field work carried out in 1992 in the four districts of the Eastern Development Region, emphasizes the importance of women's domestic and productive roles to research and policy. It makes a number of recommendations viz., the introduction of awareness programmes, gender stratification with regard to land, caste and religion, increased participation of women and greater access for them to training and credit, and special government policies for women.

Thomas Slayter and Bhatt (1994) studied the transformation of the rural livelihood system in Ghusel Village Development Committee, Lalitpur District, Nepal, as it moves from subsistence agriculture to integration with the cash economy by means of livestock production in which villages maintain buffaloes and provide milk for the Kathmandu market. It is indicated that buffalo keeping and milk sales have increased the well being of many households, while at the same time creating inequalities in gender roles and responsibilities, greater inequalities between Brahmin and Tamang residents, and put pressure on the ecosystem for increased supplies of fodder and fuelwood. Evidence suggests that there is a critical need for attention to be given to the social and particularly gender based, implications of maintaining livestock for milk sales and to the ecological underpinnings of this livelihood system.

Tripathi and Kunzru (1994) conducted a study of the dairy cooperative Bareilly Dugdh Utpadak Sahkari Sangh Ltd. (Bareilly District, U.P.) regarding milk production, consumption and disposal behaviour of rural dairy owners. Data were collected from 16 women in each of 6 member (MC) and 6 non-member (NMC). For MC and NMC households, respectively average milk production was 5.55 and 3.29 litres/day of which 1.78 and 1.98 litres was consumed (average family members 6 and 6) and 3.77 and 1.31 litres marketed. The MC households sold their surplus milk to the dairy cooperative, whilst NMC households sold their milk through a middleman or direct to the consumer, with 40.6 and 16 per cent selling liquid milk and 27.1 and 34.4 per cent selling milk products via the two channels, respectively. Milk and milk products were sold locally by 54, at the weekly market by 13 and at the town market by 47 of the 96 NMC households.

Mullins (1995) revealed that household welfare was significantly improved as a result of incorporating dairying enterprise into small land holder's crop based farming system. Income and milk consumption were the benefits of the National Dairy Development Programme (NDDP) intensive dairy package with 97 per cent of the farmers reporting increased household income.

Tripathi and Kunzru (1995) conducted study in six villages which were member (MC) and 6 villages which were not (NMC) member of dairy cooperatives in Bareilly district, Uttar Pradesh to study the dynamics of employment of 192 rural women in dairy enterprise. The study revealed that in the MC system approximately 67 per cent of rural women were

employed in dairying at home as compared with 43 per cent women in the NMC system. Approximately 69 per cent of rural women in each of the system were involved in 9-18 dairying related activities relating mostly to feeding and management of livestock and processing of livestock products. However, 34 per cent of rural women from the MC system were involved in > 18 activities as compared with 23 per cent women in the NMC system.

A study was conducted by Tripathi *et al.* (1995) in Bareilly district of Uttar Pradesh to determine the level of knowledge of farm women concerning dairy farm technology in member (MC) and non-member dairy cooperative (NMC) systems. One hundred ninety-two farm women belong to MC (96) and NMC (96) systems from 12 villages were interviewed. Majority of respondents in systems had a medium level of knowledge about AI, contagious diseases and vaccination, green fodder cultivation, green fodder feeding and concentrate feeding. About 29 per cent of respondents from MC had a high level of knowledge compared with about 11 per cent from NMC. Technology-wise, the direction of professional knowledge held was from medium to low level. A high correlation was found between the knowledge level concerning dairy farm technologies and their adoption by the respondents. A significant correlation between knowledge of five dairy farm technologies studied, except green fodder cultivation, was also found to be significantly related with respondent's attitude towards dairy cooperatives and towards productivity of their dairy animals.

Bhatt (1996) discussed the status of women in the dairy industry in India, particularly those in rural areas where work is hard and earnings

poor. Ways in which these women can be brought into the mainstream of dairy development, the channels through which they may gain access to information on modern dairying in order to attain full employment at the household level and the structure of industry needed to enhance the women's capacity to be self-reliant and illustrated through the experiences of SEWA Women's Dairy Cooperative (an organization of 158000 women in Gujarat) in fodder development and distribution in Banaskantha.

Chandra (1996) studied the development by the Pradeshi Cooperative Dairy Federation Ltd., Lucknow in Uttar Pradesh, India of a project to implement family planning, maternal and child health care and women centred development projects. The regular daily operation of the village dairy cooperative societies (DCS) provided a mechanism through which the project could be operated. The project was implemented for two years in Meerut and Sitapur, with 43 and 22 DCS, respectively. The funding aims, and organization of the project were examined. It was concluded that the professional business relationships that were already established through the DCS made the uptake of contraception and mother and child health schemes far greater than many other projects had achieved.

Kumar and Sharma (1999) found in their study that rural dairy cooperative society had been successful in improving the socio-economic conditions of milk producers, belonging to the weaker section. The milk producers were found to be benefited directly through enhanced income as well as indirectly in a number of ways through milk cooperatives. These benefits include weekly cash payments for milk, ready market for surplus milk, veterinary services for animals, subsidized cattle feed and free A.I. services.

of dairy cooperatives and milch animals population, milk production and supportive services created through different dairy development programmes in Bihar, India. It also dealt with the temporal and spatial distribution of milch animal, managerial performance of dairy cooperatives, bovine mix, supporting services, periodicity of income and socio-economic characteristics of cooperatives. Constraints faced by cooperatives and their members were identified. The study is based on primary data collected from 1440 dairy farmers (720 members and 720 non-members) from 60 dairy cooperatives in Patna and Barauni milk sheds for the period 1991-93, as well as secondary data from relevant departments. The study reports that despite progress in the organization of cooperatives, coverage of membership and milk collection, dairy cooperatives have failed to exert any positive influence on the bovine mix, milk production and consumption of participant households. Poor representation of weaker section of society in the organizational positions, longer tenure of secretaries, and passive participation of members in decision making were identified as the major constraints in the smooth functioning of dairy cooperatives. The benefits of dairy cooperatives were enjoyed by the economically and politically powerful rural elites while the landless households of low castes were excluded.

Jose *et al.* (2000) discussed the optimal product mix programme that Goa State Cooperative Milk Union Limited should adopt to maximize its profit and effectively compete with private dairies, including multinational companies, in India. Linear programming model was used to estimate optimum product mix. The optimization model was designed

to determine the quantity of milk products to be manufactured in order to determine the optimum product mix which maximizes the total profit, subject to various types of constraints (resource, milk consumption requirements, total sales, milk supply and budget). The optimal product mix programme model suggested a readjustment in product mix and magnitude which comprised of standard milk, flavoured milk and curd production level were on a higher side than existing level, while ghee and butter production were low from existing level.

Koli (2000) concluded that devoted leadership along with disciplined working of staff, cooperation of the state government and NDDDB and members' response to the union have cumulatively contributed to the progress and prosperity of the Kolhapur District Cooperative Milk Union. The efforts of this prosperity have percolated to the villages it serves and benefits in cash and kind are accrued by all the members.

Mamatha and Hiremath (2000) reported that 160 respondents from two sets of villages from Tiptur taluk of Tumkur district (one located within and another beyond a radius of 10 km from the taluk headquarters), Karnataka, India, having institutions like Mahila Mandals, cooperatives and Mandal panchayats, were selected in a survey conducted during 1996-97. From each set, the list of target groups like small and medium farmers, artisan and landless labourers was established. Medium category farm women had high participation in cooperatives, Mahila Mandals and Mandal panchayats followed by those in the small category. However, women in the artisan category participated only in cooperatives and Mahila Mandals and artisan women only in Mahila Mandals. Membership percentage of

small, medium, artisan and landless labour category farm women in dairy cooperatives were 45, 52, 12.5 and 12.5 per cent respectively. Artisan women (21%) had higher participation in Mahila Mandals than small and medium category women (both 15%). Only small, medium and artisan women participated in trainings, demonstrations and other extension activities.

Nisha and Subramanian (2000) in a study reported the level of participation of women in dairy cooperatives and the constraints in participation. Data were collected by personal interviews with women members from four women societies from Erode and Modakurichi blocks of Periyar district in Tamil Nadu, India. It was indicated that there is a low level of participation in dairy cooperatives. Social mores and taboos, excessive burden of household works and responsibilities and distant location of the society were felt as major constraints.

Rao and Reddy (2000) conducted study on a group of 120 members of All Women Milk Producers Cooperative Societies (AWMPCS) in Chittoor district of Andhra Pradesh, India, and revealed that 60 per cent of them have medium level of knowledge about scientific dairy production. The dairy women from strong AWMPCS have significantly higher knowledge than the members from weak AWMPCS. It was also found that the members of strong AWMPCS had higher socio-economic status, education, land holding, house, farm power possession material possession, herd size, extension contact level of aspiration, information seeking behaviour and technical input service facilities as compared to the members of weak societies.

Koli and Goel (2001) conducted an empirical study of a large scale

cooperative milk union in Kolhapur district, Maharashtra, India, which has contributed to socio-economic transformation in the area of its operation. It was suggested that devoted leadership along with disciplined working of staff, cooperation of the state government, National Dairy Development Board and members' response to the union have cumulatively contributed to the progress and prosperity of the Kolhapur District Cooperative Milk Union. The union had thus functioned as an engine of rural upliftment.

Rajorhia (2001) discussed the potential of a two dimensional growth of the Indian dairy industry by setting up an apex body in the Indian Dairy Association which will tap the financial participation of the central and state governments to undertake promotional, coordination and financial assistance for over all development of dairying in both cooperatives and private corporations in India.

Subburaj *et al.* (2001) examined the socio-economic conditions of members of dairy cooperatives in Dindigul district, Tamil Nadu, India and assessed the members' perceptions of the social impact of dairy cooperatives. Results show that members of dairy cooperatives are likely to have greater perception of the social, democratic and empowerment benefits of dairy cooperatives.

Tiwari and Arya (2001) identified critical factors behind the success or failure of milk producers' cooperative societies in Bareilly district, Uttar Pradesh, India based on interviews with members of one successful cooperative and another that was not successful. Milk cooperative societies were observed to be successful in cases where sincere, polite, honest and concerned leadership is visible. Milk cooperative societies were also more

successful in remote areas where there is no other alternative marketing infrastructure for milk. It was suggested that members of cooperative societies should be trained in the rules and regulations of the society as this would help in checking malpractices and corruption that lead to failures.

Tiwari and Arya (2001) revealed that average milk production and consumption per day and increased income through milk was comparatively more among members of successful cooperative society.

Deepti (2002) reported that majority of the beneficiaries did not have complete knowledge of various aspects of WDC but still women beneficiaries had more knowledge about sale and consumption pattern of milk and also aware of various support services in the form of subsidy available at WDC as compared to other aspects which is organizational, training and educational programme and objectives of WDC.

## **2.7 Constraints faced by members of dairy cooperatives**

### **Personal constraints**

Patel (1983) reported that it was big problem for the landless farm labourers to produce green fodder for the buffaloes and cows.

Kaushik and Singal (1993) found that distant location of dairy cooperative from home and difficulty in taking milk to center were major constraints in milk supply to society.

Nisha and Subramanian (2000) revealed that social morals and taboos, excessive burden of household works and responsibilities and distant location of the society were felt as major constraints by the members.

### **Educational constraints**

Manappa and Desai (1973) stressed that periodical appraisal and training of cooperative personnel is essential.

Dubey and Singh (1976) revealed that majority of rural crossbred cattle owners did not have knowledge regarding time of feeding colostrums to calves and that of feeding mineral mixture and providing salt licks.

Kaushik and Singal (1993) found the lack of knowledge about government help in the form of purchasing animals feed and lack of knowledge about advantages of dairy cooperative society at the producers' level as the major constraints faced by its members.

Nath (1996) found that lack of knowledge about feeding, breeding and management were major constraints at the producer's level.

### **Organizational constraints**

Patel *et al.* (1975) found in their case studies that low caste producers' milk was turned away by cooperatives controlled by dominant castes.

Kamat (1976) observed village faction and existence of vested interest as the weaknesses of the primary societies responsible for inadequate coverage of small farmers and agricultural labourers in cooperatives.

Kohli (1978) reported that major problem in dairy cooperative which hinders its growth were management in handful of elected members who had no knowledge of management skill. Lack of proper organization and coordination was another constraint faced by the members of cooperative society.

Rajaram (1983) indicated that the society suffered as a result of frauds by the society members.

Rajaram and Vithal (1986) concluded that factional tussle and caste dominance affected milk cooperative societies severely.

Singh (1994) observed that dairy farmers felt that veterinarians gave more attention to village leaders and was rated as a serious constraint.

Aggarwal and Rahman (1996) concluded that lack of finance and credit facilities to cooperative milk societies, high cost of imported equipments needed for cooperative dairying and absence of cooperation amongst members of cooperative milk societies and dairy units were the major problems of cooperative dairies in Western Uttar Pradesh.

#### **Animal health care and management constraints**

Saini (1975) reported that easy availability of natural service, poor conception rate and inadequate facilities for A.I. were the important constraints in adopting A.I. for cross breeding.

Tomer (1978) and Singhal (1979) stressed that A.I. centers should be well equipped and expert services should be made available at least once a week, besides the provision of proper transport facilities to supply semen to required places. It was further noted that less equipped A.I. centers also contribute to the failure to A.I. projects.

Sharma (1980) found lack of knowledge, poor results of A.I. in buffaloes and too much repeat breeding in A.I., as the major constraints which impede the utilization of services and facilities of ICDP.

Pathak (1987) suggested the ways of maintaining the milk procurement system of Anand type village cooperative societies during

drought. He stressed on availability of feed to meet the requirements of different types of animals, good animal health and extension services and providing the drought relief through the societies.

Shrotri (1989) revealed that unavailability of timely A.I. facilities, distantly located A.I. centers, lack of supply of FMD and HS vaccine even on payments, unavailability of emergency veterinary services were the major constraints perceived by the farmers.

Thakur *et al.* (1989) found that scarcity and non-availability of fodder and cattle feed, lack of technical guidance and non-availability of mobile and emergency visits of veterinarians as the main constraints.

Verhagen (1990) reported that non-availability of fodder was most likely to hold down the participation of the poor in dairying.

Singh and Prasad (1998) revealed that inadequate flow of supporting services like animal health, artificial insemination and supply of feeds were major constraints in dairy cooperative system in Bihar.

Singh and Chauhan (2000) found lack of supply of FMD and HS vaccine, problem of obtaining veterinary aids at farmers' door and less qualified staff working at the center for the technical assistance to the farmers as major constraints perceived by member milk producers.

### **Milk production, supply and payment constraints**

Dubey *et al.* (1977) reported that the milk tester and secretary were accused by the members. The executives of the milk producers cooperative societies were quite sore over triple handling. They were often found fighting with plant staff for recording low yield low fat percentages and milk spoilage.

CED (1982) observed that even those producers who supplied milk to cooperative unions did not get remunerative price for it. The price paid by union did not cover the cost of milk production.

Verma and Rawat (1985) concluded that during the lean season, milk vendors offered highest price of milk, they offered loan for purchasing animal, advance payments, which attributed to attract the farmers, while payments for milk by cooperative were usually delayed.

Rao (1986) found no facility to sale small quantity of milk, malpractices in fat determination, irregular payment and low cost of milk as major problems.

Gopala and Maraty (1989) revealed that majority of the respondents perceived “low price of milk for a litre” as a main problem followed by “delay in payments”.

Shrotri (1989) revealed that unsuitable time of milk collection from milk producers, no facility to sell small quantity of milk and more milk sample were the major constraints faced by producers.

Gupta and Raj (1995) revealed that the proportion of the milk production retained for household consumption was as high as 73 per cent and the marketed surplus was only 27 per cent.

## **2.8 Managerial effectiveness**

Reddin (1970) opined that effectiveness is not a quality, a manager brings to a situation. It is achievement of results and the accent is on performance and on actions relative to goals.

Rangnekar (1976) concluded that for the management to be effective, the managers need to be effective as management effectiveness is the sum total of managerial effectiveness.

Kirchoff (1977) pointed out that the organizational effectiveness emerges as the ultimate outcome of a combination of managerial effectiveness and factors not under the organizational control.

Ansari (1981) reported that a number of investigators have found the relationship between managerial effectiveness and managerial success to be very negligible.

Ansari (1981) and Dastidar (1986) observed that there is a clear-cut indication that salary progression and career progression in terms of promotion have frequently been used as a measure of managerial success.

Michael (1989) argued that the effectiveness in dealing with the subordinates is an essential aspect of managerial effectiveness. It was further emphasized that just by virtue of one being the boss one is not expected to deal with one's subordinate in a mechanical way.

Supriya (1997) pointed out that the need for power, need for achievement and need for affiliation have a bearing on managerial effectiveness.

Prasad (1998) viewed that the criteria of effectiveness are debatable as effectiveness is not one dimensional that can be measured and predicted from a set of clear-cut criteria. In a simplest sense, managerial effectiveness is a ability of the manager in making his best contribution towards the organizational objectives and goals.

### **Functions of management**

#### **Management**

Different experts have defined management in different ways. Some of the popular definitions are given below.

According to Henry Fayol (1949) to manage is to forecast and to plan, to organize, to command, to co-ordinate and to control.

In the words of Koontz (1969) management is the art of getting things done through and with people in formally organized groups.

McFarland (1979) defined management as the process by which managers create, direct, maintain and operate purposive organizations through systematic, coordinated and cooperative human efforts.

Koontz *et al.* (1982) stated that management involves the design or creation and maintenance of an internal environment in an enterprise where individuals working together in groups, can perform efficiently and effectively towards the attainment of group goals.

Burton and Thakur (1996) delineated the management is the process of planning, organizing, leading and controlling the resources of an organization in the efficient and effective pursuit of specified organizational goals.

Stoner *et al.* (1997) expressed that management is the process of planning, organizing, leading and controlling the work of organization members and using all available organizational resources to reach the stated organizational goals.

From the above mentioned definitions of management, it can be concluded that over the years the basic concept underlying management remained unchanged.

### **Planning**

According to Haynes and Massie (1973) planning is that function of a manager in which he decides in advance what he will do. It was further emphasized that it is a decision making process.

Koontz *et al.* (1982) viewed planning as an intellectual process, determination of course of action based on decisions of purpose, facts and considered estimates.

Turner (1985) suggested that useful planning must be done by managers with the assistance of planning staff. It was further stressed that providing good information to person at the right time in the appropriate context involves a lot of thought and is considered as planning.

Mehta (1990) revealed that a few senior bureaucrats were quite hostile to the idea of promoting staff participation in decision making and management whereas a few of senior bureaucrats thought that the staff participation would put a check on authoritarian tendencies among them.

Kulshreshtha (1994) observed that in a public organization, decision making is a matter of life and death and without it, an organization becomes 'still' and 'uncapacitated'.

Sharma (1994) revealed that in government organizations decision making is linked to several factors like bureaucracy, politician relationship, pressure groups within or out side government organization, effective communication system, standardization of rules and procedures, impartiality of implementation systems, competence and credibility of the subordinates and senior subordinate relationship including personal relationships at all the levels.

Ardekani and Haug (1997) revealed that by adopting a more comprehensive approach towards conceptualization of planning processes, we were able to assess the effects of organizational context on planning design dimensions. It was further stated that the important dimensions

included the extent of involvement of top management and line management in planning as well as the length of planning horizons.

According to Stoner *et al.* (1997) planning is a particular kind of decision making that addresses the specific future the managers desire for their organizations.

## **Organizing**

### **Organizational climate**

Hellreigel and Slocum (1974) suggested that an effective climate in a simple and static environment may prove to be dysfunctional in a dynamic and complex organization. At the same time, it should be noted that the climates of different organizational subsystems are seldom radically different. Therefore, instead of taking a fragmented view of climate in a particular subsystem, the total system may be more meaningful to study and analyze.

Jhamtani and Singh (1987) found that the personal development was ranked the poorest dimension in the existing environment and the organization was perceived by the employees as providing little opportunity to its members to develop their abilities and skill.

Samanta (1988) in a study on perception of motivational climate noted that a very high percentage (72.6%) of scientists felt that they had a congenial motivational climate in their research institutes.

Jhamtani and Singh (1992) concluded that effectiveness of any organization and more so that of the developmental non-profit organization depends to a large extent on how well it is organized and how the employees perceive its organizational climate.

Davies (1994) found that organizational climate has a major influence on motivation, productivity and job satisfaction. It was further suggested that employees start expecting certain rewards, satisfaction and frustrations based upon their perception of the organizational climate. These expectations influence their motivation, as explained by expectancy theory.

According to Rao and Narayana (1997) organizational climate is global expression of what the organization is.

### **Delegation of authority**

Sharma (1981) emphasized that effective delegation is the foundation to success of all organizations, especially in public sector where ownership is abstract and beneficiary happens to be the entire society. It was further highlighted that the process of delegation becomes difficult and halting, since the objectives of public sector are confused due to political interference and ideological debates.

Verma and Saha (1994) studied work culture in Indian development departments and revealed that 73.5 per cent of the managers in the developmental administration were found to be very much supportive to the employee and allowed them to work more freely. Similarly, 66 per cent of managers were following delegating system of management as they have properly sensed the employees, high job maturity and high motivation for work performance.

Verma and Chander (1995) found that the delegation of authority is exercised by extension managers maximum in T and V extension system to the extent of 90.92 per cent. While this system is a much better system than other extension systems with respect to delegation of authority.

Burton and Thakur (1996) indicated that delegation is also seen as a form of job enrichment that will result in greater subordinate productivity and job satisfaction.

Verma and Mehrotra (1997) investigated the professional orientation of extension personnel and observed that a group of extension professionals believes to carry on the development projects with the concept of using volunteers and local leaders. The delegation of powers to volunteers is very vital to the extension professionals. However, it is not true in case of subject matters specialists (SMS) professionals who rely more on their ability to carry on their projects.

#### **Span of control**

Kulkarni (1970) noted that many a times in a day to day working, the span of control becomes wider and sometimes a stage is reached when an executive finds it extremely difficult to control the working of his subordinates.

Waghmare and Patel (1974) followed the method of paired comparison to measure perception of administrative organization principles. It was concluded that an organization is effective when an administrator is able to control a definite size of group effectively.

Peters (1988) surveyed that the basic structural issues, such as span of management are the most appropriate issues for Chinese managers.

Verma and Chander (1995) studied organizing innovations in management of extension systems. It was found that upto 5 subordinates were supervised by 65.54 per cent of the extension managers and 34.46 per cent were controlling more than 5 subordinates. It was further revealed

that 68.92 per cent extension managers were of the opinion that the supervisory levels in their respective extension systems, were normal whereas 25.67 per cent of extension managers felt that there were too many supervisory levels in their extension systems.

Burton and Thakur (1996) reported that the optimal span of management is influenced by the preference of both managers and subordinates. Some managers simply prefer to monitor subordinate performance much more closely, and this preference limits the effective span of management.

Stoner *et al.* (1997) suggested that choosing an appropriate span of management requires weighing of factors such as the environment and the capabilities of both managers and employees.

## **Leading**

### **Leadership style**

Hofsfede (1980) reported that in nations where power distances between people are smaller, there is greater acceptance of democratic leadership styles. It was further emphasized that leadership in any culture must make concessions both to subordinates and culture that conditions the attitudes and behaviours of managers.

Singh and Verma (1986) studied managerial leadership style of three different management hierarchies in scientific organizations. It was found that higher the status in administrative hierarchy, greater the amount of autocratic style. It was further revealed that the Deans and Directors are more autocratic with lower cadre functionaries as compared to immediate subordinates.

Regarding the leadership style, Islam *et al.* (1987) found that only 20 per cent of the Barangay council officials had a distinct leadership style, i.e. they were either autocratic or democratic or laissez-faire. The leadership of the rest 80 per cent was flexible or situational.

Gilbert (1988) observed that the managers in all foreign operations were encouraged to create organizational structures and leadership styles which were compatible with local cultural situations and employees expectations.

Michael (1989) concluded that the number of factors which supported the leadership style were personality, task characteristics, task roles, group characteristics, existing government regulations, behaviour, response and reactions of the people and organizational climate.

Stoner *et al.* (1997) opined that most managers lean towards the leadership style favoured by the organizations top ranking executives.

### **Motivation**

McClelland (1983) suggested that managers can raise the achievement, need level of employees by creating the proper work environment. Managers can do this by permitting the employees a measure of independence, increasing responsibility and autonomy, gradually making tasks more challenging and praising and rewarding their performance.

Michael (1989) opined that better the motivational tool greater would be its effect on the individual behaviour since motivation is a morale booster.

Mayo (1993) disclosed that the need for affiliation has been cited as a reason why “telecommuting” working from one’s home via tele-

communications lines to the office has not become as widespread in urban areas as predicted. It was further pointed out that many people, not surprisingly wanted to be around their co-workers.

Prokopenko (1995) suggested that people perform better if the reward for their work is tied to actual performance. It was further emphasized that the performance factors such as attitudes, effort, quality of work and attendance should also be taken into consideration. Incentives both financial and non financial should be explicitly built into the appraisal process.

Lindner (1998) studied the motivational factors of employees. It was reported that employees ranked interesting work (self-actualization factor), good wages(physiological factor), full appreciation of work done (esteem factor), job security(safety factor) in decreasing order. It was further emphasized that the study did not conform the Maslow's conclusions that lower level motivational factors must be met before ascending to the next level.

### **Controlling**

Koontz *et al.* (1982) defined that the managerial function of controlling is the measurement and correction of the performance of activities of subordinates in order to make sure that enterprise objectives and the plans devised to attain them are being accomplished.

Rao and Rao (1983) studied organizing of personnel functions in Indian railways. It was concluded that every manager performed some basic functions, irrespective of his department and level in an organization viz., planning, organizing, staffing, directing and controlling. Though

the manager formulated brilliant plans and used effective measures of direction and sophisticated controlling techniques, he would not be regarded as an efficient manager unless he directs the human resources on appropriate lines and controls them in a sound manner.

Mockler (1984) emphasized that the management control is a systematic effort to set performance standards with planning objectives, to design information feedback systems to compare actual performance with these predetermined standards, to determine whether there are any deviations and to measure their significance and to take any action required to assure that all corporate resources are being used in the most effective and efficient way possible in achieving corporate objectives.

Rao and Narayana (1997) concluded that it is vital in every organization to know the reactions of employees for various types of controls imposed on them. It was further emphasized that unless a certain amount of control over the human element is exercised, organizational personnel would tend to pursue their own goals, needs and most likely to adversely affect the organizational efficiency.

Stoner *et al.* (1997) pointed out that control is a dynamic process, unless managers see the control process, they are merely monitoring performance rather than exercising control. It was further suggested that emphasis should always be on devising constructive ways to bring performance upto standard, rather than merely identifying past failures.

#### **Communication skills**

Parshad and Sandhu (1974) revealed that majority (46.53%) of village level workers (VLWs) were having medium level of communication

skills, only 15.97 per cent VLWs were having low level of communication skills and a little more than one-third of the VLWs were found to have high level of communication skills.

Humphreys and Bolton (1980) emphasized that listening is an important part of the communication process and managerial effectiveness depends on communication skills. Just as other skills require development, so does effective listening. The manager who recognizes this will reap benefits that far outweigh the efforts.

Radhakrishna *et al.*(1992) used Likert scale to assess the job performance of Extension Directors. It was found that the communications and job knowledge dimensions indicated that County Extension Directors (CEDs) perceived themselves as efficient in communications and knowledge required for the CEDs job.

Kaushik and Verma (1996) revealed that the inter-personal communication behaviour of research workers was of low extent.

## CHAPTER – III

# RESEARCH METHODOLOGY

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The objective of this chapter is to describe the methodological steps and techniques adopted in conducting the present investigation. The study being exploratory in nature has been carried out through field survey. The research procedure adopted has been distinctly described under the following sub-heads:

- 3.1 Locale of the study
- 3.2 Sampling procedure
- 3.3 Variables and their measurement
- 3.4 Tools and techniques of data collection
- 3.5 Analysis of data

### **3.1 Locale of the Study**

The study was conducted in Bihar state because Bihar Women Dairy Project (BWDP) is regarded as a successful co-operative for augmenting income of rural families by directly involving the rural women from poor households in dairying enterprise. Map of Bihar state showing the study area is presented in Fig. 1.

### **3.2 Sampling Procedure**

Multistage sampling procedure was adopted for the selection of milk unions, districts, villages and respondents. At the first stage both the milk

**BIHAR**

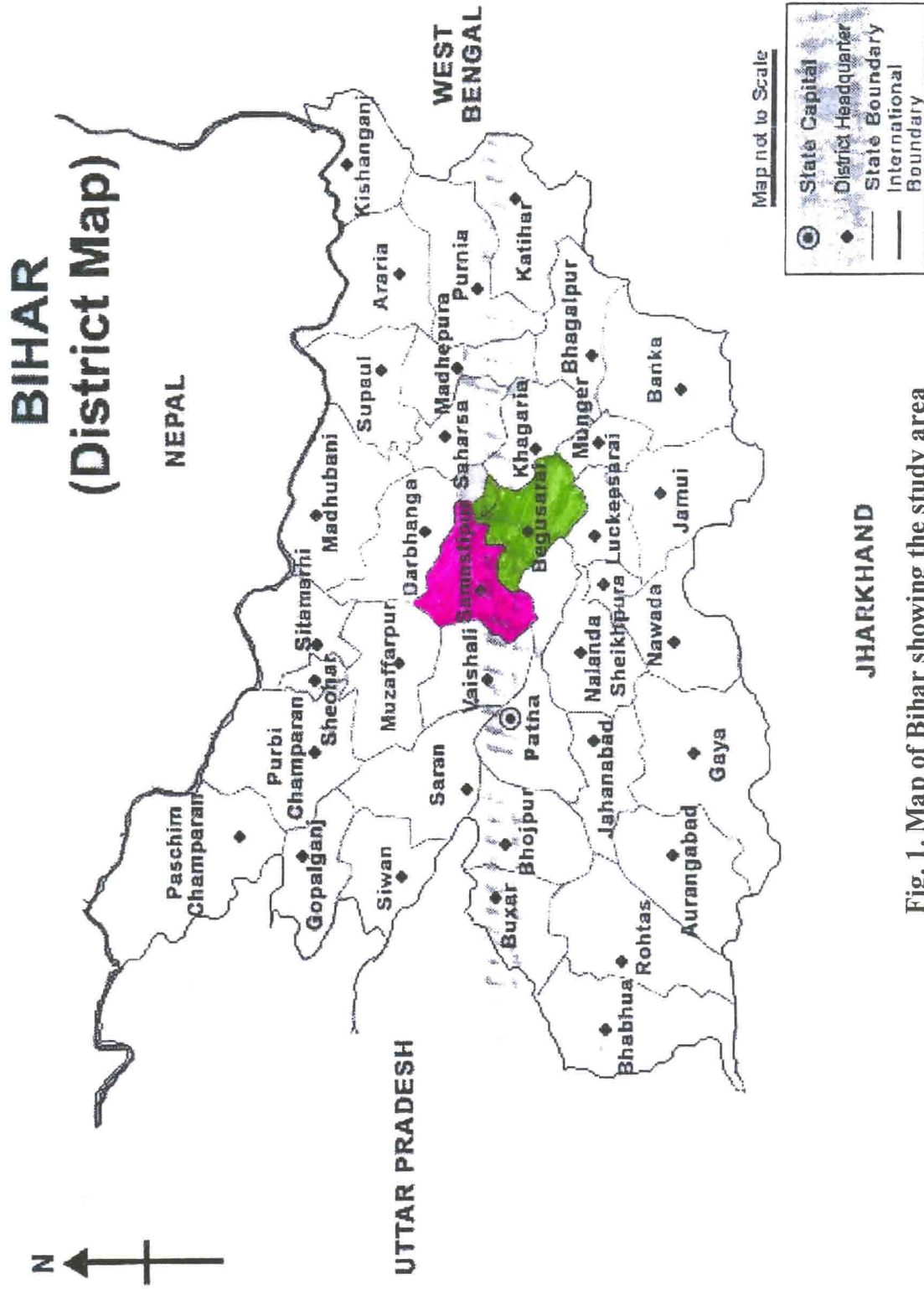


Fig. 1. Map of Bihar showing the study area

unions, at the second stage two districts, at the third stage twelve villages and at the last stage 300 respondents were selected. The selection procedure is described below and diagrammatically explained in Fig. 2.

### **Selection of milk unions**

Both the milk unions in Bihar i.e. Barauni Milk Union, Barauni and Mithila Milk Union, Samastipur were selected purposively.

### **Selection of districts**

Begusarai district from Barauni Milk Union and Samastipur district from Mithila Milk Union were selected purposively based on good performance of women dairy cooperatives.

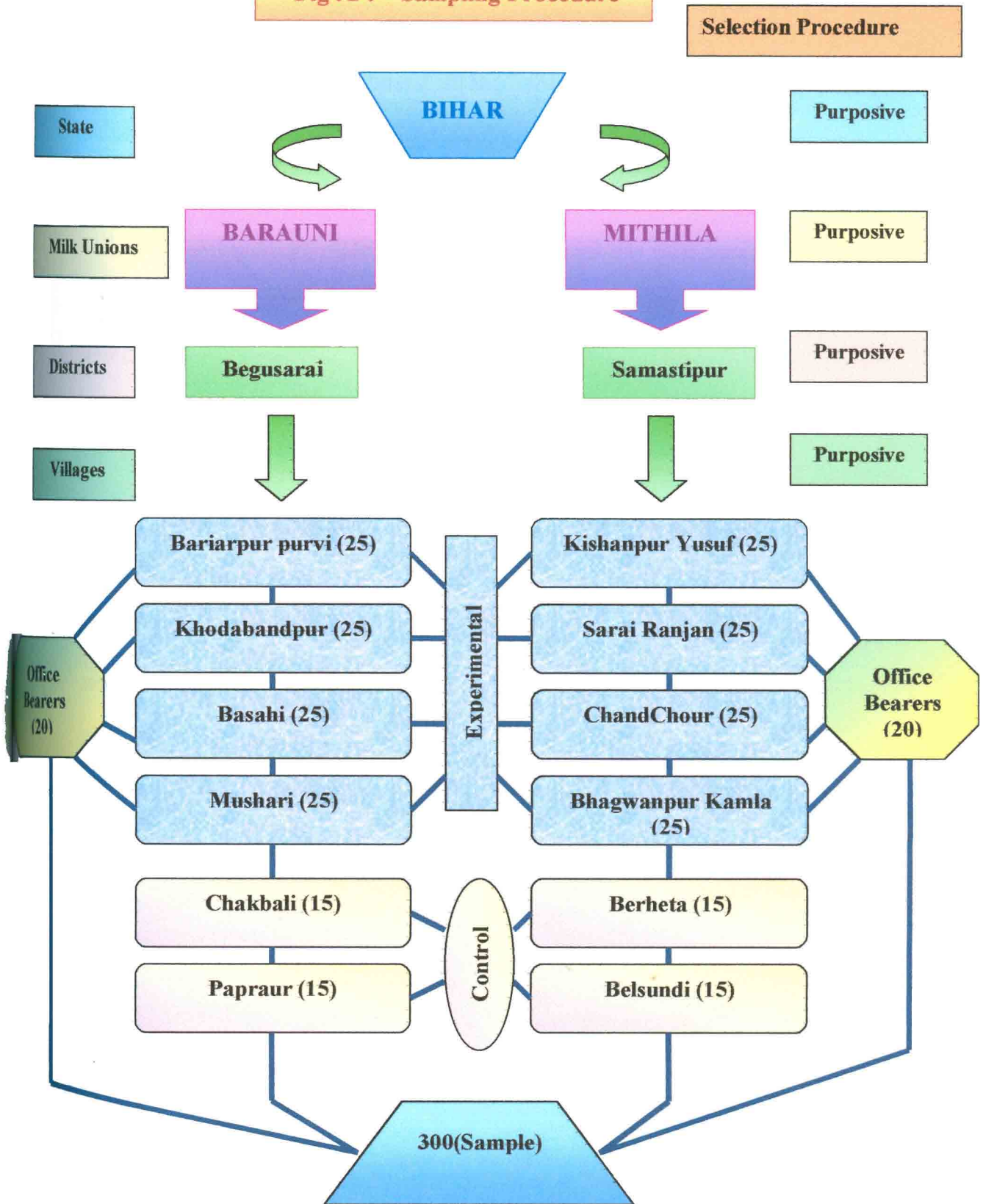
### **Selection of villages**

The list of villages under the selected districts where women dairy co-operatives were in successful operation for atleast last five years were procured from the respective milk union offices. Further, six villages from each of the two districts were selected purposively with four villages per district acting as an experimental group and the other two villages per district as control group. The selected villages as experimental group were Bariarpur Purvi, Khodabandpur, Basahi and Mushari from Begusarai district and Kishanpur Yusuf, Sarairanjan, Chandchour and Bhagwanpur Kamla from Samastipur district and the control villages were Chakbali and Papraur from Begusarai district and Berheta and Belsundi from Samastipur district.

### **Sample selection**

The requirement of the study demanded two sub sample units. The sampling procedure for selection of respondents followed is as under.

**Fig .2 :- Sampling Procedure**



(Note : Figures in parentheses indicate sample size)

**For objective 1 to 3**

List of women members of the women dairy co-operatives in all selected villages were obtained and a random sampling of 260 women respondents i.e. 100 beneficiaries per district (25 women members per village) acting as an experimental group and 30 non-beneficiaries per district (i.e. 15 women non-members per village) as control group were selected.

**For Objective 4**

Through the methodology of random sampling, 40 office bearers (5 per village) were selected from villages where the co-operative had been functioning.

Thus, the total sample comprised of 300 respondents (260 rural women and 40 office bearers).

**3.3 Operationalization and Measurement of Variables**

The relevant variables for the present study were selected on the basis of extensive review of literature, consultation with experts and a pilot study conducted in the area of investigation.

**Selected variables and their measurements**

The list of selected variables and the procedure followed for the measurement have been described underneath.

### 3.3.1 Variables and their measurements

#### Variables and their measurements

Sr. No.	Variables	Measurement
<b>Independent variables</b>		
<b>1.</b>	<b>Personal variables</b>	
*	Age	Chronological
*	Education	Schedule developed
*	Marital status	Schedule developed
*	Type of family	Schedule developed
*	Size of family	Schedule developed
*	Family education status	Schedule developed
*	Social participation	Schedule developed
<b>2.</b>	<b>Socio-economic variables</b>	
*	Caste	Schedule developed
*	Occupation of male head	Schedule developed
*	Total annual income	Schedule developed
*	Land holding	Schedule developed
*	Type of house	Schedule developed
*	Material possession	Schedule developed
<b>3.</b>	<b>Communication variables</b>	
*	Mass media exposure	Scale, Kaur (1986)
*	Extension contacts	Scale, Kashyap (1988)
<b>4.</b>	<b>Entrepreneurial variables</b>	
*	Entrepreneurial motivation	Scale, Singh (1991)
*	Entrepreneurial traits	Scale, Singh (1991)
<b>5.</b>	<b>Dairy related variables</b>	
*	Herd size	Schedule developed
*	Place of animal shed and water availability for animal husbandry	Schedule developed
*	Distance travelled and time taken in carrying water	Schedule developed
*	Fodder availability	Schedule developed
*	Method used for judging milk quality	Schedule developed
*	Milk production consumption and sale	Schedule developed

<b>Sr. No.</b>	<b>Variables</b>	<b>Measurement</b>
*	Opinion and comparative profits from dairy enterprise	Schedule developed
*	Knowledge regarding products prepared and frequency of purchase	Schedule developed
*	Length of association with dairy cooperatives	Schedule developed
*	Average distance travelled, time spent and mode of travel upto collecting centre	Schedule developed
*	Reasons for choosing dairy enterprise	Schedule developed
<b>6. Resource system variables</b>		
*	Financial assistance availed	Index developed
*	Technical training availed	Index developed
*	Veterinary institutional infrastructural utilization	Scale, Khatik (1994)
<b>Dependent variables</b>		
<b>1. Specific empowerment</b>		
*	Personal	Index developed
*	Social	Index developed
*	Political	Index developed
*	Economical	Index developed
*	Technological	Index developed
*	Managerial	Index developed
*	Entrepreneurial	Index developed
2.	Overall empowerment	Index developed
3.	Enterprise satisfaction	Scale, Singh (1991)
4.	Impact	Index developed

**For objective 4**

**Managerial effectiveness of the office bearers**

<b>Variables</b>	<b>Measurement</b>
* Age	Schedule developed
* Sex	Schedule developed
* Educational background	Schedule developed
* Marital status	Schedule developed
* Caste	Schedule developed
* Residence	Schedule developed
* Length of service	Schedule developed
* Planning	Schedule, Sharma (1999)
* Organizational climate	Scale, Burton (1990)
* Organizational commitment	Scale, Rani (1991)
* Delegation habits	Scale, Krein (1982)
* Leadership style	Leadership questionnaire, Pfeiffer and Jones (1974)
* Motivation	Scale, Pfeiffer and Jones (1973)
* Controlling	Schedule, Sharma (1999)
* Communication skills	Scale, Burton (1990)

**3.3.1 Independent variables**

**Personal variables**

**Age**

Age was operationalized as the number of full years completed by the respondent at the time of interview. Actual age was recorded and categorized on the basis of maximum-minimum responses obtained, the age groups were categorized as:

<b>Age group</b>	<b>Score</b>
Young (23-36 years)	1
Middle (37-50 years)	2
Old (51-64 years)	3

### **Education**

Education was operationalized as the number of years of formal education acquired by the respondent and grouped as follows:

<b>Category</b>	<b>Score</b>
Illiterate	0
Can read only	1
Can read and write	2
Primary	3
Middle	4
Matriculate	5
Graduate	6

### **Marital status**

It was operationalized as the married or unmarried status of the respondent. It was measured with the help of schedule developed for the purpose and the following scoring pattern was followed:

<b>Category</b>	<b>Score</b>
Married	1
Unmarried	2

### **Type of family**

Type of family refers to family status of the family. Nuclear family is composed of members of only one person and includes his wife and children. Nuclear family was one where couple was living with their unmarried children, while a joint family was the one where couple lived with their married children, in-laws or other family members. Details of scoring are as follows:

<b>Category</b>	<b>Score</b>
Nuclear	1
Joint	2

### **Size of family**

Size of family refers to the total number of members in a family . It was measured with the help of schedule developed for the purpose based on number of members. Details are presented as follows;

<b>Category</b>	<b>Score</b>
Small (upto 4 members)	1
Medium (5-6 members)	2
Large (more than 7 members)	3

### **Family education status (FES)**

For the present investigation, family education was operationalized as the formal education obtained by the family members who were above six years of age. Family education score was calculated with the help of given formula

$$\text{FES} = \frac{\text{Total education score of the family}}{\text{Total number of eligible members of the family}}$$

and on the basis of minimum-maximum score obtained, it was categorized into three groups which are as follows:

<b>Category</b>	<b>Score</b>
Low (<2.0)	1
Medium (2.0-4.0)	2
High (>4.0)	3

### **Social participation**

It refers to the degree of involvement of the respondent in the formal organization either as member or as office bearer and measured as follows:

<b>Category</b>	<b>Score</b>
No membership	0
Member of a formal organization	1
Member of non-formal organization	2
Office bearer	3

### **Socio-economic variables**

#### **Caste**

Caste is an endogamous group where the status of an individual related to a group is determined by birth. There are numerous castes in India. For the present study, caste refers to the class or distinct hereditary order in the society. The categorization and scoring was done as follows:

<b>Category</b>	<b>Score</b>
SC/ST	1
Backward	2
Upper	3

#### **Occupation**

It was operationalized as the specific major work which the head of the family do to earn livelihood and was measured as follows:

<b>Category</b>	<b>Score</b>
No work	0
Labour	1
Caste occupation	2

Business	3
Farming	4
Government service	5
Private service	6
Any other	7

### **Total annual income**

It refers to the amount earned by all family members in a year from various sources viz., agriculture, dairy and other sources. This was operationally measured in terms of actual family income expressed in rupees. This was categorized as follows:

<b>Category</b>	<b>Score</b>
Low (below Rs. 25,000)	1
Middle (Rs.25,000-50,000)	2
High (above Rs.50,000)	3

### **Land holding**

This refers to the area of cultivated land in acres possessed by the respondents' family. It was measured as follows:

<b>Category</b>	<b>Score</b>
Landless (no land)	1
Marginal (upto 2.5 acres)	2
Small (2.5 - 5.0 acres)	3
Medium (5.0 - 10.0 acres)	4
Large(above 10.0 acres)	5

### **Type of house**

It refers to the type of house, possessed by the respondent at the

time of investigation. Kucha refers to made of mud and thatch, Mixed refers to made of mud or cement, brick and thatch and Pucca refers to made of brick, cement and concrete. The weightage was assigned as:

Category	Score
Kutchu	1
Mixed	2
Pucca	3

### **Material possession**

It refers to household gadgets available within the respondents family. It was measured on scheduled developed for the purpose. Categories formed under this were as follows:

Category	Score
Low (1-16)	1
Medium (17-32)	2
High (33-48)	3

### **Communication Variables**

#### **Mass media exposure**

Mass media exposure has been operationalized as the degree to which a respondent has exposure to mass media viz., radio, television, newspaper and magazine. Scale of Kaur (1986) was used to measure the extent of exposure. On the basis of total scores responses were divided into three categories as under:

Category	Score
Low (<6)	1
Medium (6-12)	2
High (12>)	3

### **Extension contact**

This is the degree of contact of the respondent with extension functionaries. The variable has been operationalized as the intensity or extent of contact of the respondent in terms of frequency of contact with extension personnel and was measured with the index developed by Kashyap (1988). The scores assigned are as follows:

<b>Category</b>	<b>Score</b>
Frequently	3
Occasionally	2
Seldom	1
Never	0

### **Entrepreneurial Variables**

#### **Entrepreneurial motivation**

In order to understand main motivating forces affecting entrepreneurial performance of the respondent it is essential to understand different motives. The proper understanding of such motives would be possible only if there has been some empirical measures for their quantification. Keeping this in view, the scale of Singh (1991) was slightly modified on basis of enterprise and used for measuring each motivation type i.e. affiliation motivation, economic motivation, self actualization, achievement motivation, risk taking ability and power motivation. These are as under:

**(i) Affiliation motivation:** Affiliation (belongingness) motive is the need to be loyal to the friends, neighbours, relatives and family members to participate in friendly groups to share ideas with them and to be in conformity with one's group in an enterprise.

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	7-14	1
Medium	15-22	2
High	23-30	3

**(ii) Economic motivation:** Economic motivation is the urge of the respondent to achieve occupation success in terms of profit maximization:

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	7-14	1
Medium	15-22	2
High	23-30	3

**(iii) Self actualization motivation:** Self actualization motivation is the need for self fulfillment, to realize potentialities and to become what one is capable of becoming in an enterprise.

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	7-14	1
Medium	15-22	2
High	23-30	3

**(iv) Achievement motivation:** Achievement motivation refers to the urge of the respondent to achieve some standard or accomplishment or proficiency.

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	7-14	1
Medium	15-22	2
High	23-30	3

(v) **Risk taking ability:** Risk taking ability refers to the degree to which an individual is oriented towards accepting risk and uncertainty.

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	5-11	1
Medium	12-18	2
High	19-25	3

### **Entrepreneurial Motivation**

The scores obtained in all the motivational categories described above was pooled. The categories on the basis of obtainable score are as under:

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	33-69	1
Medium	70-107	2
High	108-145	3

### **Entrepreneurial traits**

It has been operationalized as the extent of distinguishing entrepreneurial characteristics or qualities possessed by the respondent needed for running the enterprise efficiently. Scale of Singh (1991) that uses a semantic differential technique was used to give quantitative measurement to draw meaning of various entrepreneurial traits. Minimum-maximum obtainable score was divided into different categories. Score assigned to them are as under:

<b>Category</b>	<b>Range</b>	<b>Score</b>
Low	21-63	1
Medium	64-105	2
High	106-147	3

### **Dairy related variables**

**Herd size:** Herd size was operationalized as the number of dairy/ small animals possessed by the respondent. Details of categories as formed were under:

<b>Category</b>	<b>Score</b>
Small (upto 2)	1
Medium (3 to 4)	2
Large (5 and above)	3

**Animal shed and water availability :** It refers to the place of animal shed and availability of water for animals. The categories formulated were as under:

<b>Sr. No.</b>	<b>Category</b>	<b>Score</b>
1	Place	
	Within the house	1
	Adjoining the house	2
	Near the house	3
	Away from the house	4
2	Water availability	
	Available within the house	1
	Travel a short distance	2
	Carry from a long distance	3

**Distance travelled and time taken:** It refers to the distance travelled and time taken by the respondent in carrying water and was categorized as under:

Sr. No.	Category	Score
<b>1. Distance travelled</b>		
	< ½ km	1
	½ - 1 km	2
	Above 1 km	3
<b>2. Time taken</b>		
	< 15 min	1
	15-30 min	2
	Above 30 min	3

**Fodder availability:** It refers to the source for fodder availability, frequency of availability of fodder for dairying. The responses were obtained and categorized as under:

Category	Score
Never	0
Seldom	1
Frequently	2
Always	3

#### **Method used for judging milk quality**

This refers to the method used at society level by the women beneficiaries for judging milk quality and was categorized as under:

Category	Score
Organoleptic test	1
Lactometer test	2
Fat test	3
Starch test	4

#### **Purchasing and selling of animals**

It refers to the purchasing and selling behaviour of animals by the respondents. Responses were obtained and categorized as under:

Category	Score
Locally	1
Government institution	2
Dairies	3
Livestock mela	4

### **Milk production, consumption and sale**

It includes milk production, consumption and sale (litres) by members of women dairy cooperatives daily. Responses were obtained and categorized as under:

Sr. No.	Category	Score
<b>1. Production (litres/day)</b>		
	Low (1-3)	1
	Medium (3 - 9)	2
	High (9 and above)	3
<b>2. Consumption</b>		
	Low (upto $\frac{1}{2}$ )	1
	Medium ( $\frac{1}{2}$ - 2)	2
	High (2 and above)	3
<b>3. Sale</b>		
	Low (1-2)	1
	Medium (2 - 8)	2
	High (8 and above)	3

### **Opinion and comparative profits from dairy enterprise**

It refers to the respondents' opinion about profitable dairying and comparative profits from dairy enterprise. Responses were obtained and categorized as under:

Sr. No.	Category	Score
1.	<b>Opinion</b>	
	Highly profitable	4
	Moderately profitable	3
	Somewhat profitable	2
	Least profitable	1
	Not at all profitable	0
2.	<b>Comparative profits</b>	
	Increasing	2
	Decreasing	1
	No change	0

### **Knowledge regarding products prepared and frequency of purchase**

It refers to respondents' correct knowledge related to brand name under which milk is sold, products prepared and frequency of purchasing these products and was categorized as under:

Sr. No.	Category	Score
1.	<b>Brand name</b>	
	Incorrect	1
	Correct	2
2.	<b>Knowledge regarding products</b>	
	No	0
	Yes	1
3.	<b>Frequency of purchase</b>	
	Never	0
	Seldom	1
	Frequently	2
	Always	3

### **Length of association with dairy cooperative**

It refers to the duration of time with which the women beneficiaries were associated with dairy cooperative and was categorized as under:

<b>Category</b>	<b>Score</b>
5-7 years	1
7-9 years	2
9-11 years	3
11-15 years	4

### **Reasons for choosing dairy enterprise**

It refers to the reasons for choosing dairy enterprise by the women beneficiaries. Responses were obtained and categorized as under:

<b>Category</b>	<b>Score</b>
Own wish	1
Wish of family member	2
Government schemes were helpful	3
Motivated by neighbours/friends	4
Motivated by members of society	5
Motivated by extension agent	6
Availability of better vety. facilities	7
Help from family members in dairy	8
An economic enterprise	9
High social recognition in dairying	10

### **Resource System Variables**

#### **Financial assistance availed**

It is conceptualized as the assistance in the form of money provided by any agency or institution. It was categorized and scored as follows:

Sr. No.	Category	Scores
1.	<u>Amount (per year in Rs.)</u>	
	< 1800	1
	1800-3600	2
	3600 and above	3
2.	Agency (source)	
	Self investment	1
	Family members	2
	Relatives and friends	3
	Private money lender	4
	Government agency	5
	Non-Government agency	6
	Bank	7
	Women dairy cooperative society	8
	Self help group	9
3.	<u>Purpose</u>	
	Purchase of animals	1
	Purchase of dairy related equipment and machinery	2
	Purchase of fodder	3
	Animal sickness	4
	Animal health care	5
	Children education	6
	Medical treatment	7
	Social functions	8

	Marriage	9
	Agriculture purpose	10
	Purchase of cattle	11
4.	<u>Duration of loan repayment</u>	
	Very short term (upto 1 month)	1
	Short term (1-3 months)	2
	Medium term (3-6 months)	3
	Long term (above 6 months)	4

#### **Technical training availed**

It was operationalized as training availed by the women beneficiaries related to any aspect of dairy enterprise. Frequency to attend the various training programmes and the extent of benefits received by the women beneficiaries were scored as under:

<b>Sr. No.</b>	<b>Category</b>	<b>Scores</b>
1.	Frequency	
	Never	0
	Seldom	1
	Frequently	2
	Always	3
2.	Extent of benefits	
	Not beneficial	0
	Beneficial	1
	Highly beneficial	2

Based on the scores obtained by the respondents for each training, the weight mean score was calculated.

### **Veterinary institutional infrastructural utilization**

It refers to the information source utilized by the women beneficiaries. For measurement of this, scale of Khatik (1994) was used.

Score assigned was as under:

<b>Sr. No.</b>	<b>Information source</b>	<b>Indices score</b>
1.	A.I. centre	3.8
2.	NGO/KVK	4.8
3.	Govt. Primary Health Centre	2.2
4.	Welfare association	1.2
5.	Schools	2.7
6.	Bank	2.1
7.	Milk cooperative	3.2

Total scores thus obtained were categorized as:

<b>Category</b>	<b>Score</b>
Low (1.2 - 7.5)	1
Medium (7.6 - 13.9)	2
High (14.0 - 20.0)	3

### **3.3.2 Intervening Variables**

#### **Socio-personal traits**

##### **Age**

It refers to the chronological age of the office bearers. The age of office bearers were classified into three different age group as follows on the basis of maximum-minimum age.:

<b>Group</b>	<b>Score</b>
Young (32-39 yrs)	1
Middle (40-47 yrs)	2
Old (48-55 yrs)	3

**Sex**

It refers to the male and female office bearers in the organization.

This was categorized as follows:

Category	Score
Male	1
Female	2

**Educational background**

Educational background was operationally defined as the highest degree successfully accomplished by the office bearer at the time of investigation. This was categorized as follows:

Category	Score
Graduation	1
Post-Graduation	2

**Marital status**

It described the status enjoyed by the individual ascertained by an institution of marriage. Office bearers were classified into married or unmarried category with scores as under.

Category	Score
Married	1
Unmarried	2

**Length of service**

It was computed as the total number of years completed by the office bearers in the service of the organization. This was categorized into following categories:

<b>Category</b>	<b>Score</b>
Less than 10 years	1
10-20 years	2
More than 20 years	3

### **Managerial effectiveness**

Managerial effectiveness refers to the effectiveness of the manager in making his/her best contribution towards the organizational objectives and goals (Michael, 1989). The success of public sector organizations depends to a large extent upon the managerial effectiveness of the office bearers. Effectiveness is not one dimensional concept that can be measured and predicted from a set of clear-cut criteria. However, it can be defined mostly in terms of organizationally goal achieving behaviour. For the present study, it was operationally defined as the integration of effectiveness in managerial functions performed namely planning, organizing, leading, controlling and communicating. Details of these are discussed below:

#### **Planning**

Planning is generally regarded as a method of delineating goals and ways of achieving them. For the present study, it was operationalized as a mental exercise, which involves decision-making, differentiation between strategic and operational goals, use of planning tools and ensuring active participation of subordinates for the achievement of specified objectives of the organization. The planning ability of each office-bearer was assessed on the basis of statements of the schedule developed by Sharma (1999)

rated on five point continuum ranging from “always” to “never” attributed with their respective score from five to one. Office bearers were categorized on planning ability on the basis of cumulative frequencies as follows:

<b>Category</b>	<b>Score</b>
Low (16-21)	1
Medium (22-25)	2
High (26-31)	3

### **Organizing**

Organizing is the process of arranging an organization’s structure and co-ordinating its managerial practices and use of resources to achieve its goals (Verma and Chander, 1995). For the present study, it has been confined to organizational climate, organizational commitment and delegation of authority. Details are under:

#### **Organizational climate**

It refers to the opinion of the office-bearers towards prevailing communication, role, structure, responsibility and reward system in the organization. It was measured by using scale developed by Burton (1990). This consists of 15 items, both positive and negative quantified on a 5-point continuum ranging from strongly agree to strongly disagree. The office-bearers were categorized on the basis of obtained scores into categories as follows:

<b>Category</b>	<b>Score</b>
Low (1-10)	1
High (11-20)	2

### **Organizational commitment**

It refers to the effective attachment with the goals and values of an organization. It was measured with the help of scale developed by Rani (1991). This consists of 7 items both positive and negative rated on a five point continuum, ranging from strongly agree to strongly disagree. The office bearers were grouped into following categories on the basis of cumulative frequencies.

<b>Category</b>	<b>Score</b>
Low (19-23)	1
Medium (24-27)	2
High (28-31)	3

### **Delegation of authority**

It refers to the sharing or handing over of power, authority and responsibility to a subordinate. It was measured by using scale developed by Krein (1982). This comprised of 18 items, all negative statements quantified on five point continuum ranging from strongly agree to strongly disagree. Office bearers were grouped into four categories on the basis of their total obtained score.

<b>Category</b>	<b>Score</b>
Ineffective delegation (90-72)	1
Delegation habits need substantial improvement 71-54)	2
You still have room to improve (53-36)	3
Superior delegation (35-18)	4

### **Motivation**

The term 'motivation' has been derived from the word 'motive'. A motive is an inner state that activates, energizes or moves an individual behaviour towards a goal. Motivation is the art of understanding these motives and satisfying them to direct and sustain behaviour towards the accomplishment of organizational goals (Gupta, 1988). It was measured by using the scale of Pfeiffer and Jones (1973). This consists of 20 items, all positive statements. It was rated on 7 point continuum ranging from strongly agree to strongly disagree. Office bearers were categorized on the basis of cumulative frequencies into following categories:

<b>Category</b>	<b>Score</b>
Low (42-58)	1
Medium (59-70)	2
High (71-88)	3

### **Leadership style**

Leadership is a continuous process of influencing behaviour, while leadership style refers to the behaviour pattern, which a leader adopts in influencing the behaviour of group members (Gupta, 1988). For the present study, it was operationalized as the behaviour pattern, which reflects the degree of inclination towards task and people. It was measured with the help of modified leadership questionnaire developed by Pfeiffer and Jones (1974). This consists of 17 items, quantified on five point continuum ranging from always to never. Office bearers were grouped into three leadership styles on the basis of their obtained scores.

<b>Leadership style</b>	<b>Score</b>
Shared leadership (sharing of ideas)	1
Autocratic leadership (task oriented)	2
Laissez faire leadership (people oriented)	3

### **Controlling**

Controlling is the managerial process for measuring progress towards planned performance and when required, taking corrective actions (Burton and Thakur, 1996). For the present study, it refers to the measurement and correction of subordinate's performance with a view to ensure their adequate and satisfactory progress. For the measurement of this variable, schedule developed by Sharma (1999) was used. The office bearers controlling behaviour were categorized into following categories:

<b>Category</b>	<b>Score</b>
Low (4-7)	1
High (8-10)	3

### **Communicating**

Communication is the means by which organized activity is unified, behaviour is modified, change is effected and goals are accomplished, while sound communication promotes managerial and organizational effectiveness (Gupta, 1988). For the present study communicating was confined to communication skills of the office bearers. This was measured with the help of scale developed by Burton (1990). This consists of 18 items, both positive and negative quantified on 5 point continuum, ranging from strongly agree to strongly disagree. The office bearers communication

effectiveness was classified on the basis of cumulative frequencies as under.

<b>Category</b>	<b>Score</b>
Low (28-37)	1
Medium (38-42)	2
High (43-50)	3

The test contained 97 items, both positive and negative. The scoring was done according to the respective scale. The statements were intermixed to strengthen the validity of the managerial effectiveness test.

#### **Managerial effectiveness index**

It was computed as the sum total of scores obtained for planning, organizing, leading, controlling and communicating by the office bearers. The office bearers were grouped into following categories on the basis of cumulative frequencies:

<b>Category</b>	<b>Score</b>
Low (193-227)	1
Medium (228-244)	2
High (245-281)	3

#### **Dependent Variable**

##### **3.3.3 Specific Empowerment**

Empowerment is defined as a process that helps and assists women realize their identity, capacity, capability, strengths and power and its application in day to day life in various spheres. It enables them to have access to resources, greater say in decision-making, more ability to plan

their time and family size and also free them from irrelevant customs, traditions, practices and prejudices. Empowerment is a multi-dimensional process with major dimensions as personal, social, economic, entrepreneurial, managerial, political and technological. For the present study, empowerment was measured with the help of index developed for this purpose. To ascertain the role of women dairy cooperatives in empowerment of women, it was studied in terms of extent of change and level of empowerment. Comprehensive close ended statements were prepared for each dimension and compiled through due consultation with relevant literature, officials of milk-sheds and project objectives of WDC. Due care was taken to include pertinent information for all the seven enlisted dimensions.

The statements were formulated on a three point continuum of increased, same and decreased for the extent of change with score of 3, 2, 1 and a five point continuum of very high, high, moderate, some and no change for the level of empowerment with scores from 5 to 1, respectively. The score assigned was as under:

The maximum-minimum obtainable score for level of empowerment of each dimension was categorized and scored as under:

<b>Sr. No.</b>	<b>Category</b>	<b>Range</b>	<b>Score</b>
1.	Personal		
	Low	32-74	1
	Medium	75-117	2
	High	118-160	3

<b>Sr. No.</b>	<b>Category</b>	<b>Range</b>	<b>Score</b>
2.	Social		
	Low	32-74	1
	Medium	75-117	2
	High	118-160	3
3.	Economic		
	Low	14-32	1
	Medium	33-51	2
	High	52-70	3
4.	Entrepreneurial		
	Low	20-46	1
	Medium	47-73	2
	High	74-100	3
4.	Managerial		
	Low	30-71	1
	Medium	72-113	2
	High	114-155	3
5.	Political		
	Low	24-57	1
	Medium	58-91	2
	High	92-125	3
7.	Technological		
	Low	21-50	1
	Medium	51-80	2
	High	81-110	3

### **Overall empowerment**

Overall empowerment was measured and quantified by summing up the individual scores of each of the seven dimensions viz., personal, social, economic, entrepreneurial, managerial, political and technological. The beneficiaries were grouped into following categories on the basis of obtained scores:

<b>Category</b>	<b>Score</b>
Low (<411)	1
Medium (411-646)	2
High (646 +)	3

### **Enterprise satisfaction**

It refers to the degree of member's contentment about various aspects of cooperatives society. Scale of Singh (1991) was used to measure the present variable. On the basis of maximum-minimum obtainable score satisfaction level of the respondents was categorized under following sub-categories.

<b>Category</b>	<b>Range</b>	<b>Score</b>
Somewhat satisfied	15-36	1
Moderately satisfied	37-58	2
Highly satisfied	59-80	3

### **Impact of dairy co-operative society on beneficiaries**

Impact was defined as the changes that occurred in various life quality parameters of women beneficiaries due to their participation in women dairy co-operative societies (WDCS). Impact of WDC was studied

on nine parameters. The parameters were economic, nutrition and health, housing, material possession, domestic violence, educational, social, recreational and others.

To evaluate the impact of women beneficiaries on each of the selected parameter, a set of statements was prepared under each parameter. The statements were formulated and information obtained on a three points continuum of increased, same and decreased with the scores of 3, 2 and 1, respectively for positive statements and for negative statements scoring pattern was reversed.

Based on the scores obtained by the respondents against each statement, weight mean scores of each statement was calculated.

The weight mean scores thus obtained were finally ranked according to their degree of impact on various life quality aspects of women and their families.

### **Constraints faced by women beneficiaries**

Constraints in the present context was defined as any condition or situation which impede, hinder, restrict, limit the participation of women in various aspects of dairy cooperatives and various activities or programmes related to it. Constraints were measured on inventory prepared for the purpose and responses for various constraints were obtained in a category of major, moderate, minor and not a constraint with assigned score of 3, 2, 1 and 0 scores, respectively. Mean score was calculated and ranks assigned .

### **3.4 Tools and Techniques of Data Collection**

#### **Tools of data collection**

An interview schedule was prepared and used for primary data collection from the field. While developing the schedule, relevant secondary sources of information were carefully examined and due importance was given to various independent and dependent variables. It was pre-tested on twenty women in a village. Necessary changes were incorporated and schedule was finalized and finally used in the field.

#### **Data collection**

After planning and formulating the research design and interview schedule the next step was the collection of data through the use of structured interview schedule. The interview was conducted personally by the investigator with women individually and in group. Data collection took approximately four months and involved going into village interiors. Photographs were also taken of involvement of respondents in various dairy related activities.

### **3.5 Data Analysis and Interpretation of Data**

The qualitative data was tabulated and quantified as per the standard procedure and data analysis done as under:

#### **1. Frequency and percentage**

Frequencies and percentages were obtained for each aspect of the study to draw inferences as per the objectives.

#### **2. Weighted mean score**

Weighted mean scores were obtained for ascertaining rank.

### 3. Chi-square test

The chi-square ( $\chi^2$ ) test was used to identify factors affecting empowerment. Chi-square test as a test of independence can be used to find out whether two or more attributes are associated or not. The formula used for chi-square test:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where,

O : Observed frequency

E : Expected frequency

After finding the  $\chi^2$ - value by the formula given above it was compared with table value of  $\chi^2$  at  $(r-1) \times (c-1)$  degree of freedom at 5 per cent level of significance. If calculated  $\chi^2$  value is more than table value, the result is significant.

### 4. Contingency coefficient

Contingency coefficient was used to test the degree of association.

## CHAPTER – IV

# RESULTS AND DISCUSSION

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The results of the present research in accordance with the objectives, derived through the use of presented methodology and standard tools have been presented in this chapter. Following are the main section under which the research results have been presented and discussed.

- 4.1 Profile and entrepreneurial traits of beneficiaries and non-beneficiaries of women dairy cooperatives
- 4.2 Resource system support availed by beneficiaries and non-beneficiaries of women dairy cooperatives
- 4.3 Empowerment of women through women dairy cooperatives
- 4.4 Managerial effectiveness of the office bearers of women dairy cooperatives

### **4.1 Profile and Entrepreneurial Traits of Beneficiaries and Non-Beneficiaries**

#### **4.1.1 Personal and socio-economic traits of the respondents**

With a view to have a indepth knowledge about personal, socio-economic traits of beneficiaries (experimental group) and non-beneficiaries (control group) desired information was collected. The data presented in Table 4.1.1 reveals that 50 and 55 per cent of beneficiaries and non-beneficiaries were in middle age group, followed by 43 and 40 per cent

**Table 4.1.1. Personal and socio-economic variables of beneficiaries and non-beneficiaries in women dairy cooperatives**

Sr. No.	Variables and categories	Non-beneficiaries (n=60)		Beneficiaries (n=200)	
		Frequency	Percentage	Frequency	Percentage
1	<b>Age</b>				
	Young	24	40.00	86	43.00
	Middle	33	55.00	100	50.00
	Old	03	5.00	14	7.00
2	<b>Education</b>				
	Illiterate	26	43.30	73	36.50
	Can read only	00	0.00	00	0.00
	Can read and write	14	23.30	19	9.50
	Primary	12	20.00	46	23.00
	Middle	08	13.30	19	9.50
	Matriculation	00	0.00	43	21.50
3	<b>Marital status</b>				
	Married	60	100.00	200	100.00
	Unmarried	00	0.00	00	0.00
4	<b>Type of family</b>				
	Nuclear	43	71.70	132	66.00
	Joint	17	28.30	68	34.00
5	<b>Size of family</b>				
	Small	43	71.70	99	49.50
	Medium	17	28.30	92	46.00
	Large	00	0.00	09	4.50
6	<b>Family education status</b>				
	Low	32	53.30	82	41.00
	Medium	28	46.70	93	46.50
	High	00	0.00	25	12.50
7	<b>Recognition*</b>				
	Certificate	-	-	73	36.50
	Honour	-	-	57	28.50
	Award	-	-	88	44.00
	Position	-	-	102	51.00
	Financial	-	-	140	70.00
8	<b>Social participation</b>				
	No membership	60	100.00	99	49.50
	Member of a formal organization	-	-	37	18.50
	Member of non-formal organization	-	-	64	32.00
9	<b>Caste</b>				
	Schedule caste	22	36.67	71	35.50
	Backward class	38	63.33	129	64.50
	Upper	-	-	-	-

10	<b>Occupation of male head of household</b>				
	No work	5	8.33	18	9.00
	Labour	24	40.00	79	39.50
	Caste occupation	10	16.67	33	16.50
	Business	09	15.00	32	16.00
	Farming	12	20.00	38	19.00
	Government service				
	Private service				
11	<b>Involvement in agriculture</b>				
	<b>As Agriculture Labour</b>				
	Low	12	20.00	42	21.00
	Medium	31	51.67	108	54.00
	High	17	28.33	50	25.00
12	<b>Occupation</b>				
	Housewife	-	-	-	-
	Housewife +agriculture	60	100.00	-	-
	Housewife+ agriculture +livestock	-	-	125	62.50
	Housewife +agriculture + livestock + business	-	-	75	37.50
13	<b>Total annual income</b>				
	Low	30	50.00	93	46.50
	Middle	25	41.67	80	40.00
	High	05	8.33	27	13.50
14	<b>Land holding</b>				
	Landless	33	55.00	102	51.00
	Marginal	11	18.33	56	28.00
	Small	16	26.67	19	9.50
	Medium	-	-	23	11.50
	Large	-	-	-	-
15	<b>Type of house</b>				
	Katcha	16	26.67	31	15.50
	Mixed	21	35.00	95	47.50
	Pucca	23	38.33	74	37.00
16	<b>Size of house</b>				
	Small	40	66.67	122	61.00
	Medium	20	33.33	78	39.00
	Large	-	-	-	-
17	<b>Material possession</b>				
	Low	39	65.00	105	52.50
	Medium	21	35.00	68	34.00
	High	-	-	27	13.50

\*Multiple responses

of them being in young age category, and 7 and 5 per cent of them in old age group, respectively. Further, 36.50 per cent of beneficiaries and 43.30 per cent of non-beneficiaries were illiterate followed by profile of beneficiaries for education upto primary level (23.00%), matriculation (21.50%), middle (9.50%) and can read and write (9.50), whereas for non-beneficiaries the distribution was, can read and write (23.30%), primary (20.00%) and education upto middle (13.30%). Cent per cent beneficiaries and non-beneficiaries were married, while 66.60 per cent beneficiaries and 71.70 per cent non-beneficiaries had nuclear families and remaining had joint family.

Regarding family size 49.50, 46 and 4.50 per cent had small family size, medium and large, respectively, whereas in case of non-beneficiaries majority (71.70%) had small family size followed by medium (28.30%). As far as family education status was concerned it was found that 46.50 per cent had medium family education status followed by low (41.00%) and high (12.50%), whereas 53.30 per cent non-beneficiaries had low family education status followed by medium (46.70%).

Regarding social and financial recognition, it was noted that majority of the beneficiaries (70.00%) got financial recognition followed by position (51.00%), award (44.00%), certificate (36.50%) and honour (28.50%), whereas no such recognitions were earned by non-beneficiaries. The data regarding social participation, other than in dairy cooperatives reveal that 49.50 per cent of the beneficiaries had no membership other than dairy cooperatives followed by member of non-formal organization (32.00%),

and member of a formal organization (18.50%). None of the non-beneficiaries were having social participation of this nature.

The caste-wise distribution of the respondents reveal that majority of them (64.50% and 63.33%) beneficiaries and non-beneficiaries belonged to backward caste and remaining were from scheduled caste. In case of both beneficiaries and non-beneficiaries labour was the main occupation of male head of household (39.50% and 40.00%) followed by farming (19.00% and 20.00%), caste occupation (16.50% and 16.67%), business (16.00% and 15.00%) and no work (9.00% and 8.33%), respectively. As far as involvement in agriculture was concerned, it was found that more than half of both beneficiaries and non-beneficiaries (54.00% and 51.67%) had medium involvement as an agriculture labour followed by high (25.00% and 28.33%) and low (21.00% and 20.00%), respectively.

Regarding occupation of respondents, the main occupation of 62.50 per cent of beneficiaries was found to be in combination of housewife, agriculture and livestock followed by housewife, agriculture, livestock and business (37.50%), whereas in case of non-beneficiaries cent per cent of them were having main occupation as housewife and agriculture. Total annual income in both the cases was reported to be low by 46.50 per cent of beneficiaries and 50.00 per cent of non-beneficiaries followed by middle (40.00% and 41.67%), and high (13.50% and 8.33%), respectively.

The results of possession of land holding by beneficiaries and non-beneficiaries indicated that maximum (51.00% and 55.00%), respectively were landless followed by marginal (28.00%), medium (11.50%) and small

(9.50%) in case of beneficiaries and small (26.67%) and marginal (18.33%) in case of non-beneficiaries.

Regarding type and size of house 47.50 per cent of beneficiaries had mixed house and 38.33 per cent of non-beneficiaries had pucca house followed by pucca (37.00%) and katcha (15.50%) in case of beneficiaries and mixed (35.00%) and kutchha (26.67%) in case of non-beneficiaries. Majority of beneficiaries and non-beneficiaries (61.00% and 66.67%) were having small house followed by medium (39.00% and 33.33%), respectively.

Regarding material possession 52.50 and 65.00 per cent beneficiaries and non-beneficiaries had low material possession followed by medium (34.00% and 35.00%), respectively and 13.50 per cent of beneficiaries had high material possession.

Verma (2003) reported that majority of the respondents had medium level of material possession (59.20%) followed by low (28.00%) and 12.80 per cent had high level of material possession.

#### **4.1.2 Communication variables**

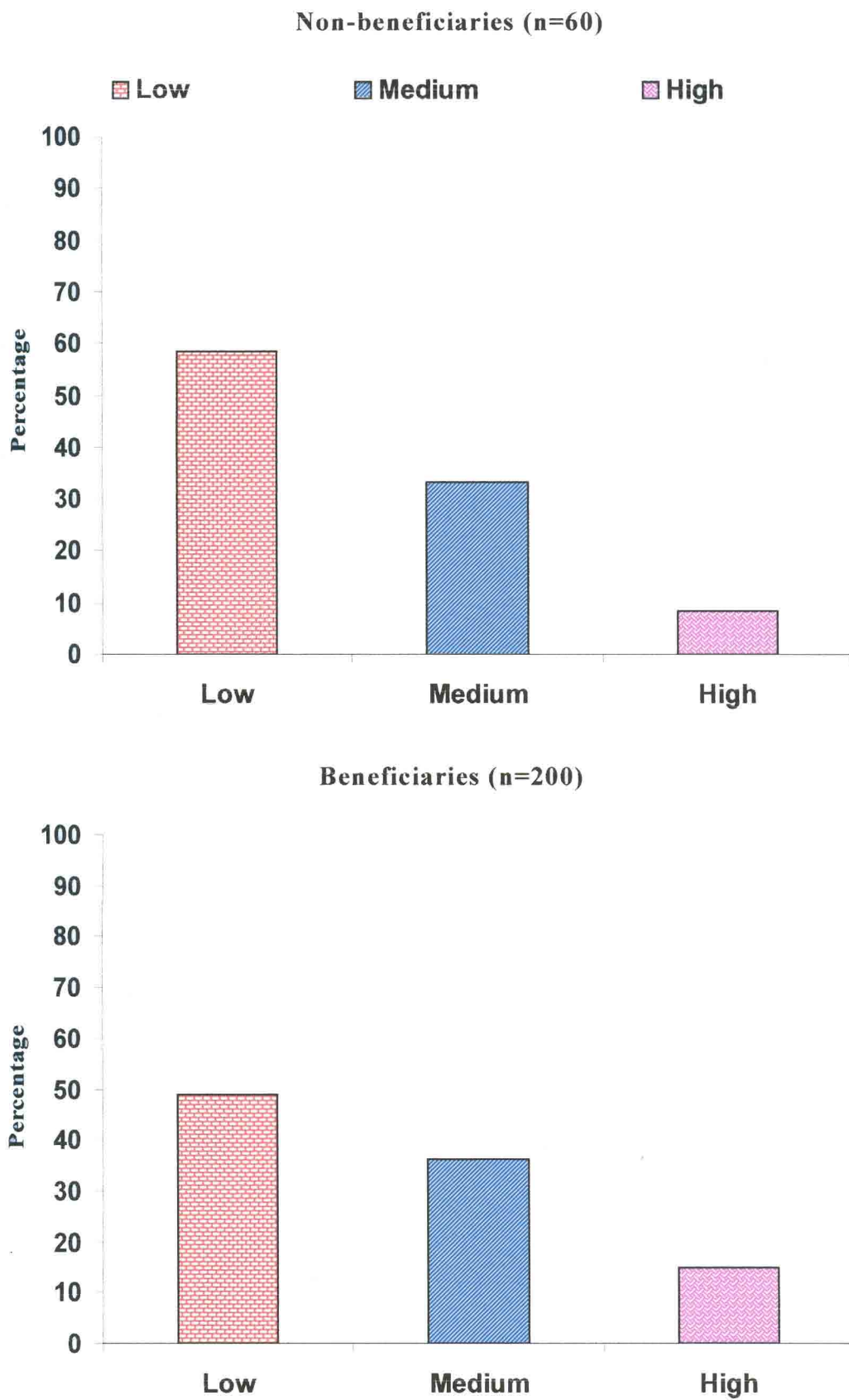
The two communication variables investigated were mass media exposure and extension contact .

##### **4.1.2.1 Mass media exposure**

The data presented in Table 4.1.2.1 revealed that mass media exposure for beneficiaries was low in 49.00 per cent followed by medium (36.00%) and high (15.00%), whereas in case of non-beneficiaries this was low in 58.33 per cent followed by medium (33.33%) and high (8.33%), respectively (Fig. 3).

**Table 4.1.2.1. Mass media exposure of beneficiaries and non-beneficiaries**

Variables and categories	Non-beneficiaries (n=60)		Beneficiaries (n=200)	
	Frequency	Percentage	Frequency	Percentage
<b>Mass media exposure</b>				
Low	35	58.33	98	49.00
Medium	20	33.33	72	36.00
High	05	08.33	30	15.00



**Fig. 3. Mass media exposure of beneficiaries and non-beneficiaries**

Deepti (2002) in a study from Haryana state reported that mass media exposure of beneficiaries of women dairy cooperatives was low in majority (85%) of the cases followed by those with medium level (15%) and none in the high category.

#### **4.1.2.2 Dairy related extension contact of beneficiaries**

The data presented in Table 4.1.2.2 showed the frequency of dairy related extension contact of beneficiaries. It is clear from the table that 41.00 per cent of respondents were frequently attending the meeting with veterinary surgeon/specialist followed by seldom (34.00%) and occasionally (25.00%) with weighted mean score 2.07 (IV rank). Cent per cent of the respondents frequently attended meeting with gram sevika with weighted mean score 3.00 (I rank). Majority of the respondents (71.00%) seldomly attended meeting with health visitor followed by occasionally (29.00%) with weighted mean score 1.29 (VIII rank). As far as meeting with extension worker was concerned, it was found that 60.00 per cent of the respondents occasionally attended the meeting followed by seldom (40.00%) with weighted mean score 1.60 (VII rank). Majority of the respondents (69.00%) occasionally attended the meeting with dairy supervisor and anganwadi teacher followed by frequently (31.00%) with weighted mean score 2.31 (II rank). Maximum respondents (69.00%) seldomly attended meeting with veterinary doctor followed by never attended the meeting (31.00%) with weighted mean score 0.69 (IX rank). Further 46.50 per cent respondents seldomly attended the meeting with bank/cooperative officials followed by occasionally (34.00%) and frequently (19.50%) and majority of the respondents (72.50%)

**Table 4.1.2.2. Dairy related extension contact of beneficiaries**

Sr. No.	Extension contact	Response category				Weighted mean score	Rank
		Frequently	Occasionally	Seldom	Never		
<b>1 Meeting</b>	Veterinary Surgeon/ Specialist	82 (41.00)	50 (25.00)	68 (34.00)	-	2.07	IV
	Gram Sevika	200 (100.00)	-	-	-	3.00	I
	Health Visitor	-	58 (29.00)	142 (71.00)	-	1.29	VIII
	Extension Worker	-	120 (60.00)	80 (40.00)	-	1.60	VII
	Dairy Supervisor	62 (31.00)	138 (69.00)	-	-	2.31	II
	Veterinary Doctor	-	-	138 (69.00)	62 (31.00)	0.69	IX
	Bank/Cooperative Official	39 (19.50)	68 (34.00)	93 (46.50)	-	1.73	V
	Adult Educator	-	145 (72.50)	55 (27.50)	-	1.73	V
	Anganwadi teacher	62 (31.00)	138 (69.00)	-	-	2.31	II
	<b>2 Visits</b>	Veterinary Clinic	-	115 (57.50)	85 (42.50)	-	1.58
Primary Health Centre		-	134 (67.00)	66 (33.00)	-	1.67	II
Field Demonstration		-	168 (84.00)	32 (16.00)	-	1.84	I
Mahila Mandal		-	35 (17.50)	165 (82.50)	-	1.18	V
Anganwadi		-	69 (34.50)	131 (65.50)	-	1.35	IV

Figures in parentheses indicate percentages.

occasionally attended meeting with adult education teachers followed by seldomly (27.50%). Both cooperative official and adult educator had same weighted mean score 1.73 (V rank).

Thus, it is clear from the above table that as far as meeting with different functionaries is concerned gram sevika got first rank, anganwadi teacher and dairy supervisor got II rank, veterinary surgeon got IV rank because meeting with these functionaries were frequently held at the society level. So, it was easy for the beneficiaries to attend the meeting and interact with the respondents.

The findings of the present study are in contrast with the findings of Sihag (1995) who reported that cent per cent of rural women have low extension contact. This was so as the women were not organized on a cooperative basis.

Responses from beneficiaries about how frequently they were visiting the different veterinary institutions reveals that 57.50 per cent were occasionally visiting veterinary clinic followed by seldomly (42.50%) with weighted mean score 1.58 (III rank). Regarding Primary health centre majority of them (67.00%) were occasional visitor followed by seldomly (33.00%) with weighted mean score 1.67 (II rank). As far as field demonstration was concerned majority of them (84.00%) were occasional visitor followed by seldomly (16.00%) with weighted mean score 1.84 (I rank). Majority of the respondents (82.50%) seldomly visited mahila mandal followed by occasionally (17.50%) with weighted mean score. 1.18 (V rank). Nearly seventy per cent (65.50%) of the respondents seldomly

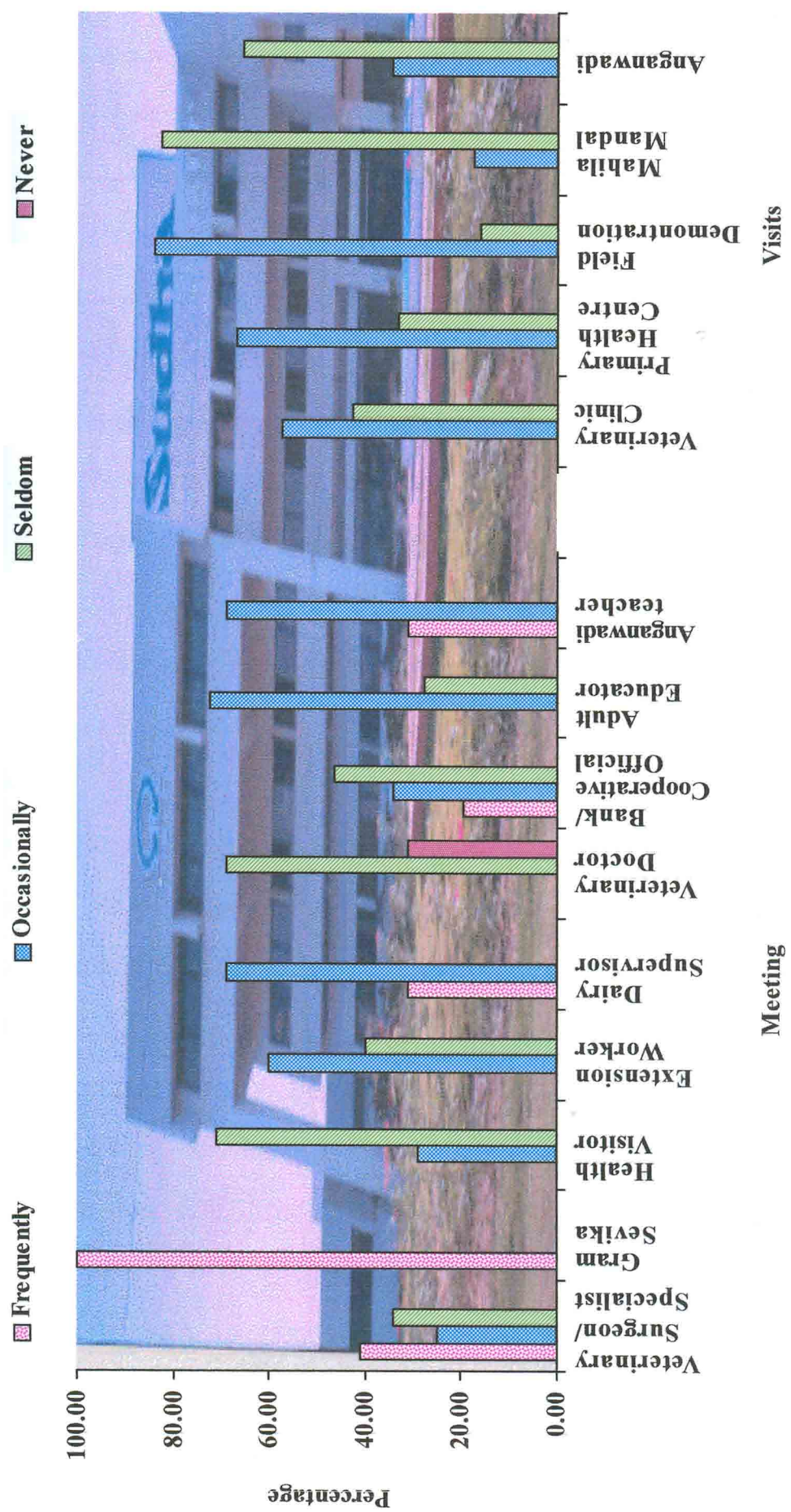


Fig. 4. Dairy related extension contact of beneficiaries

visited anganwadi followed by occasionally (34.50%) with weighted mean score 1.35 (IV rank) (Fig. 4).

It is clear from the above findings that the respondents showed personal interest in field demonstration because they believed in "Learning by doing" and also as the field demonstration was organized at the society level itself by the dairy cooperatives, it was easy for them to attend.

### **4.1.3 Entrepreneurial variables**

#### **4.1.3.1 Different motivations of beneficiaries and non-beneficiaries**

To assess the extent of motivational forces, responsible for the initiation, growth and development of enterprise run by women, different types of motivation considered in the present investigation were affiliation, economic, self actualization, achievement, risk taking ability and power motivations. Table 4.1.3.1 unfolds the fact that affiliation motivation level 49.50 per cent of the beneficiaries was medium followed by low (40.50%) and high (10.00%), whereas affiliation motivation level of majority of the non-beneficiaries was low (71.67%) followed by medium (23.30%) and high (5.00%). As far as economic motivation level of women member of dairy cooperative societies was concerned, it was found that 65.00 per cent of the women had medium economic motivation level followed by those under low (22.50%) and high (12.50%), whereas economic motivation level was reported low by majority of women non-member (86.67%) followed by medium (13.33%). Self actualization motivation of majority of the beneficiaries was of medium level (49.50%) followed by low (40.50%) and high (10.00%), but in case of non-beneficiaries majority

**Table 4.1.3.1. Different motivations of beneficiaries and non-beneficiaries**

Sr. No.	Types and categories	Non-beneficiaries (n=60)		Beneficiaries (n=200)	
		Frequency	Percentage	Frequency	Percentage
<b>1</b>	<b>Affiliation motivation</b>				
	Low	43	71.67	81	40.50
	Medium	14	23.30	99	49.50
	High	03	05.00	20	10.00
<b>2</b>	<b>Economic motivation</b>				
	Low	52	86.67	45	22.50
	Medium	08	13.33	130	65.00
	High	-	-	25	12.50
<b>3</b>	<b>Self actualization</b>				
	Low	44	73.30	81	40.50
	Medium	16	26.70	99	49.50
	High	-	-	20	10.00
<b>4</b>	<b>Achievement motivation</b>				
	Low	41	68.30	67	33.50
	Medium	19	31.70	107	53.50
	High	-	-	26	13.00
<b>5</b>	<b>Risk taking ability</b>				
	Low	-	-	99	49.50
	Medium	60	100.00	76	38.00
	High	-	-	25	12.50
<b>6</b>	<b>Power motivation</b>				
	Low	55	91.67	85	42.50
	Medium	05	08.33	87	43.50
	High	-	-	28	14.00
<b>7</b>	<b>Entrepreneurial motivation</b>				
	Low	39	65.00	60	30.00
	Medium	20	33.33	108	54.00
	High	01	01.67	32	16.00

of them had low level of self actualization (73.30%) followed by medium (26.70%).

As regards to achievement motivation in case of beneficiaries it was of medium level for 53.50 per cent followed by low (33.50%) and high (13.00%), whereas in case of non-beneficiaries, it was found to be low 68.30 per cent followed by medium (31.70%).

As far as risk taking ability was concerned, it was observed that 49.50 per cent had risk taking ability level of low extent followed by medium (38.00%) and high (12.50%), whereas in case of non-beneficiaries cent per cent of them had medium level of risk taking ability. Power motivation was found to be of medium level by 43.50 per cent of beneficiaries followed by low (42.50%) and high (14.00%), whereas power motivation of non-beneficiaries was of low level by majority (91.67%) of them followed by medium (8.33%). Entrepreneurial motivation of 54.00 per cent beneficiaries was of medium level followed by low (30.00%) and high (16.00%), whereas entrepreneurial motivation of majority of non-beneficiaries (65.00%) was of low level followed by medium (33.33%) and only 1.67 per cent of non-beneficiaries had high entrepreneurial motivation (Fig. 5).

Pravathi *et al.* (1994) suggested that there are lot of chances to improve women participation by way of motivation and encouragement for entrepreneurial activities.

Anuradha (2004) reported that the influence/power motivation, recognition and self actualization motivation of majority of the rural women were low followed by medium level.

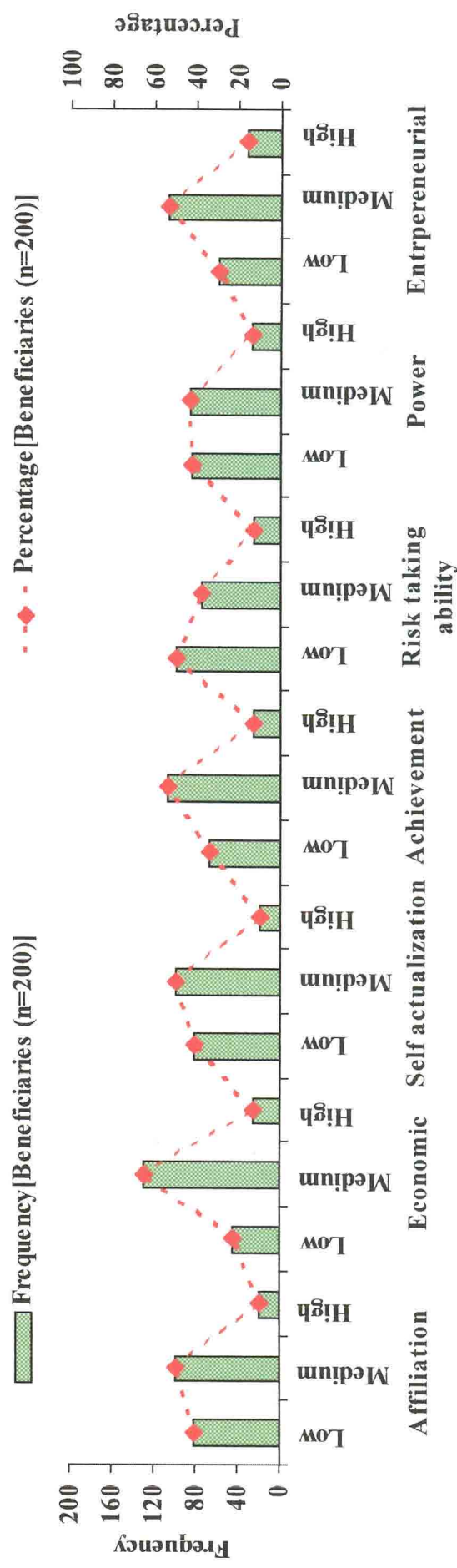
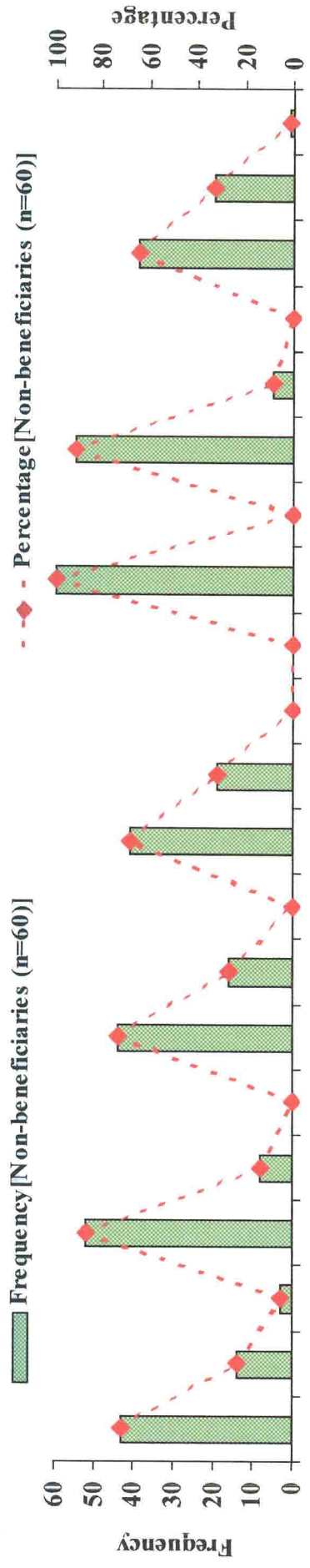


Fig .5. Different motivations of beneficiaries and non-beneficiaries

#### **4.1.3.2 Entrepreneurial traits**

Data in Table 4.1.3.2 indicate that majority of the beneficiaries (68.00%) possessed medium scores, followed by low (17.00%) and high (15.00%), whereas majority (88.33%) of the non-beneficiaries possessed low scores on entrepreneurial traits and only 11.67 per cent possessed medium score on this variable (Fig. 6).

Tripathi and Kunzru (1992) reported that all socio-personal characteristics were significantly greater for women member than for women non-member. Verma (2003) reported that a sizeable member of the respondents (40.80%) had medium scores and 10.40 per cent possessed high scores on entrepreneurial traits.

Anuradha (2004) reported that majority of the rural women (95.83%) had scored high on innovativeness while highly motivated and self reliance obtained the low score.

Conclusively, the members of dairy cooperatives had higher socio-economic status, education, land holding, house, farm power possession, material possession, herd size, extension contact, level of aspiration, information seeking behaviour and technical input service facilities as compared to the non-members.

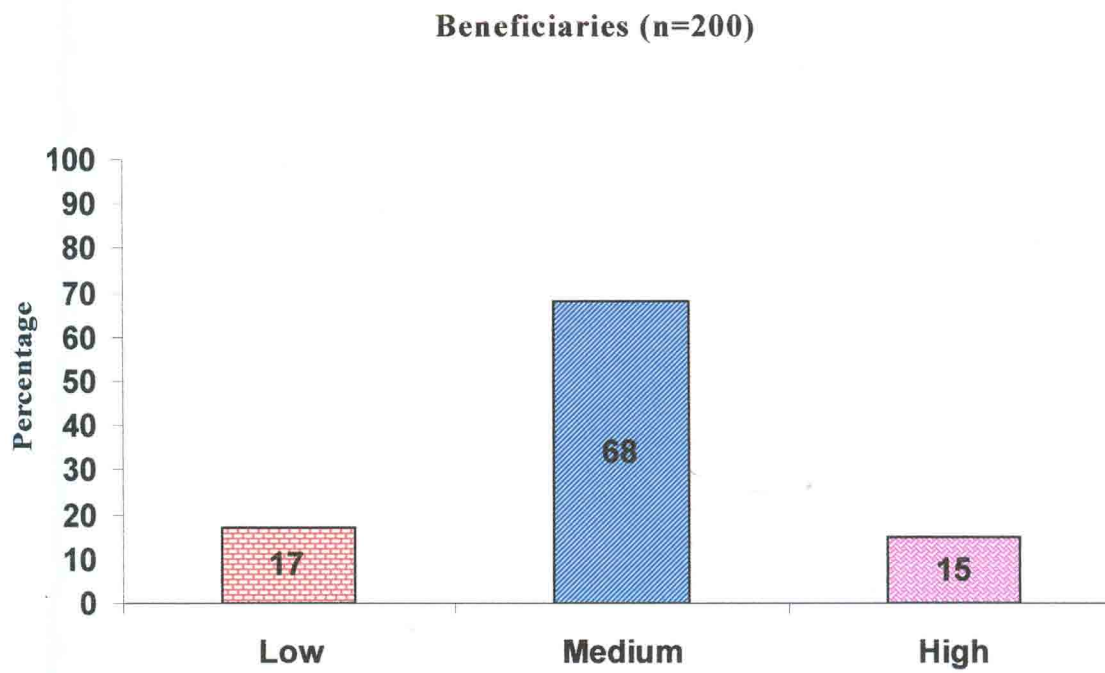
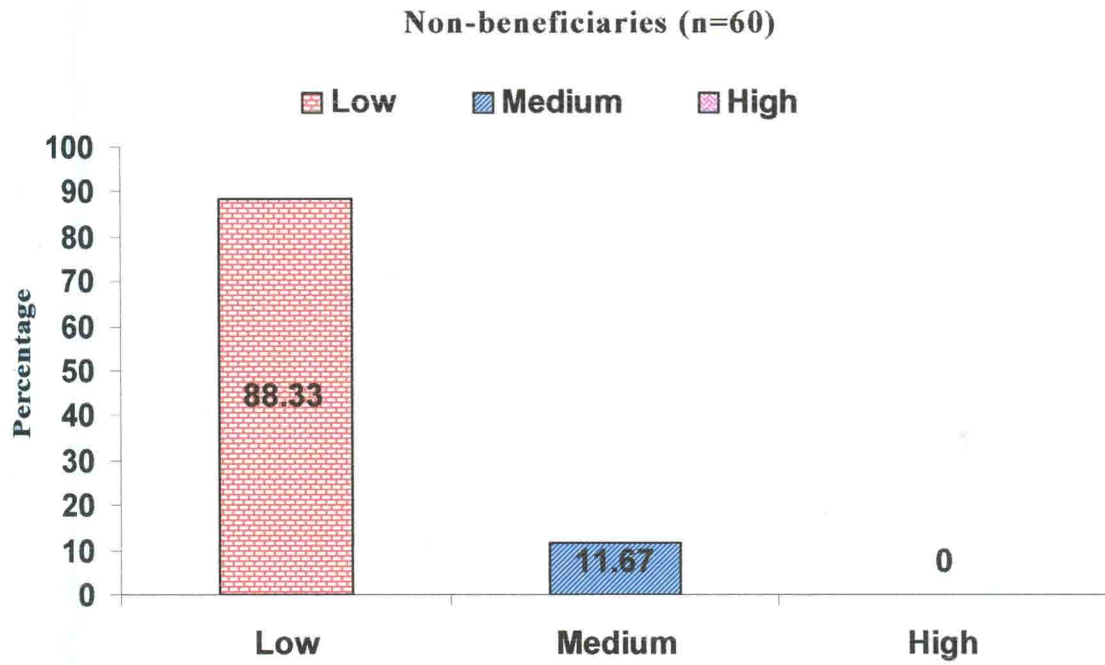
#### **4.1.4 Dairy related variables of beneficiaries**

##### **4.1.4.1 Herd size**

Perusal of Table 4.1.4.1 reflects that the 45.00 per cent beneficiaries had medium herd size followed by small (35.00%) and large (20.00%). Sinha and Rangonathan (1989) reported that majority of the members

**Table 4.1.3.2. Entrepreneurial traits of beneficiaries and non-beneficiaries**

<b>Category</b>	<b>Non-beneficiaries (n=60)</b>		<b>Beneficiaries (n=200)</b>	
Low	53	88.33	34	17.00
Medium	07	11.67	136	68.00
High	-	-	30	15.00



**Fig.6. Entrepreneurial traits of beneficiaries and non-beneficiaries**

prefer to maintain a minimum of three milch animals so as to enable them to supply milk regularly to the milk society for getting supplementary income throughout the year to meet the day to day expenses.

#### **4.1.4.2 Animal shed and water availability for animals**

Table 4.1.4.2 depicts that 59.50 per cent of the respondents had animal shed adjoining the house followed by within the house (40.50%). As far as water availability was concerned, it was found that more than half of the respondents (56.00%) had to travel a short distance followed by water available within the house (44.00%).

#### **4.1.4.3 Distance travelled and time taken by the beneficiaries in carrying water**

Table 4.1.4.3 shows that less than half kilometer distance was travelled by 59.82 per cent of the respondents in carrying water for animals followed by  $\frac{1}{2}$  - 1 km (40.18%). As regard to time taken 51.79 per cent reported less than 15 minutes time taken in carrying water followed by 15-30 minutes (48.21%).

#### **Fodder availability**

Fodder availability as presented in table 4.1.4.4 shows that this was obtained mainly from farm as was reported "frequently" by 31.00 per cent and never (69.00%) by the beneficiaries, from local market "seldomly" (31.00%) and "never" (69.00%) and fodder availability mainly from cooperative society reported "always" by 69.00 per cent followed by "frequently" (31.00%).

Regarding availability of type of fodder, it was reported by cent per cent of the beneficiaries that dry fodder and concentrate were available

**Table 4.1.4.1. Herd size maintained by beneficiaries**

(n=200)

<b>Category</b>	<b>Frequency</b>	<b>Percentages</b>
Small	70	35.00
Medium	90	45.00
Large	40	20.00

**Table 4.1.4.2. Animal shed and water availability for animals**

(n=200)

<b>Sr. No.</b>	<b>Variables and categories</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1</b>	<b>Animal shed</b>		
	Within the house	81	40.50
	Adjoining the house	119	59.50
<b>2</b>	<b>Water availability</b>		
	Available within the house	88	44.00
	Travel a short distance	112	56.00

**Table 4.1.4.3. Distance traveled and time taken by the beneficiaries in carrying water**

<b>Sr. No.</b>	<b>Variables and categories</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1</b>	<b>Distance travelled</b>		
	<½ km	67	59.82
	½ - 1 km	45	40.18
	Above 1 km	-	-
<b>2</b>	<b>Time taken</b>		
	< 15 min	58	51.79
	15 – 30 min	54	48.21
	Above 30 min	-	-

**Table 4.1.4.4. Fodder availability to beneficiaries**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Always</b>	<b>Frequently</b>	<b>Seldom</b>	<b>Never</b>
<b>1</b>	<b>Fodder availability</b>				
	Mainly from farm	-	62 (31.00)	-	138 (69.00)
	Local market	-	-	62 (31.00)	138 (69.00)
	Cooperative society	138 (69.00)	62 (31.00)	-	-
<b>2</b>	<b>Type of fodder</b>				
	Green fodder	-	-	200 (100.00)	-
	Dry fodder	200 (100.00)	-	-	-
	Concentrate	200 (100.00)	-	-	-
<b>3</b>	<b>Type of feed</b>				
	Plain straw	-	-	-	200 (100.00)
	Treated straw	-	200 (100.00)	-	-
	Mineral mixed salt	-	62 (31.00)	138 (69.00)	-

Figures in parentheses indicate percentages.

"always" at the society and regarding type of feed availability of plain straw was reported "never" by cent per cent of the beneficiaries, treated straw "frequently" (100.00%) and mineral mixed salt frequently (31.00%) and seldomly (69.00%) by beneficiaries.

#### **Method used by beneficiaries for milk testing**

Cent per cent of the beneficiaries were aware about lactometer and fat testing and they were using these methods for judging milk quality at society level (Table 4.1.4.5). The results are in conformity with the findings of Kaushik and Singal (1993) and Ranjekar (1994) who reported that women respondents had knowledge of fat test and fat content.

#### **Purchasing and selling of animals**

Multiple responses were obtained by the beneficiaries regarding purchase and sale of animals. Table 4.1.4.6 shows that animals were purchased and sold locally by 66.50 per cent of the beneficiaries followed by dairies (66.00%) and livestock mela (18.50%).

#### **Daily milk production, consumption and sale (litres) by members of women dairy cooperative**

Table 4.1.4.7 reflects that the milk production level of 45 per cent of beneficiaries was medium, followed by high (31.00%) and low (24.00%). Regarding milk consumption 44 per cent of beneficiaries had medium consumption level followed by low (29.00%) and high (27.00%). As regards selling of milk 44.00 per cent of them had medium level of sale followed by high (30.00%) and low (26.00%).

Table 4.1.7.1.1 depicts that the mean milk production (litres/day) by members of women dairy cooperatives daily was 10.23 and variance

**Table 4.1.4.5. Method used by beneficiaries for judging milk quality at society level**

(n=200)

<b>Method</b>	<b>Frequency</b>	<b>Percentage</b>
Organoleptic test	-	-
Lactometer	200	100.00
Fat testing	200	100.00
Starch test	-	-

**Table 4.1.4.6. Purchasing and selling of animals by beneficiaries**

(n=200)

<b>Purchasing and selling*</b>	<b>Frequency</b>	<b>Percentage</b>
Locally	133	66.50
Government institution	00	0.00
Dairies	132	66.00
Livestock mela	37	18.50

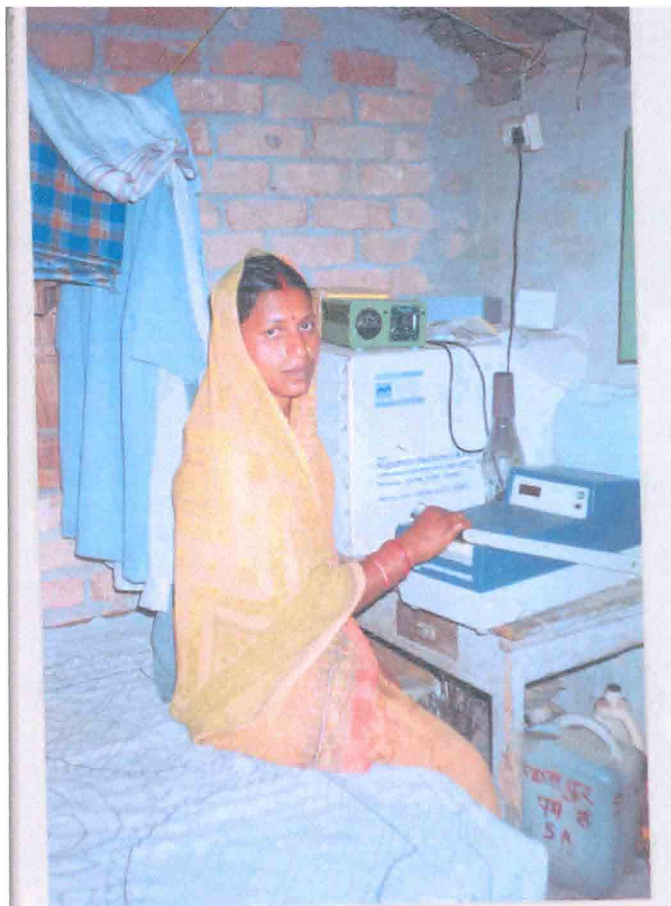
\*Multiple responses



**Plate 1. Interviewing the beneficiaries**



**Plate 2. Centrifugal machine used by beneficiaries for milk testing**



**Plate 3. Electronic milkotester used for milk testing**

**Table 4.1.4.7. Milk production, consumption and sale (litres) by members of women dairy cooperatives daily** (n=200)

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Production</b>		
Low	48	24.00
Medium	90	45.00
High	62	31.00
<b>Consumption</b>		
Low	58	29.00
Medium	88	44.00
High	54	27.00
<b>Sale</b>		
Low	52	26.00
Medium	88	44.00
High	60	30.00

**Table 4.1.4.7. 1 Mean milk production, consumption and sale (litres) by members of women dairy cooperatives daily**

<b>Variables</b>	<b>Mean</b>	<b>Variance</b>
Production	10.23	25.585
Consumption	2.36	1.537
Sale	7.88	15.919

25.585, mean consumption 2.36 and variance 1.537 and mean sale 7.88 and variance 15.919.

Tripathi and Kunzru (1994) conducted a study of the dairy cooperative Bareilly Dugdh Utpadak Sahkari Sangh Ltd. regarding milk production, consumption and disposal behaviour of rural dairy owners and reported that average milk production was 5.55 litres/day of which 1.78 litres was consumed and 3.77 litres marketed. Findings of the present study are on similar lines.

#### **Profitability from dairying**

It is evident from Table 4.1.4.8 that 35 per cent of the beneficiaries reported dairying as highly profitable followed by moderately profitable (34.00%) and somewhat profitable (31.00%).

#### **Knowledge related to brand name, product prepared at union level and frequency of purchase of products**

Findings regarding the knowledge related to brand name, product prepared and frequency of purchase of products are placed in Table 4.1.4.9. It is evident from the table that cent per cent of the beneficiaries were aware about the brand name under which milk was sold i.e. 'SUDHA'. As far as knowledge regarding products prepared, cent per cent of them were aware about milk, ghee, misti dohi and lassi followed by peda (33.50%), gulab jamun and dairy whitener (26.00%), full cream (21.50%), kalakand (21.00%), rasogulla (19.00%), milk cake (16.50%), white butter (11.50%) and khoa (8.00%).

Regarding frequency of purchase of products, it was noted that this was done seldomly by 53.50 per cent of beneficiaries followed by

**Table 4.1.4.8. Opinion of beneficiaries on profitability from dairy enterprise**

(n=200)

<b>Opinion</b>	<b>Frequency</b>	<b>Percentage</b>
Highly profitable	70	35.00
Moderately profitable	68	34.00
Somewhat profitable	62	31.00

**Table 4.1.4.9. Distribution of respondents according to their knowledge related to brand name, product prepared at union level and frequency of purchase of products**

(n=200)

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1. Knowledge</b>		
<b>Brand name</b>	200	100.00
<b>Products prepared*</b>		
Milk	200	100.00
Ghee	200	100.00
White butter	23	11.50
Full cream	43	21.50
Peda	67	33.50
Kalakand	42	21.00
Rosgulla	38	19.00
Gulab jamun	52	26.00
Milk cake	33	16.50
Khoa	16	08.00
Dairy whitener	52	26.00
Misti Dohi	200	100.00
Lassi	200	100.00
<b>2. Frequency of purchase of products</b>		
Frequently	92	46.50
Seldom	107	53.50

\*Multiple responses.

frequently (46.50%). Jose *et al.* (2000) suggested that optimal product mix programme should be adopted to maximize its profit and effectively compete with private dairies, including multinational companies in India. The optimal product mix programme model suggested a readjustment in product mix and magnitude.

#### **Gender distribution of operations carried out for animal husbandry and mean time spent**

Table 4.1.4.10 depicted the gender distribution of operations carried out for animal husbandry and mean time spent (minute). It is noted that operations of cleaning of shed, preparing cowdung cakes, boiling and other milk related activities, selling of milk, cleaning of utensils used for milking, preparing of milk products (I rank) were exclusively carried out by women, whereas grazing animals was exclusively carried out by men (I rank) (Fig. 7).

Bringing fodder from field was carried out by 76.50 per cent (Rank II) and 23.50 per cent (VIII rank) of men and women, respectively with mean time 37.40 and variance 39.69. Chaffing the fodder was carried out by 40.00 per cent (V rank) and 60.00 per cent (X rank) of men and women, respectively with mean time 26.28 and variance 69.10.

Prepare feed for animals was carried out by 14.00 per cent (VIII rank) and 86 per cent (VII rank) of men and women, respectively with mean time 10.00 and variance 6.44. Health care of animals like dehorning and deworming was carried out by 23.50 per cent (VI rank) and 76.50 per cent (IX rank) of men and women, respectively with mean time 20.00 and

**Table 4.1.4.10. Gender distribution of operations carried out for animal husbandry and mean time spent (minutes) at beneficiary level**

		(n=200)					
Sr. No.	Operations	Men	Rank	Women	Rank	Mean time	Variance
1	Bringing fodder from field	153 (76.50)	II	47 (23.50)	XIII	37.40	39.69
2	Chaffing the fodder	80 (40.00)	V	120 (60.00)	X	26.28	69.10
3	Prepare feed for animals	28 (14.00)	VIII	172 (86.00)	VII	10.00	06.44
4	Grazing animals	200 (100.00)	I	-	-	32.38	21.09
5	Health care of animals (dehorning and deworming, etc.)	47 (23.50)	VI	153 (76.50)	IX	20.00	10.32
6	Offering water to animals	100 (50.00)	IV	100 (50.00)	XI	07.00	03.66
7	Cleaning of animals	145 (72.50)	III	55 (27.50)	XII	08.00	05.75
8	Cleaning of shed	-	-	200 (100.00)	I	08.10	03.45
9	Preparing cowdung cakes	-	-	200 (100.00)	I	07.42	02.49
10	Milking	45 (22.50)	VII	155 (77.50)	VIII	20.51	13.06
11	Boiling and other milk related activities	-	-	200 (100.00)	I	07.00	03.37
12	Selling of milk	-	-	200 (100.00)	I	16.00	17.44
13	Cleaning of utensils used for milking	-	-	200 (100.00)	I	14.26	13.38
14	Preparing milk products	-	-	200 (100.00)	I	08.17	09.64

Figures in parentheses indicate percentages.

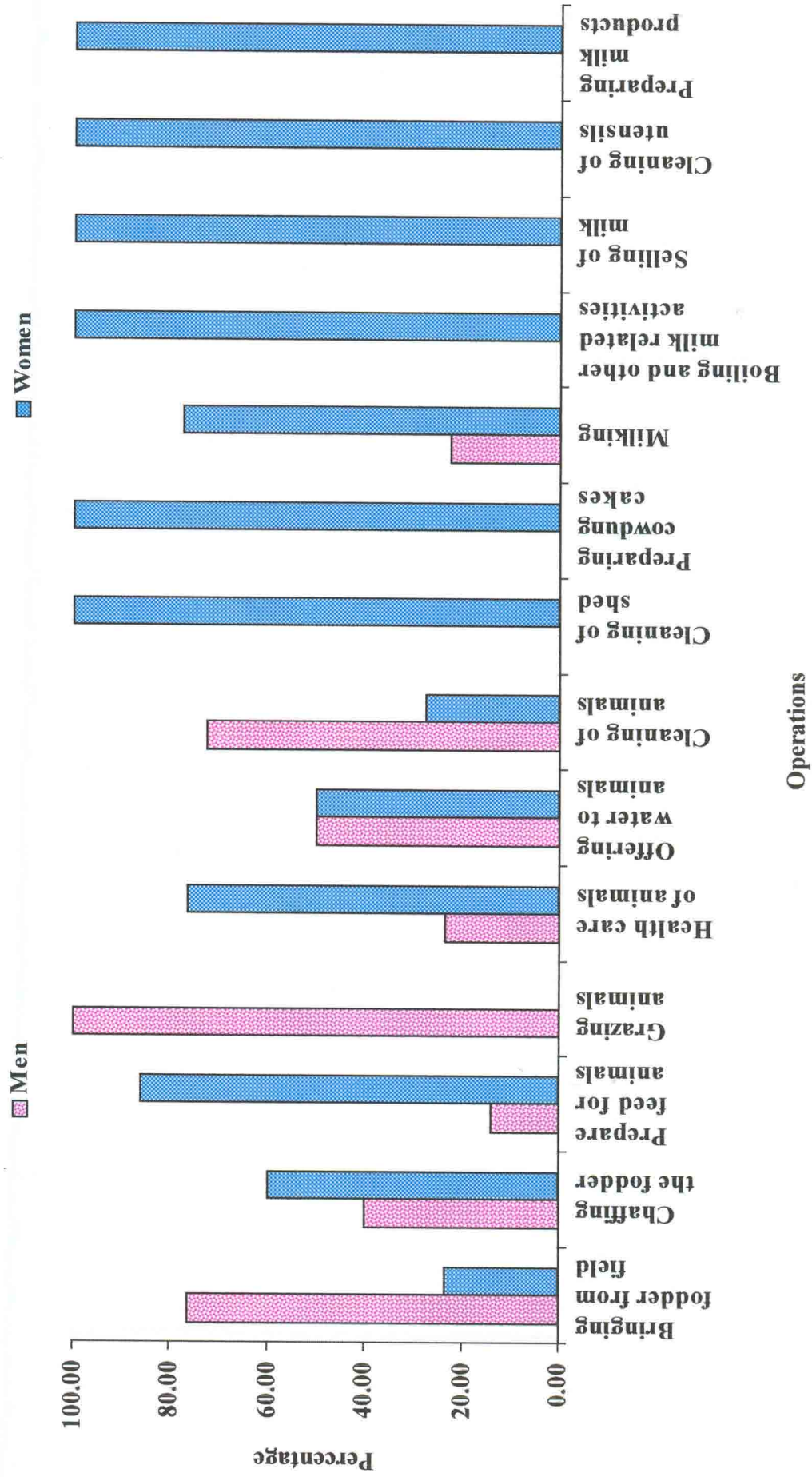


Fig. 7. Gender distribution of operations carried out for animal husbandry

variance 10.32. Offering of water to animals was carried out by 50.00 per cent of both men (IV rank) and women (XI rank) with mean time 7.00 and variance 3.66.

Cleaning of animals was carried out by 72.50 per cent (III rank) and 27.50 per cent (XII rank) of men and women, respectively with mean time 8.00 and variance 5.75. Milking was carried out by 22.50 (VII rank) and 77.50 (VIII rank) of men and women, respectively with mean time 20.57 and variance 13.06.

Thus, it is inferred that mean time spent per day was maximum in bringing fodder from field, followed by grazing animals, chaffing the fodder, milking, health care of animals, selling of milk, cleaning of utensils used for milking, preparing milk products, cleaning of shed, preparing cowdung cakes and boiling and other milk related activities.

Anil *et al.* (1992) assessed the extent of physical involvement of men and women of the family in different aspects of dairying and reported that in housing and feeding of cattle, which are adopted within the household, a reasonably effective involvement of women was observed. Tripathi and Kunzru (1995) revealed that approximately 67 per cent of rural women were employed in dairying at home and were involved in 9-18 dairying related activities relating mostly to feeding and management of livestock and processing of livestock products.

#### **Length of association and type of membership**

Length of association with the dairy cooperative of 43.50 per cent of the beneficiaries was between 9-11 years followed by 26.00 per cent in

**Table 4.1.4.11. Length of association and type of membership of beneficiaries with women dairy cooperatives**

(n=200)

<b>Categories</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Length of association</b>		
5-7 years	33	16.50
7-9 years	28	14.00
9-11 years	87	43.50
11-15 years	52	26.00
<b>Type of membership</b>		
Life	200	100.00

**Table 4.1.4.12. Frequency of delivering milk, average distance travelled, time spent and mode of travel upto collecting center by beneficiaries**

(n=200)

<b>Categories</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Frequency of delivering milk</b>		
Always	153	76.50
Frequently	47	23.50
<b>Model of travel</b>		
Walk (on foot)	200	100.00
	<b>Mean</b>	
<b>Distance travelled</b>	1.26 km	-
<b>Time spent</b>	20.45 min	

11-15 years, 16.50 per cent in 5-7 years and 14.00 per cent in 7-9 years category. All the beneficiaries were having whole life membership (Table 4.1.4.11) as this is directly related to the facilities that can be availed by them.

#### **Frequency of delivering milk, average distance travelled, time spent and mode of travel upto collecting centre**

It is clear from the data presented in Table 4.1.4.12 that majority of the beneficiaries (76.50%) were always delivering the milk to the society followed by frequently (23.50%) and mean distance travelled and time spent were 1.26 km and 20.45 minute, respectively. Walking on foot was the mode of travel upto collecting centre reported by cent per cent of the beneficiaries.

#### **Reasons for choosing dairy enterprise**

Data presented in Table 4.1.4.13 revealed that 77.50 per cent of the beneficiaries reported that dairy is an economical enterprise (Rank I) as the main reason for choosing dairy enterprise followed by help from family members in dairy enterprise (76.50%; Rank II), high social recognition of dairying (71.00%, Rank III), availability of better veterinary facilities (70.00%, Rank IV), government schemes were helpful and wish of family members (66.50%, Rank V), motivated by members of society (65.50%, Rank VII), own wish (57.50%, Rank VIII) and motivated by neighbours/friends (27.50%, Rank IX).

It can thus be summarized that majority of the members had knowledge of various aspects pertaining to milk sale and consumption pattern like rate fixation parameter, fat test, place of milk transportation from women dairy cooperative (WDC), utilization of milk at milk plant

**Table 4.1.4.13. Reasons for choosing dairy enterprise by beneficiaries**

<b>Reasons*</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Rank</b>
Own wish	115	57.50	VIII
Wish of family members	133	66.50	V
Government schemes were helpful	133	66.50	V
Motivated by neighbours/friends	55	27.50	IX
Motivated by members of society	131	65.50	VII
Availability of better vety. Facilities	140	70.00	IV
Help from family members in dairy enterprise	153	76.50	II
An economical enterprise	155	77.50	I
High social recognition in dairying	142	71.00	III

\*Multiple responses.

and frequency of payment.

The findings are an indicator of the fact that women were not only concerned with supplying milk to cooperative society and receiving payments but were highly informed about the price they were getting as per fat content and variation in milk rate due to fat level. Some of the respondents (30.00%), as emerged through discussion, used to add water to milk to increase volume so that more money could be received. Cooperative societies succeeded in making a breakthrough in such type of perception among women. Visit to local milk plant helped in shedding off women's fear about misutilization of milk by exposing women to different products prepared after processing of milk.

Frequency of payment between 10-15 days as reported by members is a reflection of the fact that WDC at village level was a regular source of income to members which acts as a basis for making these societies more credible in coming times.

#### **4.2 Resource System Support Availed**

Providing employment support services for creation of dairy assets for assetless women is the main feature of "WDC Project". Therefore, efforts were made to assess women regarding resource system support services provided for WDC. Table 4.2.1 depicts the distribution of beneficiaries and non-beneficiaries according to financial assistance availed from various agencies. It is clear from the table that nearly half of the beneficiaries (45.00%) had availed the amount (per year in rupees) (1800-3600), followed by 43.00 per cent (3600 and above) and 12.00 per

**Table 4.2.1. Distribution of beneficiaries and non-beneficiaries according to financial assistance availed from various agencies**

Sr. No.	Variables and categories	Non-beneficiaries		Beneficiaries	
		Frequency	Percentage	Frequency	Percentage
1	<b>Amount (Per year in Rs.)</b>				
	< 1800	5	33.33	24	12.00
	1800-3600	7	46.67	90	45.00
	3600 and above	3	20.00	86	43.00
2	<b>Source</b>				
	Private moneylender	11	73.33	-	-
	Bank	04	26.67	20	10.00
	Govt. agency	-	-	14	07.00
	Women dairy cooperatives	-	-	46	23.00
	Self-help group of WDC	-	-	120	60.00
3	<b>Purpose</b>				
	Purchase of animals	-	-	14	07.00
	Children education	2	13.33	12	06.00
	Marriage	09	60.00	38	19.00
	Social functions	-	-	16	08.00
	Agriculture purpose	04	26.67	64	32.00
	Purchase of cattle	-	-	56	28.00
4	<b>Duration</b>				
	Very short term (upto 1 month, nil interest)	01	06.67	14	07.00
	Short term (1-3 month @ Rs.2/100)	03	20.00	76	38.00
	Medium term (3-6 month @ Rs.3/100)	09	60.00	32	16.00
	Long term (above 6 month @ Rs.5/100)	02	13.33	78	39.00

cent (<1800), whereas in case of non-beneficiaries 46.67 per cent had availed the amount (1800-3600), followed by 33.33 per cent (<1800), and only 20.00 per cent (3600 and above).

The main source of majority of beneficiaries (60.00%) from where the financial assistance availed was self help group of WDC, followed by women dairy cooperative society (23.00%), bank (10.00%) and government agent (7.00%), whereas the main source by majority of non-beneficiaries (73.33%) was private moneylender followed by bank (26.67%).

As far as the purpose for availing the financial assistance was concerned, 32.00 per cent of beneficiaries reported agriculture was the main purpose, followed by purchase of cattle (28.00%), marriage (19.00%), social function (8.00%), purchase of other animals (7.00%) and children's education (6.00%) but the main purpose was marriage by majority of non-beneficiaries (60.00%) followed by agriculture (26.67%) and children education (13.33%).

As regards the duration of loan repayment as fixed by the society, 39.00 per cent of beneficiaries had long-term duration of loan repayment (above 6 month @ Rs. 5/100), followed by short-term (38.00%) for 1-3 month @ Rs. 2/100, medium term (16.00%) for 3-6 month @ Rs. 3/100 and very short term (7.00%) upto one month with nil interest, whereas the duration of loan repayment of 60.00 per cent of non-beneficiaries was medium term, followed by short-term (20.00%), long-term (13.33%) and very short term (6.67%) with much higher interest rate from private moneylender.

### **Frequency to attend the training programmes**

Data presented in Table 4.2.2 indicate the frequency of attending the training programmes organized by women dairy cooperatives for the beneficiaries in order to improve their efficiency, effectiveness and competency (Fig. 8).

Regarding frequency to attend these training it was noticed that frequency to attend management committee members training was seldom by 60.50 per cent, followed by frequently (31.00%) and always (8.50%).

Regarding secretaries training it was reported frequently by 63.50 per cent followed by seldomly (24.00%) and always (12.50%). Frequency of awareness programmes was reported as always by majority of beneficiaries (70.00%) followed by frequently (30.00%). Similarly, training related to legal literacy and female awareness were reported always by nearly sixty per cent (59.00%) of beneficiaries followed by frequently (41.00%).

Training male awareness was noted to be frequently by majority of beneficiaries (71.50%) followed by seldom (18.00%) and always (10.50%).

As far as Artificial Insemination (A.I.) training was concerned 58.50 per cent of the beneficiaries attended it frequently, followed by always (41.50%).

Frequency to attend training in clean milk production was reported to be always by 73.50 per cent followed by frequently (26.50%). Training women leadership was found to be frequently by 63.00 per cent of

**Table 4.2.2. Frequency of attending training programmes organized by women dairy cooperatives by beneficiaries**

Sr. No.	Name of the training programme	Always (3)	Frequently (2)	Seldom (1)	Weighted mean score	Rank
1	Training of management committee members	17 (08.50)	62 (31.00)	121 (60.50)	1.48	XVIII
2	Training of secretaries	25 (12.50)	127 (63.50)	48 (24.00)	1.89	XI
3	Training of awareness programme	140 (70.00)	60 (30.00)	-	2.70	II
4	Training of legal literacy	118 (59.00)	82 (41.00)	-	2.59	IV
5	Training of female awareness programme	118 (59.00)	82 (41.00)	-	2.59	IV
6	Training of male awareness programme	21 (10.50)	143 (71.50)	36 (18.00)	1.93	X
7	Training of artificial insemination	83 (41.50)	117 (58.50)	-	2.42	VIII
8	Training of clean milk production	147 (73.50)	53 (26.50)	-	2.74	I
9	Training of women leadership	14 (07.00)	126(63.00)	60 (30.00)	1.77	XIV
10	Training of women health awareness	22 (11.00)	147 (73.50)	31 (15.50)	1.96	IX
11	Training of animal husbandry practices	114 (57.00)	86 (43.00)	-	2.57	VI
12	Training of women motivational programme	22 (11.00)	106 (53.00)	72 (36.00)	1.75	XV
13	Training of women development and economic development	92 (46.00)	108 (54.00)	-	2.46	VII
14	Training of veterinary first aid worker	-	139 (69.50)	61 (30.50)	1.70	XVI
15	Training of technical input promoter	33 (16.50)	73 (36.50)	94 (47.00)	1.70	XVI
16	Training of dairy animal management	19 (09.50)	122 (61.00)	59 (29.50)	1.80	XII
17	Training of secretary orientation	15 (07.50)	127 (63.50)	58 (29.00)	1.79	XIII
18	Training of farmers induction programme	139 (69.50)	61 (30.50)	-	2.70	II

Figures in parentheses indicate percentages.

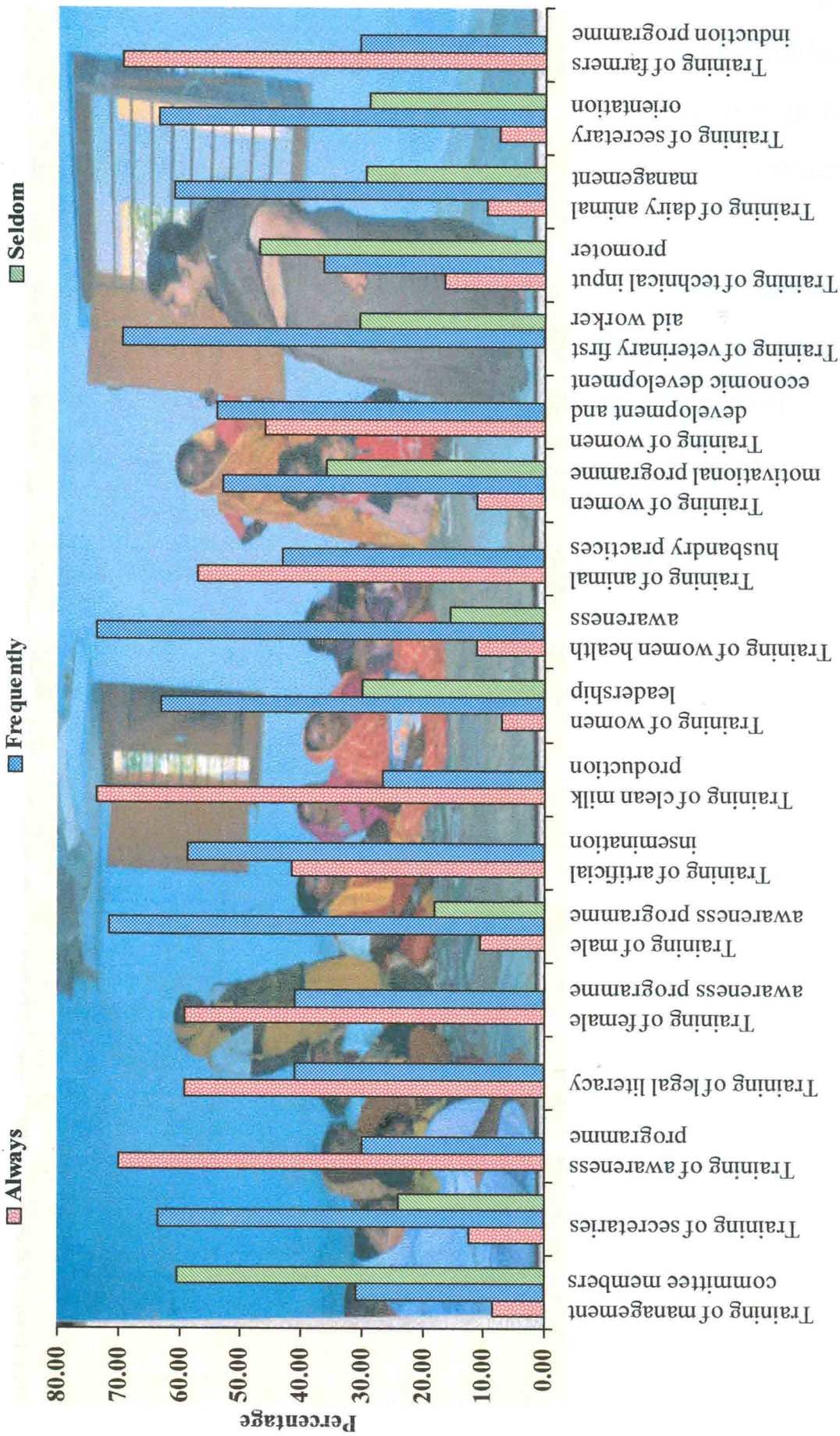


Fig. 8. Frequency of attending training programmes organized by women dairy cooperatives

beneficiaries followed by seldom (30.00%) and always (7.00%), frequency of training women health awareness was reported to be frequently by majority (73.50%), followed by seldom (15.50%) and always (11.00%).

As far as frequency to attend training on animal husbandry practices was concerned it was reported always by 57.00 per cent of beneficiaries followed by frequently (43.00%). Training women in motivational programme was attended frequently by 53.00 per cent of beneficiaries followed by seldom (36.00%) and always (11.00%). Training women development and economic development was attended frequently by 54.00 per cent of beneficiaries followed by always (46.00%). Frequency to attend the training related to veterinary first aid worker was found to be seldom (47.00%) of beneficiaries followed by frequently (36.50%) and always (16.50%). Training related to dairy animal management was attended frequently (61.00%) followed by seldom (29.50%) and always (9.50%). Training related to secretary orientation was attended by beneficiaries frequently (63.50%) followed by seldom (29.00%) and always (7.50%). Frequency to attend farmers induction training was found to be always by majority of the respondents (69.50%) followed by frequently (30.50%).

It can, therefore, be abstracted that women's frequency to attend most of the trainings was fairly high. The findings as described in the preceding lines clearly suggest the efforts of milk plant officials in disseminating information about training and educational programmes was very encouraging. Training is the pre-requisite for human resource



**Plate 4. Woman doing artificial insemination**



**Plate 5. Training in progress**

development and this aspect was duly covered under WDC project as revealed through the respondents responses.

The original action plan of WDC project also included other aspects of training and education of health and nutrition, literacy, general awareness, household management, use of biogas, smokeless chulha and bee-keeping . The training facilities relevant to various aspects of dairy cooperatives were availed by majority of the members because most of the trainings were organized at the society level itself and dairy extension workers regularly visited the society and were motivating the members to attend various trainings organized by WDC.

Rajorhia (2001) discussed the potential of a two dimensional growth of the Indian dairy industry by setting up an apex body in the Indian Dairy Association which will tap the financial participation of the central and state governments to undertake promotional, coordination and financial assistance for over all development of dairying in both cooperatives and private corporations in India.

#### **Extent of benefits from trainings**

Table 4.2.3 contains rank-wise ordering of the trainings on the basis of extent of benefits as perceived by the beneficiaries. An examination of table reveals that training related to first-aid and timely veterinary treatment of animals obtained I rank followed by artificial insemination and maintenance of milk pass books, receipts and payment of milk price (Rank II), receipt of milk price (Rank IV), society formation (Rank V), importance of balanced cattle feed, greens (Rank VI), care and management

**Table 4.2.3. Extent of benefits from trainings as perceived by beneficiaries**

Sr. No.	Basic training	Extent of benefits		Weighted mean score	Rank
		Highly beneficial	Beneficial		
1	Society formation	89 (44.50)	111 (55.50)	1.45	V
2	Procedure for electing members	38 (19.00)	162 (81.00)	1.19	X
3	Society management	55 (27.50)	145 (72.50)	1.28	VIII
4	Maintenance of milk passbooks, receipts and payment of milk price	127 (63.50)	73 (36.50)	1.64	II
5	Artificial insemination	128 (64.00)	72 (36.00)	1.64	II
6	Care and management of pregnant animals, vaccination, nutrition, calf rearing, deworming, etc.	62 (31.00)	138 (69.00)	1.31	VII
7	Importance of balanced cattle feed, greens, etc.	65 (32.50)	135 (67.50)	1.33	VI
8	First-aid and timely veterinary treatment of animals	147 (73.50)	53 (26.50)	1.74	I
9	Control measures for forestalling the epidemics	54 (27.00)	146 (73.00)	1.27	IX
10	Receipt of milk price	119 (59.50)	81 (40.50)	1.60	IV

Figures in parentheses indicate percentages.

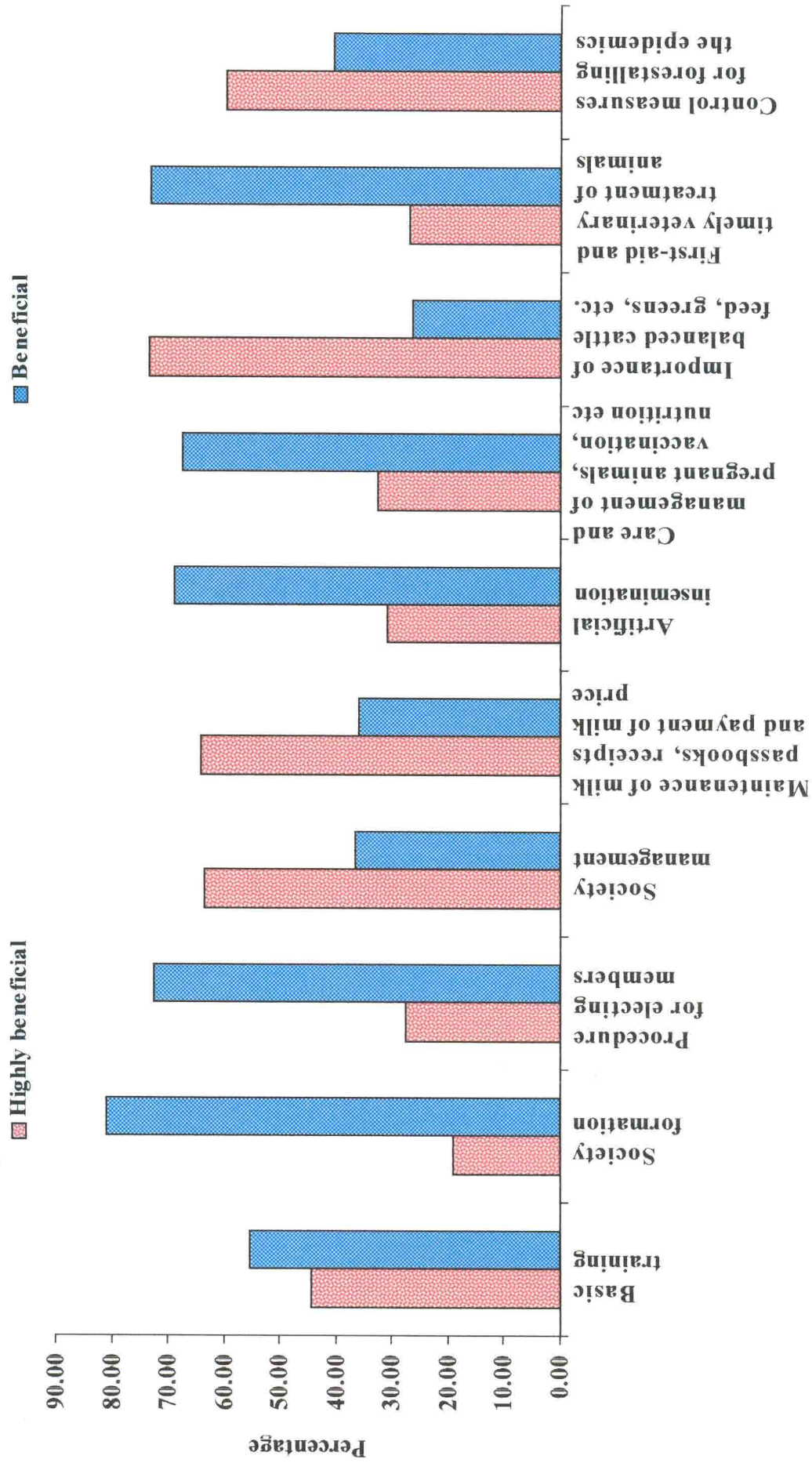
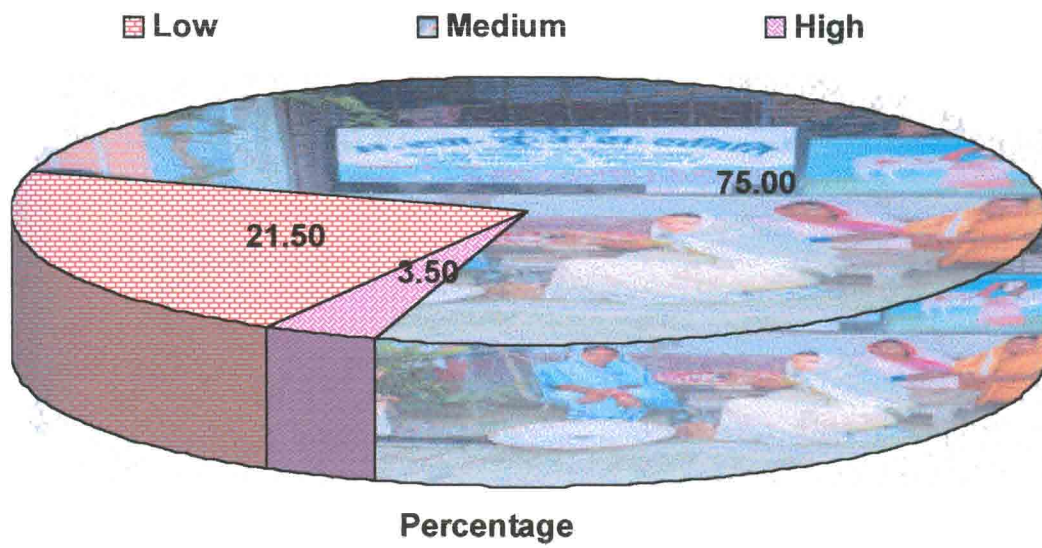


Fig. 9. Extent of benefits from trainings as perceived by beneficiaries



**Fig. 10. Veterinary institutional infrastructural utilization by beneficiaries**

of pregnant animals, vaccination, nutrition, calf rearing and deworming (Rank VII), society management (Rank VIII), control measures for forestalling the epidemics (Rank IX) and procedure for electing members (Rank X) (Fig. 9).

#### **Veterinary institutional infrastructural utilization**

Table 4.2.4 highlights that out of total sample, majority of beneficiaries (75.00%) assessed the veterinary institutional infrastructural utilization was of medium level, followed by low (21.50%) and high (3.50%) (Fig. 10).

**Table 4.2.4 Veterinary institutional infrastructural utilization**

(n=200)

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Low	43	21.50
Medium	150	75.00
High	7	03.50

#### **4.3 Empowerment of Women Through Women Dairy Cooperatives**

Women dairy cooperatives societies (WDCS) were established to act as a vehicle for propagation of various developmental activities for rural women along with providing a regular source of income. It was assumed that WDC would provide an organized forum through which women could address their personal and social needs and grievances and also become active participants in development. The extent and level to which these societies could succeed in empowering the beneficiaries were measured with the help of index developed for this purpose. Various

dimensions of empowerment investigated were personal, social, economic, entrepreneurial, managerial, political and technological.

Therefore, data on extent of change and level of empowerment of women beneficiaries through WDC are incorporated in section below.

### **Extent of change**

Cent per cent of the women beneficiaries reported that there was increase in extent of change in terms of personal, social, economical, entrepreneurial, managerial, political and technological empowerment.

### **Level of empowerment**

Table 4.3.1 contains the data related to personal, social, economical, entrepreneurial, managerial, political and technological level of empowerment of women beneficiaries (Fig. 11). It is evident from the table that majority of the beneficiaries (89.00%) had medium level of personal empowerment, followed by low (6.50%) and high (4.50%).

Regiana (1990) stressed that empowerment of women means strengthening of their innate viability. It can be done through acquiring knowledge, power and expression. Power is not to dominate but power to reduce helplessness. It is a sense of internal strength and confidence to face life, the right to determine choice in life, the ability to influence social process that affects their lives. Empowerment of women are endowed with the capacity and opportunity to influence the direction of social transformation.

Regarding social empowerment of beneficiaries majority of them (84.00%) had medium level followed by high (11.50%) and low (4.50%).

**Table 4.3.1. Level of empowerment of beneficiaries through dairy enterprise**

(n=200)

<b>Sr. No.</b>	<b>Dimensions</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1. Personal</b>			
	Low	13	6.50
	Medium	178	89.00
	High	9	4.50
<b>2 Social</b>			
	Low	9	4.50
	Medium	168	84.00
	High	23	11.50
<b>3 Economic</b>			
	Low	10	5.00
	Medium	90	45.00
	High	100	50.00
<b>4 Entrepreneurial</b>			
	Low	15	7.50
	Medium	170	85.00
	High	15	7.50
<b>5 Managerial</b>			
	Low	7	3.50
	Medium	170	85.00
	High	23	11.50
<b>6 Political</b>			
	Low	18	9.00
	Medium	168	84.00
	High	14	7.00
<b>7 Technological</b>			
	Low	12	6.00
	Medium	168	84.00
	High	20	10.00

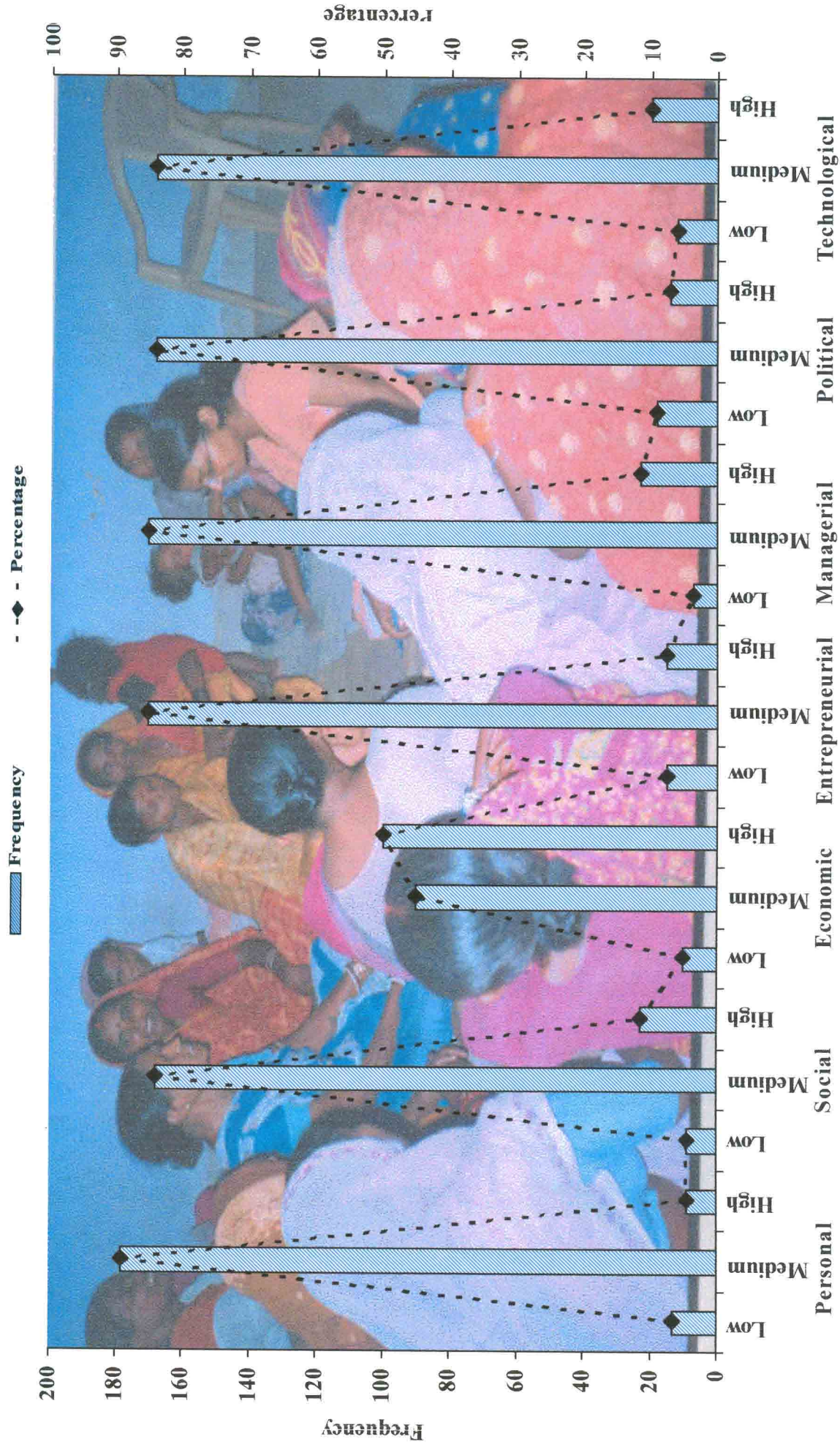


Fig.11. Level of empowerment of beneficiaries through dairy enterprise

Jena (1989) observed that the National Perspective Plan for Women (1988-2000) views women as an important component of national development and emphasizes integration of women into the main stream of national economy, while ensuring equality and social justice for all women.

As regards to economic empowerment 50.00 per cent beneficiaries had high level followed by medium (45.00%) and only 5 per cent had low level of economic empowerment. Joshi (1996) revealed that economic empowerment of women is very important for raising their status in the society. Anuradha (2004) reported that regarding socio-economic extent of empowerment most of the respondents were empowered to a large extent for loaning procedure and process.

Level of entrepreneurial empowerment of majority of the beneficiaries (85.00%) reported was medium followed by high and low (7.50% each). Gain (2001) expressed that for empowering women we need to enlarge the choices and access to various opportunities and also build her capacity for taking up successfully income generation activities.

Majority of the beneficiaries (85.00%) had medium level of managerial empowerment followed by high (11.50%) and low (only 3.50%). Srinath (1992) through an action research study evolved features of empowerment which include self perception, perception of role of women in society, decision making, economic independence, innovativeness, desire to improve present living conditions, attitude towards group action and communication behaviour.

Political empowerment level was found to be medium by 84.00 per cent of beneficiaries followed by low (9.00%) and high (7.00%). Bhagyalakshmi (2001) concluded that India has taken several measures "including legislation to ensure the full development and advancement of women, for the purpose of guaranteeing them the exercise and enjoyment of human rights and fundamental freedoms on the basis of equality with men."

As far as technological empowerment level was concerned, it was reported medium (84.00%) followed by high (10.00%) and low (6.00%). Bulatao *et al.* (1993) revealed that in Philippines women in dairy cooperatives were proving to be able dairy managers and women technicians were proving to be of considerable assistance to the cooperatives. Women involved in dairying were found to make strenuous efforts to maximize the resources within their reach despite difficulties faced.

It is evident from the result that strongest component has been economic empowerment as majority of the beneficiaries fell in the high category while majority of the beneficiaries had medium level of empowerment for personal, social, entrepreneurial, managerial, political and technological empowerment

Thus, it can be inferred that women dairy cooperatives has been a successful model for improving the socio-economic condition of rural families in general and rural women in particular. The benefits are direct as well as indirect viz., weekly cash payments for milk sold, ready market



**Plate 6. Product prepared at union level**



**Plate 7. ISO 9001 and HACCP certification to BWDP for producing quality products**

at the door-step at the village level itself for surplus milk. The milk collected at village level gets pooled at the union level and converted into a number of value added products sold under brand name 'SUDHA'. Bihar Women Dairy Cooperative (BWDC) had evolved a unique and powerful method of sharing economic benefits. It returned 85 per cent of the consumers rupee to the grass-root level and kept 15 per cent for plant development, infrastructure, marketing returning the balance to the beneficiaries.

#### **Distribution of economic benefit from Union level to beneficiaries**

Further, the break-up followed was that 65 per cent of benefit was returned for village society development that then covered cost of trainings and day to day management of the WDC. The remaining 15 and 5 per cent was given to beneficiaries in the form of bonus and spent on dissemination of information related to dairy cooperative. It was also found that the beneficiaries had a choice to choose the form in which they desired bonus, in cash or kind.

Punjraath (1989) reported that dairy farming has proved a powerful instrument to further economic progress and social change in rural areas of India. It also has tremendous potential for the creation of mass employment opportunities in these areas for those with limited education and can, therefore, be an important means for the alleviation of poverty. As a result of a woman focussed approach the active participation of women in dairy cooperatives increases. The consequences have not only been to improve women's economic position but also to assist them in breaking down the barriers created by feudal traditions poverty.



**Plate 8. Beneficiaries involved in bee-keeping**



**Plate 9. Self-Help Group Meeting**



**Plate 10. Bonus distributed among beneficiaries**

Subburaj *et al.* (2001) reported that members of dairy cooperatives are likely to have greater perception of the social, democratic and empowerment benefits of dairy cooperatives.

### **Ordering of dimensions of empowerment**

Table 4.3.2 depicts the rank-wise dimensions of empowerment according to weighted mean score. Economic empowerment obtained (Rank I) followed by managerial (rank II), social (Rank III), technological (Rank IV), entrepreneurial (Rank V), political and personal (Rank VI).

Anuradha (2004) reported that socio-economic extent of empowerment of rural women obtained the highest mean score (Rank I).

### **Impact of women dairy cooperatives on quality of life of beneficiaries**

Present part of the study attempts to explore the type of impact WDC could succeed in establishing on various life quality parameters of its members. These parameters were economic, nutrition and health, housing, material possession, domestic violence, personal grooming, education, social, recreational (Table 4.3.3; Fig.12). Economic impact was ascertained viz., change in income, expenditure, saving and investment. It is apparent from Table 4.3.3 that majority of the beneficiaries (76.00%) reported increase in their income as a result of their being member of WDC, whereas 61.50 per cent of them reported increase in expenditure. According to cent per cent beneficiaries their saving level also increased.

According to 67.00 per cent women beneficiaries their investment level remained same. The above result suggests that dairy cooperatives has succeeded in increasing income, expenditure and saving of women beneficiaries as providing additional and regular income to its members

**Table 4.3.2. Rank-wise dimensions of empowerment**

<b>Sr. No.</b>	<b>Dimensions</b>	<b>Weighted mean score</b>	<b>Rank</b>
1	Personal	1.98	VI
2	Social	2.07	III
3	Economic	2.45	I
4	Entrepreneurial	2.00	V
5	Managerial	2.08	II
6	Political	1.98	VI
7	Technological	2.04	IV

is one of the important objectives of WDC project. The money earned by women through their hard labour indirectly increased their control over income. The borrowing tendency was observed to be less due to availability of regular money to meet emergency needs like illness, unexpected guests, family occasions, etc.

The findings are in consonance with the results of Deepti (2002) who also reported an increase income of the small, marginal and landless farmers due to dairy and dairy cooperatives.

The impact of WDC on nutrition and health related aspects when studied revealed that majority (70.00%) of the women beneficiaries reported increase in their expenditure on food items, increase in quality/variety of food (46.00%), increased expenses on health care (76.50%) mainly due to regular availability of money from dairying. Reduction in experience of strain and fatigue was reported by 65.50 per cent of them.

Thus, it can be concluded that there was increase in awareness and utilization level of women regarding health of family members, balanced diet and management of human resources like time, money and energy so women felt less exertion and fatigue on account of undertaking dairy enterprise to supplement family income.

The result of impact on housing aspect of beneficiaries revealed that majority of the beneficiaries (91.00%) went for interior decoration, followed by repair/maintenance (47.00%), furnishing (42.00%) and home improvement (37.50%) and 17.00 per cent went for construction of house.

**Table 4.3.3. Impact of women dairy cooperatives on quality of life of beneficiaries**

(n=200)

Sr. No.	Aspects	Response category			Weighted mean score	Rank
		Increase	Same	Decrease		
<b>1.</b>	<b>Economic</b>					
	Income	152 (76.00)	48 (24.00)	-	2.76	II
	Expenditure	123 (61.50)	77 (38.50)	-	2.62	III
	Saving	200 (100.00)	0 (0.00)	-	3.00	I
	Investment	66 (33.00)	137 (67.00)	-	2.33	IV
<b>2</b>	<b>Nutrition and health</b>					
	Expenses on food	140 (70.00)	60 (30.00)	-	2.70	II
	Quality/variety of food	92 (46.00)	108 (54.00)	-	2.46	III
	Expenses on health care	153 (76.50)	47 (23.50)	-	2.77	I
	Experience of strain fatigue	34 (17.00)	35 (17.50)	131 (65.50)	1.52	IV
<b>3</b>	<b>Housing</b>					
	Rent	57 (28.50)	143 (71.50)	-	2.29	V
	Furnishing	84 (42.00)	116 (58.00)	-	2.42	III
	Repair/maintenances	94 (47.00)	106 (53.00)	-	2.47	II
	Home improvement	75 (37.50)	125 (62.50)	-	2.38	IV
	Construction	34 (17.00)	166 (83.00)	-	2.17	VI
	Interior decoration	182 (91.00)	18 (09.00)	-	2.91	I
<b>4</b>	<b>Material possession</b>					
	Low prestige items	177 (88.50)	23 (11.50)	-	2.89	I
	Medium prestige items	132 (66.00)	68 (34.00)	-	2.66	II
	High prestige items	32 (16.00)	168 (84.00)	-	2.16	III

<b>5</b>	<b>Domestic violence</b>								
	Abuse	0 (0.00)	32 (16.00)	168 (84.00)	1.16	I			
	Beating	-	-	200 (100.00)	1.00	III			
	Mental torture	-	13 (06.50)	187 (93.50)	1.07	II			
<b>6</b>	<b>Personal grooming</b>								
	Clothing	116 (58.00)	84 (42.00)	-	2.58	I			
	Jewellery	37 (15.50)	163 (81.50)	-	2.19	II			
<b>7</b>	<b>Educational</b>								
	Better schooling of children	200 (100.00)	-	-	3.00	I *			
	Spending on private tuitions/coaching of children	154 (77.00)	46 (23.00)	-	2.77	III			
	Enrolment of children in extra-curricular activities viz. computer, art & music class, etc.	28 (14.00)	172 (86.00)	-	2.14	IV			
<b>8</b>	<b>Social</b>								
	Attend adult education classes	200 (100.00)	-	-	3.00	I			
	Social recognition of self	155 (77.50)	45 (22.50)	-	2.78	III			
	Social participation	159 (79.50)	41 (20.50)	-	2.80	II			
	Size of social circle	135 (67.50)	65 (32.50)	-	2.68	IV			
	Status of family in society	178 (89.00)	22 (11.00)	-	2.90	I			
<b>9</b>	<b>Recreational</b>								
	Holidays, outings	55 (27.50)	145 (72.50)	-	2.28	IV			
	Outdoor meals	32 (16.00)	168 (84.00)	-	2.16	V			
	Hosting/attending parties	91 (45.50)	109 (54.50)	-	2.46	II			
	Time for hobbies	86 (43.00)	114 (57.00)	-	2.43	III			
	Celebration of festivals/ceremonies	94 (47.00)	106 (53.00)	-	2.47	I			

Figures in parentheses indicate percentages.

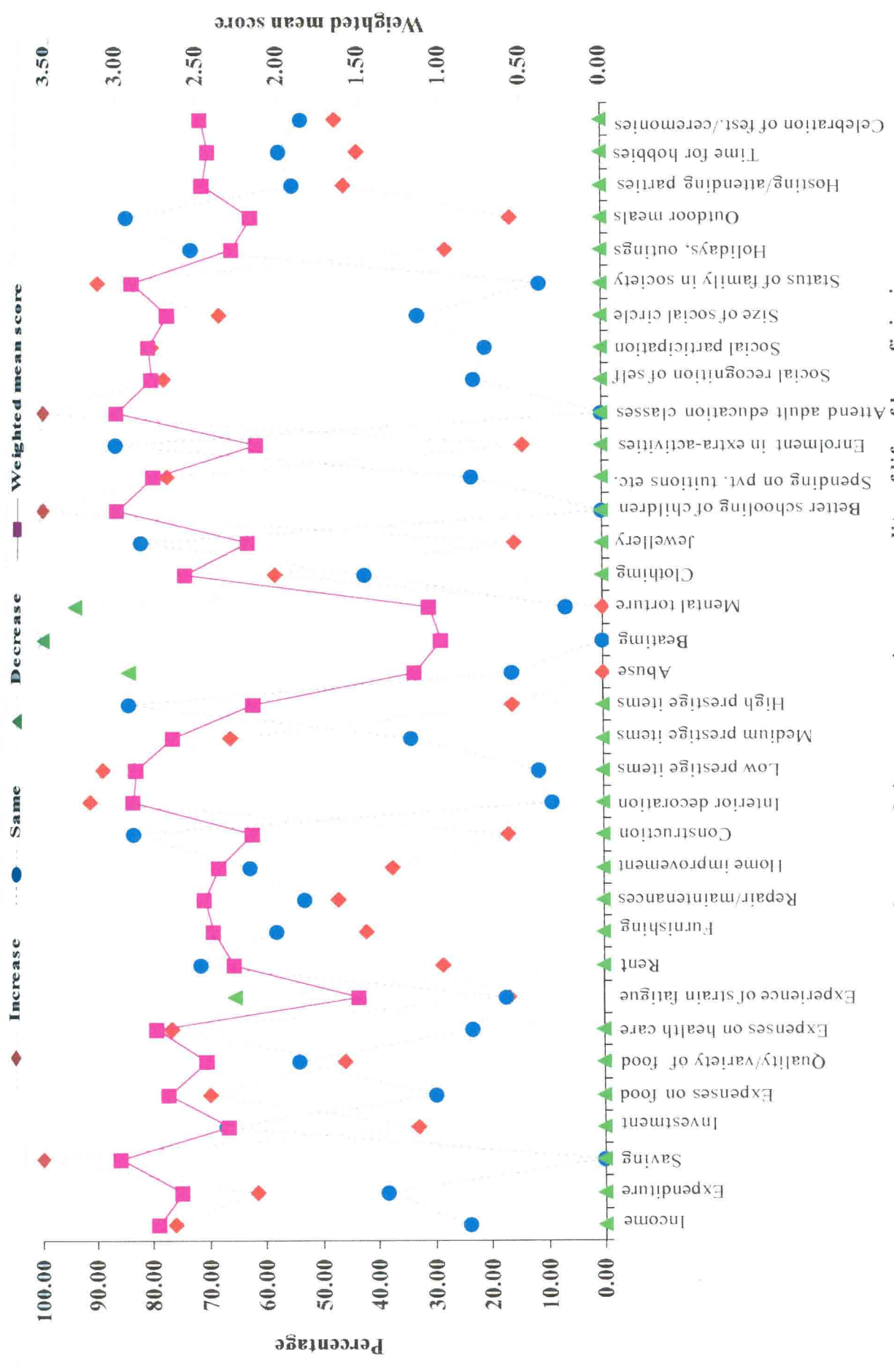


Fig.12. Impact of women dairy cooperatives on quality of life of beneficiaries

The activities of housing like furnishing, repair and maintenances, home improvement were undertaken by the respondents. This may be due to the reason that the WDC project was in operation for more than 15 years providing regular income to its members and hence they were able to furnish and repair old house and construct new ones, out of the money earned from dairying.

As far as impact on material possession aspect was concerned, it was noted that 88.50 per cent of beneficiaries reported increase in low prestige items followed by medium prestige items (66.00%), whereas according to 84.00 per cent of beneficiaries high prestige items remained same. Majority of the respondents reported decrease in domestic violence viz., abuse, beating and mental torture as a result of member of dairy cooperative. Regarding personal grooming, increase in expenditure on clothing was reported by 58.00 per cent of beneficiaries and 81.50 per cent of beneficiaries perceived that expenditure on jewellery remained the same.

The information pertaining to impact of WDCS on educational aspects revealed that cent per cent of the respondents agreed that they were able to provide better schooling facilities for their children after joining DCS, followed by spending on private tuitions/coaching of children (77.00%). Cent per cent of them attended adult education classes. Thus, on the basis of mean scores, it may be concluded that the respondents were able to improve schooling facilities for their children due to the availability of money from dairying.

It is revealed from Table 4.3.3 that 89.00 per cent members of WDCS agreed to the point that the status of their family in society increased. Increase in social participation was also reported by majority of the respondents (79.50%). They were of the opinion that WDC scheme was more beneficial for women of weaker section as it provided opportunity to participate in government schemes. It was found that social recognition of self has been increased by 77.50 per cent of them and size of social circle got increased (67.50%).

Hence forth, it can be concluded that WDC influenced various social issues and matters concerning women directly as well as indirectly. Women gather daily at WDCS to supply milk which in turn resulted in more social interaction and participation. The increased contact of women members with government officials helped in shedding off their hesitation. The successful running of dairy cooperatives by women helped to increase credibility of women among villagers and villages.

As far as impact on recreational aspect is concerned, it was revealed that in 47.00 per cent cases the expenditure on celebration of festivals/ ceremonies increased followed by hosting/attending (45.50%). Time for hobbies increased as reported by 43.00 per cent of them. Majority of the beneficiaries (84.00%) informed that expenses on outdoor meals remained same.

The mean score data on impact of WDC indicated that the participation of women in WDC project influenced all the selected parameters in a positive way as the mean scores of most of the parameters were more than two, however, the maximum impact was visualized on economic, educational and social aspects.

**Enterprise satisfaction**

Satisfaction level of beneficiaries (Table 4.3.4) was calculated by considering various parameters and it was found to be moderate in 50.00 per cent of the cases followed by high (48.00%) and only 2 per cent of them were in the slightly satisfied category (Fig. 13).

**Overall empowerment of beneficiaries**

The study indicates that majority of the beneficiaries (75.00%) had medium level of empowerment followed by high (18.00%) and only 7.00 per cent of them had low level of empowerment (Table 4.3.5; Fig. 14). This means that the beneficiaries had the opportunity and ability both to assess and control their rights. This in turn lead to improvement in their socio-economic condition. It also reveals that those in authority had the will to enforce various development activities and these were performed in right earnest and empowering women. Singh (2001) also had similar observations. Kant (2001) observed that the process of women's empowerment is multidimensional as it enables them to realize their full potential and empower them in various spheres of life.

In gist, we can say that Bihar Women Dairy Cooperative (BWDC) established in mid eighties in economically and educationally backward Bihar state had been successful in improving the socio-economic conditions of women, belonging to the weaker section. The women were found to be benefited directly as well as indirectly in a number of ways through milk cooperative. BWDC has created favourable conditions for long-term effective growth in production and productivity of animals

**Table 4.3.4. Enterprise satisfaction of beneficiaries of women dairy cooperatives**

(n=200)

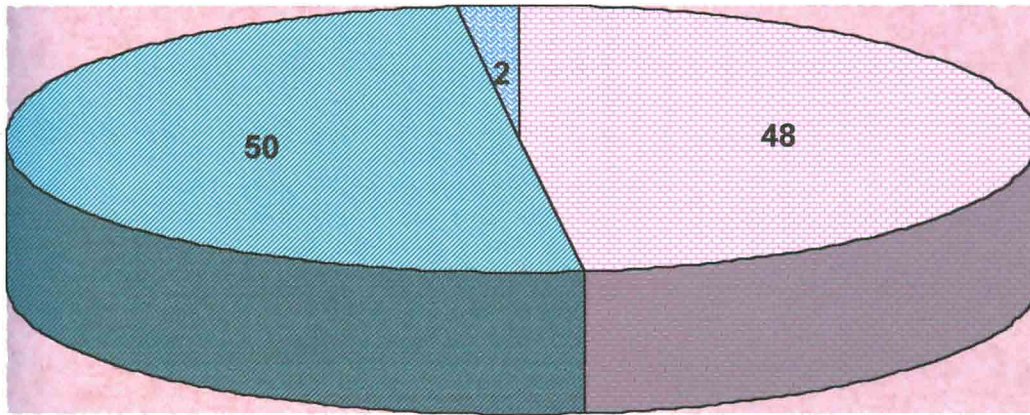
<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Highly satisfied	96	48.00
Moderately satisfied	100	50.00
Slightly satisfied	4	02.00

**Table 4.3.5. Overall empowerment of beneficiaries of women dairy cooperatives**

(n=200)

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Low	14	07.00
Medium	150	75.00
High	36	18.00

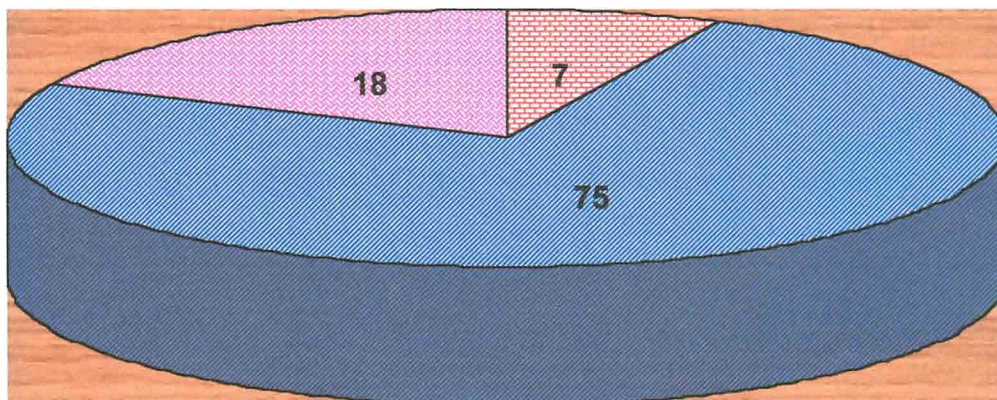
■ Highly satisfied      ■ Moderately satisfied      ■ Slightly satisfied



Percentage

Fig.13. Enterprise satisfaction of beneficiaries of women dairy cooperatives

■ Low      ■ Medium      ■ High



Percentage

Fig.14. Overall empowerment of beneficiaries of women dairy cooperatives

through modern animal husbandry technologies viz., animal breeding, feeding, housing, management practices, milk production along with noticeably empowerment of women through professional management skills. Technical input services provided by BWDC included artificial insemination, balanced cattle feed/by pass protein feed, better fodder varieties and emergency health services which have been of immense value to women in raising and sustaining milk production along with ensuring a better quality of life. The milk collected at village level pooled at the union level and converted into a number of value added products sold under brand name 'SUDHA' viz. pasteurized milk, sweets, curd, cheese, ghee, butter milk, dairy whitener, milk powder, ice-cream. BWDC returned 85 per cent of the consumers rupee to the women members. This venture has opened horizon to build intra and inter-state market, satellite markets, up-country market and rural market in more than a dozen district town in the state of Bihar including capital city Patna and inter-state market of West Bengal.

#### **Association of independent variables with empowerment of women**

In order to study association of independent variables with empowerment of women chi-square and contingency coefficient was calculated. Contingency coefficient (COC) defines the degree of association between variables and empowerment i.e. weak association (0.1 to 0.2), moderate association (0.2 to 0.4) and high (0.4 to 0.7). Table 4.3.6 unveils the association of independent variables with empowerment of women. A look on table indicates that education of respondent ( $\chi^2 =$

**Table 4.3.6. Association of independent variables with empowerment of women through women dairy cooperatives**

Sr. No.	Independent	Empowerment of women		
		X <sup>2</sup> value	COC	DF
1	Age	2.5561	1.123 I	4
2	Education of respondent	27.9244*	0.3500 I	10
3	Type of family	79.1797*	0.5326 I	2
4	Size of family	1.2925	0.0801 I	4
5	Family education status	38.5709*	0.4172 I	4
6	Social participation	12.4779*	0.2423 I	4
7	Caste	23.5581*	0.3246 I	4
8	Occupation of male head of household	16.1238*	0.2731 I	8
9	Total annual income	31.9680*	0.3712 I	4
10	Land holding	60.4184*	0.4817 I	8
11	Type of house	7.6420	0.1918 I	4
12	Size of house	17.1788*	0.2812 I	4
13	Material possession	55.4398*	0.4659 I	4
14	Mass media exposure	37.8947*	0.3991 I	4
15	Extension contact	102.6616*	0.5824 I	4
16	Motivation	116.6712*	0.6070 I	4
17	Entrepreneurial traits	138.7229*	0.6400 I	4

\*Significant at 5 per cent level of significance.

COC – Coefficient of contingency

DF – Degree of freedom.

27.9244\*), type of family ( $\chi^2 = 79.1797^*$ ), family education status ( $\chi^2 = 38.5709^*$ ), social participation ( $\chi^2 = 12.4779^*$ ), caste ( $\chi^2 = 23.5581^*$ ), occupation of male head of household ( $\chi^2 = 16.1238^*$ ), total annual income ( $\chi^2 = 31.9680^*$ ), land holding ( $\chi^2 = 60.4184^*$ ), size of house ( $\chi^2 = 17.1788^*$ ), material possession ( $\chi^2 = 55.4398^*$ ), mass media exposure ( $\chi^2 = 37.8947^*$ ), extension contact ( $\chi^2 = 102.6616^*$ ), motivation ( $\chi^2 = 116.6712^*$ ) and entrepreneurial traits ( $\chi^2 = 138.7229^*$ ) had been found to be significantly associated with empowerment of women.

Contingency coefficient (COC) of these variables indicates that education of respondent, family education status, social participation, caste, occupation of male head of household, total annual income, size of house and mass media exposure had medium association with empowerment of women, whereas type of family, land holding, material possession, extension contact, motivation and entrepreneurial traits showed strong association with empowerment of women.

Hence, high chi-square value in case of extension contact, motivation and entrepreneurial traits means that as the value in these variables increases, the empowerment of the beneficiaries increases accordingly. Similar findings were reported by Anuradha (2004) who reported that mass media exposure, extension personal contact and motivation were found significantly associated with empowerment of rural women.

### **Constraints of beneficiaries of women dairy cooperatives**

Any programme or activity no matter how effectively it has been

formulated would encounter constraints. It was, therefore, assumed that the constraints faced by women beneficiaries of WDCS would be of varied nature which would further help to provide alternate suggestions to make the cooperative societies more functional, viable and useful to rural women. Table 4.3.7 incorporates constraints viz., personal, educational, animal health care and management, milk supply and payment and organizational constraints. Rank-wise ordering of various personal constraints on the basis of weighted mean scores revealed that non-availability of land to grow green fodder, non-availability of green fodder round the year and small children or dependent in-laws were the major constraints faced by women.

On the basis of weighted mean scores, it is clear that there was no major educational constraints. Lack of knowledge about advantages and facilities provided by dairy cooperative societies and lack of knowledge about government subsidy for purchasing animals and animals feed were the moderate constraints faced by women. Regarding animal health care and management, inability to buy balanced feed on cash basis, absenteeism among veterinary staff and short supply of foot and mouth disease vaccine were the moderate constraints faced by women. As far as milk supply and payment was concerned, low milk rate in comparison to local venders and less price for milk were reported as moderate constraints.

As regards to organizational constraints, dominance of relatives/ friends of office bearers, lack of coordination among office bearers and attention of secretary to influential women were reported as moderate constraints faced by women.

Table 4.3.7. Constraints of beneficiaries of women dairy cooperatives

Sr. No.	Constraints	Major (3)	Moderate (2)	Minor (1)	Not a constraint (0)	Weighted mean score	Rank
<b>1. Personal</b>							
	Increase work burden and responsibility	-	61	139	-	1.31	VIII
	Small children or dependent in-laws	61	94	45	-	2.08	III
	Non-cooperative attitude of husband/in-laws	34	120	46	-	1.94	IV*
	Family member do not render help in house hold work	-	81	119	-	1.41	VII
	Family member do not help in dairy work	-	117	83	-	1.59	V
	Hindrance due to ill health	15	84	101	-	1.57	VI
	Non-availability of sufficient water	-	-	-	200	-	-
	Non-availability of land to grow green fodder	77	123	-	-	2.39	I
	Non-availability of green fodder round the year	61	139	-	-	2.31	II
	Lack of technical training for growing green fodder	-	-	-	200	-	-
	Dependence on family member for supplying milk	-	-	-	200	-	-
	Control of husband over income	-	57	143	-	1.29	IX
<b>2. Educational</b>							
	Inability of cross checking the fat content due to illiteracy	-	-	-	200	-	-
	Lack of knowledge about advantages and facilities provided by dairy cooperative society	15	61	124	-	1.46	I

(n=200)

Lack of knowledge about government subsidy for purchasing animals and animal feed	-	84	116	-	1.42	II
Lack of knowledge about care and management of milch animals	-	37	163	-	1.19	IV
Lack of timely guidance regarding feeding and care of milch animals	-	70	130	-	1.35	III
<b>3 . Animal health care and management</b>						
High charges of emergency veterinary services	-	-	-	200	-	-
Absentism among veterinary staff	-	92	108	-	1.46	II *
Inability to buy balance feed on cash basis	-	123	77	-	1.62	I
Distant location of AI center	-	-	-	200	-	-
Non-availability of timely medical aid	-	78	122	-	1.39	IV
Short supply of foot and mouth disease vaccine	-	92	108	-	1.46	II
Improperly trained staff working at AI center	-	22	178	-	1.11	VII
Lack of training to first-aid worker	-	63	137	-	1.32	V
Irregular supply of cattle feed	-	32	168	-	1.16	VI
High cost and inferior quality of cattle feed	-	-	-	200	-	-
<b>4 Milk supply and payment</b>						
Less price for milk	-	63	137	-	1.32	I
Lack of incentives for supplying milk to WDCS	-	-	-	200	-	-
Low milk rate in comparison to local vendors	-	63	137	-	1.32	I
Distantly located milk collection center	-	-	-	200	-	-
Unsatisfactory milk weighing and fat testing procedure	-	-	-	200	-	-
Problem in receiving payments	-	34	166	-	1.17	III

### 5. Organizational

Presence of male family members of office bearers	-	77	123	-	1.39	VII
Lack of respect for women of lower caste group	-	118	82	-	1.59	IV
Dominance of relatives/friends of office bearers	61	73	66	-	1.98	I
Attention of secretary to influential women	-	136	64	-	1.68	III
Biasness in distribution of free cost vaccine	-	34	166	-	1.17	XI
Rude behaviour of society secretary	-	-	-	200	-	-
Lack of timely information	-	73	127	-	1.37	VIII
Inappropriate assistance	-	-	-	200	-	-
Concerned officers are not easily approachable	-	63	137	-	1.32	IX
Inappropriate timings	-	98	102	-	1.49	V
Testing equipment remains out of order	-	84	116	-	1.42	VI
No prior information about trainings	-	-	-	200	-	-
Pick and choose in selecting trainees	-	-	-	200	-	-
Inappropriate distribution of benefits	-	52	148	-	1.26	X
Lack of coordination among office bearers	-	155	45	-	1.78	II
Proper dairy accounts not made	-	-	-	200	-	-
Delay in payment	-	32	168	-	1.16	XII

Not a constraint WMS 0.00

Minor constraints WMS 0.01 - 1.00

Moderate constraint WMS 1.01 - 2.00

Major constraint WMS 2.01 - 3.00

WMS = Weighted mean score

#### **4.4 Managerial Effectiveness of the Office bearers of Women Dairy Cooperatives**

Efficient and effective human resource is a crucial component of any successful organization. The success level depends considerably on the degree to which the human factor is put to its ideal possible use and capacity. Managerial effectiveness means organization goal achieving behaviour. Managerial effectiveness is a function of various activities of planning, organizing, leading, controlling and communicating. For the speedy progress of dairy as an industry the Bihar Women Dairy Cooperative (BWDC) is based on the Anand pattern with dairy society at village level, Union at district level and federation at state level. As a result of dairy cooperative initiative rural women who were afraid of talking to the strangers, now participate in day to day working of the society, discussing financial matters, work and other related matter with an intensity not known to even many male societies. There is a healthy competition for election of managing committee. Dairy cooperative societies act as facilitators to bring about economic equality and social justice by focussing attention on and directing training towards poor women, to empower women to move into position of decision maker and to enable women participation in all three tiers of Anand pattern organization. In different decision making bodies the representation of women is encouraging. Cost reduction and technology management, modernization of process and plant technology, quality assurance programme leading to ISO 9000 and HACCP certification, high-tech information management and high profile human resource management, all are measures under way to update the technology

available to rural producers, employees, customers, suppliers, dealers, retailers and all on associates direct or indirect and so further improve their socio-economic health. Technical input services provided by these cooperatives not only helped in raising and sustaining milk production, but have also ensured a better quality of life to the members. All these could happen because women's productivity capacity has been enhanced through various trainings like management committee members training, secretaries training, women leadership training, women motivational programme, training of women development and economic development, farmers induction programme and secretary orientation training has been linked with professional management. This helps to ensure that the fruits of science and technology reach at the grass-root level. Therefore, the objective of the study was to analyze the managerial effectiveness of the office bearers at the grass-root level. The findings are as under:

#### **4.1.1 General information of the office bearers**

Table 4.4.1 shows that 42.50, 32.50 and 25.00 per cent of office bearers belonged to young, old and middle age group, respectively, 57.50 per cent were male and rest female (42.50%). On the education front 62.50 per cent of office bearers were postgraduate followed by graduates (37.50%). Cent per cent of them were married, 52.50 per cent belonged to backward caste followed by upper caste category (47.50%). Majority of the office bearers (82.50%) were living in rural areas followed by urban (17.50%).

**Length of service:** More than half of the office bearers (62.50%)

**Table 4.4.1. General information of the office bearers of women dairy cooperatives**

			(n=40)
Sr. No.	Variables and categories	Frequency	Percentage
<b>1. Age (yrs)</b>			
	Young	17	42.50
	Middle	10	25.00
	Old	13	32.50
<b>2. Sex</b>			
	Male	23	57.50
	Female	17	42.50
<b>3. Education background</b>			
	Graduation	15	37.50
	Postgraduation	25	62.50
<b>4. Marital status</b>			
	Married	40	100.00
	Unmarried	00	0.00
<b>5. Caste</b>			
	Upper	19	47.50
	Backward	21	52.50
<b>6. Residence</b>			
	Urban	07	17.50
	Rural	33	82.50
<b>7. Length of service</b>			
	Less than 10 years	05	12.50
	10-20 years	25	62.50
	More than 20 years	10	25.00

had worked between (10-20 years), followed by more than 20 years (25.00%) and less than 10 years (12.50%).

### **Managerial effectiveness of office bearers**

Managerial effectiveness has been discussed under the following functions of management:

- \* Planning
- \* Organizing (discussed in terms of organizational climate, organizational commitment, delegation of authority)
- \* Leading (Motivation and leadership style)
- \* Controlling
- \* Communication (Communication skills)

The data reported in Table 4.4.2 shows that majority of the office bearers (85.00%) felt that they had high level of organizational climate followed by low (15.00%). Approximately, half of the office bearers (47.50%) had medium organizational commitment towards dairy cooperatives followed by high (35.00%) and low (17.50%). From these findings it was clearly indicated that office bearers were satisfied with organizational climate and were well committed to their organization.

Jhamtani and Singh (1992) concluded that effectiveness of any organization and more so that of the developmental non-profit organization depends to a large extent on how well it was organized and how the employees perceive its organizational climate.

Delegation habits of half of the office bearers (50.00%) needed improvement and merely 5.00 per cent of the office bearers had ineffective



**Plate 11. Meeting of office bearers at WDCS**



**Plate 12. Women leadership development programme in progress**

**Table 4.4.2. Managerial effectiveness of office bearers**

		(n=40)	
Sr. No.	Functions of management	Frequency	Percentage
<b>1.</b>	<b>Organizational climate</b>		
	Low	06	15.00
	High	34	85.00
<b>2.</b>	<b>Organizational commitment</b>		
	Low	07	17.50
	Medium	19	47.50
	High	14	35.00
<b>3.</b>	<b>Delegation habits</b>		
	Ineffective delegation	02	05.00
	Delegation habits need substantial improvement	20	50.00
	You still have room to improve	13	32.50
	Superior delegation	05	12.50
<b>4.</b>	<b>Communication skills</b>		
	Low	04	10.00
	Medium	34	85.00
	High	02	05.00
<b>5.</b>	<b>Leadership style</b>		
	Shared leadership	06	15.00
	Autocratic leadership (Task-oriented)	13	32.50
	Laissez-faire leadership (People-oriented)	21	52.50
<b>6.</b>	<b>Planning</b>		
	Low	06	15.00
	Medium	05	12.50
	High	29	72.50
<b>7.</b>	<b>Motivation</b>		
	Low	02	05.00
	Medium	03	07.50
	High	35	87.50
<b>8.</b>	<b>Controlling</b>		
	Low	19	47.50
	High	21	52.50

delegation habits. About 32.50 per cent of the office bearers reported still there was scope to improve and 12.50 per cent of the office bearers had superior delegation habits. Delegation of authority helps the superior to get more work done by allowing subordinates to assume a part of that work load. Besides this delegation helps in job enrichment that results in greater subordinate productivity (Burton and Thakur, 1996).

Data presented in Table 4.4.2 show that most of the office bearers (85.00%) had medium level of communication skills, 5.00 per cent had high level and only 10.00 per cent had low level of communication skills.

Parshad and Sandhu (1974) noted that majority (46.53%) of village level workers (VLWs) were having medium level of communication skills.

More than half of the office bearers (52.50%) had laissez faire leadership style (people-oriented) followed by 32.50 and 15.00 per cent of them who had autocratic and shared leadership style, respectively. Hofsfede (1980) reported that in nations where power distances between people are smaller, there is greater acceptance of democratic leadership styles. Leadership in any culture must make concessions both to subordinates and culture that had conditioned the attitudes and behaviour of managers. Singh and Verma (1986) expressed that higher the status in administrative hierarchy, greater the amount of autocratic style.

As far as level of planning is concerned it was found to be high by majority of the office bearers (72.50%) followed by low (15.00%) and medium (12.50%).

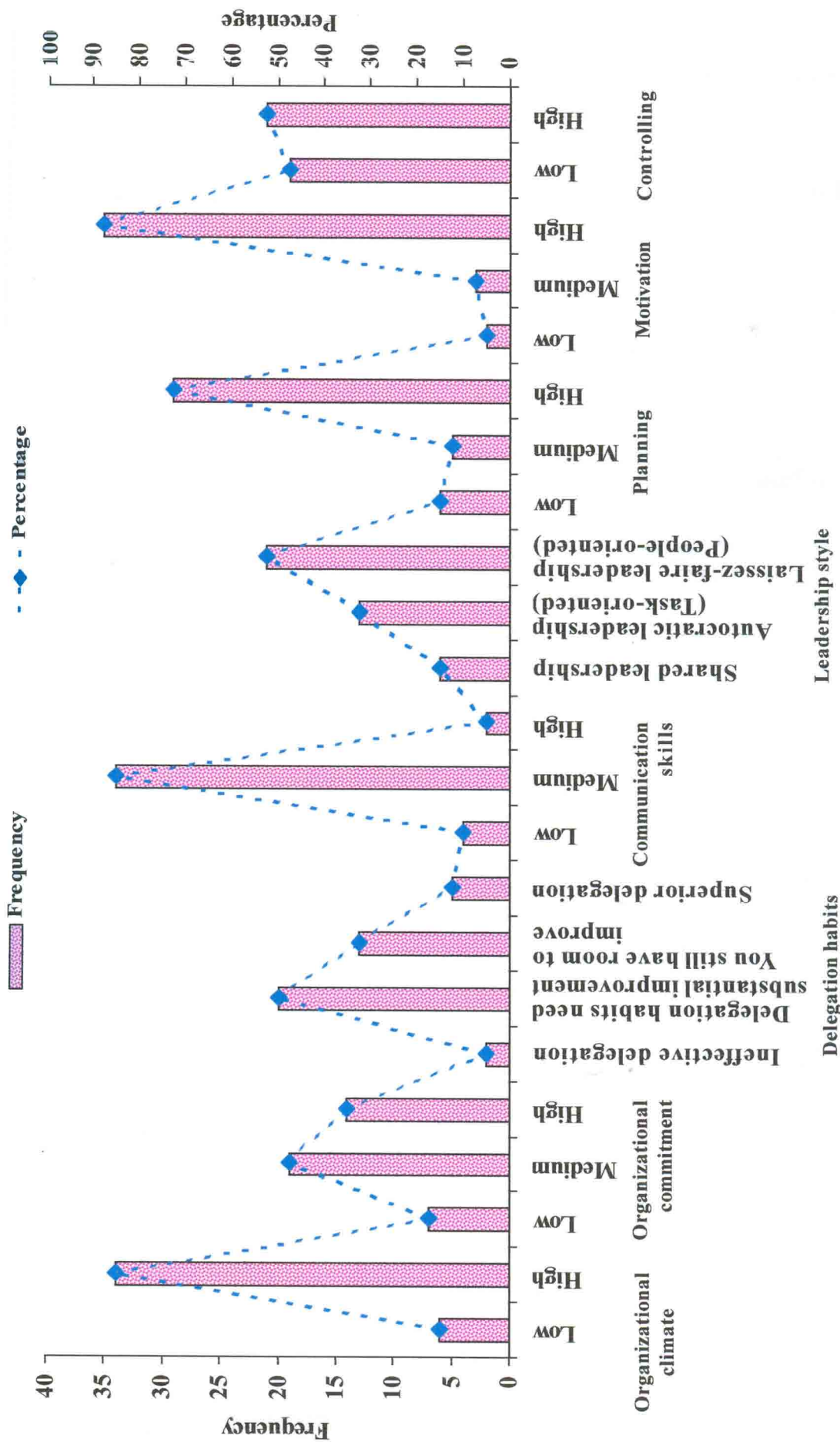
Thus, it can be inferred from these findings that various aspect of planning are considered by the office bearers irrespective of gender and

extent of involvement was high of various aspects of planning. Burton and Thakur (1996) concluded that planning was the very foundation for the other key managerial practices of organizing, leading and controlling. Ardekani and Haug (1997) noted that by adopting a more comprehensive approach towards conceptualization of planning process, assess to the effects of organizational context were evident on planning design dimensions.

It is evident from the figures reported in Table 4.4.2 that majority of the office bearers (87.50%) had high motivation followed by medium (7.50%) and low (5.00%). The results clearly indicate that all the motivational factors (self-actualization factor, esteem factor, belonging and safety factor, physiological factor) were stated to be high by majority of the office bearers.

McClelland (1983) suggested that managers can raise the achievement, need level of employees by creating the proper work environment. Managers can do this by permitting the employees a measures of independence, increasing responsibility and autonomy, gradually making tasks more challenging, praising and rewarding their performance. Michael (1989) opined that better the motivational tool greater would be its effect on the individual behaviour since motivation is a morale booster.

Table shows that 52.50 per cent of the office bearers had high control which means that nearly half of the office bearers were considering various means for controlling and directing the performance of the subordinates, whereas 47.50 per cent of the office bearers had low control which means



**Fig.15. Managerial effectiveness of office bearers**

they were using few means for controlling and evaluating the performance of their subordinates (Fig. 15).

Koontz *et al.* (1982) defined that managerial function of controlling is the measurement and correction of the performance of activities of subordinates in order to make sure that enterprise objectives and the plans devised to attain them are being accomplished.

### **Ordering of managerial effectiveness of office bearers**

Table 4.4.3 depicts the ranking of managerial effectiveness of office bearers on the basis of obtained weighted mean scores.

Motivation obtained (Rank I), followed by planning (Rank II), delegation of habits (Rank III), leadership style (Rank IV), organizational commitment (Rank V), controlling (Rank VI), communication skills (Rank VII) and organization climate (Rank VIII).

### **Managerial effectiveness index of office bearers of women dairy cooperatives at the grass root level**

Distribution of the office bearers according to their managerial effectiveness score presented in Table 4.4.4 shows that half of the office bearers (50.00%) had high managerial effectiveness, followed by medium (32.50%) and low (only 17.50%) (Fig. 16).

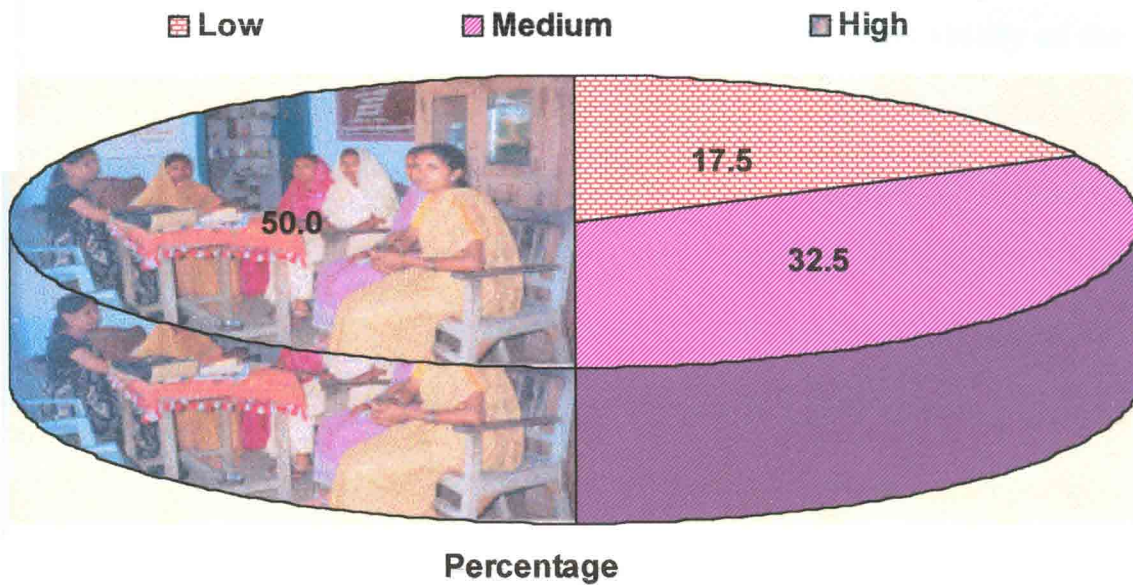
Thus, it can be concluded that half of the office bearers of women dairy cooperatives at the grass root level had excellent managerial effectiveness. It was also found that in women dairy cooperatives employees are highly motivated and disciplined, their grievances are being addressed on top priority basis. Number of employees benefit schemes have been incorporated in their HRD policy. Efficient working capital

**Table 4.4.3. Rank-wise managerial effectiveness of office bearers**

Category	Weighted mean score	Rank
Organizational climate	1.85	VIII
Organizational commitment	2.18	V
Delegation habits	2.53	III
Communication skills	1.95	VII
Leadership style	2.38	IV
Planning	2.58	II
Motivation	2.83	I
Controlling	2.05	VI

**Table 4.4.4. Managerial effectiveness index of office bearers of women dairy cooperatives at the grass root level**

Category	Frequency	Percentage
Low	07	17.50
Medium	13	32.50
High	20	50.00



**Fig.16. Overall managerial effectiveness of office bearers of women dairy cooperatives at the grass root level**

management in accordance with other functional management could help to deal successfully with the odds.

Reddin (1970) opined that effectiveness is not a quality, a manager brings to a situation. It is achievement of results and the accent is on performance and on actions relative to goals.

In gist, we can say that management effectiveness is ability of the office bearers in making his best contribution towards the organizational objectives and goals and management involves the design or creation and maintenance of an internal environment in an enterprise where individuals working together in groups, can perform efficiently and effectively towards the attainment of group goals. Human factor consists of all men and women capable of contributing their mite in one way or the other to the success of their organization. An ideal organization, must provide equal opportunities of career advancement to men and women alike along with reasonable economic benefits.

## CHAPTER – V

### SUMMARY AND CONCLUSION

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India is predominantly an agrarian economy with nearly 70 per cent of the population residing in villages and depending on agriculture. Indian agriculture is an economic symbiosis of crop and livestock production with cattle as the foundation. For small farmers, cattle is perhaps the only tangible asset and mainstay for their socio-economic, food and nutritional security.

With the increase in population and consequent decrease in available farm land per person, the marginal farmers and landless labourers are getting increasingly poor. The women members of these households are worst sufferers. Viewed in this context, dairy as an alternate source of income can be ideally suited as women have always been associated with cattle rearing. Various studies from time to time have documented the significant role of women in various dairy activities of collecting fodder, watering, feeding, cleaning as well as collecting dung, milking, bathing and cleaning cattle shed. Therefore, it was considered appropriate that women could play a crucial role in making dairy development sustainable and a beginning was made in eighties to involve women exclusively in dairy cooperative societies.

Considering women dairy cooperative (WDC) as an agency of women development, Bihar Women Dairy Project (BWDP) was taken up under the Seventh Five-Year Plan for augmenting income of rural families by directly involving the rural women in dairying activities and COMPFED (Cooperative Milk Producer's Federation Limited) as the implementing agency for this project. The trust of WDC formation in Bihar has been on utilizing women positively for dairy production and to change their own status from non-earner to earning members. Thus, dairy cooperatives as an agency of women development holds potential in improving the status of women involved in this enterprise.

Keeping the active role of women dairy cooperatives in empowerment of rural women, present study was undertaken with the following objectives:

1. To investigate the profile and entrepreneurial traits of beneficiaries and non-beneficiaries in women dairy cooperatives.
2. To investigate the resource system support availed by beneficiaries and non-beneficiaries in women dairy cooperatives.
3. To ascertain the role of women dairy cooperatives in empowerment of women and to isolate the factors affecting empowerment.
4. To analyze the managerial effectiveness of women dairy cooperatives at the grass root level.

### **Methodology**

The study was conducted in Bihar state purposively because Bihar Women Dairy Project (BWDP) is regarded as a successful cooperative for

augmenting income of rural families by directly involving the rural women in dairying enterprise. Both the milk union in Bihar i.e. Barauni Milk Union (BMU) and Mithila Milk Union (MMU) were selected purposively. One district each from each of the two milk unions was also selected purposively based on performance. Further, six villages from each of the two districts were selected purposively with four villages/district acting as an experiment group and the other two villages as control group.

#### **Objective 1 to 3**

List of women members of the cooperative in all the selected villages were obtained and random sampling of 260 women respondents i.e. 100 beneficiaries/district (25 women members per village) forming the experimental group and 30 non-beneficiaries/district (i.e. 15 women non-members per village) as control group were selected.

#### **Objective 4**

Random sampling of 40 office bearers i.e. 5 per selected village where the cooperative was functioning were interviewed.

Thus, the total sample comprised of 300 respondents (260 rural women and 40 office bearers).

Personal socio-economic, communication, entrepreneurial, dairy related and resource system variables were studied as independent variables. Various dimensions of empowerment viz., personal, social, political, economical, technological, managerial, entrepreneurial and overall empowerment were studied as dependent variables. Enterprise satisfaction and constraints were also investigated.

Managerial effectiveness of the office bearers was assessed in terms of planning, organization climate, organizational commitment, delegation habits, leadership style, motivation, controlling and communication skills and measured using appropriate available scales.

The data were collected personally with the help of pretested structured interview schedule. Appropriate statistical tools were applied to analyze the data and inferences were drawn accordingly.

### **Main findings**

#### **Personal and socio-economic profile of the respondents**

Fifty per cent of the beneficiaries and fifty five per cent of non-beneficiaries were in middle age group. More than one-third of beneficiaries and non-beneficiaries were illiterates, all of them were married, majority had nuclear families. Family size of nearly half of the beneficiaries (49.50%) was small, whereas majority of non-beneficiaries (71.70%) had small family size. Family education status of near about half of the beneficiaries (46.50%) was medium, whereas, more than half of the non-beneficiaries (53.30%) had low family education status.

Majority of the beneficiaries got recognition like financial, position, award, certificate, whereas no such recognition were found in case of non-beneficiaries. Nearly half of the beneficiaries had no membership social organization other than dairy cooperatives, while none of the non-beneficiaries were having any membership. Majority of them belonged to backward caste; labour was the main occupation of male head of household (39.50% and 40.00% beneficiaries and non-beneficiaries). Slightly more

than half of both beneficiaries and non-beneficiaries had medium involvement as agriculture labour. The main occupation of nearly two-third of beneficiaries were found to be in combination of housewife, agriculture and livestock, whereas cent per cent of non-beneficiaries were having main occupation as housewife and agriculture. Total annual income in both the cases was found to be low, maximum were landless, having small house. More than half of both beneficiaries and non-beneficiaries (52.50% and 65.00%) had low material possession. More than one-third of beneficiaries and non-beneficiaries had medium mass media exposure. Meeting with gram sevika, anganwadi teacher, dairy supervisor and veterinary surgeon were most frequently attended by the beneficiaries and majority of them showed their personal interest in field demonstration organized at the society by the dairy cooperatives. Affiliation, economic, self actualization, achievement, risk taking ability and power motivations of beneficiaries were very high as compared to non-beneficiaries as dairy cooperatives act as a “morale booster” for their members. Entrepreneurial traits of majority of the beneficiaries (68.00%) possessed medium scores, whereas majority (88.33%) of the non-beneficiaries had low entrepreneurial scores.

#### **Dairy related variables of beneficiaries**

Forty-five per cent of the beneficiaries had medium herd size. Nearly sixty per cent of the respondents had animal shed adjoining the house and 56.00 per cent of beneficiaries reported that they had to travel a short distance in carrying water for animals. As regard to time taken more than

half of them reported less than 15 minutes time taken in carrying water for animals. Fodder availability mainly from cooperative society was reported “always” by 69.00 per cent of the beneficiaries. Cent per cent of the respondents were aware about lactometer and fat testing for judging milk quality.

Sixty-six per cent of the beneficiaries reported that animals were purchased and sold by dairies. The mean milk production (litres/day) by members of women dairy cooperatives was 10.23, mean consumption 2.36 and mean sale 7.88 and more than one-third of the beneficiaries rated dairying as highly profitable. Cent per cent of the beneficiaries were aware about the brand name under which milk and its products were sold i.e. 'SUDHA'. Cent per cent were also aware about products like ghee, misti dohi and lassi followed by peda (33.50%) prepared at the union level. Frequent purchase of these products were reported by 46.50 per cent of beneficiaries. Operations of cleaning of shed, preparing cowdung cakes, boiling and other milk related activities, selling of milk, cleaning of utensils used for milking, preparing of milk products were exclusively carried out by women. Length of association with the dairy cooperative of near about half of the beneficiaries (43.50%) was between 9-11 years and all the beneficiaries were having whole life membership. Majority of the beneficiaries were always delivering the milk to society and mean distance traveled and time spent were 1.26 km and 20.45 min, respectively and walking was the mode of travel.

Dairy is an economical enterprise, help from family members, high social recognition and availability of better veterinary facilities were the main reasons reported by beneficiaries for choosing dairy enterprise.

#### **Resource system support availed**

The main source of majority of beneficiaries (60.00%) from where the financial assistance was availed was self-help group of WDC, whereas the main source by majority of non-beneficiaries (73.33%) was private moneylender. Main purpose for availing the financial assistance was agriculture by 32.00 per cent of beneficiaries, whereas the main purpose was loan for marriage by majority of non-beneficiaries.

Frequency to attend the training programmes by majority of women beneficiaries was reported quite high. First-aid and timely veterinary treatment of animals obtained I rank on the basis of extent of benefits received by the beneficiaries followed by artificial insemination and maintenance of milk pass books, receipts and payment of milk price (Rank II). Veterinary institutional infrastructural utilization level of majority of beneficiaries (75.00%) was medium.

#### **Empowerment of women through women dairy cooperatives**

Cent per cent of the women beneficiaries reported increase in their extent of change in terms of personal social, economical, entrepreneurial, managerial, political and technological aspects. Level of empowerment was reported to be of medium level by majority of the beneficiaries followed by high level. The maximum impact of women dairy cooperatives on quality of life of beneficiaries was evident on economic, educational and social aspects.

Satisfaction level of beneficiaries about dairy cooperatives was moderate in 50.00 per cent of cases followed by high (48.00%). Overall empowerment of majority of the beneficiaries (75.00%) was medium followed by high (18.00%). It was found that extension contact, motivation and entrepreneurial traits were strongly associated with empowerment of women.

### **Managerial effectiveness of the office bearers of women dairy cooperatives**

#### **General information**

About 42.50 per cent of office bearers belonged to young age group, 57.50 per cent were male and 42.50 per cent were female, 62.50 per cent of the office bearers were postgraduate and cent per cent of them were married, 52.50 per cent were from backward caste. Majority of the office bearers were living in rural areas and length of service of more than half of the office bearers was between 10-20 years.

#### **Managerial effectiveness**

Organizational climate was reported to be high by majority of the office bearers and nearly half of them had medium organizational commitment. Delegation habits of half of the office bearers needed improvement and 12.50 per cent of the office bearers had superior delegation habits. Most of the office bearers had medium level of communication skills and more than half of them (52.50%) had laissez faire leadership style. Level of planning and motivation were found high by majority of the office bearers.

Nearly 52.50 per cent of the office bearers had high control which means that half of the office bearers were considering all the means for controlling and directing the performance of the subordinates. Managerial effectiveness of office bearers of women dairy cooperatives was found high by exactly half the office bearers.

Conclusively, women dairy cooperative is a crucial agency of women development. It not only improves the social status including condition and position of women involved in dairy farming but also carry on production, procurement, processing and marketing of milk to ensure continuous supply of milk and to provide remunerative returns to the women milk producers. In WDCS most of the activities pertaining to milk production are in the hands of women and it is quite logical that they should share the burden of the management of cooperatives and WDCS remains the nucleus for multifarious activities concerning women's development.

### **Conclusion**

1. Members of women dairy cooperative societies (WDCS) sell the milk directly to the village cooperatives, which markets to the Milk Union and the middleman route gets avoided in the process to the advantage of the beneficiaries.
2. Majority of the cooperative members are landless or marginal or small farmers who regularly delivering milk to the cooperatives. For them, the income derived from milk provides their only regular cash flow transforming dairying into an economically viable activity.

3. Necessary financial help provided to the societies/individual members by bank and state government for purchase of crossbred animal and other related marketing assistance for functioning of women dairy cooperative societies has been a boon for the beneficiaries.

4 Dairy cooperative has created modern value-added processing and production facilities at Union level. It has a range of delicious Indian sweets and products sold under the brand name of 'SUDHA' in its fold viz., Rasogulla, gulab-jamun, peda, kalakand, milk cake, misthi dohi, sweetened condensed product called Sudha special, paneer. SUDHA has become the synonymous of quality in the area of milk and milk products and has become a household name in the eastern part of the country.

5. Modern technologies in animal breeding and feeding have been adopted successfully by a significant number of rural women beneficiaries.

6. Technical input services including animal insemination, balanced cattle feed/by pass proteins feed, better fodder varieties and emergency veterinary health services have not only helped in raising and sustaining milk production but have also ensured a better quality of life in the villages. All these could happen because women's productive capacity has been linked with professional management.

7 Inseminators in women DCS are exclusively women. Women members are using cattle feed. The animals are being vaccinated regularly. Women are well aware of the different high yielding varieties of fodder seeds and they are being benefited from modern technical input services.

8. Training of members in animal husbandry related dimensions has played an important role in upgradation of knowledge and adoption of

modern technology. Other trainings that have been imparted by DCS to rural women for income generation are sewing, bee-keeping, fruit preservation like jam and sauce preparation, agarbatti, candle, soap and detergent making and some women have attached themselves with khadi centers of their respective village and they are earning income regularly.

9 It was encouraging that woman cooperative societies became the hub of various programme run by the health center, nutrition center and literacy center. These programmes have evidently had a marked impact on their life styles. They have become more aware of hygiene and health care needs.

10 As a result of dairy cooperative women who were afraid of talking to the strangers, now participate in day to-day working of the societies, discussing financial and other matters, work and other related matter with an intensity not known to even many male societies. There is even a healthy competition for election of managing committee.

11 Dairy cooperative societies act as facilitators to bring about economic equality and social justice by focusing attention on and directing training towards poor women, to empower women to move into position of decision maker and to enable women to participate in all three tiers of Anand pattern organization that is societies at village level, union at district level and federation at state level. In different decision making bodies the representation of women is encouraging.

12. The cooperative elects its chairman and other officials in a democratic manner and so they are bound to do what members desire. The

WDC also employs its own staff. This staff pays beneficiaries on the basis of the quantity of the milk they bring in and on its quality tested on the basis of the fat and snf content. Scientific testing procedure adopted satisfies the beneficiaries. These rural women beneficiaries own the largest and most successful business in an industrially backward state.

13. These milk unions have returned a greater share to the tune of 85 per cent (65% for society development, 15% as bonus to their members, 5 % for propaganda, 15% for plant functioning) of the consumer's rupee to the women. This could be only be possible by mobilizing all resources optimally and positive development policies.

14. Women dairy cooperative has opened horizon to built sustainable markets including rural market, up-country market, satellite market in more than a dozen of district town in the state of Bihar including capital city Patna and inter-state market of West Bengal.

### **Strategies**

1. Genetic upgradation of cattle and buffaloes and expansion of existing infrastructure and delivery of breeding inputs and services to the rural women.
2. Systematic dissemination of appropriate technologies in the field of clean milk production and milk free from pesticide residues will help the local people produce standard milk products which can compete even in the international market. Although, the cooperative sector had made significant improvement in the development of dairy sector in rural areas, effort should be intensified to include more rural areas under the

cooperative set up. The aim should be “Reaching the un-reached people and including the excluded rural areas.”

3. Effort should be made to further improve both the quantity and quality of feed and fodder and ensure regular supply to beneficiaries at reasonable price.

4. The existing system of animal health services in terms of disease control and prevention needs to be strengthened so that disease-free and quality dairy products can be produced.

5. Awareness should be created in the minds of dairy women about the scope of value addition in dairy products like ghee, butter, paneer, khoa, yogurt, etc., since these products command premium prices when compared with whole milk.

6. The institutional and organizational support in terms of credit delivery and insurance should be stepped up to boost the performance of the dairy sector. A comprehensive insurance system catering for the needs of diversified regions of the country needs to be developed.

7. Emphasizing the importance of a holistic approach including judicious blend of empowerment and development activities in order to have a broader impact on the lives of poor women needs to be adopted.

8. Ensuring that the process of empowerment remains self-sustaining building women’s institutions that will have the capacity to further their development on an on-going basis.

9. Mutual support for members and confidence to strive collectively for social change and social justice.

10. Facilitating women's higher access to credit to increase their involvement in income generation activities.

11. Both success stories and failures/constraints need to be communicated to pursue at large so as to draw meaningful conclusions. The print and electronic media can play the desired role in communication.

## CASE STUDY

Here a moo, there a moo, everywhere a moo, moo.. While Old McDonald's farm may have been filled with other sounds, young Sita Sinha's backyard echoes with only the cows' mooing, testifying to her profession. She specialises in the artificial insemination of bovine beauties. Needles and gloves are her tools and the backyard her clinic.



Working with animals, much like other professionals, was till recently a man's domain. Therefore, in 1991 when Sita decided to start work as an artificial insemination worker (an AI worker in dairy parlance), her family wondered who in the village would come to her. Her farmer father, who had completed his own graduation in the early sixties had ensured that his daughter went to college, where Sita did her BA in History. However, Sita decided to leave history behind, preferring to go into profession that brings value to the present.

It was at a state level seminar that she heard about artificial insemination for cows and buffaloes for the first time. She learnt how this procedure could help improve and increase quantity of milk produced by cows. Being a farmer's daughter, Sita was aware that the cattle in her village did not produce more than a litre or two of milk per day. It was also a fact that her village depended on farming and the dairy for revenue. The decision was not hard to make Sita decided to try her hand at the new field of artificial insemination.

Sita was trained at the National Dairy Development Board's instruction facility at Siliguri, West Bengal. Back in her village (Sarairanjan in the Samastipur district of Bihar), she began work in earnest. Business however, was slow in the beginning. The villagers were sceptical about the ability of a woman to work with animals that kicked and whisked their tails every so often. No wonder, in her first year of practice, she treated only 36 patients a month. But Sita did not lose heart and kept going confident that things would change on day . In time the cows that had been artificially inseminated gave birth to cross breed calves that turned into high yielding milch cows. Seeing the fruitful results of her work, the villagers gained confidence in Sita. They shed their initial inhibitions and she started treating more and more patients. She now handles about 200-250 cows/buffaloes a month.

Sita's success has improved her economic condition, as well as contributed to the improved prosperity of her own, and that of the neighbouring villages.

In the beginning, Sita's husband Brajnandan expressed his reservation about her job as well. But Sita was adamant that she wanted to work and that too in a field of her choice. Eventually he gave in and now has no cause for complaint. Today they have two children, an eight year old girl and a boy who is almost four. Since Sita works from home (the villagers bring their cows and buffaloes to her house from where she performs all her duties), she makes sure that neither the home nor the hearth suffers.

But what are the dangers associated with her job? Well, you can get kicked and badly hurt by an irate cow or a buffalo, but that is a part of the job. Sita reiterates.

For Sita, work is not only restricted within the parameters of artificial insemination. She has also done a six month training stint as a veterinarian. Sita has been a source of inspiration to other women of her village currently there are more than 80 AI women workers in Bihar

## CASE STUDY

The vibrant India dairy sector is a case in point today where the very substantial contribution made by ordinary women folk has played a major role in making the so called “white revolution”.

Asha Devi is one of such women, who took the bull by its horn and founded a Women’s Dairy Cooperative Society at Basahi village, a small hamlet on the bank of the river Kamla Balan in the Begusarai district of Bihar. Her travails and the story the Basahi Women Milk Cooperative (BWMC) that she started with just 14 members and a collection of meagre 14.3 litre of milk a day in 1997, is classic example of how women power is a moving force in the fast expanding dairy sector today. Today the average milk procurement is 125 litres per day.



She founded a cooperative dairy in her village with the sole intention of freeing the village from the shackles of money lenders. She was beginning to share the gains with her fellow member’s when her husband decamped with the profits. Undeterred by the outpouring of scorn and suspicion, she started all over again. With her inspired leadership and new found confidence, the members of BWMC were the inhabitants of Basahi in good stead ... as a responsible and responsive Gramsevika she increasingly strives to give solace and enable the indigent and impoverished women in her domain become financially independent by helping them acquire sewing machines and training them in many other vocation. Asha’s sincere efforts, determined toil and persevering commitment, her villagers are all proud to say that she has led to all round growth of the society and the village’s economy as well.

This success story bring out how rural women can be empowered through sincere efforts and different techniques and tools adopted in dairy cooperatives. The development agencies will have to be committed to empower women with information, training, knowledge and proper guidance and allow them to emerge as leaders with confidence to guide their own destinies.

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**Recognition**

* Certificate	<input type="checkbox"/>
* Honour	<input type="checkbox"/>
* Award	<input type="checkbox"/>
* Position	<input type="checkbox"/>
* Financial	<input type="checkbox"/>

**Social Participation**

* No membership	0
* Member of a formal organization	1
* Member of non-formal organization	2
* Office bearer	3

**Social Economic Characteristics****Caste**

* SC	1
* Backward	2
* Upper	3

**Occupation of Male Head of Household**

* No work	0
* Labour	1
* Caste Occupation	2
* Business	3
* Farming	4
* Government Service	5
* Private Service	6
* Any other	7

**Involvement of Respondent in Agriculture****Agriculture Cultivator**

* High
* Medium
* Low

**Agriculture Labour**

* High
* Medium
* Low

**Occupation of the Respondent**

* Housewife
* Housewife + Agriculture
* Housewife + Agriculture + Livestock
* Housewife + Agriculture + Livestock + Others

**Total annual income**

* Low income group (below Rs. 25,000)	1
* Middle income group (Rs. 25,000-50000)	2
* High income group (Above Rs. 50,000)	3

**Land holding**

* Landless (No land)	1
* Marginal (upto 2.5 acres)	2
* Small (2.5 to 5.0 acres)	3
* Medium (5.0 to 10.0 acres)	4
* Large (>10.0 acres)	5

**Type of Size of House**

Type		Size	
* Katcha	1	* Small	1
* Mixed	2	* Medium	2
* Pucca	3	* Large	3

**Material Possession****Low Prestige Items**

* Sewing machine	1
* Electric fan	1
* Cycle	1
* Radio	1

**Medium Prestige Items**

* Electric iron	2
* Mixed blender/grinder	2
* Butter churner	2

**High Prestige Items**

* Refrigerator	3
* Cooler	3
* Washing machine	3
* T.V.	3
* V.C.R.	3
* Camera	3
* Geyser	3
* Car/Jeep/Matador	3

* Toaster	2
* Immerson rod	2
* Pressure cooker	2
* Improved storage bin	2
* Gobar gas plant	2
* Tape recorder/record player	2
* Scooter/motor cycle	2

### Communication Variables

#### Mass media exposure

A. Do you possess a radio/transistor?	Yes	1	No	0		
B. Do you listen to radio/transistor?	Yes	1	No	0		
C. Do you listen to programmes related to agriculture and animal husbandry?	Yes	1	No	0		
If yes with what frequency?	Daily	3;	Often	2;	Sometimes	1
D. Do you possess T.V. set?	Yes	1	No	0		
E. Do you watch T.V. programmes related to dairy?	Yes	1	No	0		
If yes with what frequency?	Daily	3;	Often	2;	Sometimes	1
F. Have you ever visited any exhibition or mela related to agriculture/animal husbandry during the last 2 years?	Yes	1	No	0		
G. Do you read/listen news related to dairy?	Yes	1	No	0		
If yes, mention the frequency?	Daily	3;	Often	2;	Sometimes	1
H. Do you read any magazine related to dairy?	Yes	1	No	0		
If yes, with what frequency?	Daily	3;	Often	2;	Sometimes	1

#### Extension Contact (during last one year)

Sr. No.	Extension contact	Frequently (3)	Occasionally (2)	Seldom (1)	Never (0)
---------	-------------------	----------------	------------------	------------	-----------

#### Meeting

- Veterinary surgeon/specialist
- Gram Sevika/Krishi Sahayak
- Health Visitor
- BDO/Staff
- Extension Worker
- Dairy supervisor
- Veterinary Doctor
- Bank/Cooperative official
- DES/Staff
- Adult educator/teacher
- Anganwadi teacher
- Mitra Kisan
- Any other

Sr. No.	Extension contact	Frequently (3)	Occasionally (2)	Seldom (1)	Never (0)
---------	-------------------	----------------	------------------	------------	-----------

#### Visited

- Veterinary clinic
- Primary health centre
- Field demonstration
- Kisan mela
- Gyan divas

- f. Craft centre
- g. Mahila mandal
- h. Anganwadi
- i. Any other

### Entrepreneurial variables

#### Type of motivation

Given below are some of the statements. Please go through each and indicate your responses by putting(√) in the appropriate column.

Statement	SA	A	UD	DA	SDA
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#### Affiliation motivation

1. Relatives are strong motivating forces for successful entrepreneurs
2. Stronger affiliation of friends make one take risk inspite of knowing the difficulties ahead in entrepreneurship
3. An entrepreneur does not loose, family affiliation even when undertakes enormous risk
4. An entrepreneur is guided to actions under adverse conditions by family forces
5. The success of an entrepreneur is based on strong affiliations with financial institutions
6. Family deliberations and consultancy are the fundamentals for the success of entrepreneurs

#### Economic motivation

1. An entrepreneur works towards large production and economic profiles
2. A successful entrepreneur puts in constant efforts to make better economic prospective
3. An entrepreneur takes risk in trying innovations which fetch him more profit
4. An entrepreneur expands his enterprise to increase monetary profit
5. Entrepreneurs are money minded and this approach affects the social values
6. As everything cannot be evaluated in economic terms one should bother more for social prestige

#### Self actualization

1. Exploring ones own potential for successful endeavour is an inmate quality of an entrepreneur
2. Self help is the best help and is the motto of an entrepreneur
3. An entrepreneur feels restless if predecided task is not achieved successfully
4. An entrepreneur tries hard for self fulfilment through his efforts

Statement	SA	A	UD	DA	SDA
-----------	----	---	----	----	-----

5. Achieving goals according to the maximum potentials is only possible with an entrepreneur
6. Maximum utilization of one's ability is the pre-requisite for achieving success in an entrepreneurial activity

Achievement motivation

1. Achieving long distant goals is usually the target of an entrepreneur
2. In spite of several failures an entrepreneur strives hard to reach excellence in his endeavour
3. Entrepreneur leaves no stone unturned to fulfill strong urge to reach the heights in his profession
4. One who sets forth self imposed standards of excellence is psychologically charged to achieve success
5. An entrepreneur is innovative in his enterprise
6. An entrepreneur never face problems in achieving difficult tasks but resolve it through rationality and expertise

Risk taking ability

1. An entrepreneur should take more of a chance in making a big profit than to be content with a smaller but less risky profit
2. An entrepreneur who is willing to take more risks in adopting new activities than the average entrepreneur usually do better financially
3. It is good for an entrepreneur to take risk in adopting new venture when they know that it will be for their benefit
4. Trying out an entirely new technology by an entrepreneur involves risks but it is worth it.
5. An entrepreneur should not adopt a number of improved technologies which involve risk

Power motivation

1. Power positions await successful entrepreneurs
2. As entrepreneurs enjoy economic independence they hold strong dislike of subordination
3. Power affiliation is more prestigious than riches
4. To reach power positions entrepreneurs strive hard at all stages with ups and downs
5. Power positions are long distant goals of an entrepreneurs
6. Entrepreneurship is the mean to achieve ultimate goal of power and prestige in the society

**Entrepreneurial traits**

Please put a mark (✓) on any of the seven alternatives against each of the attributes the extent you feel you possess that attribute.

Do not omit any one. Please give your free response.

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	7	6	5	4	3	2	1
1. Self confidence							Self distrust
2. Resourcefulness							Low resourceful

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3. Decision making ability	Non decision making ability
4. Problem solving	Problem solving inability
5. Managerial ability	Managerial inability
6. Credit orientation	Credit ignorance
7. Risk preference	Risk avoidance
8. Foresightedness	Short sightedness
9. Rationality	Irrationality
10. Creativity	Non-creativity
11. Communicability	Non-communicability
12. Skill competence	Non competence
13. Intelligence	Non intelligence
14. Perseverance	Perplexicity
15. Innovative	Laggard
16. Competition spirit	Non competitive spirit
17. Emotional spirit	Immaturity
18. Change proneness	Change resistance
19. Amicable nature	Non amicable
20. Independence	Dependence
21. High aspiration	Low aspiration

---

**Dairy related variables**
**Herd size**

* Small (upto 2)	1
* Medium (3 to 4)	2
* Large (5 and above)	3

**Animal shed**

## Place

- 
- \* Within the house
  - \* Adjoining the house
  - \* Near the house
  - \* Away from the house

**Water availability for animal husbandry**


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Water availability	Distance	Time
--------------------	----------	------

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- \* Available within the house
- \* Travel a short distance
- \* Carry from a long distance

**Fodder availability**


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Particulars	Always (3)	Frequently (2)	Seldom (1)	Never (0)
-------------	---------------	-------------------	---------------	--------------

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**Fodder availability**

- \* Mainly from farm
- \* Local market
- \* Co-operative society
- \* Any other

**Type of fodder**

- \* Green fodder
- \* Dry fodder
- \* Concentrae

Type of feed

- \* Plain straw
- \* Treated straw
- \* Mineral mixed salt
- \* Urea

**Method used for judging milk quality**

Method	Society	Home
* Organo-leptic test		
* Lactometer		
* Fat testing		
* Starch test		
* Do not know		

**Purchasing and selling of animals should be done**

- \* Locally
- \* Government institution
- \* Dairies
- \* Livestock mela

**Milk Production consumption and sale (L/day)**

Milk production	Consumption	Sale
-----------------	-------------	------

- \* Do you know the products prepared from milk by union and sold in the market? Yes/No
- \* Specify the brand name under which milk is sold by the union. Correct/Incorrect

**Knowledge regarding products manufactured at union level.**

Product manufactured	Yes / No
* Milk	
* Ghee	
* White butter	
* Full cream	
* Peda	
* Kalakand	
* Rasogulla	
* Gulab jamun	
* Milk cake	
* Khoa	
* Dairy whitener	
* Misti Dohi	
* Lassi	

**Comparative profits from dairy enterprise**

- \* Increasing
- \* Decreasing
- \* No change

How often do you purchase these products?

- \* Always
- \* Frequently
- \* Seldom
- \* Never

**Opinion on profitable of dairying enterprise**

- \* Very profitable 4
- \* Moderately profitable 3
- \* Somewhat profitable 2

**Details of operations carried out by men and women for animal husbandry**

Sr. No.	Operations	Man/Woman	Minutes spent/day
1.	Brining fodder from field		
2.	Chaffing the fodder		
3.	Prepare feed for animals		
4.	Grazing animals		
5.	Health care of animals (dehorning and deworming, etc.)		
6.	Offering water to animals		
7.	Cleaning of animals		
8.	Cleaning of shed		
9.	Preparing cowdung cakes		
10.	Milking		
11.	Boiling and other milk related activities		
12.	Selling of milk		
13.	Cleaning of utensils used for milking		
14.	Preparing milk products		

**Length of association with dairy cooperative?**

- \* 5-7 years
- \* 7-9 years
- \* 9-11 years
- \* 11-15 years

**With what frequency do you deliver milk to centre?**

- \* Always
- \* Frequently
- \* Seldom
- \* Never

If yes, distance travelled, time spent and mode of travel upto collecting centre.

Distance travelled	Time spent	Mode of travel
--------------------	------------	----------------

**Type of membership**

- \* Annual
- \* Biannual
- \* Life
- \* Others

**Reasons for choosing dairy enterprise**

- |     |  |   |
|-----|--|---|
| (a) | Own wish                                     | 1 |
| (b) | Wish of family members                       | 1 |
| (c) | Government schemes were helpful              | 1 |
| (d) | Motivated by neighbours/friends              | 1 |
| (e) | Motivated by members of society              | 1 |
| (f) | Motivated by extension agent                 | 1 |
| (g) | Availability of better veterinary facilities | 1 |
| (h) | Help from family members in dairy enterprise | 1 |
| (i) | An economical enterprise                     | 1 |
| (j) | High social recognition in dairying          | 1 |

**Resource System Variables****I. Financial assistance availed \***

Have you availed any financial assistance,  
If yes,

Yes/No

Amount	Agencies (Source)	Purpose	Duration of loan repayment
	* Self	* Purchase of animals	
	* Family members	* Purchase of dairy related equipment/ machinery	
	* Relatives and friends	* Purchase of fodder	
	* Private money lender	* Animal sickness	
	* Govt. agency	* Animal health care	
	* Non-Govt. agency	* Children education	
	* Bank	* Medical treatment	
	* Women dairy cooperative society	* Social functions	
	* Self-help group	* Marriage	
		* Agriculture purpose	
		* Purchase of cattle	

**II. Assistance Provided at Cooperative Level**

Training	Frequency			
	Always (5-6 d)	Frequently (3-4 d)	Seldom (1-2 d)	Never
* Management committee members				
* Secretaries				
* Awareness programmes				
* Legal literacy				
* Female awareness programme				
* Male awareness programme				
* Artificial insemination				
* Clean milk production				
* Women leadership				
* Women health awareness				
* Animal husbandry practices				
* Women motivational programme				
* Women development & economic development				
* Veterinary first-aid worker				
* Technical input promoter				
* Dairy animal management				
* Secretary orientation				
* Farmers' induction programme				

**Extent of benefits**

Sr.No.	Basic training	Extent of benefits		
		Highly beneficial (2)	Beneficial (1)	Not beneficial (0)
1.	Society formation			
2.	Electing members			
3.	Society management			
4.	Maintenance of milk pass books, receipts and payment of milk price			
5.	Artificial insemination			
6.	Care and management of pregnant animals, vaccination, nutrition, calf rearing and deworming, etc.			
7.	Importance of balanced cattle feed, greens, etc.			
8.	First-aid and timely veterinary treatment of animals			
9.	Control measures for forestalling the epidemics			
10.	Receipt of milk price			

**III. Veterinary Institutional Infrastructural Utilization**

Sr.No.	Information source	Indices score
1.	A.I. Centre	3.8
2.	NGO/KVK	4.8
3.	Govt. Primary Health Centre	2.2
4.	Welfare Association	1.2
5.	Schools	2.7
6.	Bank	2.1
7.	Milk cooperative	3.2
8.	Other	

**EMPOWERMENT ON ACCOUNT OF DAIRY COOPERATIVES**

Indicate the level/extent of change and empowerment.

Aspects	Extent of change			Level of empowerment			
	Increased	Same	Decreased	Very high	High	Moderate	Some

**Personal**

- \* To overcome shyness
- \* To gather courage to speak out
- \* To overcome hesitation
- \* To overcome indecisiveness
- \* Faith in abilities and capabilities
- \* To know and accept limitations

- \* To be assertive
- \* Desire to articulate will to achieve
- \* Broadmindedness
- \* Self respect
- \* Self confidence
- \* Self satisfaction
- \* Personal security
- \* Freedom of expression
- \* Awareness about healthy living
- \* Frequency of visit to doctor
- \* Writing skills
- \* Reading skills
- \* Communicating skills
- \* Accounting skills
- \* Observational skills
- \* Creativity
- \* Listening skills
- \* Role identity
- \* Self reliant
- \* Self control
- \* Self propelled
- \* Self directed
- \* Sharing of responsibilities
- \* Respect from family members
- \* Independent thinking
- \* Independent decision making

Aspects	Extent of change			Level of empowerment			
	Increased	Same	Decreased	Very high	High	Moderate	Some No change

**Social**

- \* Get to know more people
- \* Number of friends
- \* Social contacts
- \* Size of social circle
- \* Participation in local institutions
- \* Sharing of happiness and woes
- \* Credibility
- \* Ability to put-forth one's problems
- \* Fulfilment of social obligations
- \* Social gatherings
- \* Membership in social organisation

- \* Holding of position
- \* Group activities
- \* Break social barriers
- \* Social status
- \* Gathering information skills
- \* Organising ideas
- \* Exploring and expanding ideas
- \* Household jobs sharing
- \* Tackling matrimonial issues
- \* Capacity to resolve conflict
- \* Access to quality education
- \* Equality of opportunity
- \* Social mobility

#### **Status within the family**

- \* Status in the eyes of children
- \* Status in the eyes of husband
- \* Status in the eyes of in-laws
- \* Status in the eyes of parents

#### **Status outside the family**

- \* In the eyes of neighbours
- \* In the eyes of friends
- \* In the eyes of relatives
- \* In the eyes of society member

Aspects	Extent of change			Level of empowerment			
	Increased	Same	Decreased	Very high	High	Moderate	Some

#### **Economic**

- \* Money keeping
- \* Control over income
- \* Access to income
- \* Borrowing tendency
- \* Returning of loan
- \* Employment of hired labour for work
- \* Income to meet emergency needs
- \* Help by milk vendors
- \* Freedom to discuss financial matters
- \* Thrift habit
- \* Avenues for employment and

- \* Value addition for more income and employment
- \* Visionary outlook for profit
- \* Satisfaction from income

#### **Entrepreneurial**

- \* Independence
- \* Initiative
- \* Opportunity seeking
- \* Risk taking (Moderate & calculated)
- \* Problem solving
- \* Hard work
- \* Perseverance
- \* Need to achieve
- \* Positive self concept
- \* Competence
- \* Expanding the enterprise
- \* Obtaining credit
- \* Improving quality of product
- \* Money transaction
- \* Self confidence
- \* Adoption of improved technologies
- \* Seeking additional information
- \* Self reliance
- \* Ability to motivate
- \* Profit making

Aspects	Extent of change			Level of empowerment			
	Increased	Same	Decreased	Very high	High	Moderate	Some

#### **Managerial**

- \* Independent decision making
- \* Problem solving ability
- \* Aspirations
- \* Ability to influence others
- \* Awareness of values & attitudes
- \* Clarity of goal
- \* Confidence in self
- \* Futuristic planning
- \* Managing time
- \* Managing energy
- \* Managing financial resource
- \* Managing human

- \* Managing labour
- \* Managing dairy animals
- \* Managing dairy products
- \* Managing market
- \* Managing day to day problems
- \* Goal orientation
- \* Goal direction
- \* Goal monitoring
- \* Goal evaluation
- \* Record keeping
- \* Commitment for work
- \* Managerial capabilities
- \* Giving instructions
- \* Negotiating
- \* Prioritizing
- \* Conflict management
- \* Organising resources
- \* Counselling ability
- \* Knowledge about numbers and basic calculations

Aspects	Extent of change			Level of empowerment			
	Increased	Same	Decreased	Very high	High	Moderate	Some

#### **Political**

- \* Awareness about political rights
- \* Power seeking behaviour
- \* Power of individual voting right
- \* Leadership trait
- \* Participation in community institutions (School, bank, etc.)
- Interest in political matters at:
  - Household level
  - Community level
  - Panchayat level
  - Block level
  - District level
  - National level
- \* Participation in political matters
  - With family members
  - With friends

- With relatives
- With Community leaders
- \* Desire to hold positions
- \* Desire to guide others
- \* Desire to possess power
- \* Women as political role mode
- \* Information about developmental schemes
- \* Knowledge about democratic process
- \* To draw maximum benefits from the ongoing scheme
- \* Encouragement from field staff to take part in political activities
- \* Encouragement from family members to take part in political activities
- \* Interest in political leadership

Aspects	Extent of change			Level of empowerment				
	Increased	Same	Decreased	Very high	High	Moderate	Some	No change

### Technological

- \* Skill acquisition in handling improved equipments
- \* Quality of milch animals
- \* Number of milch animals
- \* Use of land for growing green fodder
- \* Artificial insemination of animals
- \* Quality and quantity of fodder
- \* Timely vaccination of animals
- \* Provision of balanced feed for animals
- \* Deworming of calves

- \* Mortality rate of calves
- \* Conditions of animals houses
- \* First-aid of animals
- \* Awareness about care and management of pregnant animal
- \* Awareness about vaccination
- \* Knowledge about deworming
- \* Knowledge of importance of balanced cattle feed
- \* Knowledge about various diseases
- \* Knowledge about characteristics of quality milch animals
- \* Knowledge about AI
- \* Knowledge of Govt. subsidy for purchasing milch animals
- \* Knowledge about housing of animals
- \* Participation in vocational training

### IMPACT ON QUALITY OF LIFE

How has your role in dairy cooperative affected the quality of life of your family under these aspects?  
Please tick against the appropriate column:

Aspects	Increased (3)	Same (2)	Decreased (1)
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#### Economic

- \* Income
- \* Expenditure
- \* Saving
- \* Investment

#### Nutrition and health

- \* Expenses on food
- \* Quality/variety of food
- \* Expense on health care
- \* Experience of strain or fatigue

#### Housing

- \* Rent
- \* Furnishings

Aspects	Increased (3)	Same (2)	Decreased (1)
* Repair/maintenances			
* Home improvement			
* Construction			
* Interior decoration			
<b>Material possession</b>			
* Low prestige items			
* Medium prestige items			
* High prestige items			
<b>Domestic violence</b>			
* Abuse			
* Beating			
* Mental torture			
<b>Others</b>			
* Clothing			
* Jewellery			
<b>Educational</b>			
* Better schooling of children			
* Provision of private tuitions/coachings			
* Enrollment in extra-curricular courses like computers, art class, etc.			
<b>Social</b>			
* Social recognition of self			
* Social participation			
* Size of social circle			
* Status of family in society			
<b>Recreational</b>			
* Holidays, outings			
* Outdoor meals			
* Hosting/attending parties			
* Time for hobbies			
* Celebration of festivals/ceremonies			

**Enterprise Satisfaction**

Statements	SA	A	UD	DA	SDA
* Dairy enterprise is like a hobby to me					
* Enterprise is usually interesting enough to keep me away from getting bored					
* In this enterprise, I get chance to work according to my capabilities and abilities					
* I enjoy my work					
* Dairying is very tiring endeavour					
* I consider the enterprise rather unpleasant					
* There is ample scope in the enterprise to prove my excellence					
* I am often bored with dairy activities					
* Most of the time I have to force myself to continue my enterprise					
* Most days I am enthusiastic about my work					
* There is correct weighting and testing of milk					
* There is fair maintenance of individual account					
* Supply of fodder seed, fertilizer and cattle feed is a useful activity					
* There is appropriate veterinary care facilities					
* There is adequate provision of loans and insurance for dairying					
* I am satisfied with the general working of the society					

**Constraints faced by rural women in WDCS**

Constraints	Strongly agree	Agree	Disagree
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**Personal constraints**

- \* Increased work burden and responsibility
- \* Small children or dependent in-laws
- \* Non-cooperative attitude of husband/in-laws
- \* Family member do not render help in household work
- \* Family member do not render help in dairy work
- \* Hinderance due to ill health
- \* Non-availability of sufficient water
- \* Non-availability of land to grow green fodder
- \* Non-availability of green fodder round the year
- \* Lack of technical training for growing green fodder
- \* Dependence on family members for supplying milk
- \* Control of husband over income

**Educational constraints**

- \* Inability of cross checking the fat content due to illiteracy
- \* Lack of knowledge about advantages and facilities provided by DCS
- \* Lack of knowledge about government subsidy for purchasing animals or animal feed

- \* Lack of knowledge about care and management of milch animals
- \* Lack of timely guidance regarding feeding and care of milch animals

#### **Animal health care and management**

- \* High charges of emergency vety. services
- \* Absentism among veterinary staff
- \* Inability to buy balanced feed on cash basis
- \* Distant location of AI centre
- \* Non-availability of timely medical aid
- \* Short supply of FMD and HS vaccine
- \* Improperly trained staff working at AI centre
- \* Lack of training to first aid worker
- \* Irregular supply of cattle feed
- \* High cost and inferior quality of cattle feed

#### **Milk supply and payment**

- \* Less price for cow's milk
- \* Lack of incentives for supplying milk to WDCS
- \* Low milk rate in comparison to local vendors
- \* Distantly located milk collection centre
- \* Unsatisfactory milk weighing and fat testing procedure
- \* Problem in receiving payments

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Statements	SA	A	UD	DA	SDA
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#### **Organizational constraints**

- \* Presence of male family members of office bearers
  - \* Lack of respect for women of lower caste group
  - \* Dominance of relatives/friends of office bearers
  - \* Attention of secretary to influential women
  - \* Biasness in distribution of free cost vaccine
  - \* Rude behaviour of society secretary
  - \* Lack of timely information
  - \* Inappropriate assistance
  - \* Concerned officers are not easily approachable
  - \* Inappropriate timings
  - \* Testing equipment remains out of order
  - \* No prior information about trainings
  - \* Pick and choose in selecting trainees
  - \* Inappropriate distribution of benefits
  - \* Lack of coordination among office bearers
  - \* Proper daily accounts not made
  - \* Delay in payment
-

## GENERAL INFORMATION

Age .....	years	Sex: Male	<input type="checkbox"/>
		Female	<input type="checkbox"/>
Educational Background		Graduation	<input type="checkbox"/>
		Post-Graduation	<input type="checkbox"/>
		(Please specify area of specialization)	
Marital Status		Married	<input type="checkbox"/>
		Unmarried	<input type="checkbox"/>
Caste		Upper	
		Backward	
		Schedule caste	
		Others (specify)	
Residence		Urban/Rural	
Length of service			

## MANAGERIAL EFFECTIVENESS

	Strongly Agree (5)	Slightly Agree (4)	Not sure (3)	Slightly disagree (2)	Strongly disagree (1)
1. Formal communication channels are not always used					
2. I am not always satisfied with my role in the enterprise					
3. It's not always clear as to who has the authority to make decisions					
4. Performance, not politics is rewarded					
5. Most workers do not take responsibility for their work					
6. I wish I could get more feed back about how well I'm doing					
7. My rewards equal my contributions					
8. There are rules and regulations to cover every situation					
9. Most people understand my role in the enterprise					
10. Most people do what is asked of them and do it well					
11. Administration respects the ideas and suggestions of the workers					
12. People are not allowed to communicate informally at all levels					
13. There is just too much red tape at work					
14. Most people don't understand my role on the enterprise					
15. If you perform well, you will not necessarily receive appropriate rewards					

Strongly Agree (5)	Slightly Agree (4)	Not sure (3)	Slightly disagree (2)	Strongly disagree (1)
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16. I am willing to put in great deal of efforts to help this enterprise be successful
17. I feel very little loyalty to this enterprise
18. I would accept almost any type of enterprise assignment to keep working for this enterprise
19. I am proud to tell others that I am part of this enterprise
20. I could be working well for a different enterprise as long as nature of work were similar
21. This enterprise inspires best in the way of job performance
22. There is no gain by sticking with this enterprise indefinitely
23. I do not feel I have time to delegate
24. I delegate the whole job to the subordinate without any of my involvement. I review the end result.
25. When I have given clear instructions and the task is not done right, I get upset.
26. I feel the staff lacks commitment that I have so many tasks I delegate will not get done as well as I had done it myself.
27. I feel I can do the task better than the person I might delegate it to.
28. When I delegate a task outcome is such that I end up doing the task myself.
29. I have not found that delegation saves time.
30. I cannot delegate because my subordinates lack experience
31. I feel that delegation decreases the control.
32. I would delegate more but I am perfectionist
33. I work longer hours than I should
34. I can give subordinates the routine tasks, but I must keep non routine tasks myself
35. I would delegate more. But the jobs I delegate never seem to get done the way I want them to be done.
36. I would delegate more. But I feel I can do the task better than the person I might delegate it to.
37. I would delegate more. But if the individual I delegate the task to does an incompetent job. I will be severely criticised.
38. If I were to delegate a task, my job would not be nearly as much fun.
39. I delegate a task clearly and concisely explaining exactly how it should be accomplished.
40. My own boss expects me to keep very close to all details of my job
41. When responding, I try to use examples
42. I tend to talk more than others
43. If the other person seems not to understand me, I try to speak more slowly and more distinctly.

	Strongly Agree (5)	Slightly Agree (4)	Not sure (3)	Slightly disagree (2)	Strongly disagree (1)
44. When I give feedback, I respond to the facts and keep the feelings out of it					
45. I am not embarrassed by periods of silence when I am talking to someone.					
46. I avoid saying "Good", "Go on", etc. while the other person is speaking					
47. I enjoy using slang and local expressions					
48. My feedback focusses on how the other person can use my ideas					
49. When someone is wrong, I make sure he/she knows it.					
50. I try to express my ideas in general overall terms.					
51. When I am listening, I try not to be evaluative.					
52. I tend to forget that some words have many meanings.					
53. I concentrate hard to avoid distracting nonverbal cues					
54. Listening and hearing are the same things					
55. I make sure the person wants feedback before I give it					
56. I try to delay giving feedback so I can have more time to think it through					
57. Body language is important for speakers, not listeners					
58. I use technical jargon only when talking to experts					
1-15 Organisational climate					
16-22 Organisational commitment					
23-40 Delegation habits					
41-58 Communication skills					
				Always	Frequently
59. I act as the spokesman of the group				Occasionally	Seldom
60. I encourage overtime work				Never	
61. I allow staff members complete freedom in their work					
62. I encourage the use of uniform procedures					
63. I permit the members to use their own judgement in solving problems					
64. I try out my ideas in the group					
65. I work hard for a promotion					
66. I can tolerate postponement and uncertainty					
67. I settle conflicts when they occur in the group					
68. I decide what should be done and how it should be done					
69. I allow the group a high degree of initiative					
70. I assign particular tasks to staff members					
71. I trust my subordinates					
72. I schedule the work to be done					
73. I refuse to explain my actions					
74. I act without consulting the subordinates.					
75. I ask subordinates to follow standard rules and regulations					
59-75 Leadership style					

76. Do you plan in advance the necessary details before carrying out the programme under your enterprise?
77. Do you differentiate between strategic and operational planning (in terms of time spent)?

Always Frequently Occasionally Seldom Never

78. How often do you make use of planning tools (brain storming, buzz-sessions, etc.)?
79. Do you involve your subordinates in the process of planning/decision making with regards to the programmes undergoing in your enterprise
80. Do you take few decisions spontaneously?
81. Do you involve expert's opinions before taking decisions regarding technical matters?
- 76-81 Planning

I II III IV V VI VII

82. Almost every job can be made more stimulating and challenging
83. Pride in one's work is actually an important reward.
84. Better job descriptions would be helpful so that employees will know what is exactly expected of them.
85. Job security is important to employees.
86. Individual recognition for above-standard performance means a lot to employees
87. Employees want to feel that their real skills and capacities are put to use on their jobs
88. Special wage increases should be given to employees who do their jobs very well.
89. Individual incentive bonuses would improve the performance of employees.
90. The quality of the relationships in the informal work group is quite important
91. The supervisor ought to work hard to develop a friendly working atmosphere among subordinates.
92. Employees need to be reminded that their jobs are dependent on the company's ability to compete effectively.
93. A supervisor should give a good deal to attention to the physical working conditions of his or her employees.

I = Strongly agree; II = Agree; III = Slightly agree; IV = Not sure; V = Slightly disagree  
VI = Disagree; VII = Strongly disagree

82-93 Motivation

94. Which standards serve as yardsticks for the measurement of desired performance of subordinates?
- \* Physical standards such as man-hours
  - \* Time standards such as completion of job within a speculated time
  - \* Qualitative standards such as attitudes, relationships, executive development, etc.
95. How do you measure actual performance of subordinates?
- \* Personal observation
  - \* Previous records (such as ACR)
  - \* Performance appraisals
  - \* Any other
96. How do you evaluate actual performance of subordinates?
- \* Get group involved in decision making, but we see that objectives are met.
  - \* Emphasize the importance of deadlines and tasks
  - \* Give feedback, so that performance is improved
  - \* Any other
97. Which type of action will you take in case of deviation in the performance?
- \* Coercive Action (written explanation)
  - \* Corrective Action (Informal feedback)

94-97 Controlling

## ABSTRACT

- Title of Thesis** : Empowerment of women through women dairy co-operatives
- Full Name of Degree Holder** : **Rajni Pandey**  
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- Year of award of degree:** 2005
- Major subject** : Home Science Extension Education
- Total number of pages in Thesis** : 186 + xxiii
- Number of words in abstract** : Approx. 350

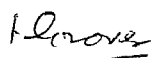
**Key words:** Empowerment, women dairy co-operatives, entrepreneurial traits, entrepreneurial motivation, resource system support, enterprise satisfaction, impact on quality of life, managerial effectiveness, organizational climate, organizational commitment, delegation habit, communication skill, leadership style, planning, motivation, controlling

The present study was undertaken to find out the empowerment of women through women dairy cooperatives. Begusarai district, Brauni Milk Union and Samastipur district, Mithila Milk Union, Bihar state were selected purposively. The sample for the study comprised of 200 women beneficiaries of women dairy cooperatives, 40 office bearers drawn randomly from eight villages and 60 non-beneficiaries taken as control sample. Data were collected with the help of interview schedules combined with observation and case study method. Profile of beneficiaries and non-beneficiaries revealed that 50 and 55 per cent were in

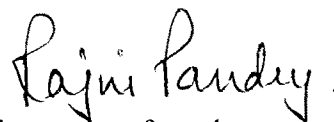
middle age group, one-third of them were illiterate, married, majority had nuclear family, belonged to backward caste, were agriculture labour, annual income was low, maximum were landless, having small house, had low material possession. Sixty-eight per cent beneficiaries had medium level of entrepreneurial traits, compared to 88.33 per cent of the non-beneficiaries who had low entrepreneurial traits. Forty-five per cent of the beneficiaries had medium herd size (3-4 cattles), veterinary institutional infrastructural utilization for 75 per cent of beneficiaries was of medium level, the mean milk production (litres/day) by members of women dairy cooperatives was 10.23, mean consumption 2.36 and mean sale 7.88 and 35 per cent of the beneficiaries rated dairying as highly profitable venture. Cent per cent of the them were aware about the brand name 'SUDHA' under which milk and its products were sold by the milk union.

Majority of beneficiaries availed the financial assistance from self-help group of WDC, while majority of the non-beneficiaries took loan from private money lender. Majority of the beneficiaries regularly attended the training programmes organized by WDC and a supplier of regular income.

On the empowerment front, amongst various types of empowerment, 50 per cent of beneficiaries had high economic empowerment while majority had medium level of personal, social, entrepreneurial, managerial, political and technological empowerment. The maximum impact of women dairy cooperatives on quality of life of beneficiaries was evident on economic, educational and social aspects. Forty-eight per cent of the beneficiaries were highly satisfied with dairy cooperatives. Extension contact, motivation and entrepreneurial traits were strongly associated with empowerment of women. At the grassroot, 50 per cent of the office bearers of women dairy cooperatives had excellent managerial effectiveness in terms of organizational climate, organizational commitment, delegation habit, communication skill, leadership style, planning, motivation and controlling.



Major Advisor



Signature of student



Head of Department

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