

ANALYTICAL STUDY ON THE COST AND RETURNS ON MILK PRODUCTION OF MEMBERS AND NON-MEMBERS OF JAIPUR DUGDH UTPADAK SAHAKARI SANGH LIMITED, RAJASTHAN

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Abstract

Dairying is a major productive activity which provides supplementary support and stable income to the small and marginal farmers, landless labourers in Indian agriculture sector. On the primary basis of production criterion, milk is occupying the second highest position among the food commodities next only to rice. To support income from farming, dairy sector generates a regular source of family income to the farmer covering the entire year. Despite this fact, the main disadvantage is that the dairy farming in India is scattered and spread over the entire nation in micro units that too in a significantly disorganized form. In the modern times, the Indian dairy industry is undergoing positive transformation to combat the challenges. However, more attention is expected in the areas of cost and returns of milk production to make dairying a profitable activity. While exploring the ways to optimise the farmers' incomes in this direction, the present study has been conducted in Jaipur Dugdh Utpadak Sahakari Sangh Limited, the major milk union of Rajasthan state which is among the topmost producers of milk in India.

KEYWORDS: Cost, returns, milk production, Jaipur Dugdh Utpadak Sahakari Sangh Ltd, Jaipur district, Rajasthan

1. Introduction

Indian farming community is dependent on the dairying activity to mainly support their income from crop production. Hence, dairy farming was primarily a subsistence occupation in India, with the goal of producing milk for personal consumption. In 1920s, the noteworthy progress is made in milk processing and marketing technology in India (Kumar et al., 2017). The influences of Nationalist revolutionaries on dairy producers have contributed to the formation of dairy cooperatives. Since independence, the central government took adequate initiative in the formation of dairy cooperatives around the country. In order to promote dairy development, Government introduced various programmes such as milk procurement centres, clean milk production-kits, milk chilling facilities at the village, block, and district levels. Besides these facilities, the government also gone ahead with establishment of testing Laboratories for milk and milk

products, technical input services, construction and establishment of testing Laboratories for milk and milk products, Information and Communication Technology (ICT), milk processing and marketing at a higher scale. Farmers are grossly benefitted from above programmes.

The position of dairy production is second most prominent for the agricultural sector and the first one is rice. Stability for the source of income could be achieved through dairy production as it does not depend on the seasons or place. GVA (Gross Value Added) is highly contributed by the farmers who are involved in dairy production. As per Aggarwal et al., (2018) the growth rate for milk all across the world is 1.8% of which India contributes nearly 1% which is approximately 168 million metric tonnes. Milk production holds the largest crop in India which is higher than wheat and paddy worth 6.6 lakh crore. An operational flood was launched through the Government of India in July 1970 that was a type of cooperative

movement. In this movement, the Indian government had established its collaboration with the World Food Program of the US (United States). The development of rural areas of India has been noticed as the effects of dairy cooperatives and operational floods.

Modernization in dairy products results in the development of milk presentation and fulfilled the demands of milk for Indians. Growth in the production of dairy products leads to the economic growth of the nation besides it provides job opportunities for different work roles. Development of women and youngsters could be noticed with the improvement in milk production along with that it provides opportunities for exploiting the global market. Disorganization is the main cause that leads to neglect of all these achievements of India in dairy production (Suri et al., 2019). Despite a wide range of development, the expected result is not coming through this sector. The present article is conducted to evaluate the change of improvement and requirement of a big trust for the development. Operations of the dairy movement are conducted on three different tiers: farmer members are the owners of the DCS (Dairy cooperative societies) to the district level which is the union of producers. The current article is based on the district producer's union through Jaipur, Rajasthan dairy. The role of cooperative movements could be determined to be holding a special place in the development of supporting dairy.

Jaipur Dugdh Utpadak Sahakari Sangh Limited

As per Gadad & Kunnal (2018), for achieving the national objective of making India self-sufficient in production of milk, an initiative was taken in 1975 and Jaipur Zila Dugdh Utpadak Sahakari Sangh Ltd., Jaipur (popularly known as Jaipur Dairy or Jaipur Milk Union) was established under Cooperative Act 1965 to work in the Jaipur District

The dairy co-operative movement works on a three-level system wherein farmer members own dairy co-operative societies (DCS) at village level and these cooperatives in turn own district level milk producers' union. These unions combine together and collectively own the Rajasthan Cooperative Dairy Federation (RCDF) at state level.

2. Significance and scope of the study

In Rajasthan state, the milk production during 2017-18 was 22.427 million tonnes and the share of cow milk production in total production of milk was at 38 percent (Lal & Chandel 2016). Buffalo milk stood at 50 percent and goat milk contributed 12 percent of the total milk production.

In Rajasthan state, currently 21 milk unions are functioning and covering a total of 14,928 registered dairy co-operative societies in the State with a total membership of 8,10,927. The average milk procurement of all cooperative unions put together is 2791 tonnes kilo gram/day. Rajasthan cooperative dairy federation provides package of technical input services with distribution of cattle feed, fodder seed, animal health care and training to the staff members of Dairy cooperative societies. According to Bairwa et al., (2014, the products manufactured are marked with the help of RCDF, Jaipur under a common brand name "SARAS". Presently, a total of 2499 dairy cooperative societies are operating under Jaipur Milk union with association of total 172133 members. The average milk procurement of the Jaipur Dairy is about 1044 tonnes kilo gram per day.

In consideration of the above facts and the impact and influence of local cooperative societies on the milk production, income, employment and socio-economic development of the rural people, the present study was taken up with the specific objective of studying the role of Dairy cooperative societies cost and returns structure milk production in respect of members as well as non-members of cooperative societies.

3. Research Methodology:

For selection of study area, Jaipur Milk Union is selected and out of the total of eight zones constituted by Jaipur Milk Union, three zones, namely, Bindayaka zone, Dudu zone and Manpura Machdi, were selected on the basis of performance and geographical coverage. From these 3 zones, 12 dairy cooperative societies were selected considering 4 cooperatives from each of these selected zones. For this purpose, secondary data pertaining to the data on performance was collected from Jaipur Dairy Accounts office (Tanwar & Kumar, 2012).

The data for the purpose of obtaining primary data, 180 dairy members were selected from the members of cooperative societies using proportional probability method and similar numbers of 180 non-members were also selected from the same villages for the comparative study between members and non-members. A suitable questionnaire was designed and utilised for collecting the necessary data. The data so collected was analysed by using tabular and graphical methods for drawing conclusions.

Feroze et al., (2019) mentioned that, the appropriate methodology is required to be selected for enhancing the quality and reliability of the implemented data. Performance criteria for the membership of the Jaipur dairy production cooperative are required to have some features. These features are like accounts office, personal communication, knowledge about the milch, and have information related to the Milk production union of Jaipur, Rajasthan. The selection of dairy production unions is done with the random selection process as it is effective in avoiding the chance of bias. Different regions were selected for obtaining information for the rate of employment and dairy production profitability such as Dudu zone, Manpura Machdi, and Bindayaka zone. Twelve cooperative societies were selected from specific regions with the implication of the proportional probability method. Comparative analysis has been adopted for analyzing the collected primary data. Information related to the members and non-member employees is collected in equal amounts with equal responses.

4. Results of the study and related findings:

The cost and returns in dairy business are major components in view of milk producers, consumers, dairy industry and policy formation such as dairy cooperative societies, milk union, and government officials for better dairy management decisions. To achieve the current objective of the present study, cost of milk production was worked out by using various cost components such as depreciation on fixed assets and interest on fixed assets by including in the fixed cost, the cost of fodder, concentrates and other feed supplements, labour cost, breeding cost, veterinary expenditure and miscellaneous cost components such as additives, energy boosters and salts etc. considered as variable cost components. The milch animals were mostly fed wheat straw, guar straw and bajra, jowar stoves as dry fodder, and jowar, bajra, oat and Berseem as green fodder and. concentrate were mainly given to milch animals in gestation and milking period. The concentrate included cotton cakes, mustard cakes, wheat and barley bran, mung gram churi (Acharya & Malhotra, 2020). The availability of green fodder was continued round the year because jowar and bajra were available during the summer season and Berseem and oat were available during the winter season.

The details of feeding patterns and cost incurred on various inputs supplied by milk producer member of dairy cooperative society and non-members of dairy cooperative society with regard to their milch animals has been worked out and presented in Table 4.1 and 4.2.

4.1 Cost structure in maintenance of milch animals on dairy cooperative society members

**Table 4. 1 Cost structure in milk production of milch animals on Dairy cooperative Members
(In Rupees per animal/ per day)**

S.No.	Cost components	Indigenous cow		Crossbred cow		Buffalo	
		Value	Percentage	Value	Percentage	Value	Percentage
A	Fixed Cost						
1	Interest on fixed capital	17.10	6.40	18.93	4.08	25.16	5.38
2	Depreciation	1.73	0.64	2.38	0.52	3.68	0.78

	Total Fixed Cost	18.83	7.04	21.31	4.60	28.84	6.16
B	Variable Cost						
1	Dry fodder	32.38	12.11	48.52	10.47	58.36	12.47
2	Green fodder	45.16	16.89	94.71	20.43	104.9	22.42
3	Concentrate	61.23	22.90	152.97	33.00	136.60	29.18
4	Mineral Mixture	1.38	0.52	6.18	1.33	6.47	1.38
5	Supplementary feed	3.16	1.18	7.53	1.62	9.44	2.02
	Total Feed Cost	143.31	53.60	309.91	66.85	315.80	67.47
6	Miscellaneous expenditure (Insurance and other charges)	1.93	0.72	3.19	0.69	3.42	0.73
7	Veterinary expenses	5.12	1.92	7.54	1.63	6.65	1.42
8	labour cost	98.18	36.72	121.63	26.23	113.4	24.22
	Total Variable Cost	248.54	92.96	442.27	95.40	439.22	93.84
	TOTAL COST (A+B)	267.37	100.00	463.58	100.00	468.06	100.00

The cost structure based on various cost components was worked out for various milch animals (indigenous cows, crossbred cows and buffalo) for dairy cooperative society members and presented in table 4.1. A significant difference in total maintenance cost was found in various milch animals and between the dairy cooperative society member and non-member. The total variable cost per day by indigenous cow was 248.54 which were about 93 percent of the total cost and only 7 percent of the share was the total fixed cost (Sharma, 2020). The share of total filled cost was about 143.31. The Other major cost component among the variable cost was labour cost. The labour cost was 98.18 per day per indigenous cow for dairy cooperative society members. As per Umamageswari et al., (2017), in the case of crossbred cows, the maintenance cost of the per crossbred cow per day on dairy cooperative society members was found to be in a similar trend as it was for indigenous cows but the amount spent on various cost components was quite higher than the indigenous girls maintained by Dairy cooperative society members.

The total cost (both the total fixed and total variable cost) was worked out at about 463.48. Out of this, the total variable cost share was 442.27 and the share of total fixed cost was

21.21. Of the total variable cost, the total fixed cost was 309.21 and labour cost contributed at about 121.63. Similarly, the cost structure for buffalo was estimated on the dairy cooperative society members and presented in table 4.1. The total maintenance cost for buffalo on dairy cooperative society members was calculated at about 468.06 per animal per day. The contribution of total variable cost was 439.22 and total fixed cost contributed about 28.84. The total feed cost was estimated at 315.80 and labour cost at 113.35. Among the feed and fodder cost components, cost share of concentrates was 30 percent followed by green fodder 23 percent and dry fodder 12 percent. The total fixed cost contributed about 6 percent of the total cost (Tripathi et al., 2019).

4.2 Cost structure in maintenance of milch animals on Non-dairy cooperative society members

To make a comparative study between dairy cooperative society members and non-dairy cooperative society members in respect of maintenance cost of milch animals, the cost structure of indigenous cow, crossbred cow and buffalo was also estimated for non-dairy cooperative members and the results are presented in table 4.2.

**Table 4. 2 Cost structure in milk production of milch animals on Non-Dairy cooperative Members
(In Rupees per animal/ per day)**

S. N o.	Cost components	Indigenous cow		Crossbred cow		Buffalo	
		Value	Percentage	Value	Percentage	Value	Percentage
A	Fixed Cost						
1	Interest on fixed capital	14.23	5.95	15.57	3.95	21.53	5.05
2	Depreciation	1.18	0.49	1.91	0.49	2.26	0.53
	Total Fixed Cost	15.41	6.44	17.48	4.44	23.79	5.58
B	Variable Cost						
1	Dry fodder	29.26	12.23	45.34	11.51	51.82	12.15
2	Green fodder	41.48	17.34	82.19	20.86	97.74	22.93
3	Concentrate	55.69	23.28	123.42	31.32	132.58	31.10
4	Mineral Mixture	0.73	0.31	2.93	0.74	4.76	1.12
5	Supplementary feed	1.54	0.64	4.76	1.21	7.28	1.70
	Total Feed Cost	128.70	53.80	258.64	65.64	294.18	69.00
6	Miscellaneous expenditure (Insurance and other charges)	0.68	0.28	1.05	0.27	1.86	0.44
7	Veterinary expenses	3.07	1.92	4.12	1.05	4.08	0.96
8	Labour cost	91.36	38.19	112.75	28.60	102.42	24.02
	Total Variable Cost	223.81	93.56	376.56	95.56	402.54	94.42
	TOTAL COST (A+B)	239.22	100.00	394.04	100.00	426.33	100.00

Results of the study shows the similar trend under various cost components was between the dairy cooperative society members and non-dairy cooperative society members. However, a marginal difference was seen in terms of expenditure made on various cost components for maintaining the various milch animals by dairy cooperative society members and non-dairy cooperative society members. The total maintenance cost of indigenous cow on non-dairy

cooperative society members was estimated at 239.22. Of the total cost, the value of total variable cost components was 223.81 which were about 94 percent of the total cost. Of the total variable cost, non-dairy society members spent a large amount which was about 128.70 (about 54 percent) and the labour cost which was 91.36 (about 38 percent) of the total cost. Among feed costs, non-dairy cooperative society members

spent higher money on concentrates which was about 55.69 (about 24 percent).

The cost structure for crossbred cows on non-dairy cooperative society members reveals that the total cost was estimated at 394.04 for non-dairy cooperative society members in comparison to dairy cooperative society members of 463.48. Of the total cost, ₹17.48 was accounted for by total fixed cost and the remaining 376.56 was as total variable cost. The total fixed cost was estimated to be about 258.64 which were 66 percent of the total variable cost. Among feed costs, the maximum 123.42 was contributed by concentrates. The labour cost was 112.75. The cost components for buffalo are also worked out on non-dairy cooperative society members and the results are presented in table 4.2. The results of the analysis revealed that the pattern of the investment and various cost components was similar on buffalo non-dairy cooperative society members as it was on cooperative society members. However, it varied in terms of rupees. The table shows that the total fixed cost for buffalo was worked out at 23.79. The total feed cost was 294.18 for buffalo. The labour cost for buffalo was estimated at 1102.42. On concentrates, they spent 132.58.

Thus, from the above discussion it can be revealed that the trends of investment on various cost components are similar on both members and non-members of the cooperative society for different types of milch animals. The variation on the cost components was recorded in terms of money spent on various milch animals. Among all cost components, the major cost component was total feed cost and total variable cost. However, the concentrates and labour cost are the other two major cost components. Further, it was revealed that the members of the dairy cooperative society spent more in maintenance of their milk animals in comparison to the non-dairy cooperative society members in the study area.

4.3 Returns from the milk production

The economic analysis of milk production is an important aspect to find out the income obtained by milk producers from dairy occupation and also measures the reasons or factors that affect the milk production and constraints in income. This is essential step for the benefit of

milk producers, consumers and also for the policy makers in order to settle the reasonable or effective price of milk rationally. Thus, the present study also examined the income obtained by the milk producer on both members and non-members of the cooperative society. In order to measure the income from milk on the basis of various aspects, the following income measures were computed and presented in table 4.3 to 4.4.

$$\text{Gross income} = \text{Total milk yield per day} \times \text{Milk price per litre}$$

$$\text{Net income per day} = \text{Gross income per day} - \text{Total cost per day}$$

$$\text{Net income per litre} = \text{Net income per day} / \text{Milk yield per day}$$

$$\text{Net income on operating cost per day} = \text{Gross income per day} - \text{Total variable cost of milk production per day}$$

$$\text{B.C. Ratio (Benefit Cost Ratio)} = \text{Gross income} / \text{Total cost}$$

In general, the milk producer was having local (indigenous) cows, crossbred cows and buffaloes. The milk collection by dairy cooperative societies from its members was done on the basis of fat percentage in the milk and milk price was fixed accordingly. There are 3 slabs of milk price fixed by the dairy cooperative society: 36 per litre on the fat percentage between 3.50 and 4.50, 40 per litre on fat percentage 4.51 to 6.00 percent and ₹45 on the fat percentage of 6.00 and above. Thus, on the basis of fat percentage, the average milk price of indigenous cows, crossbred cows and buffalo was taken for estimation of income obtained by members of the milk producers. The average milk price for indigenous cows, crossbred cows and buffaloes was undertaken at 40, 36, and 45 respectively. However, the milk selling price for non-members of dairy cooperative societies was taken on the basis of actual milk price on which the non-members sold their milk in the market. Thus, the milk selling price of various milch animals was considered 34 for crossbred cow, 38 for indigenous cows and 43 for buffalo milk.

4.4 Returns from milk production on member producer of dairy cooperative society

Returns from indigenous cow

The gross return net income and other important income measures were estimated and presented in table 4.3 the results clearly show that average gross income per day per individual indigenous cow was 267.37. The net income per day was estimated to be rupees 65.43. The net income per day was arrived at by deduction of gross income per day from total cost of production per day. However, the net income per litre from indigenous cow was worked out by the milk yield per day divided by net income per day. The net income per litre was recorded at 7.86 per litre. The net income on variable cost was also calculated by deducting the total variable cost of milk production per day from gross income received per day. The income received on one-

rupee investment (B.C. ratio) was worked out by dividing the gross income by total cost of milk production. Thus, the B.C. ratio of indigenous cow was worked out as 1.24.

Returns from crossbred cow

The income measures from crossbred cow for members of dairy cooperative society were done and results are presented in table 4.3. The result reveals that the average gross income from cross breed cow per day for cooperative society members was 583.56 and net income per day per animal was estimated at 120.08. However, the net income from the per litre milk production was calculated at 7.41. The net income on variable cost per day per crossbred cow was worked out at 141.29 and the Benefit Cost ratio for crossbred cow in case of cooperative society members was revealed as 1.26

**Table 4.3 Returns per day per animal on Dairy cooperative Members
(Rupees per animal)**

S.No.	Components	Indigenous cow	Crossbred cow	Buffalo
1	Total Cost per day	267.37	463.48	468.06
2	Milk Yield (Litres per day)	8.32	16.21	12.56
3	Cost per litre	32.14	28.59	35.26
4	Gross Income per day	332.80	583.56	565.56
5	Net Income per day	65.43	120.08	97.14
6	Net Income per litre	7.86	7.41	7.73
7	Net Income on operating cost	84.26	141.29	126.34
8	B.C Ratio	1.24	1.25	1.21

4.5 Returns from buffalo milk production

The income generated from buffalo milk for member producers are analysed and results are presented in table 4.3. The gross returns from buffalo milk per day were estimated as 565.56 and net income obtained as 97.14. The net income

from one litre of buffalo milk was recorded at 7.73 per day. However, the net income on variable cost was estimated at 126.34 and B.C. ratio was measured as 1.21.

Thus, from the above discussion it can be revealed that among all these three milch animals,

crossbred cow was more profitable in terms of net income per day. Due to higher production cost of crossbred cow and buffalo, indigenous cow was slightly more profitable in comparison to crossbred cow and buffalo. But the overall performance of crossbred cow was much better than indigenous cow and buffalo.

Returns from milk production for non-members of dairy cooperative society

Returns from indigenous cow milk production

Income generated in terms of various income aspects from indigenous cows for non-members of milk producers was worked out and the results are presented in table 4.4. The outcome of the income analysis clearly shows that the gross income of milk production in which total cost of the milk production was included for or was 290.32 per day per animal. However, the net

income obtained after deduction of the total cost from gross income has revealed 51.10 per day. The net income per litre for indigenous cow recorded at 6.69 and income received and variable cost was estimated at 66.51 per day per animal. The B.C. ratio for indigenous cow milk production was calculated as 1.21.

Returns from crossbred cow

Incomes obtained from a crossbred per day are presented in table 4.4. The gross income per day per animal on non-dairy cooperative society members was 470.22 and net income was 76.18 per day. The net income on per litre milk production was revealed as 5.50. The income on variable cost was estimated at 93.66 and B.C. ratio worked out to 1.19 for Crossbred cow on non-members.

Table 4.4 Returns per day per animal on Non-Dairy cooperative Members
(Rupees per animal)

S.No.	Components	Indigenous cow	Crossbred cow	Buffalo
1	Total Cost per day	239.22	394.04	426.33
2	Milk Yield (Litres per day)	7.64	13.83	11.63
3	Cost per litre	31.31	28.49	36.67
4	Gross Income per day	290.32	470.22	500.09
5	Net Income per day	51.10	76.18	73.76
6	Net Income per litre	6.69	5.50	6.34
7	Net Income on operating cost	66.51	93.66	97.55
8	B.C Ratio	1.21	1.19	1.17

Returns from buffalo milk

The various incomes measured for buffalo milk production for non-cooperative society members and findings are presented in table 4.4. The results of this study show that the gross income obtained from buffalo milk production was 580.09 and the net income per day per animal was 73.76. The net income per litre milk production was recorded at 6.34. However, the income generated on variable cost was

measured 97.55 and B.C. ratio was established for buffalo at 1.17.

Thus, from the above discussion it is revealed that in terms of B.C. ratio, the indigenous cow was more rational due to less total maintenance cost. However, in terms of net income per day, crossbred cow was recognised as the most profitable milch animals in comparison to indigenous cow and buffalo.

4.6 Generation of employees with the development of dairy production for the cooperative members and non-members

The opportunities for the job are generated for both non-members and members with the development of the dairy production. The employment rate increases for the dairy cooperative society with the generation of households for men and women in different sections. The household identified through the survey report is 9.32 hours for women while only 3.90 hours for men (Bayan, 2018). For the members of the dairy production society, the

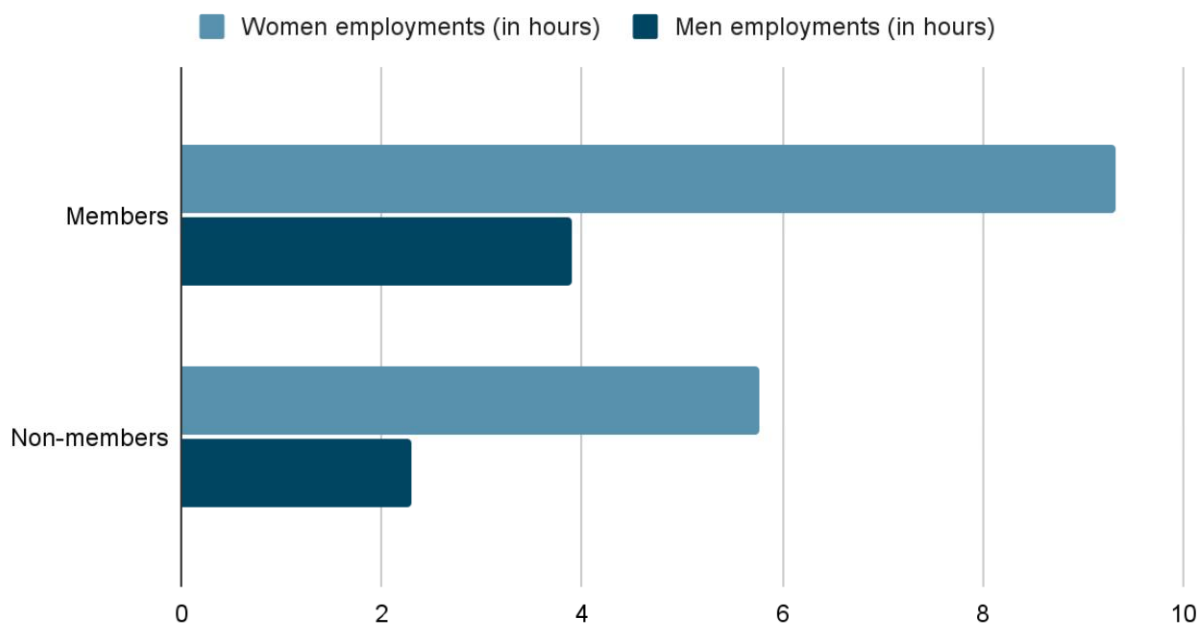
average household per day has been identified to be more than 13.15 hours. Non-member people of the dairy society show an average household hour for a day is near about 5.76 hours for women and 2.30 hours for men. Priscilla & Chauhan (2019) mentioned that, in the case of non-members, the average of total employment has been noted as 7.96 hours for the household per day as illustrated in the below table 4.5 and figure 1. The rate for the average employment for the members of a dairy cooperative is higher than the non-members.

Table 4.5: Rate of employments generated for non-members and members

Dairy cooperative society	Women employments (in hours)	% of Women employments (in hours)	Men employments (in hours)	% of Men employments (in hours)
Members	9.32	70.35	3.90	29.65
Non-members	5.76	71.43	2.30	28.57

Figure 1: Graphical representation of employment generation for members and non-members of dairy cooperative

Average employment generation



The positive impact of the dairy cooperative on society could be illustrated through the above graph. The presented table and figure provide information that the job opportunities for the members of the dairy cooperative are 39.25% more than the non-members. Working hours for the members and non-members of the dairy cooperative has also a wide margin between them. Members of the cooperative were involved in working 13.15 hours more than the non-members' employees. Different activities are performed by members of the dairy cooperative such as animal feeding, animal cleaning, milking, space cleaning, throwing the dunks, and more. It would be clearly observed through the above table that females are working for more hours and provide more extra contribution. Women have been witnessed to provide 71.43% and men show its 28.57% construction in dairy production and being its non-member employees. For member employees, women contributed 70.35% whereas men contributed only 29.65%.

5. Discussion:

The presented article provides discussion over the return and cost observed through the milk production. The selected area for the discussion is the impact of members and non-members of the Jaipur Dugdh Utpadak Sahakari Sangh Limited, Rajasthan. From the result and data analysis part it has been found that the study has a positive contribution towards the members' betterment as compared to the non-members. The benefits provided by the cooperative society are not reaped by the non-members as compared to the members. The average annual milk production of the member groups has been increased with the help of cooperative societies. Cooperative society also plays an important role in the increment of the income generation as well as employment opportunities have also been increased. It has been seen from the result that all the member groups found uniform distribution of the income. In the members group 36.33% more income has been achieved as well as distribution of the incomes has been done in a uniform way.

The contribution of women in the milk production activities is about 70.36% whereas 29.64% of the non members' women were involved. As compared to non-member group work hours have been found more in the member group. The women belonging to the member;s group have

more self-confidence as they have the ability to generate more income. Involvement of women in the mil productivity activities has increased the social-esteem of the women. Social self-esteem of the women has been increased through the dairy cooperative society that also helps in generating employment. The most important factor in the Jaipur Dairy is the utilization of the technology. Advancement in the technology helps in the faster growth and development of dairy in both urban and rural areas. Jaipur Dairy management has taken the bold step regarding the higher growth in membership as well as milk procurement. Using various technologies such as bulk milk coolers, automatic milk collection stations are one of the effective initiatives done by Jaipur dairy. Training can help the organization to improve the income, production as well as employment opportunities.

6. Conclusion:

From the above discussion it can be revealed that the trend of investment on various cost components is similar on both members and non-members of the cooperative society for different types of milch animals. The variation on the cost components was recorded in terms of money spent on various milch animals. Among all cost components, the major cost components were total feed cost and total variable cost. The concentrates and labour cost were found to be the other two major cost components. It was also revealed that the members of the dairy cooperative society spent more money in maintenance of their milk animals in comparison to the non-dairy cooperative society members in the study area. Further, it can be revealed from the result that among all the three types of milch animals, crossbred cow was more profitable in terms of net income per day. Due to higher production cost of crossbred cow and buffalo, indigenous cow was slightly more profitable in comparison to crossbred cow and buffalo. But the overall performance of crossbred cow was much better than indigenous cow and buffalo. In terms of B.C. ratio, the indigenous cow was more rational due to less total maintenance cost. However, in terms of net income per day, crossbred cow was recognised as the most profitable milch animal in comparison to indigenous cow and buffalo. Overall, it is clearly evident from the study the dairy cooperatives

played a significant role in supporting their members in acquiring a greater number of animals of better quality and assisted the members with dissemination of relevant scientific knowledge to manage and maintain their milch animals with optimal profit margin. All these efforts of dairy cooperatives paved way for the better socio-economic development of member households.

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