

Management Practices Followed by Members and Non-Members of Dairy Co-operative Societies and their Correlates

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ABSTRACT

Dairying has played a prominent role in strengthening India's rural economy. It has been recognized as an instrument to bring about socio-economic transformation. The study was conducted in Karjat tahsil of Ahmednagar district of Maharashtra state. The data was collected from 120 respondents. Majority of the members and non-members of dairy co-operative societies were from middle age group. Most of them completed education up to secondary level, having medium size of family and had medium level of dairy experience. Majority of them had medium social participation, having medium level of annual income, small and marginal size of land holding, medium herd size, moderately favorable motivation and also medium level of aspiration. It was seen that the members (55.00%) and non members (75.00%) of dairy co-operative societies had followed medium level of improved dairy management practices. From this study it is found that socio-economic characteristics viz. education, family size, social participation, size of land holding, annual income, occupation experience, size of herd, motivation and aspiration exhibited positive and significant relationship with improved dairy management practices. While, age and family type of dairy farmers found to have non-significant relationship with dairy management practices

Key words: Dairy; Management practices; Motivation; Social participation;

Animal husbandry and dairying has played a prominent role in strengthening India's rural economy. They further play a significant role in generating gainful employment in the rural sector, particularly among the landless, small and marginal farmers and women, besides providing cheap and nutritious food to the millions of people. Livestock sector is an important sub-sector of the agriculture of Indian economy. It forms an important livelihood activity for most of the farmers, supporting agriculture in the form of critical inputs, contributing to the health and nutrition of the household, supplementing incomes, offering employment opportunities. Total number of workers in farming of animals is 20.5 million as per usual status (principal status plus subsidiaries status irrespective their principal activity status). Farmers of marginal, small and semi-medium operational holdings (area less than 4 ha) own about 87.7 per cent of the livestock (Anonymous 2015). Milk production during 2012-13 and 2013-14 is 132.4 million tonnes and 137.7 million tonnes respectively with an annual growth rate

of 3.54 per cent and 3.97 per cent respectively (Anonymous 2015). The per capita availability of milk is around 307 grams per day in 2013-14 (Anonymous 2015). The vast potential of dairying in employment generation and poverty alleviation is well recognized. Successful dairy farming depends on the availability of healthy crossbreed animals. For this proper feeding, disease prevention, sanitation, breeding, cleaning, milking practices are important to improve the profitability of dairy farming. Hence these management practices play a vital role in the optimum milk production. Co-operative societies helping their members in breeding, feeding and management. Several programmes were undertaken by co-operatives like provision of improved fodder seeds, veterinary medicines, advice regarding management practices, facility of artificial insemination, sufficient and timely loans for dairy farmers. In the Western Maharashtra co-operative movement is active in dairy business. Therefore present investigation entitled "A study on management practices followed by members

and non- members of dairy co-operative society” was undertaken with objectives to know the personal, social and economic characteristics of the members and non-members of dairy co-operative society, to study the management practices followed by members and non-members of dairy co-operative society and to study the relationship between characteristics of dairy farmers (members and non-members) of dairy co-operative and management practices followed by them.

METHODOLOGY

The study was conducted in Karjat tahsil of Ahmednagar district of Maharashtra. Karjat tahsil was purposively selected for the study on the basis of highest number of dairy societies in this tahsil. Out of 440 dairy co-operative societies from Karjat tahsil 10 dairy co-operative societies were selected from 10 villages by using random sampling method. From each village selected 6 members of dairy cooperatives and 6 non members randomly. Thus, in all 120 respondents were selected for the study. The interview schedule was designed based on the objectives of the study. The interview schedule was pre-tested by interviewing 20 respondents who were not included in the sample of this study. The appropriate statistical tools were used to draw meaningful conclusions.

Independent variables- Age, Education, Family Size, Social participation, Size of land holding, Annual income, Experience in dairy occupation, Herd Size, Motivation and Aspiration

Dependent variables

Management Practices: The respondents were asked whether they know the various identified management practices which were expected to perform as their regular job. Zero score was given if the respondent has not followed recommended management practices, one score assigned if partially followed and two score assigned if completely adopted management practices. The final score was calculated by summing up the scores of all the statements. They were classified into three categories by using formula mean \pm S.D.

Category	Management practices (Score)
Low	Up to 35 score
Medium	36 to 60 score
High	61 and above

RESULTS AND DISCUSSION

Personal, social and economic characteristics of the members and non- members of dairy co-operative

societies : It is observed from Table 1 that majority of the members (68.33%) and non members (70.00%) were in the middle age group. The average age of members and non members 35.01 years and 29.49 years respectively. Calculated t value (1.2253) was no significant. It can be inferred from these observations that age groups of both members and non- members were more or less same.

It is noticed that maximum number (36.67%) of the members had secondary level of education and non-members (48.33%) had no education. The average education of members was 6th and non-members were 7th standard. This difference in mean education score was found significant at 1.00 per cent and 5.00 per cent level of probability as indicated by calculated 't' value (3.979) it can be said that the members of dairy co-operative societies were better educated than those non-members of dairy co-operatives. Regarding family size majority (63.33%) of the members had medium size and majority of members (80.00) percent and Non members (73.33%) had joint family.

It is revealed from table that majority (63.33%) of the members and non members (56.67%) had medium social participation. The calculated 't' value (3.9796) was significant indicating the members of dairy co-operatives had better social participation than non- members.

The data regarding the size of land holding of the respondents indicated that, majority (40.00%) of the members had medium size of land holding and majority (46.66 per cent) of the non members had small size of land holding. The average size of land holding score of members was 5.87 and non-members were 3.98 calculated 't' value (2.287) was significant at 5.00 per cent of probability. It means that members had large size of land holding as compared to the non-members of dairy co-operative societies. It is noticed that maximum number (48.33%) of the members and 58.33 per cent non members had medium annual income. The average annual income of the members was Rs. 96080/- and non-members was Rs. 62180/-. Calculated 't' value (1.3952) was non- significant.

It is seen from table that majority (65.00 %) of the members and non members (63.33%) were having the medium level of experience in dairy occupation. The calculated 't' value (2.7759) was significant at 1.00 and 5.00 per cent of probability. It means the members of dairy occupational experience than the non-members of dairy co-operative societies.

Table 1. Personal, social and economic characteristics of the respondents (N=120)

Characteristics	Respondents		
	Members (n=60)	Non-mem. (n=60)	Overall (N=120)
<i>Age</i>			
Young (Up to 35 years)	10(16.67)	10(16.67)	20(16.67)
Middle (36 to 55 years)	38(68.33)	42(70.00)	80(66.66)
Old (56 years <)	12(20.00)	8(13.33)	20(16.67)
Average (Score)	35.01	29.49	32.50
<i>Education</i>			
Illiterate	13(21.67)	29(48.33)	42(35.00)
Primary	8(13.33)	12(20.00)	20(16.67)
Secondary	22(36.67)	35(29.16)	
Higher Secondary	7(11.66)	2(3.33)	9(7.50)
College education	10(16.67)	4(6.67)	14(11.67)
Average (Score)	5.55	7.78	6.34
<i>Size of family (members)</i>			
Small (up to 4)	10(16.67)	17(28.33)	27(22.50)
Medium (5 to 10)	38(63.33)	38(63.33)	76(63.33)
Large (11 <)	12(20.00)	5(8.33)	17(14.17)
Average (Score)	7.46	5.56	6.71
<i>Type of family</i>			
Joint	48(80.00)	44(73.33)	92(76.66)
Nuclear	12(20.00)	16(26.67)	28(23.34)
Average (Score)	1.25	1.14	1.20
<i>Size of land holding</i>			
Marginal (<.00 ha.)	11(18.33)	19(31.67)	30(25.00)
Small (1.01-2.00 ha.)	21(35.00)	28(46.66)	49(40.83)
Medium (2.01-4.00 ha.)	24(40.00)	9(15.00)	33(27.50)
Large (4.01 ha.<)	4(6.67)	4(6.67)	8(6.67)
Average (Score)	5.87	3.98	5.13
<i>Annual Income (Rs.)</i>			
Low (Up to Rs. 30,000/-)	9(15.00)	13(21.67)	22(18.33)
Medium (Rs. 30,001/- -1lakh)	29(48.33)	35(58.33)	64(53.33)
High (Rs. 1,00,001<)	22(36.67)	12(20.00)	34(28.34)
Average (Rs.)	96080/-	62180/-	82725/-
<i>Experience in dairy occupation</i>			
Less (up to 7 years)	8(13.33)	18(30.00)	26(21.67)
Medium (8 to 15 years)	39(65.00)	38(63.33)	77(64.17)
More (16 years<)	13(21.67)	4(6.67)	17(14.16)
Average (Score)	4.28	3.31	
<i>Size of herd (milch animals)</i>			
Small (<2)	14(23.33)	29(48.33)	43(35.84)
Medium (3 to 4)	22(36.67)	19(31.67)	41(34.16)
Large (5<)	24(40.00)	12(20.00)	36(30.00)
Average (No.)	4.28	3.31	3.90
<i>Level of social participation</i>			
Low (Up to 2 score)	12(20.00)	34(56.67)	46(38.33)
Medium (3 to 6 score)	38(63.33)	22(36.67)	60(50.00)
High (7 and <)	10(16.67)	4(6.66)	14(11.67)

Average (score)	3.60	1.71	2.85
<i>Motivation</i>			
Low (up to 9 score)	11(18.33)	15(25.00)	26(21.66)
Medium (10 to 16 score)	34(56.67)	39(65.00)	73(60.84)
High (17 <scores)	15(25.00)	6(10.00)	21(17.50)
Average (score)	13.06	10.59	12.09
<i>Aspiration</i>			
Low (up to 6 score)	13(21.67)	16(26.67)	29(24.17)
Medium (7 to 12 score)	36(60.00)	35(58.33)	71(59.17)
High (13 <scores)	11(18.33)	9(15.02)	20(16.66)
Average (score)	9.40	8.07	8.87

The data regarding the herd size possessed by the respondents indicated that majority (40.00%) of the members had large herd size and in case of non members nearly half of the respondents (48.33%) had small herd size. The data in respect of motivation revealed that majority (56.67%) of the members and 65.00 percent of the non members were having medium motivation. The average motivation score of the members was 13.06 and that of the non-members was 10.59. Calculated 't' value (2.166) was found significant at 5.00 per cent of probability. The members of dairy co-operatives had a desire to achieve more than the non-members of dairy co-operative societies.

It is observed that majority (60.00%) of the members and non members (58.33%) had medium level of aspiration. The average aspiration of members and non-members was 9.40 and 8.07 score respectively. Calculated 't' value (2.2856) was significant at 5.00 per cent level of probability. It means, the members of dairy co-operative societies had more aspirations than the non-members of dairy co-operative societies.

Management practices followed by members and non- members of dairy co-operative societies : It is revealed from Table 2 that majority (55.00%) of the members partially followed care and management of new born calf and 41.67 per cent of the non-members not followed this. It was further observed that equal number of (45.00%) of the members and non members of dairy co-operatives had fully followed the practice of care and management of pregnant animals. 43.34 per cent of the members and 40.00 per cent of the non members had fully followed the parturition management practices of milch animals. Further, it was seen that majority (41.66%) of the members and 43.34 per cent of the non members had partially followed management practices in respect of care and management of milking animals. Majority (56.66%) of the members and 60.00

per cent of the non members had not followed health care management practices of milch animals. More than half (51.66%) of the members and non members had fully followed management practices in respect of storage and preservation of milk. It was further observed that majority (40.00%) of the members and 36.66 per cent of the non members had fully followed management practices relating reproduction of milch animals. It was further revealed that majority (41.66%) of the members and 35.00 percent of the non members had fully followed byre management practices. The findings of this study are in line with the findings of *Podikunju et.al.(2000)*, and *Ghosh and Ram Chand (2000)*.

Management Practices : It is noticed from Table 3 that, majority (55.00%) of the members and 75.00 per cent of the non- members had followed medium management practices, while 20.00 per cent of the members and 18.33 per cent of non- members had practiced high management practices.

The average management practices followed by the members were 51.05 and that of the non-members was 42.79. The calculated 't' value (1.22) was found non-significant. It can be concluded from these findings that there was no much difference between management practices followed by the members and non- members of the dairy co-operative societies.

Correlates of management practices with personal, social and economic characteristics of the members and non-members of dairy co-operative

The Coefficient of the correlation of the management practices with personal, social and economic characteristics of the members and non members of dairy co-operative societies are furnished in Table 4.

Age and management practices : It is seen from the Table 4 that age of the members had non-members significantly and positively related with management practices followed by them. It means that the elder non-members had followed better management practices than younger non- members. This might be because of experience coupled with management practices. Age of the members had non- significant and positive relationship with management practices. In case of overall respondents also age was positively and non significantly related with management practices. It can be said, that the management practices of members and overall respondents was not influenced by their age. The findings of this study are similar with the findings of *Shinde et.al.(1998)*, *Patange et.al. (2001)* and *Shaha and Ram Chand (2002)*.

However, the findings are dissimilar to the findings of *Bhosale (2000)*, *Deoraj (2001)* and *Ubale (2005)*.

Education and management practices: It is revealed from Table 4 that education of the members, non members and overall respondents was positively and significantly correlated with their management practices. Inference can be drawn that as the educational level of the respondents from the three categories increased their management practices also improved remarkably. The findings of this study are in line with the findings of *Shinde et. al (1999)*, *Shah and Ram Chand (2002)*, *Gunjal (2004)* and *Ubale (2005)*. However, the findings are dissimilar to the findings of *Patange et. al. (2001)*.

Family size and management practices : It was observed from Table 4 that the family size of the members, non members and overall respondents was negatively and non significantly correlated with

Table 2. Distribution of respondents (members and non- members) according to the management practices followed by them

Parameters	Management Practices					
	Members (N=60)			Non Members (N=60)		
	FF	PF	NF	FF	PF	NF
Care and management of new born calf	14(23.34)	33(55.00)	13(21.66)	22(36.66)	13(21.67)	25(41.67)
Care and management of pregnant animals	27(45.00)	26(43.34)	7(11.66)	27(45.00)	25(41.66)	8(13.34)
Parturition management of milch animals	26(43.34)	13(21.66)	21(35.00)	24(40.00)	16(26.66)	20(33.34)
Care and management of milking animals	23(38.34)	25(41.66)	12(20.00)	21(35.00)	26(43.34)	13(21.66)
Health care management of milch animals	15(25.00)	11(18.34)	34(56.66)	14(23.34)	10(16.66)	36(60.00)
Storage and preservation of milk	31(51.66)	15(25.00)	14(23.34)	31(51.66)	20(33.34)	9(15.00)
Clean milk production	26(43.34)	18(30.00)	16(26.66)	23(38.34)	19(31.66)	18(30.00)
Reproduction management of milch animals	24(40.00)	19(31.66)	17(28.34)	22(36.66)	17(28.34)	21(35.00)
Cleanliness and management of byre and sheds	25(41.66)	17(28.34)	18(30.00)	21(35.00)	15(25.00)	24(40.00)

FF=Fully followed; PF=Partially followed; NF=Not followed

Table 3. Distribution of the respondents according to the management practices followed by them

Management practices	Respondents					
	Members		Non-members		Overall	
	No.	%	No.	%	No.	%
Low	15	25.00	4	6.67	18	15.00
Medium	33	55.00	45	75.00	81	67.50
High	12	20.00	11	18.33	21	17.50
Average	51.05	42.79	47.79			

't' value = 1.22 Non- significant

Table 4. Coefficient of correlation (r) between characteristics of the respondents and their management practices

Characteristics	Members	Non-members	Overall
Age	0.029 ^{NS}	0.264*	0.143 ^{NS}
Education	0.451**	0.485**	0.473**
Family size	0.418**	0.115**	0.304**
Family type	-0.095 ^{NS}	-0.024 ^{NS}	-0.067 ^{NS}
Social participation	0.3693**	0.275*	0.343**
Size of land holding	0.360**	0.276*	0.338**
Annual income	0.486**	0.273*	0.395**
Occupation exp.	0.107 ^{NS}	0.316*	0.227*
Size of herd	0.465**	0.322*	0.415**
Motivation	0.195 ^{NS}	0.305*	0.263**
Aspiration	0.506**	0.408**	0.467**

*Significant at 0.05 level of probability

**Significant at 0.01 level of probability, NS- Non significant management practices followed by them. This may be due to the fact that larger the family more is the responsibility. More time is spent on socio-economic and welfare activities of the family.

The findings of this study are similar with the findings of *Bhosale (2000)*. However, the findings are dissimilar to the findings of *Ubale (2005)*.

Type of family and management practices : As shown in Table 4 that relationship between type of family of the members, non members and overall respondents and management practices followed by them was negatively significant. Interference can be drawn that the members from nuclear families perform management practices better and effectively than those of joint families.

Social participation and management practices: It is revealed that there was a positive and significant correlation between the social participation of the members, non members and overall respondents and the management practices followed by them. This indicated that increase in social participation of the respondents' improvement in the management practices

of the respondents.

Size of land holding and management practices : The relationship between the size of land holding and the management practices of the members, non members and overall respondents of dairy co-operative societies was positive and significant. It was hypothesized that land holding influences the level of management practices followed by them. The findings of this study are in line with the findings of *Shinde et. al (1999)*, *Bhosale (2000)* and *Deoraj (2001)*.

Annual income and management practices : There was a positive and significant relationship between the members, non- members and overall respondents with management practices followed by them. It can be discerned from these findings that annual income of the respondents had substantial impact on management practices. Higher annual income might have been helping the respondents to use the resources as per requirement and perform various family activities. The findings of this study are in line with the findings of *Shinde et. al (1999)*, *Bhosale (2000)*, *Deoraj (2001)*.

Occupation experience and management practices: The relationship between experience of the non members and overall respondents of dairy co-operative societies and management practices was positive and significant and relating to members it was positive and non significantly related to the management practices. It was therefore, assumed that the respondents having more experience in dairying followed better management practices.

Size of herd and management practices: The herd size and management practices of the members, non members and overall respondents exhibited positive and significant relationship. The respondents who maintained smaller size of livestock might have followed better management practices. The findings is in line with the findings of *Bhosale (2000)*, *Gunjal (2004)*.

Motivation and management practices : It is observed from table 4 that there was a positive and significant correlation between motivation of non members and overall respondents and the management practices followed by them. Motivation of the member had positive and non significant relationship with management practices. The finding of the present study is in line with findings of *Shinde et.al. (1998)*.

Aspiration and management practices : It is noticed that that there is positive and significant relationship between aspiration and management practices followed

by the respondents. It indicates that higher the aspiration level better will be the followed management practices. This finding is in line with the findings of *Singh (2006)*.

CONCLUSION

Majority of the members of dairy co-operative societies and non members were illiterate, most of the respondents having medium size of family and belonged to joint families, having medium social participation, medium level of experience, small herd size, medium level of annual income, medium level of motivation and also medium level of aspiration. Regarding management practices followed by them majority (67.50%) of the respondents had followed medium level of management practices. It is also concluded that, with the increase the level of education, family size, social participation, size of land holding, annual income, occupational experience, size of herd, motivation and aspiration the management practices relating to dairy societies was also increased. There is need to organize the trainings by the Animal Husbandry and Dairy Department, dairy co-operative societies and NGOs for the members and

non members of dairy co-operative societies to make them aware about their roles, activities, functions and management so they can perform better level of management practices followed by them will be improved and increased. Majority of the members and non members of the dairy co-operative societies had followed medium level of management practices. It is therefore suggested that the inadequate knowledge could be corrected by organizing proper extension methods like group discussions etc. for them by the allied departments. The research findings revealed that respondents having more social participation had followed better dairy management practices. Therefore, there is need to increase social participation of respondents by promoting leadership and giving incentives to them. The study revealed that higher the motivation and aspiration of members and non members in dairying and co-operative activities, greater and better the management practices followed by them. It is therefore, needed to increase their motivation and aspiration level by providing them satisfaction from dairy co-operatives.

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