Journal of Pharmacognosy and Phytochemistry

Available online at www.phytojournal.com

E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2019; 8(5): 1329-1335
Received: 04-07-2019
Accepted: 06-08-2019

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Knowledge and adoption of modern dairying and animal husbandry practices under dairy co-operative societies

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Abstract
The present study was conducted in Amravati and Akola district purposively selected because in these districts there is maximum milk production among the entire district in the Vidarbha region of Maharashtra State. This ultimately leads to the large beneficiary members. There are a total number of 60 milk cooperative societies running in Akola and Amravati districts. Out of which the ten Dairy Co-operative Societies were selected purposively from each district was having significant number of dairy co-operatives. From the list of 20 dairy Co-operative Societies total 200 respondents were randomly selected. Approximately, 10 regular members of each dairy co-operative society from last 5 years were selected for the study. The salient findings of the present study revealed that large proportionate i.e. 85.00 per cent of DCS members had high level of knowledge and remaining 15.00 per cent had medium level of knowledge about modern dairying of animal husbandry and dairy management practices. In case of adoption majority of DCS members had medium to high level of adoption about modern dairying and animal husbandry practices.

Keywords: Dairy co-operative societies, knowledge, adoption

Introduction
The livestock plays an important role in strengthening of India's economy and is considered as the life line of agro-based enterprise of our country. Among the livestock dairy sectors has been instrumental in bringing the "Socio-economic transformation" while the agriculture byproduct gives feed and fodder whereas, cattle provides manure, draught power for various agricultural operations. The place of dairy industry is now largely based upon a three tier system under which the primary village co-operative societies are linked with district unions and state federation which are guided by the National Co-operative Dairy Federation of India. The apex body for milk co-operative societies, a nationwide network system of multi-tier producer co-operative which are democratic in structure which are professionally managed and have been established. The Indian council of Medical Research has recommended the minimum requirement of 220 gms of milk per person per day indicating a shortage of around 66 gms per capita. The dairy sector also provides quick and regular returns and it may create bright employment opportunities and contribute vastly in socioeconomic improvement of the people especially among the women. At country level, livestock provides regular, supplementary income to producers engaged in secondary and tertiary forms related to livestock business. Besides providing organic manure, livestock is important source of several value-added by-products, which are not properly, processed and utilized as a commercial activity, but have immense value for future business. Hence, keeping in view the above facts into consideration, the present study was carried out with the following objectives:
To study the knowledge and adoption of the members about the modern dairying and animal husbandry practices and dairy co-operative societies.

Methodology
The present research investigation was carried out in Akola and Amravati district in Vidarbha region of Maharashtra state considering the significant number of dairy co-operatives in Amravati division. For the present study descriptive design namely, ex-post facto research design was used. There are 60 Dairy Co-operative Societies running in Akola and Amravati districts. Out of which the ten Dairy Co-operative Societies were selected purposively from each district was having significant number of dairy co-operatives on the basis of maximum milk production which ultimately leads to the large beneficiary members. From the list of 20 dairy Co-operative Societies total 200 respondents were randomly selected. Approximately, 10 regular members of each dairy co-operative society from last 5 years were selected for the

study. A structured interview schedule was prepared and used for data collection and data was collected by personal interview method. The suitable statistical measurement was used to analyze the data and inferences to be drawn.

Results and discussion

Knowledge

The data pertaining to the knowledge of DCS members about modern dairying and animal husbandry practices and dairy co-operative societies studied and presented in Table 1.

Table 1: Distribution of the respondents according to practicewise knowledge of modern dairying and animal husbandry practices and dairy co-operative societies

S. No.	Particulars	Knowledge	
		Yes	No
A	**Feeding Management Practices**		
1.	Feeding of balance ration at regular interval.	192 (96.00)	8 (4.00)
2.	Feeding of dry, green and concentrates in required proportion.	198 (99.00)	2 (1.00)
3.	Processing of roughages and concentrates before feeding.	180 (90.00)	20 (10.00)
4.	Enrichment of poor quality roughages.	57 (28.50)	143 (71.50)
5.	Inclusion of agro industrial by-products	102 (51.00)	98 (49.00)
6.	Feeding of concentrates for milk production	200 (100.00)	0 (0.00)
7.	Use of common salt, mineral mixture and mineral bricks	198 (99.00)	2 (1.00)
8.	Feeding of concentrates to pregnant cow/ buffalo	200 (100.00)	0 (0.00)
9.	Colostrums should be fed to newly born calf @ 10% of its body weight.	119 (59.50)	81 (40.50)
10.	Milk and concentrates should be fed to calves @ 10 per cent of body weight and 500 gm respectively up to 3 months age.	55 (27.50)	145 (72.50)
11.	Feeding of 1 kg bajara, 250 gm. of gul + 100 gm coconut + 50 gm salt should be given up to 2 to 3 days after delivery.	112 (56.00)	88 (44.00)
12.	Lactating animals should be fed daily with 15 kg green fodder, 4 kg dry fodder and 2 kg concentrates for body maintenance + 50 per cent concentrates allowance of total milk production.	41 (20.50)	159 (79.50)
13.	Pregnant cow/buffaloes should be fed with additional allowance of 1.5 to 2 kg concentrates during its advance pregnancy period.	179 (89.50)	21 (10.50)
14.	Use of silage as fodder	102 (51.00)	98 (49.00)
15.	Use of Bypass Protein supplementation	06 (3.00)	194 (97.00)
16.	Use of Bypass fat supplementation	06 (3.00)	194 (97.00)
17.	Use of Probiotics	04 (2.00)	196 (98.00)
18.	Use of Azolla as fodder	124 (62.00)	76 (38.00)
19.	Use of Hydroponics	58 (29.00)	142 (71.00)
B	**Housing Management Practices**		
1.	Knowledge of Construction of housing structure for cattle.	198 (99.00)	2 (1.00)
	i) Open shed		
	ii) Close shed		
2.	Knowledge of type of shed for cattle	190 (95.00)	10 (5.00)
	i) Katcha shed		
	ii) Pucca shed		
3.	Disinfectants like phenyl should be sprayed in the byre regularly.	167 (83.50)	33 (16.50)
4.	Availability of ventilation facility	182 (91.00)	18 (9.00)
5.	Head to head / Tail to tail system	47 (23.50)	153 (76.50)
6.	Direction of shed (North-South)	75 (37.50)	125 (62.50)
7.	Availability of electricity	200 (100.00)	0 (0.00)
8.	Drainage for urine	142 (71.00)	58 (29.00)
C	**Cleaning Management Practices**		
1.	Cleaning of milking utensils.	200 (100.00)	0 (0.00)
2.	Cleaning of shed	200 (100.00)	0 (0.00)
3.	Proper washing of udder before milking.	197 (98.50)	3 (1.50)
4.	Proper cleaning of milking machine to avoid infection.	51 (25.50)	149 (74.50)
D	**Health Management Practices**		
1.	Sprinkling of water.	200 (100.00)	0 (0.00)
2.	Practicing vaccination timely and regularly against the contagious disease.	189 (94.50)	11 (5.50)
3.	Segregating the disease animals suffering from contagious disease	49 (24.50)	151 (75.50)
4.	Practicing deworming in calves for the prevention of parasitic disease.	63 (31.50)	137 (68.50)
5.	Providing treatment of umbilical cord to new born calf.	34 (17.00)	166 (83.00)
6.	Practicing grooming	163 (81.50)	37 (18.50)
E	**Breeding Management Practices**		
1.	Practicing Natural service Insemination in animal to proper time of heat.	200 (100.00)	0 (0.00)
2.	Practicing Artificial Insemination in animal to proper time of heat.	175 (87.50)	25 (12.50)
3.	Cross-breeds should be preferred for dairy purpose	180 (90.00)	20 (10.00)
4.	After Artificial Insemination cow/ buffalo placed one day for rest	167 (83.50)	33 (16.50)
5.	Heifer / cow should be inseminated at 10-12 hrs. after estrus period	176 (88.00)	24 (12.00)
6.	Cow/ buffalo should be dried at 6 to 8 weeks before calving	169 (84.50)	31 (15.50)
7.	The 50 per cent cross- breed type should be selected	150 (75.00)	50 (25.00)

F.	**Milking management practices**		
1.	The animal washed before milking	199 (99.50)	1 (0.50)
2.	Hands of the milker should be clean and dry. Wet hand milking may result in high bacteria count in the milk	155 (77.50)	45(22.50)
3.	Milking barns should be well ventilated and free from flies	200(100.00)	0(0.00)
4.	Milk is kept in cool place to maintain the flavor and keeping quality	200(100.00)	0(0.00)
5.	Full hand milking method should be practiced for milking	77(38.50)	123(61.50)
6.	Milking should be done gently, quickly and completely	166(83.00)	34(17.00)
G.	**Calves management practices**		
1.	Immediately after birth remove any mucous or phlegm from the nose and mouth	180(90.00)	20(10.00)
2.	Naval cord of newly born calf should be cut 2 inches away from the body and apply tincture iodine on cut portion	80(40.00)	120(60.00)
3.	Feed colostrums i.e. the first milk of the cow for the first 3 days. The colostrums are thick and viscous. It contains higher proportions of vit-A	200(100.00)	0(00.0)
4.	The limit of liquid milk feeding is 10% of its body weight with a maximum of 5-6 lit./day and continue liquid milk feeding for 6-10 weeks	60(30.00)	140(70.00)
H.	**Management of pregnant animal**		
1.	Separate shed for pregnant animal	183(91.50)	17(8.50)
2.	Kept in plane area	189(94.50)	11(5.50)
3.	After 7 month additional ration should be given at 1.5 to 2 kg./ animal	160(80.00)	40(20.00)
4.	Stop milking before 2 months of delivery of animal	155(77.50)	45(22.50)
5.	Preventive measures should be done to control ectoparasites like ticks, flies, lice and mosquitoes etc.	123(61.50)	77(38.50)
I.	**Animal bio-waste management**		
1.	Use of dung for manure	200(100.00)	0(0.00)
2.	Use of dung for fuel/gas	200(100.00)	0(0.00)
3.	Use of vermicompost	200(100.00)	0(0.00)
4.	Use of waste fodder for preparation manure.	175(87.50)	25(12.50)
J.	**Water management**		
1.	Daily drinking of 30-40 lit. of water to an animal	200(100.00)	00.00(0.00)
2.	Well prepared water tank for animal near shed	200(100.00)	00.00(0.00)
3.	Abundant supply of fresh, clean and soft water should be making available to animals.	200(100.00)	0.00(0.00)
4.	Provides quality water which is as fresh as possible at least twice a day (preferably in the morning and evening)	200(100.00)	0.00(0.00)
K	**Marketing Practices**		
1.	Milk given to dairy cooperative societies on daily basis	200(100.00)	0(0.00)
2.	Selling milk as a hawkers	200(100.00)	0(0.00)
3.	Given to institutions or private persons	200(100.00)	0(0.00)
4.	Processing of dairy product for domestic use and export.	102(51.00)	98(49.00)
5.	Amount of milk kept for household consumption	200(100.00)	0(0.00)

(Figures in parenthesis indicates percentage)

The data regarding practice wise knowledge of DCS member about modern dairying and animal husbandry practices and dairy co-operative societies given in Table 1 revealed that, In case of feeding management practices, relatively higher proportion of dairy farmers had more knowledge. In case of housing management practices, full adoption was recorded by almost all respondents regarding situation of shed (99.00%) and ventilation of shed (98.00%). The practices like drainage for urine and flooring to shed were partially adopted by 88.00 per cent and 85.00 per cent respondents, respectively.

From the Table 1 it was observed that in housing management practices overwhelming majority percent of the DCS member had knowledge about availability of electricity in animal shed, Construction of housing structure for cattle and type of shed pakka/ katcha housing structure for cattle were 100.00, 99.00 and 95.00 per cent. In case of cleaning management practices out of four cleaning management practices two were fully known to almost all the DCS members who include cleaning of milking utensils and cleaning of shed 100.00 per cent. In the health management practices similar trend was observed where sprinkling of water were fully known by 100.00 per cent of DCS members followed by 94.50 per cent had knowledge about practicing vaccination timely and regularly against the contagious disease and 81.50 per cent had known to practicing grooming respectively. In breeding management practices it was noticed that all the DCS members were fully knowledge i.e. 100.0 per cent about practicing natural service insemination in animal to proper time of heat. In milking management 100.00 per cent of the DCS members had knowledge about well ventilated and free from flies milking barn and milk is kept in a cool place to maintain the flavour and keeping quality followed by 99.50 per cent of the members had knowledge about animal wash before milking for clean milking.

In case of calve management practices it was observed that 100.00 per cent members of dairy cooperative society having knowledge about colostrums feeding i.e. the first milk of the cow for the first 3 days. In case of animal bio waste management practices 100.00 per cent of the members of DCS having knowledge about use of dung for manure, use of dung for fuel/gas and use of dung for vermicompost. After studying water management practices the result revealed that sent percent i.e. 100.00 per cent of the members of DCS having knowledge about daily drinking of 30 to 40 litre of water to an animal, Well prepared water tank for animal near shed, Abundant supply of fresh, clean and soft water should be making available to animals, Provides quality water which

is as fresh as possible at least twice a day (preferably in the morning and evening).

In case of marketing management practices of dairy co-operative societies 100.00 per cent of the members of DCS having knowledge about milk given to dairy cooperative societies on daily basis, selling milk as a hawkers, given to institutions or private persons, amount of milk kept for household consumption. Hence, equipping the DCS members with the requisite knowledge about various recommended practices through organizing farmers training and arranging guidance campaigning may therefore prove useful in this regards. A simple literature, illustrations, figures and diagrams will also prove useful in creating awareness among members about recommended modern dairying and animal husbandry practices.

Table 2: Distribution of the respondents according to their extent of Knowledge

S. No.	Category	Respondents(N=200)	
		Frequency	Percentage
1	Low (Up to 33.33)	00	0.00
2	Medium (33.34 to 66.66)	30	15.00
3	High(Above 66.66)	170	85.00
		200	100

It could be observed from the Table 2, that large proportionate i.e. 85.00 per cent of DCS members had high level of knowledge and remaining 15.00 per cent had medium level of knowledge about modern dairying of animal husbandry and dairy management practices.

Therefore, it is, concluded that almost all the DCS members had high level of knowledge about modern dairying and animal husbandry practices. Probably this might have two reasons, one is the positive efforts of extension agencies and second is from DCS members side, where the educated middle age and well experience old age members always ready to take risk for gaining the income, with this intension they could have made efforts to contact with the different extension personnel for seeking the information about dairy management technology.

Adoption

The data pertaining to the adoption of DCS members about modern dairying and animal husbandry practices and dairy co-operative societies studied and presented in Table 3.

Table 3: Distribution of the respondents according to practicewise adoption of dairy management technology

S. No.	Practices	Adoption(N = 200)		
		Full adoption	Partial adoption	No Adoption
		Freq.	Freq.	Freq.
A	**Feeding Management Practices**			
1.	Feeding of balance ration at regular interval.	86(43.00)	106(53.00)	8(04.00)
2.	Feeding of dry, green and concentrates in required proportion.	152 (76.00)	48(24.00)	0(00.00)
3.	Processing of roughages and concentrates before feeding.	0(00.00)	154(77.00)	46(23.00)
4.	Enrichment of poor quality roughages.	22(11.00)	174(87.00)	4(02.00)
5.	Inclusion of agro industrial by-products	2(01.00	22(11.00)	176(88.00)
6.	Feeding of concentrates for milk production	2(01.00)	196(98.00)	2(01.00)
7.	Use of common salt, mineral mixture and mineral bricks	74(37.00)	126(63.00)	0(00.00)
8.	Feeding of concentrates to pregnant cow/ buffalo	0(00.00)	190(95.00)	10(05.00)
9.	Colostrums should be fed to newly born calf @ 10% of its body weight.	180(90.00)	20(10.00)	0(00.00)
10.	Milk and concentrates should be fed to calves @ 10 per cent of body weight and 500 gm respectively up to 3 months age.	0(00.00)	25(12.50)	175(87.50)
11.	Feeding of 1 kg bajara, 250 gm. of gul + 100 gm coconut + 50 gm salt should be given up to 2 to 3 days after delivery.	0(00.00)	30(15.00)	170(85.00)
12.	Lactating animals should be fed daily with 15 kg green fodder, 4 kg dry fodder and 2 kg concentrates for body maintenance + 50 per cent concentrates allowance of total milk production.	0(00.00)	58(29.00)	142(71.00)
13.	Pregnant cow/buffaloes should be fed with additional allowance of 1.5 to 2 kg concentrates during its advance pregnancy period.	102(51.00)	88(44.00)	10(5.00)
4.	Use of silage as fodder	0(00.00)	10(05.00)	190(95.00)
15.	Use of Bypass Protein supplementation	0(00.00)	0(00.00)	200(100.00)
16.	Use of Bypass fat supplementation	0(00.00)	0(00.00)	200(100.00)
17.	Use of Probiotics	0(00.00)	0(00.00)	200(100.00)
18.	Use of Azolla	0(00.00)	24(12.00)	176(88.00)
19	Use of Hydroponics	0(00.00)	2(1.00)	198 (99.00)
B	**Housing Management Practices**			
1.	Knowledge of Construction of housing structure for cattle.	72(36.00)	128(64.00)	0(00.00)
	iii) Open shed			
	iv) Close shed			
2.	Knowledge of type of shed for cattle	70(35.00)	130(65.00)	0(00.00)
	iii) Katcha shed			
	iv) Pucca shed			
3.	Disinfectants like phenyl should be sprayed in the byre regularly.	198(99.00)	2(01.00)	0(00.00)
4.	Availability of ventilation facility	28(14.00)	170(85.00)	1(01.00)

5.	Head to head / Tail to tail system	196(98.00)	4(02.00)	0(00.00)
6.	Direction of shed (North-South)	24(12.00)	176(88.00)	0(00.00)
7.	Availability of electricity	36(18.00)	164(82.00)	0 (00.00)
8.	Drainage for urine	46(23.00)	120(60.00)	34(17.00)
C	**Cleaning Management Practices**			
1.	Cleaning of milking utensils.	198(99.00)	2(01.00)	0(00.00)
2.	Cleaning of shed	156(78.00)	44 (22.00)	0(00.00)
3.	Proper washing of udder before milking.	52(26.00)	129(64.50)	19(09.50)
4.	Proper cleaning of milking machine to avoid infection.	0(00.00)	0(00.00)	200(100.00)
D	**Health Management Practices**			
1.	Sprinkling of water.	36(18.00)	164(82.00)	0(00.00)
2.	Practicing vaccination timely and regularly against the contagious disease.	27(13.50)	64 (32.00)	109(54.50)
3.	Segregating the disease animals suffering from contagious disease	105(52.50)	85(42.50)	10(5.00)
4.	Practicing deworming in calves for the prevention of parasitic disease.	0(00.00)	62(31.00)	138(69.00)
5.	Providing treatment of umbilical cord to new born calf.	0(00.00)	40(20.00)	160(80.00)
6.	Practicing grooming	26(13.00)	125(62.50)	49 (24.50)
E	**Breeding Management Practices**			
1.	Practicing Natural service Insemination in animal to proper time of heat.	20(10.00)	174(87.00)	6(03.00)
2.	Practicing Artificial Insemination in animal to proper time of heat.	20(10.00)	10(05.00)	170(85.00)
3.	Cross-breeds should be preferred for dairy purpose	120(60.00)	69(34.50)	11(05.50)
4.	After Artificial Insemination cow/ buffalo placed one day for rest	98(49.00)	72(36.00)	30(15.00)
5.	Heifer / cow should be inseminated at 10-12 hrs. after estrus period	0(00.00)	0(00.00)	200(100.00)
6.	Cow/ buffalo should be dried at 6 to 8 weeks before calving	0(00.00)	40(20.00)	160(80.00)
7.	The 50 per cent cross- breed type should be selected	40(20.00)	137(68.50)	23(11.50)
F.	**Milking management practices**			
1.	The animal washed before milking	45(22.50)	155(77.50)	0(00.00)
2.	Hands of the milker should be clean and dry. Wet hand milking may result in high bacteria count in the milk	56(28.00)	144(72.00)	0(00.00)
3.	Milking barns should be well ventilated and free from flies	190(95.00)	10(5.00)	0(00.00)
4.	Milk is kept in cool place to maintain the flavor and keeping quality	180(90.00)	20(10.00)	0(00.00)
5.	Full hand milking method should be practiced for milking	44(22.00)	100(50.00)	56(28.00)
6.	Milking should be done gently, quickly and completely	0(00.00)	153(76.50)	47(23.50)
G.	**Calves management practices**			
1.	Immediately after birth remove any mucous or phlegm from the nose and mouth	32(16.00)	150(75.00)	18(09.00)
2.	Naval cord of newly born calf should be cut 2 inches away from the body and apply tincture iodine on cut portion	10(5.00)	190(95.00)	0(00.00)
3.	Feed colostrums i.e. the first milk of the cow for the first 3 days. The colostrums are thick and viscous. It contains higher proportions of vit-A	198(99.00)	2(1.00)	0(00.00)
4.	The limit of liquid milk feeding is 10% of its body weight with a maximum of 5-6 lit./day and continue liquid milk feeding for 6-10 weeks	0(00.00)	0(00.00)	200(100.00)
H.	**Management of pregnant animal**			
1.	Separate shed for pregnant animal	10(5.00)	70(35.00)	120(60.00)
2.	Kept in plane area	95(47.50)	105(52.50)	0(00.00)
3.	After 7 month additional ration should be given at 1.5 to 2 kg./ animal	6(03.00)	109(54.50)	85(42.50)
4.	Stop milking before 2 months of delivery of animal	62(31.00)	98(49.00)	40(20.00)
5.	Preventive measures should be done to control ectoparasites like ticks, flies, lice and mosquitoes etc.	0(00.00)	0(00.00)	200(100.00)
I.	**Animal bio-waste management**			
1.	Use of dung for manure	112(56.00)	88(44.00)	0(0.00)
2.	Use of dung for fuel/gas	0(0.00)	37(18.50)	163(81.50)
3.	Use of vermicompost	16(08.00)	36(18.00)	148(74.00)
4.	Use of waste fodder for preparation manure.	60(30.00)	64(32.00)	76(38.00)
J.	**Water management**			
1.	Daily drinking of 30-40 lit. of water to an animal	88(44.00)	112(56.00)	0(00.00)
2.	Well prepared water tank for animal near shed	34(17.00)	151(75.50)	15(07.50)
3.	Abundant supply of fresh, clean and soft water should be making available to animals.	198(99.00)	2(01.00)	0(00.00)
4.	Provides quality water which is as fresh as possible at least twice a day (preferably in the morning and evening)	37(18.50)	109(54.50)	54(27.00)
K	**Marketing Practices**			
1.	Milk given to dairy cooperative societies on daily basis	200(100.00)	0(00.00)	0(00.00)
2.	Selling milk as a hawkers	28(14.00)	126(63.00)	46(23.00)
3.	Given to institutions or private persons	126(63.00)	10(05.00)	64(32.00)
4.	Processing of dairy product for domestic use and export.	52(26.00)	20(10.00)	128(64.00)
5.	Amount of milk kept for household consumption	200(100.00)	0(00.00)	0(00.00)

(Figures in parenthesis indicates percentage)

A) Feeding management practices: Under the feeding management practices colostrums should be paid to newly born Calf @ 10% of its body weight was adopted fully by 90.00 per cent of the respondents. Feeding of dry, green and concentrates in required proportion was adopted fully by 76.00 per cent of the respondents.

B) Housing management practices: Disinfectant like phenyl should be sprayed in the byre regularly and head to head/tail to tail system of housing were adopted by 99.00 per cent and 98.00 per cent respectively. Direction of shade (North-South), availability of ventilation facility, availability of electricity and drainage of urine were adopted partially by 88.00 per cent, 85.00 per cent, 82.00 per cent and 60.00 per cent respectively.

C) Cleaning management practices: Cleaning of milking utensils and cleaning of shade were adopted fully by 99.00 per cent and 78.00 per cent respondents. Milking machine was not owned by any of the dairy owners. In case of dairy business cleaning is the most important and inevitable practice otherwise the milk will be spoilage.

D) Health management practices: Sprinkling of water was the practice under health management adopted partially by 82.00 per cent of the dairy owners being a essential practice of buffalo for cleaning, maintenance a body temperature and relaxation. Segregation of the disease animal from the suffering from contagious disease was adopted fully by the 52.50 per cent of the respondents.

E) Breeding management practices: In regard with breeding management practices, most of the DCS members 60.00 per cent and 49.00 per cent had fully adopted the practice of Cross-breeds should be preferred for dairy purpose and after artificial insemination cow/ buffalo placed one day for rest.

F) Milking management practices: In case of milking management practices maximum 95.00 per cent DCS members had full adoption found in milking barns should be well ventilated and free from flies followed by 90.00 per cent adoption were noted in respect of milk is kept in cool place to maintain the flavour and keeping quality of milk in respect of well ventilated.

G) Calves management practices: In case of calves management practices 99.00 per cent of the DCS members had full adoption about feed colostrums i.e. the first milk of the cow for the first 3 days. The colostrums are thick and viscous. It contains higher proportions of vit-A. Regarding partial adoption 95.00 per cent of the members had adoption of method Naval cord of newly born calf should be cut 2 inches away from the body and apply tincture iodine on cut portion followed by 75.00 per cent members had partially adopted of Immediately after birth remove any mucous or phlegm from the nose and mouth as a calve management practice.

H) Management of pregnant animals: In respect of management of pregnant animals most of the DCS members had partially adopted these practices majority 54.50 per cent of the members observed in feeding of additional ration after 7 month at 1.52 to 2 Kg per animal followed by 52.50 per cent observed in keeping of animal in plane area. Whereas, 49.00 per cent of DCS members found in stop milking before 2 month of delivery of animal and 35.00 per cent observed in separate shade for pregnant animal should be preferred. While in full adoption 47.50 per cent of the members found in keeping of animal in plane area.

I) Animal bio-waste management practices: In animal bio-waste management practices 56.00 per cent of the DCS members found in full adoption of use of dung for production manure. While 74.00 per cent of the DCS members observed in preparation of vermicompost as manure.

J) Water management practices: In water management practices 99.00 per cent of the DCS members had full adoption regarding abundant supply of fresh, clean and soft water should be made available to animals. In case of partial adoption 75.50 per cent of the DCS members observed in water tank for animal near to shade no any option found in a daily drinking of animals and providing quality what is as possible at least twice a day.

K) Marketing management practices: In case of marketing management practices of dairy co-operative societies 100.00 per cent of the members of DCS having full adoption about milk given to dairy cooperative societies on daily basis and amount of milk kept for household consumption while 63.00 per cent of the members given milk to institutions or private persons. Above half i.e. 63.00 per cent of the members partially adopted selling milk as a hawker. 64.00 per cent of the DCS members had no adoption of processing of dairy product for domestic use and export.

Table 4: Distribution of the respondents according to their extent of adoption

S. No.	Category	Respondents(N=200)	
		Frequency	Percentage
1	Low (Up to 33.33)	09	04.50
2	Medium (33.34 to 66.66)	169	84.50
3	High(Above 66.66)	22	11.00
		200	100

It is clear from the data depicted in Table 4 that over three fourth of the DCS members 84.50 per cent had medium level of adoption about the modern dairying and animal husbandry practices followed by high adoption level category i.e. 11.00 per cent that had high level of adoption about modern dairying and animal husbandry practices. The study revealed that, majority of DCS members had medium to high level of adoption about modern dairying and animal husbandry practices.

It has already been discussed that majority of DCS members had high level of knowledge, but here in the adoption majority had medium level of adoption. Hence, it implied that extension agencies have to tailor the extension activities to convert the knowledge of members in to the decision of adoption.

References

1. Letha Devi G. Adoption of dairy farming technologies by livestock farmers. Indian Research Journal of Extension Education. 2013; 13(2):57-61.
2. Meena MS, Singh KM, Malik BS, Meena BS, Kanwat M. Knowledge Index for Measuring Knowledge and Adopting Scientific Methods in Treatment of Reproductive Problems of Dairy Animals Journal of Agricultural Science, 2012, 410.
3. Motghare DH. Adoption of recommended dairy management practices by dairy farmers. M.Sc. Thesis (Unpub.) Dr. PDKV, Akola, 2009.
4. Nishi, Saha. Dairy farmers' satisfaction with dairy co-operative societies: A Case study. Indian Res. J Ext. Edu. 2011; 11(1).
5. Pawar VS. Knowledge and adoption of recommended dairy management practices. M.Sc. (Agri.) Thesis, MKV, Parbhani (M.S), 2010.

6. Satyanarayan K, Jagadeeswar VA. Study on knowledge and adoption behaviour of livestock farmer Indian Journal of Animal Research. 2010; 44(2):100-106.
7. Senthilkumar T, Sudeepkumar NK, Thirunavukkarasu M. Knowledge and skill development among the learners of dairy farming through distance education course. International journal of humanities and social science invention. 2013; (2):32-35.
8. Shingade MP. Impact of dairy co-operative societies on socio-economic status of members. Unpublished M.Sc. (Agri.) Thesis, Marathwada Agri. Univ., Parbhani, 2001.