RESEARCH PAPER

Research Journal of Animal Husbandry and Dairy Science
Volume 3 | Issue 2 | December, 2012 | 53-56

Dairy management practices followed by the farmers in Kolhapur district of western Maharashtra

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ABSTRACT : All the respondents had complete knowledge about buffalo breeds hybrid cow, judging of milch animals, heat symptom and its detection, insemination, management of pregnant animal, management during and after parturition, management of newly born calves, hygienic milk production, foot and mouth disease and feed supplements like mineral mixture. All the respondents completely adopted the management practices like judging of milch animals, insemination, management of preganant animals, drinking water for animals. Though the knowledge about hybrid cow Phule Triveni was comparatively high, it was not adopted by 99.09 per cent of respondents. The reasons quoted was unavailability of semen straws at local level. All the respondents focused the constraints of lack of high cost of milch cattle, unavailability of true to type hybrid and local breeds, lack of guidance about preparation and use of value added feeds.

KEY WORDS : Dairy management practices, Dairyman, Farmers

HOW TO CITE THIS PAPER : Sasane, G.K., Patil, S.S. and Bhingardeve, S.D. (2012). Dairy management practices followed by the farmers in Kolhapur district of western Maharashtra, *Res. J. Animal Hus. & Dairy Sci.*, **3**(2) : 53-56.

INTRODUCTION

Dairy is main secondary occupation for majority of farmers from Kolhapur district. Strong roots of this enterprise are found in the well developed milk unions structure established in area and inheriting the revolution started by Amul. Dairy as an enterprise provides for the daily assured income for the small and marginal farmers. Besides, milk and its byproducts dairy enterprise provides for an important agricultural input like manures, thus having complimentary relationship with agriculture. Energy starving India is largely dependant on other countries for its hunger of energy Bio gas a by produce of dairy enterprise as an energy resource can sufficiently provide the energy need of country. Considering the importance of dairy enterprise in livelihood security of small and marginal farmers, Government and Agriculture Universities had taken tremendous efforts in its development. The efforts are taken to bring about awareness among the farmers about the advances in this sector. In this context study was carried in Kolhapur district by taking into consideration of the following objectives to study the knowledge and adoption of dairy management practices followed by the respondents and to study the constraints faced by the respondents and suggestions made by them.

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MATERIALS AND METHODS

The study was conducted in Radhanagri, Hatkanangale and Bhudargarh Tahsil of Kolhapur district purposively. In all 11 villages from Kolhapur district were selected randomly. From these selected villages, 10 respondents from each village were selected randomly. The respondents were interviewed with the help of structured interview schedule personally. In all 110 respondents were interviewed for this study.

The data were tabulated and processed through the primary and secondary tables. The statistical tools like frequency, percentages, and means of the averages were used for interpreting the data and inferences were drawn.

RESULTS AND DISCUSSION

The data regarding management practices followed by the respondents are given below:

Table 1 : Distributions of respondents according to the knowledge and adoption of dairy management practices

Sr. No.	Technologies	Knowledge (n=110)			Adoption (n=110)		
		Complete	Partial	No.	Complete	Partial	No.
1.	**Breeds**						
	Buffalo						
	Murrha	110 (100.00)	--	--	29 (26.36)	--	81 (73.64)
	Mehsana	110 (100.00)	--	--	19 (17.27)	--	91 (82.73)
	Jafaerabadi	110 (100.00)	--	--	22 (20.00)	--	88 (80.00)
	Surati	110 (100.00)	--	--	03 (02.73)	--	107 (97.27)
	Pandharpuri	110 (100.00)	--	--	50 (45.45)	--	60 (54.55)
	Cow						
	Gir	83(75.45)	--	27(24.55)	12(10.91)	--	98(89.09)
	Sahiwal	09(08.18)		101 (91.82)	--	--	110 (100.00)
	Sindhi	--	--	110 (100.00)	--	--	110 (100.00)
	Hybrid cow						
	Jercy Hybrid	110 (100.00)	--	--	27 (24.55)	--	83 (75.45)
	Holstein frigian	110 (100.00)	--	--	42 (38.18)	--	68 (61.82)
	Phule Triveni	83(75.45)		27(24.55)	01(00.91)	--	109(99.09)
2.	**Judging of milch animals**						
	Body- Developed Symmetrical	110 (100.00)	--	--	100 (90.91)	10(09.09)	--
	Skin- smooth, fine, soft.	110 (100.00)	--	--	110 (100.00)	--	--
	Pin bone – High wide apart	110 (100.00)	--	--	110 (100.00)	--	--
	Milk veins- Long tortuous	110 (100.00)	--	--	110 (100.00)	--	--
	Teats- Medium squarely placed	110 (100.00)	--	--	110 (100.00)	--	--
3.	**Care and management**						
	Housing/ barn						
	Place- High, ample aeration, Sunlight	110 (100.00)	--	--	55(50.00)	48(43.64)	07(06.36)
	Manger- Concrete	110 (100.00)	--	--	48(43.64)	54 (49.09)	08(07.27)
	Space- 60-70ft^2/animal	89 (80.91)	21(19.09)	--	68 (61.82)	42 (38.18)	--
	feeding management						
	For nourishment- 1/16 of body weight	102(92.73)	08 (07.27)	--	102(92.73)	08 (07.27)	--
	For milk production- ½ of milk production	104(94.55)	06(05.45)	--	102(92.73)	08 (07.27)	--
	Drinking water- 60-70lit/day	110 (100.00)	--	--	110 (100.00)	--	--
4.	**Breeding**						
	Heat symptoms and detection						
	Frequent urination	110 (100.00)	--	--	110 (100.00)	--	--
	Restlessness/ Bellowing	110 (100.00)	--	--	110 (100.00)	--	--
	Swelling of vulva	110 (100.00)	--	--	110 (100.00)	--	--
	Attempt to mount other animals	110 (100.00)	--	--	110 (100.00)	--	--
	Clear shine discharge	110 (100.00)	--	--	110 (100.00)	--	--
	Insemination						
	Natural	110 (100.00)	--	--	110 (100.00)	--	--
	Artificial	110 (100.00)	--	--	110 (100.00)	--	--
	Period for insemination						
	12-16 hours in heat	110 (100.00)	-	--	110 (100.00)	--	--
5.	**Management of animals in gestation/ pregnant**						
	Feeding						
	Concentrate- 1kg.	110 (100.00)	--	--	110 (100.00)	--	--
	Mineral mixture- 50gms	110 (100.00)	--	--	110 (100.00)	--	--
	Housing:						
	Isolated	110 (100.00)	--	--	110 (100.00)	--	--
	Exercise- regular without tire	110 (100.00)	--	--	110 (100.00)	--	--
	Trimming of hoops- Month before and after parturition	110 (100.00)	--	--			
		89(80.91)	21(19.01)	--	16(14.55)	44(40.00)	50(45.45)

Contd….. Table 1

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	Feed succulent and ample water	110 (100.00)	--		110 (100.00)	--	--
	Drying- 60 days before parturition	110 (100.00)	--	--	110 (100.00)	--	--
6	**Management during and after parturition**						
	Expulsion of placenta- in to 12 hrs after parturition	110 (100.00)	--	--	110 (100.00)	--	--
	Washing – Hind body, disinfectant, warm water	110 (100.00)	--	--	89(80.91)	21(19.09)	--
	Feeding – Feed concentrate and mineral mixture	110 (100.00)	--	--	110 (100.00)	--	--
	Milking in ½ hr. after parturition	110 (100.00)	--	--	110 (100.00)	--	--
7.	**Care and management of calves/ heifers**						
	Removal of mucous like substance from openings	110 (100.00)	--	--	110 (100.00)	--	--
	Cutting naval cord- 3' from stomach	110 (100.00)	--	--	110 (100.00)	--	--
	Colostrums feeding- 10% of body wt.	110 (100.00)	--	--	110 (100.00)	--	--
	Cutting tender hoops	110 (100.00)	--	--	110 (100.00)	--	--
	De worming – in first week and after every three months	110 (100.00)	--	--	92 (83.63)	18 (16.37)	--
	Dehorning in calves	88 (80.00)	12(10.91)	10(09.91)	16(14.55)	--	94(85.45)
8.	**Clean and hygienic milk production**						
	Milk shed- Clean, Hygienic	110 (100.00)	--	--	102(92.73)	08(7.27)	--
	Milker healthy, hygienic, teetotaler	110 (100.00)	--	--	85(77.27)	25(22.73)	--
	Utensils- Clean, free from pathogens	110 (100.00)	--	--	93(84.55)	17(15.45)	--
	Udder- Cleaning with wet cloth	110 (100.00)	--	--	110 (100.00)	--	--
	Milking method- Full hand	110 (100.00)	--	--	07(06.36)	--	103(93.64)
	Milking period- 7-9 min				59 (53.64)	51(46.36)	--
9.	**Disease management**						
	Anthrax *(Kalpuli)*- Anthrax vaccine	49 (44.54)	34(30.91)	27 (24.55)	46 (41.82)	30(27.27)	34 (30.91)
	Black Quarter *(farrya)*- alum ppt. BQ vaccine	104 (94.55)	06 (05.45)	--	66 (60.00)	44(40.00)	--
	Hemorrhagic septicemia (*Ghatsarpa)*- alum ppt. HS vaccine	91(82.72)	19(17.28)	--	89 (80.91)	17 (15.45)	04 (03.64)
	Mastitis *(Standah)*- Infusion with antibiotics	104 (94.55)	06 (05.45)	--	70 (63.64)	24 (21.81)	16 (14.55)
	Rinderpest*(Bulkandya)*- Tissu culture rinder pest vaccine	98 (89.09)	12 (10.91)	--	92 (83.64)	18 (16.36)	--
	Foot mouth disease Oxytetracyclin inj. and $KMnO_4$ 1 % washing	110 (100.00)	--	--	110 (100.00)	--	--
10.	**Value added feeds**						
	Silage (Chaff + 1% Jaggery+ 1% Urea)	44 (40.00)	53 (48.19)	13 (11.81)		12 (10.90)	98 (89.10)
	Uromeal (Urea 4 kg+ Molasses – 12 kg+ Rice/wheat husk 16 kg.)	01 (0.90)	--	109(99.10)	--	--	110 (100.00)
	Mineral bricks	27(24.55)	68 (61.82)	15(13.63)	--	--	110 (100.00)
	Mineral mixture	110 (100.00)	--	--	103 (93.63)	--	07 (06.37)

*Figures in parenthesis indicate percentages

Table 2 : Distribution of respondents according to constraints faced by them

Sr. No.	Constraints	No. of respondents (n= 110)	Percentage
1.	High cost of milch cattle	110	100.00
2.	Unavailability of true type hybrid and local breeds	110	100.00
3.	Lack of guidance about preparation and use of value added feeds	110	100.00
4.	High market rates of concentrate feeds	99	90.00
5.	Unauthentic insemination straw	87	79.09

Table 3 : Distribution of respondents according to suggestions made by them

Sr. No.	Particulars	No. of respondents (n= 110)	Percentage
1	True type of hybrid should made available	110	100.00
2	Availability of concentrates at reasonable rate	110	100.00
3	Reasonable market rates for milk	110	100.00
4	Requirement of skilled personnel for carrying artificial insemination	82	74.55

Knowledge and adoption :

The data regarding the knowledge and adoption of dairy management technologies by the respondents are presented in Table 1 and the results obtained are as follows.

Knowledge :

The data of Table 1 reveal that almost all the respondents had complete knowledge about buffalo breeds hybrid cow except Phule Triveni (75.45 per cent), judging of milch animals, heat symptoms and its detection, insemination, management of pregnant animal except trimming of hoops (80.91 per cent), management during and after parturition, management of newly born calves, hygienic milk production, foot and mouth disease and feed supplements like mineral mixture. About 61.82 per cent of respondents had partial knowledge of feed supplement as mineral bricks.It is strange that 99.10 per cent of respondents had not knowledge about uromeal.

Adoption :

The data further revealed that all the respondents completely adopted the management practices like judging of milch animals, insemination, management of preganant animal except trimming of hoops (14.55 per cent), drinking water for animals, management of calves except de-worming (83.63 per cent), clean and hygienic milk shed (92.73 per cent) and use of mineral mixture(93.63 per cent). Management practices like full hand milking (46.36 per cent) and treatment on mastitis disease (21.81 per cent) were partially adopted. It is also observed from data that though the knowledge about hybrid cow Phule Triveni was comparatively high, it was not adopted by 99.09 per cent of respondents. Almost all respondents had not adopted Sahiwal and Sindhi cow, value added feed uromeal and mineral mixture.

Constraints:

Constraints faced by the respondents in dairy management are depicted in Table 2.

It is revealed from Table 3 that all the respondents focused the constraints of lack of high cost of milch cattle, unavailability of true type hybrid and local breeds, lack of guidance about preparation and use of value added feeds. Large majority of respondents faced the constraints of high market rates of concentrate feeds (90.00 per cent) and unauthentic insemination straw (79.09 per cent).

Suggestions:

Suggestions made by respondents regarding their constraints in dairy management are given in Table 3.

It was observed from Table 3 that all the respondents suggested that true type of breeds should be made available, concentrate feeds should be available at the reasonable rates, respondents further suggested that they should get good market rates for milk and also they showed the requirement of skilled personnel for carrying artificial insemination. Belli and Manjula (1997) and Pharate *et al.* (2009) also worked on the management practices of the dairy farmers in Maharashtra state.

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Received : *21.05.2012;* ***Revised:*** *09.08.2012;* ***Accepted :*** *07.10.2012*