

Adoption Level of Improved Dairy Management Practices in Vidarbha Region of Maharashtra

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ABSTRACT

A field survey was undertaken in Akola and Washim districts of Vidarbha region of Maharashtra for present study. The main objective of the study was adoption level of improved dairy management practices by using exploratory design of social research. Total 140 farmers were selected from two blocks namely Akola and Washim from above districts as respondents by using random sampling method. Data were collected by personal interview with help of well structured interview schedule and data were subjected to appropriate statistical analysis. The device was developed to measure the adoption level of farmers regarding selected four major dairy management practices i.e. improved feeding, breeding, health care management and miscellaneous management practices by individual dairy farmer. About (78.00%) of the respondents had medium level of adoption followed by 13.57 per cent were having high and 08.57 per cent of the respondent farmers had low level of adoption. While adoption level of dairy farmers should be increase through providing technical knowledge about improved dairy management practices and higher level of adoption ultimately increase the livelihood status of dairy farmer.

Key words: Adoption; Dairy management practices; Livestock;

Dairy farming is one of the important activities of the rural population of our country. The importance of the dairy, as a subsidiary industry to agriculture, has stressed by the National Commission on Agriculture. Dairy Enterprise, next to agriculture, not only provides continuous income and improves dietary standards of family, but also supplements the income and reduces unemployment to a large number of the rural poor. India owns the largest livestock population in the world, accounting for nearly 56.70 per cent of the world Buffalo population and 16.00 per cent of the cattle population. India was the largest producer of milk and the production increased by 81.00 per cent over 2000-01 to 146.30 million tons during 2014-15 and aims to achieve the National Vision of producing 155 million tons by 2016-17. As per "19th Livestock Census-2012", Bovine population in Maharashtra has declined by about 5.00 per cent to 2.1 crore as against 2.2 crore in 2007. While crossbreds cattle increased by 19.00 per cent, local Cows and Buffaloes have shown 8 to 9 per cent decline.

However, the indigenous cattle and Buffalo milch population declined by 5 to 7 per cent between 2007 and 2012, while there has been an impressive growth of 26.00 per cent in crossbred milch animals (Anonymous 2012).

To prevent the suicide of farmer in the villages, dairy farming is the one of the avenues which adds the additional income to the family. Maharashtra state generate about 1.6 crore liters' of milk every day, out of which Kolhapur district is producing about 20 lakh liters of milk. As against this, Vidarbha region produces only 80,000 litres of milk per day. To overcome this situation Maharashtra Govt. launched Vidarbha development programme package (VDPP) in the year 2004 to increase the milk production in Vidarbha region (Khode et al., 2009).

Adoption of improved dairy management practices involves a process in which awareness is created, attitudes are changed and favorable conditions for adoption are provided. How recent is the technical

knowledge of a dairy producer about various dairy management practices such as breeding, feeding and management of milch animals determines largely the success or failure of dairy farming (*Gami et al., 2013*). Keeping these views in mind, the present study was undertaken to investigate Adoption Level of improved dairy management practices in Vidarbha region of Maharashtra.

METHODOLOGY

The study was conducted in Akola and Washim block of these districts of Vidarbha region of Maharashtra. Ex-post facto research design was used. Seven villages from each selected blocks were randomly selected with lottery method by preparing the list of villages where the good number of dairy farmers will available and who were having five or more milch animal. Thus fourteen villages were selected from two blocks namely Akola and Washim from the Akola and Washim districts of Maharashtra state. The data were collected through pretested interview schedule from the respondents (*Mooventhan et al., 2016*). A device was developed to measure the adoption level of farmers regarding selected recommended technologies for dairy production. And responses from individual dairy farmer were elicited on three point continuum regularly, sometime and never with a score 3, 2 & 1 respectively. The obtained raw score were converted into index score with the help of following formula.

$$\text{Adoption index} = \frac{\text{Actual obtained score}}{\text{Max. btainable score}} \times 100$$

RESULTS AND DISCUSSION

The following four practices of improved dairy management have been considered for finding out the adoption level of dairy farmer.

Breeding practices: In case of breeding practice, majority of (69.29%) dairy farmers were regularly and 25.00 per cent of sometime and 5.71 per cent of them did not keep watch on estrous cycle and heat symptoms of cow/buffalo. Whereas near about one third (32.14%) of the respondents practicing pregnancy diagnosis between 45-90 days of service while little more than one fourth (27.14%) and 40.71 per cent dairy farmers were adopting this practices sometime and never. The 8.57 per cent of dairy farmers practiced regularly and

12.86 per cent sometime and majority (78.57%) of them did not practice artificial insemination (A.I.) at proper time of heat (*Singh et al., 2015* also find out majority of dairy farmers are not practicing A.I. and facing constraints in adopting A.I.) respectively.

Feeding practices: Under feeding practices, it could be seen that nearby three fourth (74.29%) of dairy farmers regularly fed colostrums to newly born calf within one hour of its birth and 13.57 per cent sometime and 12.14 per cent of them did not follow this practice. whereas majority of them about 60.00 per cent regularly and 27.14 per cent sometime and 12.86 per cent dairy farmers never fed colostrums to newly born calves up to five days of its birth. while 21.43 per cent of dairy farmers never and 32.14 per cent of sometime and 46.43 per cent of them regularly grew green fodder. Whereas less number (12.14%) of dairy farmers regularly fed concentration mixture based on milk production, 24.29 per cent of dairy farmers sometime and 63.57 per cent of them never followed this practice, respectively. *Aski and Hirevenkanagoudar (2010)* also find major farmers were adopted better feeding practices.

Health care management: It is observed that, 42.86 per cent of dairy farmers regularly and 33.57 per cent of sometime and 23.57 per cent of them never segregating the diseased animals suffering from contagious disease. While 26.43 per cent of dairy farmers regularly and 40.71 per cent of sometime and 32.86 per cent of them never practicing deworming in calves for the prevention of parasitic diseases. Whereas 15.71 per cent of dairy farmer's regularly practicing vaccination timely and regularly against the contagious diseases like HS, BQ and FMD and 12.86 per cent sometime adopted and 71.43 per cent of them did not follow this practice. However 15.00 per cent of dairy farmers providing treatment of umbilical cord to new born calf regularly and 35.71 per cent sometime and 49.29 per cent never providing treatment of umbilical cord to new born calf, respectively.

Miscellaneous management: Under miscellaneous management, the majority (84.29%) of dairy farmers regularly provided clean and fresh drinking water to the animals and 10.71 per cent sometime and 05.00 per cent of them never adopted these practices. Whereas 65.00 per cent of dairy farmers regularly maintaining the cleanliness of animal shed/houses and 26.43 per cent sometime and 08.57 per cent never adopted this

Table 1. Distribution of the respondents according to their adoption level of improved dairy management practices (N=140)

Practices	Adoption Level		
	Regularly (No.& %)	Sometime (No.& %)	Never (No.& %)
<i>Breeding</i>			
Keeping watch on estrous cycle and heat symptoms of cow/buffaloes	97(69.29)	35(25.00)	8(5.71)
Practicing A.I. in animal to proper time of heat	12(8.57)	18(12.86)	110(78.57)
Practicing the pregnancy diagnosis between 45 – 90 days of service	45(32.14)	38(27.14)	57(40.71)
<i>Feeding</i>			
Feeding colostrum to newly born calves within 1 hour of birth	104(74.29)	19(13.57)	17(12.14)
Feeding conc. Mixture on the basis of milk production	17(12.14)	34(24.29)	89(63.57)
Feeding colostrums to newly born calves up to five days of its birth	84(60.00)	38(27.14)	18(12.86)
Growing green fodder	65(46.43)	45(32.14)	30(21.43)
<i>Health care</i>			
Practicing vaccination timely and regularly against the contagious diseases like HS, BQ and FMD	22(15.71)	18(12.86)	100(71.43)
Segregating the diseased animals suffering from Contagious disease	60(42.86)	47(33.57)	33(23.57)
Practicing deworming in calves for the prevention of parasitic diseases	37(26.43)	57(40.71)	46(32.86)
Providing treatment of umbilical cord to new born calf	21(15.00)	50(35.71)	69(49.29)
<i>Miscellaneous management</i>			
Providing clean and fresh water for drinking to animals	118(84.29)	15(10.71)	7(05.00)
Practicing full hand method of milking the animals i.e., without use of thumb for milking the animals	66(47.14)	34(24.29)	40(28.57)
Maintaining the cleanliness of animal shed/houses	91(65.00)	37(26.43)	12(08.57)
Practicing dehorning in calves at the age of about 7-15 days	20(14.29)	28(20.00)	92(67.71)
Record maintaining a) Income record b) Milk production record c)	39(27.86)	30(21.43)	71(50.71)
Animal health record d) Expenditure record			

(Figures in parenthesis indicate the percentage)

practices. However 47.14 per cent of dairy farmers regularly practicing full hand method of milking the animals i.e., without use of thumb for milking the animals and 24.29 per cent of dairy farmers sometime practicing and 28.57 per cent never practicing this practices. Thus, in case of record maintaining, 27.86 per cent of dairy farmers were maintaining record regularly and 21.43 per cent farmers maintaining sometime and majority (50.71%) of them never maintain the record. Whereas practicing dehorning in calves majority (67.71 %) of respondents never adopted and 20.00 per cent sometime and followed by 14.29 per cent regularly adopted, respectively. *Sathiadas et al., (2003)* also find out approximately similar result in management practices.

It was observed from Table 2 that most of the respondents (77.86%) had medium level of adoption of improved dairy management practices. The percentage of respondents having high level of adoption was 13.57

per cent, whereas 08.57 per cent respondents were having low level of adoption.

Sah and Ramchand (2002) and *Kumawat and Yadav (2012)* were observed that the similar result and had stated that majority of the respondents were in medium level of adoption category.

Table 2. Distribution of the respondents according to their level of adoption of improved dairy management practices

Adoption level	Respondents (n=140)	
	No.	%
Low (Up to 62)	12	08.57
Medium (62.01 to 74)	109	77.86
High (Above 74)	19	13.57
Total	140	100

CONCLUSION

It can be concluded that the dairy farmers of research area had lack of adoption in practicing artificial

insemination in proper time of heat, vaccination timely and regularly against the contagious diseases like HS, BQ and FMD etc. The overall adoption level of the respondents' had medium level of adoption about improved dairy management practices. It was very helpful to encourage the farmers to adopt improved dairy management practices that all the concerned agencies

must help the farmers in providing technical knowledge and educating them on appropriate feeding, breeding, health care and miscellaneous management practices to maintain the required nutrition of the animals, ensuring the accessibility of veterinary services with sufficient medicines and supply of drought resistant fodder varieties to the dairy farmers.

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