RESEARCH PAPER | Veterinary Science | Volume : 4 | Issue : 12 | Dec 2014 | ISSN - 2249-555X

Adoption of Scientific Dairy Management Practices in Assured and Less Irrigated Areas Farmers of Aligarh District

KEYWORDS: Adoption, dairy management, healthcare practices, dairy farmers

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ABSTRACT *Study reveals that (49.00%) of farmers of assured irrigated area were high level adoption of dairy management practices, while less irrigated area farmers were only 7 percent adopted. On pooled basis majority of the farmers (54.33%) had fell in the medium category of adoption. Majorities (61.33%) of farmers in assured irrigated area have high level of adoption, while, in corresponding category majority of farmers (75.33%) had low level of adoption. Farmers of the assured irrigated area continued adopted the (66.0%) of deworming practice. a wide variation had seen in adoption of isolation of sick animals in assured (68.02 %) and less (7.33%) irrigated areas. The high level of adoption of dairy management and healthcare practices in assured irrigated area might be due to resource availability of farmers, highly extension contact, high and level of knowledge about improved dairy husbandry cooperative societies as compared to less irrigated area.*

Introduction

Animal husbandry make up 25% of the output of the agricultural sector and the sub-sector is growing at an annual rate of 4.3%, a rate much higher than that for the agricultural sector as a whole (2.8%). Livestock is a central source of livelihood for 57% (over 100 million people). Many of these small-scale livestock keepers (32%) have no access to land, and the number of rural landless households is likely to increase due to further sub-division of land holdings. For more and more smallholder and landless farmers, livestock are becoming an increasingly important source of income. These activities have contributed to the food basket, nutrition security, and household income of the farmers and play a significant role in generating gainful employment in the rural areas. India, the largest producer of milk in the world, produces over 133 million tonne milk during 2012-13. Several measures have been initiated by the government to increase the productivity of milch animals, which has resulted in increasing the milk production significantly. Farmers of marginal, small and semi-medium operational holdings (area less than 4 ha) own about 87.7% of the livestock. Timely management and healthcare like preventive measures vaccination, de-worming and timely treatment ensure proper health of animals that promotes their productivity (Singh et al. 2007). Understanding the livestock management practices followed by the farmers is necessary to identify the strength and weakness of the rearing systems and to formulate suitable intervention policies (Gupta et al. 2008). Hence, the present study was undertaken to documents information regarding management and healthcare practices followed by the assured and less irrigated area's farmers of Aligarh district, Uttar Pradesh.

Materials and Method

The Aligarh district of U.P. was selected purposively for the study because of acquaintance of researcher with the area Aligarh district consists of 12 blocks. The whole district was divided into two parts according to their homogeneity i.e. More fertile and assured irrigated area and one having less fertile and less irrigation facilities. Three blocks from each part were selected by stratified random sampling. Hence, six blocks were selected for this study. Thus total 300 farmers constituted the sample for the purposed study. Twenty five farmers were selected in each village of the entire six selected block. The data from the selected farmers was collected on the schedule prepared for the purpose by the researcher himself. The data were analysed using percentage basis. As per the research methodology, 60 farmers from each category , i.e. landless, marginal (up to 2.5 acres),small (2.5 to 5.0 acres), medium (5.01-to 10.0 acres) and large (> 10 acres) land holding category were selected purposively.

Results and Discussion

Level of adoption of Management and Healthcare practices- Table (1) clearly shows majority of the farmers (49.34%) in assured irrigated area fell high in adoption category, followed by medium (45.33%) whereas, majority of the farmers (63.33%) in less irrigated area fell in medium category of the adoption followed by low (32.0%) category of adoption. Almost an equal percentage (5.33 & 4.67 %) of farmers fell in low & high category of adoption in assured and less irrigated area, respectively. In pooled sample, majority (54.33%) in medium category of adoption. Similar findings have been reported by Singh (1992) and Chuge (1995). Twenty seven percent farmers had high level of adoption, whereas, 18.67 % farmers had low level of adoption. It could be observed that level of adoption of management practices was higher in assured irrigated area than less irrigated area. This might have been due to the existence of large number of dairy cooperative and frequent visit of dairy officials in area. Whereas for healthcare adoption practices majority of the respondents (61.33 %) fell in high category of adoption in assured irrigated area, whereas only 3.34 percent in less irrigated area. In the medium category, marginally high percentage (26.67 %) was found in assured irrigated than less irrigated area

Volume : 4 | Issue : 12 | Dec 2014 | ISSN - 2249-555X

(21.33%). But a wide difference existed in low category of adoption in assured irrigated area and less irrigated area (12.00 & 75.33%), respectively. In pooled sample, the majority of the farmers (43.67 %) fell in the low category of adoption, followed by high (32.33%) category of adoption. Twenty four percentages of farmers had medium level of adoption. In contrast, Singh (1992) & Chuge (1995) who reported that majority of the respondents had medium level of adoption. It could be seen from the above findings that a wide gap between high and low category of adoption was in both the areas.

Extent of adoption of Management practices-Table (2) clearly shows that in the both areas of farmers fed colostrums to calves and took care of advanced pregnant animals. Most of the farmers giving proper care at the time of parturition (98.00 & 91.33%) and provided clean drinking water to animals (98.67% & 96.67%) in assured irrigated and less area, respectively. The adoptions of de-worming practice were (66.00 & 12.67%). Chowdhary et al. (2008) reported that de-worming is adopted by less than 50% of the respondents. Timely drying off animals (98.00% & 6.00%), clean milk production practices (68.00&15.33%) and maintained record (62.67 & 16.67%) in assured irrigated and less irrigated area were found, respectively. None of the farmers rejected the practice after its adoption like timely drying off animal's maintenance of records, maintaining records, providing clean water for animals and feeding colostrums to new born calves in assured irrigated area, whereas, only one practice was found i.e. colostrums feeding to new born calves in less irrigated areas. Equal percentage (32.00%) of farmers did not adopt de-worming and followed clean milk production practices by farmers of assured irrigated area, whereas, 80.00 and 78.00 % of the farmers in less irrigated area. When samples were pooled, all the farmers continued to adopt colostrums feeding to new born calves and provided clean drinking water to animals. Almost an equal percentage (95.00) of farmers continued to adopt weather protection practices to animals and proper care at the time of parturition in both the area. The least (39.33%) continued adopted practices found were de-worming. The almost similar findings had been reported by Sabapara et al. (2010) and Pawar et al. (2006) regarding de-worming of calves. Gupta et al (2008) and Kalyankar et al. (2008) who found majority (56.00%) of the respondents had not adopted the de-worming practices. Rathore et al. (2010) reported only 4.25 % farmers practiced de-worming in their calves. The findings are in contradiction with that of Jha (1978) who reported that majority of farmer's practices de-worming in their calves. A sizeable percentage of farmers (39.00%) did not practice drying off animals. Also 57 percent of the farmers did not maintaining any record. 41.67, 33.00 and 55 .00 percent farmers continued adopted, rejected after adoption and not adopted clean milk and right method of milking.

Extent of adoption of healthcare practices-Table (2) reported that all the farmers continuously adopted the treatment of sick animals by veterinary staff. These findings well comparable with findings of Sabapara et al. (2010) who reported that cent-percent farmers acquired the service of veterinary staff (95.33) percent farmers in assured irrigated area farmers continuously adopted the Ectoparasite. A similar trend was found in their practice in less irrigated area. The difference was observed (32.00 and 92.67%) in practicing isolation of sick animals and periodical testing of animals (16.00% & 72.67%) in assured irrigated and less irrigated area, respectively. In pooled samples almost the farmers (98.00%) continuously adopted treatment of sick animals followed by timely and regular de-worming vaccination. the similar findings was reported by Sabapara et al.(2010) and Arora et al. (2006) who found that majority (79.00 & 81.87%) farmers adopted vaccination against the FMD & HS, respectively. Similar findings were reported by Yadav et al. (2009). Santosh et al. (2011) reported that (100.00%) farmers adopted vaccination against contagious disease. About 62.33 % of the farmers had not adopted isolation practice in sick animals. None was found in rejection category in isolation of sick animals as well as treatment of sick animals by veterinary staff. A few farmers did not practice periodically testing and protection against ectoparasite.

Conclusion

From present study concludes 49 percent of farmers of assured irrigated area fell in high level adoption of management practices, while only 7 percent of farmers were of the less irrigated area. On pooled basis majority of the farmers (54.33%) had fell in the medium category of adoption. Majority (61.33%) of farmers in assured irrigated area have high level of adoption, while, in corresponding category majority of farmers (75.33%) had low level of adoption almost an equal cent-percent continued adoption have seen in the assured and less irrigated area in management practices colostrums feeding to new born calves, care of advanced pregnant animals, providing clean drinking water for animals, proper care at the time of parturition, weather protection also practices in animals. 66 percent of farmers of the assured irrigated area continued adopted the de-worming practice in their calves, while it was only (12.67 %) in less irrigated area. In case of healthcare practices, cent percent farmers continued adopted the vaccination against diseases e.g. H.S.and F.M.D in assured irrigated area, while, it was (96.00%) in less irrigated area. Treatment of sick animals found (100%) by veterinarian time to time, continued adopted in both assured and less irrigated area. None was adopted the vaccination against Rinderpest (RP) and Black quarter (BQ) diseases in both the area. A wide variation had seen in continued adoption of isolation of sick animals in assured (68.02 %) and less (7.33%) irrigated areas. The high level of adoption of management and healthcare practices in assured irrigated area might be due to resource availability of farmers, highly extension contact, high, high level of knowledge about improved dairy husbandry cooperative societies as compared to less irrigated area.

Table 1 Adoption level of dairy practices

Management Practices			
Category scores	Assured irrigated area (N=150)	Less irrigated area (N=150	Pooled (N=300)
Low (23.20)	8(5.330)	48(32.00)	56(18.67)
Medium(23.20-28.52)	68(45.33)	95(63.33)	163(54.33)
High (>28.52)	74(49.34)	7(4.67)	81(27.00)
Healthcare practices			
Low (<11.13)	18(12.00)	113(75.33)	131(43.67)
Medium(11.13-13.89)	40(26.67)	32(21.33)	72(24.00)
High(>13.89)	92(61.33)	5(3.33)	97(32.33)

Figures in parenthesis indicate percentage

Volume : 4 | Issue : 12 | Dec 2014 | ISSN - 2249-555X

Table 2 Extent of adoption of IDHPs

Practices	Assured irrigated area (N=150)			Less irrigated area (N=150)			Pooled (N=300)		
	Continued adoption	Rejection after adoption	Not adopted	Continued adoption	Rejection after adoption	Not adopted	Continued adoption	Rejection after adoption	Not adopted
Management									
Colostrums feeding	150 (100.00)	0 (0.00)	0 (0.00)	150 (100.00)	0 (0.00)	0 (0.00)	300 (58.00)	0 (0.00)	0 (0.00)
Care of pregnant animals	150 (100.00)	0 (0.00)	0 (0.00)	145 (96.67)	2 (1.33)	3 (2.00)	195 (65.00)	2 (0.67)	3 (1.10)
Care at parturition	147 (98.00)	1 (0.67)	48 (32.00)	23 (15.33)	10 (6.67)	117 (78.00)	125 (41.67)	10 (3.33)	165 (55.00)
Castration	147 (98.00)	1 (0.67)	2 (1.33)	119 (79.33)	7 (4.67)	24 (16.00)	266 (88.67)	8 (2.67)	26 (8.66)
De-Worming	99 (66.00)	3 (2.00)	48 (32.00)	19 (12.67)	11 (7.33)	120 (80.00)	118 (39.33)	14 (4.67)	168 (56.00)
Drying off of animals	147 (98.00)	0 (0.00)	3 (2.00)	4 (6.00)	117 (78.00)	29 (19.33)	151 (50.33)	117 (39.00)	32 (10.60)
Clean milk production practices	102 (68.00)	0 (0.00)	48 (32.00)	23 (15.33)	10 (6.67)	117 (78.00)	125 (41.67)	10 (3.33)	165 (55.00)
Records Keeping	94 (62.67)	0 (0.00)	56 (37.33)	25 (16.67)	10 (6.67)	115 (76.67)	119 (39.67)	10 (3.33)	171 57.00)
Weather protection	148 (98.67)	1 (0.67)	1 (0.67)	137 (91.33)	5 (3.33)	8 (5.34)	285 (95.00)	6 (2.00)	9 (3.00)
Drinking water	148 (98.67)	0 (0.00)	2 (1.33)	145 (96.67)	4 (2.67)	1 (0.67)	293 (97.67)	4 (1.33)	3 (1.00)
Healthcare practices									
vaccination									
HS & FMD	150 (100.00)	0 (0.00)	0 (0.00)	144 (96.00)	0 (0.00)	6 (4.00)	294 (98.00)	0 (0.00)	6 (2.00)
R.P.& BQ	0 (0.00)	0 (0.00)	0 (0.00)	144 (96.00)	0 (0.00)	6 (4.00)	294 (98.00)	0 (0.00)	6 (2.00)
Isolation of sick animals	102 (68.00)	0 (0.00)	48 (32.00)	11 (7.33)	0 (0.00)	139 (92.67)	113 (37.67)	0 (0.00)	187 (62.33)
Treatment of sick animals	150 (100.00)	0 (0.00)	0 (0.00)	150 (100.00)	0 (0.00)	0 (0.00)	300 (100.00)	0 (0.00)	0 (0.00)
Periodical test against diseases	122 (81.330	4 (2.67)	24 (16.00)	30 (2.00)	11 (7.33)	109 (72.67)	152 (50.67)	15 (5.00)	133 (44.33)
Treatment of ectoparasites	143 (95.33)	2 (1.34)	5 (3.33)	123 (82.00)	17 (11.33)	10 (6.67)	266 (88.67)	19 (6.33)	15 (5.00)
Overall	**2860 (73.33)**	**493 (12.64)**	**547 (14.03)**	**1803 (46.24)**	**884 (22.68)**	**1212 (31.08)**	**4663 (59.78)**	**1377 (17.68)**	**1759 (22.56)**

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