



SHORT COMMUNICATION

## Breeding and Heath Care Management Practices of Dairy Animals in U.S. Nagar District of Uttarakhand

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### ABSTRACT

A study was conducted to evaluate the existing breeding and heath care management practices of dairy animals in U.S. Nagar district of Uttarakhand. Majority (98.33%) of farmers adopted artificial insemination and natural mating (100%) as a method of breeding in cattle and buffalo respectively. For symptoms of heat detection, 63.33 per cent farmers relied on mucus discharge along with bellowing as most important signs of heat detection. For pregnancy diagnosis, Veterinarians were called upon by majority of the farmers (68.89 %). Regarding heath care practices, 86.67 and 84.44 per cent of the farmers followed vaccination and deworming practice in their animals followed the practice of to their animals. Majority of the farmers adopted the practice of navel cord treatment and debudding in cattle calves only. However in case of buffalo calves debudding practice was never adopted. It was observed that majority of the farmers 88.89 per cent followed the practice of control of ecto-parasites in their animals. Regarding sick animal treatment, 70 % cattle keepers preferred first veterinary doctors followed by livestock extension officers and artificial insemination workers. The present study revealed that majority of farmers in the study area is aware about scientific practices of management in dairy animals

### HIGHLIGHTS

- The study revealed that majority of farmers followed scientific practices of healthcare.
- The study revealed that dehorning were adopted in cattle calves at large scale though the same is very less practiced in buffalo calves.

**Keywords:** Breeding, Health care, Management practices, Dairy animals

Livestock sector plays an important role in the national economy and in the socio-economic development of the country. Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households. Livestock provides livelihood to two-third of rural community. It also provides employment to about 8.8% of the population in India. Livestock have revolutionized the rural economy of India. India is bestowed with the largest livestock population in the world. Production potential of livestock depends on the management practices. Understanding the livestock management practices followed by the farmers in an area is necessary to identify the strengths and weaknesses of the rearing system and to prepare suitable policy intervention. It also plays important role in the economy

as supplementing family income and generating gainful employment in the rural sector. Heath care management practices such as vaccination and deworming ensure proper heath of animals that promotes their productivity. Animal husbandry is an occupational culture of livestock production which is making major contribution to national economy. Proper heat detection, timely insemination and pregnancy diagnosis in the dairy animals affects the overall profitability from the dairying (Prajapati *et al.*, 2015). The

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state of Uttarakhand is located in Western Himalayan region and is one of the geographically smallest states of the country. The livestock sector in the state provides livelihood to majority of the people (Pundir *et al.*, 2014). Hence, the present study was purposely carried out with the aim to gather information regarding the existing breeding and health care management practices followed by the dairy husbandry farmers.

The present study was undertaken in U.S. Nagar district of Uttarakhand. The present study was carried out on animals, reared by 180 farmers' viz.: areas of Pantnagar, Gadarpur, Bazpur, Kichha and Sitarganj in Udham Singh Nagar district of Uttarakhand. During the period, Jan 2017 to June 2017. This district is present in foot hills of Kumaon and known as Tarai area also, which is most suitable for crop production. Majority of population depend on agriculture and animal husbandry. The place is located in the foot hills of Himalayas at 28.5°SE to 30°N Latitudes and 78°E to 81°E longitude at an altitude of 243.84 m above mean sea level. State is located in western Himalayan region and is one of the geographically smallest states of the country. The existing management practices relating to breeding and health care management were separately enlisted. The frequencies were obtained for different breeding and health management practices included in the study. The score of individual practice was converted into percentage.

The results regarding various breeding practices followed by the cattle keepers are presented in Table 1. Majority of the farmers 98.33% preferred artificial Insemination in cattle over natural service. This may be due to knowledge of farmers regarding the advantages of artificial insemination over natural insemination, given by local veterinarians and extension agents during various trainings, kisan- gosthis and exhibitions etc. The results are in close agreement with Sabapara *et al.* (2010) and Kumar *et al.* (2014) or higher proportion for use of artificial insemination might be due to the availability of good quality semen, good infrastructure facilities for the preservation and timely AI services at farmers door step with satisfactory results provided by AI workers in villages. This finding is in accordance with findings of Sabapara *et al.* (2010) and Khadda *et al.* (2016). Regarding pregnancy diagnosis, 68.89 per cent adopted pregnancy diagnosis by a qualified veterinarian followed by 17.78 per cent either livestock extension officer or AI workers. Sabapara *et al.* (2010) also reported the same practice in their study. Regarding heat detection

by symptoms majority of the farmers (63.33 per cent) relied on mucus discharge, bellowing followed by mucus discharge (16.67 per cent) and frequent urination (13.33 per cent) and mounting (6.67 per cent) were adopted in their animals. As regard to stages of heat at which cows were allowed for insemination, 93.33, 4.45 and 2.22% of the respondents followed the practice in mid heat, late heat and early heat, respectively which indicated that farmers were well aware about the right time of insemination. The present results were supported by Sabapara *et al.* (2010) who conducted a study and reported that majority of respondents 98 per cent allowed their female animals for better breeding between 12 and 18 hrs after heat detection for better conception rate.

**Table 1:** Breeding management practices followed by the farmers in U.S. Nagar district of Uttarakhand

Existing Practices	Frequency	Percentage
<b>Breeding method in cattle</b>		
Natural service	3	1.67
Artificial insemination	177	98.33
<b>Method of Pregnancy diagnosis</b>		
Through own judgment	24	13.33
Through qualified veterinarian	124	68.89
Paravet/A.I worker	32	17.78
<b>Heat detection by symptoms</b>		
Mucus discharge	30	16.67
Mucus discharge + bellowing	114	63.33
Frequent urination	24	13.33
Mounting	12	6.67
<b>Time of insemination after heat detection</b>		
Immediate after heat	4	2.22
Within 12-18 hrs	168	93.33
After 18 hrs	8	4.45

The data collected from the respondents with respect to health care management practices are given in Table 2. It was observed that the availability of veterinary facilities was satisfactory. The percentages of respondents regarding veterinary facilities as good, satisfactory and poor were 36.67, 58.33 and 5, respectively. Regarding to vaccination of dairy animals 86.67 per cent followed vaccination schedule in their animals. Present findings were similar to the findings of Sabapara *et al.* (2010) who revealed that regular vaccination was practice by 79 per cent respondents for their animals. Regarding deworming

their animals regularly 84.44 per cent respondents were well aware towards deworming practices and followed it once or twice in a year, while 15.56 per cent were not aware about deworming. Present findings were contrary to the findings of Sabapara *et al.* (2010) who reported that regular deworming in calves were followed by only 25.50 per cent respondents where 70 per cent respondents followed occasionally. Regarding navel cord treatment majority of the farmers 83.33 per cent were adopted the practice of navel cord treatment while 16.67 per cent farmers not adopted this practice. Majority of the farmers 82.78 per cent were adopted the practice of dehorning, while only 17.22 per cent farmers were not practiced debudding in cattle calves.

**Table 2:** Health management practices followed by the farmers in U.S. Nagar district of Uttarakhand

Existing Practices	Frequency	Percentage
<b>Availability of veterinary facilities</b>		
Good	66	36.67
Satisfactory	105	58.33
Poor	9	5
<b>Vaccination</b>		
Yes	156	86.67
No	24	13.33s
<b>Deworming</b>		
Regular	152	84.44
Occasionally	24	15.56
<b>Navel cord treatment</b>		
Yes	150	83.33
No	31	16.67
<b>Disbudding in case of cattle calf</b>		
Yes	149	82.78
No	31	17.22
<b>Practice to control of ecto-parasites</b>		
Followed	160	88.89
Not followed	20	11.11

Present findings were contrary to the findings of Sabapara *et al.* (2010). It was observed that majority of respondents 88.89 per cent in surveyed population practiced to control ecto- parasites in dairy animals while, 11.11 per cent were not aware about to control of ecto-parasites of cattle and buffaloes. Bardhan *et al.* (2005) conducted a study and reported that majority of livestock farmers having knowledge of importance of protecting their animals from ecto-parasites in Tarai area of Uttarakhand. It was observed that 70% of the respondents got treated their sick

animals by veterinary doctors followed by paravet & AI workers 18.89 per cent while only 11.11 per cent of the farmers followed treatment of their animal both veterinary doctors and paravet & AI workers. Present findings were contrary to the findings of Sabapara *et al.* (2010).

## CONCLUSION

It can be concluded that the adoption of overall existing breeding health care practices of dairy animals was good. Our results are indicative of very high level of awareness regarding this most important economic trait of dairy animal. Thus, it is quite evident from the results of various breeding practices followed by the cattle keepers in the study area that majority of the respondents were adopting the recommended breeding practices.

## REFERENCES

- Bardhan, D., Dabas, Y.P.S. and Kumar, A. 2005. Assessment of farmer's awareness about improved dairy husbandry practices. *Indian V. J.*, **82**(1): 62-64
- Gupta, D.C., Suresh, A. and Mann, J.S. 2008. Management practices and practices and productivity status of cattle and buffaloes in Rajasthan. *Indian J. Anim. Sci.*, **78**(7): 769-774.
- Khadda, B.S., Kanak, L., Kumar, R. and Jadav, J.K. 2016. Existing cattle husbandry practices followed by the farmers in semi-arid region of central Gujarat. *Indian J. Anim. Sci.*, **87**(1): 113-117.
- Kumar, S., Jain, A. and Gupta, A.K. 2014. Studies on breeding, health care and milking management practices adopted by the dairy owners in Shahdol district of M.P, India, *Intl. Res. J. Bio. Sci.*, **3**: 32-36.
- Prajapati, V.S., Singh, R.R., Kharadi, V.B. and Chaudhary, S.S. 2015. Status of breeding and health care management practices of dairy bovines in the rural and urban areas of South Gujarat of India. *J. Anim. Sci. Adv.*, **5**: 1514-1521.
- Pundir, R.K., Singh, P.K., Neelkant, Sharma, D., Kumar, S., Tiwari, R., Singh, C.V. and Prakash, B. 2014. Characterization and evaluation of hill cattle of Garhwal region of Uttarakhand, India. *Indian J. Anim. Res.*, **48**: 322-328.
- Sabapara, G.P., Desai, P.M., Kharadi, V.B., Saiyed, L.H. and Singh, R.R. 2010. Housing and feeding management practices of dairy animals in the tribal area of South Gujarat. *Indian J. Anim. Sci.*, **80**: 1022-27.
- Singh, M., Chauhan, A. and Garg, M.K. 2007. Studies on housing and health care management practices followed by the dairy owners. *Indian J. Anim. Res.*, **41**(2): 79-86.

