Indian J Dairy Sci 76(1): 97-99
https://doi.org/10.33785/IJDS.2023.v76i01.014

SHORT COMMUNICATION

Breeding and healthcare management practices of dairy animals followed by farmers in Varanasi district of Uttar Pradesh

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Received: 01 August 2022 / Accepted: 25 October 2022 / Published online: 20 February 2023

Abstract: A field survey was conducted in the Varanasi district to find out the status of existing breeding and healthcare management practices followed by dairy farmers. A total of 80 farmers were selected from the 4 randomly selected blocks of the district and survey was done with the help of prepared interview schedule throughout November 2021 to April 2022. Majority of the farmers (73.75%) always practised Artificial Insemination (A.I.) as a method of breeding for their dairy animals while mucus discharge was mostly used for detecting heat. About 24.00 per cent of farmers always followed deworming and 26.25 per cent always vaccinated their dairy animals against FMD and HS. Repeat breeding was a major reproductive problem in dairy animals faced always by about 75.00 per cent of the farmers and pregnancy diagnosis of dairy animals was practised by only about 42.50 per cent of the farmers.

Keywords: Breeding, Healthcare, Artificial Insemination, Varanasi, Vaccination, Deworming

Livestock production is an important component of the agricultural economy, a contribution that goes beyond direct food production. India's livestock sector is one of the largest in the world with a livestock population of 535.78 million and hence plays an important role in developing India's economy. The breeding and healthcare management practices plays a very important role in influencing the productivity of dairy animals.

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The awareness of the different cow management practices used by farmers is crucial because it could bridge the gap between the current methods used and the scientifically advised methods. In order to determine the strengths and weaknesses of the rearing systems and to develop effective intervention strategies, it is essential to understand the livestock management practises used by farmers. Therefore, the present study was conducted to document the existing breeding and healthcare management practices followed by dairy farmers in the study area.

The present study was conducted in Varanasi district which is located in the eastern part of Uttar Pradesh. The state of U.P. was purposively selected as it has the highest milk production as well as highest livestock population and the district was selected on the basis that it was the least developed district in terms of dairy farming in the eastern part of the state. A total of 80 farmers who were having at least 1 Milch animal were randomly selected and data were collected with the help of structured and semi structured interview schedule. 4 blocks from the district were randomly selected and from each block 2 villages were randomly selected while 10 farmers were selected from each village. The collected data were analyzed statistically using frequency and percentage.

The herd composition of the dairy animals mainly comprised of indigenous cattle (Sahiwal, Gir), Jersey and Murrah breed in case of buffalo. The information regarding various breeding management practices are presented in Table 1 and Table 2. From the study it was concluded that majority of the respondents (73.75%) were practicing artificial insemination (AI) for breeding their cattle which is similar to the results obtained by Sabapara et al. (2010) in South Gujrat and Prajapati et al. (2015) but in contrast with the results obtained by Yadav et al. (2016) according to which 26.8 per cent use AI, which may be low due to the insufficient availability of AI coverage and poor policy implementations. The respondents having buffaloes mostly prefer natural service which is 26.25 per cent and all of Artificial Insemination was done by Para-vets in the study area. The findings were in line with the results obtained by Malik et al. (2005) that natural service was preferred for buffaloes and all of the A.I. in dairy animals was done or performed by para-vets. About 57.50 per cent of the farmers do not follow pregnancy

diagnosis to determine whether their dairy animals were pregnant. The results are similar to the results obtained by Yadav et al. (2016), which stated that (59.2%) of respondents did not follow pregnancy diagnosis for their livestock. The remaining 42.50 per cent of respondents adopted pregnancy diagnosis and the pregnancy diagnosis was done by Para-vets for 47.00 per cent of the respondents who adopt pregnancy diagnosis.

In the Table 2, according to the distribution of respondents 46.25 per cent of the respondents always use mucus discharge as the method to detect heat and bellowing was used always as the method of heat detection by 28.75 per cent of farmers while 41.25 per cent of respondents used it a method occasionally and mounting was never used by majority (71.25%) of the farmers. The problem of repeat breeding in dairy animals was faced by majority (75.00%) of the respondents and another problem faced occasionally by 26.25 per cent of respondents was infertility. About 55.00 per cent of respondents faced delayed onset of cycle occasionally. The breeding problems were solved by para-vets always for 30.00 per cent of farmers, while 63.75 per cent of the respondents consulted para-vets occasionally for breeding problems. Regarding veterinarian or veterinary hospitals only 27.50 per cent of respondents consulted them on occasional basis while for majority of the respondents (72.50%) the breeding problems was never solved by neither veterinarian nor veterinary hospitals.

The information regarding various breeding management practices are presented in Table 3. Deworming was practiced by 62.50 per cent of farmers which was contradicting to the results obtained by Sabapara et al. (2010) which was that 25 per cent of respondents always followed deworming in South Gujrat. The results obtained indicated moderate level of knowledge and awareness about deworming and its benefits among the respondents. The people who practised deworming about 67.50 per cent preferred para – vets for deworming of their dairy animals while 32.50 dewormed their animal by themselves. Vaccination for dairy was followed by 48.75 per cent of the respondents and for vaccination all of the respondents were always dependent on

Table 1 Breeding management practices of dairy animals followed by dairy farmers in Varanasi

Particulars	Frequency	Percentage
Method of Breeding followed		
Artificial Insemination	59	73.75
Natural Method	21	26.25
Artificial Insemination done by		
Veterinary Surgeon	00	00.00
Para-vets	80	100
Pregnancy Diagnosis done		
No	46	57.50
Yes	34	42.50
Pregnancy diagnosis done by		
Self – assessment	18	53.00
Para-vets	16	47.00

para-vets. Mainly the vaccination was done for diseases such as Foot and Mouth Disease (FMD) and Hemorrhagic septicemia (HS). The above results for vaccination were similar to the results obtained by Prajapati et al. (2015) which stated that about 90.3 per cent followed vaccination against FMD and HS. Vaccination against Brucellosis and Black quarter was not available or accessible, while vaccination against rabies is selective in nature and respondents sampled had never encountered scenario where they had to let their animals vaccinate for rabies.

Consultation for the treatment of sick animals was done primarily with para-vets always by majority of respondents (77.50%), followed by 22.50 per cent of respondents who occasionally consult para-vets. The obtained results were similar to the results obtained by Prajapati et al. (2015) in South Gujrat where only 19.5 per cent of respondents consulted veterinarians for sick animal treatment and 80.5 per cent respondents consulted with livestock inspectors which can be substituted in terms of para-vets. The vaccination schedule was followed properly by only about 15 per cent of the respondents while the remaining majority of the respondents (85.00%) did not follow any such schedule which can be due to unavailability of sufficient human resources (para-veterinary professionals), lack of awareness and knowledge about

Table 2 Other breeding management practices followed by dairy farmers in Varanasi

Particulars	Always	Occasionally	Never
Method to detect heat			
Mucus discharge	37(46.25)	30(37.50)	13(16.25)
Bellowing	23(28.75)	33(41.25)	24(30.00)
Mounting	3(3.75)	20(25.00)	57(71.25)
Reproductive problems faced by dairy animals			
Repeat breeding	60(75.00)	20(25.00)	0(00.00)
Infertility	0(00.00)	21(26.25)	59(73.75)
Delayed onset of cycle	9(11.25)	44(55.00)	27(33.75)
Breeding problems of dairy animals solved by			
Veterinarian/ Veterinary hospital	00(00.00)	22(27.50)	58(72.50)
Para vets	24(30.00)	51(63.75)	5(6.25)

Table 3 Health management practices of dairy animals followed by dairy farmers in Varanasi

Particulars	Frequency	Percentage
Deworming practised		
Yes	50	62.50
No	30	37.50
Deworming done by		
Self	26	32.50
Para-vets	54	67.50
Vaccination practised		
Yes	39	48.75
No	41	51.25
Vaccination done by		
Veterinary doctor	00	00.00
Para-vets	39	48.75
Consultation for with sick animal done with		
Veterinary doctor	18	22.50
Para - vets	62	77.50
Deworming interval followed		
3 months (Recommended)	29	36.25
6 months	28	35.00
Yearly	14	17.50
Vaccination schedule followed		
Yes	12	15.00
No	68	85.00
Sick animal isolated for		
7 days	55	68.75
15 days	18	22.50
1 month	5	6.25
Not isolated	2	2.50

vaccination. The recommended deworming interval for the cattle is once in three months which was followed by 36.25 per cent of respondents, and an interval of 6 months was followed by 35 per cent of the respondents while about 17.50 per cent practiced deworming on yearly basis. Majority of the respondents (68.75%) isolated their sick animals for a week (7 days) from the rest of the herd, while 22.50 per cent of respondents isolated their animal when sick up to 15 days and only about 6.25 per cent had isolated their animal for 1 month in case of serious sickness or disease. About 2.50 do not isolate their sick animals at all which can be due to the reasons such as small herd size (up to 2 animals) or insufficient space for separate area in case of sick animals.

Conclusion

A field study was conducted where primary information was collected from 80 farmers regarding the existing breeding and healthcare management practices followed by dairy farmers in Varanasi. The data was collected with the help of structured and semi-structured interview schedule. Artificial Insemination was practiced by majority (73.75%) of the respondents and heat was detected by mucus discharge mostly in the morning. Pregnancy diagnosis was only opted by about 42.50 per cent of the respondents and the major problem faced by the farmers in the study area was of repeated breeding for which farmers consulted para-vets. Deworming and vaccination was practiced by only 62.50 per cent and 48.75 per cent of respondents respectively, mostly by para-vets and vaccination was done against FMD and HS in the dairy animals. For sick animals, majority of the respondents (72.50%) always consulted para-vets for their treatment. Proper schedule of deworming as well as vaccination was not followed by the respondents, while the sick animals were isolated for 7 days by about 68.75 per cent of the farmers. Adoption of scientific breeding and healthcare practices was found to be satisfactory but awareness was still lacking regarding vaccination and following proper vaccination schedule in the study area.

Acknowledgements

The authors thankfully acknowledge the infrastructure provided by ICAR-NDRI, Karnal, to carry out the research work as well as the financial assistance from ICAR as JRF fellowship.

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