International Research Journal of Biological Sciences _____ ISSN 2278-3202
Vol. **3(10),** 32-36, October **(2014)** *Int. Res. J. Biological Sci.*

Studies on Breeding, Health Care and Milking Management Practices Adopted by the Dairy Owners in Shahdol District of MP, India

Sandip Kumar, Aklank Jain and Aroop Kumar Gupta
MGCGV, Chitrakoot, Satna, MP, INDIA

Available online at: www.isca.in, www.isca.me
Received 10th May 2014, revised 25th July 2014, accepted 18th September 2014

Abstract

The present study was carried out in Shahdol district of Madhya Pradesh. The information was collected from 400 dairy owners from four blocks, five villages from each block in the district. It was observed that majority (94.25%) of the respondents resorted to natural services. About 65.25% of the dairy farmers used more than two services for the conception of the animals. About half of the owners (56.50%) preferred and consult first with livestock assistant for treatment of sick animals. Only 32.25% of the respondents followed vaccination and deworming practices regularly. They rarely used regular practices of deworming. Knuckling (62.25%) was the main method of milking.

Keywords: Dairy animals, District, Shahdol, milk.

Introduction

India ranks first in the world livestock population. District Shahdol is a tribal belt of Madhya Pradesh. Economy of rural people is significantly contributed by the livestock. The district has the breedable cattle and buffalo population 385574 and 210861, respectively.

Profit of dairy enterprises solely depends on the regular and efficient breeding of animals. Thus, an attempt has been made to study various existing practices followed by the dairy owners in the aspect of breeding, health care and milking management.

Material and Methods

The study was conducted in the Shahdol district of Madhya Pradesh, which was selected purposively. Out of five block of Shahdol district four was selected i.e. Sohagpur, Burhar, Gohparu and Jaisinghnagar block. Five villages from each block and 20 dairy owners from each village were selected randomly. Thus, the entire sample consisted of 400 respondents from selected 20 villages in four blocks of the district.

The data were collected by personal interview techniques through an interview schedule. The existing management practices related to breeding, health care and milking management included in the study. The data were collected and analysed statistically as per procedure[1].

Results and Discussion

Breeding management practices: The results regarding various breeding practices followed by the dairy farmers are presented in table 1. A persual of the results reveals that more than 90% of the farmers from all the areas can identify the animal in heat. The main symptoms for identification of animal in heat was bellowing for 41%, 45%, 52%, and 56% dairy farmers in Gohparu, Burhar, Jaisinghnagar and Sohagpur areas, respectively, however, 17% farmers of Burhar and Jaisinghnagar, 18% farmers of Sohagpur and 25% farmers of Gohparu areas were identifying the estrus by observing bellowing and discharge from vulva. Some farmers were also getting help from frequent urination for identifying heat in all the three areas which are supported by other[2]. In the present survey, a significant ($P<0.05$) difference was noticed between blocks and time of heat detection ($X^2=8.25$).

Mainly farmers were checking their animals for heat in the morning, but some famers in all the areas, were also practicing both times inspection. As far as the method of breeding is concerned, Majority of them in all the areas were practicing natural service. Only 5% farmers of Sohagpur and Gohparu, 6% of Jaisinghnagar and 7% farmers of Burhar areas were using artificial insemination (A.I.). This finding is in consonance with other authors[3]. The low incidence might be due to natural services considered more reliable and there is less chances of failure as well as more cost incurred on A.I.

Bulls which are mainly used for breeding were from road side and hence, no breeding record were maintained by the farmers only 10% farmers used own reared bulls and about 7% farmers used bulls for breeding reared by others. More than 60% farmers provide more than two services for setup of pregnancy, about 12% farmers got animal pregnant by one service.

Table-1
Breeding management practices followed by dairy farmers

S.No.	Characteristics/Categories	No./percent				
		Sohagpur	**Burhar**	**Gohparu**	**Jaisingh nagar**	**Average**
1.	Symptoms used for heat detection					
a.	Special sound	56	45	41	52	48.50
b.	Discharge from vulva	10	13	15	15	13.25
c.	Both (a and b)	18	17	25	17	19.25
d.	Frequent urination	06	06	09	06	6.75
2.	Time of heat detection					
a.	Morning	70	64	69	68	67.75
b.	Evening	05	12	09	19	11.25
	X^2 Value	**8.25***				
3.	Method of breeding					
a.	Natural service	95	93	95	94	94.25
b.	A.I.	05	07	05	06	5.75
	X^2 Value	**0.51**				
4.	Bull used for Breeding					
a.	From road	82	86	82	81	82.75
b.	Own reared	11	09	10	12	10.50
c.	Reared by others	07	05	08	07	7.50
5.	No. of services done for pregnancy					
a.	Once	12	15	09	13	12.25
b.	Twice	23	26	22	19	22.50
c.	More than twice	65	59	69	68	65.25
	X^2 Value	**3.57**				

* Significant (P<0.05)

Health care management practices: The results of the health management practices followed by the respondents are presented in table-2. A persual of the results revealed that more than 50% farmers were taking advice from livestock assistant. This might be due to less number of veterinary hospitals and veterinary doctor's availability. Involvements of local people for treatment of animal were also more. Results revealed that 58% of the farmers were watching their animals daily for any disease symptoms in Jaisinghnagar areas but it was higher 61%, 62%, and 64% in Gohparu, Burhar and Sohagpur areas, respectively. 70% farmers were cleaned house once in a day. The prophylactic measures adopted against contagious diseases by dairy farmer, were hemorrhagic septicaemia (32%) in Jaisinghnagar and Sohagpur areas, 29% in Gohparu and 36% in Burhar areas and foot and mouth disease (FMD) it is highest in Jaisinghnagar areas 31% only. This might be due to lack of awareness about animal disease and their prevention.

Deworming was done at regular interval in only 2% cases in all the three blocks except Burhar block where it was 3%. More than 60% farmers from all the areas were not using deworming practices in their animals, however, animals were seldomly dewormed by 21%, 22%, 32%, and 36% farmers in Jaisinghnagar, Gohparu, Burhar, Sohagpur areas, respectively. The less number of farmers practicing deworming might be due to lack of knowledge regarding the harm caused by the parasitic load. Disposal pattern of carcass were not proper, farmers were throwing, their animals at common open place. This was in contrary to author[4] who found 80% of the farmers in Haryana were disposing carcasses properly.

Table-2
Health care management practices followed by dairy farmers

S.No.	Characteristics categories	No./percent				
		Sohagpur	**Burhar**	**Gohparu**	**Jaisinghnagar**	**Average**
1.	Advice regarding sick animals					
a.	Veterinary doctor	11	09	08	08	9.00
b.	Livestock assistant	55	57	56	58	56.50
c.	Local	22	24	26	25	24.25
d.	Other	12	10	10	09	10.25
2.	Watching daily for disease symptoms	64	62	61	58	61.25
3.	Cleaning of house daily	71	75	72	69	71.75
4.	Prophylactic measures practiced					
a.	Vaccination against H.S	32	36	29	32	32.25
b.	Vaccination against FMD	25	22	29	31	26.75
5.	Dewoming of animals					
a.	At regular interval	02	03	02	02	2.25
b.	Seldom	36	32	22	21	27.75
c.	No	62	65	76	87	72.25
	X^2 Value	**10.80*** **				
6.	Treatment of animals					
a.	Using Ayurvedic drugs	78	73	79	81	77.75
b.	Using Allopathic drugs	22	27	21	19	22.25

*** Significant (P<0.1)

The trend of using veterinary medicine was mainly ayurvedic/desi in Burhar (73%), Sohagpur (78%) Gohparu (79%) and Jaisinghnagar (81%). In Burhar areas 27% of farmers were using allopathic drugs for the treatment of their animals, whereas it was only 19% in Jaisinghnagar areas. This might be due to lack of allopathic medicine shop, lack of veterinary doctor and high cost of treatment, which was similar to the findings of other researchear[5].

Milking management practices: The data on the various milking practices followed by the dairy farmers are presented in table 3. The results indicated that place of milking were same where farmers were keeping their animals in 89%, 91%, 93% and 94% cases in Burhar, Sohagpur, Gohparu and Jaisinghnagar areas, respectively. In contrary to this other authors[6] reported that 61.1% farmers in Haryana milking their buffaloes at a separate dry place. About 30% farmers from all the ares, were having clean and dry environment during milking, however, farmers from Gohparu, Burhar, Jaisnghnagar and Sohagpur blocks 45%, 46%, 53% and 59% respectively, milked the animals in clean and wet environment. Cleaning of animals before milking was not much in practice. Udder washing was followed by 52%, 53%, 58% and 59% farmers in Jaisinghnagar, Gohparu, Sohagpur and Burhar areas, respectively, which is supported to other researchear[9]. Calf was allowed to suckle before milking, after milking and both before and after milking 11%, 1%, and 88% in Sohagpur areas, 10%, 3% and 87% in Burhar areas whereas calf did not allowed for after milking in both Gohparu and Jaisingnagar areas.

They allowed to suckle before and both before and after milking 9% and 91% in Gohparu and 7% and 93% in Jaisinghnagar areas. A large number of farmers were not have weaning practice. This might be due to they rears their calves and not have thought of economics. As far as process of milk let down is concerned more than 90% farmers were using calf suckling which is also reported earlier in Karnal district of Haryana[7]. Some also practicing hand massaging method due to death of calves. Cleanliness of milkers in Sohagpur and Burhar areas were 56% and 55% respectively, however, this was same in both Gohparu and Jaisinghnagar 53%, this might be due to self involvement of farmers in milking, but cleanliness of pail was more than 60% in all the three blocks except Sohagpur areas 53%. Mainly open types of milking pail or bucket were used for milking in all the four areas, under the study. 60% farmers of Sohagpur blocks was milking twice in a day, however in all the three areas there were no significant difference in frequency of milking once or twice in a day.

Table-3
Milking management practices followed by dairy farmers

S.No.	Characteristics categories	No./percent				
		Sohagpur	**Burhar**	**Gohparu**	**Jaisinghnagar**	**Average**
1.	Place of Milking					
a.	At same place	91	89	93	94	91.75
b.	At separate place	09	11	07	06	8.25
	X^2 Value	**1.95**				
2.	Milking environment					
a.	Clean and dry	26	31	33	31	30.25
b.	Clean and wet	59	46	45	53	50.75
c.	Dirty	15	23	22	16	19.00
3.	Washing of udder	58	59	53	52	55.50
4.	Feeding animal at the time of milking	45	53	43	48	47.25
5.	When the calf is allowed to suckle					
a.	Before milking	11	10	09	07	9.25
b.	After milking	01	03	-	-	1.00
c.	Both	88	87	91	93	89.75
	X^2 Value	**7.20**				
6.	Cleanliness of milkers					
a.	Dirty	13	12	12	10	11.75
b.	Sometime clean	31	33	35	37	34.00
c.	Clean	56	55	53	53	54.25
7.	Type of milking pail used					
a.	Completely open	83	88	87	85	85.75
b.	Somewhat open	17	12	13	15	14.25
8.	Cleanliness of pail					
a.	Dirty	13	11	11	13	12.00
b.	Somewhat clean	34	28	23	25	27.50
c.	Clean	53	61	66	62	60.50
9.	Frequency of Milking					
a.	Once in a day	40	47	49	47	45.75
b.	Twice in a day	60	53	51	53	54.25
10.	Interval between milking					
c.	Equal interval	67	63	62	65	64.25
d.	Different interval	33	37	38	35	35.75
10.	Time of milking					
a.	Morning	24	28	23	20	23.75
b.	Evening	05	-	07	-	3.00
c.	Both morning and evening	71	72	70	80	73.25
	X^2 Value	**14.90***				
11.	Method of milking					
a.	Knuckling method	63	66	61	59	62.25
b.	Stripping method	16	18	10	07	12.75
c.	Full hand method	21	16	29	34	25.00
	X^2 Value	**14.37***				
12.	Milk drying off in animals					
a.	Intermittent milking	13	11	19	17	15.00
b.	Self drying	87	89	81	83	85.00

* Significant ($P<0.05$).

This might be due to low yield of milk. Interval between milking was almost equal 62%, 63%, 65% and 67% in farmers of Gohparu, Burhar, Jaisinghnagar and Sohagpur areas respectively. In all the areas, mostly about 70% farmers both morning and evening time were choosen for milking. There were significant association (X^2=14.90*) between blocks and time of milking.

In the study area, the effect of blocks on method of milking was significant (X^2=14.37*). Knuckling method were followed about 60% in all the areas, full hand method which is a healthy practice was followed by 16%, 21%, 29% and 34% in Burhar, Sohagpur, Gohparu and Jaisinghnagar, areas respectively. This might be due to lack of awareness of full hand milking and easiness in practicing knuckling. Stripping was also in practice in some cases and it was practiced by about 10% farmers. This finding was in contrary toauthor in Baran district of Rajasthan where no farmers were practicing full hand method of milking[8]. Thus in this areas farmers were somewhat more aware about method of milking.shows that 36.1% farmers were practicing full hand milking in Hissar district of Haryana, it means farmers from these areas were more aware in milking[9, 10] . Most of the farmers in all the areas were not using any drying off procedure, and animals got self dried in 85% cases. In view of above facts there is a need to educate dairy owners about the new technology of managemental practices through conducting demonstration, trainings or planned extension programmes.

Conclusion

It was observed that 95%, 93%, 95% and 94% of farmers in Sohagpur, Burhar, Gohparu and Jaisinghnagar areas were practicing natural service for breeding.

Prophylactic vaccination against H.S. were 32%, 36%, 29% and 32% and F.M.D. were 25%, 22%, 29% and 31% followed by farmers in Sohagpur, Burhar, Gohparu and Jaisinghnagar areas, respectively. Deworming was done seldomly by 36%, 32%, 29% and 25% farmers in Sohagpur, Burhar, Gohparu and Jaisinghnagar areas, respectively. A large percentage of farmers were also not practicing deworming practices.For the treatment of animals 78%, 73%, 79% and 81% farmers were practicing desi medicines in Sohagpur, Burhar, Gohparu and Jaisinghnagar areas, respectively.

Calf suckling was the major process of let down of milk in all the areas. It was found that 63%, 66%, 61% and 59% farmers were using knuckling method, for milking in Sohagpur, Burhar, Gohparu and Jaisinghnagar areas, respectively. However, 21%, 16%,29% and 34% of farmers were also using full hand method of milking in Sohagpur, Burhar, Gohparu and Jaisinghnagar areas, respectively, which is the ideal practice.

Acknowledgement

The authors duly acknowledge the MGCGV, Chitrakoot, Satna, J.N.K.V.V., Jabalpur, and N.D.V.S.U., Jabalpur for the support to the demonstration at farmer fields.

References

1. Snedecor G.W. and Cochran W.G., Statistical methods, 9th ed. Oxford and IBH publishing Co., Calcutta, **(1984)**

2. Kokate K.D. and Tyagi P., Factors contributing to the level of breeding gaps in cattle of tribal milieu, *Mah. J. Ext. Edu.,* **XIII**, 209-216 **(1991)**

3. Dhiman P.C., Singh Narendra and Yadav B.L., A study on cattle and buffalo feeding and breeding practices in adopted and non-adopted village of Hisar district, *Indian J. Anim. Prod. Mgmt.,* **6(2)**, 90-94 **(1990)**

4. Malik D.S., Studies on managemental practices of Murrah buffalo in its home-tract of Haryana, Ph.D. thesis, NDRI, Karnal, **(1997)**

5. Kalyankar S.D., Gujar B.V., Patange D.D.G.R. and Londhe G.K., Adoption of dairy management practices of Marathwadi buffaloes in their home tract, *Indian J. Dairy Sci.,* **57(6)**, 421-423 **(2004)**

6. Singh P., Singh M., Verma M.L. and Jaiswal R.S., Animal husbandry practices in Tarikhet block of Kumaon hill of Uttaranchal, *Indian J. Anim. Sci.,* **74(9)**, 997-999 **(2004)**

7. Malik D.S. and Nagpaul P.K., Studies on milking and calf rearing management practices of Murrah buffalo in its home tract of Haryana, *Indian J. Anim. Prod. Mgmt.,* **15(2)**, 52-54 **(1999)**

8. Garg M.K., Jain L.S. and Chaudhary J.L., Studies on housing, feeding and milking management practices of dairy cattle in Baran district of Rajasthan, *Indian J. Dairy Sci.,* **58(2)**, 123-128 **(2005)**

9. Dubey V.K. and Kumar R., Identifying existing animal husbandry practices as followed by the cattle keepers in Karnal district, *Dairy Guide,* **3(2)**, 9-15 **(1981)**

10. Sinha R.R.K., Dutt Triveni, Singh R.R., Singh Mukesh and Bhushan Bharat, Studies on breeding and health care management practices in rural, semi-urban and urban areas of Bareilly district of Uttar Pradesh, *Indian J. Anim. Prod. Mgmt.,* **26(1-2)**, 11-15 **(2010)**