

## Short Communications

# Impact of Knowledge and their Existing Practices Management Regarding Reproductive Disorders by Small Dairy Farmers at Field Level

Ashoo<sup>1</sup>, H.C. Verma<sup>2\*</sup>, R.K. Singh<sup>3</sup>, R.K. Verma<sup>4</sup> and A.K. Verma<sup>5</sup>

<sup>2</sup>Department of Veterinary and Animal Husbandry Extension Education, <sup>3</sup> TVCC, <sup>4</sup> ILFC, C.V.Sc.&A.H., N.D.U.A.T., Kumarganj, Faizabad, India

\*Corresponding author

## ABSTRACT

### Keywords

Knowledge,  
Existing practices,  
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disorder, Small  
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The reproductive disorders born due to improper feeding, breeding, and health care management practices. So, a study was conducted to explore the socio-economic profile, knowledge, existing practices to manage, incidence rate and constraints faced by dairy farmers on reproductive disorders management. The present study was conducted in Barabanki district of Uttar Pradesh. The selected Barabanki district having 6 Blocks, out of which 3 Blocks were selected randomly. From each selected Block, 2 villages were selected by applying simple random sampling technique. For the present study information was generated from 120 farmers, 20 from each selected village, who had at least one milch animal at the time of investigation. Majority (51.67%) of the farmers had medium knowledge regarding reproductive disorders (71-80). Dystocia, abortion and stillbirth were mostly treated by veterinary doctors and remaining reproductive disorders were treated by farmers through by using grains and herbs. Anoestrus and repeat breeding were major reproductive problems in dairy animals.

## Introduction

The reproductive problems result in heavy economic losses and have been public health concern in dairy farmers. Reproductive problems are the main causes of poor productive performance in small holder dairy farms (Roberts, 1986; Bekena *et al.*, 1994, 1997; Arthur *et al.*, 1996). Among the major reproductive problems that have a direct impact on reproductive performance of dairy animals are Abortion, Dystocia, Retained fetal membrane (RFM), Pyometra, Metritis, Prolapse, (Uterine and Vaginal), Repeat breeder, Anoestrus, have been reported to be the most common economic problems (Hadush *et al.*, 2013; Dinka, 2013; Haile *et al.*, 2014). The reproductive problems could also be classified as before gestation (anoestrus and repeat breeder), during gestation (abortion, vaginal prolapsed and dystocia) and after gestation (retained fetal membrane and uterine prolapsed). The impaired function of the reproductive

system results failure of a cow to produce a calf yearly and regularly (Arthur *et al.*, 1989; Hoojjar *et al.*, 1999; Shiferaw *et al.*, 2005; Lobago *et al.*, 2006). Many production constraints, mainly reproductive health problems, from a bottle neck in the production process and productivity in the livestock sub-sector. Therefore, it is generate scientific information on the production system and the major reproductive problems of dairy animals in the study area. More than 70% Indian rural households own livestock and a majority of them are smallholders with less than 5 dairy animals (Birthal and Jha 2005, Misra *et al.*, 2007, Ghuman and Singh 2009).

## Materials and Methods

*In vitro*-poisoned food technique was The present study was conducted in Barabanki district of Uttar Pradesh. The selected Barabanki district having 6 Blocks, out of which 3 Blocks were selected randomly. From each selected Block, 2 villages were selected by applying

simple random sampling technique. In social science research selection of respondents is a crucial task, hence due care was taken while selecting the respondents. For the present study information was generated from 120 farmers, 20 from each selected village, who had at least one lactating cow or buffalo at the time of investigation. The primary data was collected by personal interview method using a structured interview schedule. The collected data were tabulated, scored and analyzed in the light of the objective.

Knowledge level is operationalised as the amount of information and understanding of the farmers at the time of interview about reproductive disorders. Knowledge score depend on Farmers' recall memory. All possible care was taken to cover maximum aspect pertaining reproductive problems of animal. The respondents were classified in terms of having low, medium and high knowledge level on the basis of cumulative square root frequency method where as knowledge was measured using following formula.

$$\text{Knowledge index} = \frac{\text{score obtained}}{\text{Maximum obtainable score}} \times 100$$

Indigenous technical knowledge is based on knowledge, beliefs and customs which are internally consistent and logical to those holding them, but at odds with the objectively deduced findings of normal science. Existing practices to manage the reproductive disorders by the small dairy farmer's attempts were made in documenting the indigenous technical knowledge regarding reproductive disorders in dairy animals prevalent in Barabanki district of Uttar Pradesh.

**Results and Discussion**

Table 1.1: Overall (Pooled) Knowledge of the dairy farmers on reproductive disorder in dairy animals:

(N=120)

S. No.	Categories	Frequency	Percentage
1.	Low (< 71)	3	2.50
2.	Medium (71 - 80)	62	51.67
3.	High (>80)	55	45.83
		Mean score 80.38	

The findings presented in table 1.1: revealed that the overall knowledge of dairy farmers, majority of the respondents (51.67 %) had the medium level of knowledge (71-80) regarding reproductive disorders of dairy animals as compared to 45.83 percent in high and 2.50 per cent in low levels respectively. It was also observed that most of the farmers were having latest Knowledge on various reproductive disorders and manage it on their own level. Minimum score was 71 while maximum was 91 with mean score 80.33. Simillar finding was subhash (2011) NDRI, Karnal Haryana. Thus it could be finely concluded that respondent were having medium to high level of knowledge on reproductive disorder of dairy animals in the study area. But most of the dairy farmers know about Abortion and stillbirth and prolapse comparison to the others reproductive disorders. Simillar finding was subhash (2011) NDRI, Karnal Haryana.

**Existing practices to manage the reproductive disorders by the dairy farmers**

An attempt was made to documented traditional knowledge and ethno veterinary practices followed by livestock farmer and their rationale behind each practices. It was tried to identify the traditional practices approaches for some reproductive problems with their diagnosis and management are outlined here. It was observed that treatment was being done with the help of locally available species, herbs, shrubs, minerals and other material medica etc, in the form of mixture, powder, poultice, ointment, fumes, decoction etc. Livestock owners reported that they rarely consult the veterinary doctor, if their animals get sick. Animal suffering from reproductive problems were treated by them at home. An attempt, therefore, was made, to assess the existing practices to manage the various reproductive disorders of dairy animals. Information was collected using open ended interview schedule developed for this purpose. It was observed during the investigation that combinations of various grains and herbs were commonly used by the farmers to overcome the reproductive disorders of dairy animals in the locale.

**Table.1** Existing practices to manage the reproductive disorders by the dairy farmers (N=120)

S. No.	1.REPEAT BREEDING	F	%
1.	1 lit. of cow milk/day to buffalo in case of buffalo during oestrus and vice-versa	96	80.00
2.	200 g Gular ( <i>Ficus glomerate</i> ) as single dose	75	62.50
3.	250 g. Gokharu ( <i>Tribulus terrestris</i> ) seed as single dose	69	57.50
4.	1lit. milk and 250 g mustard oil ( <i>Brassica</i> spp.) before service, 1kg boiled methi ( <i>Trigonella foenum-graecum</i> ) grain next day of service and then feed only dry fodder for 10 days	58	48.33
	<b>2.LATE MATURITY AND ANOESTRUS</b>		
1.	Desi ghee @ ½ kg/day for 3-4 days	103	85.83
2.	Call veterinary officer/ livestock assistant	91	75.83
3.	5 kg Til cake and 1½ kg red lentil ( <i>Lens culinaris</i> ) divided in three halves and fed to animal for 3 days	82	68.33
4.	Green guar ( <i>Cymopsis tetragonoloba</i> ) covered air tight under pressure overnight and fed to animal in morning	78	65.00
5.	1 kg/day curd and ½ kg/day boiled methi ( <i>Trigonella foenum-graecum</i> ) grain	67	55.83
6.	100 g carrot seed ( <i>Daucus carota</i> ) mixed with 250 g 'Khand' (desi sugar)	63	52.50
	<b>3.RETENTION OF PLECENTA</b>		
1.	Naval of animal is smear with oil/ghee and warm for few minute	95	79.17
2.	Gur in luke warm water	81	67.50
3.	300-400 g. bamboo leaf	78	65.50
4.	2-3 kg rice grain	73	60.83
6.	½ kg Methi ( <i>Trigonella foenum-graecum</i> ) grain and ½ kg jiggery	64	53.33
	<b>4.PROLAPSE</b>		
1.	Avoid long resting	105	87.50
2.	Correct mild prolapse by themselves using lather shoe	95	79.17
3.	250 g/day desi ghee + 2-3 kg/day pumpkin ( <i>Cucurbita pepo</i> ) fruit/ 'lauki ( <i>Lagenaria siceraria</i> ) for 4-5 days	85	70.83
4.	Warming of rear part of animal	64	53.33
5.	Reduce feeding specially concentrate	58	48.33
	<b>5.ABORTION AND STILLBIRTH</b>		
1.	Drenching desi ghee @ ½ lit. /day for 3-4 days	92	76.67
2.	Call veterinary officer/ livestock assistant	84	70.00
	<b>6.DYSTOCIA</b>		
1.	Call veterinary officer/ livestock assistant /quack	88	73.33
2.	Force to move on uneven ground	65	54.16

Table.1 revealed that Cow milk in case of repeat breeding in buffalo and vice-versa was most common ITK used by majority (80.00%) of dairy farmers and other practices followed are; barley flour with khimp, gular, gokharu, milk with mustard oil before service then boiled methi grain next day of service after that fed only dry fodder for ten days. Table 1.2.revealed that boiled Desi ghee was most common ITK used

by majority (85.83%) of farmers in case of Late maturity and anoestrus followed by til cake with red lentil, green gaur, crud with boiled methi grain, carrot seed with 'khand', and avoid stall feeding, carry animal for grazing. During interaction with farmers heat they elaborated that carrying animal for grazing and these things will increase body activity therefore induce heat in the positive manner.

Table.2 enunciate that naval of animal is smear with oil or ghee and warm for few minute was most common ITK used by majority (79.17%) of farmers in case of retention of placenta and other practices followed are as follows; gur in luke warm water, bamboo leaves, rice grain, methi with jiggery. It was explained by farmers during survey that they explained these things stimulate expulsion of placenta. Table 1.2.4 : describes that avoid long resting of affected animals was most common ITK used by majority (87.50%) of farmers in case of prolapse and other ITKs used are as follows; correct mild prolapse by themselves using lather shoe, desi ghee and pumpkin, warming of rear part of animal, reduce feeding specially concentrate. Table 1.2.5 : describes that avoid long resting of affected animals was most common ITK used by majority (87.50%) of farmers in case of prolapse and other ITKs used are as follows; correct mild prolapse by themselves using lather shoe, desi ghee and pumpkin, warming of rear part of animal, reduce feeding specially concentrate. Table 1.2.6: The result show that majority (58.67%) of farmers believe in treatment of dystocia by Call veterinary officer/ livestock assistant and followed by animal is Force to move on uneven ground.

Majority (51.67%) of the farmers had medium knowledge regarding reproductive disorders. The overall knowledge of the farmers regarding reproductive disorders was 65.41 percent. They had highest knowledge on abortion and lowest on prolapsed. Farmers treat various reproductive disorders by using many ITKs; most of them are ingredients of concentrate, so there is need to aware the farmers about balanced feed to enhance the reproductive efficiency and to reduce the incidence of reproductive disorders in dairy animals.

## References

Arthur, G. H., Noakes, D. E. and Pearson, H. (1989): Veterinary Reproduction and Obstetrics. *Theriogenology* 6<sup>th</sup> ed. Baillier Tindall UK, Pp. 83-85.

Bekena, M., Ekman, T. and Kindhal, H. (1994):

Ultrasonography of Bovine postpartum cows with retained fetal membranes. *Journal of Veterinary Medicine and Animal Health*, 41: 653-662.

Bekena, M., Jonsson, P., Kindhal, H. (1997): Bacterial isolates with retained fetal membranes and subsequent ovarian activity in cattle. *Veterinary Record*, 140: 232-234.

Birthal, P. S. and Jha, A. K. (2005): Economic losses due to various constraints in dairy production in India. *Indian Journal of Animal Science*, 75: 1470-1475.

Chand, S. (2011). Analysis of reproductive Disorders in Dairy Animals in Alwar District of Rajasthan. M. Sc. Thesis, NDRI Deemed University, Karnal (Haryana), India.

Dinka H. (2013): Reproductive performance of crossbred dairy cows under smallholder condition in Ethiopia. *AJDFMP*, 1(5): 101-103.

Ghuman, S. and Singh, J. (2009): A benchmark study on reproductive management assessment of dairy animals under rural smallholder conditions. *The Internet Journal of Veterinary Medicine*, 8(1). Haile, A., Tsegaye, Y. and Tesfaye, N. (2014): Assessment of Major Reproductive Disorders of Dairy Cattle in Urban and Per Urban Area of Hosanna, Southern Ethiopia. *Animal and Veterinary Sciences*, 2(5): 135-141.

Hadush, A., Abdella, A. and Regassa, F. (2013): Major prepartum and postpartum reproductive problems of dairy cattle in Central Ethiopia. *Journal of Veterinary Medicine and Animal Health*, 5(4): 118-123.

Hoojjer, G. A., Frankena, K., Varks, M. M. H. and Shuving, M. (1999): Treatment of cystic ovarian disease in dairy cows with gonadotrophin releasing hormone. *Veterinary Quarterly*, 22: 33-37.

Misra, A. K., Rama Rao, C. A., Subrahmanyam, K. V., Vijay Sankar Babu, M., Shivarudrappa, B. and Ramakrishna, Y. S. (2007): Strategies for livestock development in rainfed agroecosystem of India. *Livestock Research for Rural Development*, 19(83).

Roberts, S. J. (1986): Veterinary obstetrics and genital diseases. *Theriogenology*. 3<sup>rd</sup> ed. Edwards's brothers, Inc., Michhigan, Pp. 48-104.

Shiferaw, Y., Tenhagen, B. A., Bekana, M. and Kassa, T. (2005): Reproductive disorders of crossbred dairy cows in the central highlands of Ethiopia and their effect on reproductive performance. *Trop. Anim. Health Prod.*, 37: 427-441.