



# Buffalo Breeding Management Practices Followed by Farmers of Western Haryana

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## ABSTRACT

The present investigation was conducted in Western Haryana. Two districts Bhiwani and Sirsa and two tehsils from each district and two villages from each tehsil were selected randomly. Twenty five buffalo keepers from each village were selected thus making a sample of 200 farmers. The study revealed that more than half (54.50 %) respondents got conceived their buffalo by artificial insemination and around 80.00 percent respondents got their animals inseminated at the later stage of heat. About 41 percent of respondents detect through bellowing. Most (84.00%) of the respondents used panchyat buffalo bull for service and about 62.50 percent buffalo keepers followed pregnancy diagnosis. Only 40.50 buffaloes were bred after 2 months of calving and 53.00 percent buffaloes calved at the age of 3.5 yr.

**Key Words:** Western Haryana, Buffalo, Breeding, Management.

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## INTRODUCTION

The state of Haryana is situated in the northern part of India and there are two agro climatic zones in the state i.e. north-western and south-western. The buffalo plays an important role in the rural economy through their contribution to food, draught power, income and employment generation. The species are more productive due to higher production potential, higher percentage of fat in the milk and more sustainable for rearing because of its better feed conversion efficiency and disease resistance. However, the production potential of livestock depends mostly on the management practices under which they are reared and these practices vary significantly across various agro-ecological regions due to many factors.

Efforts have been made to study systematically the buffalo management practices in western Haryana especially where there is scarcity of water due to low rainfall which is less than 400 mm. The soil salinity, metrological drought, poor fertility and nutrient deficiency are bottlenecks in agriculture and livestock production. The information available

and the notation prevalent on the subject have been based on assumptions, usual observations, experience and reports of some specialists and professional workers. Hence, the findings of this study will provide feasible and relevant package of buffalo breeding practices traditionally adopted by the buffalo keepers of western Haryana.

## MATERIALS AND METHODS

In this field study, desired observations on various buffalo husbandry practices in western Haryana were recorded during the period of four months by using interview schedule, interview guide and direct observations method by the researcher.

### Selection of respondents

The study was conducted in Bhiwani and Sirsa districts of western Haryana. Two tehsils from each selected district were identified, which were Loharu, Dadri, Sirsa and Rania and 25 farmers from 8 villages of these 4 tehsils were selected for the study, thus making a total sample of 200 dairy farmers.

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**Table 1. Breeding Management Practices Followed in Western Haryana.**

Sr. No.	Management Practice	Frequency	Percentage
<b>1.</b>	<b>Method of breeding</b>		
	Natural	20	10.0
	Artificial insemination	109	54.5
	Both ( Natural and artificial insemination)	71	35.5
<b>2.</b>	<b>Method of heat detection</b>		
	Doka	33	16.5
	Mucous discharge	57	28.5
	Mounting	19	09.5
	Off feed	10	05.0
	Bellowing	81	40.5
<b>3.</b>	<b>Buffalo for service</b>		
	Stray bulls	32	16.0
	Panchayat bull	168	84.0
<b>4.</b>	<b>Stage of heat when buffalo allowed for insemination/service</b>		
	Early heat	8	04.0
	Mid heat	32	16.0
	Later heat	160	80.0
<b>5.</b>	<b>Pregnancy diagnosis</b>		
	Yes	125	62.5
	No	75	37.5
<b>6.</b>	<b>Treatment of anoestrous/repeaters</b>		
	Yes	200	100
	No	0	0
<b>7.</b>	<b>Insemination after calving</b>		
	2-3 m	81	40.5
	3-5m	70	35.0
	5-6m	27	13.5
	More than 6 months	22	11.0
<b>8.</b>	<b>Dry period</b>		
	2 m	118	59.0
	Less than 2 m	82	41.0
<b>9.</b>	<b>Age of first calving</b>		
	3 yr	6	3.0
	3.5 yr	106	53.0
	4 yr	55	27.5
	More than 4 yr	33	16.5

## Buffalo Breeding Management Practices

### Development of Interview schedule

An interview schedule was prepared with the help of College of Veterinary Science, Hisar and the data were collected through personal interview technique from each selected village like personal particulars of farmers and his family members, detailed information about the buffaloes kept by the respondents and buffalo housing management practices followed by the buffalo owners.

### Conducting interview and data collection

After having selected the respondents, the researcher made repeated visits to the villages under investigation and developed a good rapport with the selected respondents to gain their confidence. The researcher's personal professional qualifications and experience greatly facilitated in rapport building. Before administering the schedule, the objectives of the study were explicitly explained to the farmers. The questions from the schedule were presented to them in their own dialect, ensuring that they had perceived the questions correctly so as to avoid any interpretational variation of the questions put before the respondents. At occasions, when the respondent found it difficult to respond to a particular question, it was postponed till the end of interview.

Further the response of each question in the interview schedule was coded and tabulated respondent-wise in a master table. The qualitative data were quantified accordingly and tabulated to draw meaningful inferences.

### Statistical analysis of data

To analyze the collected information, basic statistical tools and methods were used like frequency distribution and percentage for the total numbers of respondents in the survey.

## RESULTS AND DISCUSSION

The results indicated that 54.5 percent of the respondents adopted artificial insemination (A.I), 10.0 percent adopted natural service and 35.5 percent adopted both (A.I. and natural service). The poor percent of natural service was due to lack of A.I.

facility in the study area. The present result of A.I was in accordance with results observed by Prajapati (2015), Gadhwal *et al* (2015), Malsawmdawngliana and Rahman (2016). however, the present results of A.I were in contrast with the findings of Tanwar *et al* (2012), Kishore *et al* (2013), Manohar *et al* (2014) and Chand (2014).

It was observed that 40.5, 28.5, 16.5, 9.5 and 5.0 percent respondent detected heat through bellowing, mucous discharge, doka, mounting and off feed, respectively as main sign of estrous. Only traditional knowledge plays an important role and there is no scientific approach for the heat detection. As regards to the stage of heat at which buffaloes were allowed for inseminate, 80.0 and 16.0 percent of the respondents followed the practice in later heat and mid heat, respectively, whereas only 4.0 percent was observed to detect heat in early stage. The results were contrary with Rathore *et al* (2010), Manohar *et al* (2014) and Gadhwal *et al* (2015). It was noted that all the respondents observed their buffaloes for heat symptoms regularly. It was also noted that 84.0 and 16.0 percent respondents inseminate their buffalo with panchyat bull and stray bull, respectively. This was due to high genetic inheritance of buffalo bull maintained by the local panchayat.

Regarding pregnancy diagnosis, 62.5 percent of the respondents practiced pregnancy diagnosis of their buffaloes, but remaining 37.5 percent did not practice pregnancy diagnosis. There are various misconception regarding Pregnancy diagnosis that buffalo may abort. These results were similar as observed by Sabapara *et al* (2010b), Manohar *et al* (2014) and contrary to findings of Kishore (2013), Chand *et al* (2014), Malsawmdawngliana *et al* (2016) but in contradiction to the finding of Rathore *et al* (2010). The result indicated that all the respondents treated their buffaloes for anestrus and repeat breeding.

It was observed that 40.5, 35.0, 13.5 and 11.0 percent respondents bred their buffalo after 2-3 m, 3-5 m, 5-6 m and more than 6 months of calving,

respectively. These findings were supported with the results of Sabapara *et al* (2010). It might be due to fairly high level of awareness in respondents as they are under a milk shed of co-operative milk producer union.

Thus, it was quite evident from the results of various breeding practices followed by the buffalo owners in the study area that majority of the respondents were adopting the recommended breeding practices.

### CONCLUSION

In order to improve the productivity of buffalo in the study area, at least one artificial insemination centre should be established at village Panchayat level to provide regular insemination, pure bred proven sire should be distributed to interior village buffalo keepers, conservation of purebred buffalo should be taken on priority basis by motivation of buffalo keepers through subsidies or remuneration and wherever the artificial insemination facilities exist, it should be further strengthened for providing better services.

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