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Existing breeding management practices by the respondents of Kanpur Nagar, Uttar Pradesh

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Abstract

The result of buffalo breeding in the different two blocks Bilhaur and Kalyanpur. These two blocks selected from Kanpur Nagar district of Uttar Pradesh revealed that in the study only 28.00 per cent of the respondents rearing descript buffalo in the study area. It was concluded that in my study more than half 51.00 per cent of the respondents adopted both A.I. and natural breeding and most of the 42.50 per cent respondents were heat detection by mucus discharge + bellowing. The majority of the respondents 52.50 per cent were reported expelled placenta within two hours. It was found according to my village's study noted that buffaloes were allowed for insemination at mid-heat by 82.00 per cent of respondents and pregnancy diagnosis not done by most of the farmers 62.00 per cent in the villages. Most of the respondents 57.50 per cent animals take 3-4.5 year time for first calving. 81.50 per cent of respondents treated the anoestrus as their animals in the villages. Mostly 79.00 per cent of the respondent's buffaloes were taken more than 18-month calving interval. These all information obtained from 200 respondents of the district of Uttar Pradesh.

Keywords: Respondents rearing, discharge + bellowing, anoestrus, bubalus bubalis

Introduction

Buffaloes in the world are categorized into two species: the numerous Asiatic water buffalo (*Bubalus Bubalis*) and African buffalo (*Syncerus caffer*). Asiatic Water buffalo two subspecies are known, the river ($2n = 50$) and the swamp ($2n = 48$) buffalo. River buffalo are the most numerous species include the Murrah, Jafarabady, Surti, Mehsana, Egyptian and Mediterranean breeds (Iannuzzi, 1994) [6]. India is leading the world in milk production since 1998 and produced 165.4 million tonnes of milk with per capita availability of milk 335 grams during 2016-17. Buffalo shared about 49.2 per cent of the total milk produced in India (Anonyms, 2018) [1]. Buffaloes contribute 30 per cent total meat in the country. Buffaloes are great producers of milk and fulfill the great demand of meat. The major states of buffalo meat production are Uttar Pradesh followed by Andhra Pradesh and Maharashtra.

In the encouragement of the national economy of India, the Livestock sector plays a major role and also increases the growth rate. Due to the lack of detailed information on the animals farming existing breeding practices adopted for different categories of livestock, it's not possible for the policy planners to give full attention to these important aspects of dairy cattle production. Efficient management requires a strong database. Efforts should aim to collect information related to animal rearing. Few efforts are known to have been made to study systematic information related to livestock farming and its management adopted in the village. This has not been adequate to serve as the basis on which valid guidelines for introducing scientific managerial practices for improvements of livestock dairy animals can be framed.

Materials and Methods

The study was conducted purposively in the central zone of Uttar Pradesh. Kanpur occupies the north-western part of the Kanpur division. The present study was conducted by comprising two different blocks Bilhaur and Kalyanpur of Kanpur Nagar district of U.P. The study area has more buffalo population. In each block, Ten villages were selected, and also in all these villages ten farmers were selected randomly have vast opportunities for rural development through buffalo. During summer the temperature of the Kanpur district is very high temperature compared to another district of U.P. The Kanpur lies 132m above sea level and the climate in Kanpur is warm and temperate.

When compared with winter, the summers have much more rainfall. The average annual temperature is 25.6 °C | 78.1 °F in Kanpur. The annual rainfall is 820 mm (32.3 inches). Statistical tools percentage using the methods suggested by Snedecor and Cochran (1994).

Results and Discussion

The finding regarding various breeding practices followed by respondents in given Table-1.

The finding regarding various breeding practices followed by respondents in given table 1. The role of breeding is very important to generate sufficient stock of improved germplasm for better productivity and healthy animal in the district. The overall result comes from table 1. Indicated that 72.00 per cent were reared non-descript buffaloes only 28.00 per cent reared descript buffaloes like Murra, Bhadawari. This finding is well comparable with the findings of Dhaka *et al.* (2017)^[4]. That is because descript buffaloes are costly and respondents were not able to pay more money.

It was concluded that in my study more than half 51.00 per cent of the respondents adopted both A.I. and natural breeding, while 36.50 per cent preferred only A.I. and 12.50 per cent respondents adopted natural service in the block of

the district. The present findings were in close agreement with those reported by Sekhar *et al.* (2017)^[12], Yadav *et al.* (2016)^[19]. Some of the contradicted by Chakravarthi *et al.* (2017)^[2], Godara *et al.* (2018b)^[5] found that most of the respondents used A.I. practices at the time of breeding.

Heat detection was observed that by the respondents 42.50, 27.50, 20.00, and 10.00 per cent through mucus discharge + bellowing, mucus discharge, mucus discharge + bellowing + mounting and off feed + urine discharge as the main sign of estrous. This finding is well comparable with finding of Khadda *et al.* (2017)^[7], Kumar *et al.* (2019a), Kumar *et al.* (2020)^[8], Singh (2018)^[18], Viswkarma *et al.* (2018)^[18], Yadav *et al.* (2016)^[19] respondents used mucus and bellowing together for heat detection in animals. Mucus discharge and bellowing is the main sign and respondents assure that buffalo in heat.

The study shows that the majority of the respondents 52.50 per cent was reported expelled placenta within two hours and followed that by the 33.00 per cent take 1 hour after calving but 14.50 per cent take more than 2 hours in the study area. The observation and findings of the study were in favor of finding reported by Singh *et al.* (2016)^[11].

Table 1: Existing Breeding Management Practices

| Existing practices | Bilhaur | Kalyanpur | Respondents | Per cent |
|--|---------|-----------|-------------|----------|
| 1. Breed of buffalo | | | | |
| A. Descript buffalo | 23 | 33 | 56 | 28.00 |
| B. Non-descript buffalo | 77 | 67 | 144 | 72.00 |
| 2. Method of breeding | | | | |
| A. Natural | 20 | 05 | 25 | 12.50 |
| B. A.I. | 36 | 37 | 73 | 36.50 |
| C. Both | 44 | 58 | 102 | 51.00 |
| 3. Method of heat detection | | | | |
| A. Mucous discharge + bellowing | 40 | 45 | 85 | 42.50 |
| B. Mucous discharge + off feed | 12 | 08 | 20 | 10.00 |
| C. Mucous discharge + bellowing +mounting | 18 | 22 | 40 | 20.00 |
| D. Mucous discharge | 30 | 25 | 55 | 27.50 |
| 4. Expulsion of placenta | | | | |
| A. Within 1 hour | 38 | 28 | 66 | 33.00 |
| B. Within 2 hour | 45 | 60 | 105 | 52.50 |
| C. More than 2 hour | 17 | 12 | 29 | 14.50 |
| 5. Stage of heat which buffalo allowed for insemination/service | | | | |
| A. early heat | 10 | 06 | 16 | 08.00 |
| B. mid heat | 78 | 86 | 164 | 82.00 |
| C. later heat | 12 | 08 | 20 | 10.00 |
| 6. Pregnancy diagnosis | | | | |
| A. By experience farmers | 31 | 25 | 56 | 28.00 |
| B. By veterinary doctors | 04 | 16 | 20 | 10.00 |
| C. not done | 65 | 59 | 124 | 62.00 |
| 7. Age at first calving | | | | |
| A. Within 3 year | 00 | 06 | 06 | 03 |
| B. 3-4.5 year | 49 | 66 | 115 | 57.5 |
| C. 4.5-6 year | 51 | 28 | 79 | 39.5 |
| 8. Treatment of anoestrous/repeaters | | | | |
| A. Yes | 77 | 86 | 163 | 81.5 |
| B. no | 23 | 14 | 37 | 18.5 |
| 9. Breeding after calving | | | | |
| A. Within 3 months | 11 | 36 | 47 | 23.50 |
| B. 3-6 months | 68 | 54 | 122 | 61.00 |
| C. More than 6 months | 21 | 10 | 31 | 15.50 |
| 10. Calving interval | | | | |
| A. Less than 18 month | 17 | 25 | 42 | 21.00 |
| B. More than 18 month | 83 | 75 | 178 | 79.00 |

All the respondents observed their buffaloes for heat symptoms regularly. It was found according to my village's study noted that buffaloes were allowed for insemination 82.00 per cent and 10.00 per cent of the respondents followed the practice in mid-heat and later heat, respectively, whereas only 08.00 per cent observed to detect heat in an early stage. This is the support of the study with Kumar *et al.* (2019a), Kumar *et al.* (2020)^[8], Singh (2018)^[18], Singh *et al.* (2019a), and Godara *et al.* (2018b)^[5] found Mostly respondents inseminate at the later stage of heat.

It was noted that pregnancy diagnosis not done by most of the farmers 62.00 per cent in the villages and 28.00 per cent respondents were pregnancy diagnosis done by experienced farmers and only 10.00 per cent by the qualified veterinarian in the study area. The results are in line with the findings of Dar *et al.* (2017)^[3], Tanwar *et al.* (2012)^[17], Sreedhar *et al.* (2017a)^[16], Singh (2018)^[18], Malsawmdawngliana and Rahman (2016)^[10]. It was contradicted the study found that most farmers' pregnancy diagnosis was done Khadda *et al.* (2017)^[7]. It was observed from my study that most of the respondents were not observed pregnancy diagnosis by the respondents because of lack of knowledge and experience about the pregnancy respondents don't know how to detect pregnancy of the buffaloes.

The study found that most of the respondents 57.50 per cent animals takes 3-4.5 year time for first calving followed that more than 4.5-6 year time takes by the 39.50 per cent buffaloes and only 03.00 per cent buffaloes first calving within 3 years of age. These were in agreement with Dhaka *et al.* (2017)^[4], Meena *et al.* (2016)^[11] first calve at 1288±122 day, Singh *et al.* (2016)^[11].

The result indicated that all the respondents treated their buffaloes for anoestrus, repeat breeding, and sometimes infertility problem. It was found that 81.50 per cent of respondents treated the anoestrus and 18.50 per cent of respondents not treated their animals in the villages. These results are in consonance with the findings of Khadda *et al.* (2017)^[7], Sivaji *et al.* (2018), and this observation highly contradicted by the Malsawmdawngliana and Rahman (2016)^[10].

It was observed that 61.00 per cent buffaloes successive breeding done 3-6 months after calving followed that 23.50 per cent breeding their animals within 3 months of calving and 15.50 per cent breeding done after 6 months of calving. Similar findings were reported by Kumar *et al.* (2020)^[8], Malsawmdawngliana and Rahman (2016)^[10], Singh (2018)^[14], Singh *et al.* (2019a), Yadav *et al.* (2016)^[19], Sekhar *et al.* (2017)^[12].

It was found in the study mostly 79.00 per cent of the respondent's buffaloes were taken more than 18 months of calving interval and only 21.00 per cent calving within 18 months of age. These were in agreement with Dhaka *et al.* (2017)^[4], Singh (2018)^[18], Sreedhar *et al.* (2017a)^[16] found 73.75 percent were taking more than 18 months' time. Meena *et al.* (2016)^[11] observed that the calving interval of buffaloes is 495±45. Calving interval is more in the buffaloes this is because of repeated breeding and due to lack of feeding management.

Conclusion

It was noted that in the study most of the respondents of Kanpur Nagar prefer that both methods of insemination. Repeat breeding and anoestrus are highly affected to the dairy buffaloes this is because of hot weather in summer and poor

management practices used by the respondents. This is also observed that pregnancy diagnosis is not done by most of the respondents because of lack of awareness. It was found in the study mostly 79.00 per cent of the respondent's buffaloes were taken more than 18 months of calving interval because of lack of management practices adopted by the respondents in the district.

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