Control of anestrous in buffaloes through locally available resources

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ABSTRACT: A survey was conducted on 2160 respondent buffaloes in three districts of Western Uttar Pradesh, India, during 2003-04 to study the various reproductive problems and managemental practices following locally available indigenous resources. The observations were pooled on the basis of season, parity and farmer’s categories. It was observed that highest number of buffaloes were found in anestrus condition as 54.38 percent in summer season, 69.01 percent heifers and 54.60 percent buffaloes belonging to land less farmers and were found highly significant statistically. The majority of the farmers used Indigenous Technical Knowledge (ITK)/ resources in different combinations to over come the anestrus problems.

Key words: ITK, Jaggery, Locally resources, Maithi, Raw egg, Bajara.

INTRODUCTION - Buffalo is the premier dairy animal of India as it contributes over 55 per cent of the total milk produced in the country. Besides producing large quantity of milk with high fat and Solid Non Fat (SNF) content, buffalo also plays a significant role as a draught and meat animal. However, due to several reproductive problems such as delayed puberty, silent estrus, summer anoestrus, post-partum anoestrus and repeat breeding, buffalo is still considered as difficult breeder and therefore lead to huge economic losses to the farmers with consequently fluctuation in milk production throughout the year.

Domestication has influenced the sexual behavior of buffaloes. These influences are a result of deviation of stocking density, housing pattern, accessibility of opposite sex’s etc.. Generally, buffalo comes in estrus during night and estrus lasts for a period of 12 to 24 hours. In tropical region anoestrus may be of shorter duration and symptoms at the early stages of the heat are not pronounced. Under stall-feeding systems where buffaloes are tied crowded in to small lots where there will be little opportunity to exhibit cardinal breeding behavior. In the last years, the farmers experimented several natural remedies for animal health care and developed an intrinsic and invaluable knowledge from generation to generation. These invaluable experiences, commonly known as “indigenous practices”, have been passed from one generation to another by word to mouth. The term indigenous is often interchangeable with terms like ‘traditional’ or ‘local’ or ‘ethnic’. Over countries people have developed their own ways of keeping animals healthy and productive using age-old home remedies, surgical and manipulative techniques, husbandry strategies and associated magico-religious practices, taken together these constitute what is now termed as Ethno veterinary Medicine (Mc Corkle, 1995).
MATERIAL AND METHODS - The present study was carried out in 27 villages on 2160 buffaloes characterized by several reproductive problems, such as anoestrus, repeat breeding, abortion, dystocia, pre-partum and post partum prolapsed, retention of placenta and metritis during the years 2003-04. The data were collected and classified according to: 1) classes of parity: heifer, 1\textsuperscript{st} calver, 2\textsuperscript{nd} calver, 3\textsuperscript{rd} calver and more than 3\textsuperscript{rd} calver; 2) categories of farmers: landless, marginal, small and large; 3) seasons (the year was divided into five seasons based on climatologically conditions): winter (December to February), Spring (March to April), Summer (May to June), Rainy (July to September) and Autumn (October to November).

RESULTS AND CONCLUSIONS - The overall 45.20 percent of Murrah buffaloes did not show heat up to 90 days post partum. It was also observed that a significantly higher number of buffaloes was found in anestrus conditions during the summer season (54.38 percent), in heifers (69.01 percent) and in land less farmers (54.60 percent).

| Table 1. Number of Animals Exposed Anoestrus. |
|-----------------------------------------------|
| Effects                                      | No. of Exposed | No. affected | Percentage |
| Overall                                      | 2701           | 1221         | 45.20      |
| Seasons: Winter                             | 413            | 160          | 38.78      |
| Spring                                      | 442            | 162          | 36.65      |
| Summer                                      | 644            | 350          | 54.38      |
| Rainy                                       | 825            | 355          | 43.03      |
| Autumn                                      | 377            | 194          | 51.45      |
| Parity Orders: Heifer                       | 752            | 519          | 69.01      |
| 1\textsuperscript{st} calver                | 528            | 212          | 40.15      |
| 2\textsuperscript{nd} calver                | 433            | 140          | 32.33      |
| 3\textsuperscript{rd} calver                | 586            | 199          | 33.95      |
| >3\textsuperscript{rd} calver               | 402            | 151          | 37.56      |
| Farmer categories: Landless                 | 967            | 528          | 54.60      |
| Marginal                                   | 684            | 275          | 40.20      |
| Small                                      | 615            | 225          | 36.58      |
| Large                                      | 435            | 193          | 44.36      |

Indigenous Technical Knowledge (ITK)/ Herbal treatments followed by farmers. The majority of the farmers used Indigenous Technical Knowledge (ITK)/ locally resources in different combinations to overcome the anoestrus problems. Perhaps in many cases there were inadequate veterinary facilities at the village level, hence there was no alternative to accept the adoption of ITK/herbals for the treatment of their buffaloes, due to ITKs costs and availability.
It was observed that the majority of animals (53.33 percent) overcome anoestrus by keeping male with the female in practice; 45.00 percent by using boiled Maithi (Trigonella Foenum Graecum L.) with Wheat bran for three days; 38.84 percent by feeding 0.5 - 1 kg boiled Bajara (Pennisetum typhoides L.) mixed with Gur (Jaggery) for a week, and 30.24 percent by feeding 0.5-1 kg Masur daal (lens esculenta moench) in evening time. Similar results were reported by Shrivastava (1982) and Sah (1999). Furthermore, 20.46 percent of animals solved anoestrus by using pigeon faeces (10-20 mg.) with flour: this technique has also been reported by Kartikiyan and Chanrakanandan (1996) and Sah (1999).

To maintain the estrus cycle regular, 6 Fowl's egg for one week were provided to the animals and 12.67 percent of these overcome the problem. Also this technique was previously suggested from, Mandal (1999) and Sah (1999) by using raw eggs. Finally, 16.30 percent of buffaloes solved anoestrus following exercise and 3.84 percent by feeding 5-7 kg Maili (sugarcane juice wastage) for three days during the winter season to induce the estrus in buffalo cows.

The survey revealed that the majority of farmers are using indigenous technical knowledge that has positive effect on the anoestrus problems in buffaloes. Therefore, there is an urgent need to identify and validate the above-cited formulation for clinical efficiency in induction of estrous. The problems and constraints in animal’s reproduction have to be addressed by using modern technique to improve the traditional reproductive management practices for maximum return.

| Sr. No. | Indigenous Technical Knowledge followed by farmers | Frequency | Percentage |
|---------|-------------------------------------------------|-----------|------------|
| 1.      | Keeping male with female                        | 1152      | 53.33      |
| 2.      | Maithi + wheat bran boiled (for three day)      | 972       | 45.00      |
| 3.      | Feeding ½ to 1 kg. boiled Bajra (Pennisetum typhoides L.) + Gur (250gm) for seven days | 839 | 38.84 |
| 4.      | Feeding Masur dal (lens esculenta moench) ½ to 1 kg. for three days in evening time. | 649 | 30.24 |
| 5.      | Feeding pigeon faeces (10 to 20 gm) with flour/ chapatis | 442 | 20.46 |
| 6.      | Physical exercise to fatty animals              | 352       | 16.30      |
| 7.      | Feeding raw egg (Desi hen’s) 5 to 6 eggs in one week | 274       | 12.67      |
| 8.      | Maili (sugarcane juice wastage) 5-7 kg. for three days in winter season | 83        | 3.84       |
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