INTRODUCTION

Postpartum fertility is one of the major factors of economic importance in buffalo reproduction. Because of diversity in feeding and management practice, large number of animals exhibit long postpartum anestrus under field condition. Prolonged postpartum anestrus is the major reproductive concern of economic losses to the buffalo breeder. Early establishment of cyclic ovarian activity in postpartum buffaloes is desirable as it improves the reproductive efficiency. The majority of cows and buffaloes resume ovarian cycles within the first month of calving (Patel et al., 2005). Some animals have a longer postpartum interval and may still be acyclic during the period when they should be inseminated (Khasatiya et al., 2006). Failure to resume ovarian activity after calving is the main reason for delay in conception (Abdoul-Ela et al., 1988). Early postpartum breeding to shorten the calving interval in buffaloes would increase reproductive efficiency (Khasatiya et al., 2006). The aim of this study was to evaluate the effect of combination of Mineral mixture and Herbal seeds on Reproductivity of buffaloes under filed condition.

OBJECTIVE

To know the effect of combination of meneral mixture and herbal seeds on reproductivity of buffaloes under filed condition.

METHODOLOGY

The present study was carried out under field conditions on 20 recently calved buffaloes under field condition in 2016. The selected buffaloes were dewormed using Fenbendazole 3 g and then were divided into two groups. Animals of group-A (n=10) received combination of oral supplementation of herbal seeds 100 g/day/animal for 25 days and oral chelated mineral mixture @ 50 g/day/animal for 60 days post partum(n=10), Group-B) were kept as a control as Farmer’s Practice (Oral supplementation of Herbal seeds 100 g/day/animal for 5 days post partum) (n=10) The highest conception rate (80.00 %), shortest service period (101 days) and early induction of post partum estrus (68 days) was observed for group-A buffaloes as compared to group-B. The corresponding values for group-B were 50 %, 156 days and 104 days respectively. The use of combination of Mineral mixture and herbs to recently calved buffaloes for longer period will help in augmenting cyclical activity resulting early induction of post partum estrus, higher conception rate and shorter service period under field conditions.

Keywords: herbs, buffaloes, mineral mixture, conception rate etc.
Table 1 : List of herbal seeds and its effect on animal body

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dill/ Suva</td>
<td>Anethum graveolens</td>
<td>Galactogogue, Increased Milk Production (Mohanty et al, 2014)</td>
</tr>
<tr>
<td>Fenugreek</td>
<td>Trigonella foenumgraecum</td>
<td>Galactogogue, Oxytocic, Uterotonic effect. (Mohanty et al, 2014)</td>
</tr>
<tr>
<td>Black Pepper</td>
<td>Piper nigrum</td>
<td>Ecblolic, Uterotonic, Oxytocic effect (Mohanty et al, 2014)</td>
</tr>
<tr>
<td>Common Grass</td>
<td>Lepidium sativum</td>
<td>Immuno Modulator, Uterine Cleanser (Lessard M. et al, 2003)</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

Shorter Duration of the induction of post partum estrus was observed in group A (68 days) given the combination of Herbals for 25 days post partum and chelated mineral mixture for 60 days as compared to group B (104 days). The conception rate was observed higher in group A (80 %) as compared to Group B (50 %) where as the service period was higher in group B (156 days) as compared to group A (101 days).

Table 2: Effect of combination of herbal seeds and mineral mixture on reproductivity of buffaloes

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>No. of Animals</th>
<th>Duration of Induction of Post partum estrus</th>
<th>Conception Rate</th>
<th>Service Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>10</td>
<td>68 days</td>
<td>80 %</td>
<td>101 days</td>
</tr>
<tr>
<td>Group B</td>
<td>10</td>
<td>104 days</td>
<td>50 %</td>
<td>156 days</td>
</tr>
</tbody>
</table>

Similar findings observed by Nidhi et al. (2010), reported higher estrus induction and conception rate with the use of herbal heat inducer and mineral mixture. Therefore, the improvement in reproductive efficiency of buffaloes in the present study might be attributed to the beneficial action of the supplementation with minerals on the neuro-endocrine axis and reproductive function. In present study, the service period was reduced by using the combination of Mineral mixture and herbals for longer period after calving. Similar findings were observed by Parmar et al, 2012 he reported shorter service period in surti buffaloes using minerals and herbals which helped to increase the lactation of buffaloes resulting more profit to animal keepers.

CONCLUSION

The findings of estrus induction response and conception rate clearly indicated that resumption of ovarian cyclicity with ovulatory estrus can be effectively induced with using the combination of Mineral mixture and herbals for the longer duration in recently calved buffaloes under field conditions, thereby reducing their service period and calving interval towards achieving the goal of augmenting reproductive efficiency for better economic return.

REFERENCES


**Extension Strategies for Doubling the Farmers' Income for Livelyhood Security**


