

## Post-abortion and post-partum breeding efficiency in Mehsani buffaloes retaining fetal membranes

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### ABSTRACT

The effect of retention of fetal membranes on the occurrence of first estrus and fertile estrus was studied in different groups. The occurrence of first estrus in retained fetal membranes after parturition (RFM/AP) and retained fetal membrane after abortion (RFM/AA) were found delayed as compare to buffaloes not retaining fetal membranes after parturition (control) with the differences being non-significant. The occurrence of fertile estrus was nonsignificant between the control ( $85 \pm 9.18$  days) and RFM/AP group ( $113.19 \pm 15.94$  days) but the RFM/AA group ( $145.86 \pm 19.85$  days) differed significantly ( $P < 0.05$ ). Buffaloes of RFM/AA group required the number of inseminations 1.6 times greater than the control group.

**Key words:** Buffalo, placenta, retention, breeding efficiency

Retained fetal membrane cases are treated usually by its manual removal and placing the intrauterine antibiotic pessaries. Cases of RFM after abortion particularly are very obstinate in removing their firmly attached placenta. Delayed involution of uterus due to any of the reasons i.e. retention of placenta, prolapse, metritis or pyometra not only results in reduction of milk yield but also affects the fertility there by causing severe economic losses to the farmers (Sane *et al.*, 1994) and hence to know the breeding status of post-partum and post-abortion retained fetal membranes buffaloes the study was under taken on Mehsani buffaloes of Mehsana District of Gujarat.

Buffaloes retaining fetal membrane after parturition (RFM/AP), gr 3. Buffaloes retaining fetal membranes after abortion (RFM/AA). The animal was considered to retain fetal membranes when placenta was not expelled within 12 hours after parturition or abortion. All the buffaloes of gr 2 and 3 were treated by manual removal whenever the easy detachment of placenta was

possible. Three or four boluses of Furea (Nitrofurazon and Urea bolus) were placed intrauterine for three days. Certain cases with firmly attached placental membranes where manual removal was difficult and if attempted was likely to damage the uterus, were treated by placing the Furea boluses daily till complete placenta could ultimately be taken out.

After treatment a total of forty buffaloes were examined per-rectally at regular intervals of 15 days for the confirmation of the cyclic changes in accordance with the owner's history so as to know the occurrence of first postpartum estrus, fertile estrus and the number of services per conception. The pregnancy was confirmed by rectal palpation after 45 days of breeding. Data were statistically analyzed using CRD and Chi square test (Snedecor and Cochran, 1967, Panse and Sukhatme, 1978).

All the buffaloes of gr 2 and 3 required the treatment ranging from one to five days for complete removal of placenta and gr 3 buffaloes obviously required more days treatment. The period of occurrence of first estrus ranged from 34 to 70, 40 to 76 and 30 to 108 days

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with an average of  $49.55 \pm 3.01$ ,  $57.09 \pm 3.50$  and  $54.14 \pm 9.09$  days for the gr 1, 2 and 3, respectively with the differences being non-significant. The average period for the occurrence of first estrus in gr 2 and 3 were found to be longer as compared to the gr 1, which is in agreement with the report of Dutta and Dugwekar, (1988) for the RFM/AP group. Eleven out of fourteen buffaloes of gr 1 exhibited estrus within 70 days, while 3 animals remain anoestrus for more than 200 days. Eleven of fifteen buffaloes of gr 2 exhibited estrus within 76 days, whereas in gr 3 seven of eleven buffaloes exhibited estrus within 108 days and four animals in both groups remained anoestrus at the end of the study.

Fertile estrus occurred within 34 to 123, 64 to 216 and 64 to 200 days with an average of  $85 \pm 9.18$ ,  $113.19 \pm 15.94$  and  $145.86 \pm 19.85$  days for the buffaloes of gr 1, 2 and 3, respectively. The difference was non-significant between the buffaloes of gr 1 and 2, but the buffaloes of gr 3 differed significantly ( $P < 0.05$ ). Buffaloes conceiving within 120 days were 81.81 percent, 72.72% and 45.85% for the gr 1, 2 and 3, respectively. Services required per conception were  $1.46 \pm 0.16$ ,  $1.82 \pm 0.26$  and  $2.29 \pm 0.29$  for the buffaloes of gr 1, 2 and 3 respectively. Buffaloes of gr 3 required more numbers of services almost 1.6 times greater than the control for conception which get supports of Nayak *et al.* (1982) who observed that aborted animals required 1.5 times more inseminations per pregnancy. The overall findings of the present study agree with views of Sandals *et al.* (1979) who reported that retained placenta alone did not significantly impaired reproductive performance. The influence of retained placenta on fertility appears to depend on the proportions of the cow with retained placenta that have metritis complex. The present study agrees with the Dyrendahal *et al.* (1977) who reported that effect on fertility was greatest where placenta was not easily removable. Longest service period and lowest conception rate in late abortions has been reported in

dairy cattle by Singh and Thakur (1991) and in crossbred cows by Mehrotra *et al.* (1999). Narayana *et al.* (1986) have reported that low fertility in RFM buffaloes could be due to factors other than routine antibacterial drug therapies.

In spite of intrauterine treatment all buffaloes do not behave as normal as control buffaloes in respect to their breeding efficiency. Manual removal should be attempted only if the minimum efforts and traction makes it possible. Cases of retained fetal membrane after abortion required more days and services to settle.

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