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PARTURITION BEHAVIOUR OF SWAMP BUFFALOES OF ASSAM

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ABSTRACT

An investigation was undertaken to study the parturition behaviour of Swamp buffaloes of Assam. Data were collected from 30 animals of first to fifth lactation. Reduced interest in feed and water, restlessness, occasional raising of tail and abdominal straining were the most prominent signs observed during the first stage of parturition. During second stage of parturition animals showed restlessness and severe abdominal straining and they frequently lie down and got up. Majority of the animals (93.33%) delivered their foetus in standing position or on the way of attempting to stand. The pluriparous cows nursed their calves immediately after delivary. The average time recorded for the first, second, and third stages of parturition were 131.67±22.93, 30.93±3.60 and 248.33±22.28 minutes respectively. Total time required for the whole parturition process was 411.00±28.91 minutes. There was no significant effect of parity of animals as well as sex of the calves on various stages of parturition.

Key words: Swamp buffalo, parturition, behaviour, primiparous, pluriparous.

Parturition is one of the most important events for the farmers as by this act of his animal he would derive gain in terms of milk or sale of animal and its progeny. Most domestic animals are prone to maximum injuries and infections, some of them endangering the life of the fetus and the dam immediately, and some of them affecting the future productive and reproductive life of the mother. Therefore, due care must be exercised in advance and sufficient vigilance must be kept during parturition to minimize parturient problems. Keeping this in view, the present investigation was undertaken to study the process of parturition in swamp buffaloes.

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MATERIALS AND METHODS

Thirty swamp buffalo cows, in their first to fifth lactation maintained at Livestock Research Station, Assam Agricultural University, Mondira were selected for the study. The animals were grouped according to the number of lactation viz. group-I: animal in their first lactation (parity-I), Group-II: animal in their second lactation (parity-II) and Group-III: animal in their third to fifth lactation (parity-III). The animals were maintained under semi-intensive system of management where they were let loose for grazing in the morning after milking till evening and were housed during the night time. They were provided 30 g of mineral mixture and common salt at the time of milking. Different stages of parturition were observed and recorded the data as per the earlier methods[3]. Data were analysed statistically following standard methods[8].

RESULTS AND DISCUSSION

Behavioural signs during various stages of parturition:

Behavioural signs during first and second stage have been presented in Table-1. During the first stage of parturition, the animals reduced the interest in feed and water, restlessness, raising the tail and showed intermittent abdominal straining with arch back indicating labour pain. The animals tried to isolate themselves from human vicinity and from their herd. Similar observations were also reported by other workers[7, 4 & 9]

Abdominal pain switching and raising of tail, frequent lying down and getting up were the most prominent signs during the second stage of parturition. It was observed that all the animals gave stain to expel the foetus in lying position. The expulsion of head of the foetus required strongest expulsive as evidence by abdominal straining force. After appearance of the head and shoulder through external genitalia the remaining portion of the foetus was found to be expelled within minutes. Similar observations were reported by other worker [7]. In the present study 93.33 per cent animals showed interest in feed and water during the second stage of parturition.

Majority of cows (93.33%) delivered their foetus in standing position while rest (6.67%) cows delivered in lying position. Other worker[1] also reported that the buffalo cows remained in standing position during expulsion of foetus.

Behavioural signs of animals during third stage of parturition have been presented in Table-2. Just after delivery of the foetus, the mother was busy with the new born. Majority (63.34%) of the cows reacted quickly to nurse the calves. Nursing started licking of different parts of the calves to clean it. It was also observed that the primiparous animals nursed their calves lately (within 5 minutes after delivery) compared to the pluriparous cows (immediately after delivery). Such observations were also reported by earlier worker[2], which might be due to first time experience of shock and pain of birth felt by the new calvers and/ or the calf might be a stranger to her. It was observed that most cows tried to eat up their foetal membrane if they were not prevented. This was in agreement with other worker [9].

Length of various stages of parturition:

The sequence of various events of parturition in swamp buffaloes of different parities are presented in Table-3. The overall mean time required for onset of labour and appearance of water bag (first stage) was 131.67± 22.93 minutes. Earlier worker[7] recorded longer duration of the first stage of parturition in Murrah buffaloes while another worker[6] recorded a short duration of the first stage of parturition Nili- Ravi buffaloes. The overall mean time required for expulsion of foetus (second stage) was 30.97± 3.60 minutes. Similar duration of time for second stage of parturition in swamp buffaloes was also observed by a worker[9]. After appearance of head at external genitalia, the remaining portion of the foetus was expelled within 3 minutes. The overall mean time required for expulsion of foetal membrane (third stage) was found to be 248.33± 22.38 minutes. Similar observations were also recorded by earlier workers [9 & 7] in Swamp and Murrah buffaloes. Analysis of variance showed no significant difference between groups in duration of various stages of parturition.

The total time required for parturition in the present study was 411.00± 28.92 minutes which was in agreement with the findings of earlier worker[6] in Murrah buffaloes while other workers [2&7] recorded longer duration in Murrah and Nili- Ravi buffaloes respectively.

There was no significant effect of parity on the length of various stages of parturition in Swamp buffaloes. Similar observation was also recorded by

previous worker[6]. However, the duration required to complete the act of parturition was higher in animals of parity I than of parity II and III. Other worker[2] observed that primiparous animals took longer duration to complete the process of parturition than pluriparous animals. The longer duration required for completion of various process of parturition by the first calver than by multiple calvers buffaloes might be due to first time maternal adjustment of reproductive tract and shock and pain of parturition felt by the new calvers.

The sex of the calves did not affect significantly on various stages of parturition in the present study, which was in agreement with the findings of earlier worker[6]. A significant ($P< 0.05$) negative correlation ($r = -0.39^*$) was observed in the present study between birth weight of calf and total time required for parturition. The total time required for complete delivery in buffalo is highly variable and it is affacted by breed, health, intensity of labour pain, parity and the environment[5].

Table: 1. Behavioural signs during first and second stages of parturition in swamp buffaloes

Signs	First stage		Second stage	
	No. of animal	Per cent	No. of animal	Per cent
Reduced interest in feed and water	30	100	2	6.67
Restlessness	30	100	-	-
Isolation from human and herd mates	30	100	-	-
Raising of tail	30	100	30	100
Lie down and getting up	30	100	28	93.33
Occasional abdominal strain and arch back	30	100		
Abdominal straining	-	-	30	100
Expulsion of foetus on a) Standing position b) Lie down position		 28 2	 93.33 6.67	

CONCLUSION

It can be concluded from the present study that reduced interest in feed and water, restlessness, occasional raising of tail and abdominal straining were the most prominent signs observed during the first stage of parturition while reslessness, severe abdominal straining and frequently lie down and got up were signs observed during the second stage of parturition. Majority of the animals (93.33%) delivered their foetus in standing position where the whole parturition process took 411.00 $\pm$ 28.91 minerals. The pluriparous cows nursed their calves earlier than the primiparus. parity of animals and sex of the calves had no significant effect on various stages of parturition.

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