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Short Communicat

Some Reproductive characteristics of Marwari mares

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ABSTARCT

Data on different reproductive traits *i.e.* length of the estrous cycle, duration of estrus, gestation period and foal heat in respect of Marwari mares for a period of five years (2002-2006) were recorded and analyzed for the present study. These findings may be useful, as ready references for some of the reproductive characteristics of our indigenous horses.

Key words: Estrus, Estrous cycle, Foal heat, Gestation, Marwari mares

Domestic horses (Equus caballus) are the members of the family Equidae, which belongs to the order Perissodactyla. The reproductive cycle of the mare is subject to the greatest variability among all the domestic animals and some mares appear to be truly polyestrous and they can produce offspring at any time of the year. However, majority of the mare populations are seasonally polyestrous (Hafez, 1993). Breed differences and individual variations in reproductive characteristic exist in mares. The reproductive characteristics of exotic or thoroughbred horses are well studied and available for ready references. However, the reproductive characteristics of our indigenous horses are not well studied. Therefore, the present study was undertaken to record different reproductive traits in Marwari mares for a period of five years (2002-2006) at National Research Centre on Equines, Equine Production Campus, Bikaner.

Length of the estrous cycle was recorded as the time interval in days from the beginning of estrus (day 0) to the beginning of subsequent estrus (Hafez, 1993). A total of 33 observations were taken for this parameter. Duration of estrus in female horses was estimated as the time interval in days between the first and the last detection of male receptivity along with cessation of estrus activities. A total of 62 observations were carried out in this study. The length of gestation period is calculated as the interval from fertile mating to foaling or parturition. Gestation period was calculated in 21 observations as; the date of successful breeding to the date of foaling. Foal heat is an important reproductive parameter of horses as it comes within short period after foaling and is measured as the time interval between foaling to the occurrence of first estrus. A total of 19 observations were undertaken for the present study.

Different reproductive characteristics of Marwari mares maintained at sub-campus Bikaner farm are presented in the table 1. The results reveal a mean of 19.16 ± 0.71 (range 13-29) days estrous cycle in the present study. Our results are lower than the earlier reports of Roberts (1971) and Hafez (1993) in case of exotic horses. They have reported an average length of 21 days in exotic horses. The present finding also shown a wider range in the length of estrous cycle, which Hafez (1993), reported to be 19-23 days in exotic horses. In present study, an average duration of estrus was observed as 6.14 ± 0.21 days with the range of 3-11 days. Daels et al (1991) and Allen (1978) reported the duration of estrus as 5-6 and 3-10

Table 1. Reproductive Characteristics in Marwari mares

Traits (days)	Mean	Range
Length of the estrous cycle (n = 33)	19.16 ± 0.71	13 – 29
Duration of estrus (n = 62)	6.14 ± 0.21	3 – 11
Gestation period (n = 21)	328.67 ± 3.5	301 – 368
Foal heat (n = 19)	21.10 ± 4.47	4 – 75

Numbers within the brackets indicates number of observations

days, respectively, in exotic horses and are corroborative with our findings. The average gestation period in Marwari mares was found to be 328.67 ± 3.5 days and ranged from 301 to 368 days. Similar results have also been reported by Hafez (1993) and Mina Davis Morel (2005). Further, Hafez (1993) reported that gestation length in the mare is influenced by maternal size, fetal genotype and the stage of the breeding season when conception occurs. In the present study theaverage duration for exhibition of foal heat was observed as 21.10 ± 4.47 days (range 4-75 days) after foaling. This finding is longer than the earlier observation made in exotic horses (Mina Davis Morel, 2005), and mares are unusual among mammals in showing her first estrus very soon after foaling often within 4-10 days. Postpartum estrus usually occurs 5 to15 days after foaling and some mares, however may show estrus as late as 45 days (Hafez, 1993) and the present study is similar to this findings. The present study gives an idea about some of the reproductive characteristics of our indigenous horses of Marwari breeds.

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