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Full Length Research Paper

Postpartum interval of Darfurian cows: Influences of breed, BCS, parity and season

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Abstract

The present study was designed to determine the length of postpartum interval (PPI) of some local Sudanese cows in South Darfur State namely Fellata, Kenana and cross bred cows (Kenana × Friesian). Furthermore the influence of body condition score (BCS) and parity on PPI was also investigated. In experiment 1 a total of 59 dairy cows that gave birth were employed to determine the length of PPI. The parity range of these cows was 1 to 5. Their BCS range was 2.5 to 4. The cows were grouped according to their breed into three groups. Group I was Kenana (n = 21), group II was Fellata (n = 17) and group III was cross-bred (n = 21). The PPI was recorded as the time elapse from parturition to the appearance of the first oestrous postpartum. The pure local cows of Fellata and Kenana had a significantly ($p < 0.001$) longer PPI compared to cross-bred cows. The mean length of PPI of Kenana, Fellata and cross-bred cows were 286.9 ± 35.3 , 246.3 ± 26.6 and 122.0 ± 14.9 days respectively. No difference ($p > 0.05$) in the PPI were found between

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Kenana and Fellata cows. Slight negative relation ($R = 0.2$) between BCS and the PPI was observed and parity did not influence PPI ($R = 0.005$), Experiment II was designed to study the influences of season on the PPI of the above mentioned cows. The PPI was compared among three groups of cows that gave birth in three different seasons. Group I was 18 cows that gave birth in summer (Kenana = 7, Fellata = 4 and cross-bred = 7). Group II was 19 cows that gave birth in autumn (Kenana = 9, Fellata = 6 and cross-bred = 4) and group III was 31 cows gave birth in winter (Kenana = 13, Fellata = 11 and cross-bred = 7). The BCS and parity of these cows were similar to those of the above experiments. The results of this experiment showed that PPI of cross-bred cows was significantly ($p < 0.001$) shorter in summer. No difference ($p > 0.05$) in the PPI of cross-bred cows that gave birth in autumn and winter was found. Neither the PPI of Kenana nor that of Fellata cows were influenced by the season ($P > 0.05$). It is concluded that the Kenana and Fellata cows have a similarly long PPI that would not be influenced by season whereas the cross-bred cows have a short PPI which is influenced by summer only. Additionally BCS has slight influence on the PPI while parity has no effect on it.

Keywords: Cow, postpartum, breed, BCS, parity, season.