Reproductive and growth performance of Friesian crossbred bulls

ABSTRACT

This study investigates the growth and reproductive performance which includes the onset of spermatogenesis and puberty of Friesian crossbred bulls, the results of which may become useful in the evaluation of bulls for breeding soundness. At 36 months of age, the bulls attained a mean body weight (BW) of 493.44 kg with mean height at withers (BH), body length (BL) and scrotal circumference (SC) of 133.68 cm, 160.33 cm and 35.28 cm, respectively. The results showed that age was significantly correlated with BW ($r = 92$, $p < 0.01$), BH ($r = 90$, $p < 0.01$), BL ($r = 90$, $p < 0.01$) and SC ($r = 0.89$, $p < 0.01$). The SC was also found to significantly correlate with BW ($r = 93$, $p < 0.01$) and BH ($r = 91$, $p < 0.01$). The BW, BH, BL and SC norms distributed with age in this study would be useful in the evaluation of the Friesian crossbred bulls for breeding soundness. Within the limits of this study for age, BW, BH and breed, from the quadratic equations shown in this paper, it is also possible to predict the SC, which is highly related to fertility, if the age, BW or BH of a bull is known. The GnRH-induced plasma testosterone level was found to increase as the bulls grew older from 4ï 24 months, then it plateaued up to 36 months. Though spermatogenesis began at the age of 9 months in this breed type, the bull calves were found to reach puberty only at the age of 11 months.

Keyword: Growth; Body weight; Testosterone; Semen; Spermatogenesis; Puberty