DIFFERENCES IN TESTICLE SHAPE AND WEIGHT OF DIFFERENT BREEDS OF CATTLE AT WEANING

Y. ENDO*, G.W. SEIFERT* and H.R. CHRISTENSEN**

Scrotal circumference is advocated as a criterion for selection for fertility in bulls (Coulter, Rounsaville and Foote 1976). This paper examines the differences in scrotal circumference and testicle diameter, length and weight of bulls from Africander x Hereford/Shorthorn (Belmont Red) (BR), Brahman x Hereford/Shorthorn (BX), selected Hereford x Shorthorn- (HSS), random bred Hereford x Shorthorn (HSR), Sahiwal x Hereford (SX), BR x BX, and BX x BR.

Scrotal circumference was measured immediately prior to castration and the freshly collected testicles were measured from the lower 50% (258) of six-month-old calves culled over two years on their age and dam-age corrected weaning weights. The data were analysed by least-squares.

The mean liveweight, age, scrotal circumference, and testicle weight, length and diameter at castration were 156 kg, 188 days, 16.34 cm, 25.27 g, 5.17 cm and 2.64 cm. All testicle measurements differed significantly (P < .01) between breeds. The diameter, length and weight of BR testicles were larger than those of the BX by 15.5%, 12.7% and 41.2% respectively. SX testicles were similar to those of the BX with the reciprocal crosses of BR x BX and BX x BR intermediate between BX and BR. When the significant effect (P < .01) of body weight was removed by covariate analyses the diameter, length and weight of the HSS and HSR were similar to those of the BR. Analyses of the ratio diameter/length showed that the testicles of the BR, HSS and HSR were the least elongated while those of the BX were the most elongated.

The small testicles of the BX are consistent with their lower fertility compared to the BR (Seifert and Kennedy 1972). Accurate fertility figures are not yet available for the SX but it is interesting to note the similarity of testicle sizes between them and the BX.

The differences between breeds in testicle size which are consistent with the differences in fertility could possibly be used to validate the use of testicle measurements as a measure of fertility within breeds.