Abstract

The objective of this study was to compare the reproductive and productive performance of Bos indicus, Bos taurus and crossbreed cows in a cowcalf system in Yucatan, Mexico. Twenty years information on 310 Brahman (Br), 191 Nellore (Ne), 140 Commercial Zebu (CZ), 49 Brown Swiss (BS) and 69 cows crossbred with BS (Cz) was used. The response variables studied were age at fist calving (AFC), calving interval (CI), weaning weight at 205 days (WW205) and weaning weight per day of calving interval (WW/CI). General linear models were used to determine the effect of year of birth (YB) or calving (YC), season of birth (SB) or calving (SC), parity number (PN), sex of the calf (SX) and racial group of the cow (RGC) on the response variables and mixed models to estimate the repeatability by using the between and within; cows components of variance. The overall means and standard deviations for AFC, CI, WW205 and WW/CI were 1091.7±137.9 days, 432.9±96.9 days, 164.3±25.5 kg y 401±159 g, respectively. The YB and SB affected AFC, whereas YC, SC and PN affected CI, WW205 and WW/CI (P<0.05). The SX of the calf affected WW205 and WW/CI (P<0.05). WW205 as a covariate affected CI. The RGC affected the AFC, CI and WW205 (P<0.05). Ne cows had better reproductive performance (AFC and CI) than Br cows, whereas the SP and Cz cows were in between. Br and SP had the higher WW205 than Ne cows. There were no differences between RGC for WW/CI. The repeatabilities for CI, WW205 and WW/CI were 0.074±0.014, 0.097±0.013 and 0.014±0.013, respectively. In conclusion, in order to improve the productivity of the cow:calf system, the effect of season of the year and management practices should be taken care, as well as to identify the breed or crossbred with better performance to be used by farmers.

Keywords

Reproductive performance, productivity, Zebu, Brown Swiss, tropics.