

Factors influencing reproductive performance of cows from different Nguni ecotypes in southern Mozambique

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Abstract

The objective of this study was to assess the reproductive performance of two Nguni ecotypes (Nguni and Landim) raised in a subtropical environment to enhance strategies for livestock development and restocking programmes within the southern African region. Reproduction data collected between 1996 and 2009 from 365 cows of the Landim and Nguni ecotypes were analysed. From the results, ecotype, place of birth, year and season of birth/ calving had significant effects on age at first calving (AFC) and calving interval (CI). Overall means for AFC and CI were $1,071 \pm 166$ days and 432 ± 85 days, respectively, while average calving rate was $88.0 \pm 4.7\%$. Heifers born in the dry season had lower AFC than heifers born in the wet season. Heifers born at Impaputo Breeding Center were the youngest at first calving, followed by the South African born ones. Heifers of the Landim ecotype also calved younger than heifers of the Nguni ecotype. CI was shorter in wet seasons (main breeding seasons) than in dry seasons. Interaction between ecotype and year-season ($p < 0.005$) showed that, in wet and dry seasons, Nguni cows had shorter CI than the Landim. This study demonstrates for the first time a possible genotype-by-environment interaction between Nguni ecotypes. This might aid future cattle development and restocking programmes in southern Africa taking into consideration the adaptation of indigenous genotypes and climate change.