ABSTRACT

Genetic and phenotypic parameters of Santa Gertrudis, Sahiwal, Brahman and crossbred cattle were estimated from eleven years data collected at the Ebini Livestock Station in Guyana.

Least squares analyses were employed to determine the influence of sire, breed and sex of calf, age and calving interval of the dam, year and season of birth on the body weights of the calves at different ages. Santa Gertrudis body weights were significantly influenced by all factors except calving interval. Season did not affect Sahiwal weights whereas year and season were the most important factors affecting Brahman weights.

Santa Gertrudis calves reared on improved pasture were heavier than Brahman and Sahiwal kept on range. Santa Gertrudis were 63, 206, 322, 411, 532 and 630 pounds at birth, 4, 8, 12, 18 and 24 months, respectively.

Paternal half-sib estimates of heritability of body weights at different ages, derived from data adjusted for the fixed effects, were generally higher than values reported for beef cattle in the tropics. This finding suggests that the individual's own phenotype should be the most important basis for selection.

Mortality rates were determined as a per cent of live births. The mean was 23 per cent, 16 per cent occurred before one year of age.

Age at first calving was 33, 39 and 38 months, calving interval was 19, 19 and 22 months, and calving percentage was 63, 62 and 55 per cent for Santa Gertrudis, Sahiwal and Brahman cows, respectively.

Dressing percentage of all steers was 48 per cent. Sahiwal steers dressed significantly higher than Santa Gertrudis and Brahman.

Output per acre on improved pasture was 174 pounds; that on range 3 pounds.

The study revealed that up-grading native dams to three-quarter Santa Gertrudis blood would bring about a substantial increase in body weights of the animals and all production traits can be improved to an even greater extent through improved management practices and nutrition.