

Abstract

An on-farm observational study was conducted between November 2000 and February 2002 to identify the factors associated with average daily weight gain (ADWG) of calves in Maasai pastoral systems of Kenya. The study involved a two-stage random sampling of 23 herds from 2 former Group Ranches. A total of 1,694 observations were made on 292 calves aged less than 13 months. Univariate and multivariate mixed model analysis were used to determine the association between growth rate and potential explanatory factors for ADWG. The overall ADWG was 0.26 kg (-0.57- 0.81 kg). There were significant differences in ADWG associated with age, breed, initial calf body weight, occurrence of clinical anaplasmosis and helminthiasis, frequency of water intake and seroconversion for *Theilaria parva* and *T. mutans*. Thus, selective breeding for higher weights and increased water intake during the dry period, coupled with improved delivery of animal health packages to control theileriosis and internal parasites would go a long way in increasing daily weight gains of calves in Maasai pastoral systems.