

Abstract

The efficacy of morantel sustained release trilaminar (MSRT) bolus against gastrointestinal nematodes was evaluated under field conditions over a 10-month period. Twenty weaner calves were randomly divided into 2 groups of 10 calves each and grazed from March to December on adjacent, similarly contaminated paddocks. Group 1 calves (T-1) served as untreated controls while group 2 calves (T-2) were dosed at turnout with MSRT bolus designed to release morantel tartrate continuously for 90 days. The efficacy of MSRT was assessed by comparison of parasitological data (faecal worm egg counts, herbage larval counts, worm counts from tracer calves and set-stocked trial calves, determination of haematological parameters and pepsinogen levels), weight gains and clinical status of the animals. Faecal egg counts from the treated group (T-2) were reduced by 100% ($P < 0.001$) following treatment and remained significantly ($P < 0.05$) lower than counts from T-1 calves up to trial termination. The use of MSRT bolus resulted in a reduction of 92% ($P < 0.001$) in the number of gastrointestinal nematodes in set-stocked calves at the end of the study and a 55 to 85.7% reduction in herbage larval infectivity as reflected in lowered parasite burdens in tracer calves. At the trial termination, the control calves had gained on average (\pm s.d.) 59.4 ± 4.8 kg (200.0 ± 7.4 g day⁻¹) and the treated ones on an average 128.6 ± 10.5 kg (530.0 ± 13.1 g day⁻¹)