Abstract:

An investigation was carried out to assess the effects of weather on the occurrence and magnitude of the periparturient rise (PPR) in trichostrongylid nematode egg output in breeding Dorper ewes. The study was conducted over three breeding seasons on a ranch in the semi-arid area of Kajiado District in Kenya between June 1999 and December 2001. During each breeding season 20 ewes randomly selected from the breeding stock and 20 others selected from the unmated yearlings were monitored for faecal strongyle egg counts every 3 weeks. The lambing seasons were timed to coincide with the onset of the short rains (October-November 1999), the mid-short rains (November-December 2000) and the end of the dry season (September-October 2001). In each season higher egg outputs were recorded in the peri-parturient ewes compared to the unmated yearlings. The highest PPR occurred in September 2001, when lambing coincided with the end of the dry season, possibly as a result of maturation of hypobiotic larvae. The lowest PPR occurred in November 2000 when the onset of lambing coincided with the mid-short rains, possibly owing to low pasture infectivity associated with a long dry spell between January and October of the same year. The results of this study indicate that PPR occurred when lambing coincided with both the wet and the dry seasons. However, the magnitude was greatly influenced by the season when lambing occurred. It was also influenced by resumption of development of hypobiotic larvae and the nutritional status of the ewes. Not only should control of gastrointestinal nematode parasites in this area aim at preventing the occurrence of PPR by treating ewes 2-3 weeks before they are to lamb and during lactation, but the anthelmintic used must also eliminate hypobiotic larvae. In addition, the animals must be given supplementary feeding during this period.