

## **Development, survival and availability of gastrointestinal nematodes of sheep on pastures in a semi-arid area of Kajiado District of Kenya**

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### **Abstract**

A study was carried out on a ranch in the semi-arid area of Kajiado District in Kenya during the period July 2000 to June 2001 to determine the seasonal patterns of development and survival of gastrointestinal nematodes of sheep on pastures. A series of plots were contaminated with sheep faeces every month and pasture samples were collected weekly for the recovery and identification of larvae. The availability of infective larvae on naturally contaminated pastures was also monitored on the paddocks grazed by sheep and around the night pen and the watering point every month from July 2000 to June 2001. The results from the examination of the pasture samples indicated that rainfall distribution was the major factor governing the development and survival of the pre-parasitic stages. No parasitic larvae were detected from the plots contaminated during the dry months from July to October 2000, but development and translocation of infective larvae on pastures occurred on plots contaminated during the rainy seasons and soon after when relatively high moisture was present in the herbage (November 2000 to June 2001). During this period, peak larval counts occurred between the first and the second week post contamination, then declined to undetectable levels between week 4 and 16 post contamination. The lack of development of infective larvae during the dry season and the relatively rapid decline of their population during the wet season presents an opportunity for the use of pasture spelling as a means of helminth control in the study area. The availability of infective larvae on naturally contaminated pastures, around the night pen and around the watering point also followed the rainfall distribution pattern. Infective larvae were consistently recovered around the watering point throughout the study period. This indicated that the point is an important source of infection for sheep, especially during the dry season when other pastures are non-infective.

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