SUMMARY

The trial was carried out on a 1-year period to identify the factors involved on pasture contamination by infective larvae of gastrointestinal nematode parasites of cattle and sheep. Animals were assigned to two paddocks, as follows: five calves to paddock 1 (area = 1 ha) and five calves and 16 ewes to paddock 2 (2 ha). These animals remained on these paddocks in continuous grazing throughout the trial. Fecal samples were collected for nematode egg counts and fecal cultures at fortnightly intervals. Grass samples were collected, in the same day, to determine the number of infective larvae on pasture. In both paddocks, the highest larval counts of *Haemonchus* spp., *Trichostrongylus* spp. and *Cooperia* spp. on pasture were found from May to October. The highest rates of *Oesophagostomum* spp. larvae were observed from September to November. Pasture contamination was relatively high in June, July and August, when low pluviometric levels were recorded (less than 25 mm). In September, when rainfall was higher, there was a pronounced increase in larval counts on pasture, suggesting that larvae migrated in "waves" from fecal pats accumulated on paddocks during the drought. In contrast, low larval rates were recorded from November to March. Measurements of the association between parasitical and meteorological parameters were performed by coefficients of canonical correlation, which were high for all parasites detected on pasture. The results suggest that susceptible animals should be treated with an anthelmintic at the end of the rainy season followed by their transference to clean pasture.

**KEY WORDS:** nematode, *Haemonchus*, *Cooperia*, *Trichostrongylus*, *Oesophagostomum*, *Bunostomum*, cattle, sheep, infective larvae.