INTRODUCTION

Gastrointestinal parasitic infection represents the major cause of loss to sheep farmers worldwide. Hence, a major challenge is the generation of rapid, high-throughput and accessible routine diagnostic approaches to assess the health status of individual animals and the whole flock, so that managers of technical assistance may exercise effective control over helminths in sheep. Targeted selective treatments (TST) are an alternative to more rational helminth infection control.

OBJECTIVE

To optimize the control of gastrointestinal parasitism using the TST methodology and relating the meteorological behavior in a sheep production system, municipality of Sora (Boyacá), Colombia.

METHODOLOGY

16 creole lambs were used between 3 and 7 months belonging to a conventional sheep farming (Figure 1). The feeding scheme was extensive grazing and energy-protein supplementation (Figure 2). Between April and October 2015, blood and faecal samples were individually taken every 2 weeks to respectively evaluate the percentage of hematocrit (HCT) and egg per gram (EPG), also and with the same frequency were performed the FAMACHA-test, DAG SCORE-test, body condition score (BCS) and weight gain (WG) (Figure 3). Precipitation, maximum temperature, minimum temperature and relative humidity were recorded daily. Animals with at least two of these results: HCT <25%, EPG > 600, FAMACHA 4 to 5, BCS 1 to 2, DAG SCORE 4 to 5, and an undesired rate of WG, should be dewormed with a benzimidazole or a macrocyclic-lactone.

RESULTS

43.8% of the lambs did not require deworming, 18.8% were dewormed once and 37.5% needed twice or more anthelmintic treatments. Thus, the TST approach represented a 65% reduction in anthelmintic use. The highest EPG occurred between May and June, a period historically conceived as the transition from wet season to the dry season (Figure 4). Mean WG values from all the groups were similar at the beginning and end of the study (p>0.05).

CONCLUSIONS

TST allows reduction of annual applications of anthelmintics promoting their efficiency, maintaining animal performance, even in restrictive scenarios for water deficit in the soil (Phenomenon “El Niño 2015”), where forage based diets are scarce.

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REFERENCES