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Use of Probiotics to Control Gastrointestinal Nematodes in Sheep under Grazing Conditions, in Uruguay

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In Uruguay, anthelmintic resistance is a wide-spread phenomenon among sheep farms and there is a need to search for alternative strategies.

The aim of this study was to evaluate non-chemical alternatives to control GIN in sheep under grazing conditions in Uruguay. Trial1 was conducted at the Research Station "La Estanzuela", Colonia using 110 lambs distributed in five groups (n=22) with two repetitions each: G1= feed 16% protein concentrate (Control); G2=16% protein concentrate + 1% condensed tannins; G3= % protein concentrate + 4% condensed tannins; G4= 16% protein concentrate + condensed tannins extract as oral drench; G5= 16% protein concentrate + *Saccharomyces cerevisiae* CNCM I-1077 (LEVUCELL®SC).Trial2 was conducted at a commercial farm in Artigas using 90 lambs. Three experimental groups (n=30) were formed grazing native grasses: G1= feed 20% protein concentrate + *Saccharomyces cerevisiae* CNCM I-1077 (LEVUCELL®SC); G2= feed 20% protein concentrate (Control) and G3= feed 20% protein concentrate + 1% condensed tannins. Trial3 was similar to Trial 2 conducted during 2016.

The follow up period for Trial1 and Trial2 was from January- June 2015 and for Trial3 from January-June 2016. Production traits were recorded and fecal egg counts (FECs) were performed on individual animals. Infective larvae were recorded in animals and pasture.

Briefly, the main effect of probiotics treatment was a significant reduction in the number of treatments the animals required to thrive in Trial2 and Trial3 (31 vs 44 and 11 vs 30 respectively), in comparison with the control ($p<0.05$). In Trial1, FECs tended to be lower in G5 compared with G1 (2448 vs 2898) and G1 compared with G2in Trial2 (900 vs 1100).

Although probiotics have proven to be effective in controlling microbes, the results obtained from these exploratory trials are promising for further studies.

Biography:

América Mederos has a Veterinary Medicine degree from the Veterinary School in Montevideo, Uruguay. During 1993 she completed her MSs at Reading University (UK) and his PhD at the University of Guelph in 2010 in Veterinary Epidemiology. Since 1991 she joined the National Research Institute for Agriculture and has been conducting research programs on Animal Health. Her main interest has been in the study of anthelmintic resistance and searching for alternative methods to control gastrointestinal nematodes in ruminants using non-chemical drugs such as bioactive forages and probiotics.