Control of gastrointestinal nematodes in goats on pastures in South Africa using nematophagous fungi Duddingtonia flagrans and selective anthelmintic treatments

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Source

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Abstract

The effectiveness of selective anthelmintic treatments and use of nematophagous fungi Duddingtonia flagrans in reducing levels of gastrointestinal nematodes in goats was investigated at Onderstepoort, South Africa. Nineteen (19) naturally infected indigenous male goats, aged 10 months, were separated into four groups and grazed in separate previously ungrazed paddocks for two worm seasons (February 2002-March 2003). Two groups of goats were fed D. flagrans chlamydospores daily and two groups did not receive fungi. The FAMACHA system was used to determine which goats required anthelmintic treatments. Twice as many goats in the no-fungi fed group required treatments as compared with the fungi fed group. Mean FAMACHA scores in the no-fungi fed group were higher during most of the sampling occasions compared to the group fed fungi, but the difference was not significant. The group-mean faecal egg counts and PCV% were comparable between the two treatment groups throughout the study. Haemonchus was the predominant parasite genus in composite group faecal cultures. Group-mean body weights and body condition scores were higher for the no-fungi fed group from May 2002 up to the end of the study, though statistical differences were not significant. Mean worm burdens indicated that the most abundant species infecting animals were Haemonchus contortus and Trichostrongylus spp. and were higher in the fungi fed group. More animals required individual anthelmintic treatments in the no-fungi fed group. The requirement for extra treatments in the no-fungi fed group must, however, be considered against the financial cost of the fungi, the requirement of daily feeding of the fungi, the lower performance and higher worm burdens in the fungi fed group.

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