Resistance to thiabendazole, febantel, albendazole and levamisole in gastrointestinal nematodes of goats in Kenya

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ABSTRACT

A survey was undertaken to determine resistance to thiabendazole (TBZ), febantel (FB), albendazole (ALB) and levamisole (LVM) in gastrointestinal nematodes of goats on 4 farms in Kenya. Resistance was first investigated using faecal egg counts reduction in naturally infected groups of goats after treatment with either of the anthelmintics at the manufacturer’s recommended doses. Evidence of TBZ resistance was found on farms in Nairobi and Kajiado, while resistance to LVM was evident on a farm in Kiambu. Faecal egg count reduction for the anthelmintics was less than 90% on the respective farms. Haemonchus and Trichostrongylus were the 2 predominant species isolated from the 4 farms. Isolates from the farm in Nairobi and Kajiado had LC50 values of 0.18 and 0.22 μg TBZ/ml, respectively, while the isolate from Kiambu had an LC50 value of 2.52 μg LVM/ml. The LC50 values were determined using the egg hatch assay. This data confirms resistance to TBZ on the farms in Nairobi and Kajiado, and to LVM on the farm in Kiambu.