

A survey of anthelmintic resistance in nematode parasites of goats in Denmark.

[N Maingi](#), [H Bjørn](#), [S M Thamsborg](#), [H O Bøgh](#), [P Nansen](#)

Danish Centre for Experimental Parasitology, Royal Veterinary and Agricultural University, Frederiksberg, Denmark.

[Veterinary Parasitology](#) (impact factor: 2.58). 12/1996; 66(1-2):53-66. DOI:10.1016/S0304-4017(96)01006-0 pp.53-66

Source: [PubMed](#)

ABSTRACT The occurrence of anthelmintic resistance in 15 goat herds in Denmark was investigated using the faecal egg count reduction test (FECRT), egg hatch assay (EHA) for thiabendazole (TBZ) and a microlarval development assay (LDA) for TBZ, levamisole (LEV) and ivermectin (IVM). Resistance to both benzimidazole (BZ) and levamisole (LEV) anthelmintics was detected on six farms, and to both BZs and IVM on one farm. Resistance to BZs was also detected on two farms and to LEV on two farms. Ivermectin resistance was present on one farm. *Trichostrongylus* and *Ostertagia* spp. were the predominant nematode species in both pre-treatment and post-treatment faecal cultures. In all nine instances where BZ resistance was detected in the FECRT, the LD50 values for TBZ in the EHA were higher than 0.5 microM TBZ (0.1 microgram TBZ/ml), indicating resistance. LD50 values for TBZ in the LDA were also higher than 0.5 microM where resistance to BZs was detected in the FECRT, except two farms where LD50 values of 0.21 and 0.29 microM TBZ were recorded. LD50 values in the LDA for isolates declared resistant to LEV ranged from 0.78 to 5.62 microM LEV. For IVM, the two resistant isolates had LD50 values of 25 and 68 nM IVM. There were disagreements in the declaration of resistance between methods of calculating faecal egg count reduction percentage (FECR%) based on the arithmetic mean and those where geometric mean EPG is used. Similarly, inclusion of pre-treatment EPG or control group EPG in the calculation of FECR% influenced declaration of resistance.