

D.w. gakuya^{*,1} c. J. Nganga,² d.n. karanja,² j.k. wabacha¹ and m.n. mutune²

¹Department of Clinical Studies, University of Nairobi P.O. Box 29053 Kangemi, Nairobi

**²Department of Veterinary Pathology, Microbiology & Parasitology, University of Nairobi
P.O. Box 29053 Kangemi, Nairobi**

***Corresponding author**

Abstract

The occurrence of anthelmintic resistance in gastrointestinal nematodes in sheep on a farm in Kabete, Kenya was investigated between October 2005 and March 2006 when an outbreak of acute and fatal helminthosis occurred despite the use of ivermectin in worm control. The efficacies of locally available anthelmintics, namely, ivermectin, levamisole, levamisole ó rafoxanide combination and albendazole were evaluated based on faecal egg count reduction percentages (FECR %), clinical manifestation of helminthosis and post-mortem worm count (WC). All drugs tested showed low efficacies with FECR% of 44.2 %, 77.0 %, 66.9 % and 42.3 % for ivermectin, levamisole, levamisole ó rafoxanide combination and albendazole respectively. During the test period, 18 clinical cases were observed out of which 10 died. The mean WC in the dead animals declined gradually from 8905 in the pre-treatment period to 1545, 1529, 618, and 111 following ivermectin, levamisole, levamisole ó rafoxanide combination and albendazole treatments respectively. *Haemonchus contortus* and *Trichostrongylus* were resistant to all drugs tested. *Trichostrongylus* species were resistant to ivermectin and levamisole, but susceptible to albendazole. This necessitated treatment of the entire flock with albendazole and movement to new pastures and pens. No clinical case of helminthosis or mortality was recorded one month after the movement. This study indicated presence of multiple anthelmintic resistance on the farm as reported elsewhere in the country. Based on these findings, it is necessary to educate farmers on adapting integrated approach to helminth control with appropriate use of anthelmintics.

Key Words: Sheep, anthelmintic resistance