

Resistance of *Haemonchus spp.* to albendazole, fenbendazole and levamisole in 4 goat farms of Antioquia, Colombia.

Jose D Zapata-Torres, Esteban Naranjo-Gutiérrez, Ángela M Martínez-Valencia, Jenny J Chaparro-Gutiérrez*, David Villar-Argaiz

*Corresponding autor to provide phone 57-4-219-91-22; fax: 57-4-2199109; e-mail:
jenny.chaparro@udea.edu.co

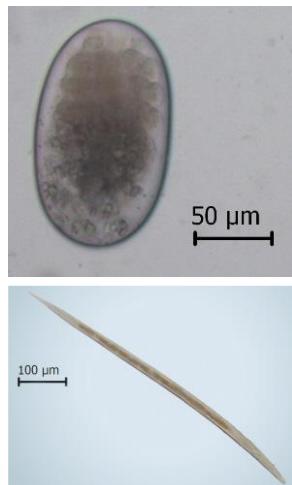
**Facultad de Ciencias Agrarias
Escuela de Medicina Veterinaria
Universidad de Antioquia
Medellín, Colombia**



PROBLEM DESCRIPTION



- DRUG RESISTANCE!!!
- The extremely high prevalence of multi-drug resistance in nematodes of sheep and goats threatens the viability of small-ruminant industries.
- No reports of drug resistance in Antioquia, Colombia.



OBJECTIVE



This study was to evaluate the efficacy of albendazole, fenbendazole and levamisole to control gastrointestinal nematodes in goat farms of Antioquia by doing fecal egg count reduction tests.



METHODS



- A total of 139 crossbreed goats from four separate farms.
- Individual fecal egg counts were performed using the modified three chamber McMaster technique.
- The anthelmintics administered:
 - Albendazole (farm 1, n=63),
 - Fenbendazole (farm 2, n=20),
 - Levamisole (farm 3, n=37 and farm 4, n=19).
- Larval cultures using Baermann's technique and the morphological keys for identification of L3 in small ruminants.



RESULTS AND CONSLUSION

Table 1. Fecal egg count reduction test in 4 goat farms following treatment with different anthelmintics

Drug/farm	Eggs per gram (mean±SD)		% Reduction
	Day 0	Day 14	
Albendazole (n=63)	2856,38 2488,75	2288,83 1964,48	25,86%
Fenbendazole (n=20)	435,2 470,69	1176,60 906,89	0%
Levamisole Farm 3 (n=37)	1126,49 1290,12	1739,08 2082,30	0%
Farm 4 (n=19)	178,53 184,54	499,33 407,63	5,50%

- The genus of nematodes identified was predominantly *Haemonchus spp.*, with 70,27% and 82,81% for samples from day 0 and 14, respectively
- These results provide evidence of a total state of resistance to 3 common anthelmintics. Further research is needed to design integrate management programs to control nematodes in small ruminants in Colombia.