



THE BASIS FOR ANTHELMINTIC TARGETED SELECTIVE TREATMENT IN HIGH VALUE SARDI SHEEP IN MOROCCO : QUESTIONNAIRE SURVEY AND ACTUAL INFECTION

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Introduction

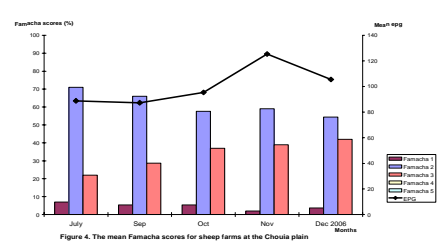
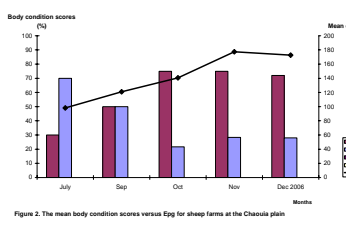
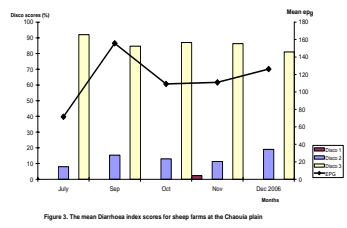
The targeted selective treatment (TST) approach is centred around the fact that gastrointestinal nematode populations are highly overdispersed. Under these circumstances, the ability to select individual sheep that need treatment should minimise the rate of development of anthelmintic resistance by maintaining an untreated parasite population (*in refugia*). The main problems of TST are: i) how can we detect sheep that really need anthelmintic treatments ? ii) are farmers ready to change their strategy of treatment (from all flock to selected sheep) ? iii) how shall we cope with controlling worm infections and not increasing nematode resistance to deworming, mostly with Benzimidazoles.

Materials and Methods

The Chaouia plain is a particularly well adapted region for our investigation. The Chaouia plain has an arid climate. A patchy fluorosis disease that requires emigration of lambs to other pastures and their subsequent return on original farm may result in putative introduction of resistant worms. The efficacy of drugs is declining since Tetramisole has an efficacy of 45-91%, Thiabendazole 36-86% and ivermectin 48-93%, depending on farms. The resistant species to benzimidazoles are *Haemonchus contortus* and *Teladorsagia circumcincta*. The local Sardi breed is highly praised and its meat used in the most important familial events. The anthelmintic treatments necessity might be determined by using TST markers (Body condition, Disco-diarrhoea score and Famacha-anaemia score). This is tested in 8 farms. The farmer's acceptability of TST was tested in 48 farms of Chaouia.

Results

- 1) Sheep used in the initial TST study (2006) had a low faecal egg counts (<300) and did not require strongly treatment. This was mostly due to exceptionally dry conditions in the area. The TST markers (Bodyscore, Disco and Famacha), at first examination were not very efficient to detect sheep with higher infection.
- 2) Most of the farmers are ready to use TST (79%) provided they are given simple rules for action.



DISCUSSION AND CONCLUSIONS

- 1) The low EPG in the Chaouia arid conditions in 2006 precluded the real interest of selecting lambs for treatment. None of the markers was really efficient. There is still some investigation to be done to eventually combine markers using multivariate analyses..
- 2) The farmers are ready to use TST if they are guided to do so.
- 3) The research should then focus on building up a decision tree that could be translated in a simple TST markers and EPG value combination.

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