

# Integrated management of gastrointestinal parasites on pastures



There are many advantages to using pastures to feed sheep:

- Direct, natural food source;
- Lifestyle akin to that of their herbivore ruminant nature;
- Best conditions for optimal health and well-being.

On the other hand, sheep on pasture are more exposed to internal parasites, especially those in the nematode family. It is therefore important to control these gastrointestinal parasites with an integrated management program. In this way, the parasite load on the farm is limited to a level that minimally impacts the health and productivity of animals, all the while ensuring that there is no contribution to the emergence of resistance to anthelmintic medications.



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## Key elements of integrated management

### Monitoring of therapeutic efficacy

Efficacy of dewormers can be confirmed with fecal analyses, ideally before and after treatment. It's important to test regularly and adjust the choice of dewormer accordingly.

### Pasture management

Well fed animals better tolerate parasites. A good pasture management system leads to better quality feed and limits exposure to parasites. Certain forage species rich in proteins and tannins are of particular interest to help animals live comfortably alongside parasites.

### Observation, clinical signs

In addition to fecal egg counts performed by fecal analysis, certain clinical indicators can help determine which animals require an antiparasitic treatment, specifically:

- Colour of the mucous membrane of the eyes (anemia - FAMACHA technique)
- Body score, weight, and daily gain
- Consistency of feces and cleanliness of hindquarters
- Bottle jaw

Each of these elements will be described in the different sheets and videos included in this tool kit.

### Refugia

Refugia is a reservoir of parasites that remain susceptible to dewormers (non-resistant). In other words, these are parasites that have not been exposed to anthelmintic treatment and can be found inside animals or on pastures.

### Resilience of animals

An animal is resilient to parasites when it's capable of tolerating an infestation. Parasites may harbour inside the animal and lay eggs, but the animal is not clinically affected. Integrated management of parasitism means selecting resilient animals.

### Targeted selective treatments

Systematic treatment of the entire herd is no longer appropriate. If deworming is required, targeted selective treatment must be used.

## Goal of integrated management

Integrated management is an approach for the control of parasites that involves several techniques (biological, chemical, physical, and cultural) in order to slow the development of resistance to dewormers, all while prioritizing animal health; for example, choosing forages rich in proteins and/or tannins.

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The strategies described in this  
pamphlet also largely apply to goats