



Sustainable PARasite Control
in Grazing Ruminants



Assessment of Resistance to Intestinal Strongyles: Findings from tests conducted on eight farms in France

To identify potential resistance of intestinal strongyles to antiparasitic drugs on livestock farms, the fecal egg reduction test is the gold standard. According to recent tests conducted in central-western France, all 8 farms studied are affected by resistance to at least one class of antiparasitic drugs.

Principle and prerequisites

The test to measure the reduction in the excretion of digestive strongyle eggs in feces can be performed with all classes of antiparasitic drugs. It is conducted directly on the farm. This test is based on egg excretion levels before and after antiparasitic treatment. The percentage reduction obtained provides an estimate of the resistance of the strongyle population to the antiparasitic class being tested.

If the reduction rate in the number of strongyle eggs is greater than 95%, the product is effective; if it is lower, the product is partially or completely ineffective, and resistance to strongyles has developed.

Four prerequisites must be verified before beginning a test. The animals in the test group must be infested and excrete at least 150 eggs per gram (opg), and they must have been kept together for several weeks prior to the test. They must not have received any antiparasitic treatment for at least one month, or up to three months in the case of a residual compound. A sufficient sample size is required, with at least 10 ewe lambs or ewes per antiparasitic drug family being tested.

Implementation

Two sampling rounds are required, spaced 7 to 17 days apart depending on the active ingredient being tested. For each family of antiparasitic drugs being tested, a corresponding number of homogeneous groups (by age and body condition) of 10 to 15 animals must be formed. During the first round, the animals—identified by a different color per group—are treated with each test compound at the dosage corresponding to the heaviest animal in the group. At the same time, fecal samples are collected and stored individually in small bags. The individual bags are grouped by batch to facilitate the mixing of feces, which takes place exclusively in the laboratory for pooled analysis. The second round takes place 7 to 17 days later, depending on the active ingredient being tested (Table 1), feces from all ewes are collected again using the same procedures as during the first collection.

Results of 8 tests conducted in western France

Eight tests were conducted on meat sheep farms between March 2025 and May 2026 in central-western France, using the methodology described above. Five classes of antiparasitic molecules were evaluated as part of our study. The results are presented in Table 2.

The main lessons to be drawn are that all the farms tested are facing resistance to at least one class of antiparasitic drugs. Nearly half of the farms are dealing with resistance to two classes, and 40% to three classes of antiparasitic agents. All classes of antiparasitic agents are affected by this phenomenon, including the most recently marketed ones, such as Monepantel. These results are consistent with other findings recently obtained in the Nouvelle-Aquitaine region and support our conclusions.

These results demonstrate that antiparasitic drugs must be used judiciously to avoid eventually reaching a therapeutic dead end. They must be combined with preventive measures and integrated parasite management to limit the risk of infestation and reduce the frequency of their use.

Table 1. Time intervals for fecal sampling after treatment

Active ingredient of the antiparasitic drug	Time interval between treatment and the second fecal sample
Levamisole	7 to 17 days
Benzimidazoles	8 to 10 days
Macrocyclic lactones	14 to 17 days
Multiple active ingredients tested simultaneously	14 days



Table 2. Results of the 8 resistance tests conducted on the farm.

Active ingredient of the antiparasitic agent tested	% of herds showing resistance
Levamisole	38%
Fenbendazole	63%
Moxidectin	25%
Ivermectin	75%
Monepantel	13%

In summary:

- All farms are affected by resistance issues.
- Nearly 40% of farms face resistance to at least three families of antiparasitic drugs.
- All classes of antiparasitic drugs are affected.
- Prudent use of antiparasitic drugs is essential to avoid treatment failure.

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