

The Role of the Vet: Responsible Anthelmintic Use in Sheep

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Anthelmintics are antiparasitic drugs that expel internal parasites. However, resistance to these drugs is becoming more and more common, especially in gastrointestinal nematodes and liver fluke¹. This is detrimental to both the welfare and production of the sheep. Therefore, it is important that vets are aware of their role in preventing this from exceeding further by using anthelmintics responsibly. Examples of this are detailed below.

Anthelmintic classes:

- Benzimidazoles
 - Levamisoles
 - Macrocytic lactones
 - Amino-acetonitrile derivative (AAD)
 - Spiroindoles
- MOST RESISTED¹**

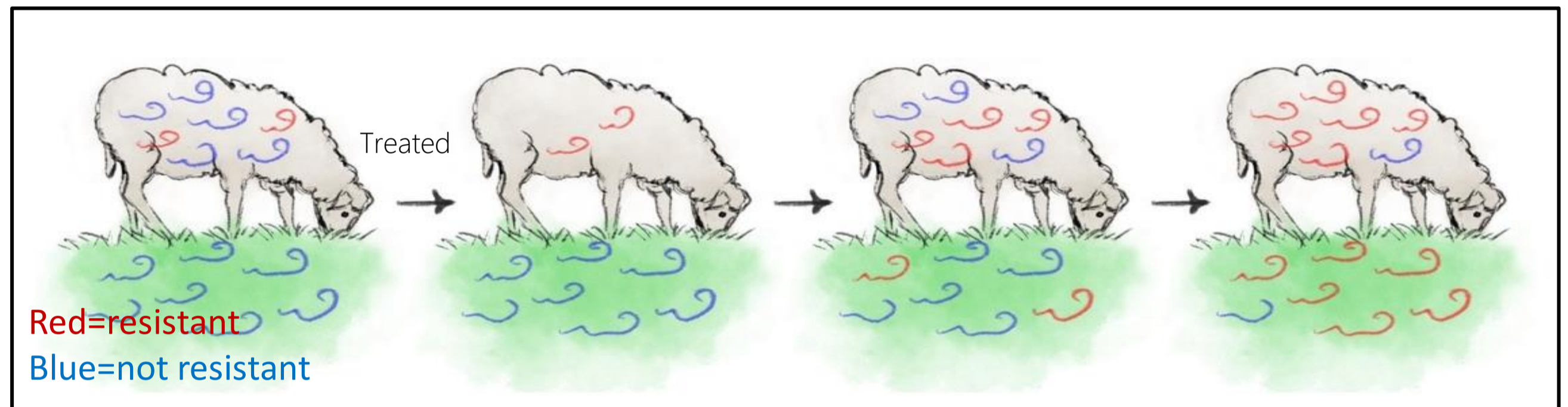


Figure 1 – the process of developing resistant internal parasites²

RESPONSIBLE USE:

Prevention¹

Preventing parasite burdens in the first place is more cost effective and reduces the development of resistance:

- Strong biosecurity protocols
- Protective immunity
- Pasture management
- Vaccines (lungworm)
- Nutrition (protein)⁴
- Quarantine new sheep for minimum 4 weeks⁵



Figure 2 – liver fluke⁷

Administer treatment correctly

- Carry out diagnostics before treatment e.g., faecal egg counts for gut worms and liver fluke & blood tests for sheep scab³, to ensure treatment is necessary.
- Dose for the heaviest animal to avoid underdosing. However, know your drug! E.g., anthelmintics containing closantel can cause blindness in sheep³ if the dose is exceeded too far, so this method would not be ideal. Grouping the flock into weight bands would be preferable to avoid overdosing small animals.
- Ensure full dose is administered by drenching over the tongue; maintain & calibrate drenching guns regularly.

Educate yourself

- Know which parasites are commonly seen in sheep, such as liver fluke.
- Knowledge of other host species and parasite life cycles gives you an advantage when tackling parasite burdens. For example, knowing which species are active at what times.
- Knowledge of the various anthelmintics allows the correct one to be selected. Different classes are required for different parasites at different times of year. It is also good practice to rotate which classes are used annually.
- Knowing which treatment to use also allows the use of more narrow spectrum anthelmintics, which are preferable to avoid off-target exposure.³

Consequences of irresponsible use

- Poor animal welfare – resistance means more common parasite burdens.
- Economic impact – death of livestock or reduced meat quality could be detrimental for farmers.
- Public health – resistant zoonotic parasites could pose an issue for treating humans.

Educate others

- Curate a parasite control plan, working alongside the farmer, based on monitoring and diagnostics.
- Encourage grazing management programmes e.g., pasture rotations (advise against moving recently treated animals to new pasture, as this will bring resistant parasites into the area).⁶
- Encourage regular faecal egg counts to ensure sheep are only treated when necessary.

Report

Post-treatment, carry out further diagnostics to test whether the anthelmintic was effective, such as a faecal egg reduction test. It is crucial to report suspected decrease in anthelmintic efficacy to the [Veterinary Medicines Directorate](#)¹.

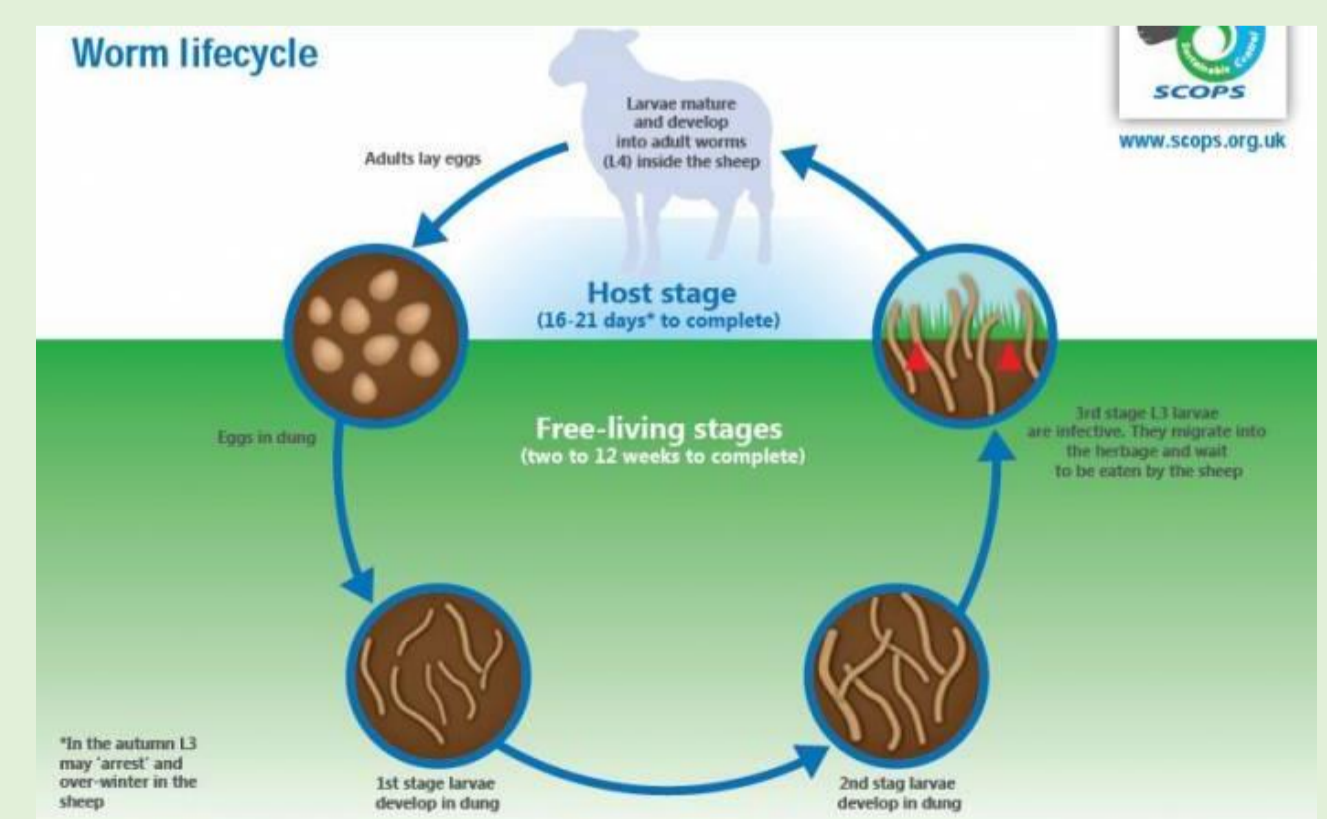


Figure 3 – nematode lifecycle³

References:

