

# Biosecurity, resistance, and helminth parasites of grazing ruminants

**Helminths are a major cause of production losses in grazing ruminants. Prophylactic control with broad spectrum anthelmintics is no longer sustainable due to growing resistance, and more sustainable control measures are now needed.**

A wide range of helminth parasites can infect grazing ruminants, with the most severe pathologies being due to infection with gastrointestinal nematodes. However, flukes are also responsible for significant production losses, but often fly under the radar due to their tendency to cause subclinical infection.

Helminth parasites affect sheep, goats, and cattle. It is estimated that helminth infections lead to over €300m per year in production losses in Europe.

For many years prophylactic use of broad spectrum anthelmintics was effective, however, in recent years resistance has emerged in all major classes of anthelmintics and presents a serious threat to the sustainability of outdoor grazing ruminant farming.

Sustainable worm control practices are a growing area of interest in parasite control and have important implications for biosecurity.

A key component of many sustainable worm control practices is the maintenance of anthelmintic susceptible parasite populations. This allows resistance traits to be diluted out when populations mix, preserving the efficacy of anthelmintics.

Another key feature of sustainable worm control is testing for resistance before treating, which prevents selecting for resistance by ensuring that the correct anthelmintic is used.

It is also important to test animals before they are introduced to a new pasture or herd, to prevent pasture contamination with helminth eggs shed in faeces.

Helminth parasites are an unavoidable hazard of outdoor grazing systems

Resistance is a serious problem, but sustainable control is possible and practical

Testing before treating is extremely important to preserve anthelmintic efficacy

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