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Evaluation of an organic anthelmintic for farmed livestock

THE PROBLEM

Parasite infection can cause a 20-25% mortality in undrenched lambs. **Up to 10% production losses in undrenched lambs is not uncommon.**

In 1993, \$57 million was spent on anthelmintic drenches by New Zealand farmers (MRL Research, March 1993).

Use of farm chemicals which leave a residue in animal products may attract non-tariff trade barriers. Parasite resistance is now widespread in sheep and goats and some resistance has been recorded in cattle. **65% of sheep farms may have some form of drench resistance.** (AgResearch, AgFacts vol 40, November 1995)



The Research: Garlic as an organic solution?

This project, carried out by WRONZ, evaluated the effectiveness of a garlic-based tonic developed by the late Mr R.J. Calder of Banks Peninsula. Mr Calder claimed that his preparation **reduced the incidence of gastro-intestinal parasites** and resulted in improved animal health.

Did it work?

A 'natural' garlic preparation was given to young sheep and **compared against both positive and negative controls** (i.e. sheep that were not protected against worms and sheep which were protected using a combination anthelmintic drench).

In general, the garlic preparation gave **no reduction** in faecal egg counts and **liveweight gains were lower** than in sheep treated with the combination drench.

There was no apparent selective treatment of certain gastro-intestinal parasite species and no benefits could be detected in wool quality or growth.

When gastro-intestinal parasites were low in early winter, garlic gave a small advantage over undrenched sheep in terms of better growth rates and reduced FEC.

Because the **benefits were small and inconsistent** between years, these results are **not sufficient to recommend** the use of the garlic formulation as a substitute for drench.

Where to from here?

There have been positive changes. Lambs are now usually farmed with about **3-4 drenches in their first 12 months**, compared with the **previous 7-9 drenches in the 1980's**.

However, for New Zealand farmers to be able to market their products as chemical free, **alternative means of anthelmintic control** need to be developed.

Points to Remember

- Do not drench unnecessarily, use dose rates suited to the heaviest animal, do not use one drench type exclusively and continuously for several years, check the performance of the drench you are using

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