

What do you know about worm management on your farm?

Worms are a major cause of lost production in livestock. The variation across farms means that one management solution will not apply to all. However, industry experts have developed general principles that can be applied in each situation. This document lists the principles and outlines their application. It has been developed primarily with sheep in mind, but the principles apply equally to cattle.

The industry agreed principles upon which this advice is based:

- *All healthy animals have worms and always will – eradication is not an option.*
- *Worms have less effect on well fed animals than on animals under nutritional stress.*
- *Mature animals are generally less susceptible to worms than younger ones. This means, at times, they can be used to reduce the number of infective larvae on pastures.*
- *Some animals are more susceptible to worms than others (genetic variability).*
- *Selective breeding can select animals for resistance or resilience to worms.*
- *When breeding for a characteristic, more intensive selection pressure will result in more rapid change being made (both to livestock and worms).*
- *Breeding for a single trait leads to more rapid change than breeding for a combination of traits.*
- *Most of the year there are more worms, in the various life stages, on pasture than inside the animals.*
- *There are no new drench families under development so farmers should use drench wisely to preserve future options.*
- *The way in which you use drenches and manage parasites will change the rate at which worms develop resistance to drench.*
- *Each farm is unique, and effective worm management depends on knowing whether resistant worms are present.*
- *Some drench formulations are long-acting and using them may speed up the development of drench resistance.*
- *Drench resistance is complex – worms, livestock, climate, feeding, drench and management practices are all involved.*

Recommendations:

Drenching

- You should know which drenches are effective on your farm. Do this by carrying out a full drench test every 2 – 3 years. Choose your drench on the basis of the results.
- If drench resistance is present, seek professional advice.
- Evidence suggests that combination drenches can slow the development of a drench resistance problem on a property, but only if used before resistance has developed.
- Good drenching practice is essential. Weigh animals and set the dose according to the heaviest. Check hourly that your drenching gun is delivering the correct dose.
- Faecal egg counts from young stock indicate levels of adult worm infection and whether they are likely to be causing production losses.

Drenching adult stock

- Routine drenching of adult stock is not recommended, but it may be necessary under certain circumstances (e.g. feed levels, age of ewes, number of lambs, parasite burdens).
- If worms are definitely causing a problem, drench once and monitor its effectiveness.
- Discuss drenching programmes with your veterinarian or other parasite control advisor.

Manage the level of larval challenge

- Lowering the levels of worm larvae on pasture will benefit production, particularly in young stock. Plan to create low levels of larval challenge e.g. use stock movement, grazing history, pasture species, weather, and stock type and classes to match nutritional needs.
- Try to use farm paddocks for different purposes each year e.g. finish lambs on different paddocks from last year.
- Use a paddock diary and stock class mapping as part of the planning process. This way you can see which paddocks will have most larvae and you can anticipate how to deal with it.
- Discuss with your advisor how to achieve a balance between low worm larval levels on pasture for good growth rates and a reservoir of worm larvae that have not been exposed to drenching (i.e. a refugia – see below for discussion).

Feeding

- Provide all classes of stock with sufficient feed to reach specified targets.
- Monitor live-weights and condition routinely to enable forward planning.

Quarantine for bought-in stock

- When introducing stock on farm, drench them with a triple combination drench and hold them off pasture for 24 hours. Provide water and some feed. Do not put them on “clean” pasture but on pasture that is likely to have large numbers of worm larvae from your own sheep on it.
- 10 days after arrival of the stock, check (by faecal egg-counts) that the drenching was effective.

Using resistant or resilient sires

- You may choose to buy-in or breed your own stock that are resistant to worms or are resilient, as a component of your parasite management plan.

Animal health plan

- To get best animal production and minimise the risk of drench resistance, each farmer should follow a parasite management plan, specifically designed for that farm as part of an overall animal health plan.
- The drenching component of the plan should aim to minimise both the effect of worms on production and selection of worms for drench resistance.
- The plan should consider all factors that affect parasite management and animal production as they are interrelated.

For more information

If you would like more information and would like to be kept up to date on worm management then please:

phone: **0800 696 328**

email: **wormwise@meatandwoolnz.com**

web: **www.wormwise.co.nz**

What is meant by “refugia”?

- To reduce the chances of breeding resistant worms you need to make sure that they are outnumbered by drench-susceptible worms on your farm. (This is the concept of refugia.)
- When susceptible worms breed with the resistant ones they slow the development of resistance by diluting the gene frequency for resistance. Think of a farmer breeding sheep for a particular trait, such as wool weight, and a mob of “scrub” rams invading the farm at tupping and upsetting his breeding programme. Genetic “gain” is easily lost in both worms and sheep.
- The aim is to achieve a balance between maximising animal production and minimising selection pressure on the worm population.

Here are six things you can do now to slow down the development of drench resistance on your farm:

- *Do not drench lambs onto clean pasture grazing.*
- *Do not drench more frequently than every 28 days.*
- *Do not treat the whole flock pre-lambing with a long-acting drench.*
- *Do not drench adult animals routinely.*
- *Regularly check efficacy of the drench you are using.*
- *Quarantine drench introduced stock.*