



Footrot in sheep: 3. Treatment

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Treatment chemicals

Footbathing - walk through or stand in for 5 to 10 minutes:

Zinc Sulphate 10% - 1 kg to 9 litres water.

Formalin 5% - 1 part formalin to 19 parts water. (Zinc Sulphate is safer and gentler on the sheep).

"Radicat" - 10 litre container mixed with 100 litres of water. Provides 2 weeks protection. Specific treatment instructions include: paring; followed by a 15 minute footbath (within 4 hours of paring); followed by 15 minutes on slats, grating or a dry concrete; and then 1 hour on a clean dry area.

- **Vaccine** - 1 ml dose, 2 doses, minimum 6 weeks apart and booster every 10 to 12 weeks while spread conditions persist. Provides good protection of clean sheep rather than cure.
- **Antibiotic injection** - several, as prescribed by a veterinarian.

Provides good cure but no ongoing protection against reinfection.

Footrot treatment programs

Advances in technology have given the owner of footrot-affected sheep more choices in the method of footrot eradication.

First consider all the options and costs before deciding on an eradication procedure. A properly planned program is essential for successful eradication of footrot. Before choosing a program that will best suit your property and situation, answer these questions to help guide you to the best choice:

- How many mobs are affected?
- Can I operate the farm and still keep the infected and clean sheep separate?
- How old are the sheep in the infected mob(s)?
- What is the slaughter value of these sheep now?
- What will their value be after shearing and/or weaning?
- What is the replacement price for these sheep?
- How much will these sheep produce from now until culled for age?
- What is the cost of control and eradication?

- What are the costs of each of the options available?

There are two steps in footrot management -

1. Footrot control

2. Footrot eradication

Footrot control

Control treatments reduce the severity of infection and minimise the number of sheep contracting footrot which in turn increases the success, economics and ease of eradication procedures.

Control treatments are a choice of:

- A course of two (2) vaccinations; **OR**
- Footbathing in zinc sulphate or formalin every 7 to 10 days; **OR**
- Footbathing in "Radicat" every 12 - 16 days; **OR**
- A combination of vaccination and footbathing.

For control periods of less than 8 weeks, footbathing is the best choice. For short term footbathing zinc sulphate or formalin should be considered as it requires less capital investment. If unweaned lambs are to be involved, vaccination is easier and causes fewer mis-mothering problems than footbathing.

Vaccines will not provide any significant benefit until after the second dose. It is therefore necessary to footbath sheep for 4 to 6 weeks until after the second dose is given. To maintain protection beyond 10 to 12 weeks a single booster dose is required, and should be repeated every 10 to 12 weeks while protection is necessary.

Footrot eradication

To eradicate footrot from a property all the *D. nodosus* bacteria must be killed or the infected sheep removed. As the bacteria cannot be seen you must look for the signs of their presence, cull those sheep with signs and use chemicals and time to kill any bacteria on the remaining sheep and pasture.

The eradication choices	Property cleared
Immediate slaughter of infected mobs at an abattoir	7 days
Control, then slaughter after shearing and/or weaning	7 days from slaughter
Control then summer eradication program	Spring next year

1. Immediate slaughter at an abattoir.

Slaughter can be the best option when infected sheep are aged, or in prime condition with a high slaughter value compared to replacement store prices or when a few infected sheep or small mobs are putting the majority of the flock at risk. Disposal of these must be direct to an abattoir as a paddock, CALM or "over the hooks" sale.

2. Control, then slaughter after shearing and/or weaning.

After removing the current year's production of wool and lambs, the economics of slaughter are often very sound and attractive compared to treating, as long as you can prevent the infection spreading to clean mobs. Control measures must of course prevent suffering, loss of production and loss of body condition.

3. Control then summer eradication.

Step 1. Control

A summer eradication program can achieve good results if the spread and severity of footrot is restricted during spring. A planned control program needs to be implemented as soon as footrot is diagnosed. Vaccination and footbathing are both useful options. They each need to be costed and labour requirements considered.

Step 2. Eradication

Examine:

Once pasture has dried off in summer, all sheep must be tipped up and individually examined, foot by foot, paring sufficiently to ensure an accurate diagnosis. Permanently brand all infected or suspect sheep. During this examination, sort sheep into *CLEAN* and *INFECTED* (infected or suspect) mobs. Culling all infected sheep will give better results. An infected mob kept for treatment is a high risk for breaking down and infecting clean mobs.

Infected sheep to be retained for treatment require paring, sufficient to return feet to normal shape and size and to expose all pockets of infection. If infected sheep are to be culled, paring can cease as soon as a diagnosis is made.

Footbath: (as per instructions)

CLEAN MOB, then release them into a clean paddock, one that has not had sheep in for the previous 7 days. In dry environments foot bathing may not be necessary.

INFECTED MOB either, footbath and move to a clean paddock. **OR** inject with antibiotics and move to a clean paddock.

Examine again:

CLEAN MOB - Every sheep in this mob must be examined again in 3 to 6 weeks. Repeat examination and bathing cycle until 2 consecutive clean inspections are achieved.

INFECTED MOB after 4 weeks inspect all feet. Any sheep not cured should be culled immediately for slaughter. Repeat treatment and examinations until 2 clean inspection are achieved. The *INFECTED* mob becomes the *CURED* mob.

Surveillance and isolation:

Keep *CLEAN* and *CURED* mobs separated and isolated until after next Spring. Keep sheep under close surveillance for signs of lameness; any lameness must be checked to determine the cause. If footrot is detected recommence the program.

Making foot inspection easier and more effective

Sheep handlers

A variety of handlers are available from the V-belt multiple sheep machine, to single sheep unpowered handlers and even a bag sling or cradle. They are good at relieving back strain and fatigue and therefore improve the quality and speed of operation.

Pneumatic shears

These are a great asset for paring feet, particularly in summer.

Contractors

Contractors are available to do the whole job, to supply a sheep handler and shears or just labour. They can be a very effective and quick means of getting the job done, but make sure they are doing the job to your satisfaction.

Help

Expert advice on diagnosis, treatment and program design to quickly eradicate footrot is available from your veterinarian or DPI's Animal Health Officers or Veterinary Officers. They are waiting to help you back to normal production as quickly as possible.

Further information

Footrot in Sheep - Agriculture Notes from DPI offices -

AG0445: *Footrot in sheep: 1. Disease facts*

AG0446: *Footrot in sheep: 2. Diagnosis*

AG0447: *Footrot in sheep: 3. Treatment*

AG0448: *Footrot in sheep: 4. Prevention and damage control*

AG0190: *Footrot in sheep: 5. Benign footrot*

Beating Footrot - 39 pages, including colour photos, available from DPI offices.

Footrot the Facts - Video all about footrot, available on loan from DPI offices.

The previous version of this note was published in February 2007.

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