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Animal Health
Fact Sheet



CONTAGIOUS FOOT ROT OF SHEEP

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AH/Sheep/06

Foot rot is a serious, contagious disease of sheep in which the horny hoof tissue is involved and undermined. Once established, it usually remains in a flock unless a systematic treatment program is used to eradicate it.

CAUSE

Dichelobacter (Bacteroides) nodosus
Fusobacterium necrophorum

RESERVOIR OF INFECTION

Feet of infected sheep (2–4 months)
Soil (2 weeks)
Moisture
Temperature (50–70 F.)

PREVENTION IN FLOCK THAT IS FREE OF FOOT ROT

Caution buying sheep
History of Free Flock, Isolate, Examine
Caution—facilities, vehicles for hauling
Vaccines will NOT keep it out of flock
FOOTVAX—Cooper Animal Health (Dichelobacter)
VOLAR—Miles Laboratories (Fusobacterium)

“LIVING WITH” AN INFECTED FLOCK

1. Vaccinate all of breeding flock with FOOTVAX (2 doses).
2. Booster vaccinations every 3–6 months (before rainy season).
3. Portable footbathing facility; treat early.
4. Cull heavily; genetic selection pressure.
5. Caution with new additions; new strains.

SHORT-TERM CONTROL

Footbathing flock (or footsoak)
Individual treatment (footparing and topical medication)
Vaccination (FOOTVAX)

ERADICATION

1. Develop a systematic plan, commit to it and plan to follow through for two years time.
2. Implement the plan during the dry season of the year when the potential for spread is greatly reduced.
3. Stop all treatment and vaccination for 8 to 12 weeks prior to examination.
4. Set up every sheep and examine every foot to find any with foot rot lesions.
5. Identify and remove for permanent culling any sheep found with foot rot.
6. Repeat this examination and culling process every 3– 4 weeks until none are found for two consecutive examinations.
7. Continue to watch the clean flock for any lameness. Examine for foot rot any sheep which become lame. If any have foot rot, re-examine the entire flock again until two negative tests are achieved.
8. Establish procedures to keep foot rot out of the flock and prevent its re-introduction.
9. If the season turns wet and a high percentage of the flock breaks with foot rot, stop the eradication program and go back to a control effort.
10. It will take two years and some wet seasons before you can be confident that you have really eradicated foot rot.

FOOTBATHS (toxic if ingested)

1. Zinc Sulfate (50# bags; 99% ZnSO₄ with 36% Zinc)
10% = 8#/10 gallon; pour between 2 buckets for 3-5 min.
2. Copper Sulfate (CuSO₄; Bluestone; Bluevitrol)
10% = 8#/10 gallon; hot water hastens dissolving corrosive to metal; especially toxic if sheep eat it
3. Formalin
5% = 1 gallon of 36% formaldehyde in 10 gallons water controlled use and disposal in some states very irritating to skin, & lungs; must be used outside don't use more than once per week

FOOTSOAKS

1. FOOTRITE (Hardman Chem. Ltd., Australia)
2. Zinc Sulfate (10%) plus sodium lauryl sulfate (0.2%) or 1/3 cup liquid laundry detergent per 10 gallon

TOPICAL MEDICATIONS (apply with household squeeze-spray aerosol)

1. Oxytetracycline solution in alcohol
Add one packet (25.69 grams) of Terramycin Soluble Powder to ½ cup of water; add rubbing alcohol to bring solution to 2 quarts.
2. Penicillin solution in alcohol
Mix 5 million units of potassium penicillin G with 10 ml of water and add this solution to one pint of rubbing alcohol.

DAILY FOOTBATH (ideal treatment)

Zinc Sulfate solution (10%); situate so the sheep have to use, going to feed or water. Train them for 2-3 days and then they will use it on their own. Be sure water is available or they may drink the solution and be poisoned. Add to and change as needed; will tolerate some debris.

AUSTRALIAN ERADICATION PROGRAM

An eradication program in New South Wales, Australia has had great success in recent years and has provided valuable information. They stress the importance of a well-planned and implemented program, with high priority and effort for two years. Producers must be willing to purchase ANY new additions, ONLY from flocks that are free of footrot. They must be able to keep strays away from their flock. Treatment or vaccination may be used during periods of rapid spread but as those wetter (spread) seasons come to a close, all treatment is stopped in order to allow infected sheep to become apparent. From that point on the program is based on inspection of feet and culling of ALL infected sheep found.

During the phase when they are just trying to control footrot, they have had good success with the use of injectable, long acting antibiotics. BUT, the sheep must be kept COMPLETELY dry for at least 24 hours after treatment with the antibiotic. This antibiotic treatment, vaccination or footbathing are not used during the actual eradication program because the goal is to identify any infected sheep.

Three phases are used in their program:

1. **Control** the disease during the period of spread, to reduce the level of infection so eradication is feasible. Use vaccination, injection of long-acting antibiotics and/or footbathing as the basic treatments. Wait several weeks after vaccination (10–12 weeks) or other treatments before beginning the eradication phase.

2. **Eradication.** Plan the program and timing of efforts. Inspect every foot of every sheep and cull immediately ALL infected sheep. Repeat inspection and culling every 4 weeks until there have been two consecutive tests that were completely negative. (DO NOT try to treat infected sheep or ones that were treated previously and haven't healed.)

3. **Surveillance.** Examine all lame sheep. If any show footrot, repeat the inspection and culling on the entire flock until two more negative flock exams. The key test will come during wet, warm weather as any small pockets of infection walled off in hooves are most likely to break down at this period. If it does break out again, the flock would be considered back to phase one again. Prevent any re-infection from purchased or stray sheep.

The problems which have led to failure of eradication of footrot from flocks have been:

- Masking of infection by treatments of vaccination, footbathing or antibiotic treatment.
- When much attention was given to a separated “infected flock” in trying to cure them.
- With too few inspections of “clean” sheep.
- Re-introduction from stray or purchased sheep.

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