Sheep and all things feet
Footrot and Foot Abscess
BWBL phone seminar

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Agenda

• Diagnosis control and management of footrot

• Management of foot abscess

• Other issues related to lush seasonal conditions
Footrot: the disease

• Contagious disease

• Caused by bacteria *Dichelobacter nodosus*

• Numerous strains can affect sheep at any time

• The bacteria lives no more than **seven** days off sheep
  • In all conditions

• Costly disease Virulent $5-10/head /year
Expression of the disease

• The strain of bacteria: virulence
  • Benign
  • Intermediate
  • virulent

• Sheep susceptibility
  • Breeds merino>crossbred>British breed
  • Age
  • Sheep immunity

• Environmental factors
  • Rainfall
  • Temperature
  • Pasture
  • Length of growing season
Transmission

• Infected livestock
  – Sheep & Goats
  – Goats
  – Cattle
    • Benign long term
    • Virulent short term in wet conditions?
  – Cars dogs native animals etc – no

• Interdigital skin must be disrupted
  • Wet conditions water maceration

• Environmental conditions
  • Wet > 45 – 50 mm/month (more summer)
  • Average daily Temp > 10 °C
Diagnostic choices

• Essential to make a rational decision on footrot management
  – Clinical expression most important
  – Lab tests

• Not footrot
  • Another disease

• Benign footrot
  • <1% of sheep with score 4 lesions

• Virulent footrot
  • >1% with score 4 lesions (other states lab tests – big issue)

• Intermediate footrot
  • Can be difficult making a diagnosis
Benign footrot disease

<1% with score 4 lesions

No serious damage to feet

Benign strains

Virulent footrot disease

>1% with score 4 lesions

Serious damage to feet

Intermediate strains

Virulent strains
Normal foot
Score 1
Score 2
Score 3a
Score 3b
Score 3c
Score 4
Score 4/5
Managing footrot

• Legal issues
  • Sale of sheep
    – Virulent footrot
    – Benign footrot
  • Notifiable disease (virulent)
  • Infected sheep must be treated

• Benign footrot

• Virulent Footrot
Benign footrot

- Mild signs most years
- Few signs in dry years
- Very few score 4
- Lots of score 1-2 lesions
- Self cure in dry period
- Back next wet period
Benign Footrot

• Not obliged to eradicate
• Eradication not cost effective or likely
  • True carrier state more likely?
• Big decision with borderline strains
• Control options
  • Simple footbathing as necessary
Virulent footrot

- Needs suitable weather
- Initially signs similar to benign
- Keeps progressing
- Some self cure
- Severe disease
- Obliged to eradicate
- Can be eradicated
- Cost effective to eradicate
Footrot timetable

- Winter - Spring
  - Control
  - Prepare for first inspection

- Summer (or when conditions dry out)
  - Best time to eradicate

- Late Autumn
  - Management depends on seasonal conditions
Control objectives

• Minimise production losses
• Improve welfare
• Maximise chance of eradication
  • Less lesions
  • Quicker inspection time
  • Less salvage required
Control options

- Footbathing
  - Benign
  - Virulent

- Vaccination
  - Not available (apart from small scale single strain through U of Sydney)

- Do nothing
  - Generally not a good option but probably the most common
Footbathing

• Walk through 8m+
  • Formalin (prefer not to use)
  • 10% zinc sulphate weekly

• Stand in
  • 10-20% zinc sulphate
  • Footrite: (not available)
  • Radicate 12-16 days

• Management
  – More frequent better results
  – Zinc sulphate tester
Footbathing

• Response to treatment
  – Lambs>>chronic adult lesions

• Logistics
  – Makes frequent footbathing difficult
  – Good to do with short spread period or low virulent strains (<5-10% severe lesions)

• When to cut out before summer
Eradication

- By inspection (contractors)

- Destocking

- Only after planning and elimination of potential re-introduction
Objective of eradication

- Remove all infected sheep from property by the autumn break

- Inspection process
  - If in doubt chuck it out
  - Repeat inspection
  - Salvage?

- Inspection rate
  - Don’t be a hero!!
Surveillance

- Chance of break down
- Separate paddocks
- Follow the 7 day rule
  - Don’t let clean sheep walk where suspect sheep have been within 7 days
  - Crutching
  - Shearing
- Inspect the following spring
  - Clearance after normal spring
Prevention

• Fences

• Roadways
  • Communicate with neighbours

• New stock (do not let any other sheep walk across where new sheep have walked in the previous 7 days)
  – Rams
  – Bigger mobs
    – Do your home work before buying - inspect
    – Avoid buying from yards
    – Footbath – won’t guarantee freedom from footrot
    – inspection when they get home
    – Quarantine until they have been through a spring spread period

• Cattle
Foot abscess

Toe abscess
Management of foot abscess

• Toe abscess: often associated with shelly toe various bacteria

• Foot/Heel abscess

• Risk factors
  – Wet muddy conditions, heavy late pregnant ewes or rams
  – Breeds merino, xb
  – Older sheep more vulnerable
Foot abscess

• Treatment:
  – Drainage
  – Remove to dry ground
  – Antibiotics with individual animals
  – Pain relief:
  – Manage pregnancy toxaemia risk
  – Cull chronic lame ewes/rams

• Prevention
  – Manage body condition of ewes
    • Avoid over fat ewes and ewes too light
  – Run older/at risk ewes in dry paddock
  – Gravel in yards not sharp rocks
  – Footbathing may exacerbate condition?
Scabby mouth

- Orf/scabby mouth virus
- Zoonosis
- Lush conditions, young sheep and lambs
  - Mouth lesions with dry rough feed, thistles
- Supportive treatment for individuals with secondary infection
- Vaccination available but not always used
  - Scabiguard®
  - Live vaccine
Iodine deficiency: goitre

• Risk factors
  – High rainfall lush conditions
  – >80-100 mm/month X3
  – Spring lambing higher risk
  – PD cross lambs higher risk

• Management
  – Pot iodide drench mid pregnancy
  – Iodised salt lick