

# What you will see

Diagnosis	Behaviour	Skin/Muscle	Convulsion	Death
Pulpy kidney	Depressed		Yes	Rapid
Black disease	Depressed			Rapid
Blackleg & malignant oedema	Depressed	Swollen, rancid black		Rapid
Tetanus	Over-reactive	Spasms, stiff walk	Yes	Slow

# **Impact**

All sheep can be affected, survival is rare and treatment following diagnosis mostly fails.

## Likelihood

Bacteria live everywhere, in all regions, but to multiply and cause an impact, a trigger is needed. Likely triggers for clostridial diseases:

- a diet change, liver fluke, skin or muscle wounds or bruising (fighting, lambing, shearing, marking, yarding).
- a pasture flush.

# **Strategic prevention**

- Vaccinate for increased immunity.
- Control liver fluke.
- Avoid wounds.
- Practice good hygiene during invasive procedures.
- Treat wounds with penicillin.

# **Tactical response**

Quickly get a professional diagnosis to prevent further cases:

- treat sick sheep immediately.
- vaccinate all at-risk sheep. Before choosing a vaccine, seek professional advice on your risk of black disease, blackleg and malignant oedema.
- black disease: vaccinate the unvaccinated and bury carcases.
- blackleg and malignant oedema: vaccinate the unvaccinated and administer penicillin if it is early in the outbreak.
- pulpy kidney: vaccinate the unvaccinated, restrict feed and give roughage.
- tetanus: give antitoxin if found early.

## Types of clostridial vaccines

- 3 in 1 vaccine prevents pulpy kidney, tetanus and cheesy gland
- 5 in 1 vaccine prevents pulpy kidney, tetanus, black disease, blackleg and malignant oedema
- 6 in 1 vaccine includes 5 in 1 plus cheesy gland







# For comprehensive immunity

- · Assume introduced sheep are unvaccinated.
- Always read and follow the vaccine product label.
  The key principles are:
  - unvaccinated sheep and lambs need a priming shot and a follow-up booster in four weeks
  - administer lifelong annual boosters for cheesy gland
  - administer one annual booster for tetanus
  - administer extra boosters as needed for pulpy kidney. In high challenge periods, sheep who have not been given a pulpy kidney vaccine within the last three months should be given a booster, ideally 10 days before the challenge occurs.
- Vaccination cannot guarantee 100% immunity in all sheep but is strongly recommended as when done properly, remains highly effective.

# TIPS AND INFORMATION

- Before choosing a vaccine, seek professional advice on your risk of black disease, blackleg and malignant oedema.
- Generally, the cost of a vaccination program is very small compared to the cost of the disease it prevents. One way to look at it is as a form of insurance.

## **Resource links**

MLA A producers' guide to sheep husbandry procedures

MMFS Tool 11.12 Prevention of clostridial diseases and cheesy gland

### **New South Wales**

How vaccination works

## Queensland

Livestock vaccination

### **South Australia**

Lamb vaccination

Sheep diseases - the farmers' guide

### **Tasmania**

Cheesy gland or CLA

#### Western Australia

Pulpy kidney (enterotoxaemia) of sheep

© Copyright 2024. Making More From Sheep – a joint initiative of Australian Wool Innovation (AWI) and Meat & Livestock Australia (MLA). Care is taken to ensure the accuracy of the information contained in this publication. However, AWI and MLA cannot accept responsibility for the accuracy or completeness of the information or opinions contained in the publication. You should make your own enquiries before making decisions concerning your interests. AWI and MLA accept no liability for any losses incurred if you rely solely on this publication and excludes all liability as a result of reliance by any person on such information or advice.

AWI and MLA acknowledge the matching funds provided by the Australian Government to support the research and development detailed in this publication. GD4986





