

Sheep measles

(*Cysticercus ovis*)

factsheet

Key messages

- Sheep measles can cause significant economic impact with lost yield due to carcase condemnation.
- Dogs are the primary host for tapeworms, which are the primary disease agent. Dogs infected with adult tapeworms excrete eggs, which can be ingested by sheep.
- Eggs can be swallowed during grazing and hatch inside sheep where the immature larvae form cysts in the organs of infected animals.
- Worm dogs monthly with praziquantel to break the parasite life cycle and burn or bury any of offal and livestock carcasses.

What are sheep measles?

Sheep measles, also known as *Cysticercus ovis*, is the cystic stage of the dog tapeworm (*Taenia ovis*). Despite a similar name and life cycle, this parasite is not the same as bladder worm (*Taenia hydatigena*) or hydatids (*Echinococcus granulosus*).

The cysts form in the organs of intermediate host animals — sheep and goats.

Economic impact

If there are more than five cysts in the sheep carcase, the whole carcase is condemned at the abattoir. If there are five or less cysts, processors will trim the carcase as required, reducing profits.

Infected offal (liver heart lungs) is condemned.

Parasite life cycle

The adult dog tapeworm lives in the intestines of dogs. Worm eggs pass out in the dog's faeces onto pasture and are ingested by sheep during grazing.

The larvae burrow through the wall of the sheep's intestine into the bloodstream and lodge in muscle tissue. Here they develop into oval-shaped cysts, especially in the skeletal muscles, heart, diaphragm, cheek muscles and oesophagus (see Figure 1).



Heart of the matter: *C. ovis* larvae burrow through the wall of the sheep's intestine into the bloodstream and lodge in muscle tissue, such as the heart, forming oval-shaped cysts.

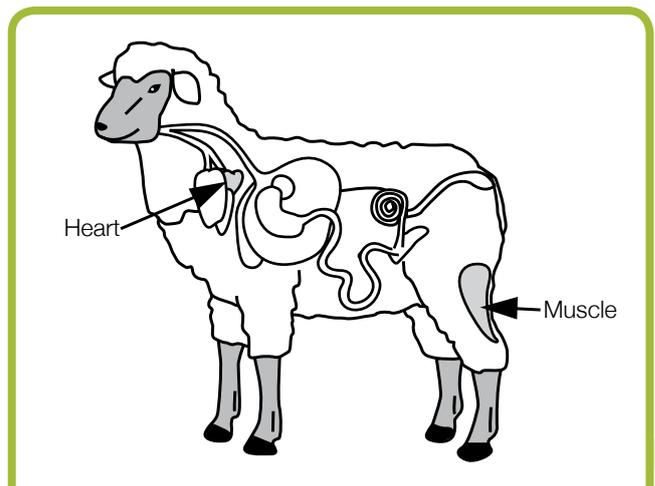


Figure 1: Cysts are usually located in the heart and muscles.

Diagnosis

There are no outward signs of infection in sheep or goats — cysts are found after slaughter or death.

Unusually oval cysts up to 12mm long are usually detected in sheep and goats during meat inspection.

Tapeworm segments or eggs are detected in dog faeces and can be up to 3–5mm long, white and flat in appearance.

Treatment and prevention

Worm dogs monthly with praziquantel to break the parasite life cycle.

There is no practical treatment for cysts in sheep or goats.

Carry out any home killing of sheep or goats in a dog-proof enclosure. Burn or bury offal so dogs cannot eat it.

Do not feed raw sheep or goat to dogs — feed commercial dry dog food or deep freeze meat for 21 days before feeding it to dogs.

Prevent dogs from wandering and scavenging carcasses and dispose of livestock carcasses by burial or burning.

Ensure all dogs entering the property have been treated with a tapeworm-killing drug in the past month. This should include dogs belonging to friends, shooters, contractors, casual staff or tenants.

Ensure water used for livestock purposes, such as drinking and pasture irrigation, is free of contamination from dog droppings. 🗑️

Note: The control measures for sheep measles (*Taenia ovis*) will also control the tapeworm responsible for bladder worm, or false hydatids (*Taenia hydatigena*) and hydatids tapeworms. The life cycle of each of these parasites is similar — so one convenient control measure will take care of all three parasites.

What constitutes offal?

Offal includes any internal organ of livestock (including sheep, cattle, pigs and goats) — liver, heart, lungs, all of the digestive tract and the kidneys.

Not acceptable

Do not feed dogs any of the offal items listed above.

When farm livestock die, the optimal action is to promptly bury or burn carcasses to ensure dogs have no access to offal. If livestock are being slaughtered on farm for meat, bury or burn the offal promptly.

Acceptable

Farmers and dog owners can feed muscle meat and bones from sheep, cattle, pigs and goats to their dogs. This meat will not cause dogs to become infested with hydatid tapeworms.

However, feeding sheep muscle meat can cause dogs to get *Taenia ovis* tapeworms unless the meat is initially frozen for at least 21 days.

These tapeworms are not hydatids but will perpetuate the sheep measles cycle on the property. Worm all dogs, both working and pet dogs, regularly.

For further information:

Contact your local DPI/PWE Animal Health officer or local veterinary practitioner; or phone DPI/PWE toll free helpline on 1300 368 550.

FOR ANY SIGNS OF UNUSUAL OR SERIOUS ANIMAL DISEASE, RING THE DISEASE WATCH HOTLINE: 1800 675 888.

Acknowledgements:

This factsheet is part of the *Financial impact of ovine Johne's disease (OJD) on the processing sector* series. The project is being funded by Meat and Livestock Australia and administered by the EH Graham Centre — an alliance between Charles Sturt University (CSU) and the NSW Department of Primary Industries (NSW DPI). Some technical content has been sourced from Primary Industries South Australia (PIRSA).

