



Bladder worm

Key Messages

1. Bladder worms are large cysts found on the liver and in the abdominal cavity of sheep, caused by the ingestion of eggs from the dog tapeworm *Taenia hydatigena*.
2. It causes losses due to condemnation of livers and trimming of cysts in the abdominal cavity of carcasses.
3. Regular monthly tape worming and removing sheep meat and offal from the diet of dogs can control the disease.

What are bladder worms?

Bladder worms (*Cysticercus tenuicollis*) are infective cysts from the dog tapeworm *Taenia hydatigena*, found on the liver and in the abdominal cavity of sheep. The bladder like fluid filled cysts are up to 50-60mm in size and each contains a single infective tapeworm head. They are sometimes called “false hydatids” due to some similarities with hydatid cysts.

They generally cause no on farm losses but their importance is due to the trimming and condemnation of livers, and other abdominal organs.

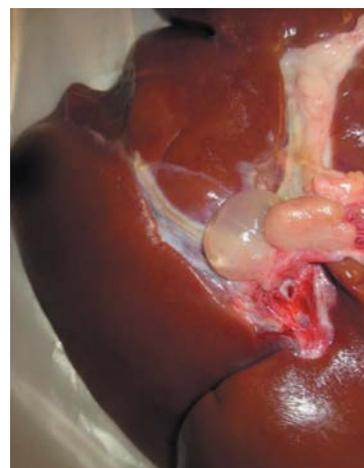
Disease on farm

Bladder worm is present throughout Australia. The level of disease varies between states but around 20% of sheep have bladder worm or evidence of bladder worm infection at slaughter. Bladder worm has little or no effect on sheep health or on farm production, but occasionally heavy infections can predispose sheep to the fatal bacterial infection, Black disease. In dogs, the tapeworm, *Taenia hydatigena* can be quite large, up to 3 metres in length, but usually causes no harm to the dog. You will sometimes see evidence of infective segments in the faeces of dogs, but *Taenia hydatigena* is just one of a number of different tapeworm species

found in dogs, including the tapeworms that cause sheep measles (*Taenia ovis*) and hydatids cysts (*Echinococcus granulosus*) in sheep.

How is it spread?

Bladder worm cysts are formed when sheep ingest tapeworm eggs on pasture. Once ingested the eggs hatch and the larvae migrate through the gut wall and travel through the liver leaving tracts or scars. The cysts are normally found on the liver but can form anywhere in the abdominal cavity. The dog becomes infected when they are fed offal or scavenge carcasses with viable cysts. Each cyst contains a single head of a tapeworm, which once ingested is capable of producing viable eggs within 42 days. These eggs can



survive on pasture for at least a year. A single worm can produce large numbers of eggs and they can be mechanically spread by flies, rain and wind. Goats and pigs may also be affected with bladder worm.

Figure 1: Bladder worm cyst (PIRSA).

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Disease picture at the abattoir

Bladder worm cysts are found in around 20% of sheep. Affected livers, along with other affected offal, are trimmed or condemned.

The presence of bladder worm is an indicator that the dog/sheep tapeworm lifecycle is occurring and means that more, serious economic disease like sheep measles or human health risks like hydatids can also occur on your farm.

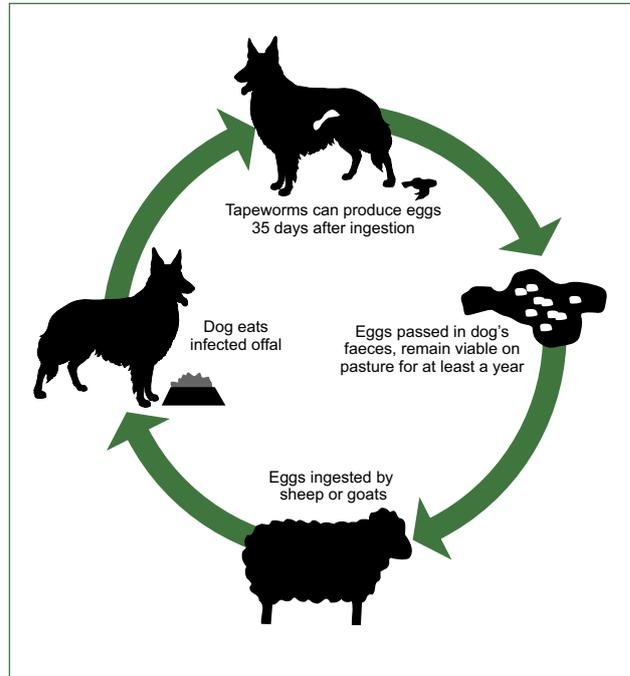
Treatment

There is no available treatment for infected sheep. Stopping domestic dogs becoming infected and regular preventative tapeworm treatment, controls infection in sheep.

Prevention

Prevention is aimed at breaking the life cycle by ensuring dogs are no longer being infected and if they do, that the tapeworms are killed before they can produce eggs. There are two other important tapeworms that have a sheep/dog life cycle that cause hydatid cysts and sheep measles in sheep, these will also be controlled by following the same program

1. Worm all farm and house dogs, monthly with a wormer that contains the active ingredient praziquantel. Hunters or contractors with dogs should provide evidence that their dogs have been treated at least 3 days, and no longer than a month before they come on to the property.
2. Feed commercial packaged dog food to dogs and don't feed or allow access to sheep, goat or pig carcasses.
3. Secure dogs at night and dispose of carcasses to stop scavenging by domestic dogs, wild dogs and foxes. Consider burying, burning or creating a fenced (dog proof) offal pit.



4. All home killing of sheep should occur in a dog proof enclosure.

Because of the ability for eggs to spread some distance, control works best when organised on an area basis so include neighbours in a control program.

What to expect from a control program

Even after a control program is commenced, sheep may still become infected for at least a year due to existing viable eggs on pasture. Cysts and liver scarring are present in sheep for life, so once the lifecycle has been broken it may take many years to turn over the flock and remove the last infected animals.

In some areas wild dogs and foxes may play a part in the maintenance of bladder worm in the sheep population. Control of wild dogs and foxes has welfare and production advantages and will help reduce the level of infection.