

Caseous Lymphadenitis (CLA), or Cheesy Gland, is a common chronic disease of sheep and goats. It is characterised by formation of abscesses caused by the bacterium *Corynebacterium pseudotuberculosis*

How does infection occur?

The bacterium is able to penetrate through unbroken skin, although more commonly infects skin wounds. A slowly enlarging abscess may form at the site of entry or in the regional lymph node. It then may spread via the bloodstream to internal lymph nodes or organs. The bacteria release a toxin, which damages the lymph node/organ and causes an abscess to form. Over time, the pus-filled abscess reorganises to form the characteristic caseous abscess or "cheesy gland." Abscesses can also occasionally form in the organs, including the lungs, liver, spleen and kidneys.

The main source of infection is material from ruptured abscesses that contaminate pastures, handling equipment, shearing equipment and dipping fluid. Ruptured abscesses contain large numbers of infective bacteria, which can survive for months in the environment. The bacteria are highly contagious.

What are the signs of Cheesy Gland?

Initial infection usually causes few clinical signs, but fever and loss of appetite may occur. Abscesses are most commonly associated with the lymph nodes of the shoulder, flank and rump. These abscesses may spontaneously rupture, or be cut at shearing, releasing the infective pus. Abscesses involving the internal organs may result in ill thrift. Sheep with lung abscesses may cough up the infective bacteria. Incidence of the disease increases as sheep become older.

How is Cheesy Gland spread?

Spread of Cheesy Gland within a flock most commonly occurs at shearing. Infection may result from contact with infective material from either ruptured or cut abscesses via shearing equipment, or from infective aerosol from coughing sheep with lung abscesses. Aerosol transmission is more likely to occur when sheep are yarded together. The bacteria can also survive in dipping fluid, with plunge and shower dipping increasing the risk of spreading the disease.

What is the significance of Cheesy Gland in Australia?

Australian research has shown that sheep infected with Cheesy Gland are less productive. A 4-7% reduction in clean fleece weight has been noted in the first year of infection and the disease accounts for almost half of all abattoir condemnations. It has been estimated that these combined effects cost the Australian sheep industry \$30 million annually.

Can Cheesy Gland be controlled or prevented?

Treatment is not usually attempted as antibiotics have limited ability to penetrate the abscesses. Control of this disease is achieved by vaccination and prevention through management strategies. This includes flock vaccination within 6 months prior to shearing, avoiding keeping sheep yarded for long periods, handling and dipping younger sheep first, disinfecting shearing equipment and culling sheep with ruptured abscesses.

Will vaccination against Cheesy Gland be effective?

Vaccination with Pfizer's Glanvac[®] range has been shown to be effective in reducing the prevalence of Cheesy Gland. An Australian survey showed that farms which followed a recommended vaccination program reduced the prevalence of the disease to 3% compared to 29% in other partially vaccinated or unvaccinated flocks sampled.

What are the recommended vaccination programs?

For previously unvaccinated sheep or goats, the primary course of Glanvac[®] consists of two doses ideally given 4 weeks apart. This should be followed by a booster dose every 12 months.

Note that the second dose 4-6 weeks after the first is sometimes missed but is very important. Missing the dose will lead to much lower efficacy and benefits, even if yearly boosters are subsequently given.

B12
1mL subcutaneously
Glanvac[®] 6, Glanvac[®] 6 B12, Glanvac[®] 6S B12
1mL subcutaneously