Vaccination

Vaccination ensures that animals are exposed to a level of challenge sufficient to stimulate their immunity to the parasite. The vaccine contains L3 larvae that have been irradiated, to prevent them from developing within the host animal.

Using a vaccination strategy is usually most appropriate for herds with a history of lungworm and those in high-risk areas. It is important to complete the two-dose vaccination course prior to animals going out onto pasture.

Anthelmintics

Anthelmintics with persistent activity can be used strategically to treat cattle to control lungworm in addition to gastrointestinal nematodes. In youngstock, often the first dose is given at or soon after turnout, with treatments repeated at appropriate intervals depending on the persistency of the active ingredient. An alternative approach is to monitor closely for signs of disease during the grazing season and treat if these are observed in a group of cattle.

Where therapeutic treatment is necessary for animals showing clinical signs of lungworm, the advice of a vet should be sought. Lungworm control should be addressed in a farm's parasite control plan drawn up with the help of a vet or Suitably Qualified Person (SQP).

Eprinex®

EPRINEX® Pour-On solution for Beef and Dairy Cattle contains eprinomectin for the treatment of a broad spectrum of gastrointestinal roundworms, lungworm and external parasites in cattle. EPRINEX has a zero day milk withold.

ivomec CLASSIC

IVOMEC® Classic Injection and IVOMEC® Classic Pour-On contain ivermectin for the treatment of a broad spectrum of gastrointestinal roundworms, lungworm and external parasites in cattle.

ivomec super

IVOMEC® Super contains ivermectin and clorsulon in a single injection, for the control of gastrointestinal roundworms, lungworm, liver fluke and external parasites in beef cattle.

Boehringer Ingelheim

Global Leaders in Parasiticides

References
1. Control of Lungworm in Cattle (August 2014). Control of Worms Sustainably. www.cattleparasites.org.uk
2. Emerging Threats Quarterly Report Animal Plant Health Agency Q4 Annual, Oct - Dec 2014 (15 Feb 2015).

Useful sources of information about lungworm: www.nadis.org.uk

www.cattleandsheepworming.com

Managing Parasites in Cattle

LUNGWORM

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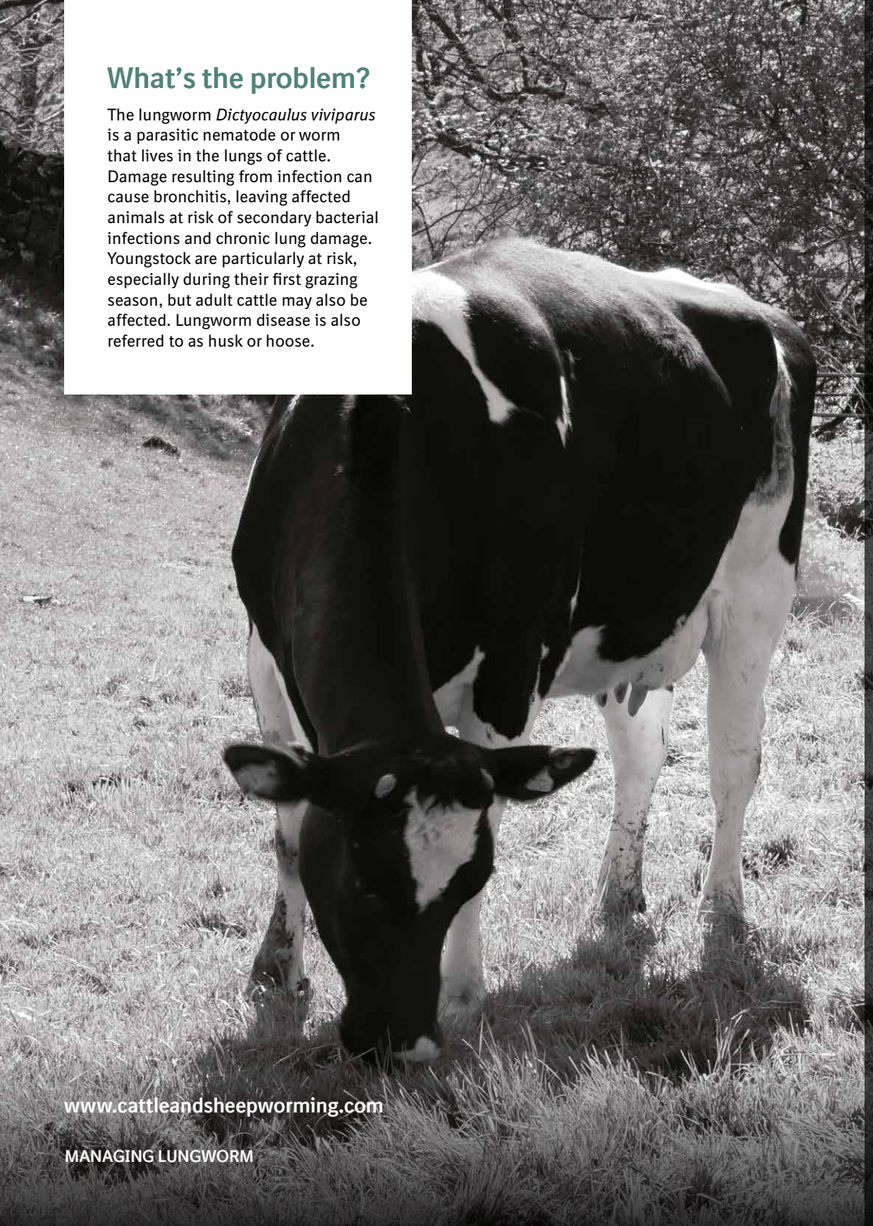
MANAGING LUNGWORM



What's the problem?

The lungworm *Dictyocaulus viviparus* is a parasitic nematode or worm that lives in the lungs of cattle. Damage resulting from infection can cause bronchitis, leaving affected animals at risk of secondary bacterial infections and chronic lung damage. Youngstock are particularly at risk, especially during their first grazing season, but adult cattle may also be affected. Lungworm disease is also referred to as husk or hoose.

www.cattleandsheepworming.com

MANAGING LUNGWORM

Why does it matter?

Typically infected animals cough and have laboured breathing. They fail to thrive and may lose weight. Slower growth rates and longer finishing time has been estimated to cost £50 – £100 per head in growing cattle[1].

The incidence of severe outbreaks of lungworm infection in adult cattle is reported to have increased in recent years[2]. Lungworm in dairy herds can have a considerable impact on productivity, with a sudden drop in milk yield often associated with infection.

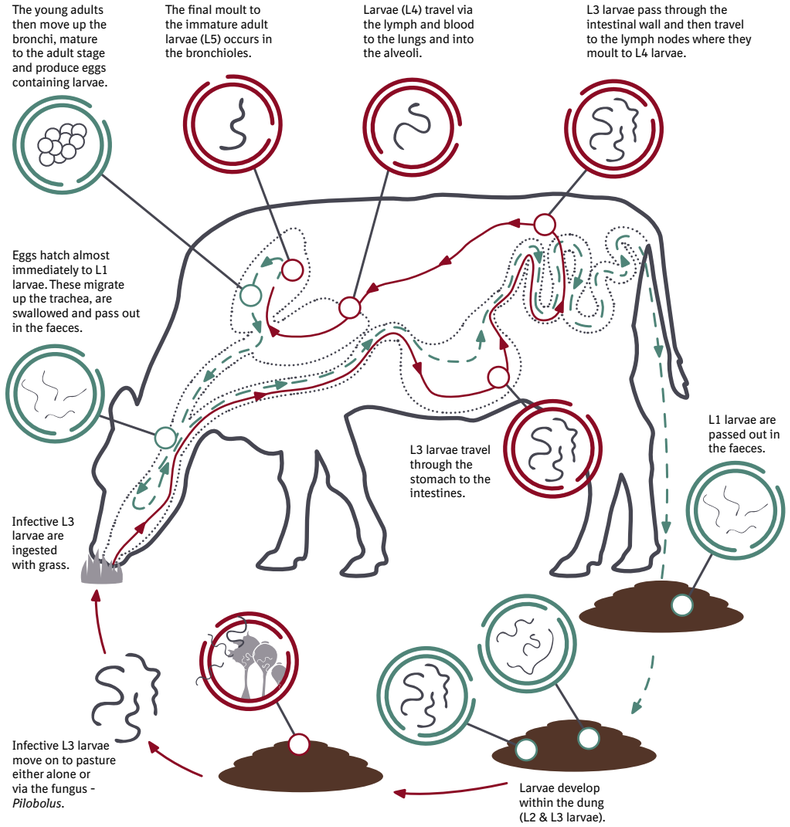
Lungworm may prove fatal. After treatment, severely affected animals may continue to exhibit signs of respiratory disease due to residual inflammation and infection. These animals may require additional supportive treatment to aid their recovery.

Herds may be infected with the parasite but not display any signs of disease until a combination of circumstances occur. For example; a wet summer, high stocking density and low herd immunity provide optimum conditions for a flare-up. Bringing cattle of different immune status onto the farm can also precipitate an outbreak of disease.

Lungworm disease is less predictable than gutworm in the beef herd, and pasture management strategies are generally less effective.

Youngstock between 6 and 18 months of age are most susceptible to developing disease associated with lungworm infection and, although cattle develop an immunity to the parasite, individuals can carry low numbers of worms which lay eggs and contaminate the pasture with larvae.

Outbreaks of disease are most common during July, August and September, but the threat of lungworm can continue until November or even December, as the disease favours mild, wet autumns and winters.



Lifecycle of the lungworm

Adult lungworm live in the main airways; the bronchi and trachea. They produce eggs that hatch almost immediately, are coughed up and swallowed. L1 larvae pass through the digestive system and leave the cow via dung. It is here that they develop to the infective stage. This development can occur within a week given the right moisture and temperature conditions. Animals then ingest these larvae by grazing herbage.

There is no intermediate host species, but the larvae can use a fungus called *Pilobolus*, which grows on dung pats, to spread via the air to reach a wider area of grass away from the pats. Larvae can survive on pasture for several months, but are sensitive to periods of hot, dry weather.

Once ingested, the larvae burrow through the intestine and migrate to the lungs, through the blood and lymph, where they develop into adults within three weeks.

Lungworm and immunity

Cattle that are exposed to lungworm will develop immunity. However, the protection this provides is short-lived. Continued immunity relies on ongoing low-level exposure to boost protection. Many factors can affect the development of immunity, and determining whether cattle are protected against disease is not possible.

In adult animals not previously exposed to infection, the disease process is the same as in young animals. However, in immune adults, re-exposure to the parasite can result in a different form of disease. In the face of heavy challenge, larvae may reach the lungs before they are killed by the immune system. These larvae induce a severe inflammatory bronchitis. The reaction associated with this process can lead to severe clinical signs if the lesions are extensive. This is known as reinfection syndrome.

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