

## Newsletter August 2020

# Lungworm in Cattle

Goncalo Barrenho

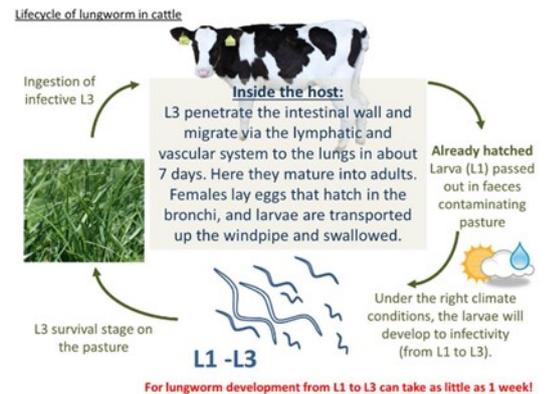


**A roundworm called *Dictyocaulus viviparus* (also known as *Parasitic Bronchitis*, *Husk* or *Hoose*) is associated with high mortality. Calves at grass from midsummer to autumn are most vulnerable to the disease, but heavy infections in animals of any age who have not previously been exposed, will produce clinical signs. It is most often seen in dairy calves, but also common in weaned beef calves.**

The overall costs associated with an outbreak have been (conservatively) estimated at approximately £140 per adult cow in the herd, with milk production losses, averaging 4 kg/cow/day, making up 50 per cent of total costs and the remainder being incurred through the disposal of dead animals, laboratory costs, treatments and extra inseminations. Subclinical infections have been shown to account for a milk drop in the region of 0.5 kg/cow/day.

A fascinating contribution to parasite epidemiology is delivered by *Pilobolus* fungi. While parasite development is completed in the cow pat, the fungus grows on top of it. *Pilobolus* is thought to produce chemokines which direct the usually sluggish L3 larvae upwards and migrate to the head of the fungus. When the spore box of the fungus discharges, the infective lungworm larvae are expelled up to 10 feet away from the faecal pat, thereby increasing the chance of ingestion by grazing cattle.

The **clinical signs** may vary from occasional coughing to severe respiratory distress, and symptoms reflect the number of infected larvae ingested during a relatively short period. Typically, the peak incidence of clinical cases occurs in late summer and early autumn (August-October) though can persist until December. By the third week, severely affected cattle do little else except stand in a characteristic head-extended position with rapid shallow breathing and frequent coughing. Clinical disease in adult dairy cows can result in severe losses, mainly in terms of reduced milk production, reduced fertility and potentially even the death of the cow. Spring-born suckled calves that are with their dams until housing are often less at risk. However, first-season grazing dairy cows and autumn-born suckled beef calves can be susceptible when turned out in early summer. Lack of exposure in young cattle may result in clinical disease in older cattle.



Widespread coughing in a herd is a tell-tale sign, and mortality can occur in heavy infestations. Other symptoms include weight loss and laboured breathing. Fever may occur when there is secondary bacterial infection.

Currently, we do not have evidence that diagnosed disease outbreaks, normally recorded June/July onwards and peaking in September, are starting to occur earlier in the year. However, when compared to other regions, longer grazing seasons lead to more outbreaks later in the year (especially October) in the south-west of England. If non-immune animals are turned out on heavily infected pasture, for example, a plot already grazed by first- or second-season heifers in that year, then clinical disease can occur three to four weeks after turnout. However, this is uncommon. Typically, in spring, very few larvae will have survived the winter, leading to only a light pasture contamination when animals are first turned out. Carrier animals are thought to be the most important and reliable contributors to the year-to-year survival of *D. viviparus*. If naive animals are turned out onto pasture grazed by carrier animals, contamination will normally be light until the arrested larvae resume their development and create patent infections. If pastures are not rotated, repeat infections on the same pasture can lead to heavy pasture contamination, with disease being seen in the second or third worm generation (approximately two or three months at pasture, respectively). Transmission between cows is most problematic if animals of different immunity levels are mixed, for example, when brought-in animals enter the herd or heifers join the adult cows.

To be continued on the next page...

Methods that can be used to prevent lungworm outbreaks are:

- Low stocking rates
- Closed herd policy or quarantine and treatment of introduced stock
- Do not run young calves with older calves
- Avoid lush wet pastures or paddocks with swampy areas if possible, at times of high risk
- Use rotational grazing if possible, moving at weekly intervals, followed by adult immune cattle
- Blood samples can be analysed for antibody to *D. viviparous* and faecal larvae counts can be used to assess exposure from early summer through the grazing season – however, a negative faecal result is not proof of absence of disease, especially in adult cattle with mild symptoms larvae are rarely found, but they do respond to anthelmintic therapy
- Vaccination may be required on farms where the disease is endemic. Vaccinated animals need to be exposed to parasitic challenge following immunisation to ensure the development of adequate immunity.

A vaccine is available to protect against lungworm in cattle, or alternatively control can be achieved through use of an appropriate endectocide or anthelmintic treatment programme.

If the pre-housing long-acting anthelmintic treatment can be given some weeks before housing, this will help ensure calves are free of lungworm and therefore healthier, and less at risk of Bovine Respiratory Disease in the early housing period.

Some endectocides allow treatment up to five weeks pre-housing which, for convenience, could coincide with vaccination against the respiratory viruses. As always, it is important to speak to your vet about the treatment methods most appropriate for your herd.



## Talking Balls!

Eliot Hedley



**Ringing** – Very quick and affordable when done right. However, in accordance with the Mutilation Regulations of the Animal Welfare Act, one must not use a ring on an animal over 7 days old. I have witnessed the detrimental effect it can have on youngstock and would not fancy it on myself.

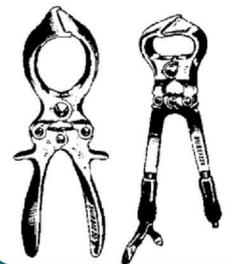
**Beware of the burdizzos** – I was recently called out to see a “golf ball sized, not-where-it-should-be testicle”. After examination and surgical castration, it appeared that the bullock in question had been castrated by a previous owner using burdizzos. There was still plenty of functional testicular tissue present, skill and care are needed when using burdizzos as they can be unreliable. Remember they still require local anaesthetic even if they are not being cut.

Legislation states anything over 2 months of age NEEDS local anaesthetic to be castrated by ANY means – I would still use local

anaesthetic no matter the age. Again, if it were done to me I'd be sure to want plenty of local! FarmVets SouthWest have a policy of no Burdizzos to ensure no failed castrations.

**Pain relief** – A single dose of NSAID pain relief (such as Metacam) has been proven in multiple trials and studies to reduce the ongoing pain from castrating. Pain causes cortisol release, which leaves calves susceptible to getting sick (pneumonia) and lowers voluntary feed intake and subsequent daily live weight gain. The effects of pain relief have been shown to be beneficial for up to 28 days post castrating compared to animals castrated without pain relief - so well worth using!

### The Burdizzos



### Red Tractor Audits Re-starting

As many of you will know Red Tractor/Farm Assurance Audits have re-started as lockdown has been eased. Please remember that there were a *considerable number of changes to the Dairy Standards which occurred in October of last year including requirements for a full BVD eradication plan, Johnes Monitoring through blood or milk samples, attendance at medicines courses and a number of visible protocols required around the farm. Many of these changes are being considered for the forthcoming Beef and Lamb changes being proposed* over the next two years so it would be prudent to start thinking about putting measures in place and discussing this with ourselves over the coming year.

*If you need to attend a medicines course we will be running these again in the Autumn* providing Covid-19 restrictions continue to ease. Please contact any of our offices to register your interest and we will contact you with specific details closer to the time.

In preparation for your Red Tractor Review having detailed accurate records of animal treatments, health issues and mortalities enables the review to be much more beneficial and time efficient.

**Please give plenty of notice in arranging your Red Tractor review with us so we can have all of this paperwork ready for your audit.**