

We need to think about a different kind of worm

Tom Hume, partner at Westover Veterinary practice

Tom Hume is a partner at Westover Vets in Norfolk. He is passionate about improving the productivity of livestock farms without increasing costs. In this edition of Grazing Club, he looks at the role parasites play in livestock health as part of grassland management.



Let's be honest, internal parasites (worms) can be a boring subject! But they are an important factor in a the loss of productivity, despite us all knowing about them and spending money on wormer.

Before I begin, a quick reminder of the life cycle of a worm:

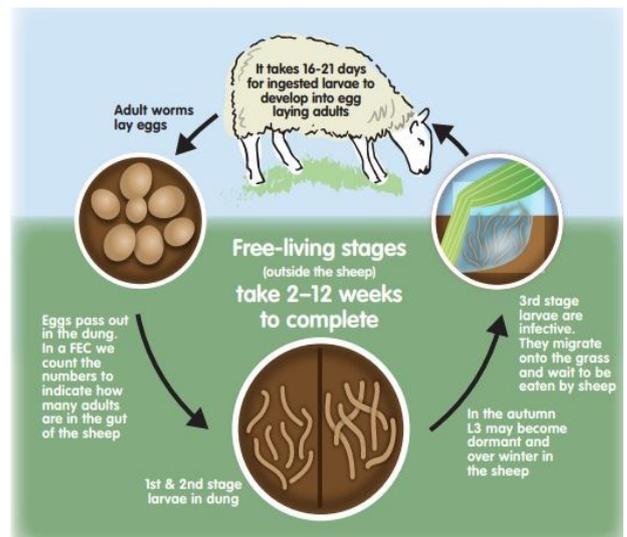
The adult worm lays eggs inside animals' intestines, which then pass out in dung onto pasture. The eggs hatch into larvae that crawl onto grass near the dung and the larvae are eaten by the grazing animal in the grass.

Larvae develop through different stages inside the animal, then when they reach adulthood they lay eggs.

This process normally takes about three weeks, depending on weather conditions, and generally need an average day and night temperature of 10 degrees.

Now to compare the young and adult animals:

The young animal starts with no immunity to worms and therefore the worms find a calf or lamb a very easy place to inhabit. As a result, they develop quickly into big strong worms and produce lots of eggs. Therefore, each excrement that a lamb or calf produces will have many more eggs in it than that of an adult. The pasture will very quickly become infested with larvae and, if they are eaten by another young animal, the process will continue. Compare this to the adult animal, which has developed immune cells that will specifically attack the worms. When the adult eats the larvae, they find life a struggle inside the adult intestines. The worms grow poorly and only produce a few eggs that are passed out in the excrement, meaning that there are far fewer larvae on the pasture.



Hopefully this makes it clear why there is such a difference between the impact of worms on adults compared to youngstock. This becomes relevant to control strategies when we consider different grazing systems.

Autumn-born suckler calves (also relevant for dairy-bred calves that are to be grazed)

There are two significant points to consider:

1. They are generally weaned at turnout so will be grazing on their own, away from their dams.
2. They are consuming a large amount of grass at this age and therefore take in quite a lot of worm larvae over a short space of time.

In combination, these factors mean that the worm population is thriving because they are only ever inside young animals with no immune system so they all develop well and lay lots of eggs, which easily find a new home inside another young animal. The pasture very quickly becomes infested with larvae and the growth rates of the calves slow down, and they may develop diarrhoea or have serious health consequences. Grazing autumn born calves on contaminated pasture are high risk and they will need prevention strategies and/or treatment.

Spring-born suckler calves

In contrast to autumn-born calves, these animals are normally turned out with their dams as young calves. This means their dams are consuming most of the larvae and only passing a few eggs back out onto the pasture. Early on in the grazing season, young calves don't actually graze that much. They will consume some grass, but they are still getting the majority of their nutrition from milk. This means that they slowly start to take in worm larvae a few at a time. This allows them time to develop an immunity over the course of the summer as they graze more. Growth rates may not be affected so dramatically and it is unusual to see clinical problems with worms during the summer.

Spring-born lambs

In theory, the processes outlined above are similar for sheep. Animals will develop immunity over time, but as most lambs are grazing hard by six to eight weeks old, this often coincides with the right weather conditions for an increase in worm activity. Lambs grazing alongside their dams aren't protected in the same way as calves would be. In addition to this, we know that wormer resistance is a big issue in sheep so treatment strategies have to be targeted.

Diagnosis

Most people will be aware of the importance of worm egg counts in lambs and this can be an excellent way to monitor the worm burden, the need to worm and the effectiveness of the wormer. The same is not true for calves. Worm egg counts are useful for monitoring pasture contamination and exposure, but measuring growth rates during the grazing period is a better way of checking the calves are achieving their target growth rates.

Treatment

For both lambs and calves there are plenty of wormer treatments available and some will be more suitable to different systems or timings than others. Take advice from your vet so that you are using the right product at the right time to get the right result. This should include a deliberate plan to avoid developing wormer resistance on your farm.

Prevention

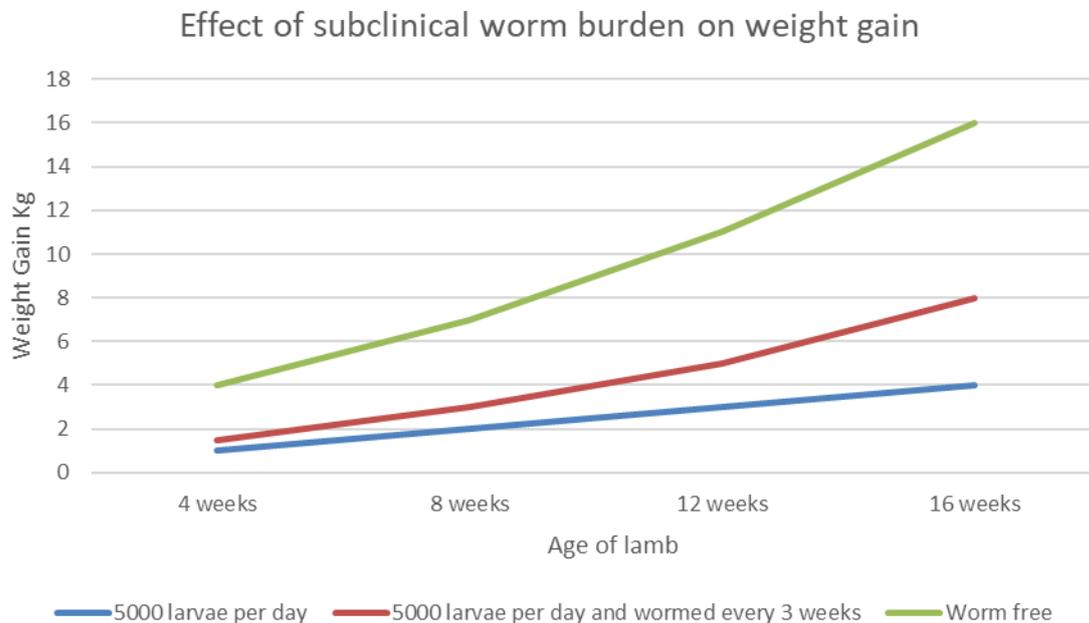
Prevention is better than cure—knowing as much information about the worms as possible means we can do things to make sure they don't get a chance to cause losses.

Lower risk grazing typically means new leys, silage aftermath or land that hasn't been grazed for two years. Weaning young animals onto lower risk grazing, and then continuing to move them frequently onto low risk grazing, is probably the number one way to avoid the worms ever getting a chance to establish. In practice this can be challenging. The old saying of "not letting them hear the church bells twice on the same bit of ground" is still valid today.

Rotational grazing with other species can work well as often the worms are species specific. Also, rotating the grazing land in the arable rotation can have spin off benefit of increasing the organic matter content in the arable land.

Most people will be aware of the situation when some of the lambs will finish in 11 weeks at 42kg. On the same farm, with the same genetics and management, there will also be lambs that linger on over the summer, perhaps eating creep and going onto turnips and are finally finished in November time at 28 weeks. The graph below, helps to illustrate why this might be.

As can be seen from this graph, even when worms are treated regularly, they still have a massive impact on the weight gain achieved, so it is important to think about ways to reduce exposure to worms, if at all possible, rather than relying on treatments.



References: Effect of Subclinical Teladorsagia Infection on LWG. Coop et al, Journal of Agricultural Science, 1982, 98, 247-255.

For more information download our BRP manual [Worm Control in Sheep for Better Returns](#)