

Cattle worming

Cattle worming strategies vary massively between farms and they are often devised without much input from us. Fortunately, with exposure to gut worms, cattle do gain good immunity over time and so far resistance to the commonly used wormers is very rarely reported in cattle. With these points in mind, worming strategies should allow cattle to get exposure to gut worms so they can build immunity to them and wormers should be used responsibly so that resistance is less likely.

Similarly, with lung worm, exposure will lead to immunity over time. There is also a vaccine, Huskvac, which can be used to increase the speed of onset and strength of immunity when exposed to lungworm. With fluke however, cattle do not gain immunity after exposure, so cattle of all ages are at risk. In cattle there are two main types of gut worm that are of concern, *Ostertagia* (stomach worm) and *Cooperia* (intestinal worm), the signs of these are very similar in cattle. The table below shows the signs of gut worms, lung worm and fluke.

Parasite	<i>Ostertagia ostertagi</i> (Stomach worm)	<i>Cooperia oncophora</i> (Intestinal worm)	<i>Dictyocaulus viviparus</i> (Lungworm)	<i>Fasciola hepatica</i> (Liver fluke)
Disease	Parasitic gastroenteritis		Bronchitis and pneumonia. Also known as husk/hoose	Fasciolosis: Damage to liver and bile ducts seen at slaughter
Signs in affected animals	Loss of appetite, watery green scour, rapid weight loss and poor growth rates		Persistent coughing. Laboured breathing	Poor weight gain. Loss of body condition Reduced fertility

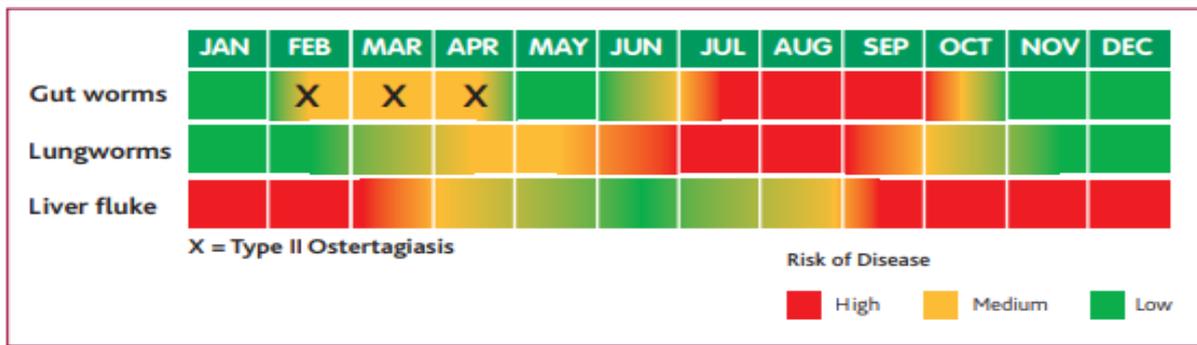
Without going into too much detail on gut worm life cycles, for fear of losing your attention, the main points to take note of are,

- Adult worms live in the gut and lay eggs which are passed in the dung
- These hatch into larvae in warm moist conditions (spring, summer)
- Larvae are then eaten with the grass when animals graze and then grow into adults in the gut and the cycle starts again
- This takes a minimum of 4 weeks

Ostertagia (stomach worm) has an important difference. In autumn when the conditions become less favourable, instead of the larvae becoming adults in the stomach once ingested,

they hibernate there for a few months. They then resume development late winter and large numbers of adult worms can develop simultaneously in the stomach. This can happen in animals of any age but is very serious in younger animals, which causes acute disease which can be fatal. This condition is called type II ostertagiasis.

Lung worm's life cycle is more complicated, but it also has minimum life cycle time of 4 weeks and is spread in the dung. Fluke is very different; the life cycle lasts a minimum of 20 weeks (12 weeks inside the animal once ingested) and it involves snails which live in wet areas of pasture. Disease is seen once the fluke reach the liver and start tunnelling through it, causing considerable damage.



The table above shows the disease risk period for each type of worms

The larvae of gut and lung worms can survive on pastures grazed the previous year. This means that pasture contamination the following grazing season will start to increase as soon as cattle are turned out to graze and these larvae are ingested. Pasture contamination will increase to a peak which generally happens in July, this is when cattle with limited exposure and low immunity are most at risk of severe disease.

Natural immunity to gut and lung worms requires continual exposure over a grazing season (two grazing seasons for Ostertagia). Using short acting wormers will reduce the contamination on the pasture but will still leave enough exposure for immunity to develop. Keeping the pasture contamination under control will help prevent sudden onset, severe disease in naïve animals.

Group 1 1-BZ
Benzimidazoles (BZ)
White drenches
 Resistance status:

- Cases on most UK sheep farms
- No resistance reported on UK beef farms

E.g. Panacur

Group 2 2-LV
Levamisoles (LV)
Yellow drenches
 Resistance status:

- Cases increasing on UK sheep farms
- No resistance reported on UK beef farms

E.g. Levacide

Group 3 3-ML
Macrocyclic lactones (ML)
Clear drenches
 Resistance status:

- Cases increasing on UK sheep farms
- A few cases reported on UK beef farms

E.g. Bimectin

Types of wormers

The boxes above show the three main types of broad-spectrum wormers used in cattle. All three types control gut and lung worms in cattle but not fluke. Separate flukicides are needed to control fluke, these are available in products on their own or in combination products containing a flukicide and a broad-spectrum wormer.

Wormers can be given by several different methods including drenches, injections, pour-ons and boluses. The route of administration and the type of product affect the persistency, these can be categorised by,

Short acting

- Any BZ or LV products other than boluses
- All flukicides

Long-acting (usually 4 weeks)

- ML injections or pour-ons
- Combination products containing MLs

Ultra-long-acting (4 to 5 Months)

- Worming Boluses
- Long acting ML (moxidectin) injections

The long acting products have the advantage of less cattle handling being needed through the grazing season with the ultra-long-acting products lasting a whole grazing season. The disadvantages are these products will accelerate selection for and prevent cattle developing their own immunity (an exception to this is pulse release boluses eg. Autoworm which release a dose every 3 weeks). Another potential issue is

the ultra-long-acting products may leave animals at risk late on in the grazing season if worm numbers remain high into autumn due to favourable weather conditions.

Treatment strategies

Unfortunately, no worming strategy will suit every farm, treatment plans need to take into account farm location, disease history, current season/weather and the type and age of stock.

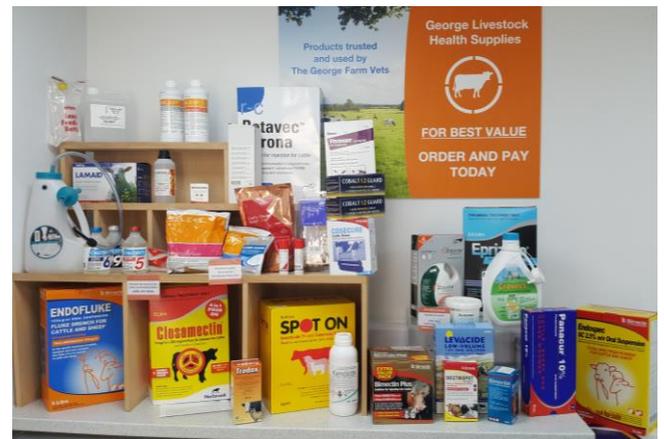
Some general principles that should be considered,

- Broad spectrum worming treatments for gut worms should be aimed at animals in their first and second grazing season
- Cattle in their third grazing season and over should not need broad-spectrum wormers at all
- Worming pre turn out, especially with ultra-long-acting products, will not allow animals to develop immunity by exposure to gut and lung worms
- If using Huskvac, do not worm cattle until they have been turned out for 4 weeks, this will allow exposure to lung worm which is necessary for the vaccine to work
- All cattle are susceptible to fluke, if in high risk area or have a history of fluke, fence of wet area of your fields and use a flukicide treatment at winter housing
- When worming in autumn when cattle come into housing do not use levamisole (group 2) as this will not kill *Ostertagia* larvae that are hibernating (type II ostertagiasis)

And finally, when using wormers they should be used responsibly to help avoid resistance. Follow the directions for use on the box or leaflet and know the weight of the cattle ensure the correct dose is given. Rotating the types of wormers used

and continually using the same wormer will aid the selection resistant worms.

With our new shop, George Livestock Health Supplies, we sell worming, fly and other products at competitive prices; give Bridget a ring or pop in for more details. We are also on hand to give you proper advice for the use of these medicines and answer any questions you may have. These products can be collected from any of our drug drop off points or brought to the farm by a vet during a visit.



The information for this newsletter has been taken from the AHDB Beef and Lamb booklet.

‘Controlling worms and liver fluke in cattle for better returns.’

This is available on the website below if you would like to read about worming of cattle in more detail.

www.beefandlamb.ahdb.org.uk

All the best!

Will

