

Gastrointestinal worms

Clinical signs

Gastrointestinal infections occur in cattle in any age class. Especially in animals during the first grassing season, clinical signs may occur. The most typical symptoms are: loss of appetite, rough hair, weight loss, deterioration of overall condition and a sometimes diarrhea.

Cause

Gastrointestinal worms are commonly referred to as worms that occur in the stomach or intestines. Some worm species are common while others are rare. Some species are (very) pathogenic while other species are less to not pathogenic. Every cattle can have worms.

Infection route

Calves and young animals get infected with worm larvae as soon as they come to grassland where cattle have been in the previous year. The larvae develop into the cattle to adult worms, which secrete worm eggs. These eggs return again to the grassland with the manure, where they develop into worm larva in a few weeks (depending on the humidity and temperature). This will induce a re-infection of cattle. During the meadow season, the infection pressure increases.

Damage

Damage caused by gastrointestinal worm infections consists of reduced calves and pink growth and hence a later calving time. The damage is caused by reduced intake of energy, protein and minerals through the gastrointestinal tract. This leads to reduced growth and/or wasting. In later years, this may lead to a reduced milk production.

In addition, costs of veterinarians, use of worm medication and extra labour will lead to additional costs.

Diagnosis

An infection with gastrointestinal worm infections can be diagnosed in several ways, e.g. by examination of manure, blood tests and by tank bulk milk.

Manure (faeces) investigation

With the support of manure (faeces) analyses, infections with gastrointestinal worms can be determined. For this investigation, the number of worm eggs in the manure is counted.

Quantitative manure (faeces) analyses is only useful between six and ten weeks after grassing, in case no medications against worms have been used. In this period, the number of worm eggs gives you an indication about the severity of worm infection. This allows you to make the choice between treatment or no treatment.

Blood analyses

Using blood tests on pepsinogen, of at least five calves during or after a first grassing season, may give you a good impression whether the animals needs to be dewormed. The determination of pepsinogen gives an indication about the damage of the rennet stomach, so about the larvae infection of the animals.

Tank bulk milk analyses

In tank bulk milk samples, antibodies against worm infections can be detected. These tank milk samples are examined every year in August on antibodies against lungworms, and in October / November on antibodies against liver fluke, lungworms and gastrointestinal worms. The result tells you per parasite whether there is an infection, to what extent and whether you have to start with any treatment.

Risk factors

Grassing plays an important role in gastrointestinal infections. Extra chances of infection are present when:

- Calves are used to graze on parcels where other bovine animals (e.g. calves) have previously grazed;
- Calves are sent to the meadows early in the season;
- Dairy cows have not built up any resistance to gastrointestinal infections when they were young, for example because they have been kept in stables or have been treated extensively.

The chance of damage caused by a worm infection is the smallest when the calves are transported every three weeks to other parcels that have not yet been used by young animals or mowed 2-times.

With these methods a slight contamination of the parcels will occur. As a result, the animals will develop resistance. Important is the initial contamination of a parcel. If this is low, this infection will not cause damage for the first two months.

The initial contamination may vary and depends on the grazing in the previous or current season. A persistent contamination of the parcel is the highest when calves have run on the parcel the year before.

The contamination of the parcel is lower in case heifers and even lower when cows have grazed on the parcel the previous year. A persistent contamination of the parcel is rarely so high that severe growth retardation occurs within a few months.

By mowing 1 to 2 times in the new season, the contamination of the parcel decreases considerably. The same applies if cows or other animal species (e.g. horses or sheep) have used the parcel prior to grazing by cattle.

Treatment

The approach to treat gastrointestinal worm infections consists of grassland management in combination with a good deworming strategy.

Grassland management

Grassland management plays an important role in the prevention and treatment of gastrointestinal worm infections. To build up resistance to gastrointestinal worm infections, calves should be exposed to an infection to a limited extent.

A good way to build up resistance to gastrointestinal worms is to let the calves graze on new grass parcels every three weeks (change parcels every three weeks). This grazing system works optimally when calves are sent to parcels for the first time more lately (older calves). For companies where this period is not possible, it is advisable to check the severity of the infection 6-10 weeks after the start of grazing by means of manure testing.

If the meadow season of calves is longer than two months, treatment may be necessary. Use the described procedures to prevent infections as much as possible, and on the other hand, in combination with a calf condition score and proper diagnostics, to determine the right choice for (or no) treatment. It is not always necessary to use treatments during the growing season as well as during the period of stabling (bringing to the stable). It is useless to treat if it is not necessary (additional cost, risk of resistance development), but it is also useless not to treat if it is necessary (growth retardation, later calving or possibly reduced future milk production).

Interpretation test results

In order to convert the test results in to action on your farm, it is advisable to consult with your veterinarian. He or she can decide whether follow-up steps are desired.