



FarmLab

DIAGNOSTICS

GUIDE TO INTERPRETATION OF FAECAL PARASITOLOGY SAMPLES

Faecal analysis of cattle and sheep dung samples may be used as an aid in the assessment of parasite levels in individual animals and on farms. Faeces is examined at FarmLab Diagnostics using a variety of methods depending on the type of parasite to be analysed.

Samples may be tested individually or as part of a composite (pooled) sample. Testing individual animals in a group is a more sensitive (accurate) method of parasite analysis. Pooled samples, however, are a cost-effective means of assessing parasite levels, albeit, with somewhat less accuracy when compared to individual samples.

WORM FAECAL EGG COUNTS

The number of worm (Strongyle) eggs per gram is estimated using the McMaster Technique. In general there is a positive correlation between the number of worm eggs present in the faeces and the number of adult worms present in the animal's gastrointestinal tract. Recently infected animals will not have worm eggs in their faeces as the worm population in their gastrointestinal tract will not be fully mature, i.e. a prepatent infection.

In general the following guide can be used when assessing the requirement to treat lambs or calves for gutworms:

FEC<50 EPG	Gutworms undetectable, or present at very low levels	Worming not required
FEC<200 EPG	Gutworms present at low levels	Monitor again in 2-3 weeks
FEC<200 EPG	Gutworms present in significant numbers	Worming possibly required

The number of worm eggs produced by gut worms tend to reduce as the animal matures. Therefore worm faecal egg counts may underestimate the intestinal worm burden of adult animals. It may therefore be more appropriate to use a different test method in adult animals, eg milk antibody level in dairy cows.

The number of nematodirus EPG will be noted separately. Severe disease due to nematodirus may occur in the absence of positive visualisation in the faeces, this is due to the acute nature of the onset of clinical signs in nematodiroisis.

If coccidia oocysts are seen by the analyst when performing the worm faecal egg count, this fact will be stated on the test report. **The presence of coccidia oocysts may or may not be significant.** There are many different types of coccidia species in ruminants, but they do not all cause disease in the animal. Their presence or absence needs to be considered in association with signs of clinical disease and the history on the farm. Clinical coccidiosis may also occur in young animals before the appearance of coccidial oocysts in the faeces.

FLUKE EGG DETECTION

Fluke eggs in faeces are detected using the sedimentation technique. This method identifies the presence of fluke eggs in faeces. Our lab differentiates rumen fluke from liver fluke by visual inspection. Fluke eggs will only be present in the faeces of animals which have a patent fluke infection, i.e. the animals must have been exposed to fluke larvae on pasture for at least 12 weeks before examination.

The presence of any liver fluke eggs in cattle or sheep faeces is highly significant and indicates that flukicide treatment of those animals and their cohorts (co-grazed animals) is warranted. Negative liver fluke egg results need to be viewed with caution. **Negative liver fluke results do not mean that the animal is free of fluke.** In the case of negative liver fluke results the animal, may truly be free of liver fluke, or it may have a pre-patent infection (not infected for at least 12 weeks). In addition, the shedding of liver fluke eggs may be intermittent, and therefore the animal may simply not have fluke eggs in its faeces at the time of examination. Use of faecal coproantigen testing may be useful for further investigation, this test is available at an additional cost.

Many samples are positive for rumen fluke. The significance of this is not clear and may or may not indicate that treatment is warranted.

LUNGWORM DETECTION

Lungworm are identified using the modified Baermann technique. This test takes 24hrs to perform and is carried out at an additional cost when requested by the client. **Clinical lungworm disease (Hoose) can occur in young animals before lungworm larvae appear in the faeces,** i.e. in prepatent (recent) infections. Lungworm larvae are rarely present in adult cattle faeces, this does not mean that the animal is free of lungworm.

INCIDENTAL FINDINGS

If the laboratory analyst sees the presence of other parasites when analysing the faeces, such as strongyloides or moniezia, these findings will be noted on the test report. In most cases their significance is questionable.

This document is intended as a guide for the interpretation of faecal tests. This document should be interpreted in conjunction with the advice of the client's veterinary practitioner. Monitoring of parasite levels forms one part of the parasite control programme, however, professional advice should be sought in the design and implementation of on-farm parasite control programmes.



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