FAECAL ANALYSIS

Faecal analysis can be a useful diagnostic step for the investigation of weight loss, recurrent colic and diarrhoea/colic cases. Faecal samples can be analysed for nematode egg counts, nematode larvae, Clostridial toxins, aerobic and anaerobic enteropathogens, the presence of blood and sand.

a. Parasite eggs/Larvae

An adult parasite burden is greatly overestimated as a cause of weight loss (especially as owners will invariably have dewormed a thin horse) but cyathostominosis is a common cause of acute (and sometimes chronic) weight loss usually but not necessarily with diarrhoea. Over-reliance on fenbendazole could lead to a significant parasite problem in horses which are reportedly ‘well wormed’.

b. Sand

Chronic weight loss may result from an abrasive enteropathy due to voluntary or involuntary sand consumption. Sand can easily be detected by sedimentation in a suspended faecal sample but the quantity that is regarded as normal in a horse grazing sandy pasture is debatable. Sand enteropathy is common in certain parts of the country as the cause of weight loss syndromes, diarrhoea and/or colic. However, the presence of fairly large quantities of sand may be normal in some horses on certain pastures and the finding of sand in faecal samples only really indicates that the horse is ingesting large quantities of sand and doesn’t always necessarily imply aetiologic significance. Sand accumulation can be identified radiologically.

c. Occult blood

In general, positive faecal occult blood indicates colonic bleeding rather than gastric / small intestinal – eg. colitis, NSAID toxicity, neoplasia or just prior rectal examination. Also high numbers of leucocytes in stained smears may be significant.

There has been a recent development in the analysis of faeces for the presence of occult blood for the investigation of various gastrointestinal diseases (“Succeed”). It is claimed that the test can help in the differentiation of gastric or colonic lesions where a positive result for faecal haemoglobin only indicates a gastric lesion (since albumin is digested in the small intestine) and a colonic lesion will give a positive result for albumin and haemoglobin. Further work is currently underway to assess the accuracy of this test further.

d. Culture

Bacteria such as E. coli, Bacteroides and Enterococcus are also of highly equivocal relevance when cultured. On the other hand aerobic culture of Aeromonas, Campylobacter and Salmonella sp. are probably relevant to diarrhoea. Intermittent shedding of salmonellae may lead to false negative results and repeat samples are always advisable.

Faecal culture is rarely very helpful in chronic weight loss cases.

e. Clostridial toxin immunoassay (C.difficile Tox A/B, C.perfringens enterotoxin)

Testing is available for toxins of Clostridium difficile (toxins A&B) and also Clostridium perfringens enterotoxin. These toxins are readily detectable in faecal samples using enzyme
immunoassay tests and positive results infer either Clostridial enterocolitis or areas of severely compromised or necrotic bowel with secondary Clostridial infection (e.g. neoplasia). Anaerobic culture for Clostridia is often uninformative. Clostridium difficile is very difficult to culture on submitted samples due to its difficult growth requirements and extremely strict anaerobic requirements often leading to its death in transit. Clostridium perfringens is a normal gut constituent of horses and therefore identification of this bacterium does not imply aetiologic significance.

In the absence of diarrhoea, faecal samples positive for clostridial toxins have been associated with necrotic intestinal lesions such as neoplasia.