



## Guide To Equine Worming

### ***Why should I worm my horse?***

Horses which have large burdens of worms are at risk from a number of diseases, most of which can be divided into three categories of spasmodic colic, colic requiring surgery and diarrhoea.

### ***What kinds of worms cause a problem?***

#### **Large Redworms**

In the past these were very common worms. However, modern wormers are highly effective and so these worms less likely to cause a problem unless parasite control is poor.

The immature stages of the worm migrate through the gut wall and then along the arteries which supply blood to the gut wall. The larvae damage the walls of the arteries and can cause small blood clots to form which may block blood and therefore oxygen supply to that particular part of the gut, leading to that part of the gut. The immature stages then move back to inside the gut to develop to adults which produce eggs to contaminate the pasture.

#### **Small Redworms (Cyathostomes)**

The immature stages of these parasites live in the wall of the gut where they may stay almost in hibernation over the winter months. In this location they are fairly insensitive to most wormers. In the spring, these worms emerge from the gut wall and damage it, potentially causing weight loss, diarrhoea and in severe cases, death.

#### **Ascarids (Parascaris Equorum)**

Ascarids are mainly a problem in foals and young horses. When larvae are ingested from the pasture, they migrate from the gut to the lungs through the liver. Once in the lungs they are coughed up and swallowed and develop to adult in the guts. Heavy infestations can cause coughing as the larvae migrate through the lungs and the adults can cause impaction of the gut as they are often up to 40cm long.

#### **Tapeworms (Anoplocephala Perfoliata)**

The horse tapeworm lives in the mid-part of the gut at a junction between the small and large intestine known as the ileo-caecal junction. Infected horses pass eggs on to the pasture which are eaten by tiny forage mites which are on the grass. The eggs develop into an immature stage which is infective to horses and they ingest the mites as they graze. These then develop to egg-producing adults.

Tapeworms can lead to increased incidences of spasmodic colic and are related to a specific type of surgical colic- impaction of the ileum.

## ***How can I find out if my horse has a worm burden?***

### **Faecal Egg Count**

This test counts the number of strongyle eggs per gram of faeces and also identifies eggs of *Parascaris Equorum*. It is performed on a small sample of fresh droppings. Horses should be tested every 12 weeks if Faecal Egg Counts are being used to determine which horses are to be treated with wormer.

#### **This test is useful for:**

- Routine monitoring of parasite status
- Identification of infected horses for treatment targeting
- Investigation of weight loss
- Investigation of colic
- Investigation of the parasite status of a new horse

#### **Limitations:**

- Does not detect immature or encysted stages of strongyle parasites which are responsible for causing disease
- Does not discriminate between large and small strongyles
- Results are not well correlated with total parasite burden.

### **Tapeworm Antibody Test**

This test measures the level of antibody in the blood to a specific tapeworm antigen. Horses with significant tapeworm burdens have elevated levels of antibody. The level of antibody gives an indication of tapeworm infection intensity. It is recommended to be performed every year if horses are being treated in a Targeted Strategic Programme.

#### **This test is useful for:**

- Routine monitoring of parasite status
- Identification of infected horses for treatment targeting
- Investigation of an acute colic episode
- Investigation of recurring colic
- Investigation of the parasite status of a new horse

#### **Limitations:**

- Does not accurately differentiate between non-infected horses and those with a low level of infection
- Test results do not give an exact number of tapeworms

## ***How can worm burden be controlled?***

The main premise behind parasite control is to break the parasites lifecycle and this is primarily done through two methods:

### **Managemental/Pasture Control**

This involves minimising the contamination of the pasture through physical means. Clearly it is not possible to stop grazing horses inadvertently ingesting some infective larvae but regular removal of droppings from the pasture with twice weekly being the recommended frequency, rotation of pasture and resting periods of at least three months along with mixed species grazing and care with the number of horses grazed together can all aid this.

### **Worming Drugs**

The use of worming drugs to suppress egg output in droppings has been the mainstay of parasite control for many years as the drugs kill the egg laying adults and thereby reducing pasture contamination. See attached sheet for a full list of the drugs used as wormers and some specific information on their use. There are three ways of using these drugs:

#### **1. Strategic Dosing**

Wormers are used at specifically at turnout, during the grazing season and again in the autumn to disrupt the seasonal cycles of transmission. However, most parasites require specific weather conditions for development on the pasture so unseasonal weather may mean strategic dosing may not work as well.

#### **2. Targeted Strategic Dosing**

Horses are treated at critical times of the year but all horses have their droppings analysed for the number of eggs present and animals with more than 200 eggs per gramme of droppings are then wormed.

#### **3. Interval Dosing**

Specific wormers are given at regular time intervals during high risk summer grazing.

## ***Which method of control is best for my horse?***

Some practices are advocating use of Targeted Strategic Dosing and this approach may be suitable for a small number of horses but in a large yard or where horses are regularly moving on and off then a different approach is required. In such situations we would advise the use of a routine worming programme, treating all horses at the same time. It is good practice to have a Faecal Egg Count (FEC) done two to three weeks after worming. Effective wormers will remove adult worms and so should reduce the faecal egg count to zero for up to six weeks and therefore it is possible to monitor any potential resistance problems.

As you can see, worming of horses is a huge topic which we have attempted to condense into the newsletter for your information. Please feel free to contact the surgery to discuss your specific requirements and we will endeavour to get back to you as quickly as possible if no one is available to take your call.

## Drugs available against equine intestinal parasites

Drug	Trade names	Recommended frequency of dosing for adult horses	Efficacy against cyathostomes and tapeworms
Fenbendazole	<b>Panacur Equine Granules/Paste</b> (Intervet)  <b>Panacur Equine Guard- 5d course</b> (Intervet)	6 weeks  6-12 months	Will kill adult small redworms, their eggs and some immature stages. Some are resistant to this drug. 5d course effective against inhibited mucosal stage of small redworms
Mebendazole	<b>Telmin</b> (Janssen)	6 weeks	Will kill adult small redworms. Some are resistant
Pyrantel embonate	<b>Strongid-P Granules/Paste</b> (Pfizer) <b>Strongid Caramel</b> (Pfizer) <b>Pyratape P</b> (Intervet) <b>Exodus</b> (Janssen)	4-6 weeks	Will kill small adult redworms. Not effective. Not effective against inhibited mucosal stages. Double dose will kill tapeworms. Use tapeworm does every 6-12 months.
Ivermectin	<b>Eqvalan Paste</b> (Merial) <b>Panomec Paste</b> (Merial) <b>Furexel</b> (Janssen) <b>Eraquell</b> (Virbac) <b>Noramectin</b> (Norbrook)	8-10 weeks	Highly effective against adult small redworms, limited efficacy against inhibited mucosal stages
Moxidectin	<b>Equest</b> (Fort Dodge)	13 weeks	High efficacy against adult and developing small redworms. Persistent effect
Praziquantel	<b>Equitape</b> (Fort Dodge)	6-12 months	Efficacy against tapeworms. No efficacy against redworms
Praziquantel + Ivermectin	<b>Equimax</b> (Virbac) <b>Eqvalan Duo</b> (Merial)	6-12 months	High efficacy against tapeworms. Highly effective against adult small redworms.
Praziquantel + Moxidectin	<b>Equest Pramox</b> (Fort Dodge)	6-12 months	High efficacy against tapeworms. Highly effective against adult small redworms. Persistent effect