

## WORMING ADVICE

Worms are a common problem in many horses. In this article we look at the types of worms, resistance to treatment and the advantages of targeted worming for both horses and foals.

### WHICH WORMS CAUSE DISEASE IN HORSES?

- **Small redworms (Cyathostomins):** these worms are usually less than 2.5cm in length and appear red or white in colour. They are extremely common in the U.K. and their eggs are often present on pastures in high numbers. They can cause lethargy, sudden weight loss and diarrhoea, they also form cysts in the intestine. Huge numbers of larvae emerging from these encysted forms in the late winter/early spring can lead to severe damage to the intestinal wall causing diarrhoea, colic and even death in some cases. Resistance of cyathostomins to wormers is a serious worldwide problem (see below).
- **Large Redworms (Large Strongyls):** large redworms are much less common in the UK than in the past as they are very sensitive to modern wormers. However, they do have potential to cause serious disease as they migrate through blood vessels which supply the intestines, this can lead to blockage of these blood vessels, damaging the intestines causing severe colic and sometimes death. They can also cause anaemia, weight loss and poor performance.
- **Large Roundworms (Ascarids):** Foals are particularly at risk from large roundworms, as adult horses usually develop resistance after 2 years old. Larvae burrow through the intestinal wall, and are carried by the blood stream to the liver, heart and lungs, from the lungs they travel up the windpipe and are swallowed (again!), before developing in the intestines into adults which can produce up to 200,000 eggs per day. Affected foals may show unthriftiness, coughing and anaemia. Great care must be taken when worming foals with high worm burdens, as dead worms within the foal's intestine can cause blockages which lead to serious forms of colic. If in doubt, please discuss your foals worming regime with a vet.
- **Lungworms (Dictyocaulus arnfeldi):** Donkeys are the primary host of lungworms with up to 70% of donkeys being affected, however, they do not usually show signs of disease. Horses that are co-grazing with donkeys can become affected and may develop a cough. Ivermectin containing wormers are usually a very effective treatment. NB: Lungworm cannot be passed from horse to horse (they must be grazing with donkeys).
- **Tapeworm (Anaplocephala perfolata):** Can grow up to 20cm long, they attach to the intestinal wall where the small and large intestines join and cause inflammation of this site. Their eggs are difficult to detect in faeces and therefore treatment should not be based on the results of faecal egg counts. A blood test can be performed in order to evaluate tapeworm burdens, although it may be more cost effective to treat once or twice yearly prophylactically. Tapeworm have been linked to both spasmodic and impaction colic.
- **Pinworm (Oxyuris equi):** Pinworms can be recognized by their long tail which tapers to a point. Female adult pinworm can reach up to 10cm in length (males are much smaller), they inhabit the large intestine of horses and migrate to the anus of the horse where they protrude in order to deposit many thousands of eggs in a large sticky mass of fluid. This sticky fluid can cause severe irritation in some horses and affected individuals will often be seen frantically rubbing their back end against stable walls or fencepost. Resistance to some of the available wormers is seen in this species which can make treatment difficult.

## THE PROBLEM OF RESISTANCE

Resistance to wormers used in horses is becoming more and more widespread, meaning that even horses that are regularly wormed may still be at risk of serious disease. Recently a study published in the Journal of Veterinary Parasitology, found resistance in England to two of the three classes of wormers available in horses. Even more worryingly, resistance to one of these drugs was found to exist on 100% of yards tested!

Over-worming horses with low worm burdens is thought to be a major factor in the development of resistance strains of worms. At Bellevue Equine we strongly believe that it is the responsibility of vets and horse owners to ensure that horses are being wormed safely and effectively, while limiting the spread of resistance amongst worm species. For this reason we recommend that targeted worming protocols are used to control worms in horses.

## WHAT IS A TARGETED WORMING?

The study mentioned above found that 80% of the eggs measured were found in 15% of horses. This means that in any given group of horses it is likely that the majority will have low worm burdens, while a small number will be very wormy and shed huge numbers of worm eggs into the environment. Targeted worming involves using faecal egg counts during spring and summer to identify these 'high shedders', which can then be 'targeted' with appropriated worming drugs, while individuals identified as shedding low numbers of eggs are left untreated.

## WHAT ARE THE ADVANTAGES OF TARGETED WORMING?

- Avoid treating horses with unnecessary or ineffective drugs.
- Helps to prevent resistance developing.
- Horse's with high worm burdens are identified and treated before they can infect other horses.
- Disease-causing numbers of parasites are never allowed to build up.
- **Peace of mind for owners! Regular monitoring means you know whether your horse is at risk of worm related disease before it becomes a problem.**

## SO IF MY HORSE HAS LOW WORM COUNTS DOES IT EVER NEED TO BE WORMED?

If a horse is a 'low shedder' it should be monitored throughout spring and summer using worm egg counts, In addition, all horses are treated twice yearly in order to control tapeworm and encysted roundworms, which cannot be assessed using worm egg counts. We also recommended that new horses coming onto the premises should be quarantined and wormed routinely as they pose an infection risk to other horses.

## IS THE TARGETED WORMING APPROACH COSTLY?

Targeted worming should not be seen as a budget approach to worm control, however a recent cost comparison of targeted worming protocols in horses in the UK identified that use of worming drugs was reduced by 82% and on average a saving of £294/yard/year could be achieved when compared to a typical interval treatment program.

This may not translate to a huge saving for individual horse owners and indeed some horses which have high worm burdens may require more costly treatment initially, however in our opinion this is money well spent in preventing the more serious consequences of high worm burdens in these individuals.

## IT ALL SEEMS A BIT COMPLICATED!

Using targeted worming may seem more complicated than the old-fashioned interval dosing approach and can be confusing. But we're here to help! Our worming program offers tailored veterinary advice for each individual horse in addition to all worm egg counts needed for the year (minimum of three depending on your horse's requirements).

## HOW SHOULD SAMPLES BE COLLECTED?

In order ensure representative testing, we advise at least 3 faecal balls to be taken at random from the dung pile, which should not be more than twelve hours old.

If samples are to be stored for any length of time they should be kept below 6 degrees Celsius but ideally they should be submitted to the practice as soon as is practical.

## WHAT ABOUT FOALS?

Foals have different worming requirements to adult horses, particularly as they are very susceptible to serious disease caused by ascarid worms (see section on types of worms above) and it is essential that all foals are wormed at 3 to 4 month intervals during the first two years of life, before being switched to a targeted worming program. The choice of wormer is very dependent on the age of the foal and the time of year it was born. We recommend contacting the practice for individual advice for your foal.

### BELOW IS AN EXAMPLE OF A WORMING PROGRAMME DESIGNED FOR A FOAL BORN IN MAY/JUNE:

- **2-3 months** – treat with fenbendazole (eg. 1 day panacur)
- **6-8 months (at weaning)** – treat with fenbendazole (eg. 1 day Panacur) then one week later with ivermectin (eg. Eraquell) or worm egg count to help choose which of these wormers is best
- **9-12 months (spring)** – treat with ivermectin (e.g. eraquell) +/- worm egg count to check for resistance
- **12-15 months (summer)** – treat with ivermectin (e.g. eraquell)
- **15 months + (autumn/winter)** – treat with moxidectin combined with praziquantel (e.g. equest pramox)

**Important note:** This program is a guide and should be adjusted depending on what time of year your foal is born. Please contact the practice for individual advice specific to your foals needs.