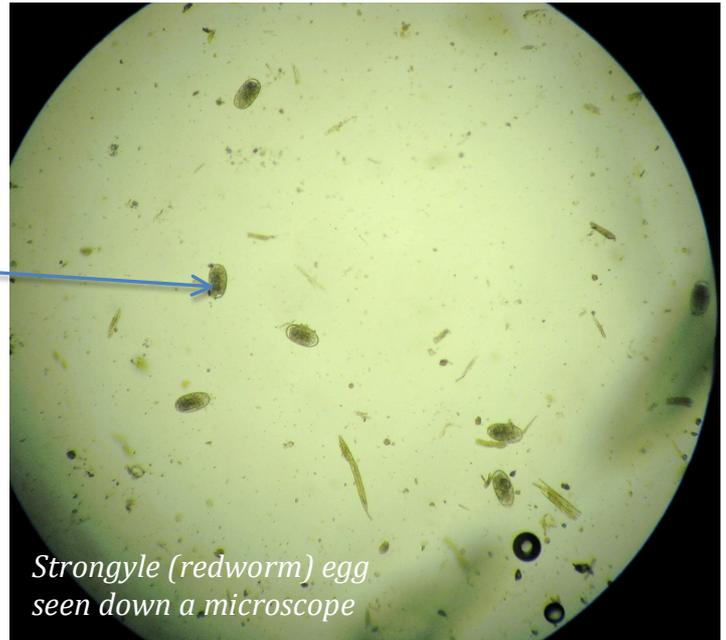




Small, Red and Dangerous

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Recent research indicates that resistance to many of the wormers available to us is becoming a serious problem. As there are no new wormers in "the pipeline" it is important that we preserve the efficacy of the wormers we currently have. An integrated approach including good management practices and an individual approach to worming for each horse or pony is needed. This will help to reduce our reliance on wormers to prevent disease associated with high worm burdens.



*Strongyle (redworm) egg
seen down a microscope*

The traditional approach of interval-based worming (treating all horses at set intervals with a particular wormer) has resulted in over worming many adult horses and the emergence of resistance. Studies indicate that in many populations of horses in the UK cyathostomins (small redworms) are resistant to benzimidazoles (Panacur) and pyrantel (Strongid). In a few cases resistance to Ivermectin and Moxidectin has been reported. It is well recognised that levels of infection with worms varies between individual horses grazing the same paddocks, with some having repeatedly higher worm burdens. In fact 1 or 2 horses out of a group of 10 horses are likely to have 80% of the worm burden.

Youngstock and geriatric horses are also more likely to have higher worm burdens and are more susceptible to disease associated with significant worm burdens.

Worm egg counts are part of the strategy to decide which wormers to use, based on the type of worms affecting that horse. Your Vet can then recommend the most effective product to use.

Good Management Practices

The aim of good management is to reduce the level of worm eggs and infective larvae that our horses are exposed to therefore reducing reliance on wormers to control worms. It is important to remember that it is not possible to eradicate certain worms such as redworms, and in fact exposure to low levels of worms will beneficially boost your horses own immunity.

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Worm eggs are passed in the faeces and these eggs hatch in the faecal piles. The hatched larvae then migrate out of faecal pats on to the grass. Moisture is needed for this migration.

In cool weather of 10°C the eggs take 12-14 days to hatch, but when temperatures rise to 25°C it only takes 3-4 days.

A 500kg horse produces about 8-12 piles of dung a day weighing around 25kgs. So if your horse has a low worm egg count of 100 eggs per gram of faeces that's 2.5 million eggs each day!

Reducing level of infective larvae on the paddocks

When grazing, horses take in infective small redworm larvae on the grass. The aim of good paddock management is to minimise the number of infective larvae your horse eats on the grass.

“Dropping picking”

There has been good scientific evidence, for over 20 years, that dropping picking paddocks substantially reduces the burden of worm eggs and larvae. The aim is to remove the dung before the eggs hatch. Regular twice weekly dropping picking is recommended through spring and summer, once temperatures fall and egg hatch takes longer once weekly removal is effective. Small heavily used pens should be dropping picked daily.

Rotational grazing and resting paddocks

The idea of rotational grazing with cattle or sheep is that they act as a biological “vacuum cleaner”. When sheep or cattle graze the paddocks they ingest the infective larvae. Small strongyles are host specific and they do not infect sheep or cattle so they effectively remove these infective larvae from the paddocks.

Likewise resting the paddock for at least 4 - 6 months will reduce the burden of infective larvae. Resting paddocks allows all the eggs to hatch and the infective larvae to die before the paddock is grazed again.

When paddocks are being grazed by horses, harrowing simply spreads the worm eggs and infective larvae over a larger area, increasing the infection risk. However infective larvae survive longer when in dung piles, therefore once horses are no longer grazing the paddocks harrowing is useful to spread the infective larvae out of the dung piles and reduce their survival time.

Reduce stocking density

When given adequate grazing, horses will naturally graze certain areas into “lawns” and avoid areas contaminated by faeces, “roughs”. When paddocks are overstocked and grazing is limited, horses will graze the “roughs”. The “roughs” are the areas with highest worm contamination.

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New horses arriving at the yard

When you have worked hard to reduce the worm burden on your paddocks don't let new arrivals increase contamination levels.

It is important to quarantine, test and then worm new horses arriving on the yard to avoid contamination of paddocks with worm eggs. There is always a risk that these worms could potentially increase the level of resistance on your premises.

Ideally all new horses should have a worm egg count taken and be wormed with an appropriate product on the advice of your Veterinary Surgeon. They should not be turned out on the paddocks for at least 48 hours after worming.

Getting the most out of worm egg counts

Regular faecal worm egg counts (FWEC) are an important tool that allows us to evaluate the level of egg shedding by individual horses. They give a measure of the horses' worm burden. Only the mature female worms lay eggs, so FWEC doesn't take into account numbers of male and immature worms.

There are a few things that you can do to ensure the results are as accurate as possible:

- Don't take the sample too close to worming. They should be taken at least 13 weeks after moxidectin, 8 weeks after ivermectin, 6 weeks after benzimidazoles (Panacur) and pyrantel (Strongid) unless advised otherwise by your vet.
- Take the sample from a fresh dung pile.
- Take a small sample from 3-4 dung balls.
- Ensure as much air is excluded from the collection bag as possible.
- Despatch to the Lab without delay.
- If for any reason there is a delay, keep the sample in a fridge.
- Discuss results with your vet who will advise you on the best course of action. If the horse has a high count; which is the best wormer to use, and if the count is low; when the next FWEC should be done.



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How do you know which wormers the small redworms in your horse's paddocks are resistant too?

It is a good idea to discuss with your vet the best way to monitor how effective various classes of wormer are at your yard.

Different yards have different resistance patterns and these can also vary between different age groups of horses. So one wormer might be effective in the adult horses but there may be signs of resistance to the same wormer in foals and yearlings.

A test called a Faecal Worm Egg Count Reduction Test can be used, which pools data from, ideally, a group of 6 or more horses at the premises that have worm egg counts greater than 200 eggs per gram of faeces. They are all treated with a particular wormer and a follow up FWEC is carried out 14 days after treatment. The risk of resistance to that class of wormer can then be estimated.

These measures, together with a full worm control plan developed with your vet, including use of a routine wormer to treat immature worms and the types of worm that are not readily detected on a FWEC, will reduce unnecessary use of wormers yet ensure that your horses don't suffer from disease associated with small redworms.

Cheshire Equine Clinic offers a tailored worm control program, including faecal egg counts at our laboratory. For further advice contact us; office@cheshireequineclinic.co.uk or 01829 770999.



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