

Worming Update

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Worming treatment programmes have changed fairly little over the last 40 years even though the types of worming causing disease in horses have altered dramatically. The current approach of treating all horses at frequent intervals was designed specifically to control the large strongyle worm, *Strongylus vulgaris*, but this parasite is now quite uncommon in managed horses. Presently the cyathostomins (small strongyles) are the main problem causers of mature horses. How these two types of worms behave and cause disease is very different and therefore treating them requires an entirely different approach.

The only way to accurately diagnose the level of mature worms present in any horse is to measure the eggs being passed in the faeces with a faecal egg count (FEC) and the only method available for determining if anthelmintics (wormers) are effective on a yard/pasture is the faecal egg count reduction test (FECRT). Faecal egg counts are measured both before and 14 days after a worming treatment is given. Failure of drugs to achieve high levels of egg reduction following treatment indicates the presence of anthelmintic resistant parasites on that yard. Tapeworm burden is measured with a blood sample that is sent to a lab to detect antigens from the worms themselves. It's a really useful test and quickly identifies horses with high burdens that may be at risk of disease.

Costs of performing FECs must be viewed as a necessary expense for maintaining optimal horse health.



Strongyle egg visible under a microscope

However, the worms are starting to fight back! Some worms are resistant to certain drugs in anthelmintics (so they're no longer being killed by them) so strategies to decelerate the buildup of this drug resistance, thereby extending the lifetime of currently effective anthelmintics, should be implemented whenever possible.

Treatment programmes based solely on the calendar without considering the individual patient with their individual needs can no longer be recommended.

To develop a programme we must:

- Determine which drugs are effective on each yard
- Use the correct drug for the correct parasite at the appropriate time of year
- Determine which horses require less or more frequent treatment by performing FEC

- Evaluate the overall success of the worm egg count of the worm control programme by monitoring the FEC of all horses on the property at regular intervals.

But all worms are bad, right? Well, it's a commonly held belief that any worms in a horse are bad, but this is simply not true. Horses have evolved with their intestinal worms and small numbers do not cause any significant health impairment, but rather help to stimulate immunity that serves to protect the horse from the establishment of a more serious worm burden.

Parasite burdens are not evenly distributed across the horse population. 20-30% of horses harbour 80% of all the worms. This means that some horses will continue to shed high numbers of eggs even when treated fairly regularly with anthelmintics while other horses have strong immunity and consistently shed very low numbers of eggs.

So which worms are important?

The parasites that are important and should be targeted in a control programme are:

- Cyathostomins (small strongyles) - **the main culprit**
 - Disease symptoms in horses infected with cyathostomins range from a mild change in intestinal function with no visible symptoms to a life-threatening disease known as larval cyathostominosis characterised by severe weight loss, chronic diarrhoea and oedema.
- Tapeworms (*Anoplocephala perfoliata*)
 - infection with a high number of tapeworms are linked to an increased likelihood of certain types of colic.
- The large strongyles now relatively uncommon in managed horses
 - These will be controlled with only once or twice yearly correctly timed treatments.
- Foals are slightly different as the worm *Parascaris equorum* is the most important.
- There are several other worms that are less common/important that are normally controlled within a properly designed programme.

A worming programme that treats all horses the same, rather than as individuals, will fail to provide optimal levels of parasite control. When it comes to worming there is no such thing as 'one size fits all'.



Horse with colic.

Unfortunately not all types of colic are preventable but by using an appropriate worming strategy, some types can be prevented.