



Parasite infection is a largely silent threat to the health of our horses – it's impossible to look at the outside of a horse and say whether it's carrying worms. Sometimes they are passed out in dung but even this doesn't correlate to burden and horses can be carrying large numbers without any outward indication.

This picture is further complicated by resistance. Death and disease caused by parasites, once the preserve of neglect or ignorance, is increasingly the result of our limited medications no longer being effective. We can no longer give a wormer and simply expect it to work. So how do we protect them from this threat?

Best-practice approach is to plan a test-based programme, the interval of testing based on a horse's relative parasite risk profile as low, medium or high for disease caused by worm burdens. To calculate this we can use a useful tool developed by an organisation called CANTER (Controlling ANTiparasitic resistance in Equines Responsibly), a pan-industry group of experts dedicated to solving the burgeoning problem of wormer resistance.

LOW, MEDIUM OR HIGH

A broad range of risk factors influence a horse's susceptibility to parasite infection. These can be easily remembered using the **CANTER** acronym: **C**linical history, **A**ge Profile, **N**umber of horses, **T**est results and **E**nvironment to give an overall parasite **R**isk profile. From this we determine whether a horse is low, medium, or high risk of infection. Let's take a look at each one to understand how it impacts the overall picture.



Underlying conditions (especially PPID) or previous history of parasite related disease can be associated with higher parasite risk.

Clinical History - anything that compromises the immune system of our horses also makes them more susceptible to parasitic infection and disease. This could be from a previous gut related parasite damage or from systemic diseases such as PPID, EMS etc. The more co-existing conditions, the higher risk a horse becomes. Regular worm egg counts can therefore be a barometer of health if a horse that has previously had good results slowly sees increasing counts.

Age Profile – a horse’s overall immune response has a lot to do with their resilience to parasite infection. Young horses under the age of five are much more vulnerable to worms as their system is undeveloped. Many horse owners say they never had a problem with parasites until they had youngsters! Ascarids are a parasite typically associated with young horses – as they get to adulthood, they generally develop a good natural immunity to these particular parasites. Even with good resilience through adulthood, a horse’s natural defences can wain as they age, again increasing their risk factor.



Horses < 5 years and geriatric animals are more susceptible to parasites so can act as a source of infection and are more likely to develop disease.

Number of Horses – the more horses kept together and the higher the density of horses per acre, the more important parasite control becomes. A small herd of adult horses grazing with more than two acres per horse will have a much lower risk than larger numbers of horses with a stocking density of less than one acre per horse. This is because each adult worm inside of a horse can lay tens of thousands of eggs every day. These are shed onto the pasture and, if not removed by poo picking, hatch to become infective larvae for horses to ingest. High numbers of horses multiplies this particular risk factor.



The more horses that graze together, the more important parasite control becomes, as infection risk increases with higher stocking densities.

Test Results – for a variety of reasons, some horses are just more susceptible to parasite infection. We can identify these individuals by using regular worm egg count, tapeworm and small redworm antibody testing. In a herd of horses grazing and managed together we usually find approximately 20% of horses carry the 80% of the worm burden. Horses with higher test results – or those who graze with these horses - will automatically be at medium risk. If wormer resistance has been identified on the property by worm egg count reduction testing this shifts risk into the high category because of the limited treatment options this poses and potential for disease to occur.



All horses should have regular worm egg count and tapeworm tests and be assessed for small redworm testing to detect infection.


Environment – as well as the individuals in a herd and overall stocking density we need to consider other environmental influences. Management techniques such as poo picking (ideally at least twice a week), cross grazing with other animals, resting and rotating pasture, has a major influence in breaking the lifecycle of the worms mechanically rather than relying on chemicals. Done regularly it prevents infective eggs or larvae from being ingested and is an important way of reducing parasite infection risk on the land.



Regular poo-picking to break the parasite life cycle and managing the herd to minimise new parasite challenges will help to reduce risk.

We also need to ask whether there are frequent movements of horses in and out of the herd and if so what are the quarantine procedures to protect against this? We can think of parasites like any other transmissible disease and new introductions not suitably tested and treated before being allowed into the herd can bring unwanted passengers with them to infect their new grazing. If any resistant strains of worms are present then this brings double jeopardy.

Risk Profile – all of these factors add up to help classify a horse as low, medium or risk of parasite infection. Try to be realistic; there’s no blame in having a horse in a higher risk category. Being honest will help you to put measures in place to protect their health. These steps include testing more regularly and looking for ways to break the parasite lifecycle with management like increasing your poo picking. A recent straw poll found more than 40% of British horses in the medium to high risk category.



Assessing Your Horse's Parasite Risk Profile
A range of factors influence a horse's parasite risk profile; remember them using the CANTER acronym and use this tool to discuss with your prescriber.

Risk Factor	LOW	MEDIUM	HIGH
C Clinical History	No history of worm associated (gut) disease	Some history of worm associated (gut) disease and/or coexisting disease such as PPID	Clear indication of worm associated (gut) disease in multiple cases plus coexisting disease such as PPID
A Age Profile	5-15 years, no youngstock	5 years-geriatric, no youngstock	1*-5 years, geriatric horses with coexisting disease
N Number of Horses	Low stocking density >2 acres per horse	Medium stocking density 1-2 acres per horse	High stocking density <1 acre per horse
T Test Results	Individual: repeated low worm egg count, tapeworm & small redworm antibody results Herd: low for worm egg count, tapeworm & small redworm antibody results	Individual: low-moderate worm egg count, tapeworm & small redworm antibody results Herd: low-moderate for worm egg count, tapeworm & small redworm antibody results	Individual: high worm egg count, tapeworm & small redworm antibody results Herd: high for worm egg count, tapeworm & small redworm antibody results Wormer resistance identified on property by worm egg count reduction testing
E Environment	Closed herd Poo-picked more than once a week Quarantine procedures in place	Occasional newcomers Poo picked less than once a week Quarantine procedures inconsistent	Frequent movements in and out of herd Not poo picked or picked infrequently No quarantine procedures
R Risk Profile	Calculate risk based on number of features that apply in each category; the more that apply in category low, the lower the risk, the more that apply in category high, the higher the risk of parasite infection and disease occurring.		

*Note: speak to your prescriber about the approach to parasite control in foals [visit www.canterforhorses.org.uk for more information](http://www.canterforhorses.org.uk)

For more information about CANTER and the work being done to address wormer resistance, visit the website at <http://www.canterforhorses.org.uk>

PLANNING FOR SUCCESS

Once you know your horse’s risk factor, ask your prescriber – your vet, pharmacist or SQP – for help in developing a strategic test-based parasite control programme for the year ahead. Foals from 4 weeks to 6 months will need a proactive treatment schedule along with testing to monitor efficacy. After this time, worm egg counts conducted every 8-12 weeks, depending on risk, will form the cornerstone of the plan with tapeworm testing added every six to twelve months and, for low-risk horses, small redworm antibody testing in the late autumn/winter. In this way any treatments can be targeted with the right chemical to the right parasites at the correct time of year and reduction testing added in at least annually to check for any resistance.

Any questions? The friendly experts at [Westgate Labs](http://www.westgate-labs.com) will be happy to advise.