



Resistance and why we need to think harder about worming

One of the most frequent questions we are asked is 'what do I worm my horse with?' Over the last few years the advice on the best approach to worming horses has changed, so we want to make sure everyone is able to make an informed decision on the best approach for their horse. It is important to remember that it is NORMAL for every horse to have worms – it is important to monitor them closely but only to treat when they have enough that could cause a problem. Within every herd of horses, approximately 80% of horses will not have a problem whilst only 20% will have a worm burden that needs treating.

What are the worms that can affect my horse?

There are three main types of worms that we routinely see in the UK: these are large strongyles, small strongyles (redworms or cyathostomins), ascarids (roundworms) and tapeworm.

Large strongyles

Large strongyles are uncommonly seen in the UK as they have mostly been eradicated by anthelmintic use. They can cause colic secondary to blood clots forming around migrating larvae which block blood vessels in the gut, but thankfully this is now rare in the UK.

Small strongyles

Disease as a result of small strongyle infestation is unfortunately seen quite commonly in some UK horse populations. The larvae of the small strongyles burrow into the wall of the large intestine in the autumn and hibernate there over the winter. In the spring these larvae burst out of the intestinal wall, causing dramatic weight loss and diarrhoea. However, with practical parasite control this is something we can prevent.

Ascarids

Ascarids are mostly a problem in young horses, especially those living in herds with lots of other youngsters. They can cause a problem when a horse has a high burden of worms which can cause a blockage in the intestine resulting in colic.

Tapeworm

Tapeworm is something we need to consider in all our horses. Tapeworm has a long lifecycle of 9 months and rarely causes a problem unless a horse has a high burden, in which case there is an association with colic. Luckily, we now have several different tests to determine if your horse needs treating for tapeworm.

How can I test to see if my horse has worms?

There are two approaches to diagnosing a high worm burden in your horse:

The faecal worm egg count (FWEC)

This is a simple test that we can perform at the practice. We take a small sample of fresh poo from your horse, dilute it in solution to make the worm eggs float to the top then examine the sample under the microscope. The number of eggs seen is then multiplied up using a calculation to give a total egg count for that horse. We use this test for large and small strongyles and ascarids.

- Horses with a count of <400 eggs per gram (epg) do not need treating – at this level
- Horses with a count of >400epg should be wormed with the product recommended by your vet

Tapeworm saliva test (EquiSal)

The saliva test is easy to perform and can be done at home. Your horse is kept away from food for 30 minutes to stimulate saliva production and then a swab is inserted into the cheek. This sample is sent off to the lab where they measure the level of antibody against tapeworm in the saliva.

Tapeworm blood test

The tapeworm blood test is performed by the vet. A blood sample is taken and sent off to the lab where the level of antibody to tapeworm is measured. When there are tapeworm present in the horses system, their immune system creates antibodies in response to this – it is these antibodies that we are measuring when we test for tapeworm. The antibodies last in the body for up to 6 months, so they give us an idea of what your horse has been exposed to and the best way to treat them.

How should I treat my horse for worms?

Before we start thinking about how to treat our horses, it is very important to first work out if the horse actually has a worm problem that needs treating! We do this using the tests above. We would recommend performing 4 faecal worm egg counts and one tapeworm test per year. We can then make a decision on whether your horse needs worming and if they do, what the best product to use is.

What wormers are available?

There are lots of different products available to worm your horse. Make sure you always check the active ingredient as lots of wormers have different brand names but contain the same active ingredient.

Fenbendazole

Fenbendazole is the drug found in Panacur. It is effective against ascarids so is a useful choice for worming foals. In the past fenbendazole has been used to worm against small strongyles (Panacur 5 day Guard), however there is now a lot of resistance in the small strongyle population against this drug. It can also cause a nasty inflammatory reaction in the guts if it is used to treat the encysted larvae of small strongyles so we would not recommend using it in adult horses.

Pyrantel

Pyrantel is the active ingredient found in Strongid-P and Pyratape-P. It can be used at a double dose to treat tapeworm or at a single dose to treat strongyles. The only stage it doesn't have action against is the encysted larvae stage.

Praziquantel

Praziquantel is the active ingredient in Equitape and is also found in Equest Pramox in combination with moxidectin, and in Equalan Duo and Equimax in combination with ivermectin. It is active against tapeworms.

Ivermectin

Ivermectin is the active ingredient in Animec, Equalan, Eraquell, Noromectin and Vectin, and is found in Equalan Duo and Equimax in combination with praziquantel. Ivermectin has a high efficacy against strongyles but resistance has been reported against ascarids.

Moxidectin

Moxidectin is the active ingredient in Equest and in Equest Pramox in combination with praziquantel. It is the only wormer that we can use to treat the encysted form of small strongyles. It is a close relation to ivermectin.

Help! My horse has a high faecal worm egg count, what should I do?

Don't panic! There are several different treatments available and it depends on the time of year and your individual horse as to what treatment we would recommend.

If your horse has a high burden of strongyles but is an otherwise healthy adult horse then we would initially recommend using an ivermectin or pyrantel product.

If your horse has a high burden of strongyles and is a youngster or is otherwise sick (weight loss, diarrhoea, poor coat) then we would recommend using a moxidectin product.

If your horse has a high burden of ascarids then we would recommend using a fenbendazole product.

Once your horse has been treated it is really important to do a second faecal worm egg count (faecal worm egg count reduction test – FWECRT) after 2 weeks. This lets us know if the wormer has been effective against the worm population in your horse.

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Help! My horse has a high antibody titre to tapeworm, what should I do?

If your horse has a high antibody titre to tapeworm we would recommend using a double dose pyrantel or single dose praziquantel product (this should be an individual praziquantel product and not in combination with ivermectin or moxidectin unless your horse also has a high faecal worm count). The antibody level will remain high in your horse for up to 6 months so we would not recommend retesting to see if the product has worked, as it takes time for this level to fall.

Can't I just give my horse a different wormer every 8-12 weeks?

NO! Routine worming is never recommended as over exposure of worms to a product in this way is how resistance develops. We are now seeing big problems in the UK with resistance to wormers, especially in horse dense areas. In any population of horses it is usually 20% of horses that carry 80% of the worm population and these are the horses we are looking to identify and treat with our FWECs. By leaving some horses untreated we leave a population of worms that have not been exposed to drugs, which then dilute down any resistant worms that are present in the population. If all horses are always wormed only the resistant worms will be left, which we will then be unable to treat. This principle is called 'refugia'.

So what is the problem with resistance against wormers?

In the UK we have big problems with strongyle resistance against fenbendazole. We are also starting to see resistance against ivermectin, and most concerningly against moxidectin. Moxidectin is the only product available to treat for encysted small strongyle larvae (cyathostomins) which can cause very severe disease, especially in youngsters. If resistance develops against moxidectin then there is a real risk that horses will start dying of worms because we are unable to treat them.

How can I stop resistance developing in my horse?

The best way to prevent resistance in your population is to follow the advice above: worm count your horse 4 times a year and only treat horses with a high burden as recommended by your vet. If you do treat your horse make sure you perform a reduction test two weeks later to check that the drug has worked. Poo picking your fields daily is really important. It can also help to co-graze your pasture with sheep to mop up any worms on the pasture. Chain harrowing the fields can also help.

The golden rules of worm control

- Perform 4 faecal worm egg counts a year
- Perform 1-2 tapeworm antibody test a year (blood or saliva)
- Avoid using moxidectin unless recommended to do so by your vet
- Only treat your horse if it has a worm egg count of >400epg and only use the product recommended by your vet
- Always perform a faecal worm egg count reduction test 2 weeks after treating
- Poo pick your paddocks daily

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