

GUIDE TO WORMING HORSES

Worms that affect horses are everywhere and all horses are continually being exposed and infected with worms. For this reason, prevention of worm problems in horses is one of the most important aspects of horse husbandry and veterinary medicine.

Common worms that affect horses:

- o Small strongyles (cyathostomes): These are common and cause direct damage to the gut wall. The immature stages can encyst in the wall of the intestine for 1-2 months, and when they are released in spring, they can cause colic and diarrhoea. Resistance to anthelmintics (worming pastes) in these worms is becoming a serious problem.
- o Large strongyles: Some members of this group of worms invade the blood vessels supplying the intestines and can cause serious damage leading to colic, ill-thrift, diarrhoea and even death. Resistance is also increasing in this group.
- o Roundworms: These worms are generally only of significance in horses younger than 2 years. They can cause intestinal blockage, ill-thrift, diarrhoea, and even respiratory problems.
- o Pinworms: The most common sign of pinworm infection is tail-rubbing, due to the adult worms laying their eggs around the horse's anus and causing irritation.
- o Tapeworms: These can cause colic, weight loss, diarrhoea, gut rupture and death. Their life cycle involves the oribatid mite that lives on pasture.
- o Bots: The adult bot is actually a fly that lays its eggs on the horse's coat. These hatch into larvae and are ingested into the horse's stomach, where they can cause ulceration and may even penetrate the wall of the stomach. Bots are extremely common in temperate climates.

How do I know if my horse has a worm problem?

The most common signs that a horse is suffering from a worm problem include ill-thrift or weight loss, diarrhoea and colic. Some types of worms may produce more specific signs but often it will be hard to tell from the clinical presentation alone whether the horse has a worm problem or not.

Your vet can perform a simple and inexpensive test called a faecal egg count to determine the level of infection in your horse. A further test called a larval culture can be used to determine what types of worms the horse is infected with. Because all horses are continually exposed to worms and no drench is 100% effective, it can be expected that all horses will have some evidence of infection. For this reason it is important that your vet explains to you how best to interpret the information gained from the diagnostic tests.

Which wormer should I use?

Oral tube paste drenches are easy and convenient to use, and are the most common way for horse owners to control worms. It is very important to dose your horse correctly, as underdosing can contribute to the development of resistance. If you do not have access to a set of scales, the following formula can be used to calculate your horse's weight¹. ***picture***?

$$\text{Body weight (kg)} = \frac{\text{girth (cm)}^2 \times \text{length (cm)}}{11\,000}$$

Classes of worming products used in horses:

- o Benzimidazoles eg. oxybendazole, fenbendazole: There is widespread resistance among small strongyles to this class of anthelmintic.
- o Macrocyclic lactones eg. moxidectin, abamectin: This is the most common class of drug used in Australia today. Resistance to this class has already developed in sheep and cattle parasites, and it is feared that the same will occur in horse worms².
- o Organophosphates eg. trichlorfon, dichlorvos: Added to drenches because they are effective against stomach bots.
- o Piperazine: Said to be extremely efficacious against the common roundworm that affects foals. Safe to use monthly from 6 weeks of age³.
- o Praziquantel, pyrantel (a tetrahydropyrimidine): Effective against tapeworms.

In order to minimise the development of resistance it is important to choose a highly effective wormer; "Equimax" (abamectin) is said to treat all equine worms as well as tapeworms, and has so far had no reported cases of resistance². Using wormers that combine classes of drugs has been recommended to slow the development of resistance². For example, the combination of oxfendazole and pyrantel ("Strategy-T") is said to be highly efficient against small strongyles that are resistant to benzimidazoles alone. It is recommended to choose a wormer that controls tapeworms², such as abamectin or one that includes praziquantel or pyrantel.

An example worming program would be to use a drench containing abamectin (eg "Equimax") for 12 months and then change to oxfendazole/pyrantel (eg "Strategy-T"), which contains two drugs from different classes to abamectin².

If a horse is diagnosed with a problem with encysted cyathostomes (the larval stage of small strongyles that live in the walls of the intestines) then it needs more specific treatment, for example, drenching every day for 5 days with fenbendazole (Panacur).

How often should I worm my horse?

It is usually recommended that horses be wormed every 6-8 weeks.

In some situations it may be possible to implement a strategic drenching program, which combines drenching with pasture management and uses faecal egg counts to monitor the levels of infection. With a program such as this, drenching can be reduced to 4 times a year: early and late summer, winter and spring. This is desirable due to the fact that the chance of developing resistance increases with the frequency of drenching, but may not always be practical.

What is 'resistance' and how can I help prevent it?

The term resistance is used to describe the decreasing effectiveness of anti-worm preparations. It occurs because some worms are able to develop a tolerance to the killing effects of anthelmintics. It is becoming a serious problem in veterinary medicine. The best way to help prevent resistance is to use a

worming program that is tailored to your particular situation.

Points to consider are:

- o Use the correct dose of anthelmintic (see above for how to work out how much your horse weighs)
- o Ensure the horse receives the whole dose (doesn't spit it out) by placing the paste as far back on the tongue as possible and encouraging the horse to swallow by rubbing the throat
- o Rotate drenches every 12 months. You must ensure that you change the class of drench you are using, not just the brand name.

How can I best manage my property to prevent worm problems?

The aim of any worming program should be to control worms and keep them at an acceptable level in your horses, by combining judicious use of anthelmintics with individual property management.

- o Use a program of regular drenching – an example is to use Equimax every 6-8 weeks for 12 months and then change to Strategy-T for 12 months
- o Remove manure regularly
- o Feed horses in feed bins, preferably off the ground
- o Keep stocking rates as low as possible
- o Segregate horses according to age, and keep the youngest horses on the least contaminated pasture
- o Drench all horses in a group at the same time
- o Mixed grazing with sheep or cattle or prolonged spelling of pasture can help to reduce contamination
- o Drench all new horses before they enter the property, and wait 48 hours before introducing them to pasture

Acknowledgements:

1. NSW DPI website. <http://www.agric.nsw.gov.au/reader/1045>
2. Petalia website <http://www.petalia.com.au/>
3. Collins, H. 2004. VETS3041 Veterinary Parasitology notes. University of Sydney.

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