



WHY WORM????

WHAT ARE WORMS?

Basically, worms are parasites that live in different parts of the gastrointestinal tract of the horse. Their life cycles may involve the migration of larval stages of the worm via the blood vessels. This migration takes them to different organs of the body such as the liver, lung and kidneys. The migration of the larvae and the feeding habits of the adult worm, coupled with the large number of worms involved in severe infestations, are the cause of the many different health issues we see in the horse.

HOW DO HORSES GET WORMS?

The main way that horses become infested is by ingestion of worm larvae from contaminated feed, pasture or water. The mature worms lay eggs, which are passed in the manure where they mature to the infective larval stage. It has been reported that some mature worms can lay up to 7.5 million eggs per day.

WHAT WORMS ARE THERE?

There are many different worms that infect horses. They all have interesting, long and complicated parasitological names, but, luckily, they also have common name that we can all remember! Some of the most common are *Strongylus vulgaris* (Redworm), *Parascaris equorum* (Roundworm), *Anoplocephala perfoliata* (Tapeworm) and *Oxyuris equi* (Pinworm) to name but a few. There are also "Bots", which are really not worms at all, but the larvae of the *Gasterophilus* species of fly, which spend up to 10 months attached to the lining of the horse's stomach. The adult flies lay their eggs on the hairs of the horse, which bites at itself thus ingesting the eggs.

There are many and varied worms that can infest horses. Some require certain environmental or climate factors, some are only present in certain countries or regions and some require other animals to be present for infestation to occur.

WHAT PROBLEMS DO WORMS CAUSE?

Many different conditions are caused by or contributed to by worm infestation in horses. The clinical signs that you, the horse owner, will detect can vary from incredibly subtle (i.e. "ain't doin' right") to incredibly violent and life threatening (e.g. severe colic).





Clinical signs depend on the severity of the infestation, the type of worms involved in the infestation and the age of the animal. The most common clinical signs that can be attributed to worm infestation are ill thrift, dull or dry coat, lethargy (possibly due to anaemia), persistent low grade colic or acute colic, diarrhoea, tail rubbing and biting and, occasionally, death.

Large Strongyle species (Redworms) can suck blood and cause verminous enteritis (inflammation of the intestines) and thromboembolic colic while migrating, while small Strongyle species can cause severe enteritis and diarrhoea. Heavy burdens of roundworms can cause diarrhoea, debility and potbellies in young animals, whereas heavy infestation of migrating larvae in foals up to nine months of age can cause coughing. The worms that suck blood from the intestinal wall can cause anaemia and ill thrift, which is then linked to lethargy and poor coat quality. The horse may not perform at an optimal level despite being fit and have no shine to its coat despite being fed properly. Large volumes of worms such as Roundworms can cause obstruction of the intestine, resulting in colic. Tapeworms cause irritation of the intestinal wall and the formation of granulation tissue at the junction of the ileum and the caecum, which can occlude the lumen and cause colic. The feeding habits of worms on the bowel wall can cause a watery diarrhoea and, in acute cases, perforation of the bowel wall and subsequent peritonitis. This can be life threatening. The larvae that pass via the blood vessels as part of their life cycle cause many problems due to blockage of blood vessels and damage to different organs. As mentioned, they can cause colic, cysts in organs and in some that pass via the lung, a chronic cough. Tail rubbing is associated with Pinworms. The adults lay their eggs around the anus which causes irritation and hence the rubbing. This is mainly seen in stabled horses. All the above symptoms and conditions can be seen in infestation with worms. The level and intensity of these depends on what organs are involved and the level of infestation.

HOW DO WE KNOW HORSES ARE INFESTED WITH WORMS?

If a horse is severely infested with certain worms, you may see worms in the manure. This is not common and the horse owner usually has to rely on subtle clinical signs to know whether their horse is infested. Generally, the clinical signs include ill thrift, poor coat quality, diarrhoea, lethargy, tail rubbing or biting and persistent low grade or acute colic. Any of these clinical signs can suggest that worms may be involved. It is wise to consult your veterinarian who can advise you if this is the problem. The veterinarian can also perform a simple worm egg count to check if the horse is infested with worms. This involves the collection of fresh manure, mixing it with a special solution and then counting worm eggs under a microscope. It will be done at the veterinarian's clinic or at a special laboratory. Blood tests may be an indication that a horse has worms or indicate what damage the worms are causing.





WHAT HORSES ARE MOST AT RISK?

Although all horses are at risk from worms, infestation can cause more problems in the very young, the very old and the debilitated horse. The horse's environment can also play a part. For instance, horses with different owners that are kept in high numbers in one paddock can be more at risk than one horse kept in its own, regularly cleaned paddock. Climatic factors can also play a part, with horses in warm, humid environments or in paddocks with poor drainage facing a greater worm challenge. Sometimes the horse's environment can make it at risk from certain types of worms. An example of this is in the case of lungworms, which may present as a problem if a horse is kept in a paddock with or next to donkeys.

HOW DO WE FIX THE PROBLEM?

To manage or control worms we need to know what conditions they like. The best weather conditions for the worm eggs to develop into infective larvae in the manure are generally warm and humid. We can't change the weather, but we can be aware that these conditions increase the risk of infestation. The following husbandry conditions also contribute to contamination: overcrowding, manure left in the paddock, adults running with young horses, feed and water contaminated with manure and a lack of effective worming procedures.

Management consists of the following steps to try and reduce the incidence of worm infestation.

1. Avoid overcrowding (not too many horses to a paddock).
2. Clean up manure regularly (daily if possible).
3. Don't feed and water on the ground or where it can be contaminated with manure.
4. Once foals are old enough to be weaned, do so. Also, separate weanlings and yearlings from older horses.
5. Rotate the paddocks with another species e.g. cattle or sheep or spell the paddock occasionally if possible.
6. Introduce an effective WORMING PROGRAM. We are lucky today to have effective anthelmintics available to control worms. However, they need to be used correctly to be effective and to avoid the development of worm resistance. A well-planned worming program is essential to the success of the other management systems you have in place.





WHAT IS A WORMING PROGRAM?

A worming program is a planned schedule of drenches that is not only effective against all worms that are prevalent at certain times of the year, but also tries to avoid the possibility of worms becoming resistant to the drench by rotation of products using a different family of active ingredients. Even though different worming products may contain different active ingredients, these ingredients may still belong to the same family of chemicals which act on the worm in the same manner and, therefore, still result in the worm becoming resistant to that family of products. Resistance generally develops from overuse of one drench without rotation or under dosage of some or all animals.

MANAGEMENT STEPS

Horses should be wormed every six weeks.

A worming program will be most successful if the following steps are followed:

1. Follow the management steps mentioned previously.
2. Involve your veterinarian who can recommend if you have the risk of any special worms and who can monitor the program by twice yearly egg counts.
3. Weigh your horse if you have access to scales or ask your veterinarian to estimate the weight of your horse to ensure that the dose given is correct for the specific animal. Ensure that the directions are followed for the specific drench and that the horse has swallowed all of the dose.
4. Ensure all horses in the same paddock are wormed at the same time using the same drenches.
5. New horses should be isolated and wormed before being introduced to other horses on the farm or in the stable.
6. Mares should be wormed regularly to avoid contamination of young foals.

The steps mentioned, coupled with a good working relationship with your veterinarian, should give you the best results.

The economic loss to the owner due to worms is often an unseen cost. Worms can cause poor development of animals, poor performance in the sale ring, the show ring or on the racetrack and can cause the loss of a much-loved companion. This, coupled with the costs involved for veterinary treatment for the effects of worm infestation such as colic, diarrhoea or anaemia, can be devastating.

