SOUTH AFRICAN PONY CLUB

Worm Control Achievement Badge

Workbook

Objectives: To understand the main worms affecting horses, To know how we aim to manage worm burdens in horses and ponies, To have knowledge of the most effective and sustainable ways of achieving this.

Key points: Candidates should understand:
- The main worms affecting horses and ponies
- Principles of pasture management
- The role and purpose of FWECs (Faecal Worm Egg Counts)
- The importance of seasonal worm threats
- The problem of resistance
- How to dose horses and ponies appropriately

NAME _____________________________________________________________

BRANCH __________________________________________________________
**What are worms?**

Worms are parasites which live, feed and reproduce in the gut of the horse or pony. Although small numbers of worms are not a problem, larger worm burdens can cause major issues, making the horse or pony lose weight, perform poorly or even suffer from colic.

Almost all horses and ponies will have some worms in their lives. The key is to control the numbers and stop them causing a problem or disease. A low level of worm infection does not cause a problem and may even be beneficial, but excessive worm burdens can result in disease and even death, especially if the horse is very young, old or unwell.

**How do wild horses survive without being wormed?**

In the wild horses used to roam freely over thousands of acres with continuous access to ‘cleaner’ pasture. Worms and horses evolved together like this, building a relatively healthy balance to sustain both populations. Domesticated horses tend to be kept in smaller paddocks on much more restricted grazing. This exposes them to many more worms on the pasture they graze, upsetting the balance between pony and worm, which we then need to re-establish with worming and worm control. This might help explain why poo-picking is important—the more you can manage the pasture, hopefully the less you will have to worm your pony.

**How Do Horses Get Worms?**

In general, infection is acquired by eating immature larvae from the pasture which then develop in the intestine into adult worms. The adults then lay eggs which are passed in the faeces (droppings) and these in turn hatch to infect the pasture with immature larvae. This is known as the life cycle of the worm and each type of worm has its own specific life cycle with individual differences.

These are important in terms of control and disease and they can cause problems in many ways, for example some worms migrate through the blood vessels of the intestines or damage the lining of the gut.

In general all worms impair the horse’s ability to absorb and process nutrients, change the behaviour of the gut and result in disease.

Typical signs of worm infection include weight loss, poor condition, diarrhoea and colic.
Worm Life Cycle

Different types of worm have different life cycles.  
The one illustrated here is typical of roundworms.

Types of Worm

Many types of worm can affect horses.

The most common and the most important are:

- Small Redworms
- Large Redworms
- Large Roundworms
- Pinworms
- Tapeworm
Small Redworms (Cyathastomes)
These are the most common worm in most horses. The adults can cause ill-thrift and weight loss, but the larval stages can become ‘encysted’—where they burrow into the gut wall and hibernate. Sudden mass emergence of these encysted larvae from the gut wall can cause severe diarrhoea and even death. Major infestations of encysted larvae can lead to a disease syndrome known as ‘larval cyathostominosis’.

Large Redworms (Strongylus)
These are now less common but the adults can lead to ill-thrift and worm related disease. The larvae can cause life threatening colic due to the damage caused by their migration through the blood vessels of the intestines.

Large Roundworms (Ascarids)
These are large, round, grey-coloured worms which can grow up to 40cm in length. They are a major concern in foals and young-stock as severe infestations can cause colic. Adult horses develop a level of protective immunity to large roundworms.

Pinworms (Oxyuris)
The adults live in the large intestine and lay their eggs around the anus, causing irritation. Pinworms can grow up to 4.5cm. It is possible to see pinworms when they leave the anal cavity of the horse to lay their eggs around the outer rim. Fully-grown pinworms may also be observed in the droppings, along with eggs. Perhaps most commonly, though, you will notice egg sacs around the horse’s anus.

Tapeworm (Cestodes)
These have light-coloured ribbon-like bodies made up of segments. The end segments contain eggs and break off periodically, passing out in the droppings and releasing the eggs. The eggs are then eaten by the forage mite and the tapeworm larvae develop inside this intermediate host. When the mite is eaten by a horse during normal grazing, the horse becomes infected and the adult tapeworm develops. Tapeworm is a proven risk factor in certain types of colic.

Bots (Gasterophilus)
These are not worms, but the larvae of the bot fly, which looks rather like a bee and lays its eggs on the legs of the horse or pony. The larvae are mildly irritating while they hatch, which may cause the horse to lick them. The larvae then migrate to the stomach of the horse where they attach to the lining, potentially causing issues with digestion and damage to the stomach lining. The larvae eventually pass out in the droppings and develop into the adult fly to complete the cycle. The eggs can be manually removed from the legs of horses to help control infection.

Other Types of Worm
Controlling Worms

The four main points to consider when controlling worms are:

- Pasture management.
- Assessment of the horse or pony’s worm burden.
- Assessment of the worm threats to the horse or pony.
- Worming dose required.

These four things should be used in combination to work most effectively.

Pasture Management

To stop your horse or pony accidentally eating worm larvae from the grass and re-infecting itself you should keep your grazing in good order all year round:

- Remove droppings, preferably every day, especially over the grazing season.
- Rest the pasture for at least three months a year to try and reduce the pasture burden—sunlight or hard frost should help.
- Cross grazing the pasture with cattle or sheep will help reduce the worm challenge to the horses. They will ‘hoover-up’ the worms without being affected as the worms are host-specific.
- Combine harrowing with resting. Harrowing dirty pasture can just spread the worm eggs and larvae over the field but if combined with pasture resting it is of benefit.
- Don’t over-stock paddocks as the quality of grazing will suffer and the worm burden will build up more quickly.
- Reduce paddock size so that you can alternately rest and graze your fields.

Assessing the Horse’s Worm Burden

A faecal worm egg count (FWEC) tells you the number of worm eggs in your horse or pony’s dung. Presence of eggs means there are egg laying adult worms in the gut and you can make a ‘guestimate’ of your pony’s worm burden from this. Warming horses with a high burden (e.g. >200 epg) will benefit that horse, but arguably the most important role of a FWEC is to identify which of the horses in the field are shedding the most worm eggs onto the pasture. Then the horses or ponies shedding significant numbers can be wormed and the overall burden in your horses is kept under control. This shows the important link between pasture management and FWECs and forms the basis of worm control over the summer grazing months.

Regular FWECs play a major role in allowing you to target your worming treatment effectively, especially over the traditional grazing season, but they are not the whole answer. A standard FWEC will not give a clear indication of an infection with tapeworm or bots and importantly the presence of roundworm larval stages will not detected.

Some worms, such as the encysted stages of small redworm, tapeworm and bots and may not show up in a standard FWEC. To keep your horse or pony healthy you should treat for these particular parasites at certain times of year.

It is generally advised that:

- Encysted small redworm should be specifically treated in the late autumn or early winter each year.
- Tapeworm should be treated at least once a year—ideally in the autumn and spring.
- Bots should be treated in the winter, after the first frost when the adult flies have died and before the bots mature.
Assessing the Risks from Worms

Certain worms should be controlled at specific times of the year and some horses may need worming more frequently than others. A thorough history of your horse’s health and worming regime, together with an assessment of his living environment and field companions, will help you to build the best possible approach to worm control. Considering other aspects such as age and health status will also help—for example young horses are more prone to infestation and tend to be a main source of egg shedding and hence pasture contamination.

Horses and ponies can cope differently within the same yard and with the same management—even the same owner! Check out the worming protocol of your horse’s field companions as well, to make sure your horse isn’t exposed to re-infection with worms from a horse that hasn’t been treated.

Seasonal Threats

It is important to consider the seasonal worming threats when formulating your worm control plan.

Worming Dose

When you’ve discovered how many worms your horse or pony has and considered which type is most likely to be a problem the next step, if needed, is to administer the right wormer to get rid of them. Different wormers can treat different worms. Assessing the risks and the need for worming will mean you can choose the right worming drug for your horse at any given time.

The worming drug can either be administered in the feed, in tablet form, or by using a paste delivered directly into the mouth.

It’s important to select the wormer most appropriate for the parasite you are targeting, by looking at the chemical ingredients of each wormer, rather than just choosing the wormer for its name alone—ask your SQP or vet for help.

You must also make sure you treat your pony accurately according to weight. Use a weigh tape or scales to find your pony’s weight to ensure you give exactly the right dose.

By using the correct dose of the best wormer at the right time, you can be sure you get rid of your horse or pony’s worms in the most efficient way. You will also be helping to maintain the effectiveness of the treatments currently available to all of us by reducing the chance of resistance occurring and wormers not working as well in the future.

New horses should be treated for all worms and kept separately for forty-eight hours to avoid bringing resistant worms or large numbers of worms onto the premises.
My Pony Hates Being Wormed!

Whether your pony likes it or not it’s important for their health that they receive the correct dose of wormer without spitting any out! Make sure you always worm your pony with the help of an experienced adult who will be able to make sure your pony’s medicine goes down properly!

What is ‘Wormer Resistance’?

Resistance is when worms which were previously killed by a particular wormer are no longer affected by it and survive treatment. Too frequent dosing or ‘under-dosing’ (giving your horse or pony less wormer than needed) with wormers are major contributors to this—each time a wormer is used we are selecting for the survival of the strongest worms in our horses and ponies. Over time we may struggle to control the worm burdens in our horses and ponies unless we try to prolong the effectiveness of the wormers we have with the responsible and well-planned use of them.

Take control of worms by picking up your free EQUEST worming guide from your SQP retailer or vet. For further information visit www.wormingyourhorse.info
Quiz

1. Can you name two reasons why domesticated horses and ponies are exposed to more worms than their wild counterparts?

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2. How can horses and ponies become infected with worms?

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3. Name three problems that worms may cause to your horse or pony.

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4. What is the most common worm in horses in the UK?

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5. Which worm causes larval cyathostominosis?

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6. Which worm is more likely to be a problem in foals and youngstock rather than adults?

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7. Where might you find pinworm eggs on your horse or pony?

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8. When is the best time to treat your horse or pony for encysted small redworm?

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9. How do you check if your horse or pony has tapeworm?

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10. When are the best times of year to treat your horse or pony for tapeworm?
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11. What are bots?
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12. What worms can donkeys spread to horses?
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13. What does FWEC stand for?
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14. Why is a weigh tape useful for worming?
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15. Should you check the brand name or chemical ingredients when choosing a wormer?
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16. Why is resistance an issue?
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17. Name two things that can contribute to resistance.
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18. Name two aspects of your horse’s history that you should consider when planning your worm control programme.
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19. What should you do with a new horse to stop resistant worms being brought on to your premises?

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20. Name three ways in which you can keep your grazing in good order and help reduce the worm burden.

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Wormsearch

Find the WORMING words which are hidden vertically, horizontally, diagonally, forwards and backwards.

<table>
<thead>
<tr>
<th>PASTURE MANAGEMENT</th>
<th>REDWORM</th>
<th>ROUNDWORM</th>
<th>PINWORM</th>
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</thead>
<tbody>
<tr>
<td>FAECAL WORM EGG COUNT</td>
<td>TAPEWORM</td>
<td>LUNGWORM</td>
<td>HORSE</td>
</tr>
<tr>
<td>CROSS-GRAZING</td>
<td>BOTS</td>
<td>LIFECYCLE</td>
<td>LARVAE</td>
</tr>
<tr>
<td>WORM BURDEN</td>
<td>RESISTANCE</td>
<td>ENCYSTED</td>
<td>PARASITE</td>
</tr>
<tr>
<td>DOSING INTERVAL</td>
<td>GUT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WORMING words:

BOTS WLF ZBM JWG SELLC
GUTYDAAIRGIFNFXPQI
NTTWJBRDRYOVLJNIVA
INEZWEEVOGWZLFEDRHR
SXJERNULEAGRSHDMEZD
OTZNMKTCTENHZORSTZJ
DTWLEEICNYPUDSOUTNOE
PQZLOGNCRLWDBLILY
TFEJAGTAXRQEDQMTRPF
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FJAFJFCZARSCILOMCPN
OPDETSYCNEASMNLWIBDP
MROWNIPOMQAEGULWFQHM
DJGKLIQRYTPRFFSWKV
BENFKDOWSHUTOUVAVBHT
UQLDWBVJTBWPVTOZILX
OFFXELSRWNPZICLG
JYZQPEHUSUBXIRFUAN
TSACRANAHORSEFGKFPGG
PTFAECALWORMEGGCOUNT
In the wild horses used to roam freely over thousands of acres with continuous access to ‘cleaner’ pasture.