Worming Information Sheet:

This document will hopefully act as a guide to help you understand and make evidence based decisions regarding the best endoparasite management in your horse. If you have any concerns or questions please do not hesitate to chat to one of our vets.

THREE AIMS:

1) Reduce risk of worm related disease
2) Reduce resistance to wormers
3) Minimise environmental impact

What Worming Products are Available?

Drug	Small red worm (Cyathostomin)	Round Worm (Parascaris)	Tapeworm (Anoplocephala)	Pinworm (Oxyuris equi)
Ivermectin	Adult, L4	RESISTANT	No activity	RESISTANT
Moxidectin (EQUEST)	Adult, L3, L4	RESISTANT	No activity	RESISTANT
Pyrantel (STRONGID P)	Adult (not USA)	Yes	Double dose	Yes
Fenbendazole (PANACUR)	RESISTANT	Yes	No activity	Yes
Praziquantel	No activity	No	Yes	No

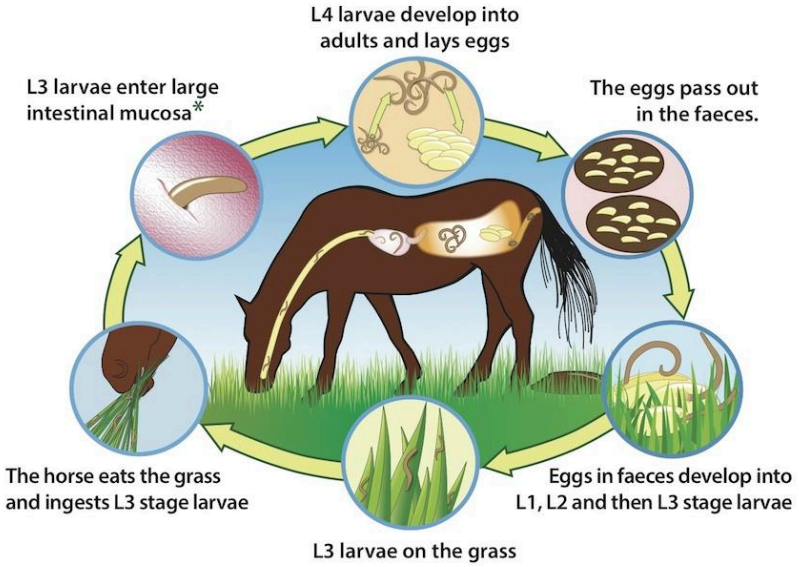
KEY
Resistance common
Resistance emerging
Highly Effective
No activity

KEY POINT: LOTS OF RESISTANCE

We will never fully eliminate worms on pasture. The key is to enable horses to be exposed to enough worms to develop a good immune response without causing clinical disease. A small non resistant population of worms on the pasture and healthy horses is our number one aim.

Common Worms (internal parasites) in UK equine population

Encysted Red Worm:



Why are we worried?

- May cause **weight loss, colic, and diarrhoea**, including a severe form of the disease known as **acute larval cyathostominosis.** Disease is caused by larvae not adult worms.
    - Late autumn, larvae are at their highest levels on the pasture – these, once ingested, then burrow into the gut wall and “encyst over the winter”. They may emerge all at once in the spring and cause severe gut damage, diarrhoea and often require hospital treatment

Aim of management is to reduce the number of larvae that can damage the gut wall. The best way to do this is to reduce the number of larvae ingested in the first place through:

1) **Good pasture management**

MOST EFFECTIVE TOOL

a. Remove faeces twice a week
    i. *Allows some time for leaching of nutrients onto the pasture, but not before eggs hatch. This is good for dung beetles*

b. Pasture rotation
    i. Very important: foals and yearlings do not graze on the same pasture as last year.

c. Co-grazing with livestock
    i. Worms are specific to equids, so sheep may hoover up the eggs or larvae, without being affected themselves, breaking the life cycle.

- *Harrowing is not recommended as this serves to spread the eggs and larvae all over the pasture*
- *If carried out the pasture needs to be left for 3 months or longer depending on weather (dry, very hot or cold weather is required to kill eggs/ larvae).*

2) **Reduce egg shedding on pasture**

ROUTINE WORMING OF ADULT EGG-PRODUCING WORMS

a. 20% of horses shed 80% of eggs

b. Carry out worm counts every 2-3 months during the grazing season.

A typical FEC programme would be one test at the beginning of the spring, one mid-summer and one in the autumn.

c. If high, then worm-affected horses with Pyrantel (Strongid-P)/Ivermectin.

d. This reduces the number of eggs shed on the pasture and larvae ingested.

e. The result of an egg count DOES NOT indicate that individual horse's risk of disease or worm burden.

- It is important to note that if your horse has a high egg count, then they will be ingesting a larger number of larvae from their own faeces, putting them at a higher risk. BUT even if another horse had a lower egg count, they would also be at a higher risk if co-grazing with this horse.

LAST RESORT to kill larvae/ encysted larvae

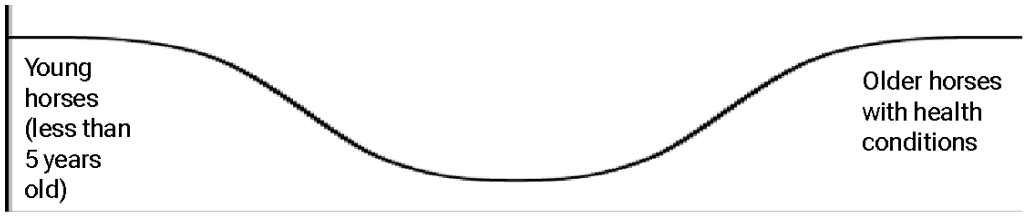
3) **Strategic Moxidectin (Equest) in the autumn/winter**
    a. Moxidectin (Equest) is the only effective drug we have available against encysted larvae.
        i. Only use it when necessary to kill larvae when at their likely highest number/ encysted before they have a chance to cause disease esp. acute larval cyathostominosis.
    b. Why after the first frost?
        i. Cold weather kills most larvae on the pasture, helping to break the life cycle.

KEY POINT:
The above programme is all about prevention in horses with no clinical signs. If you are concerned your horse has clinical signs it is important to discuss with your vet.

<u>Who gets disease and why?</u>

Majority of clinical disease is seen in young horses under the age of five years and older horses with other illnesses, especially PPID.

Which Horses Are Affected?



KEY POINT:

HEALTHY ADULT HORSES ARE LOW RISK

The best way to determine your horse's risk and requirement to be wormed is to check the new canter guidelines:

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	History of suspected subclinical worm associated (gut) disease or PPID	History of confirmed worm associated (gut) disease or PPID
A Age Profile	5-20 years old	5-20 years old, concurrent suspected worm associated (gut) disease or PPID	<5 years old*, >20 years old
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 antibody results Herd: low for worm egg count & tapeworm antibody results No history of wormer resistance by worm egg count reduction testing	Individual: low-moderate worm egg count & tapeworm antibody results Herd: low-moderate for worm egg count & tapeworm antibody results No history of wormer resistance by worm egg count reduction testing	Individual: high worm egg count & tapeworm antibody results Herd: high for worm egg count & tapeworm antibody results Wormer resistance identified on property by worm egg count reduction testing
E Environment	Closed herd or kept individually Horses with restricted grazing time Poo-picked more than once a week Effective quarantine procedures	Occasional newcomers Poo picked less than once a week Quarantine procedures inconsistent	Frequent movements in and out herd No poo picked or very infrequent 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
Updated: September 2024

› visit www.canterforhorses.org.uk for more information

Based on the risk profile we can then determine:

- **How frequently you need to carry out FEC?**
- **What threshold of eggs per gram to use for worming?**
    - **250 epg if high risk**
    - **500 epg if low risk**
        - *If your horse is healthy then they can manage exposure to a higher worm burden.*
- **Is the use of moxidectin (equest) required in the autumn?**

Faecal Egg Count Tips:

- Collect samples from at least three different faecal balls as eggs are not evenly distributed in the faeces.
- Send samples on the same day you are collecting them.

Faecal egg count reduction test:

- To monitor resistance on your premises, at least once a year it is recommended carrying out a second faecal egg count two weeks after worming. This should be carried out for each different drug used.

Blood tests:

- **Encysted red worm larval ELISA (antibody):**
    - Low result is very reassuring and confirms we do not need to treat. A high result does not necessarily mean they are at high risk of disease, if otherwise low risk based on CANTER guidelines, may still not require treatment. DISCUSS WITH YOUR VET

- **Albumin:**
    - If we are worried about worm related disease this may help check the degree of inflammation in the gut wall. If there is a lot of inflammation this may be low. We may then recommend a course of steroids around worming to settle the inflammation and help with weight gain.

Tapeworms:

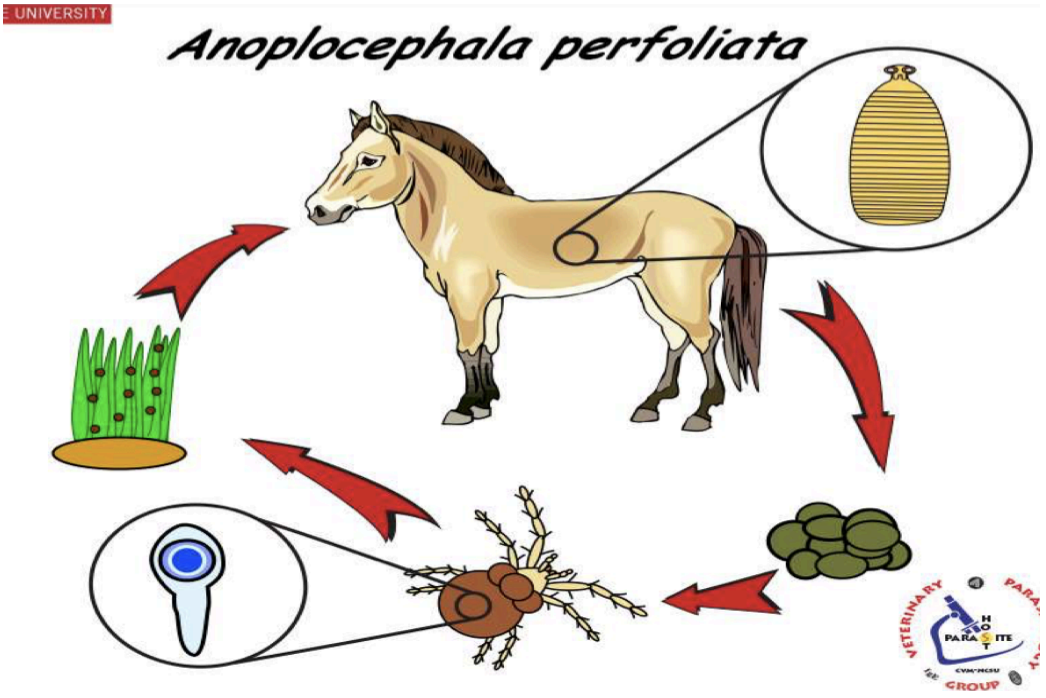
Found in 51-69% of UK equine population.

Why are we worried?

Large burdens are associated with various forms of colic:

- Impaction colic
- Spasmodic colic
- Intussusception colic
    - Surgical

Life Cycle:



Key point: Eggs are ingested by the pasture mite in the faeces, so a faecal egg count is often not accurate for diagnosis.

Diagnosis:

To diagnose we carry out an antibody test. This can be done via either a saliva sample (equisal test) or a blood sample.

Published evidence demonstrates these tests are 100% effective at detecting a clinically significant burden (more than 20 tapeworm).

The test should be carried out 1-2 times a year depending on risk status.

What to treat with?

Praziquantel.

This can be found in equest praemox, or we stock our own praziquantel only wormer without the equest.

It is worth carrying out the test in the autumn as can then use the combination wormer if required. OR just equest OR just praziquantel OR no wormer.

Worming Foals:

This is the highest risk group, and hence is the group that requires the most attention and care when coming up with a worming plan.

Which wormers can be used?

Ivermectin from 2 weeks of age.

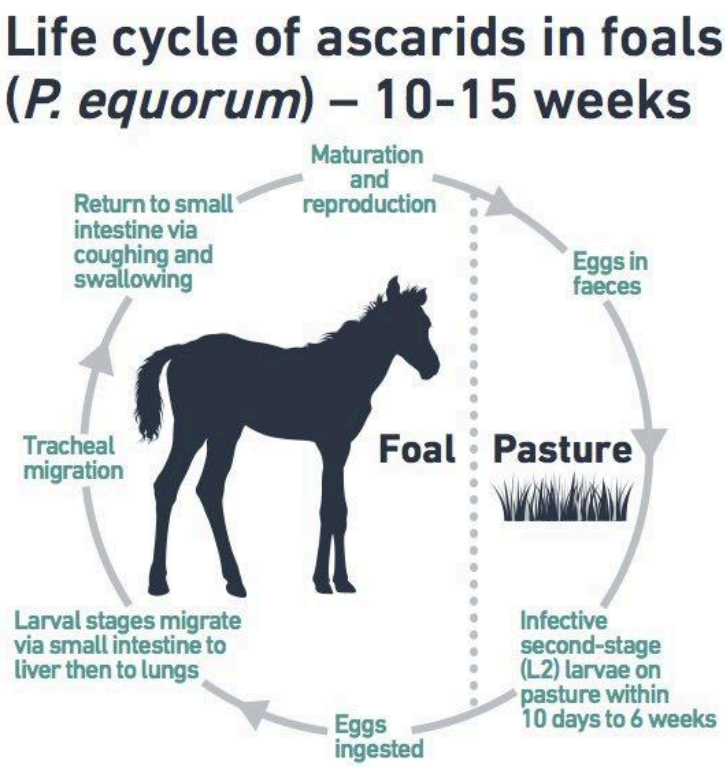
Moxidectin (Equest) from 4 months of age, moxidectin and praziquantel (Equest Praemox) from 6.5 months of age.

Pyrantel (Strongid-P) from 4 weeks of age

Fenbendazole (Panacur) from any age.

In foals we are mostly concerned about the risk of roundworm and redworm

Roundworm:



Why are we worried?

May cause mild respiratory disease/ ill thrift.

In severe cases may cause a small intestinal obstruction which is surgical and has a poor prognosis.

How to prevent?

Roundworm eggs are incredibly resilient in the environment

Good pasture management is critical

MUST ROTATE MARE AND FOAL PADDOCKS ANNUALLY

How to treat:

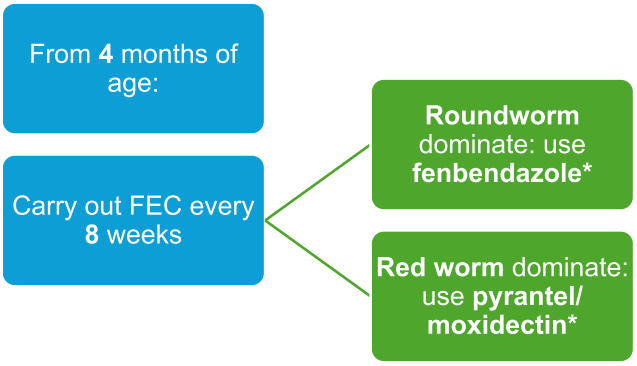
All foals should be treated with a blanket one-day fenbendazole (PANACUR) treatment at 2 months of age to treat roundworm.

Roundworm has a long pre-patent period (this is the time from ingesting an egg to then having egg producing adults in their small intestine which we can detect on FEC) - FEC are not accurate at this age but there is still a high risk of disease.

BUT

- **Roundworm** egg excretion peaks at 4-5 months
- From 4-6 months foals may also be affected by **redworm** and **tapeworm**

So, we need to determine which worm type predominates and so which treatment is going to be most effective to prevent disease as the resistance profiles for the drugs are opposite:



Reserve the use of moxidectin (equest) for the autumn

<u>Plan for a typical foal born in June:</u>

- Blanket treatment at **2 months** of age **(August)** 2 months if history of roundworm related disease on the property) with **fenbendazole** (Panacur)
- **4-5 months** of age **(October)**. We need to carry out a FEC to determine which parasites we need to treat: **pyrantel (strongid-P) if red worm and both redworm and roundworm/ fenbendazole (panacur) if roundworm.**
- **7 months** of age **(January).** Strategic treatment with **Moxidectin and praziquantel (equest praemox).**

N.B.

We can only use equest praemox in foals older than 6.5 months. For foals born later in the year we recommend using just **moxidectin (equest)** and then using the **moxidectin + praziquantel (equest praemox)** in the spring when they are at least 6.5 months old.

If at any point concerned about signs of parasite related disease (poor BCS, potbellied appearance, diarrhoea), call your vet. They will be able to advise you on which product is best to use and any supportive care/ further diagnostics required.

Tapeworm:

Can only reliably test from 6 months of age due to interference of antibodies from dam's milk. Can carry out the equisal/ blood antibody test from this point to determine requirement to treat.

Links and acknowledgements:

https://canterforhorses.org.uk/prescribers/

https://beva.onlinelibrary.wiley.com/doi/epdf/10.1111/evj.14036

https://www.beva.org.uk/Resources/Medicines/Anthelmintic-Toolkit

Zoetis

https://www.bimedaequine.co.uk/disease-information/small-strongyles