

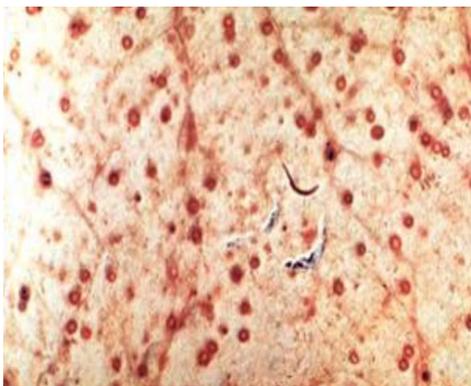


## Worming Guidelines

The importance of an appropriate worming programme for your horse should not be underestimated. Parasitic worms can adversely affect the health and well-being of horses and ponies of all ages. These internal parasites can do irreversible damage to the gut and other organs and be responsible for poor body condition, colic and, in serious cases, fatalities.

### Internal Parasites

There are many types of worm that use the horse as a host during their lifecycle. The degree of damage to the horse depends on the type of worm, its lifecycle (whether it remains inside the gut or migrates round the body), the number of worms present and the horse's health and immune status.



#### **Small Redworm (Cyathostomes)**

Small redworms are the most common internal parasite of the horse and can account for at least 90 percent of the horse's worm burden. Horses eat the larvae and they develop into adults inside the horse. These worms hibernate in the wall of the gut creating small cysts. At this stage they are not a problem to the horse but in autumn / winter they tend to all emerge from their cysts at the same time which tears many small holes in the lining of the gut and causes serious problems for the horse, including colic, diarrhoea, loss of condition and sometimes death. These worms have become very resistant to many types of wormer, Moxidectin is our only wormer that will kill them while they are inside the gut wall.

### **Large Redworm (Strongyles)**

This worm is not as common as it used to be, though has the potential to be the most dangerous. The larval stage of the lifecycle is of most concern, because they migrate through blood vessels to develop within the major artery supplying blood to the intestinal tract. This migration not only damages the blood vessel walls but can also lead to blood clots and a weakening of the blood vessels. Disruption to the blood supply can cause colic and, in rare cases, death.

### **Large Roundworms (Ascarids)**

Adult roundworms can reach up to 50cm in length. These are the worms that look like spaghetti. Roundworms typically only affect foals and young horses. Adult horses are not normally affected as they develop immunity with age. Adult ascarids and migrating larvae can cause poor growth, digestive and respiratory problems and occasional fatalities when they block the intestine. The horse will often develop a cough as the larvae migrate from the lungs to the small intestine. The eggs of large roundworms can survive in the soil and in stables for many years.



Young horses become infected by ingesting these eggs from the pasture and their surroundings. 5 days of Fenbendazole is the wormer of choice for these as 1 day of treatment has now become ineffective.

### **Threadworms**

Threadworms are rarely of consequence, routine treatment for this worm is not recommended unless there is a known issue on the farm. Natural immunity usually develops by the age of six months.

### **Pinworms**

Female pinworms migrate to the horse's rectum and lay their eggs on the skin around the outside of the anus. This can cause intense irritation, provoking the horse to scratch and rub the tail area. Persistent scratching can result in loss of hair from the dock. They are generally of not of great consequence and are killed by most wormers.

### **Lungworms**

Donkeys are thought to be the natural host of this parasite but horses can also be infected with lungworms. Infected horses show obvious respiratory signs, such as persistent coughing. For most horses who are not housed with donkeys, these worms are not an issue.

### **Tapeworm**

Tapeworms are located in the horse's gut and congregate around the narrow junction of the small and large intestine. Here, adult tapeworms attach in clusters to the lining of the gut where they release their eggs. Tapeworms can grow to 8cm in length and 1.5cm wide. Severe tapeworm infections can cause digestive disturbances, loss of condition, colic and death.

### **Bots**

Larvae of bot flies are not a cause of disease and don't warrant treatment with wormers.

# Worm Control and Resistance

Effective worm control aims to prevent worms from completing their lifecycle and thus prevent further pasture contamination. Routine blanket use of anthelmintics (wormers) is no longer recommended as this encourages the development of drug resistance. Resistance is when a greater frequency of individuals in a parasite population, usually affected by a wormer are no longer affected. Once resistance is present in a worm population, the health, welfare and performance of horses infested with resistant worms will be compromised. Help slow down resistance by following these tips :

## Top tips for managing horses

- When worming, dose appropriately for the weight of the animal - underdosing encourages resistance
- Regular fecal egg counts - 3 per grazing season or 4 if year round grazing is used
- Minimum 4 fecal egg counts per year for youngstock (1-3 yo) or horses over 15 years old.
- Tapeworm antibody test at least annually (autumn) but ideally twice yearly (spring + autumn)
- Test for encysted redworms in the autumn
- Use the recommended type of wormer for the type of worm to be targeted.

## Top Tips for herd management

- Remove faeces from fields at least twice weekly
- Reduce stocking density on fields
- Don't use horse manure to fertilise pastures
- It is not recommended to chain harrow fields as it just spreads out the manure, temperatures in Ireland are not extreme enough to kill off worms left on pasture.
- Don't mix animals of different ages in the same field
- Use a rotational grazing system with foals getting access to the cleanest pasture first followed by youngstock and then adult horses.
- Rest pastures frequently
- Graze with ruminants (sheep, goats, cows) this breaks the life cycle of the parasites and horses are not affected by worms which affect ruminants. Ruminants also graze the grass horses will not eat so the field is grazed more evenly.

# Types of Wormer

**Wormers**

<b>Fenbendazole</b> (eg Panacur, Curazole) <ul style="list-style-type: none"><li>• Ascarids, pinworm, lungworm</li><li>• Widespread resistance of strongyles</li></ul>	<b>Ivermectin</b> (eg Bimectin) <ul style="list-style-type: none"><li>• Large strongyles, some stages of small strongyles, bots, pinworm, lungworm</li></ul>	<b>Moxidectin</b> (eg Equest) <ul style="list-style-type: none"><li>• Encysted small strongyles, adult strongyles, bots, pinworm</li></ul>
 <b>Praziquantel</b> (Equitape or in combination eg Equest Pramox) <ul style="list-style-type: none"><li>• Tapeworm</li></ul>	<b>Pyrantel</b> (Embotape) <ul style="list-style-type: none"><li>• Tapeworm at double dose, strongyles, pinworm, ascarids</li></ul> 	

There are not many different types of wormers available for horses and unfortunately for now, there are

no new wormers being produced so we must use the ones we have responsibly so they continue to be effective. There is no single wormer that kills all worms so it is important to be aware of the reason for choosing each wormer. Time of year, species detected on fecal egg count and life cycles of the parasites are all important things to consider when choosing the appropriate wormer.

## Fecal Egg Counts

To minimise the risk of worm resistance, FECs are used to identify horses with high worm burdens. Horses with a FECs of **more than 200epg** (eggs per gram of faeces) should be treated with an appropriate anthelmintic, this will be recommended by your vet. Those with lower FECs do not require treatment, preventing the unnecessary and ineffective use of wormers (see below for when these should be done). Fecal egg count reduction tests should also be done 2 weeks after worming animals once a year to ensure wormers are still effective on a particular farm.



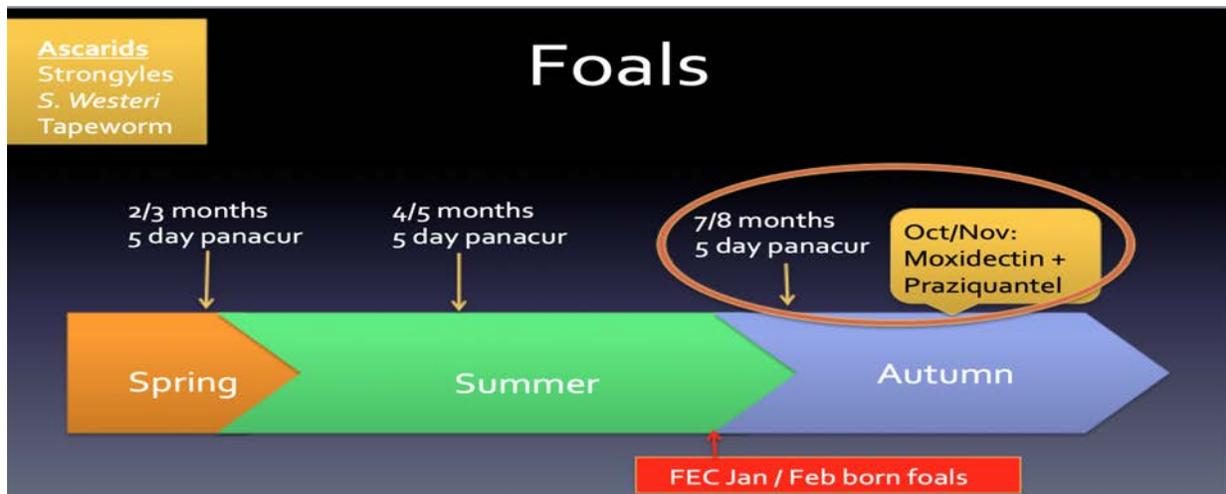
Unfortunately Fecal egg counts are unreliable for detection of tapeworm, for this we have a blood test which may be done in spring and autumn and if detected in one horse within a group it is recommended that the entire group be treated with either Praziquantel or double dose Pyrantel.

There is also a new test available for the detection of encysted redworm, this is also a blood test and it is recommended that this is performed in autumn. If detected Moxidectin is the wormer of choice for this in most cases, however if the burden is particularly high we may recommend a 5 day course of fenbendazole initially for this.

## When should I worm ?

The current recommendations revolve around fecal egg counts and worming based on the results of these. There are however differences with regards to the age of the horse and management factors.

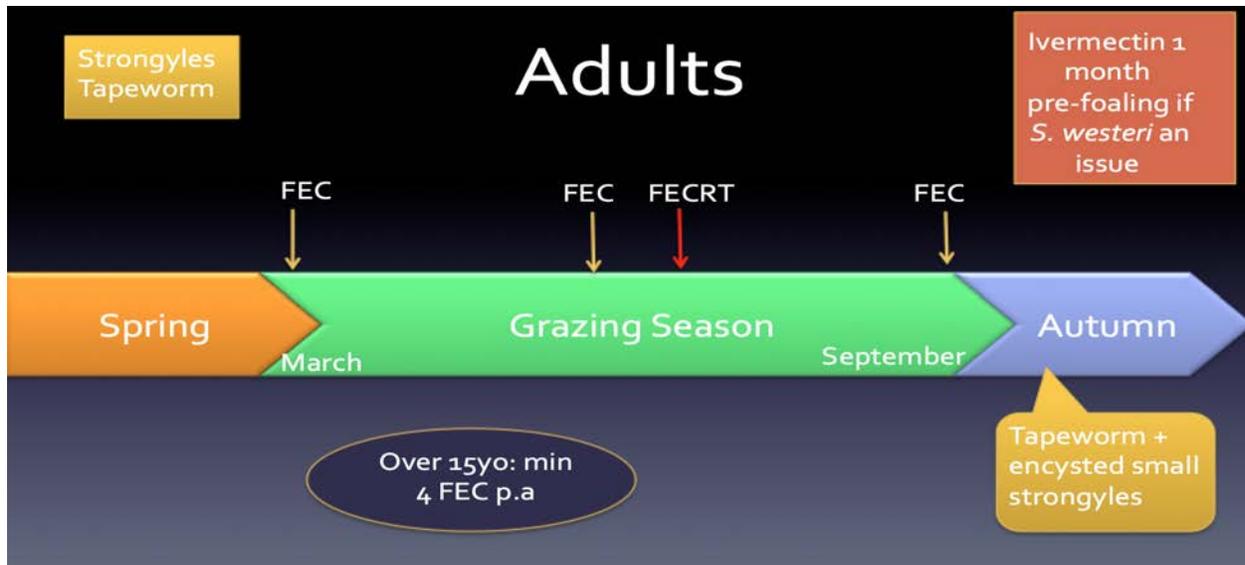
**Foals:** We are trying to target mostly Ascarids, this is the one group of animals where fecal egg counts may be disregarded as the impact of ascarid impaction can be fatal so blanket treatment is still recommended for this group. Foals should be wormed at 2-3 months old, 4-5 months old and 7-8 months old. For the first two wormings 5 days Fenbendazole is recommended. One day of treatment has recently been found to be ineffective due to resistance. For worming at 7-8 months old either 5 days Fenbendazole can be used again or, if this coincides with October / November they can be given a combination product of Moxidectin and Praziquantel in lieu of the Fenbendazole. Those foals whose 7-8 month worming does not coincide with the autumn worming may receive a third treatment of 5 days fenbendazole, so this group would be wormed on 4 occasions in their first year (see the diagram below).



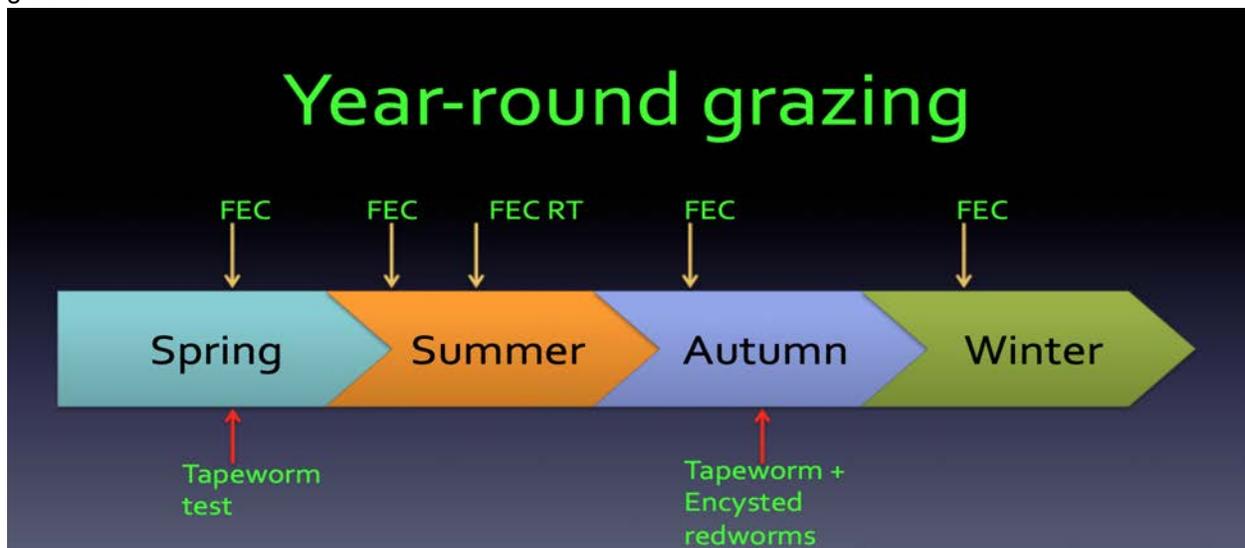
**Youngstock i.e. horses 1-3 years old:** It is recommended that 4 fecal egg counts are done throughout the grazing season with 1 Fecal egg count reduction test done 2 weeks after treatment (if treatment is warranted) at least once a year.



**Adult horses:** (4yrs old -15yrs old) 3 fecal egg counts per year is satisfactory, again with one fecal egg count reduction test conducted after treatment annually. For horses older than 15, 4 egg counts are recommended as older horses have less immunity to worms and other diseases.



**Year round grazing:** All horses, regardless of age will require 4 egg counts minimum per year (i.e one per season), this is necessary in Ireland as our winters are just not cold enough to kill off eggs on the ground.



## What next?

If you would like to talk about a worming program for your horse or yard contact us any time.

If you would like us to do a fecal egg count for your horse follow these steps:

- Find fresh poo from your horse
- Take a glove/bag and put no more than 1 ball of poo into the glove/ bag
- Label the glove with your horses name and age
- Drop it into us at Dooneen Equine Vet Clinic
- If you are not a regular client, please provide your phone number / email address when dropping samples off
- We will call / email you with results and recommendations for worming as soon as we are finished.