Setting the Standards in Strategic Worming

Your Guide to Sustainable and Effective Equine Worming

Virbac

Shaping the future of animal health
3 SMARTER WAYS TO BEAT WORMS

Direction
Understanding resistance and importance of Faecal Egg Count testing (FEC).

Dosage
Correct weight estimation and dosage of a horse.

Delivery
Using the right product, at the right time.

CONTENTS
Direction 4
Dosage 14
Delivery 20
Your Gold Standard 28
Resistance is the ability of worms in a population to survive treatments that have generally been effective against the same species and stage of infection.

The most important worm of the young horse is Ascarids (roundworm) while small strongyles are considered the most significant worm of adult horses. Unfortunately some roundworms and small strongyles have developed resistance to key worming chemicals. A strategic approach to worming our horses is necessary to manage and/or prevent chemical resistance.

Anthelmintic resistance is a real concern in Australia with increasing horse worms becoming resistant to chemicals. Resistance occurs because a very small percentage of worms always had a genetic ability to survive chemical treatment. Ongoing use of any chemical in a manner that is inadequate to remove resistant genes from the worm population will lead to increasing resistance over time.
**HOW DOES ANTHELMINTIC RESISTANCE OCCUR?**

Development of anthelmintic resistance depends on how many worms survive anthelmintic treatment to pass these resistant genes on to the next generation. Several factors can influence how quickly resistance to a particular anthelmintic will develop.

**Frequency of worming treatment**
High frequency dosing is an important risk of selection for resistance.

**Dosing and efficacy of treatment**
Under-dosing or using an ineffective anthelmintic will increase the development of resistance.

**Refugia population**
(In refugia) literally means ‘taking refuge’ or ‘hiding’ and refers to the population of worms not exposed to or affected by treatment. The larger the refugia population the slower resistance will develop.

**Overgrazing and overstocking**
This can contribute to an increase in the number of resistant worms on a property.

Too frequent use of chemicals when not needed and under dosage of chemicals are the major ways that worm resistance to chemicals is increasing. Resistance tends to occur first in worm species that are the hardest for a particular chemical to control. Worming too frequently will ensure only resistant worms survive, as the most susceptible worms are killed, leaving the resistant worms to reproduce.\(^2\)\(^3\)

Under-dosing is most commonly caused by incorrect weight estimation, incorrect method of administration, spitting out of the product and inaccurate sharing of dosages between horses.

Worms in refugia remain susceptible to a worming treatment. This means that the higher the proportion of worms in refugia is, the more slowly resistance will develop. To maximise refugia of susceptible worms a Gold Standard approach to worming is needed where horses that do not need treatment are not wormed as frequently. To do this faecal egg count testing is required.

Pasture management practices can have an impact on resistance as well, for example if grass is scarce or paddocks are overstocked, horses are forced to graze close to their manure and therefore consume more larvae. In this way overgrazing and overstocking can cause a rapid increase of resistant worms in the horse.\(^4\)

Other factors such as length of parasite lifecycle, their egg production capabilities as well as a horse’s immunity level can influence resistance to anthelmintics.
Faecal egg count testing for selective deworming.

FEC testing to understand horses parasite burden and then worming based on results.

- Applicable to all horses > 1 year of age
- Horses < 1 year to be wormed every 8 weeks beginning from 8–12 weeks of age (mare wormed two weeks before foaling or on day of foaling if missed)
- Some horses will always shed more worm eggs than other horses. 20% of horses shed 80% of the eggs
- To focus efforts on the horses that need more frequent worming a recommended program includes:
  - At least one spring and one autumn treatment for all horses (‘Always worm’)
  - In late autumn and spring ideally test horses to see if worming is needed or if this is not practical treat all horses. If testing horses only treat those above 200 eggs per gram (‘Test or Worm’) 
  - In early winter and summer it is always recommended to test to see if worming is required or only worm horses previously identified as ‘high shedders’ (Test and Worm Shedders)

FEC worming guide

<table>
<thead>
<tr>
<th>Result</th>
<th>FEC</th>
<th>Risk</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>&lt;200</td>
<td>Negligible</td>
<td>No need to worm your horse as this is an acceptable egg count.</td>
</tr>
<tr>
<td>Moderate</td>
<td>200–500</td>
<td>Small risk</td>
<td>Your horse has a burden of worms and you should consider treating. There is a small risk of worm-associated disease.</td>
</tr>
<tr>
<td>High</td>
<td>&gt;500</td>
<td>High risk</td>
<td>Your horse has a high worm burden. Treatment should be administered to reduce the risk of worm-related disease.</td>
</tr>
</tbody>
</table>

When using FEC testing, horses with > 200 eggs per gram (epg) need to be wormed. Horses above 500 epg are likely to be high shedders always needing regular worming.

Once every 2–3 years your veterinarian or Virbac area manager can give you advice on how to do a Faecal Egg Count Reduction Test (FECRT) to check if resistance exists to worming compounds.

To ensure the best seasonal worm treatment, it is recommended that a BZ-based wormer like Strategy-T® is used in spring and summer, and a mectin-based wormer like Equimax® is used in autumn and winter.

A SELECTIVE DEWORMING PROGRAM USING FAECAL EGG COUNTS IS THE MOST SUSTAINABLE WAY YOU CAN MANAGE WORMING OF YOUR ADULT HORSES. FOALS WILL ALL NEED REGULAR WORMING.
INCREASING REFUGIA

Paddock management

Dung removal
By far the most effective way of reducing larval numbers on your paddocks is via removal of the dung. If you remove the manure (and the worm eggs each pile contains) then there will be far less eggs left on the pasture to hatch into the infective larvae. As temperatures increase so does the hatching and so dung removal should be performed every three days. Obviously this may not be practical for large farms, so other methods will need to be used to minimise exposure.

Pasture vacuums are a very effective solution for manure pick up.

Resting paddocks
On bigger farms, mares are often moved from paddocks to the working area to be under lights or to foal down. This means that certain paddocks will be partially rested when the mares are moved, and therefore the shedding of eggs onto these pastures (and the number of infective larvae that could develop) has been reduced. It would be a wise idea to take some manure samples from these mare paddocks to carry out FEC. This will help to gauge which are the ‘dirtier’ paddocks with the higher egg counts.
Cross-grazing

As the old saying goes: “Drench the paddock, not the animal.” If the egg counts from a particular paddock are high, it would be better to allow older, less susceptible animals to graze these pastures compared with younger stock, or even rest the paddock completely. Resting paddocks effectively is not a practical option for many properties hence if cattle (steers) are available, then they should be moved into the contaminated paddock to help ‘mop up’ the worm eggs and larvae.

Yearlings could also be moved onto these paddocks if the contamination isn’t too high to grow these young animals out. Make sure if you are putting your yearlings onto these pastures that they have been drenched with an effective treatment at least three days prior to moving them.

Harrowing

As the temperature and moisture levels should be ideal for eggs to hatch into infective larvae, it could be a good idea to harrow the paddock before putting cattle or other animals onto these pastures. Harrowing, followed by one to two months of hard grazing will effectively reduce the infectivity of a paddock by up to half. Imagine your animals being exposed to 1 million infective larvae in a paddock versus the exposure to only 100,000! Care needs to be taken that harrowing techniques do not simply move infective worm larvae over more of the paddock.

Using older animals to ‘clean’ paddocks

Generally older animals are less susceptible to worm pressure than younger animals as their level of natural immunity is higher. If cattle are not available to cross graze, you can use older animals to do the same. This is known as a ‘leader-follower system’. Using this system, younger animals (that are more susceptible to worms and will shed more eggs) are grazed first in a paddock, and then the older animals are used to graze afterwards to ‘mop up’ all the eggs and infective larvae. This also allows the younger, growing animals to graze the new spring protein-rich pasture.

Lastly a good practice is to plan ahead for weaning so the paddock is ready in time, therefore minimising the exposure to these very susceptible young animals.

By implementing some of these simple pasture management strategies, you can effectively decrease the numbers of infective worm larvae in your paddock, which in turn will reduce your horse’s parasite burden. This in turn should mean you can extend the interval between worming treatments and therefore minimise the number of drenches administered to your horse.
For wormers to effectively treat internal parasite burdens, every horse must be dosed with the appropriate amount of wormer according to their bodyweight. If horses are underdosed with the wormer, the internal parasites are exposed to a sub-lethal amount of the drug. This may leave a population of worms that are able to tolerate the wormer. It is important to protect the wormers that remain effective as best we can. One of the most important ways of doing this is to ensure that animals are dosed to the correct bodyweight, preferable erring on the side of a slight overdose.

Always dose for the CORRECT weight of the horse. There are two very serious implication of under-dosing:

- Effectiveness of wormer is compromised
  - Horse is at risk of parasite related diseases
  - Horse is at risk of ongoing health issues increasing the cost of care
- Can encourage resistance
  - Worms develop better tolerances to the drug

It is always better to slightly overdose than underdose.
GET ACCURATE WEIGHT ESTIMATION

The best alternative to scales is a weight tape or using the weight estimation formula.

1 OR 2

Weight tape
The tape is placed around the horse’s girth and the estimated weight is read from the tape in kilograms. This is a convenient but less accurate method than a weight estimation formula.

Estimation formula

Girth
The tape (weight tape or conventional measuring tape) should be positioned snugly around the horse’s barrel, directly behind the elbow and passing over the back at the lowest part of the withers. The girth circumference in centimetres (cm) is used in combination with the length to calculate the horses weight.

Length
Place one end of the tape on the point of the shoulder, keep the tape taut and run it diagonally to the point of the buttock. Stand by the horse’s back leg and read the length in cms you can see without having to peer around the horse’s body.

Use the weight calculator available on Virbac’s 3D Worming website (www.virbac.com.au/3dworming).

Prior to worming, very few horses are accurately weighed on a weighbridge or horse scales. More often than not, the dose of wormer a horse receives is based on a visual estimation of its weight. Unfortunately, visual interpretation of a horse’s weight is very unreliable. Studies have shown that horse owners and handlers tend to under, rather than overestimate their horse’s bodyweight.5,6

Most people underestimate weight by approximately 20%. This means that many horses may be unintentionally under-dosed with wormer simply because a more accurate weight estimation method has not been used.6 All Virbac wormers such as Equimax®, Strategy-T®, Equimax® Elevation, Equimax® LV are now available in doses large enough to treat all horses weighing up to 700 kg.

WEIGHT (kg) = \frac{\text{Girth (cm²)} \times \text{Length (cm)}}{11877}
WEIGHT AWARENESS TIPS

• Always use scales, a weight tape or the weight estimation formula prior to worming your horse
• Accurately estimate the weight of ponies or foals if one syringe of wormer is being shared between two animals
• Re-check a horse’s weight every time it is wormed as a horse’s weight can change considerably with work, age and life stage (e.g. pregnancy, retirement)
• Round up the weight estimation to the nearest 50 kg calibration on the syringe, never round down

• Remember to check the total bodyweight your wormer will treat. Even though Virbac wormers treat horses up to 700 kg, most other wormers treat less
• Underdosing with products treating only 575 or 600 kgs or less should be avoided as it is a known risk factor in developing resistance issues.

VIRBAC’S WORMERS ARE DESIGNED TO TREAT HORSES UP TO 700KG WHICH COVERS THE MAJORITY OF HORSES
DELIVERY

3

USING THE RIGHT PRODUCT, FOR THE RIGHT HORSE, AT THE RIGHT TIME!
**KNOW WHAT’S IN YOUR PRODUCT**

Four key chemical groups used for worming.

**MLs or ‘mectins’ include:**
- Avermectins (abamectin, ivermectin)
- Milbemycin (moxidectin)

Macrocyclic lactones or mectins are the most widely used chemical class of anthelmintics. They are very useful to control a wide range of parasites of the horse but not tapeworms. Compared to other chemicals they are able to control younger stages of many worms and also persist in the body to give a longer control period.

There are two types of mectin: avermectin is one of them. At the present time the only avermectin chemicals on the market in Australia for horses are ivermectin and abamectin. Milbemycin is the other type of mectin. Moxidectin is currently the only milbemycin sold for horses. Unfortunately roundworm, the major threat to young horses, is commonly resistant to mectins. A wormer only containing a mectin +/- a tapewormer should not be used in horses less than two years of age. This makes most wormer products currently sold not suitable for treatment of the young horse. Mectins are also being overused in adult horses which necessitate the strategic use of other chemicals.

**BZs include drenches ending in ‘azole’:**
- Oxfendazole
- Oxibendazole
- Fenbendazole

BZs include wormer chemicals ending in ‘azole’, treat the majority of worm species, but have no efficacy against tapeworms or bots. There are several forms of BZs available, including oxfendazole, fenbendazole and oxibendazole.

Small strongylies have become widely resistant to BZs when used on their own. However when used in combination with other chemicals the BZ class of chemicals can help treat worms that are developing resistance to mectins.

**Tetrahydropyrimidines, known as THPs, these include:**
- Pyrantel
- Morantel

Tetrahydropyrimidines, or THPs, treat the majority of worm species, including some tapeworms, but have no effect on bots. There are only two types of THP – pyrantel and morantel.

It is essential that all horses less than two years of age include a THP in their worming program because mectins and BZs used on their own are not reliable enough against ascarids. Equimax® Elevation and Strategy-T® are highly suitable for the current resistance status of roundworm in Australian foals.

**Isoquinolines, this class includes praziquantel only**

Praziquantel is a member of the chemical family called the isoquinolines family. It’s highly effective against tapeworms.

No single worming compound is effective on all parasites, especially with developing resistance. Strategy-T® and Equimax® Elevation are leading examples of combination wormers. Leading parasitologists recommend that the use of unrelated chemical actives on the same day is an effective strategy to delay chemical resistance. Unlike any other wormers they combine a BZ or mectin respectively with pyrantel. Strategic use of Strategy T® and Equimax® Elevation provides you with a complete solution to the worming needs of horses of all ages.

**MLs or ‘mectins’ include:**
- Avermectins (abamectin, ivermectin)
- Milbemycin (moxidectin)

Macrocyclic lactones or mectins are the most widely used chemical class of anthelmintics. They are very useful to control a wide range of parasites of the horse but not tapeworms. Compared to other chemicals they are able to control younger stages of many worms and also persist in the body to give a longer control period.

There are two types of mectin: avermectin is one of them. At the present time the only avermectin chemicals on the market in Australia for horses are ivermectin and abamectin. Milbemycin is the other type of mectin. Moxidectin is currently the only milbemycin sold for horses. Unfortunately roundworm, the major threat to young horses, is commonly resistant to mectins. A wormer only containing a mectin +/- a tapewormer should not be used in horses less than two years of age. This makes most wormer products currently sold not suitable for treatment of the young horse. Mectins are also being overused in adult horses which necessitate the strategic use of other chemicals.

**BZs include drenches ending in ‘azole’:**
- Oxfendazole
- Oxibendazole
- Fenbendazole

BZs include wormer chemicals ending in ‘azole’, treat the majority of worm species, but have no efficacy against tapeworms or bots. There are several forms of BZs available, including oxfendazole, fenbendazole and oxibendazole.

Small strongylies have become widely resistant to BZs when used on their own. However when used in combination with other chemicals the BZ class of chemicals can help treat worms that are developing resistance to mectins.

**Tetrahydropyrimidines, known as THPs, these include:**
- Pyrantel
- Morantel

Tetrahydropyrimidines, or THPs, treat the majority of worm species, including some tapeworms, but have no effect on bots. There are only two types of THP – pyrantel and morantel.

It is essential that all horses less than two years of age include a THP in their worming program because mectins and BZs used on their own are not reliable enough against ascarids. Equimax® Elevation and Strategy-T® are highly suitable for the current resistance status of roundworm in Australian foals.

**Isoquinolines, this class includes praziquantel only**

Praziquantel is a member of the chemical family called the isoquinolines family. It’s highly effective against tapeworms.

No single worming compound is effective on all parasites, especially with developing resistance. Strategy-T® and Equimax® Elevation are leading examples of combination wormers. Leading parasitologists recommend that the use of unrelated chemical actives on the same day is an effective strategy to delay chemical resistance. Unlike any other wormers they combine a BZ or mectin respectively with pyrantel. Strategic use of Strategy T® and Equimax® Elevation provides you with a complete solution to the worming needs of horses of all ages.
**Equimax®**

**Built on a lifetime of trust**

**Composition**
Each Equimax® 35 mL syringe contains:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abamectin</td>
<td>4 mg/mL</td>
</tr>
<tr>
<td>Praziquantel</td>
<td>50 mg/mL</td>
</tr>
</tbody>
</table>

- An oatmeal-flavoured, palatable allwormer that effectively treats all major intestinal worms in horses, including all three species of tapeworm and all three species of bots
- Safe to use on all horses including pregnant mares and breeding stallions
- Each tube can treat horses up to 700 kg

**Presentation**
- 35 mL single syringe
- Stable pail containing 60 syringes

---

**Equimax® Elevation**

**Give your young horse the best possible start**

**Composition**
Each Equimax® Elevation 23.1 mL syringe contains:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivermectin</td>
<td>0.14 g</td>
</tr>
<tr>
<td>Praziquantel</td>
<td>1.0 g</td>
</tr>
<tr>
<td>Pyrantel Embonate</td>
<td>9.0 g</td>
</tr>
</tbody>
</table>

- An allwormer effective on all susceptible equine internal parasites, including three species of tapeworm and all three species of bots
- A unique combination of three active ingredients to combat or delay mectin and BZ resistance
- An ideal combination wormer for all horses from 6 weeks of age
- Safe to use on all horses including foals, pregnant mares and breeding stallions
- Each tube can treat horses up to 700 kg

**Presentation**
- 23.1 mL single syringe
- Stable pail containing 60 syringes

---

**Strategy-T®**

**Your unique defence against resistant equine worms**

**Composition**
Each Strategy-T® 35 mL syringe contains:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxfendazole</td>
<td>7.0 g</td>
</tr>
<tr>
<td>Pyrantel Embonate</td>
<td>9.1 g</td>
</tr>
</tbody>
</table>

- The ideal non-mectin wormer. Strategy-T® contains a unique combination of active ingredients that work synergistically to give Strategy-T® a superior efficacy
- Strategy-T® that has been shown to have comparable activity to mectin wormers (including benzimidazole resistant strains), making it Australia’s best non-mectin wormer
- Safe to use on all types of horses including pregnant mares, foals and breeding stallions
- Each tube can treat horses up to 700 kg

**Presentation**
- 35 mL syringe
- Stable pail containing 60 syringes
**EASY WORMING RANGE**

Equine worming choices made easy

---

**Eraquell®**
Worming made easy

**Composition**
Each 35 g Eraquell® Pellets sachet contains:

- Ivermectin 14 mg/g

- The palatable choice for horses that are difficult to worm, just add Eraquell® to their feed
- A mectin-based wormer for the treatment of all common worms and bots. Each sachet of Eraquell® treats a horse up to 700 kg
- Safe to use on all types of adult horses including pregnant mares and breeding stallions. Eraquell® pellets are not suitable for use on foals due to risk of incorrect dosing and subsequent adverse outcomes

**Presentation**
- 35 g sachet of pellets

---

**Equimax® LV**
Now easier to dose

**Composition**
Equimax® LV 7.49 g syringe contains:

- Ivermectin 18.7 mg/g
- Praziquantel 140 mg/g

- Has all the benefits of Equimax® in a convenient low volume dose in an easy-to-use tube
- Easier to use for those with small hands or those with hard-to-worm horses
- Safe to use on all types of horses including pregnant mares and breeding stallions
- Each tube can treat horses up to 700 kg

**Presentation**
- 7.49 g single syringe
- Stable pail containing 30 syringes

---

**Razor™**
Cost effective multi-dose wormer

**Composition**
Razor™ equine wormer 30 mL syringe contains:

- Ivermectin 8 mg/g
- Praziquantel 100 mg/g

- Allwormer effective on all susceptible equine internal parasites, including all three species of tapeworm and all three species of bots
- Safe to use on all horses including pregnant mares and breeding stallions
- One syringe treats 2 x 600 kg horses

**Presentation**
- Individually packaged 30 mL single syringe
- Ten pack: 10 x 30 mL syringes
- Bucket: 50 x 30 mL syringes

---

*Always include Strategy-T™ in your annual worming program*
YOUR GOLD STANDARD: USING THE RIGHT PRODUCT, FOR THE RIGHT HORSE, AT THE RIGHT TIME

Strategic Gold Standard Worming involves worming horses based on:

• Parasite lifecycle
• Risk of disease
• Likely resistance status of worms

This is important to slow down resistance. A good program:

• Targets the horses that most need treatment and reduces chemical usage in the other horses
• Use faecal egg count monitoring
• Avoids over usage of chemicals from the same class
• Includes products containing pyrantel to ensure adequate control in resistant small strongyles or roundworm
• Uses moxidectin no more than once a year when treatment for encysted small strongyles is specifically indicated*
• Strategically treats horses based on worm lifecycles and time of year
• Avoids using single active wormers year after year
### Targeted strategic worming guide
**Horses > 1 year**

<table>
<thead>
<tr>
<th>Mths</th>
<th>Targeted parasite</th>
<th>Horses &gt; 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer</strong></td>
<td></td>
<td><strong>GOLD STANDARD</strong></td>
</tr>
<tr>
<td>Jan</td>
<td>• Summer sores</td>
<td>Test or just worm</td>
</tr>
<tr>
<td>Feb</td>
<td>• Strongyles • Summer sores</td>
<td></td>
</tr>
<tr>
<td><strong>Autumn</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td>• Summer sores</td>
<td>Always worn</td>
</tr>
<tr>
<td>Apr</td>
<td>• Strongyles • Bots • Tapeworms</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>• Tapeworms</td>
<td></td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun</td>
<td>• Strongyles • Bots</td>
<td>Test and only worm shedders</td>
</tr>
<tr>
<td>Jul</td>
<td>• Strongyle larval emergence • Threadworm</td>
<td></td>
</tr>
<tr>
<td>Aug</td>
<td>• Strongyle larval emergence • Threadworm</td>
<td></td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep</td>
<td>• Strongyle larval emergence • Threadworm</td>
<td>Always worn</td>
</tr>
<tr>
<td>Oct</td>
<td>• Strongyles • Tapeworm</td>
<td></td>
</tr>
<tr>
<td>Nov</td>
<td>• Strongyles • Summer sores</td>
<td>Test and only worm shedders</td>
</tr>
</tbody>
</table>

### Targeted strategic worming guide
**Horses < 1 year**

**Your foal program**

<table>
<thead>
<tr>
<th>Steps</th>
<th>Horse</th>
<th><strong>GOLD STANDARD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Late Winter</strong></td>
<td>2 weeks prior</td>
<td>Worm mother before foaling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Every 3–5 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pick up manure</td>
</tr>
<tr>
<td><strong>Spring - Summer</strong></td>
<td>First worming for foals born in this period</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Every 8–12 weeks</td>
<td>Repeat worming</td>
</tr>
<tr>
<td><strong>Autumn - Winter</strong></td>
<td>As the foal grows change treatments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Every 8–12 weeks</td>
<td>Repeat worming</td>
</tr>
<tr>
<td><strong>Next Spring</strong></td>
<td>FEC testing as a yearling</td>
<td></td>
</tr>
</tbody>
</table>

Climatic conditions greatly impact worming requirements. Use this table as a guide only. Depending on likely encysted cyathostome burden, experts may recommend using a Moxidectin product once in the year. Worming the mare a few weeks before foaling or at foaling protects the young foal. Use a single treatment of Equimax® if suspect summer sores. Then make next treatment Strategy "T".

---

30

---

31
THE VIRBAC GOLD STANDARD WHEEL PROVIDES A GUIDE TO WHEN YOU SHOULD ‘ALWAYS WORM’, ‘TEST OR WORM’, OR ‘TEST AND WORM HIGH SHEDDERS’.

Gold standard ensures best long term protection for the available drugs and most importantly your horse.

Worming strategically involves worming your horse based on the parasite lifecycle and risk of disease. The TARGETED STRATEGIC WORMING GUIDE, on pages 30 and 31, are designed alongside the Virbac wormer wheel with the aim to simplify many important considerations for successful horse worm control.

The lifecycle of different parasites mean that they may be more active at different times of the year. Autumn and spring will always be key times to worm all horses. It makes sense to target mectin wormers in the cooler months when bots and small strongyles are more active inside the horse. Using non-mectin chemicals is typically suited to the warmer months although if summer sores are a problem a mectin product will be needed.

Environmental conditions and temperature will also impact your worming program. It is important to remember that it is not the worm eggs on the pasture that are the concern, but rather the infective larvae that hatch from these eggs. While the temperatures are very cold (under 6°C), the eggs lie inactive in the faeces or on the pasture and present no danger to the horse if eaten. However, increasing temperature will stimulate these harmless eggs to hatch into the next stage of the worm life cycle – the infective larvae. This can take 12-14 days at temperatures of 10°C.

Once temperatures are 25–33°C, it takes only 3–4 days for eggs to hatch into infective larvae. Hence designing your worming program must take into consideration both property management practices as well as regional climatic conditions. This targeted strategic approach to worming is also important to avoid prolonged use of mectin compounds that are needed for broad spectrum worm control.

The mectin moxidectin is suggested by experts to only be used once a year if treatment for encysted cyathostomes or redworms is specifically indicated, typically in early spring.

A Faecal egg count (FEC) can provide an insight into the significance of important worms in your adult horse. If used correctly, a FEC can decrease your reliance on worming treatments and extend the life of wormers used today. Faecal egg counts are most useful in determining burdens of small strongyle worms. Irrelevant of worm egg counts all horses will need worming at strategic times against bots and tapeworm. Speak to your veterinarian to assist you in conducting a FEC on your property and developing specific worming strategies.

In this way, using FEC will allow you to target your worming program to the horses that really need worming and leave some refugia (worms not exposed to treatment) untreated. This strategic approach to worming horses will help protect the compounds currently available as no new compounds are likely in the near future.
The Gold Standard

### Young horses
- Decrease worm burdens by paddock management
- Worm the mare two weeks before foaling (or if missed on the day of foaling)
- Avoid the use of straight mectin or mectin/tapewormer products in ALL horses less than two years of age
- Only use combination wormers that contain pyrantel such as Strategy-T® and Equimax® Elevation
- Use Strategy-T® as the first wormer of the foal at 8-12 weeks of age then repeat each 8-12 weeks before use of Equimax® Elevation from 9-12 months of age
- Begin a FEC monitoring program in yearlings

### Adult horses
- Decrease worm burdens by paddock management
- Worm all adult horses once in Spring with Strategy-T® and once in Autumn with Equimax® or Equimax® Elevation
- Use FEC monitoring to identify which horses or paddocks need to be wormed at other times of the year
- Use Strategy-T® in the warmer months* and Equimax® in the cooler months
- Use FEC testing to identify any high shedders in your horses. These horses are wormed 4-6 times a year

*If your horse has suspect summer sores use Equimax® or Razor® and then return to Strategy-T® if further summer worming is required.

References and notes
8. Results of national weight survey 2007 (data on file).