



Equine Newsletter

TATURA AND CAMPASPE VET CLINICS

SUMMER 2011

Worming to Reduce Resistance

It is critical for our horse's well being that an effective and regular worming program is maintained, and to consider active ingredients when rotating wormers. If you are rotating by changing brand or box colour, you may not be rotating at all!

Use effective wormers.

Using wormers that already have established resistance on your property will not protect your horse from worm related disease. Faecal egg counts can be performed to enable us to assess the effectiveness of your current program.

Rotate family of wormer on an annual basis.

This is called slow rotation. This means that you should use one class of active ingredient for an entire year, and then switch to a different class of active ingredient the next year.

It's important to know that the majority of horse worming products currently on the market have one of two major classes of active ingredient – they are either 'mectin' based or 'azole' based. If you are currently using any wormer with an active ingredient ending in '...ectin' then your rotational choices are limited to wormers that do not contain any actives ending in '...ectin'. This is regardless of the other active ingredients contained within the wormer. To make the correct choice you must change to a wormer with an active ingredient ending in '...azole'. There are other classes of active ingredient, and these are generally used in combination with other actives to target specific parasites (for example, the addition of praziquantel provides protection against tapeworm).

Give the correct dose.

If horses are underdosed with wormer, the internal parasites are exposed to a sub-lethal amount of the drug, leaving a population of worms that are able to tolerate the wormer. Modern wormers are very safe and it is better to err on the side of slight overdose than to

underdose - most people under-estimate their horse's weight by approximately 20%.

Practice good pasture hygiene.

Frequent manure removal will help to decrease the risk of grass contamination with worm eggs or larvae. Fresh, non-composted manure should not be spread onto paddocks grazed by horses.

Moving horses onto a fresh paddock following worming, and prolonged destocking of the pasture will also help to reduce reinfection rates and decrease the frequency of treatments needed.

Worm regularly.

If treatments are too infrequent pasture contamination with worm larvae and eggs will not be controlled. Pastured horses should be wormed every 6-8 weeks, as they are more likely to become re-infested with worms while grazing. It is important to remember that up to 99% of worm larvae exist on the pastures and only 1% are actually in a horse.



Worm all horses on your property, including foals.

The immature immune systems of foals and young horses make them far more susceptible to worms than older animals. We recommend worming foals from 3 months of age.

Avoid introducing resistant worms to your stables.

Quarantine and worm all new horses with prior to turn out and keep them confined to a box for 48 hrs after worming to prevent pasture contamination.

Common Families of Active Ingredients

Macrocylic Lactones ('mectins'): These are effective against a wide range of roundworms but have no activity against tapeworms.

Active against the larval stages of bot flies. *Abamectin, Ivermectin, Moxidectin*

Benzimidazoles (BZ's or 'azoles'): Single doses are effective against larval and adult roundworms. Not effective against tapeworms or bots.

Resistance to this class of drug has been documented. *Oxfendazole, Oxibendazole, Fenbendazole*

Praziquantel: Active against tapeworms only. *Praziquantel*

Tetrahydropyrimidines: These chemicals are active against larval and adult roundworms and tapeworms. *Pyrantel, Morantel*

*NB Moxidectin and Fenbendazole are the only wormers with activity against the larval stages of encysted small strongyles.



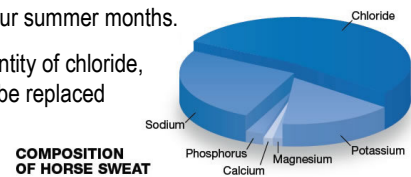
IN FOCUS—SWEATING AND ELECTROLYTE REPLACEMENT

Electrolytes play a vital role in the horse's body function and supplementing with a complete electrolyte which contains the right balance for the requirement of your horse is crucial.

Losing Electrolytes

Water makes up around 65% of a horse's body weight and is essential to the normal functioning of the horse's body systems. During exercise, contracting muscle cells generate large amounts of heat, and the most important way to dissipate this heat is by evaporation of sweat from the skin. In moderate environmental conditions an average 500kg horse can lose 6-7 liters of sweat per hour. In hot, humid conditions fluid losses can reach the 15L mark for each hour the horse is exercising. Resting horses may also sweat freely during our summer months.

As the horse sweats, electrolytes are also lost along with water. Horse sweat contains a large quantity of chloride, sodium and potassium and smaller amounts of magnesium and calcium. These electrolytes must be replaced to maintain normal body functions.



Why Electrolytes are Important

Electrolytes are body salts that are involved in many vital functions including nerve and muscle activity, metabolism, maintenance of fluid balance and kidney function. In horses the most abundant and important electrolytes include sodium, potassium, chloride, calcium, and magnesium.

Your horse's body is constantly trying to correctly balance the electrolyte amounts in his system. Electrolyte imbalances have far-reaching consequences, impacting virtually every equine body system. Excessive electrolyte losses during exercise can contribute to a variety of serious performance and health hindering issues, including fatigue, muscle cramps and tying-up, thumps and heat stress.

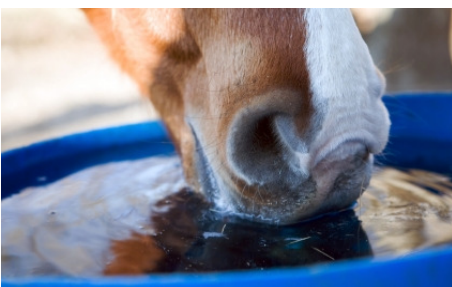
Assessing Electrolyte Needs

The use of an equine electrolyte supplement has the potential to improve your horse's performance, aid recovery after strenuous exercise and avoid dehydration. The goal of electrolyte supplementation is to replace electrolytes lost through sweat and thereby restore the proper balance of electrolytes in the horse's body. Sweat and electrolyte loss varies from horse to horse and with work undertaken, weather and fitness, therefore, it is important that the electrolyte replacement you choose is designed to meet the requirements of your individual horse.

Heavy sweating occurs as a result of working at moderate speeds for prolonged periods of time, particularly during warm weather. Heavy sweating is common in pacers and other hard-working performance horses, such as endurance horses, eventers and stockhorses. Regular heavy sweating not only depletes electrolyte stores but also leads to blood alkalosis, due to a greater loss of chloride in sweat compared to sodium.

This disproportionate loss of chloride leads to an increase in blood bicarbonate levels causing the blood to become alkaline. In order to correct alkalosis, choose an electrolyte that contains higher levels of chloride, potassium and magnesium.

'Light' sweating is seen more commonly in gallopers as they usually work for short periods of time in the cool of the early morning, however as they work at high intensity this can lead to the production of large amounts of lactic acid in their muscles during fast work. Lactic acid released from muscles causes a drop in blood pH or acidosis which leads to muscle fatigue and stiffness. These horses benefit from an electrolyte that contains additional alkaline salts (such as bicarbonate) which help to buffer these acids.



It is also essential to feed sufficient electrolytes to replace the individual needs of your horse, and it is important to adjust the amount of electrolytes given on days when he works harder. As excess electrolytes are rapidly excreted in the urine it is best to feed half the dose in the morning feed and half in the evening feed to get optimum benefit from daily supplements.

Supplement Safety

When administering multiple supplements, which many horse owners do, determine the total amount of each supplement to administer on a daily basis to ensure the horse is not receiving more than the recommended daily amount.

Some electrolytes contain high amounts of bicarbonate, therefore if used in racing or competition animals the regulations of the relevant authorities regarding medication should be observed.

Contact Amber or Clare to discuss your horse concerns.

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