

Animal Health Update

South East Local Land Services

April 2018

Local disease watch

Kate Sawford, Palerang district vet

Managing livestock during drought

Seasonal conditions have declined across much of the region over the past couple of months, with about half of the region either at the onset of drought or in drought (<https://edis.dpi.nsw.gov.au/>). With short days upon us and current climate forecasting showing very little rain in the near future, feed availability will not improve until spring at the earliest.

For many producers, this circumstance means it's time to make tough choices about what stock to keep. If you haven't already, get your private veterinarian out on farm for pregnancy testing as there is no point in feeding cows that won't produce a calf for you come spring. You may wish to have your veterinarian separate cows into 'early' and 'late' pregnant cows so that you have the option of selling 'early' pregnant cows as pregnancy tested in calf (PTIC). In doing so, you will also tighten your calving period, making things easier in future years. Refer to mycattlevet.com.au to find a PREGCHECK™-accredited veterinarian near you. These accredited veterinarians have been through a quality assurance program demonstrating their ability to accurately pregnancy test cows.

After pregnancy testing, it's time to take a long look at the cow herd (and equally, ewe flock). Consider getting rid of anything with poor conformation, unsound feet or legs, damaged teeth, history of calving difficulty, history of failing to wean a calf, poor temperament, or a poor udder. Further, now is not the time to keep cows over the age of 10 years in the hopes of 'one more calf'. These principles also apply to sheep.

The same scrutiny should be applied to bulls. The first question to ask is 'how many bulls do I *really* need'. The general guideline is two bulls per 100 cows. Planning to buy bulls to join after a spring calving? Then don't keep any surplus bulls over winter and spring, but do remember you should have at least 20 percent of bull power in reserve in case anything breaks down during joining. Bull testing by a BULLCHECK™ –accredited veterinarian (<http://mycattlevet.com.au/bull-testing/>) is strongly recommended prior to joining to ensure you don't have a disaster come pregnancy testing next year, but there is no reason you can't cull any older or injured bulls now.

Some principles of supplementary feeding

Producers that have virtually zero green feed basically need to implement a full hand feeding ration. Energy and protein are both important and the vast majority of hay won't contain enough of either to meet the needs of any class of stock. When introducing a concentrate such as cereal or dried distillery grain it is important to introduce it carefully to avoid issues such as acidosis and bloat. The NSW DPI DroughtHub has a wealth of information about feed requirements for stock broken down by species and class (<https://www.dpi.nsw.gov.au/climate-and-emergencies/droughthub/information-and-resources>).

In general terms, remember that in the end it takes more feed to get stock to *gain* condition as opposed to *maintain* condition, so monitor stock closely and be prepared to make changes to your feeding regime. Stock need to be up to date on their 5-in-1, 6-in-1, 7-in-1, or 8-in-1 (depending on what you're using). Stock that won't see any green feed for three months need to receive a vitamin ADE injection when you start to hand feed and then at least every six months. Calcium, salt and Causmag® supplementation is important for cattle,



and calcium and salt supplementation is important for sheep. For cattle, offer a loose lick of lime, salt, and Causmag® in equal parts and aim to feed around 180 grams per head per day. For sheep, mix 1.5 kg of lime and 0.5 kg of salt into every 100 kg of grain.

Available support during drought

A number of announcements have been made over recent days regarding support for land managers during drought. If you are in need of assistance your first point of call is the NSW Rural Assistance Authority (RAA). Up-to-date information can be accessed via their website (<https://www.raa.nsw.gov.au/>) or by calling 1800 678 593.

Lot feeding and pneumonia

A few sheep and cattle producers have already started lot feeding stock. Lot feeding is great in that it protects chewed out pastures from loss of ground cover, however stock end up at higher densities predisposing them to pneumonia. A couple of producers have already reported issues this year and more are expected. For cattle producers, the first thing to consider is the pestivirus status of your herd. Yarding increases the transmission of pestivirus from persistently infected or 'PI' cattle to stock previously unexposed and infection leads to immunosuppression, predisposing stock to viruses and bacteria that cause pneumonia. Producers are strongly encouraged to know the pestivirus status of their herd. For further information contact your veterinarian.

There are also vaccinations that cover many of the common viruses and bacteria involved in pneumonia and if you're spending heaps of money on supplementary feed you may wish to include these in your animal health program this year to help prevent losses. The signs of pneumonia can be subtle, with many producers failing to notice signs until they've got dead animals in the paddock. As a result the insurance afforded by vaccination may be money well spent this year.

Three Day Sickness confirmed in the Shoalhaven

Three Day Sickness, also known as Bovine Ephemeral Fever (BEF), has been confirmed on the South Coast, with another suspected case awaiting laboratory confirmation.

BEF is spread by biting insects. It has been active in the Hunter region over the past while, but this is the first case recorded south of Sydney this season.

Affected animals experience a sudden onset of fever, stiff joints, lameness and reluctance to move. They may drool, have watery eyes, and nasal discharge, and often go down.

BEF is of particular concern to dairy farmers as infection can cause significant reductions in milk production. Bulls and pregnant cows can also experience severe clinical forms of the disease.

It is important for producers to know the extent of BEF in the region so if you suspect the disease contact your local district veterinarian. A blood test can be used to confirm infection.

Animals that go down and remain that way for more than a couple of days require intensive nursing, including ready access to high quality food and water, shelter from the sun, anti-inflammatories, and repositioning to prevent nerve damage. The better the nursing care the more likely these severely affected animals are to recover.

Vaccination is a wise precaution to take for valuable cattle, particularly bulls and high-producing dairy cows. It is usually given in November-December so that cattle are protected during the high-risk period of late summer and early autumn.

Cooler weather seems to have arrived and reports available indicate that mosquito numbers are declining, which will hopefully keep the number of BEF cases seen this year in check.

Vibrio strikes again

A producer got a rude surprise this year when pregnancy testing five months after the bulls came out revealed only 75 percent in calf, 60 percent for the heifers and 78 percent for the cows. This outcome carries with it a particularly high price tag this year given that empties have spent the summer eating feed that is now much needed. Swabs from the open heifers and cows showed evidence of recent vibrio infection.

Vibriosis is the common name for *Campylobacter fetus* subsp. *venerealis*, a bacterial infection that causes infertility and abortion in cattle.

To clean up herds with confirmed infection, a combination of vaccination of heifers, cows, and bulls, in addition to antibiotic treatment of bulls, is required and this protocol doesn't come cheap.

Regular vaccination of bulls is strongly encouraged to prevent widespread infection within herds free of the disease. There is only one vaccine available for Vibrio. As with all vaccines, make sure to follow the label instructions to the letter.

If you have a poor outcome at pregnancy testing, talk to your veterinarian. Nutrition can play a big part in poor herd reproductive performance, as can bull breakdown, but when both of these factors are excluded infectious causes should be investigated. Some of the most common ones include vibrio, neospora, and of course

pestivirus. It pays to have strategies deal with these disease risks.

Part two of managing worms in horses

Petrea Wait, Monaro district vet

So, now that you have been bombarded with all this new information on how to manage worms in your horses, you may be feeling more confused than ever. Let's face it, giving a drench every six weeks was easy to remember, but now you have to consider a much larger amount of information before deciding on when, and if, to drench and with what.

To follow are some practical examples based on a real horse enterprise with a variety of horses of different ages and under different management strategies. The property is located in the Southern Tablelands of NSW, where temperatures can range from mid to high 30s in summer, with a cold winter that includes regular frosts and occasionally snow. There are several large paddocks with improved pasture, oat and Lucerne crops are sown and used for grazing and hay making, and there are also a number of smaller quarter acre paddocks that are used in rotation for foaling paddocks and young stock. In addition, there is ten acres of unimproved native pasture on the less arable portion of the property. Horses are the only livestock run on the property, although cattle and sheep are sometimes "borrowed" from the neighbours as part of the pasture management program. Broodmares and race horses come and go from the property and foals are born and reared there. The horses are kept in small groups depending on age and nutritional requirements.

Table 1 and 2 show the results of worm egg counts (WECs) carried out on manure samples collected in mid-December. Normally a WEC would be conducted in spring, but in this particular year there was no rainfall until late October so testing was delayed until a time when pasture larval burdens would have increased after winter. From the results you can see that the horses last received a drench in winter of Equimec Triple®, a product that contains ivermectin, oxbendazole and praziquantel.

You will also notice that the types of worm eggs are divided into strongyle eggs and ascarid eggs. This differentiation occurs because ascarid worms have a large egg that is easy to identify, whilst the eggs of strongyle worms all look the same, be they from large or small strongyle worms. Table 3 shows the results of larval differentiation, a procedure where the strongyle eggs are hatched and then the number and type of

strongyle larvae is noted. In this case there were 100% small strongyles, a common finding in horse worm populations today, with large strongyles being highly susceptible and largely eradicated by the use of "mectin" based drenches.



Table 1

Analysis	*Strongyle Eggs	Strongyle Eggs Interpretation	Ascarid Eggs	Drench	Drench Date
Sample ID					
BETTY	540	High	220	Equimec Triple	22-AUG-2017 14:20
SAPPHIRE	220	Moderate	1200	Equimec Triple	22-AUG-2017 14:20
SKYE	300	Moderate	0	Equimec Triple	22-AUG-2017 14:20
DUTCH	300	Moderate	0	Equimec Triple	22-AUG-2017 14:20
PARIS	80	Low	0	Equimec Triple	22-AUG-2017 14:20
JACK	120	Low	0	Equimec Triple	22-AUG-2017 14:20

Table 2

Analysis	*Strongyle Eggs	Strongyle Eggs Interpretation	Ascarid Eggs	Drench	Drench Date
Sample ID					
COCONUT	0	Low	0	EQUIMEC	22-AUG-2017 14:26
ERNIE	20	Low	660	EQUIMEC	22-AUG-2017 14:26
SANDY	0	Low	100	EQUIMEC	22-AUG-2017 14:26
BASIL	0	Low	480	EQUIMEC	22-AUG-2017 14:26
MEG	740	High	340	EQUIMEC	22-AUG-2017 14:26
BLAZE	0	Low	20	EQUIMEC	22-AUG-2017 14:26
MAISIE	0	Low	60	EQUIMEC	22-AUG-2017 14:26
DUNCAN	580	High	20	EQUIMEC	22-AUG-2017 14:26
SHADY	40	Low	0	EQUIMEC	22-AUG-2017 14:26
ASH	280	Moderate	0	EQUIMEC	22-AUG-2017 14:26

Table 3

Larval Differentiation for Horse Wormtest

		Analysis	Cyathostomes (non migratory small strongyles)
Lab No.	Sample ID	Units	%
P001		SAMPLES 1-6	100

Case 1 – Ernie



Ernie is a two-year-old Thoroughbred colt. He was born on the property, but his mother visited a stallion on another stud before returning to foal down. The mare received a drench one month prior to foaling, and then Ernie was drenched at three months, six months and nine months in his first year of life. Ernie shares a small paddock with a four-year-old gelding, and they are moved to a new small paddock approximately every four weeks.

Ernie has a WEC of 20 strongyles and 660 ascarids. The strongyle count is under the 200 eggs per gram (epg) mark where we would consider drenching, but his ascarid counts is very high and as these are from the worm type that causes the greatest problem in young horses a drench is definitely indicated. The drench selected was Strategy-T, a product that contains oxfendazole and pyrantel embonate. Oxfendazole was chosen for its good activity against ascarid worms, whilst pyrantel has activity against small strongyles. As Ernie had received a “mectin + praziquantel” based drench in winter, tapeworms, bots and pin worms have been dealt with. Summer is also a good time to avoid a mectin-based wormer as bots are in their fly stage, and so not present in the horses gut.

Other management practices that could be undertaken to reduce the likelihood of Ernie becoming reinfested with worms might include removing all manure from the paddocks once or twice weekly, providing all feed in bins and hay nets, and ensuring the paddock that he moves to next has been spelled for three months over summer, six months over winter.

Case 2 – Meg



Meg is a 12-year-old Morgan X Riding Pony, who is best described as a very good doer. Although she has never suffered from laminitis (founder), she is of a body type and breed that would increase her risk of this condition. Because of this, she is also kept to a small paddock and tends to follow the young thoroughbreds after they have grazed most of the grass short. As she is always grazing close to the ground and following the ‘wormy’ young horses she is exposed to a high level of worm larvae. This is evidenced by her WEC with 740 epg strongyles and 340 epg ascarids. It is interesting to note, that despite her high worm burden she never shows any symptoms of being ‘wormy’.

Again a drench is indicated, and the oxfendazole + pyrantel combination was selected for the same reasons as for Ernie. Other management practices that could be used to reduce Meg’s worm burden could include removal of manure from the pastures weekly, grazing the paddock with cattle or sheep prior to Meg’s introduction, or utilising the native pasture paddock as it provides a safer grazing option than the improved pastures for a founder-prone pony.

Case 3 – Jack



Jack is a 10-year-old Thoroughbred gelding. He has retired from racing and is now used for pleasure riding. He is kept at pasture with five other adult horses and intermittently has access to oat and lucerne crops. He tends to maintain body condition well and only receives a small hard feed after being exercised. His WEC showed 120epg strongyles and no ascarids. As the strongyle count is under 200 epg he did not receive a drench. Previous worm egg counts conducted on this

horse over the last few years show that he rarely exceeds 200 epg, so he is likely to be one of the 80% of horses that maintain low worm burdens. He will receive a mectin + praziquantal + BZ/pyrantal drench as his routine autumn drench with follow up WEC in spring, and possibly again in summer if conditions are warm and mild.

Case 4 – Coconut



Coconut is a 22-year-old Thoroughbred mare that has been retired from breeding. She is kept at pasture and is used as a calm and sensible ‘aunty’ to the spelling race horses. She does not maintain her weight well and receives a hard feed and hay twice daily. Her WEC showed no worm eggs of either type, so she did not receive a drench. It is possible that the manure for the test was collected at a time when she was not shedding eggs, so we cannot conclude that she is a low egg shedder from a single test, and a follow up test is indicated in 6-8 weeks’ time. If she does continue to maintain a low WEC, a routine autumn drench will be her next worm treatment with another test conducted in spring.

Drench Check

A *Drench Check* provides a simple, fast and low-cost indication of possible drench resistance. It is the use of two WECs, one used before and one after a drench, to see how the drench reduces the WEC. The first WEC within the *Drench Check* is done up to 10 days before the horse is drenched, and the second is done exactly 14 days after the mob is drenched for most drenches, or 42 days later for a long-acting drench that contains Moxidectin as one of the active ingredients. A drench is considered effective if it reduces the WEC by 95% or more. In Table 4 are the results of a *Drench Check* conducted 14 days after the above horses received their drench.

Table 4

	MEG	ERNIE	ASH	BASY	EVIE	BETHY
Results	Faeces 1	Faeces 2	Faeces 3	Faeces 4	Faeces 5	Faeces 6
*Strongyle Eggs	0	0	0	0	40	20
Strongyle Eggs Interpretation	Low	Low	Low	Low	Low	Low
Ascarid Eggs	0	0	0	0	0	0
Drench	Strategy T	Strategy T	Strategy T	Strategy T	Strategy T	Strategy T
Drench Date	7-JAN-2018 17:09	7-JAN-2018 17:09	7-JAN-2018 17:09	7-JAN-2018 17:09	14-JAN-2018 17:09	7-JAN-2018 17:09

In the cases of Ernie and Meg, the egg count was reduced to 0 epg for both worm types, indicating the drench was highly effective. In the case of Betty (mis-transcribed as Bethy in Table 4), her initial strongyle count was 540 epg (Table 1), which reduced to 20 epg after the drench (Table 4). To calculate the effectiveness of the drench the following calculation is used:

$$(WEC1 - WEC2) \div WEC1 \times 100 = \% \text{ effectiveness}$$

For Betty

$$(540\text{epg} - 20\text{epg}) \div 540\text{epg} \times 100$$

$$= 520 \div 540 \times 100$$

$$= 0.96 \times 100$$

$$= 96\%$$

Therefore the drench was 96% effective in reducing the worm burden, and thus was a good choice. It also indicates that if the drench is used in the future it should also be effective as the worms present on the property have very little resistance to the active ingredients. This result does not mean that the drench should be used repeatedly, but can still be used as part of a drench rotation program. A drench with at least one different ingredient should be used for the next drench given.

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