



ETHICAL AGENTS
VETERINARY MARKETING

EA NEWS

December 2022

Edited by:
Dennis Scott BVSc
MACVSc

EA Veterinary Marketing Ltd
54 Hobill Ave Wiri
PO Box 97-110 Manukau City
Manukau 2241

Ph 09-262-1388 Fax 09-262-1411
Freephone 0800 800-624
email info@ethicalagents.co.nz
website www.eavm.nz



Inside this issue:

- Testing for FMD 2
- GnRH Storage 3
- Molybdenum - A Growing Problem 4
- One Planet 6
- Treating The Environment 7

Merry Christmas from The EA Team

The team at EA wish all our clients a very Merry Christmas and all the very best for the New Year.



Testing For FMD

As the old saying goes, “If it was easy everybody would be doing it.” That explains why so few disinfectants have successfully achieved efficacy against FMD (foot and mouth disease in animals with cloven hooves).

It is not as if few have tried because of the massive importance of the disease; many have actually tried but few achieved success.

There are very few laboratories in the world that are capable of doing such testing, with the most reputable being Blu-Test Laboratories in the UK, or Glasgow to be specific.

Testing costs several thousand British pounds so is not cheap, and the word of warning from Blu-Test themselves is that it has to be a very good disinfectant to pass. This all makes the process quite a gamble; one would need to have enormous confidence in one’s product to even try.

The team at EAVM have always had confidence in SteriGENE, especially after reviewing its superior efficacy against another very hard to kill virus with extreme veterinary importance, Canine Parvovirus.

Small non-enveloped viruses such as Canine Parvovirus are very hard to kill and are much more resilient than enveloped viruses like influenza or Covid19. FMD is in the even harder category, being a picornavirus.

Festive Dad Joke

David Bowie: Why so sad Bing?

Bing Crosby: My inflatable butt has gone flat.

Bowie: You need to say my rubber bum pump?

“if it was easy everybody would be doing it”

Because FMD is so virulent no laboratory in the world will carry the actual virus for fear of outbreak, but instead utilise another picornavirus in bovine enterovirus-1.

The official comment from Blu-Test is: “The rationale for this is that bovine enterovirus-1, a picornavirus, represents the most biocide-resistant class of viruses. This test covers (the related) picornavirus foot and mouth disease virus as well as all other veterinary viruses.”

Although the test is extremely stringent the decision was made to test in dirty conditions rather than clean, putting much more emphasis on the results.

Rather than concentrate a working solution of RTO product (diluted 1:100) was utilised. This was further diluted by the laboratory to 80% (1:160) and then to 50% (1:200) then these two concentrations were tested.

EN test, i.e. the European standard, requires a minimum of a log 4 reduction in viral load to be termed effective,

The official verbatim result from Blu-Test reads: “According to EN 14675:2015, **SteriGENE POS-**

SESSES VIRUCIDAL activity at a concentration of **80.0% v/v and 50.0% v/v** of the working concentration as tested after **30 MINUTES** at **20°C** under **DIRTY** conditions (10.0g/l bovine albumin + 10g/l yeast extract) against Bovine Enterovirus Type 1 (ATCC VR -248)/ BT Cells.”



Further comment from Blu-Test is “This test covers (the related) picornavirus foot and mouth disease virus as well as all other veterinary viruses. The test does not cover prions.”

Such a test is considered compelling evidence for regulatory authorities to classify SteriGENE as efficacious against FMD.

In addition the phrase “as well as all other veterinary viruses” naturally includes the other hard to kill non-enveloped viruses of veterinary importance, rotavirus (a non-enveloped double stranded RNA reovirus) and the even more resilient canine parvovirus, against

which SteriGENE has already proven high efficacy.

Biodegradable SteriGENE is therefore highly effective against all organisms of veterinary

interest including the highly resistant Canine Parvovirus and foot and mouth disease.

Bing: Rubber bum pump?

Bowie: Rubber bum pump



GnRH Storage

Storage of veterinary remedies is part of product stewardship. A major factor in practice is drugs being kept in cars.

Some penicillin injections have a requirement to store under refrigeration.

This has been sometimes seen as a negative by some practices when ordering stock when the real question is, why do not the other generics on the market have the same requirement?

The simple answer is that many older registrations were not required to do such testing, basically an historical anachronism.

In short all injectable penicillins, whether on label or not, should be treated the same way, i.e. stored at 2-8°C, unless definitive stability data can be provided by the compa-

ny purveying the particular product.

The same will apply to the majority of GnRH products on the market. A little-known fact is that most GnRH actives are heat sensitive except for lecirelin. Most have store 2-8°C which means refrigeration.

All buserelin products have this label requirement and most, but not all gonadorelin products are the same.

The proviso that such products should be stored at 2-8°C, unless definitive stability data can be provided by the company purveying the particular product should apply to all GnRH products on the market.

After all their efficacy is almost as important as

"should apply to all GnRH products on the market"

that of an antibiotic, the former being life threatening but the latter being so commercially important; a concentrated calving season can put a tremendous boost in a farmer's bottom line profit.

As stated above the exception amongst GnRH chemicals is lecirelin which is quite heat stable as shown by the data below from Fatro.

This of course means that there is a lot less risk with Dalmarelin than the other products that require cool storage.

Lecirelin titre after several months of storage at +4° and +25°C

Months	4°C	25°
0	103.6%	101.7%
3	103.5%	101.1%
6	103.3%	100.3%
12	103.5%	99.3%
18	103.2%	98.5%
24	103.1%	97.7%



Bad Day

There was this guy at a bar, just looking at his drink. He stays like that for a half hour.

Then a big trouble making truck driver steps next to him, takes the drink from the guy, and just drinks it all down.

The poor man starts crying.

The truck driver says, "Come on man, I was just joking. Here, I'll buy you another drink. I just can't stand to see a man cry."

"No, it's not that," the man replies, wiping his tears.

"This day is the worst of my life. First, I oversleep and I go in late to the office. My outraged boss fires me.

When I leave the building to go to my car, I find out it was stolen. The police say they can do nothing.

I get a cab to go home; when I get out, I remember I left my wallet behind.

The cab driver just drives away, wallet and all.

I then go inside my house where I find my wife in bed with the gardener.

I leave my home, come to this bar, and I was thinking about putting an end to my life.

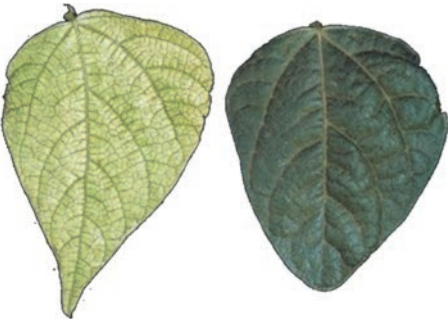
Just then you show up and drink all of my poison."

Molybdenum—A Growing Problem

In a pastoral agriculture system we need grass to grow animals but sometimes what is optimal for grass growth is not so beneficial to the animals that graze it. A supreme example is phosphate fertilizer altering the DCAD of the diet resulting in greater risk of milk fever.

The other big one is that fertilizer companies are pushing the benefits of molybdenum as it is important in the enzyme process of fixing nitrogen in plants. Without sufficient molybdenum plants accumulate nitrate in their leaves, but cannot use it to make proteins for normal growth.

The plant becomes stunted and the leaves show symptoms of nitrogen deficiency, appearing pale green or yellowish green in colour between the veins.



Within the plant, Mo is primarily used in the production of “molybdoenzymes” that regulate various plant functions. The most well known of these Mo-containing enzymes regulate nitrogen nutrition. In non-legumes, Mo-enzymes regulate the conversion of nitrate into proteins (nitrate reductase). In legume crops, another Mo-enzyme (nitrogenase) is needed by the root nodule bacteria for nitrogen fixation. The Mo requirement of legumes is greater than that of grasses and other crops.

Where adequate Mo is lacking, supplemental fertilization has re-

sulted in large increases in plant growth and yield. The upshot of this is that dietary copper, which may not be deficient, is then bound by ingested molybdenum in the rumen and so results in reduced fertility, amongst other signs of secondary copper deficiency. Lee *et al* found “At relatively low, and commonly occurring, pasture herbage concentrations of 0.5 - 2 mg Mo/kg DM, dietary Cu absorption is impaired, the levels of blood indices of Cu status are reduced, and liver Cu stores are markedly depleted.”

The late Harry Pearce when lecturing at Massey often derisively spoke about “advisory officer disease”; use of molybdenum in fertilizer could well fit into that category. It is a practice that is probably here to stay and, with the latest moves to restrict or control nitrogen use on farms, there may in fact be more incentive to use molybdenised fertilizers. What this does mean is that many areas not normally considered copper deficient will have animals showing the signs thanks to thiomolybdate toxicity.

That old saying, much beloved by feminists, of “what is sauce for the

goose is sauce for the gander,” meaning that what is acceptable for one person in a particular situation should be acceptable for another person in a similar situation, certainly is not applicable when comparing plant and animal

often derisively spoke about
“advisory officer disease”;

health. Although our herbivorous farm animals require good plant growth for adequate nutrition some of the drivers of this plant growth can be clearly detrimental to aspects of animal health.

Copper deficiency can also occur where molybdenum concentrations in pasture are less than 5 mg/kg Mo if dietary sulphur intake is adequate to high. (Phillippo *et al*) with the sulphur and molybdenum forming the aggressive thiomolybdates.

In addition, there is a greater level of complacency among dairy farmers in recent years about copper deficiency. This has come about partly through greater use of palm kernel extract as a supplement. Valuable as a supplementary feed source for the last 15 years, palm kernel extract’s high copper level has proven a welcome trace element bonus. So, as a result, deficiency has slipped a bit off the radar in terms of animal health issues.

Lee *et al* also noted that cattle will experience a “winter” depletion of liver Cu stores when grazing pastures of greater than 1-2 mg Mo/kg DM. Ensuring high liver Cu concentrations in cattle in autumn (i.e. >600 $\mu\text{mol/kg}$ FW, 150 mg Cu/kg DM) to counter the combined

(Continued on page 5)



Molybdenum—A Growing Problem

(Continued from page 4)

effects of winter depletion and a spring season increase in pasture Mo concentration, may still not guarantee an adequate Cu status (>95 $\mu\text{mol/kg}$ FW, 25 mg Cu/kg DM) for mating in the spring.

The outward signs of subclinical copper deficiency or thiomolybdate toxicity are not easy to spot, the most common being a ginger tinge to the hair in black cattle; the hard to detect sequelae being reduced growth rate and fertility.

The latter is a massive issue in the dairy world. Farmers spend a fortune on reproductive drugs and for good reason. One Morrinsville farmer, before the Fonterra payout was announced, stated that he had a much more concentrated calving this season compared to last meaning more cows in the herd for July/

August. This gave him an extra 4500 kg milk solids which he had calculated to an extra \$30,000 in income for those two months alone. With the record \$9.30 payout from Fonterra this actually balloons out to \$41,000! Just imagine if he had supplied Tatua which had a payout of \$11.30.

The financial benefits from a better in calf rate increase at a compounded rate the next season. This makes the cost of combating thiomolybdate toxicity small change.

The excellent paper by Black and French in 2004 compared Cosecure boluses with copper injections and another commercial bolus in Alltrace. Conception rates in the Cosecure group were 1.8 times greater than the copper injection and 1.5 times greater than Alltrace, all results being highly

significant. This all would make sense as, of these treatments, only Cosecure has copper available in the rumen to counter the thiomolybdates at source.

References:

Black D and French N, Effects of three types of trace element supplementation on the fertility of three commercial dairy herds, *The Veterinary Record* · May 2004

Lee J, Knowles S and West D. Predicting copper status of cattle remains an enigma, *Proceedings of the New Zealand Society of Animal Production* 62: 319-324. 2002

Phillippo M, Humphries WR, Garthwaite PH. The effect of dietary molybdenum and iron on copper status and growth in cattle. *Journal of Agricultural Science* 109, 315–20, 1987

Pronunciation

Nagy was on a trip to the US and was confronted by an officious border guard.

"Where are going to in the States, sir?"

"San Jose," replied Nagy pronouncing the word as spelt like Joe's.

"You pronounce it San Hosay," said the sanctimonious border guard, "Here we pronounce the letter J like an H. Now how long do you intend to stay?"

"All through Hune and Huly," replied Nagy



Arithmetic

Teacher: "If I gave you 2 cats and another 2 cats and another 2, how many would you have?"

Johnny: "Seven."

Teacher: "No, listen carefully... If I gave you two cats, and another two cats and another two, how many would you have?"

Johnny: "Seven."

Teacher: "Let me put it to you differently. If I gave you two apples, and another two apples and another two, how many would you have?"

Johnny: "Six."

Teacher: "Good. Now if I gave you two cats, and another two cats and another two, how many would you

have?"

Johnny: "Seven!"

Teacher: "Johnny, where in the heck do you get seven from?!"

Johnny: "Because I've already got a cat!"

One Planet

The nature of veterinary practice often necessitates plastic waste. Hygiene, especially field hygiene, results in lots of disposable equipment.

Clearly this is not in the best interests of the planet so that it behoves us to be aware of the situation and how we can best look after the planet.

We are never going to get to a situation of zero plastic but can simply take a leaf from the supermarket play book.

While the plastic shopping bags themselves are no longer dispensed there are plastic bags available to pack fruit and vegetables. They are a lighter and more environmentally favourable plastic but plastic nonetheless.

Similarly with the veterinary clinical situation. There are unavoidable uses of plastics and other chemicals but there is a growing awareness of global warming and also of the responsibility to limit it as much as possible for the sake of future generations.

It is of course easier to do if suppliers comply as well and already many pharmaceutical firms are taking steps to ensure their products are more environmentally friendly.

Some time ago SteriGENE underwent biodegradability studies, proving to be similar to fruits and

vegetables. Thus we have a high class disinfectant that is extremely friendly to the environment and that is one of the reasons DOC and MPI have it listed so highly.

But it does not stop there as far as EAVM is concerned.

On the next page we have an article about treating the environment with Bioworma and Cosecure boluses can be considered clean and green as the whole glass bolus totally dissolves inside the rumen leaving no resin coating or weights to be passed out of the animal.

One particular example however is the situation with phenylbutazone granules.

Most generics on the market come with snazzy plastic boxes that may be appealing to unthinking clients but contribute more needless plastic waste to the environment.



Chanazone granules are produced by Chanelle in Ireland, a company committed to caring for the environment. Hence their granules are packaged not in plastic but recyclable cardboard cartons. They are still highly popular with clients as they have great palatability and, of course, the eco-friendly cardboard cartons result in a much more economical product than the expensive, and wasteful, plastic.

We only have one planet – we need to look after it.



Nutrition

A boy asks his father, "Dad, are bugs good to eat?"

"That's disgusting. Don't talk about things like that over dinner," the dad replies.

After dinner the father asks, "Now, son, what did you want to ask me?"

"Oh, nothing," the boy says.

"There was a bug in your soup, but now it's gone."



Treat the Environment

When the veterinary profession was in its infancy most work entailed the treatment of individual animals. Then, as time progressed issues such as herd health became more relevant, so much so that in the food industry it is now a major part of veterinary advice.

The next logical step is treating the environment. This is important for two reasons, first of all the whole world is now more aware of environmental issue forcing the farming community to have more care in how they go about their business and secondly, in both a herd and an individual animal situation the

immediate environment can have such a major effect on animal health.

We already see this in many ways; farmers are acutely sensitive to costs when considering specific treatment for individual animals but readily spend thousands of dollars on fertilisers for pastures.

It is from this premise that interesting points have been noted in the world of anthelmintic control.

The marketing of the worm control product, Bioworma, containing the fungus *Duddingtonia flagrans* is actually based on treating the environment, even though it is fed to individual animals.

It is applicable to all animals on pasture and dramatically reduces worm burden on pasture. While some equine owners are fixated on price per animal when they only have one or two animals the overall picture has been seen much more clearly by large farmers in Australia.

As stated above they think nothing of spending huge amounts on pasture control via fertiliser and weed killers, hence they are readily receptive to the benefits of Bioworma.



Bioworma does treat the environment and thus in large herd situations becomes very cost effective. Not only that. it reduces the need for chemical intervention thus giving another large environmental advantage.

These benefits can be translocated to the small stage of a lifestyle block with one or two horses or cattle. These pastures tend to become 'wormy' very quickly if due care is not taken.

A small block with 3 or 4 horses per hectare is akin to a world heaving with 8 billion people, totally overstretched. Just as a modern world needs to be climate conscious and environmentally aware, the small horse block will never get on top of a worm problem by chemical drenching alone, the environment needs attention, as the larger herd properties in Australia are already aware.

Treating the paddocks, i.e. the environment needs to be seen as apart from individual animal treatment.

The only other option is to purchase more land to spread the load, which is ridiculously more expensive.

The Taxi

Tony and Nagy are traveling to Australia. Before they leave home, their wives gave them both a bit of advice:

"You watch them Aussie cab drivers. They'll rob you blind. Don't you go paying them what they ask. You haggle."

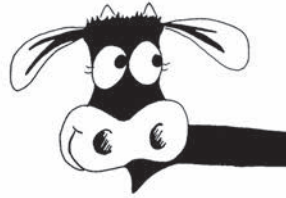
At the Sydney airport, the two catch a cab to their hotel.

When they reach their destination, the cabbie says, "That'll be twenty dollars, lads."

"Oh no you don't! My wife warned me about you. You'll only be getting fifteen dollars from me," says Tony.

"And you'll only be getting fifteen from me too," adds Nagy.





Animal Welfare is Our Business



Ageing

1. When one door closes and another door opens, you are probably in prison.
2. To me, "drink responsibly" means don't spill it.
3. Age 60 might be the new 40, but 9:00 pm is the new midnight.
4. It's the start of a brand new day, and I'm off like a herd of turtles.
5. The older I get, the earlier it gets late.
6. When I say, "The other day," I could be referring to any time between yesterday and 15 years ago.
7. I remember being able to get up without making sound effects.
8. I had my patience tested. I'm negative.
9. Remember, if you lose a sock in the dryer, it comes back as a Tup-

- perware lid that doesn't fit any of your containers.
10. If you're sitting in public and a stranger takes the seat next to you, just stare straight ahead and say, "Did you bring the money?"
11. When you ask me what I am doing today, and I say "nothing," it does not mean I am free. It means I am doing nothing.
12. I finally got eight hours of sleep. It took me three days, but whatever.
13. I run like the winded.
14. I hate when a couple argues in public, and I missed the beginning and don't know whose side I'm on.
15. When someone asks what I did over the weekend, I squint and ask, "Why, what did you hear?"

16. When you do squats, are your knees supposed to sound like a goat chewing on an aluminium can stuffed with celery?
17. I don't mean to interrupt people. I just randomly remember things and get really excited.
18. When I ask for directions, please don't use words like "east."
19. Don't bother walking a mile in my shoes. That would be boring. Spend 30 seconds in my head. That'll freak you right out.
20. Sometimes, someone unexpected comes into your life out of nowhere, makes your heart race, and changes you forever. We call those people cops.
21. My luck is like a bald guy who just won a comb.