



**ETHICAL AGENTS**  
**VETERINARY MARKETING**

# EA NEWS

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## Time For Change

### Inside this issue:

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Spring time is a time of change and refreshment and it does not just stop with nature,

A new logo for SteriGENE has just been released with the traditional bullets flying through liquid being replaced by a stylistic shield, implying protection in a crisp clean look for this highly efficient TGA approved hospital grade disinfectant.

It is also green and clean reflecting the high biodegradability of this hospital grade disinfectant.

Also part of our new look is an update of our catchphrase of “Animal Welfare is our Business”



graphic changing from the quirky animals to a smoother graphic of a hand enveloping a paw, softly implying care.



### Special points of interest:

- \* Pain relief in lambs, are NSAIDs really an answer?
- \* The little historical change that moulded the dynamics of veterinary business.
- \* Endocrine diseases causing lameness, reminiscent of cardiac disease in the little coughing dog.

## Past, Present and Future

Inside, as a break from tradition, we have only three articles but two longer ones.

One is an historical look at the profession and one little change that proved monumental and has had repercussions.

Then we have the issue that has suddenly become the topic *du jour*, i.e. pain relief in lambs.

There is a flurry of activity in chat rooms but here we look at the pharmacology and practicality of the options.

That is the past and the now, with the third article not exactly being the future, but more latest knowledge from Kentucky Equine Research on endocrine disorders contributing to lameness.

## Pain Relief In Lambs

The current push for pain relief at tailing and castration in lambs is driven by the New Zealand Merino Company seeking to market high quality product to overseas markets. In order to do this, they endeavour to seek certification of the responsible wool standard from the Textile Exchange. Just what is the Textile Exchange and what is the responsible wool standard?

The Responsible Wool Standard aims to improve the welfare of sheep and the land they graze on and is the product of the Textile Exchange, an association based in Lamesa, Texas. Its aims are to govern how resources are farmed, sourced, and extracted from the earth, plants, and animals.

Although it is a non-profit organization the Textile Exchange has a lot of commercial clout as it oversees factors such as carbon footprint and animal welfare; hence the desire for compliance from the New Zealand Merino Company. So, the drive for animal welfare is purely commercial but there is nothing wrong with good intentions albeit for the wrong reasons. The big question is the practicality.

Just as we know that renewable energy cannot simply be created by a stroke of a pen in a high-rise office, pain relief for lambs, although very laudable, does not just materialize out of thin air.

General anaesthesia is not practical or even possible so the tools available are local anaesthetics and NSAIDs, with the qualities of the latter quite dubious.

A recent webinar organized by the NZVA Sheep and Beef Cattle Veterinarians and run by Dave Robertson of Oamaru was very well attended and gave excellent insight into the subject. Just as with conferences, when the outside lec-

ture communications can be very informative about a subject, the chat room in a webinar can throw up many interesting little gems; the chat room here being very informative on both the application of local anaesthetic and the value of NSAIDs.

Pain relief in lambs is not actually a new subject and there was a lot of informative work done in the 90s, especially by Dinniss and others. This work focused on the different techniques and the concomitant differing behaviour patterns, which accentuated that the methods of pain relief varied according to not only what procedure was performed but also how it was performed.

The seminal work on the subject was the paper by Mellor and Stafford in the NZVJ 2000 in which a 6-point ranking scale emerged from assessing cortisol levels, where rank 1 represented the least distress and rank 6 the most distress. On this scale surgical castration ranked 6 and surgical tailing ranked at 5. Interestingly enough hot iron detailing only ranked at 1 for 3-week-old lambs and at 2 for 4-5-week lambs. Age was a factor and ring plus clamp castration at one week was also just ranked at 1 but the number went up with older lambs.

What was also apparent was the site of application of the local anaesthetic plus the timing of the injection. In older lambs especially this was important. Local anaesthetic applied 5-10 minutes prior to the operation had a better effect but how practical is this in a normal farming situation? Also, cortisol measurement may not reflect the distress at the time of insult because of the slower response time of the hypothalamic-pituitary-adrenocortical axis compared to

the sympathetic adrenomedullary system.

During the webinar Dave Robertson gave the anecdote of a younger veterinarian querying the speed of onset of lignocaine and he told her to put a drop on her tongue, which instantly went numb. However, this analogy is a little flawed as the dentist always waits for the nerve, not just the mucous membrane, to be fully desensitised before drilling. Some distress may occur earlier, when the local anaesthetic has had little time to act, but that would not be detected by the cortisol response.

Immediate and severe nerve damage elicits a barrage of nerve impulses in pain pathways when the injury is inflicted and this initial barrage is usually followed by inflammatory pain. With surgery neither the initial pain pathway nor the inflammatory pain is impeded. However, a rubber ring can impede inflammatory pain transmission in 1.5 hours. When a castration clamp damages the nerves in crushed tissues it interrupts nerve transmission from tissues distal to each crush line.

Hence surgery on its own is clearly the most stressful, as indicated above by the cortisol. Even when surgery is replaced by clamping or rings animal welfare dictates that some effort be made to reduce or eliminate suffering.

Thus, there are three realistic options: Option 1 is local analgesia alone, option 2 is local analgesia plus NSAID therapy, and option 3 is to not castrate or de-tail at all.

**Option 1.** This is clearly now a pre-requisite for Merino sheep at least and will more than likely become recommended across the board. The two drugs available are ligno-

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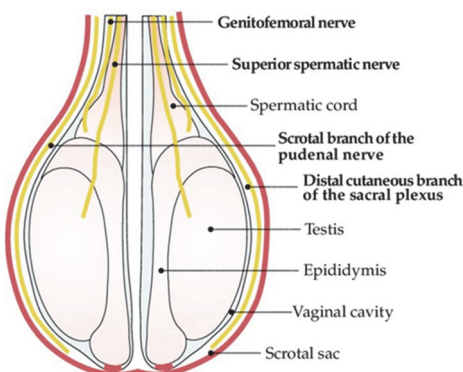
## Pain Relief In Lambs

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caine and bupivacaine with lignocaine being drug of choice for reasons of cost and supply. The only question is how to apply it most effectively with the point of debate being the administration. This varies with both tailing and castration due to the different innervations in each area. The common theme however was that, in neither case, was a single shot adequate. As stated above the innervation is a lot more complex around the scrotum, as seen in the diagram from the paper by Mellor and Stafford.

Both the webinar and the Mellor and Stafford paper recommended a ring block in the tail being more effective. This can be problematic in 2 ways, one being that it is a lot more time consuming and farmers are always in a hurry, and the other being that it is subject to poor technique leading to inadequacy and even more pain from repeat injections.

Interestingly enough this is where the chat room came into play with one participant suggesting that they got as good a response with two injections, one at 6 o'clock and



the other at 12 o'clock, i.e. either side of the tail midline.

As far as castration was concerned injecting into the spermatic chord was less effective than injecting into the head of the scrotum. Local anaesthetic placed in the vaginal cavity at least partially anaesthetises the scrotum and the testes. Lignocaine suppresses pain for around 2 hours normally, even longer if a ring is employed, delaying absorption.

Thus, it seems that local anaesthesia should be a prerequisite in all cases but for animal welfare reasons clamp or rings are much preferable to surgery. Due to time constraints and practicalities the ideal timing of injection 5-15 minutes before treatment is not feasible in many situations and the options are a few seconds prior, at treatment or just after. Clearly the first of these would be the preferred option.

**Option 2.** At first glance it would seem that NSAID plus local anaesthetic would be the gold standard, however there are pitfalls with this approach. As well as the more minor problems of extra cost and extra injections there are major doubts about efficacy, and with very good reason.

Of the various NSAIDs available in New Zealand only one molecule, meloxicam, is actually registered for sheep by ACVM. This does not necessarily make it the best option. No studies are available on meloxicam pharmacokinetics in lambs

despite many studies reported in mature sheep (Kongaraa *et al*). While it can be problematic to extrapolate data from other species, data showed low levels in the brain of pigs, indicating the existence of a blood/brain barrier for meloxicam (European Medicines Agency). This suggests that the central action that some NSAIDs do have is possibly not a feature of meloxicam itself.

Paull *et al* showed that NSAID treatments applied 45 min before or at the time of mulesing, without local anaesthetic, were not effective in reducing the acute response of lambs to mulesing, as would be expected. In another trial they showed some moderate improvement if topical local anaesthetic was applied at the time of mulesing (but this trial used carprofen and flunixin, not meloxicam).

This fits with work done in small animal surgery when general anaesthesia was given. Evidence suggested that administering NSAIDs pre-operatively provided superior analgesia and reduced secondary hyperalgesia, a cardinal sign of central sensitisation, after surgery, compared with post-operative administration (Lascelles *et al*. 1998).

This would suggest that the optimal time of administration in terms of pain-relief is pre-operatively. While this is a little controversial in general anaesthesia it would be highly relevant to local anaesthesia, i.e. give the NSAID before the anaesthetic.

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## The Beret

Nagy really got into the swing of the fact Rugby World Cup being held in France and purchased a French beret.

He proudly wore it when visiting a local dairy farm.

A sudden gust blew the beret off his head and out into a paddock.

Nagy tried on eight before he found the right one.



## A Changing Profession

The NZVA book celebrating 100 years of existence predictably recounts the seminal moments of the profession over the last century. The development of the veterinary school at Massey, the various disease outbreaks that have been tackled, gigantic progress in animal welfare issues, the list goes on.

There is one change that had monumental effects on the profession that is hardly touched on and is now an almost forgotten footnote in history; that is in the retail side of veterinary practices. What is not commonly known today is that, in the earlier days of the profession, veterinarians were not permitted to advertise their practices and even signage was strictly limited.

This was touched in 1958 upon when, in his farsighted presidential address, then president Bob Roach “chafing at the restrictions of the staid 1950s,” looked to introduce the concept of public relations.

Ten years later president Scaler Blakely, commenting on the disparities between club and private practice, was concerned about the profits clubs made from the sale of drugs stated that, “in some areas farmers themselves have developed trading organisations that can provide them with drugs at much reduced prices.” He went on to bemoan the fact that, “veterinarians trained to carry on the practice of veterinary service should develop into a group of shopkeepers.”

This theme continued for the next decade or more with cognizance being given to the fact that practices were seen to be almost profiteering by having large margins on prescription drugs that subsidized the actual clinical work that was being done. It now seemed an entrenched practice.

So much so that the 1982 president, Graham Wallace, made the comment, “The markup by the veterinarian for merely storing and injecting or dispensing the product is not really in relation to the manufacturing effort. To me that is not reasonable.”

**“All of these changes followed on from that one monumental shift in the early 80s “**

Thus, over 40 years ago, even before the major change about to envelope the profession, veterinary practice in New Zealand was already differentiating itself from other countries, including near neighbours Australia, by being more reliant on drug sales than clinical work for practice income.

Then two big changes occurred. First of all, veterinarians were entitled to use the honorific of “Dr”; prior to this all, including the presidents, could not use this honorific unless they had a PhD. As always there are exceptions and the degree for US or Canadian certified veterinarians was called DVM (Doctor of Veterinary Medicine) and so the few of them in the country freely utilized the honorific giving the erroneous impression they were somehow better qualified.

That however was mere window dressing to the real major change, allowing veterinarians to advertise. Already we had a profession that was clearly going down the path of retail sales being a major income source but limited by, as Bob Roach put it in 1958, “the conservative ethical standards used by older established veterinary associations such as those in Britain.”

Up until this moment the main competitors for the practices were

clearly the farm shops who could advertise themselves and individual products at will, promoting specials when and where they liked.

It was not unusual for farmers in selenium deficient areas to buy large containers of anthelmintics from the farm shop then bring them into the veterinary practice to have selenium added.

With this change the floodgates opened. Not only was the clinician legally able to tell the thoughtless farmer requesting selenium addition that the practice can also supply the anthelmintic itself, but the practice could use larger signage, advertise itself and products in the local media, etc.

So much so that by the turn of the century a good 50% of all farming drug purchases went through veterinary practices.

Scaler Blakely’s prophecy in 1968 that “veterinarians trained to carry on the practice of veterinary service should develop into a group of shopkeepers.” was starting to bear fruit. Whether this was a good thing or a bad thing was now immaterial; it was a thing!

As with any situation there are always pros and cons. The cons mainly involve the idealized mode of thinking that veterinarians should earn their income from their professional services, not from what is sold in their retail outlets, whereas the pros mainly involve the more pragmatic course that the retail aspects of the businesses are important in supporting the supply of veterinary care, especially in rural communities.

An unintended side benefit is that retail competition has helped demolish the myth that ‘things are always dearer at the vet.’

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## A Changing Profession

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So now we have practices that had for years relied upon sales of mostly prescription remedies with large markups now also competing in the OTC field with all the attendant competitive discounts being able to be freely advertised.

The follow on from that towards the end of the 20th Century, as the retail side of veterinary businesses became more and more important to the overall economics of the practice, was the rise of the practice manager. This role initially had been the domain of the head veterinarian but soon more and more non-veterinarians, generally with more business acumen, stepped into this space.

All of these changes followed on from that one monumental shift in the early 80s to allow veterinarians to advertise. With the new millennium the next step was not far away; corporatization of veterinary practices.

With mergers and buy-ups the drug supply industry had been becoming more corporate over several decades. This in itself was not of

great benefit to the practitioner as low profit lines were discontinued by suits in ivory towers meaning many useful tools becoming unavailable.

Some wholesale suppliers became corporatized and the corporate mentality seeped into the regulators, with more and more emphasis being put on validating steps in product manufacture; this over regulation leading to the loss of many previously valuable adjuncts to therapy.

Long gone are the days of practitioners mixing their own calcium concoctions to inject into downer cows for example. This was common in the 50s and, guess what? They saved a lot of cows. Younger clinicians probably do not know what a flutter valve is or how it worked.

Magical potions such as the black greasy but extremely effective ichthammol and camphor ointment seem to have almost disappeared, priced off the market with the requirement for registration and the active ingredients being required to be BP quality.

The flipside is that research and development has seen an improvement in many drugs such as NSAIDs and gaseous anaesthesia agents that were not around in the 50s and 60s, even xylazine only first appeared in the early 70s. Now we have developments such as monoclonal antibodies revolutionizing the vaccination world.

Science based pet foods are big earners for small animal practices and one good thing to come out of veterinary retail is more influence on anthelmintic products, which should have always been in the domain of the veterinarian in the first place.

President from 2015 to 2017 Caroline Robertson wished for better remuneration across the board so that veterinary businesses were supported by professional fees only stating, "They should embrace retail, but not be reliant upon it."

It is too late for that as, love it or hate it, veterinary practices have clearly been relying on drug sales for over seven decades, with reliance on retail itself coming to the

*(Continued on page 6)*

## Walking

Nagy was walking along a country road when he came upon a farmer working in his field.

Nagy called out to the farmer, "How long will it take me to get to the next town?"

The farmer didn't answer. Nagy waited a bit and then started walking again.

After the man had gone about a hundred yards, the farmer yelled out "About 20 minutes!"

"Thank you. But why didn't you tell me that when I asked you?"

"Didn't know how fast you could walk".

## Double Positive

An MIT linguistics professor was lecturing his class the other day. "In English," he said, "A double negative forms a positive. Howev-

er, in some languages, such as Russian, a double negative remains a negative. But there isn't a single language, not one, in which a dou-

ble positive can express a negative."

A voice from the back of the room said, "Yeah, right."

## A Changing Profession

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fore over half a century ago, despite the pleading of different NZVA presidents.

As for the influence of corporates, the major impact is upon rationalizing purchasing so that employed clinicians have less control on therapy, with their preferred treatments often being unavailable for business reasons.

**"To the chagrin of the purists viability of veterinary practice seems to be inexorably linked to drug sales and retail activity."**

In a positive note corporate practices have solved a major problem for clinicians looking to retire. Practice ownership has been less of an aim

for younger generations, which left many with succession problems. Many of these have been solved by corporate buy-outs.

So corporate practices are here to stay. There will be the occasional lone wolf preferring to run their own ship, like many mechanical and electrical services around the country, and there will always be a place for them.

As the renowned Brian Goulden advised to undergraduates in the 70s, when there were fewer veterinary jobs available, "Just put your own shingle up and you will get clients."

However nothing is as constant as change and, looking to the future some are already taking that to another extreme with on line consultations. This began with the

medical profession and clearly has its drawbacks. However the major difference between veterinary and medical on line consultations is that the latter do not dispense.

So here we go again, even in this enlightened cyberspace age, veterinary practice being mainly reliant on retail, now at an electronic extreme. Poor old Scaler Blakely, 1968 president, would be turning in his grave at the thought.

How long will it be now before corporates move into this space?

That monumental little change in the early 80s, allowing veterinarians to advertise, altered the face of the profession forever. To the chagrin of the purists viability of veterinary practice seems to be inexorably linked to drug sales and retail activity.

## Pain Relief In Lambs

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However, the  $C_{max}$  of meloxicam from the subcutaneous administration in calves was not reached until 6 to 8 hours. If the kinetics are the same in lambs, then that would suggest little effect, as noted by Paull *et al*, especially as cortisol levels after ring castration and tailing were back to normal levels in 4 hours (Mellor and Stafford).

These finding would therefore suggest that option 2, NSAID plus local anesthetic, is not really a realistic option or, at the very least, should require further data to prove efficacy.

**Option 3.** Do nothing! This means do not de-tail nor castrate. Removing tails is mainly for hygiene reasons and to reduce fly strike. With modern worming methods maybe

the risk is lower, although resistance is becoming prevalent. As to castration, the chat room suggested that taste may be altered but some farmers already raise ram lambs for slaughter. They grow much faster, with a leaner meat, and may reach slaughter size before taste is affected. The pig industry went through the same process many years ago and faster growing male pigs do not have boar taint if slaughtered at porker weight.

**Conclusion.** Farmers will continue to de-tail and castrate lambs and pain relief will most likely become compulsory across the board. That being so, it seems the most realistic option using current science is that of option 1 above, local analgesia.

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## Lame Horse? Test for EMS and PPID

Two major concerns with equine metabolic syndrome (EMS) and pituitary pars intermedia dysfunction (PPID, equine Cushing's disease) include exercise intolerance and hyperinsulinemia-associated laminitis (HAL). A swell of evidence shows that these common endocrine disorders may also contribute to back pain, suspensory ligament desmitis, and osteoarthritis.

In humans, "metabolic osteoarthritis" is a recognized subset of arthritis believed to be caused by chronic, low-grade, systemic inflammation. Although this condition has yet to be recognized in horses, experts say that due to the similarities between metabolically challenged horses and humans, research in this field should be pursued.\*

In contrast, studies do show that horses with PPID have a higher risk of soft-tissue injuries, particularly of the suspensory ligament. For example, horses with PPID had greater degeneration of the suspensory ligament than age-matched control horses in one study. Further, sport horses over 10 years of age with clinical signs of PPID had an increase in suspensory ligament injuries.

"Sixteen percent of those sport horses also had evidence of insulin dysregulation, a feature of EMS. These data raise interesting questions about how insulin regulation, inflammation, disease state, and lameness are all related," said Ashley Fowler, Ph.D., a nutritionist for Kentucky Equine Research.

Horses with PPID sometimes have muscle loss along the topline, which can result in poor saddle fit and back pain. In many cases, that back pain may present as lameness. "Muscle wasting can contribute to the destabilization of joints, which may potentially cause or worsen lameness," Fowler added.

In summary, EMS and PPID contribute to the lameness landscape not only through laminitis but also suspensory ligament damage and metabolic osteoarthritis. Lameness results in lost performance and training days, and can be financially draining for some horse owners.

Clinicians should consider testing for endocrine disorders if the horse's age, breed, or performance suggests a problem, according to the authors of a recent research paper. \* Once diagnosed, appropriate treatment should be initiated, which for many, but not all, horses with PPID and EMS involves

weight management.

"The goal of a weight loss program is to reduce calories while ensuring all other nutrient requirements, including protein, minerals, and vitamins, are met. Reducing or eliminating high-energy concentrate feeds and adding a ration balancer or vitamin and mineral supplement can help achieve that goal," advised Fowler.

Some overweight horses also require a restriction in hay intake or pasture access. Fowler explained, "Because EMS and PPID are often associated with general inflammation, add 60 mL of an anti-inflammatory supplement that features the long-chain polyunsaturated fatty acids known as EPA and DHA. In these instances, choose EO-3."

\*Manfredi, J.M., S. Jacob, and E. Norton. 2023. A one-health lens offers new perspectives on the importance of endocrine disorders in the equine athlete. *Journal of the American Veterinary Medical Association* 261(2):153-164.

The above article appeared in *Equine News*, the Kentucky Equine Research newsletter.

<https://ker.com/equineews>

## The Pictures

A New York attorney representing a wealthy art collector called his client and said to him, "Saul, I have some good news and I have some bad news."

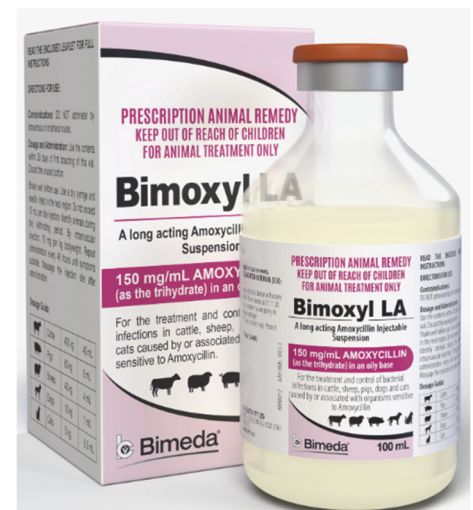
The art collector replied, "I've had an awful day; let's hear the good news first."

The attorney said, "Well, I met with your wife today, and she informed me that she invested

\$5,000 in two pictures that she thinks will bring a minimum of \$15-20 million. I think she could be right."

Saul replied enthusiastically, "Well done! My wife is a brilliant businesswoman! You've just made my day. Now I know I can handle the bad news. What is it?"

The attorney replied, "The pictures are of you with your secretary."







Animal welfare is our business



## Reminiscing

After being married for 50 years, I took a careful look at my wife one day and said, 'Fifty years ago we had a cheap house, a junk car, slept on a sofa bed and watched a 10-inch black and white TV, but I got to sleep with a hot 23-year-old girl every night.'

Now, I have an \$800,000 home, a \$70,000 car, a nice big king sized bed and a large flat screen TV, but I'm sleeping with a 73-year-old woman. It seems to me that you're not holding up your side of things.'

My wife is a very reasonable woman. She told me to go out and find a hot 23-year-old girl and she would make sure that I would once again be living in a cheap house,

driving a junk car, sleeping on a sofa bed and watching a 10-inch black and white TV.

