

## Something New on Your Milk Docket?

### What is milk urea?

Milk urea is an approximate indicator of the amount of crude protein that is in a cow's diet. It is formed from the metabolism of absorbed amino acids and body protein.

The digestion of protein in the rumen releases ammonia. If there is excess ammonia it is absorbed through the rumen wall into the blood stream and converted to urea in the liver. Most of the urea is excreted in the cow's urine although some passes into the milk.

If the diet is deficient in protein, then the urea is not excreted, but recycled back into the rumen and converted back to ammonia.

It is envisaged that MU may become a new tool allowing farmers to see changes (in milk test results) that may alert to various opportunities or problems in their herd.

### Terminology – MU and MUN

When comparing to any international findings, historically you will mostly see results based on MUN (milk urea nitrogen). Internationally there is a growing convention to report Milk Urea (MU) only. If you wish to compare historic MUN findings from overseas research, you will need to multiply your MU result by 0.467 to give an MUN equivalent.

### Interpreting MU Values

Recommended dietary crude protein (CP) requirements and the approximate MU levels at different stages of lactation are shown in the table below.

	Early lactation	Mid lactation	Late lactation
Minimum CP% in diet	18	16	14
Approximate MU (mg/dl)	25-40	25-30	20-25

In New Zealand pasture-based systems, MU levels are higher than in systems where cows are fed a total mixed ration (i.e. USA, Western Europe). This is due to the high amount of crude protein (about 20%) in good quality pasture.

**When pasture makes up more than 60% of the diet (low-input systems)** MU levels can often be greater than 30 mg/dl.

Research suggests that these high MU values are not detrimental to the health or reproductive performance of the cow, and unless pasture intake is limited, it is rarely profitable to add high carbohydrate supplements to try and utilise excess protein from pasture.

**When pasture is less than 60% of the diet (higher-input systems)** MU may be used as a tool to help guide ration changes (e.g. help to decide when to put in or to pull out expensive protein supplements).

### Factors affecting milk urea

The main factor affecting MU in pasture-based systems is the amount of protein in the diet. Other factors include water intake, cow condition, stage of lactation, season, genetics, milking frequency, rumen health, and liver function among others.

### Possible benefits to the farmer

- Reduce wastage of cows' critical energy during spring period
- Reduce stress on animals through better matching the types of supplements added to the diet
- Maximise reproductive performance
- Maximise protein yield
- Improve on-farm profit
- Better understand nitrogen outputs relative to environmental best practice

This is a growing area of research and may not be entirely applicable to all-grass systems but certainly of value on higher input farms.

Morgan Greene MVB MANZCVS  
(Animal Reproduction)



## Cattle Reminders

- Calves worm treatment
- Remove bulls
- Pregnancy test
- Dairy yearlings-lepto vaccination



"Wake up. The cat's got your teeth."

## Situation Comment

A wet and at time cold start to the new year. The majority of farms have had good growth and covers are better than average, unlike the West Indian and England cricket teams. All we need now is a few consecutive days of sunshine but hopefully it won't forget to rain like last year.

Early in calf rates have been encouraging for dairy cows. It is too early for any beef results yet. Flystrike has been more of a problem towards the end of the month compared to last year when it was seen throughout January.

Hopefully February and March bring some more settled weather, everyone has a great time at the field days and the cricket continues to provide the right results.

We have made a few changes to the Vet Times, it will be in colour and be every second month instead of four times a year as well as being four pages instead of eight.

## Working Dog and Sheep Evening

We are having a seminar for farmers and shepherds.

The topics covered will be

- The whelping bitch—when things go wrong
- Puppy care—giving your working dog the best start to life
- Worming dogs—what, when, why?
- Topping—are you ready?

Join us for supper and a beer afterwards.

**When:** 19th March 2014

**Time:** 7.30pm

**Where:** our Riversdale clinic

**RSVP** by 14th March 2014 to 03 2025636 or [fiona@nsvs.co.nz](mailto:fiona@nsvs.co.nz)

## Horse Reminders

- Check teeth
- Hoof care
- Worming treatment for foals
- Control bot eggs on horse legs

## Horse Owners Be Aware of the Dosatron

A Dosatron is an inline water dispenser used to deliver minerals and other supplements to dairy cows daily. Ionophores, such as monensin, are feed additives used to increase feed efficiency and reduce the effects of bloat. Rumensin and Rumenox are examples of commercial products containing ionophores that are commonly added to Dosatrons. Ionophores are also added to calf meal to prevent coccidiosis.

However, ionophores are highly toxic to horses. They cause muscle damage, targeting the heart muscle in particular. Signs of monensin toxicity vary according to the amount ingested. Horses that have eaten a large dose at one time (acute toxicity) show signs of anorexia, sweating, ataxia, heart arrhythmias and possible death. An example of this is horses being mistakenly fed calf meal. Chronic toxicity from prolonged exposure to an ionophore causes poor performance, muscular weakness and stiffness and heart failure. This can occur from drinking out of water troughs supplied by a dosatron.

Diagnosis of cardiac muscle damage involves blood testing for cardiac troponin 1 which is released when there is death of the muscle cells of the heart.

There is no antidote for monensin toxicity so treatment involves symptomatic and supportive therapy. Some horses might die regardless of treatment, others might recover over days, weeks or months and return to performance and some will develop permanent heart damage and never fully recover. Prevention is important. Horses on dairy farms should have a separate water supply to that of the cows. Horses being fed pre-mix feeds should only be fed ones that are specifically formulated for horses so ensure all calf meal is locked away.

If you suspect your horse has been exposed to ionophores in any way, please phone the clinic to ask for advice. Megan Reidie BVSc

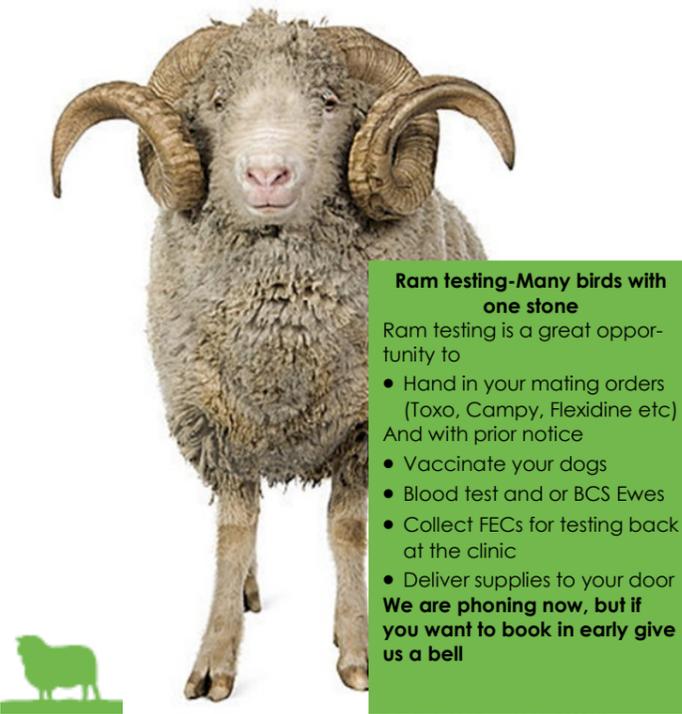


### Brucellosis Still Exists!

**Brucella ovis** was confirmed in New Zealand in 1956. Volunteer control schemes came into place in 1987. While we like to think Brucella is no longer an issue for ram soundness, almost every year we have cases crop up. After periods of 'freedom' complacency can occur allowing poor decisions and leading to catastrophe, usually at the worst possible time!

#### Avoiding risk

- Although most ram breeders are accredited each year for freedom from B.ovis, Don't assume all ram **suppliers** have tested **all** of their rams for brucellosis. Don't be afraid to ask. Ram suppliers should be able to show you a current B.ovis accreditation certificate
- Don't assume your neighbours test – some commercial farms do not test rams, and if they do, not all may present for examination by the vet on the day. (They might be at your place!)
- Be wary of accepting dog tucker rams or cheap cast offs – B.ovis could be the reason for being 'culled'.
- Watch boundary fences and regularly count your rams to look for strays (particularly close to tupping) this includes ram lambs. These seemingly harmless critters can rapidly spread infection once they become sexually active. If strays may have been there for a while it would pay to have your ram flock tested.
- Test your own rams annually. This can also pick up useful information like
  - Small testicles
  - One ballers
  - Poor testicle consistency
  - Abscesses
  - Hernias
  - Shearing (or other) wounds that can affect fertility
  - Lameness
  - Pizzle issues



**Ram testing-Many birds with one stone**  
 Ram testing is a great opportunity to

- Hand in your mating orders (Toxo, Campy, Flexidine etc) And with prior notice
- Vaccinate your dogs
- Blood test and or BCS Ewes
- Collect FECs for testing back at the clinic
- Deliver supplies to your door

**We are phoning now, but if you want to book in early give us a bell**



### Sheep Reminders

- Monitor trace elements
- Monitor worm burden
- Check rams
- Vaccinate lambs against pulpy kidney
- Dip sheep for fly strike
- Vasectomise rams
- Monitor lamb growth rates
- Faecal egg count reduction test (FECRT)
- Organise abortion vaccine requirements



**Post Mortem of Failed Ram:**  
 Testicle on the left is normal, remaining mass is abscessed right testicle.



**They're not dangerous if you raise them right**

**and neither are the dogs**

### Barley Grass Season

As the warmer weather arrives so too does the number of dogs presented to the clinic with barley grass infections. These seeds can cause significant pain and discomfort to your dog.

Barley grass has a seed that is barbed and easily attaches to the fur of dogs as they walk past. This pesky seed can actually burrow into the skin, causing infection and swelling. They can migrate around the body, sometimes resurfacing months later or getting into places such as the chest or spine that can be life threatening.

We see numerous cases of dogs with barley grass seeds in their ear, behind their third eyelids and burrowing in between their paws. We even had one dog with a barley grass embedded in his bum! One of the best ways to prevent barley grass infections is to check your dogs after they have been playing or working in areas where there is lots of barley grass. In particular, paying special attention to between the paws and the inside surface of their ears (especially Spaniels!) If your dog has long fur between the pads on their paws then keeping this hair clipped will help decrease the risk of barley grass seeds latching on.

Things to look out for include a swollen foot that the animal is licking and chewing at, painful eyes with lots of discharge, and head shaking and scratching at the ears. If you are worried that your dog may have a barley grass embedded somewhere then it is better to see them sooner rather than later!

Rebecca Morley BVSc BSc



### Pet Reminders

- Check for barley grass
- Flea treatment
- Worm cats and dogs
- Check teeth and clip nails



Barley grass in paw



### Weaning Deer

**Weaning is arguably the most stressful event for your hinds and fawns.** Below are some reminders from **Deer Industry New Zealand** to help make it as smooth as possible.

- Plan in advance
- Set minimum weights (30 kg for Reds)
- Put weaners back into familiar paddocks with hinds far away
- Feed grain 2 weeks prior to weaning and 2 weeks after weaning to help the transition
- Leave a few dry hinds in the group at weaning to help settle the mob
- Ensure feed levels are high and of good quality prior to weaning to help develop the rumen.
- Consider running hinds and fawns through the yards briefly prior to weaning (not holding them there)

#### Pre-Rut vs post rut

Pre rut weaning in many cases is more economical than late weaning. Early weaning can lead to better conditioned hinds, earlier conceptions and better use of pasture. However early weaned fawns are smaller at weaning and may be lighter going into winter. They may require extra supplements. Of course timing must fit with the rest of the farm practices and early weaning will not be suitable for late fawning herds, if there is a high risk of yersiniosis or if weaners are sold straight to finishers.

#### Drenching

Lungworm is a key player when investigating deaths in weaners. We recommend oral combination drenches to control both lungworm and gut parasites. However the oral drench is short acting and re-infestation can be quick. Consider using a macrocyclic lactone as well but watch with-holding rates! Remember pour on applications are now questionable in deer.

#### Leptospirosis

Consider the benefits of lepto vaccination. Some areas of New Zealand have found reproductive benefits as well as improved growth rates in lepto vaccinated deer. Vaccination would start at around 12 weeks of age with a booster in 4-6 weeks, with annual boosters there-after.

Watch our next newsletter for more on Leptospirosis in Deer. Yersinia was discussed in our previous newsletter.  
 Rochelle Smith BVSc MACVSc



### Deer Reminders

- Cut velvet re-growth
- Order Yersiniavax for weaners