

It's trace element testing time

By Julia Baynes, Veterinarian, Anexa Vets Morrinsville

Now that Autumn has well and truly arrived, it's time to ensure that your herd has sufficient trace elements on board, particularly Copper and Selenium, before winter hits. Being proactive about trace elements now will reduce the risk of cows becoming deficient in future, with negative effects on milk production, fertility, and general health. Knowing the trace element status of your herd will also allow you to ensure you get the best bang for your buck from supplementation.

Why worry about copper?

Copper plays a key role in cow health: supporting growth, milk production, fertility and calf viability. It is stored in the cow's liver and slowly released into the bloodstream to maintain sufficient levels. However, when the liver stores are exhausted, blood copper levels begin to drop and cows show obvious signs of deficiency.

Ensuring cows have adequate body copper stores heading into winter is important for two key reasons:

- ✓ Winter pasture is often high in molybdenum, sulphur and iron, meaning less copper is available to cows during this period;
- ✓ In addition, during late pregnancy, the calf creates a large copper demand on the pregnant cow.

It is also known that copper and zinc compete with each other for uptake in cows, meaning that zinc supplementation for facial eczema prevention will have potentially reduced copper intake over the past few months.

Testing is critical to determine how much copper cows have stored in their liver, and therefore, what level of supplementation is required to maintain their copper levels.

Just as importantly, there is a limit to how much copper a healthy animal should receive. Excessive supplementation can lead to copper toxicity with disastrous consequences. This is an issue particularly when copper supplementation is combined with palm kernel feeding, which in itself is high in copper.

The only way to be confident about your copper supplementation is to test your cows' liver copper storage levels first.

What about selenium?

Selenium is another important trace element for cow health, playing a number of roles in the body. It is involved with milk production, reproduction, calf viability, immune function, as well as reduced incidence of disease during the calving period, such as mastitis and retained fetal membranes (cleanings).

Selenium supplementation is highly variable farm to farm and is dependent on soil levels as well as the amount of supplemental feeding. The only way to be sure about selenium supplementation on your farm is to get your cows tested.

Liver biopsies are best!

Liver biopsies are the most accurate way to determine copper storage levels in your herd prior to winter. It is also possible to test selenium levels from the same liver sample, meaning two tests from one sample! We recommend that 6 - 7 liver samples are collected, representing older and younger animals in your herd. These results will enable a tailored trace element supplementation plan to be developed for your farm, or alternatively, prevent unnecessary supplementation in herds whose levels are adequate and are at risk of toxicity.



...but aren't they quite invasive?

We know that some farmers are concerned about the impact of liver biopsies on their cows. Anexa Vets are trained to perform liver biopsies as painlessly and efficiently as possible. The risk of complications from the biopsy procedure is very low and we believe that the benefits of testing far outweigh the risks.

...but what about cull livers at the works?

While cull livers are still commonly used for copper testing, and there is some merit in doing so when necessary, it is likely that these results are less reliable than if samples are taken from live cows still in your herd. The identities of the cows sampled are rarely known, and the reason for culling, for example, empties or old age, means that these animals may not be representative of your herd.

...could you just test bloods instead?

It is possible to test blood samples for copper and selenium levels, however, the usefulness of those results in making decisions about your herd is questionable. While the results for selenium are useful, the copper results will only tell you what the cow's blood copper level is on that day. It will not give you any information about the amount of copper a cow truly has stored in her liver. A cow could have adequate blood copper levels and be on the verge of deficiency, with no copper left stored in her liver. Therefore, it is very difficult to make recommendations about copper supplementation from blood copper results alone.

It's time to make a trace element testing plan

Once the busy dry-off period is over, it's an ideal time to get your trace element testing underway. Speak to your Anexa Vet about the possibility of liver biopsies this year. We are confident you will see the benefit.

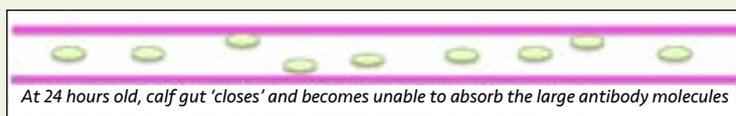
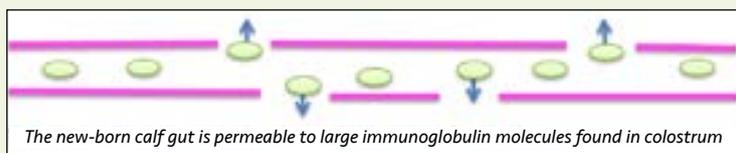
Colostrum & calf immunity – why is it such a race against the clock?

By Arnica van der Wiele, Veterinarian, Anexa Ngatea

Are you RAT ready?

RAT means **R**ace **A**gainst **T**ime; time to arm your newborn calves with defences against adversity. While human babies are born with their mother's immunity in their blood (through transfer of antibodies via the placenta), this cannot happen between a cow and her calf, so a calf is born without adequate immunity to fight disease and infection.

In the first weeks to months of a calf's life, it totally depends on the absorbed antibodies received through drinking colostrum. To enable this absorption, the gut from new-born calves is temporarily 'open' for these large immunoglobulin (IgG) antibodies to pass through, as shown in the illustration below.



However, from the moment of birth, the ability of the calf to absorb these antibodies decreases significantly and after 24 hours the gut has 'closed' to antibody transfer. After this point, colostrum is still an excellent feed, coating the intestines with antibodies, but these will not enter the bloodstream.

On the cow's side, a similarly time-related process is happening. Around calving, the antibody levels in the colostrum she is producing are at peak level. From the time of birth, the **concentration of antibodies in her colostrum will drop rapidly, regardless of whether you have milked her or not.**

This race against the time is illustrated in the chart below.

You can see that the calf's ability to absorb antibodies, and the cow's concentration of antibodies are maximum at time of birth and drop rapidly in the first 24 hours.

Good quality colostrum, given in a timely fashion at an appropriate volume will go a long way to ensuring your next batch of calves are healthy and strong. Do you have a plan to give your calves the best start with quality colostrum? Not sure where to start? Give us a call, we're here to help.

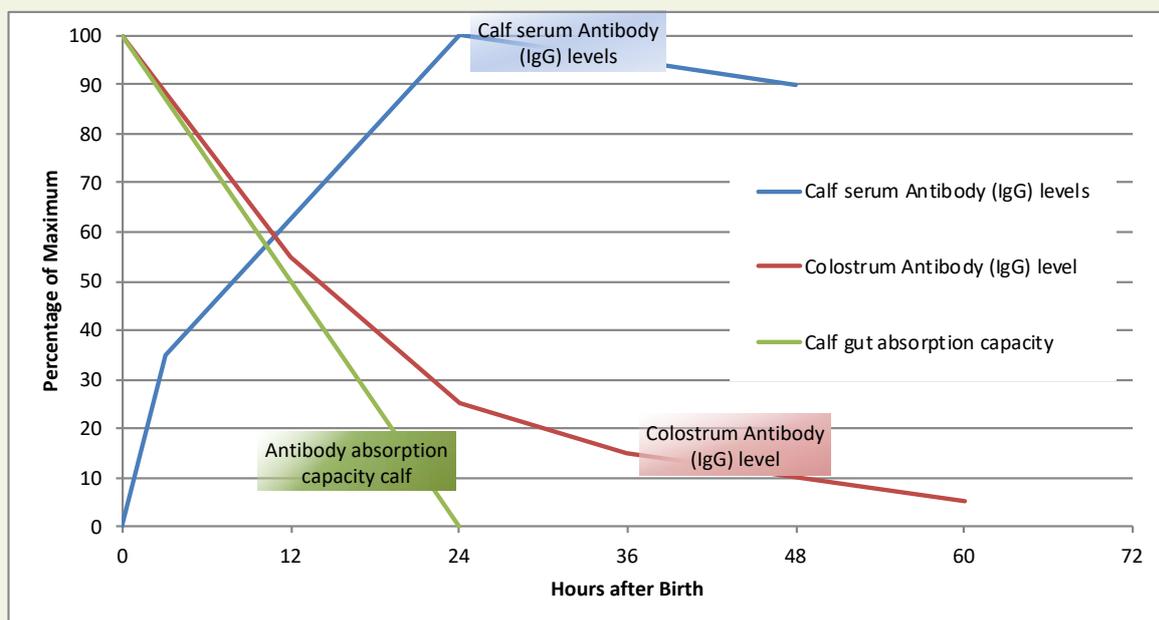


Colostrum vaccines

Calf diarrhoea is a complex, costly and devastating disease and providing your calves with specific antibodies against the big players in this field is an important part of the prevention of outbreaks. If given at the right time colostrum vaccines (such as Rotavec) will boost the concentration of IgG antibodies in the colostrum and then lead to providing your calves with increased, specific antibodies against certain diseases.

However, colostrum management needs to be optimised to maximise the benefit of the use of these vaccines. Colostrum testing on several of our farms last season showed a high percentage of colostrum fed to newborn calves is below adequate concentration of antibodies (quality). Colostrum for newborns should be collected from the first milking only with a BRIX reading >22%. BRIX is linked to the refractometer – a tool that simplifies testing the quality of colostrum through the use of a drop of colostrum. Refractometers are available from your local Anexa FVC Vet clinic and include easy-to-follow instructions. Alternatively ask your Anexa Vet to explain – the process is very simple.

Remember the 3 colostrum Q's: **Quality, Quantity, Quickly.** Get this right and you've aced one of the most important parts of calf rearing.



This clearly illustrates that the 'golden period' for colostrum administration is in those first 6 to 12 hours after birth. It is literally a race against time to get adequate levels of antibodies into the calf and if you do not succeed in those first 24 hours of a calf's life, that opportunity is lost.

We will grow with you

Johnston family farm in Ngarua is a healthy, growing family business, giving pleasure to four generations.

Work with the Johnston family began back in 2009, when the farm owner, Morrie, was not happy with the reproductive performance of the herd. The InCalf resources were pretty new to the New Zealand dairy industry at the time but Anexa FVC InCalf Advisor, Katrina Roberts, was quick to address the concerns of the business and organised a meeting to go through the herd's Fertility Focus Report.

At the time the herd performance was on par with industry average, and like all farmers at the time, the mating length was 13-14 weeks. The whole farm embraced the process – the farm owner, share-milker and the contract milker at the time, Shane Campbell, and so the journey for continuous improvement began.

However, for this farm it wasn't just about reproductive performance: all parties wanted to see the cows and land achieve their potential and be a sustainable, profitable business. The farm has been in a constant state of change for nine years; always growing, and always wanting to make improvements. Changes include addition of a feed pad, upgrading the effluent system, purchase of a run off for control of the young stock, installation of Protrack, split calving; and most recently, the building of an underpass. During this process, Katrina has developed alongside this farm, becoming a Headland consultant, and completing the Intermediate nutrient management course. The challenges this farm presented were one of the reasons she has gone down the path of farm consultancy.

The farm seeks the advice of their rural professionals and considers the success of the farm as a reflection of the commitment of all parties. The new contract milkers Dean and Tania took on the job to challenge themselves in this type of farm system.

Everyone is enthused and energised on the day of the farm consultancy visits. It may be the good discussions and challenging ideas, or maybe the morning teas from The Sweet Painted Lady in Waharoa.

Anexa Vets consider it a privilege to work alongside this progressive enterprise.

147 HA

520 Freisan X cows

Split calving (70 cows calved in Autumn)

300,000 kgms in 2017/18

Spring 6 week in calf rate 76%

Autumn 5 week in calf rate 78%

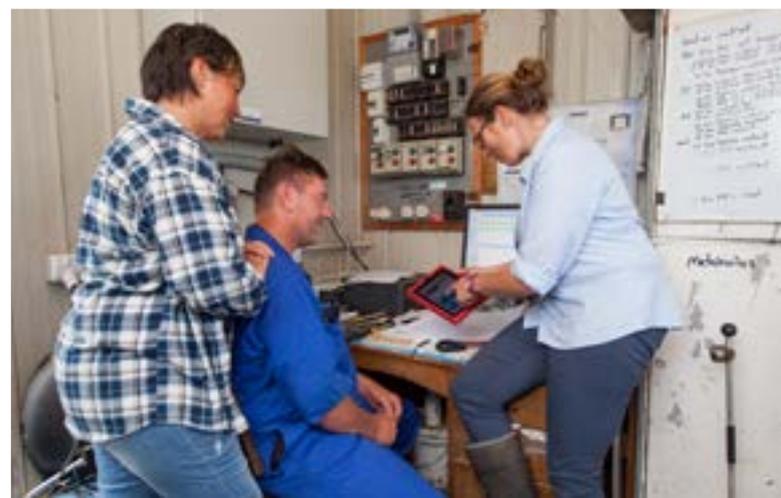


"The initial assistance from Katrina has quickly moved from reproduction performance to cover all areas of our business enterprise.

Anexa and Katrina particularly, have become a one stop shop for all aspects of our herd with emphasis on daily cow intakes, seasonal feed requirements, along with the obvious animal health decisions.

It has been a great journey and one that three generations of the Johnston family take great pride in."

**David Johnston, General Manager
Johnston Family Farms**



Track tinkering

By Hanneke Officer, Veterinarian and Health Hoof Provider

Following the excessive amounts of rain we have experienced this season we have seen a lot of tracks that are due for maintenance. Dry-off is naturally the ideal time to scoop off the old and bring in the new.

Do you know the most important aspects of a track?

- Surface material (clay content, particle size, compaction)
- Crowning
- Drainage

During visits to farms assessing risk factors for lameness, it's become increasingly evident a lot of cows walk on hard surfaces for significant distances. This slows cow flow, causing staff to put pressure on, resulting in lameness. Even without pressure, hard surfaces will cause continuous wear and tear. This then predisposes the cow to lameness in adverse events, eg calving stress, prolonged wet weather, time on concrete (standing off, feedpad).

Also, walking patterns have shown the preference of cows to walk on the outside of the track, where mud build-up provides a softer surface than the track itself. The downside of this, cows can't see what's hidden in or under the mud. They are more likely to injure themselves by stepping on stones or other objects. At the same time, the mud will soften the soles, increasing the chance of foot rot following injury.

Track maintenance is expensive, but necessary. Make sure you've got the knowledge you need to make informed decisions. We have trained staff that can perform a track check for you, both identifying risk factors and providing advice regarding track upgrades. This can be a significant step in lameness prevention.



Anexa Vets was established by farmers, for farmers. Our focus is offering our members excellent service, quality proven products, great value and the confidence that they are in the best of hands.

Terry Youngman, CEO

Join the club. Join Anexa Vets.

Belonging to a Vet Club offers benefits, to find out more visit www.anexafvc.co.nz/join

Upcoming events

Gordonton Spring Fling

Friday 8th June, 11 am – 3 pm
Anexa Vets Gordonton

Farm Staff Training Day

Anexa FVC invites you and your staff to take part in our annual Spring Farm Staff Training. The following topics will be covered on the day: Basics, farm first aid kit, calvings, calf scours, lameness, downer cow, mastitis.

Tuesday 19th June

Gordonton Hall,
1024 Gordonton Rd, Gordonton

Wednesday 20th June

Anexa Vets Morrinsville
25 Moorhouse Street, Morrinsville

Thursday 21st June

Anexa Vets Ngatea
49 Orchard Road, Ngatea

Visit www.anexafvc.co.nz/events
for more details

Anexa Vets Dairy Services Include:

- ✓ A dedicated Vet that will be your primary point of contact
- ✓ Ultrasound pregnancy diagnosis with accurate aging and report analysis
- ✓ Milk quality and mastitis advice, including consultancy and an emergency grade busting service
- ✓ Herd reproduction advisory service using tools such as the InCalf programme
- ✓ Lameness prevention and management using tools such as Healthy Hoof
- ✓ Experienced Technician support including teatsealing, disbudding, metrichecking, metricuring and hoof trimming
- ✓ Farm staff training workshops with a practical emphasis
- ✓ Young Stock Management and Dairy Grazing Plans
- ✓ Disease Prevention Management and Herd Health Plans
- ✓ On going product support from your local TSR including on-farm deliveries

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