

Dairy News

# Local dairy manager wins NZ dairy industry merit award

After last year's success taking out the 2021 RVC Fertility Award for the highest 6-week in calf rate, Todd Portsmouth decided to challenge himself by entering the 2022 New Zealand Dairy Industry Awards.

Todd is dairy manager for Oxford Farming Ltd, a 560 cow milking operation producing 422kgMS per cow on a grass-based system over 160 ha at Oxford.



2022 Canterbury North Otago DeLaval Livestock Management Merit Award, Todd Portsmouth of Oxford Farming Ltd.

Judges awarded Todd with the DeLaval Livestock Management Merit Award, demonstrating superior knowledge in animal health, breeding, managing youngstock, animal welfare and record keeping. The judges were impressed with Todd's on-farm presentation which included discussion on areas where he excels as well as identifying areas where they would like to improve.

Caring for the herd as if they were his own and working closely with vets was recognised by judges as contributing towards achieving excellent results in animal welfare, breeding and production. Recording loads of data and continually tracking progress is integral in responding to changes and improving management of his dairy stock.

A huge congratulations goes to Todd for winning this award.

### 24hr/7day emergency care Ph: 03 313 7438



F Rangiora Vet Centre - Farming

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NEW

Visit the **DAIRY** section on our website **www.rangioravetcentre.co.nz** to not only read our newsletters as they happen + now you can read articles by topic in the

### NEW SECTION DAIRY NEWSLETTER ARTICLES

There's more than 60 articles being loaded. Those ready to read have a **READ NOW** label, the remainder will be loaded and ready to read in the next few weeks.

**TELL US** what topics you'd like covered and we'll do our best to get it written to

READ AT YOUR CONVENIENCE!

Cnr Lehmans & Oxford Rds, (181 Lehmans Rd), Rangiora www.rangioravetcentre.co.nz Em: largea@rangvet.co.nz

## Drying off rules and guidelines for 2022

### It's that time of year again where we are looking forward to a bit of break from milking.

But first we need to get through drying off the herd. While to outsiders it may seem that everything is winding down, in reality we are getting everything sorted and organised for a flying start into the next milking season.

So, from us here is a checklist of things that should be ticked off before the herd goes for a break:

- End of year herd test: to give you the best idea of which cows require which treatment a herd test within 60 days of drying off is necessary to give you the correct information to make an accurate drying off plan.
- Mineral status of the herd, looking towards calving: Be it livers or bloods, it is wise to get an idea of how the heifers and the MA cows are doing with Se, B12, and Cu. A plan can be worked out now to give them the best chance at a great start next season
- BCS: lighter animals can be and should have been dried off early to give them the greatest chance of meeting their body weight goals for the start of calving.
- Milk quality / drying off consults: If you haven't done this already then this is the time to book in your drying off consults with your primary vet. It is a great time to discuss the years mastitis results and sort a plan for next season. And, of course, this starts with drying off the herd.
  This is also a great time to discuss, johnes / BVD and anything else you'd like to tackle before calving starts and the craziness begins.
- If you are wanting our tech team to assist with drying off or you would like a vet to give advice and training to your team for drying off, now is the time to book this in.

An effective and successful drying off is the best way to ensure that mastitis during calving stays at a low, manageable level.

### Once you've had your consult with your vet, the next phase is ordering your product.

There are two ways to do this:

1. Get in touch with Colin and organise a time for pick up or drop off

Or

2. Give the clinic a call and order it with either Sasha or Rebecca. And again, organise a time for pickup or drop off

In both cases we need 24hours to get your order ready before you are able to pick this up. Please adhere to this, while we can work wonders in an emergency, we can't do this on a regular basis, and we don't like disappointing people.

And for the first time this year we will be requiring farm owners / managers / share milkers to sign a drying off disclaimer. This just to say that everybody acknowledges and accepts the inherent risk of drying off. This disclaimer should have been signed off during the drying off consult. But may also be signed during pick up of the product, if you're drying off your own herd or during dry off, if our tech team is drying off the herd for you.

If you have any questions about this or any other issues, please get in touch with you primary vet or give the clinic a call.







### MINERALS; the highs & lows

The mornings are fresher and the days are getting shorter.

Winter preparations are coming into effect and this is a timely reminder to perform some pre-winter mineral testing. At this time of year the four key minerals are Selenium, Copper, Iodine and Cobalt.

### Selenium

One of the most important minerals in NZ selenium plays an

important role in growth and fertility of cattle. It also has a major anti-oxidant role and is essential for immune function.

Selenium levels vary more day to day than the likes of copper. Blood levels reflect the recent history of supplementation and are a good indicator to assess if your supplementation is adequate.

Cows will almost always be getting selenium through a dosatron or similar method, but sometimes require extra supplementation on top of that! Never forget your youngstock as well, selenium is incredibly important for their growth and performance in the long term.

Ideal Ranges:

Blood: April – Dec: 800 – 1400 nmol/L Blood: Dec – April: 300 – 500 nmol/L Liver: 4000 – 6000 nmol/kg for optimum levels Youngstock < 21 months

- Blood: 300 500 nmol/L
- Liver: > 1500 nmol/kg

### lodine

lodine ensures that metabolic, reproductive

and bone function occurs at an optimum level

as well as maintaining normal embryo and fetal development. lodine deficiency during pregnancy can result in goitre in newborn animals, this is the reason why all of our table salt is iodised!

We have been seeing lots of deficient and low results coming through from heifers and dairy cows this year as we have increased our testing. Lucky enough iodine is easy to supplement in both youngstock and older cows.

*Ideal range:* Blood: > 45 ug/L

### Copper

Copper has many roles in the body from being a

key component of the immune system to activating enzymes to ensuring proper growth.

The liver is like a storage tank of copper. However, the relationship between blood and liver copper levels very rarely matches up, only in deficiency. This means that the blood levels of copper will only be low when the liver levels have already dropped.

Copper liver levels decrease over winter, which is why it is always good to test and supplement pre-winter (Dry off time!). We can have adequate blood levels at the same time as low liver levels pre-winter; so we cannot always rely solely on bloods.

Testing liver levels can be done at the works on cull cows or via liver biopsy performed by a vet.

*Ideal ranges:* Blood: 8 – 18 umol/L Liver: 500 – 1500 umol/kg

### Cobalt

Cobalt is required in order for the body to make Vitamin B12.

B12 itself has a large role in energy metabolism, which is rather important for our growing youngstock or milking cows. Decreased milk production, decreased fertility and an increase in metabolic disease are all associated with Vitamin B12 deficiency.

Cobalt/Vit B12 deficiency is actually quite rare in cattle; lambs and sheep are much more susceptible to the disease.

Much like selenium, cobalt is not stored in great amounts of the body. Therefore blood testing is important to determine if our animals are receiving adequate cobalt over time.

Ideal ranges: Blood: > 150pmol/L Liver: > 370 nmol/kg

We used to think that there were two levels of minerals: normal or deficient. However, recently trial work has unveiled that there is a higher, third level; optimal. While a normal level prevents the animal from suffering from any of the negative effects of deficiency, an optimal level helps the animal perform at the next level. For example increasing Selenium beyond the adequate to the optimal level also increases immune function; decreasing reproductive diseases such as mastitis, metritis, retained membranes and cystic ovaries. Keep this in mind when testing or supplementing animals, especially moving into Spring.

Bloods are a quick and easy way to assess mineral levels but sometimes do not correlate exactly with what is going on in the body. Copper for example is stored in great amounts in the liver so the blood levels will remain relatively constant until the stores are depleted. Liver samples for testing can be taken from cull cows at the works, contact our office to get the forms to request these tests.

Knowledge is key, if we know now then we can take action before problems start heading our way in Spring. The only reliable way to know if we have to supplement is to test!





#### By Richard Nortje

### **Culture to Cull**

We certainly appreciate there are difficulties in removing culls from farm with the current Covid situation, but if you do get the opportunity how do you decide which cows to cull for udder health reasons?

Traditionally we have relied on a combination of information such as age, BW/PW, production, somatic cell count (SCC), number of SCC >150,000 cells/ml exceeded during lactation, number of mastitis cases etc. Consider the following animals:

Animal Tag	Age	SCC 6/04/21	SCC 31/10/21	SCC 16/02/22	SCC 7/04/22	kgMS	Expected Calving	Clinical mastitis (season)
1	3	381	7	13	5940	1.31	30/09/2022	0
2	7		45	25	5569	1.03	7/08/2022	1
3	2	256	1681	1117	4663	1.09	31/08/2022	0
4	5	47	8	18	4126	1.24	24/09/2022	0
5	6	16	43	50	2925	1.09	30/08/2022	0
6	5	693	574	585	2617	1.15	18/08/2022	0
7	8		257	289	617	1.00	31/07/2022	0
8	7	150	149	205	585	1.15	26/08/2022	0
9	9	107	341	794	537	1.16	15/08/2022	0
10	4	322	499	861	463	1.03	16/08/2022	0

Based on this information, if you had the opportunity to cull 5 cows based on this information, which ones would you choose? Let's review those decisions when we include the milk culture result:

Animal Tag	Milk culture result				
1	No bacteria detected				
2	No bacteria detected				
3	Strep uberis				
4	No bacteria detected				
5	Strep uberis				
6	Staph aureus				
7	Staph aureus				
8	Staph aureus				
9	Staph aureus				
10	Staph aureus				

#### >500,000 cells/mL: Number of cows/bacteria type (48 samples)



BESTPRACTICE

Hopefully you will see that, with the milk culture result included in the decision-making process, cows 6, 9 and 10 in particular should be ones prioritised for culling. Recently we had the opportunity to culture a large group of animals after a recent herd test. If we just had a look at the results from cows with a SCC greater than 500,000 cells/ml:



Now let's compare these results compared to culturing all cows with a SCC >150,000 cells/ml:

#### >150,000 cells/mL: Number of cows/bacteria type (220 samples)



As you can see, if we just collected a sample from animals with SCC above 500,000cells/ml we would have missed 18 out of the 30 cows with Staph aureus.

The other added benefit of culturing is that if we did this shortly before dry off, we could consider not using antibiotic dry cow therapy in cows with no bacteria detected on the culture (in this case just over 50% of animals).

We are conducting some very exciting research in this area for this dry off period so watch this space!!

### By John Spearpoint

# Are your cull cows fit for transport



Many farmers are reporting delays at processing facilities from staff shortages due to COVID. How long this lasts and how it will affect peak processing periods is unknown.

During these uncertain times we need to ensure animal welfare needs are being met, especially for at-risk animals or those requiring veterinary certification. On occasions, processing delays has resulted in animals being held over and fed on site. Consequently, some premises may struggle to accept animals with veterinary certificates.

Communication between all parties in the supply chain is critical to ensure welfare needs are met. We encourage you to maintain good contact with meat processors to ensure certification remains valid and allow the processor time to make plans for disruptions to processing. This may include sending stock to alternative premises (where additional travel is unlikely to impact on the welfare of the animal), or consideration for petfood, or humane disposal on farm.

Preparation is important. Many cull cows go down during transport due to low blood calcium, brought on by the stress of feed withdrawal, transport and yarding. Constant

movement during transport quickly uses up the supply of calcium to muscles to the point where muscles can no longer function properly, resulting in the cow going down.

To prevent this, ideally dry cows off before transporting. We recognise this is not always possible, so if you can't dry off your cows, supplementing them with calcium and magnesium on the day they are transported will make them less prone to going down. Dairy NZ recommends giving each cow 100 grams of limeflour and 60 grams of magnesium (Causemag) as an oral drench. Or, administer as a slurry over hay.

Dairy cows should not be starved and have access to water until they are loaded. The stand-off period from green feed is at least 4 hours (but no longer than 12 hours) before transport to reduce effluent spilling onto roads. But, hay or baleage doesn't need to be withdrawn. So, provide access to roughage right up the point of loading.

The following Dairy NZ poster provides a great guide for preparing cull cows for transport.

See next page >





### PREPARATION OF DAIRY COWS FOR TRANSPORT

**Preventing Down Cows** 



### Why do I need to read this?

MPI records show approximately 1000 cull dairy cows go down during transport, or at the saleyard/slaughter plant each year, this is a significant animal welfare issue and it poses a risk to the reputation of the dairy industry. This metabolic crisis is principally due to low blood calcium i.e., hypocalcaemia (milk fever), brought on by the stress of feed withdrawal, transport and yarding.

Cows which go down on the truck are at risk of being trampled by their pen mates. They can suffer injuries such as broken bones, lacerations, bruising and even death. They can also bring down other cows in the pen. Some plants may treat 'down cows' with a metabolic solution. If they respond and gain their feet they can be processed, but only to restricted markets. If they do not respond (or are not treated) they will be euthanased with a total loss to the supplier.



### What do I need to do?

It is vital that dairy cows are prepared adequately before transport to saleyard/slaughter. Even though the risks are greater for lactating cows, dry cows can also suffer from low levels of blood calcium. Therefore, **all cows** should be prepared properly regardless of lactation status, using the guidance on the back of the page:





Dairy cows should not be starved.

Stand off pasture for 4-12 hours before transport BUT provide roughage/dry feed and water until loading on the truck.

You can then add CALCIUM and magnesium to the hay/baleage/palm kernel.





1. Add 100 grams of lime flour per cow to feed during stand off (4-12 hrs before transport).

This provides each cow with 35g of CALCIUM. An alternative supplement can be used but it **must** contain the equivalent amount of CALCIUM.

2. Also give 60 grams Causmag. Note that this contains Magnesium not CALCIUM so is not a substitute for Calcium supplementation.

The extra CALCIUM could be given as an oral drench, or a slurry poured over dry feed. If no roughage is on hand it is possible to mix with dry feed/meal in troughs in the yard/shed. Use the same rates as for colostrum cow supplementation.









More information can be found here: www.dairynz.co.nz/transport





#### By John Spearpoint

# Protect your farm and your family from Salmonella



Over the past few years, there has been an increasing number of salmonella infections among dairy herds in North Canterbury mostly occurring before and during calving. Infection strikes without warning, spreads quickly and places you, your farm workers and family at risk.

### What can you do to prevent infection?

Whole herd **vaccination** is the best option. **Salvexin+B** is the only licensed vaccine that provides protection against the 3 most common strains of Salmonella (*Typhimurium*, *Brandenburg*, *Bovismorbificans*).

Two vaccinations are required, a sensitizer followed by a booster injection 4 weeks later. And if animals have been previously vaccinated, an annual booster is needed to provide ongoing protection. Vaccines come in a Vaxipak with a draw-off set (rubber tubing) which can be attached to a standard vaccinator gun.

### What is the best timing for vaccination?

Infection commonly occurs during winter due to increased stress, so a pre-winter vaccination program around dry-off or early winter will provide protection against an outbreak.

It is not advisable to delay vaccination until the first signs of disease occur. Alternatively, vaccinating so the second dose is given 3 weeks pre-calving will provide protection during the stress of calving and give protection to calves via colostrum.

After vaccinating, animals may be slightly off-colour for up to a week as the vaccine stimulates an immune reaction to produce antibodies to provide ongoing protection. Vaccinating during dry-off will have the least impact on milk production.





### What should you look out for?

On the 1<sup>st</sup> day, the cow is 'just-not-right' and usually has a high temperature. Sick animals usually separate themselves from the herd, are dull, have reduced appetite and a sudden drop in milk production. By the 2<sup>nd</sup> day, a profuse **smelly, watery scour** will appear and may contain blood, mucous or pieces of tissue from the lining of intestines.

Infection can occur following severe weather, onset of calving, sudden changes in diet, overcrowding or high stocking rates. Survivors can fail to come into milk. And in severe cases, there can be significant stock losses and lost milk production.

Infected pregnant cows may abort. Aborted calves rapidly decompose and foetal membranes are often retained. Farmers may report more stillbirths or more dead/rotten calves than usual so the incidence of infection is likely under-reported.

Carrier animals are the main source of infection and these can exist in the herd without showing any clinical signs. Infection remains hidden in lymph nodes and can flareup during periods of stress, shedding large numbers of bacteria and catching you off-guard.

### Don't forget to protect yourself

Salmonella is highly contagious and humans can become infected through contact with sick animals. **Contracting salmonella around calving is not an ideal period to have time off-work.** 

- Avoid eating, drinking, smoking near cattle.
- Don't drink untreated milk.
- Wear PPE and gloves when handling cattle.
- Maintain good standards of hygiene with regular hand washing.

#### **BENEFITS OF PREVENTATIVE VACCINATION WITH SALVEXIN®+B**

- Increases immunity to scours-causing Salmonella bacteria
- Reduces shedding which may help prevent Salmonella infection in other animals and in farm workers (zoonotic disease) through reducing environmental contamination<sup>7,8,9</sup>
- · Minimises production and stock losses if disease occurs



'Most farms only need to prevent one cow dying from Salmonella to justify the cost of preventatively vaccinating the whole heard.'

Quote from Jennifer Davison, Top Farmers podcast

### What to do if you suspect an infection?

Veterinary attention is essential and earlier treatment results in better chances of survival. Death may occur within 48 hours in untreated animals as they become quickly dehydrated and lose weight rapidly.

There is a risk of spread into the calf sheds, so separate potentially infected animals to prevent further spread to other animals. Clinically affected animals excrete large numbers of bacteria in their faeces and can also shed bacteria in urine and milk.

In the event of an outbreak, vaccination may reduce stock losses, so act promptly.

#### **Risk factors for infection include;**

- Feeding from continuous troughs
- Feeding palm kernel meal
- Using pelletized magnesium oxide (Mag supplementation above 30gm/cow/day can cause changes in rumen pH and promote the survival of salmonella bacteria leading to a higher risk of infection.
- High stocking density increases risk of transmission and exposure so if infection does occur, spread cows out across the farm.

### How much does vaccination cost?

Vaccinating against Salmonella is cost effective and is even cheaper than vaccinating for Leptospirosis.

Salvexin+B (Dose 2mL)

250mL \$163.46 (excl. GST) 125 doses \$1.31 per dose 500mL \$292.52 (excl. GST) 250 doses \$1.17 per dose







Salmonella is a bacteria spread by healthy carrier animals which don't show signs of disease, but shed bacteria (usually intermittently or at low levels). These bacteria go on to infect other animals. Carrier animals can shed Salmonella for months or even years.

There are many different strains of Salmonella in New Zealand, with the most prevalent in cattle being:

- Brandenburg (primarily causes abortions)
- Typhimurium (primarily affects the gut (enteric))
- Bovismorbificans (primarily affects the gut (enteric))

Irrespective of the strain, all types of Salmonella can cause outbreaks and deaths.



### The impact of an outbreak of enteric (gut affecting) Salmonella on a dairy farm can be devastating. On average 10% of cows become sick<sup>4</sup>, and approximately 1% die.<sup>5,6</sup> The estimated cost of an outbreak of this kind is \$27,200 for a 400-cow herd\*.

Incidence rates of laboratory submissions of different Salmonella serotypes in cattle (2019)<sup>3</sup>



The Biosecurity New Zealand maps in the above panel give an indication of how widespread three particular serotypes of Salmonella are regionally.

The incidence rates shown are estimates, showing the rate of positive detected farms based on the frequency of laboratory submissions, after accounting for the numbers of farms present in each region.

Because of a number of factors related to laboratory submissions and the data provided from them, the incidence rates are estimates. However they do clearly illustrate the regions affected by significant numbers of cases and show that the disease is a potential issue for every farm.

### **Controlling and minimising Salmonella risk**

The most common way Salmonella is introduced to a farm is through healthy looking carrier animals (cattle, sheep etc.). Higher risk practices include:

- Off-farm grazing
- Intensive feeding
- Purchasing/leasing stock
- Shared boundaries/stock yards

The number of animals that become infected, ill or die depends on the risk factors on farm. Reducing these risks is the first step to helping prevent an outbreak.

### **Risk mitigating opportunities:**

- · Minimise time off feed when yarding/transporting
- Reduce stock density
- Seperate stress events such as trucking and vaccinations
- Control pests and scavengers
- · Vaccinate at risk cattle preventatively around dry-off.

If a disease outbreak occurs, consult your vet as soon as possible. Different approaches are recommended depending on the situation.

Farms at risk of Salmonella should consider preventative vaccination.





#### **PREVENTATIVE VACCINATION PROGRAMME**



\*Risk period: pre-calving - mating

3. Credit: Surveillance & Incursion Investigation (Animal Health), Diagnostic & Surveillance Directorate, Biosecurity New Zealand

- 4. Salmonella outbreaks in dairy herds. HoofPrint NZ, Vol. 38. No.1 Page 27. March 2020. \*Based on costs of \$1,800 per dead cow and \$500 per sick cow in
- treatment costs and lost production 5. Morgan, P (2013) Salmonella outbreak case studies spring 2011.Proceedings of the Society of Dairy Cattle Vets p165-176

Molgan, P (2013) Samonena outpreak case studies spring 2011. Proceedings of the Society of Dany Cattle vets pros-176
 Carter et al (1983) Observations on acute salmonellosis in four Waikato dairy herds., New Zealand Veterinary Journal, 31:1-2, 10-12

For preventative vaccination, give two shots in the first year (sensitiser and booster) at least 4 weeks apart. The second shot should be at least 2-3 weeks before the risk period. An annual booster is required for ongoing protection.

#### WHEN TO VACCINATE

The booster shot (second shot in first year, or single annual booster in subsequent years) should be given at least 2-3 weeks before the risk period. Field experience suggests that a practical time to vaccinate for dairy farmers is around drying off.

#### **VACCINATION IN THE FACE OF AN OUTBREAK**

In the face of an outbreak, vaccination should be as early as possible to reduce stock losses. This strategy is not recommended for protection against Salmonella Brandenburg abortions in sheep.

If a disease outbreak occurs, consult your vet as soon as possible as different approaches are recommended depending on the situation.

- 1. Parkinson et al (2010). Diseases of Cattle in Australasia. Chapter 4.
- 2. Surveillance. Vols 41-47, No 3, September 2014-2020
- Royal W, Robinson R & Duganzich, D. (1968) Colostral immunity against salmonella infection in calves, New Zealand Veterinary Journal, 16:8-9, 141-145,
- Li H, McFarlane R, & Wagner J. (2005) Vaccination of pregnant ewes against infection with Salmonella Brandenburg. New Zealand Veterinary Journal 53(6):416-22.
- 9. Clark et al (2011) Salmonella in animals in New Zealand: the past to the future. NZ Veterinary Journal, 50: 3, 57-60

## Salmonella is 3.8 times than in 2013<sup>2</sup>

SALMONELLA CAN SPREAD FROM ANIMALS TO HUMANS AND CAN BE DEVASTATING FOR THE IMMUNE COMPROMISED





#### By John Spearpoint

### Fonterra Co-operative Difference 2022-23 Calf wellbeing and winter management

Fonterra's veterinary technical manager Ash Keown, explains the Cooperative Difference is intended to be a flexible framework where achievement areas change over time to reflect the current conditions in which Fonterra operates. Changes are necessary to respond to growing expectations from overseas markets. So, positioning your business to reap the rewards of this scheme will continue to have big benefits down the track.

Essentially, the overall structure of the Cooperative Difference will remain the same, however there are some minor changes to the Animals and Environment focus areas to include aspects of calf wellbeing and winter management.



For the 2022-2023 season, Animal Wellbeing Plans under the Fonterra Cooperative Difference will now need to include aspects of calf wellbeing and winter management.

### What is staying the same?

The 3 levels of achievement remain unchanged:

- Te Pūtake: this achievement is worth +7c per kgMS when the 4 focus areas of Animals, People & Community, Environment, Coop & Prosperity are addressed.
- Te Puku: this achievement is worth +3c per kgMS for milk quality excellence.
- Te Tihi: this achievement is not linked to additional payments but acknowledges the leaders in the industry.
- If your animal wellbeing plan was developed prior to April 2022, this will remain valid until the anniversary of the plan where new topics will need to be included.

## What is changing in the 2022-23 season?

- Animal wellbeing plans made after 1st April 2022 must include management of calf nutrition, calf housing and calf health.
- A farm environment plan must achieve 3 out of 4 key practices. There are additional options to include winter management, such as 'Have an approved winter management plan by 1 May 2023'. If selected, farmers will also be required to include wintering in their animal wellbeing plan.

### What do I need to do?

Your farm requires an animal wellbeing plan developed annually in consultation with your veterinarian. Please get in touch to discuss a review of your animal wellbeing plan.



