



Cepravin Milk Quality Competition Winners'

In conjunction with MSD (the manufacturers of Cepravin) we have just run our fourth competition for Milk Quality Production. Eligible entrants were those clients enrolled on Infonet. (This season we also requested Ocenais suppliers to submit their BMSCC as there are still technical issues linking data to Infonet). We sought the lowest

five day average BMSCC as at 11th of December 2014.

Well done to the Top Three farmers who will receive \$750, \$500 and \$250 respectively as a voucher to use within our practice.

Last season there were eleven farmers with a BMSCC under 80,000. This season there are 30 farmers with

a BMSCC under 80,000. This is an outstanding result. Congratulations to you all. These are great results and reflect the increased emphasis being placed on prevention of infection especially around calving.

Place	Farmer/Manager	Farm/Company	BMSCC
1st	Chris & Siobhan O'Malley	Mike & Janet O'Connor	47,700
2nd	Karl & Emma Guy	Waitaki Ventures #2	48,300
3rd	Greg & Tania Paul	Uretane	49,000
4th	Karl & Emma Guy	Waitaki Ventures #3	49,300
5th	Grant & Nicola Neal	Aspiring Cow Company	50,500
6th	Hamish & Fiona Winter	H F Farming	52,300
7th	Gerald Meyer & Team	Meyer Dairies	53,000
8th	Hadlee & Dania Bird	Clydesdale Dairy Limited	57,000
9th	Quintin & Dana Paul	Wains Crossing	59,000
10th =	Zanas & Justine Sceglinkas	Cantley - Sunrise	61,000
10th =	Hugh & Darla Le Fleming	Le Emari	61,000
10th =	Kerry Burt & Aimee Le Fleming	Willowbridge	61,000
13th =	John & Olivia Williams/Linda Brown	J. L.O	63,000
13th =	Graeme & Michelle Puttick	Backline	63,000
15th	Rodney & Kelly Herrick	Seven Mile	68,000
16th	Kim & Debbie McNamara	Murphy Farms #5 Rivercliff	68,000
17th	Jackson Henshaw	Herdovus	69,500
18th	Stu Carline	Springdale Dairies Ltd	70,000
19th	Wayne Scarrott & Louise Kahu	Des Conlan - Home	71,750
20th	Kathy & Mark Caldwell	Burke Home Farm	72,000
21st	Mark & Allan Hodder	Hodder Farms	72,250
22nd	Brendon & Avril Lane	Murphy Farms #4 Fairbanks	73,000
23rd	Shaun Kelsen	Belvue Downs	73,250
24th	Andrew Watson	Ed Finlay - Flag Farms	74,500
25th	Karl & Jilly Haywood	Four Season Contracting	75,400
26th	Aaron Clarke	Ellis Lea (Arno)	76,000
27th	David Legg	Seamist Dairies	77,000
28th	Glen Constable/Gaston Conzolino	Lisburn Farms Ltd	77,000
29th	Ricky & Mel Hutchinson	Providence	78,600
30th	Richard & Kirsten Powell	Des Conlan - Duntroon Farm	78,750

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Theileria News

There has been an outbreak of disease caused by this parasite in the North Island since spring 2012. It hasn't been an issue in our area because of a lack of the tick that transmits the disease. However in breaking news MPI is currently following up an outbreak in the Ashburton district. It would pay to be vigilant for cows that have bloody urine, are depressed, off their milk and have pale mucus membranes. As we find out more we will keep you informed.



Humeral Fractures in Dairy Heifers - Mat O'Sullivan

Since the awareness of humeral fractures in heifers was highlighted a few of years ago our practice has seen approximately 3-4 cases a year.

This season however we have had a large spike in the number of cases seen predominantly in first lactation heifers but also in second lactation cows.

We now have recorded cases of humeral fractures on ten farms this year. Four of these farms have had between 6 and 15 individuals with fractures.

There appears to be two main periods when these fractures are occurring; the first being in the peri-calving period (7 days pre-calving to 1 month post-calving) and the second spike in the pre-mating/mating period. We have dealt with one individual farm which had 3 fractures in the space of 48hrs during the 1st week of mating - all occurred at milking time while presumably riding on the concrete yard. On another farm 3 fractures occurred in the month of August and another 12 occurred in the late September/October period.

As previously documented the fractures are mid-shaft oblique to spiral-oblique. This is the type of fracture you could imagine with the shearing downward forces associated with e.g. a cow riding another cow and dropping straight down onto hard concrete.

On five of the affected farms we have collected liver samples directly from animals with fractures to measure liver copper reserves. These have been

tabulated below:

Liver copper levels from affected animals were incredibly low on Farms 1, 2, 3, and 5. They were well below 100 μ mol/L which is considered the minimum liver copper level before clinical copper deficiency might be seen. Seven animals sampled over four of the farms had copper levels below the limits of detection at 50 μ mol/Kg (NZVP).

Copper is an essential component of Lysyl oxidase an enzyme which produces cross-linkages between collagen and elastin fibrils. It is felt that the bone fragility related to nutritional copper deficiency is the result of decreased bone collagen cross-linking which changes the biomechanical properties of the bone. The highest demands for copper occur in young growing animals, late gestation and in early lactation.

Four of the farms listed above had the following pertinent histories:

Farm 1 - Liver coppers measured an average of 2250 μ mol/kg in Autumn 2012. This farm has continued to feed PKE, but has been using a nil copper trace mineral mix since Spring 2013. It has had fractures in both 2 and 3 years olds (the majority during the current mating period). These two age classes have received no other forms of copper supplement. Mature cows in the herd still have adequate copper reserves.

Farm 2 - We have seen 2 fractures this season in their 3 year olds and this same age group had 4-5 fractures in their cohort last season. Initially it appeared that copper supplementation should have been adequate (supplied 250mg/day of Copper Sulphate in a commercial mix). However further questioning revealed that the heifers were run as a singular herd last year on a block on the farm which was not supplied by the dos-a-tron!

Farm 3 - The last time heifers were supplemented was at 7 months of age with a 10g copper needles (bolus). Interestingly on this farm 7 heifers sustained fractures in the month of August. The farm started immediately supplementing with copper chelate (400mg/cow/day) and no further fractures have occurred since.

Farm 5 - Heifers on this farm received a 10 gram copper bolus as calves and had received nothing since. The heifers in this line were split between 2 farms. One farm has had 15 fractures to date this season and the other has had 7. The new manager on the farm had consciously ordered a trace mineral mix that did not include copper this season as he was feeding PKE. He also reported that he could not get his heifers to eat more than 1kgDM PKE/day.



Typical stance of a humeral fracture - totally non-weight bearing in front left (note the healthy looking dark coat)

Farm

Farm 1

Farm 2

Farm 3

Farm 4

Farm 5

Why the sudden increase in humeral fractures over the last few years?

Without doubt due to the increased awareness of this condition farmers are reporting more cases to their vets. This however does not explain why it wasn't a commonly recognized condition 10 years ago. So what has changed?

I hypothesize that there has been been two significant changes in the last 10 years which have been catalyst to the problem.

1) The majority of farms (in our area at least) now use in-line-mineral dispensers e.g. Dos-a-trons to supply trace minerals via drinking water throughout the majority of the lactation.

2) Palm Kernal Extract which has a high copper content is now a common part of the diet on many NZ farms.

Our practice routinely performs liver biopsies on the majority of our client's farms in the Autumn period. It is typical to see herd average liver coppers exceeding 1000µmol/kg and frequently these are above 2000µmol/kg. As a result we now spend significantly more time discussing the risks of chronic copper toxicity rather than deficiency. I feel the consistent reporting of high herd copper status has resulted in



The dissected fractured left humerus (note the oblique angle) with the intact right humerus as a comparison. Xrays of the left humerus show what appears to be healthy thick walled cortices.



two major changes in supplementation practices:

- 1) Many farms that feed PKE have now started to use low copper or nil copper blends in their trace mineral mix in response to toxicity concerns.
- 2) A general indifference has developed to supplementation of young stock with copper - i.e. "my cows are really high in copper therefore I don't need to supplement my heifers and calves

either!" A significant percentage of heifers in our area are not being supplemented in the autumn before calving.

The sequelae to the above is that:

- 1) We have mature cows that have high/adequate levels of liver copper stores in the herd (from the PKE and/or historic daily dosing)
- 2) But incoming heifers that have nil or low copper reserves that are not receiving any additional supplement apart from PKE. Many farmers will tell you that heifers are slow to start eating PKE.
- 3) This poses limitations for blanket recommendations of future herd copper supplementation.

Herd size	#Heifers	# cases	Ages of Affected Animals	Liver Copper µmol/kg
650 cows	130	6	3 x 3 year olds 3 x 2 year olds	<50µmol/kg <50µmol/kg 50µmol/kg
500 cows	-	2	3 year olds	<50µmol/kg
800 cows	170	7	2 year olds	<50µmol/kg <50µmol/kg
1300 cows		2	2 year olds	140µmol/kg
900 cows	220	15	2 year olds	<50µmol/kg <50µmol/kg



Uddernews

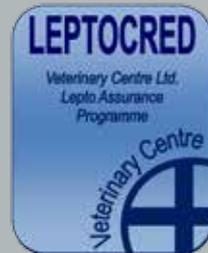


Many of you will now be taking time off. This means that the milking team will change and there could well be relief milkers employed. Make sure that the systems you want followed are known to your existing staff and any relief milkers.

- Is the teatspray recipe easy to follow?
- Are mastitis cows treated once or twice a day?
- How are cows with mastitis Marked, Recorded, Separated, and Treated?
- Are the 3 Titters easy to recognise? (Are new or clean leg bands needed?)

■ Is there a BMSCC threshold above which you want the herd stripped? With good systems in place the risk of a spike in mastitis cases or penicillin in the vat are minimised and this should mean

a relaxing holiday. Remember if there is a chance that antibiotics have got into the vat we can test for all the Penicillin type drugs and the Tetracyclines at the Oamaru clinic.



IMPORTANT NOTICE

We require all existing Leptocred officers to make a time to sit down with our vets for their 2014 annual audit and reaccreditation consult for 2015. Leptocred officers still due for re-accreditation will be contacted in the next two weeks.

Babies Corner



Blake McMurtrie (Kirsty & Jason)



Hugh Newton (Hamish & Sarah)

Welcome our new vets

Lauren Strange



Lauren is from the Waikato and is joining the team in Waimate. She is interested in all aspects of mixed animal practice but particularly enjoys the dairy animal work, and is keen to work with our farmers. Lauren and her husband, Brett have purchased a house in Waimate and are eager to explore their new home in the south island. Her other interests include netball and deer hunting, and we've already recruited Brett for the rugby and golf teams!

Tessa Boys



Tessa grew up in Timaru and is excited to be back, working in the South Island. Tessa has joined the Oamaru Clinic. She plays social netball and loves spending time outdoors, especially in the Central Otago region where she fishes the many lakes for trout and salmon. Tessa enjoys all aspects that the Oamaru Veterinary Centre has to offer, however she has a passion for dairy cattle medicine, in particular, herd health.

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light in animal
health"*

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