

Necessity is the mother of invention

BY DIANNA MALCOLM



John and Donna McCarty – Kaponga, Taranaki

John and Donna McCarty no longer use intermammary antibiotics for mastitis or dry cow treatment, which has saved them money and improved herd health. The couple farm 142 hectares (350 acres) at Riverlea near Kaponga, in South Taranaki (near Mt Egmont) milking 320-head through a 44-bale rotary. They are progressing towards a F8/J8 herd with a production average of 500-550kg Milk Solids (MS) per cow. Their production is sitting at 1250Kg MS per ha, and they recently recorded their highest production on-farm at 159,970Kg MS. Their average BMCC [Bulk Milk Cell Count] runs at 120,000. Their local vet practice acknowledges all of its clients' level of antibiotic use on-farm with a ranking between one and 10 – with 10 being the highest. The area average is seven. McCarty's is 1.5 – one of the lowest within this practice.

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Drama to relief

Their secret?

In part, a chance conversation during a maize overload crisis. John said they were smashed by Cyclone Gita four years ago, and his maize crop, which was poised to yield 23T/ha was torn down to 15T/ha. He decided the fallen crop left in the paddock was too valuable to waste, so after discussing it with his vets, he made the call to carefully feed the paddock off in small breaks. Although it had never been done, and the vets warned against it, it was working...until the cows broke out. “I'd got through 30 days, and they were cleaning up the cobs like they were turnips.

” John said. “They were loving them. And, then the morning after they broke out I got the call, ‘There's four cows down in the paddock, two down in the shed, and one on the race.’ I got to the shed and by that time there were cows down all over the place with acidosis.

We got two vets out, and started treating them as fast as we could. John estimates the cows lost an estimated 0.5 – 0.75 in body condition score and he was dreading what lay in front of them at calving because of the metabolic trauma and his herd's rapid weight-loss.

Probiotic Revolutions solution

Enter, Probiotic Revolution's Chris Collier.

“Chris said his product would help. And, at that point, I thought: ‘I'll give anything a shot’.”

Chris recommended adding BioRumen DFM, a Direct Fed Microbial, which has been fortified with unprecedented amounts of probiotic bacteria, probiotics, enzymes and yeasts. Importantly, 70-80% of a mammal's immune function is driven by the bacteria in their body – most of which is in the lower gastrointestinal (GI) tract.



So getting the right concentrations of microencapsulated probiotics to the sweet spot – to outcompete pathogenic bacteria – allows cows to fight infection on their own. The yeasts also stabilise the rumen at a healthy pH of 6-7.

John said he couldn't believe how well it worked.

"Honestly, by the time they had all calved you wouldn't have known how sick they had been," John said. "They all looked a picture. We had no acidosis, no retrained cleaning, our SCC was 110,000. And, that was the year we achieved a production record by 7000KgMS – even though the cows started from the worst position possible."

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Waste not, want not

John and Donna have a feed pad, because they believe that maize is an expensive feed to have trampled into a paddock. They don't feed meal in the bale. They add BioRumen DFM to their Maize silage, and the cows have access to it before the afternoon milking. John said he already used organic fertilisers, and the probiotic path had always interested him. "I'm not organic and I probably never will be," John said. "But I've been interested in not using antibiotics to treat mastitis.

I look at what city people are saying, and I don't think the overuse of antibiotics in cows is good in general.

"I wanted our antibiotic use to be as minimal as I could make it."

"On the seventh morning I missed her completely because the swelling had gone"

Changing their approach

They have now completed two seasons using no antibiotics for mastitis. This season the 25 clinical cases of mastitis in total have been instead treated with a potent oral probiotic drench for four to seven days. It cost \$11.50/treatment, with nil milk withhold. Twenty-four have recovered. One was culled. "You know, I had some cows that I thought would never come right.

One had a rock-hard quarter, and when I've treated those cows in the past with antibiotics I'd get maybe a 30 percent cure rate," John said. "With the ImmunoMax drench [a treatment product which includes 190 billion Colony Forming Units/dose], five days after I started, the quarter was still rock hard, and I remembered that Chris [Collier] said it might take six or seven days. I drenched her again on the sixth

morning, and I noticed the quarter was starting to soften.

"On the seventh morning I missed her completely because the swelling had gone, so I never even saw her come into the shed. I deliberately made sure I caught her on the next milking, and I stripped her, and she didn't have a trace of mastitis anywhere.

"That's what sold me on it."

Dry cow revelation

Off the back of the milking herd results, John decided to extend the probiotics into his dry cow preparation, and also into the springer paddock as a trial on problem cows.

"I started to think, if we could treat cows so well through the season, there must be another natural product which could work as a dry cow therapy," John said. So before drying off last season, they didn't use any traditional intermammary antibiotics on the herd. However, they did draft and dose 77 SCC-problem cows with ImmunoMax through the water trough.

The qualifying criteria included:

1. They either had one clinical case of mastitis during the season.
2. One herd test over 300,000 SCC.
3. Or two herd tests over 150,000 SCC.

"That's what sold me on it."



It cost John and Donna just over \$17/cow (with the added benefit of nil withholding), compared to approximately \$28/cow for antibiotic dry cow treatment (without teat seal).

The proof

The rest of the herd were fed the herd's probiotic, BioRumen DFM – albeit in higher dose rates – during the last three weeks of their dry period. “Of those 77 problem cows, four came in with clinical mastitis and the overall herd SCC is similar to last year at around 120,000,” John said. “It could have been luck, but I’m happy to promote this as an alternative to antibiotics.

“And, as good as these results are for us, it’s also been nice that we don’t have to panic about withholding times, and getting caught out at the factory if a cow calves early.

“I’m going to use it again this season. If I get two or three years in a row with the same results, it will speak for itself.”

As a comparison, In 2017 (before John and Donna had included probiotics for the herd) they had 34 cases of mastitis at calving (9.5%); in 2018 and 2019 (with BioRumen included) there were 17 cases (5%). This year it was 17 cases again, until they had to drop out the probiotics (see above).

Lightbulb moment

This season has given John some additional clarity.

“It could have been luck, but I’m happy to promote this as an alternative to antibiotics.

“I usually let the dry cows clean up behind the milkers on the feed pad [which includes BioRumen DFM]. But, as I got towards the end of calving, I couldn’t do that anymore, because I’d added Lime flour for the milkers, and it impacts on milk fever in the dry cows.

“So, my last calvers had two to three weeks without anything, and I felt the consequences. I had two or three come in with retained placentas, I had mastitis in about four of them, I had acidosis in a couple. And, I thought, ‘I’ve calved 300 cows without a problem, and now on these last 40 I’ve got all this stuff going wrong’.

“And, I’m sure it’s all because we stopped feeding the probiotics. As soon as they calved and they got back on the probiotics again, they cleaned up and came right. Their eyes looked good again, and they were milking strong.”

Things coming together

Next season they will include a contract milker in the operation, and they intend to step it up again by including Probiotic Revolution’s dedicated lead feed, Super Start. They also feed Calf Xtreme, a powerful daily probiotic powder in the calf milk.

John and Donna McCarty farm 320 cows on 350 acres in coastal Taranaki. For 2 years now they have eliminated the use of antibiotics in the treatment of mastitis.

They are looking forward to having more time to study the impact of probiotics on the calves once they get more hands on deck – in between John’s new venture – bee keeping.

“It’s just that it’s been hard until now in terms of the workload with just Donna and myself here.”

“The timing is perfect for us.”

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