

Talk STRAIGHT

SOUTH ISLAND DRY COW MANAGEMENT. IT'S ALL HERE IN BLACK AND WHITE.



Turning up the pressure on milk quality

Prior to Peter and Christine Bonifacio's move to South Canterbury from Taranaki with their Friesian herd 14 years ago, spring mastitis wasn't much of a problem, but things were a little different in their new home.

The Bonifacios bought and converted a cropping and drystock property at Milford, seven kilometres east of Temuka. They are now milking 400 cows and Christine rears up to 280 calves each year. These include 100 Friesian bull calves reared on contract, about 100 of their own replacement heifers and a surplus of heifers for sale.

Peter says they wintered cows on farm in Taranaki, whereas most of the animals graze off farm for seven weeks over winter in Canterbury. They come back in good condition but are well bagged up at calving and are more prone to spring mastitis, he says.

The Bonifacios and their herd manager take special pride in keeping their milk quality high, so have always acted decisively when problems emerge. "In the beginning we tried using Cepravin® dry cow therapy (DCT) only on the worst cows, with a cheaper product on the rest."

They also tried using a teat sealant on the lower cell count cows, but Peter says that was a bit risky if not done properly. "It can make things worse if you get it wrong." They use a teat sealant on the heifers and that protects them leading into their first season, but after that their strategy is simple: whole-herd treatment with Cepravin at dry off.

"After some trial and error we found that works best for us; we've been doing that for a number of years now," Peter says.

The aim is to keep bulk tank somatic cell counts (BTSCCs) below 150,000 through the season, and this year they are staying well inside that target with levels staying below 100,000 throughout spring. If cell counts start to creep up towards the 150,000 threshold they will start looking actively for mastitis cows and strip the herd when they need to.

By producing more than enough replacements, Peter has choice, enabling

more rigorous selection, especially on production and somatic cell count.

It's been a pleasing season so far, with production well ahead of 2010, which was affected by a wet spring. The Bonifacios and their staff have been quietly turning up the heat on milk quality, paying attention to detail and ticking off the risk factors. It's working well for them. ■■

"After some trial and error we found that works best for us; we've been doing that for a number of years now," Peter says.



Peter Bonifacio

Avoid temptation to cut corners



Duncan Crosbie

Along with most dairying regions, conditions in South Canterbury were benign through winter and spring with mostly trouble-free calving, and veterinarian Duncan Crosbie of Vetlife Temuka has seen little mastitis except for the

occasional hot spot. The November cold snap that dumped unseasonal snow further south turned the cows off somewhat, but overall the region has been enjoying a great start to the season.

Duncan says the advantages of whole-herd treatment with DCT are widely accepted, although when it comes to the detail of mastitis management for a farm, "no one size fits all".

Several years ago when there was a dip in the payout, many farmers economised by using cheaper dry cow products or not treating the whole herd. The results were apparent during the dry period and calving that followed, Duncan says. "Some people learnt lessons from that. Even though there was a fairly mild winter and spring after that, their decisions still came back to bite them."

He points out that there is a lot more to a successful programme than choosing

the best product. "We encourage our clients to keep their cows away from the shed for at least a week after the DCT has been administered. They should go onto clean, dry pasture and keep well away from mud. We also teach them to keep the teats clean and spray them carefully afterwards."

Duncan says Vetlife can help train staff in good techniques and hygiene practices. In cases where there has been previous trouble they can also pitch in and assist with administering the therapy. "When staff are confronted with 1,000 cows to do, there can be a temptation to cut corners and rush the job. We try to discourage that." ■■



Check out other dairy farmers' success stories. And be in with a chance to win a Cepravin apron. www.milkingit.co.nz

Mastitis can impact on a dairy farming business in many ways

All dairy farmers know that mastitis is a problem. But its full impact on a farm business is not always clearly understood. Clots in a cow's milk may be the obvious result of mastitis, but it's the unseen effects that have the largest impact on your business.

The direct costs of mastitis are well recognised and consist of:

- Cost of labour
- Discarded milk
- Culling
- Loss of heifer/cow (death)
- Penalties or lowered milk quality payments
- Decreased milk production
- Cost of treatment.

When we look at the tangible costs using a tool like the Smart SAMM (Seasonal Approach to Managing Mastitis) 'Gap Calculator' we see them mount up quickly.

But there are follow on effects for other areas of the business and numerous consequences that are not captured in a cost calculator. Among the many other impacts of mastitis are:

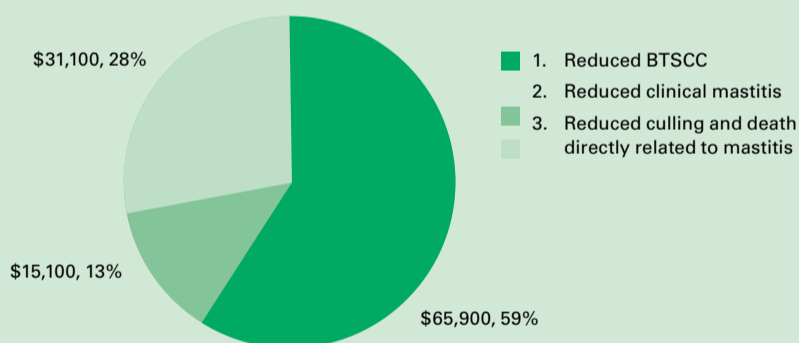
- **Time** – The time taken dealing with mastitis limits the time available to do other things properly. The period of peak incidence of mastitis cases is also when farmers are dealing with calving cows, collecting calves, metabolic disease, post calving illness and diseases of the reproductive tract that can impact on the cows' production as well as their ability to get back in calf.
- **Stress** – With all that is going on, spring is a stressful time of the year anyway. Dealing with mastitis at this time, or an escalating cell count later in the year, can add further stress.
- **Staff** – Dealing with a significant mastitis problem is difficult for staff, impacting on job satisfaction and

adding pressure to the job. It is well documented that there is a very high turnover of staff in New Zealand dairy farms. It is likely that animal health issues such as mastitis play a part in this.

- **Animal welfare** – The vast majority of farmers pride themselves on looking after their stock well. Mastitis can be an uncomfortable and often painful condition for cows. Reducing the occurrence of mastitis is undoubtedly in the best interests of the cows.
- **Calves** – As well as limiting time to manage calves well, mastitis in the herd can reduce the quality of colostrum and milk they are fed. Increased exposure to antibiotics (either before they are born or via milk from treated cows) and bacteria can occur. Adding mastitis milk to colostrum reduces the ability to store the colostrum.

- **Milk quality and market access** – Dairy farmers are producing a food product. A quality product is important to satisfy the needs of customers with ever increasing expectations. This is reflected in an increased focus on SCCs by New Zealand dairy companies of late.
- **Season length** – SCCs increase towards the end of the season with declining production and the spread of contagious bacteria throughout the lactation. This can lead to the need to dry off a significant proportion of the herd earlier than necessary.
- **Reduction of management options** – Options such as once a day milking (in a feed pinch, for ease of management or to maintain cow condition) are not possible in herds with a high SCC as this increases SCCs further. ■■■

Example of direct financial losses due to mastitis.



This graph is generated by the Healthy Udder Gap calculator which varies from farm to farm.



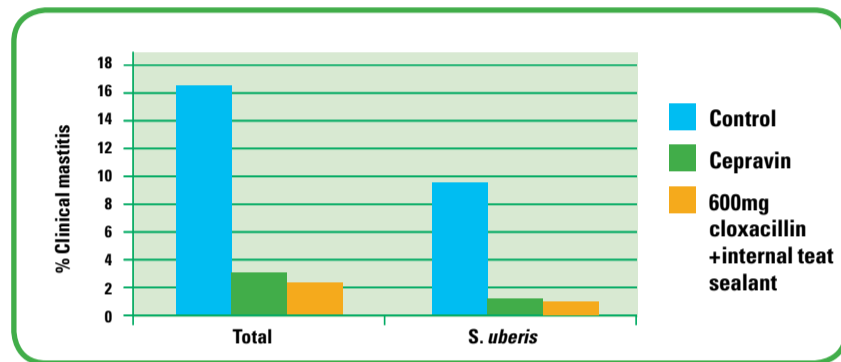
Talk STRAIGHT CONTENT

- Cover story—Turning up the pressure on milk quality 1
- Avoid temptation to cut corners 1
- Mastitis can impact dairy farm business in many ways 2
- Two tubes per quarter or one? 3
- Culling for fertility may take precedence over cell count 4
- Spectacular turnaround in udder health gets farm back on track 5
- Demise of calving induction means fresh approach 6
- South Island herds on the increase 6
- Effective management of DCT 7
- Minimising mastitis at drying off 8
- Partial insertion—when not going all the way can be a good thing 9
- Making the most of your milk quality consult 10
- The *Smart* approach to minimising mastitis 11
- Managing mastitis—in for the long haul 12
- Dairy Women's Network opens up learning opportunities 12

Two tubes per quarter or one?

Drying off is a difficult and stressful job at the best of times, so most people like to minimise the number of jobs they need to do at this time. If you dry off with combination therapy (an antibiotic DCT plus an internal teat sealant) you will be doubling up on cleaning teats and inserting tubes. So if you are going to spend more time and effort doing it, you'd like to think you are going to get extra benefits.

In fact, scientific research shows this is not the case. In a study comparing Cepravin and combination therapy in New Zealand, Woolford¹ found there was no difference in prevention of new infections throughout the dry period and in the spring. In other words, for all the time, effort and cost of inserting two tubes, you are ending up with a result that is no better than if you used a single tube of Cepravin.



The proper technique for administering combination therapy is to clean the teats, insert the DCT, massage the DCT up the quarter, re-clean the teats, insert internal teat sealant then teat spray. As you can see, there's a lot of fiddly work involved, and a lot of potential for accidental contamination of the teat that could cause severe mastitis. This is a very real risk, and throughout the country there have been a number of horror stories of multiple deaths in herds after combination therapy.

Ensuring that both no quarter is missed and no quarter gets a double treatment is important to maximise cure and avoid an increased risk of residues around calving. As there is more to do, with two tubes to administer to every quarter, there is more scope for error.

Using combination therapy is a more difficult, expensive, frustrating and risky job. All of this would be acceptable if the result were better than a single tube of Cepravin – but there is no proof that this is the case.

If you have a very significant challenge on your farm and feel that you need more than the very good protection that Cepravin provides against spring mastitis, research from the United Kingdom² shows that adding a teat sealant to Cepravin (rather than a short or medium-acting DCT) is the only way to achieve this. No other scientific research from around the world has ever shown anything to be better than Cepravin at preventing mastitis – including combination therapy. ■■■

1. The prophylactic effect of a teat sealer on bovine mastitis during the dry period and the following lactation, M. W. Woolford et al, New Zealand Veterinary Journal 1998
 2. The use of a cephalonium containing dry cow therapy and an internal teat sealant, both alone and in combination, A. J. Bradley et al, J. Dairy Sci. 93:1566-1577, 2010

The Cepravin 10 point consultation promise.



- C**ure existing infections
- E**coli mastitis protection at dry off
- P**revent dry period mastitis
- R**educe spring time clinical mastitis by up to 50%
- A**reduction in SCCs next lactation
- V**alue of 30 years of field trials and results
- I**n a great bucket
- N**o worries if you or your cows leave the farm in the dry period
- #**1 market leader with proven economic benefits
- 1** tube – no hassle

Culling for fertility may take precedence over cell count



The ‘induction reduction’ currently underway in the industry will increase pressure on dairy farmers to manage mastitis and milk quality more carefully, says veterinarian Jason Darwen of Clutha Vets in Balclutha.

The percentage of a herd that could be treated with drugs to induce calving was 8 percent this year, down from 15 percent in 2010. Next season only 4 percent of a herd will be able to be induced. The reduction is being driven by the dairy industry and veterinarians in response to animal welfare concerns about the practice.

Jason says that with the gradual removal of induction as a management tool, culling pressure will be focused almost entirely on fertility. “Unfortunately it’s not always the best and youngest cows that are the most reliable calvers – sometimes it is the nine-year-old three-titter!”

Induction has provided a bit of a crutch to the industry to compensate for poor heifer rearing and poor integration of

heifers into the main herd, he says. With that safety net removed, culling will focus on fertility and there will be much less scope to cull on SCCs.

“With inductions limited to 15 percent last season there was little impact, but some struggled this season at 8 percent, with a more strung-out calving. When the limit is reduced to 4 percent next year we might see people accepting later calving, reducing stocking rates or trying different supplementation options. They might also be prepared to invest more to ensure that younger cows get in calf earlier.”

There will also need to be much greater emphasis on good mastitis management. “That will entail many things but will include the selection of a good, long-acting DCT that gives a good cure rate and sustained protection through the dry period. It’s especially important here in South Otago where cows are often wintered on brassicas in muddy conditions.”

Jason says herd homes are also becoming increasingly popular in the

region. Although cows come through winter in good condition under the shelter, there is an increased mastitis challenge.

“If a farmer invests in a good-quality, long-acting DCT there is a lot they need to do to protect that investment. This means everything from a good dairy shed, the right liners and good teat spray in the correct concentration, to checking for problems like stray voltage in the shed.”

Another aspect of herd management that can be overlooked, but which has a big effect on mastitis and milk quality, is the handling of heifers. Jason encourages his clients to lavish plenty of care on each new generation. This includes using a teat sealant, calving them before the main herd, and bringing them in and teat spraying a few days before calving if the weather is bad. “Heifers are mainly affected by *Strep. uberis*. It’s fixable with antibiotic, but if it turns into a major infection it can cause lasting damage.”

Jason says good teamwork between the veterinarian and farmer during their annual consultation and milk quality review is the secret to designing a successful mastitis management plan that takes care of all risk factors. ■■■

“If a farmer invests in a good-quality, long-acting DCT there is a lot they need to do to protect that investment. This means everything from a good dairy shed, the right liners and good teat spray in the correct concentration to checking for problems like stray voltage in the shed.”

Spectacular turnaround in udder health gets farm back on track

When James Machin took over the management of Paul and Karen Tunnah's 480-cow dairy farm in Clydevale, South Otago in March 2010, he knew he had his work cut out for him.

There were about 80 three-titter cows and virtually no mastitis treatment had been happening. BTSCCs were in the 300,000s.

"We found the previous sharemilker hadn't been aggressive enough with the early detection and treatment of mastitis cases," say Paul and Karen. "Dealing with the after-effects of this was heart-breaking. We knew that production, mating, animal health and calving could all be affected."

At dry off on 23 May 2010 the whole herd was given a long-acting cloxacillin/ampicillin DCT and about three-quarters of the herd were wintered in two herd homes. The treatment didn't appear to give enough protection given the length of the dry period and the different environmental challenges from the wintering system, and by 10 July last year clinical cases of mastitis were appearing about every second day.

Things didn't get any better once calving started – at the first pick up for the new season the BTSCC was 800,000.

"Luckily for us James got in behind our need to manage the herd aggressively, although we doubt he realised the long hours and hard work it would involve," says Paul Tunnah.

"We found the previous sharemilker hadn't been aggressive enough with the early detection and treatment of mastitis cases."

Paddle testing every animal after calving and before joining the milking herd became farm policy. All animals were paddle tested twice a week until after calving, then a once-a-week policy was introduced.

All the clinical cases were treated and SCC came down to 120,000. While that brought the problem under control for the time being, there was a heavy cost in terms of lost production and lactating antibiotic treatments. By 20 October 2010 the entire season's animal health budget had been wiped out. From then on the high SCC cows were drafted into a separate herd and milked last, with only the really bad cases treated. "Fortunately about half of them cleared up by themselves," says James.

Throughout the season James did regular paddle testing so that any clinical cases could be picked up and dealt with early. While this meant a lot of additional work for him and his team, it had to be done.

"A high empty rate in 2010 didn't help matters and we had to keep everything that was in calf," Paul says, "but in May this year we wielded the culling axe. This meant a lot of older cows and high SCC cows went down the road."

"We all knew we couldn't carry on like this and a turning point came when James attended a seminar on the dry period hosted by Clutha Vets. It was here that he heard about whole-herd treatment with Ceptravin. We also considered using another long-acting DCT with a teat sealant, but we weren't keen as it meant two tubes going into each cow with the risk of damage to the teat canal."

The cephalonium treatment's long-acting period of activity – up to 10 weeks – was another selling point. After discussions with James and the vets, Paul and Karen decided to make the change.

"When our cows went into our two herd homes for the winter, we were quietly optimistic that the start of this season would be a positive one," Paul says.




James Machin

The turnaround has been stunning. "We had no winter mastitis in 2011 and we were already sending milk off three days before we were due to start calving. The cell count for our first pickup was 140,000."

By late October the SCC was hovering around 100,000 - 120,000 compared with 280,000 the previous season. Milk production was tracking 23 percent ahead of the previous year.

Although the improvement this season has been spectacular, James still monitors udder health very closely. "It's been an interesting challenge. We've all learned more about mastitis in the past two springs than we had in the previous 10 years," James says.

"We'll definitely be sticking with Ceptravin – there's no question about it," Paul concludes. 

The turnaround has been stunning. "We had no winter mastitis in 2011 and we were already sending milk off three days before we were due to start calving. The cell count for our first pickup was 140,000."

Demise of calving inductions means fresh approach

Three months into the season after a dry winter and mostly benign spring, milk flows around North Otago were pumping 4-8 percent ahead of last year with Fonterra's tankers working flat out to keep up with supply.

It has been a dream start to the season and veterinarian Hamish Newton of The Veterinary Centre, Oamaru, says there has been more to it than just the good weather. "There is," he says, "a lot more science and good planning behind the management of drying off and calving, which means farmers can take greater advantage of the good conditions."

The Veterinary Centre's clinics look after about 160,000 dairy cows in the region and Hamish says there has been a huge swing towards drying off based on body condition score and predicted calving date as measured by the vet practice.

"About 80 or 90 percent of our clients take advantage of this service; it means they can plan more accurately, milk for longer and have a shorter dry period of between 60 and 80 days. There is a huge emphasis on the six-week in-calf rate and days in milk, which has a direct bearing on profitability."

Hamish says there is a change in mindset occurring among progressive dairy farmers, who are managing the dry period and calving far more actively than before. "Inductions aren't going to be available as a management tool for much longer, so people are changing to adapt – they're really sitting up and taking notice. Once cows have had four or five lactations their calving date can drift back by up to two months, so with induction no longer an option it's less viable to keep these older cows in the herd."

Incidentally these cows often have higher SCCs, so removing them from the herd contributes to improved milk quality. This may well be one factor in the excellent milk quality for the season to date. Hamish says average SCCs are down on last season by 80,000-100,000, a further sign that things are going well.



Hamish Newton

Another key factor has been the widespread use of whole-herd DCT with a long-acting product. Hamish's practice encourages whole-herd treatment and he says more and more people are using Cepravin for the best results. This, combined with a tighter dry period, is making a big difference. "It's a lot easier to manage mastitis through the dry period now, and we see very few clinical cases in the herds we look after."

Once farmers have been persuaded to try whole-herd treatment with Cepravin, they can see the advantages and stick with it, Hamish says. "They dry off based on predicted calving date and body condition score, then see a better cure rate, better protection during the dry period and calving, and lower cell counts the next season. It's a no-brainer really." ■■■

South Island herds on the increase

The average herd size in the South Island is ever increasing, with the current average herd being around 540 cows and many farmers milking 1,000 cows or more. While the milk quality issues seen in the cows remain the same regardless of herd size, some of the challenges in managing them are more significant in larger herds.

With more cows to milk, there is a risk that emphasis can be more on cow throughput, with less time and manpower per cow to allow adequate observations and mastitis management.

Many large herds are relatively new or expanding. This reduces the ability to cull cows and adds the risk of the introduction of new animals to the herd.

An obvious difference between large and small herds is the number of staff working on the farm. Often people with little or no experience are hired and this, combined with high staff turnover on some farms, adds a further challenge to mastitis control in large herds.

Despite all this, many large herds are being managed for mastitis exceedingly well. Accurate records, goals that are shared with the whole team, ongoing education of staff, easy to follow procedures, monitoring, the right advice and a willingness to invest in proven preventative measures all contribute to success.

Vet consultation, advice and monitoring represent great value in large herds

Even well under the threshold for a SCC grade, there are significant costs due to mastitis. Mastitis can become a very expensive problem in a short period of time. Although the losses are the same percentage of the milk cheque on both a small and a large farm, a large-scale farm may be losing 10 times more in real dollars during the

same period. The cost of utilising a veterinarian to diagnose any issues and keep things on track becomes relatively cheap on a large-scale farm when weighed against the daily income loss.

The cost of utilising a veterinarian to diagnose any issues and keep things on track becomes relatively cheap on a large-scale farm when weighed against the daily income loss.

Vets are increasingly active in monitoring the mastitis and milk quality status of their clients' herds. Often one or more vets within a practice have a deeper knowledge of managing milk quality and can provide a good independent assessment of the problem. The use of LIC (Livestock Improvement Corporation) and dairy company records as well as tools like Infovet allows a detailed analysis of the mastitis situation on a farm and areas on which to focus. The vet is a vital cog in the SmartSAMM program and can help clients to make the most of the Healthy Udder tools.

A key to success on many large farms is having staff well trained – again the economies of scale make it viable to have vet training specific to an individual farm.

Investment in premium products pays dividends

Given the challenges in large herds, prevention is better than cure. When things go wrong it is hard to get on top of them and costs can mount up quickly. In the dry period it is vital to cure as many infections as possible. It is equally important to prevent new infections – especially when cows are grazed off the farm and out of sight. Applying a premium long-acting DCT such as Cepravin helps to manage this risk, saves time, stress and money and makes the most of the opportunity to 'reset the clock' in the herd. While the investment in good milk quality management is greater in a large herd, so is the return. ■■■

Effective management of DCT

DCT is an animal remedy for the treatment and prevention of mastitis from drying off through until calving. Dry cow treatments need to be active for an extended period of time to be effective, therefore their withholding times are considerably longer than lactational treatments. Due to the longer withholding periods associated with DCT treatments, farmers need to ensure that they have effective systems and procedures in place to minimise the risks around DCT use.

Golden Rules for DCT use:

Mark it

Cows to be treated with DCT must be marked prior to treatment. The importance of this cannot be underestimated, especially when cows are being dried off and treated prior to the rest of the milking herd. The markings need to be clear and positioned so that milkers will easily see them if a DCT treated cow gets back in the milking herd. Ensure all staff know the marking system for DCT treated cows.



Record it

Keeping accurate records of cows treated with DCT ensures that they can be easily identified if required and withholding times checked at calving. Always record the cows to be treated with DCT prior to treatment.

Separate it

Cows to be treated with DCT need to be separated from the milking herd prior to treatment and only treated once all the milking cows have left the dairy and the milk delivery line has been disconnected from the vat. Once the cows selected have been treated they must be put in a secure paddock completely separate from the milking herd and not situated next to the milking herd or where they walk past.




Treat it

Prior to treating, ensure that your date of dry off is checked against your expected calving date, ensuring that your calving date is not within the withholding period for the DCT treatment being used. DCT must only be administered after the cows' final milking of the season. Cows about to be dried off need to be milked at least daily up until the date selected to dry them off and DCT must not be administered to cows that have dried off or to quarters on a cow that are dry. When administering DCT treatments ensure that you have a system that ensures only one tube of DCT is administered per quarter.

DCT must only be used at drying off and it must not be used once a cow is dry. If during the dry period a case of mastitis is identified, treat with a lactational treatment and adhere to the withholding time for this treatment once the cow calves.

Withhold it

It is important to remember that the withholding times on DCT treatments include the number of days from dry off, plus eight milkings after calving. Therefore check the withholding period has been adhered to when the cows calve and have a marking system in place that ensures freshly calved cows are withheld for the first eight milkings (colostrum period).

If the whole herd has been DCT treated, you need to be careful around the supply of your first few loads of milk to reduce the risk of an inhibitory substance grade. To reduce the risk, ensure that the first load of milk supplied is more than 400 litres and that there is a good number of cows that make up the first load, and that they have been milking for well over eight milkings. 

The key to minimising the risk of inhibitory substance grades from the use of DCT is having good systems and procedures around their use on farm.

Minimising mastitis at drying off

The last thing you want to do at drying off is to introduce a new infection into a previously healthy udder, but unfortunately it does happen. The worst case scenario occurs when bacteria are introduced into a teat via a contaminated syringe tip or teat end. Often these bacteria are not susceptible to the antibiotics in DCTs, and the resulting mastitis can be severe or even fatal.

But it's easy to forget that management before and after drying off can also increase the likelihood of new infections by increasing contamination of the udder, lowering the immunity of the cow, or reducing the effectiveness of DCT.

Following best practice throughout the drying off process will minimise your risk of doing more harm than good at this critical time.

Before drying off

- Once daily milking to reduce production before drying off is usually not needed, unless the herd is producing more than 10 L/cow/day.
- Skip a day or every other day milking should definitely be avoided, as it will actually increase cell count and susceptibility to mastitis.
- Reduction of feed intake before drying off is only necessary if the herd is producing more than 10 L/cow/day.

Drying off

- Don't take on too much at once – if necessary dry cows off in batches over a few days. Tired people cut corners and make mistakes, and those mistakes could be very costly.
- Don't rush. If you are doing the job well you should expect to do about 20 cows per hour.
- Ensure that all staff members involved are fully trained.
- Don't warm DCT tubes in water, as you will create a soup of bacteria, which can easily contaminate a syringe tip.
- Clean all teat ends thoroughly with wipes or cotton balls soaked in 70% alcohol. Start with the front teats, then do the back teats – this reduces the chance of wiping dirty arms on clean teats.
- When inserting DCT, start with the back teats and do the front teats last, again to reduce the chances of wiping bugs back onto clean teats.
- Insert DCT no more than 3mm into the teat canal.
- Teat spray after DCT insertion.

After drying off

- Put cows onto clean, dry pasture. Avoid paddocks that have been used for effluent spreading.
- Check cows in the paddock daily for swollen quarters.
- Do not bring the herd into the shed to check for mastitis until at least seven days after drying off, as this may trigger letdown of milk, which could disrupt the protective keratin plug at the teat end.
- Don't restrict access to water.

And finally, if in spite of all precautions you do end up with mastitis after drying off, contact your vet. These cows need prompt and aggressive treatment to maximise their chances of recovery. 🏠



Severe mastitis can be the result of poor technique at drying off.



Clean all teat ends thoroughly with wipes or cotton balls soaked in 70% alcohol. Start with the front teats, then do the back teats – this reduces the chance of wiping dirty arms on clean teats.




Cepravin comes in two presentations:

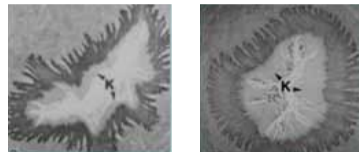
- Herd Pack (shown above) 50 cows/200 syringes
- Large Herd Pack 200 cows/800 syringes

Following best practice throughout the drying off process will minimise your risk of doing more harm than good at this critical time.

Partial insertion – when not going all the way can be a good thing

Administering DCT is not without risk. It has the potential to damage the teat canal and to introduce bacteria. Both of these can put the cow at risk of reinfection and limit the success of the DCT.

Partial insertion (insertion of no more than 3mm of the syringe nozzle into the teat canal) has been shown to do less damage to the teat canal and keratin lining and there is less chance of introducing bugs. A New Zealand study showed that farmers who used partial insertion had a lower SCC than those who didn't. 




Cross sections of the teat canal. The section on the right (after partial insertion) has significantly more keratin remaining than the teat canal on the left (which had full insertion).



Re-design of Ceperavin syringe allows for easier administration

Ceperavin Dry Cow now has a new syringe and cap, making administration easier – whether using full or partial insertion.

- For partial insertion, the operator is able to remove only the tip of the cap, limiting the exposed nozzle to the ideal length.
- If you wish to remove the whole cap, a new, more flexible nozzle allows the cap to be pushed off with the thumb without risk of the nozzle breaking – making this a one handed operation. 

The procedure for partial insertion



1. Hold the syringe in one hand and hold the cap tip with the other hand, with index finger and thumb as shown.



2. Twist the cap off as shown.



3. The syringe is ready for use with partial insertion.

For full insertion/one handed removal of the cap



1. Hold the syringe as shown, place your thumb on the base of the top of the lid and put pressure on your thumb to push the cap.



2. Flick the cap off with your thumb as shown.



3. The syringe is ready for inserting into the teat.

Making the most of your milk quality consult

Drying off is the best time to make some strategic decisions that will affect your herd's performance for the next 12 months.

Don't think of your autumn milk quality or dry cow consult just as the time when you get your DCT requirements sorted. DCT is one of the most important parts of your mastitis management, but it is not the whole story.

This consult with your vet is a great opportunity for you to gain some very useful information about the current mastitis situation on your farm and to look at possible areas of improvement.

It is important that you attend this meeting having gathered some useful herd data and having thought about your herd's udder health performance.

Before this season's milk quality consult do a little bit of homework and planning. It will maximise the value of the consult to you and your business.

What is the udder health situation on your farm currently?

You need an idea of where you are at in order to make improvements.

Have a look at this season's SCC data. This information should be available from your milk company website.

- What is your average BTSCC?
- How many pick ups have you had where the BTSCC was above 400,000 cells/mL?

Look at your records and/or check FarmMinda[®] for the following information.

- What is your clinical mastitis rate? (This is the total number of cases in the lactation and dry period added together and divided by the number of cows milked at the peak of the season.)
- What is your subclinical mastitis rate? (This is the proportion of cows with SCC above 150,000 cells/mL.)

Where would you like to be?

Are you completely happy with the figures above? If not, you need to think about some realistic goals that you would like to achieve. To help with this, benchmark your herd's performance with DairyNZ industry figures. These figures are based on real herd data from the top 10, 25 and 50% of New Zealand dairy farms, and can give you a good idea of what is achievable.

How will you get there?

Using the information above, you and your veterinarian should identify the areas of mastitis performance in which you would like to improve.

Talk about the different options for improvement in different areas. Put a plan in place to achieve these improvements and review this regularly.

Before this season's milk quality consult, do a little bit of homework and planning. It will maximise the value of the consult to you and your business. ■■■

Industry benchmarks



Measure:	Herd performance at different percentiles			
	Your herd	50%	25%	10%
BTSCC				
Average milk SCC (x1,000 cells/mL) for 09/10 season Your average for last season or season-to-date for this year, on your dairy company website.		<200	<150	<125
Number of consignments above 400,000 cells/mL Your number of demerits for SCC on your dairy company website.		3	0	0
Clinical mastitis				
Clinical case rate (% cows) Add up total cases treated for mastitis in lactation and dry period (e.g. from 1 June 2009 - 31 May 2010) and divide by number of cows milked at peak.		15%	10%	8%
Subclinical mastitis				
Proportion of cows with SCCs above 150,000 cells/mL See your Somatic Cell Count Trends Report (LIC) for proportion of cows (mixed age) above 150,000 cells/mL.		20-50%	15-30%	10-20%

Industry benchmarks were derived from data sets from Fonterra, LIC, and Cognosco Animal Health Centre (Morrinsville).

The *Smart* approach to minimising mastitis

The SAMM Plan (Seasonal Approach to Managing Mastitis) is a familiar resource for reducing mastitis and controlling milk quality on New Zealand dairy farms.

However, 18 years after its initial launch, mastitis continues to have a large impact on farmers, staff and cows. “SAMM provided relevant information and best practice, but the delivery approach relied on farmers picking up the information and adapting it to their own herd situations,” says project manager Mark Blackwell, of DairyNZ. “There is growing awareness now of the need to provide more support for farmers to develop effective mastitis control for their herds.”

Developing mastitis solutions

To reduce the impact of mastitis on productivity, DairyNZ is working on a new programme, SmartSAMM, to help farmers improve udder health in their herds.

- Benchmark the herd’s mastitis performance and set realistic goals.
- Identify the gap in performance, or potential for improvement.
- Explore options to achieve improvements.
- Select and implement the most appropriate options for the herd.
- Review progress towards goals.

“It will build on the success and simplicity of the well known SAMM Plan but will also update this approach for today’s farmers, using new technologies, information systems and insights from within New Zealand and around the world,” says Mark.

The five year project is supported by the MAF Sustainable Farming Fund. The initial phase includes piloting, with trained vets and advisors, a new training tool – SmartSAMM Healthy Udder.

Healthy Udder – a new approach

“Healthy Udder is about improving systems and procedures on individual farms, to encourage all members of the farm team to use the right procedures, every milking, every day. This is key to minimising mastitis,” says DairyNZ Senior Scientist Dr Jane Lacy-Hulbert. “As the development and implementation of procedures on individual farms is so critical to the programme, we are piloting Healthy Udder through trained vets and milk quality advisors (QCONZ,ASUREQuality).”

The DairyNZ SmartSAMM project is developing new tools and resources to help minimise mastitis on-farm and improve returns to the industry.

Healthy Udder being piloted

SmartSAMM Healthy Udder focuses on the procedures required to prevent, find and treat mastitis. Healthy Udder features easy-to-follow systems that are supported by robust resources, containing clear images and graphics. Printed on waterproof card, the resource will be well suited for life on the farm dairy. Industry trainer Josh Wheeler, from QCONZ, sees an exciting future for Healthy Udder. “This is developed for practical, farming people. It is visual, thorough and built for life in the dairy. I’m looking forward to introducing Healthy Udder to New Zealand farmers, and to the differences we can make with it.”

Make a difference now

Drying cows off is the best time to impact on mastitis for the next 12 months. Make the most of this autumn by developing a mastitis plan for the whole year:

1. Compare your herd’s mastitis performance in the past 12 months with industry targets and see how you are performing
2. Discuss with your vet the most appropriate dry cow plan for your herd, to achieve your goals for the next season
3. Decide how you will implement drying off this year. Some quick tips and easy-to-follow instructions for treating are supplied
4. Find out more about informal and formal training that vets, advisors and AgITO can provide for you
5. Look on the website for more information in the Farming Resource Centre (animals section): www.dairynz.co.nz

SmartSAMM Healthy Udder can help deliver to your dairy farm:

1. Better systems and procedures

- Fewer mistakes
- Smoother day-to-day operations
- More trust among milkers
- Improved control of mastitis.

2. More proficient team

- Better decision-making by individuals
- Faster alerts to problems and issues that need a change of plan
- Faster recovery of sick cows
- Greater motivation of the team
- Better relations between employers and employees.

3. More production and profit

- More milk solids to the factory
- Less animal wastage
- Lower costs and stress.

How can I access SmartSAMM Healthy Udder?

Trained vets and advisors participating in the pilot **Healthy Udder** initiative are listed in the Farming Resource Centre (animals section) at www.dairynz.co.nz

DairyNZ acknowledges financial support from MAF Sustainable Farming Fund and collaboration from the Dairy Australia Countdown Programme.



SmartSAMM 
The smart approach to minimising mastitis

Managing mastitis – in for the long haul



Robyn and Ian Judd are always on the lookout for ways to do things better and the 213-hectare Waitaki Valley property where they 50/50 sharemilk with Meridian Energy provides them with plenty of scope.

The former North Islanders are in their 11th season in the South Island, of which the last four have been on the present property – one of a number of dairy farms bought by Meridian in preparation for its planned Project Aqua. They are running 700

predominantly Friesian cows that are artificially bred and tailed to Friesian sires. Production last season was 264,000kg milk solids and they're targeting 290,000kg this season – with 30 more cows than last year, this represents an ambitious 5-6 percent increase per head. The 700 cows are more than enough for the “basic” 40-a-side herringbone shed, so there are no plans to expand the herd.

The property is all irrigated, half border dyke and half k-line. All of the herd

are wintered on silage and kale on a 145-hectare runoff owned by the Judds. They grow crops for silage in addition to grass silage and bought-in cereal silage.

Robyn says they have introduced chicory as an annual crop – “the cows just love it.” Palm kernel is bought in when needed to top up the supplements.

In addition to being well nourished, the herd is carefully managed for milk quality. The four full-time Filipino staff are taught all aspects of stockmanship, essential when running a larger herd.

“Everybody is taught to be a good all rounder – if there's a down cow, any one of the staff will know what to do,” she says.

“At drying off we give the cows with SCCs above 161,000 treatment with Cepravin DCT, with the rest of the herd getting the shorter-acting Bovaclox™,” Robyn explains. And why the cutoff at 161,000 and not a rounder number? “That was the number at the bottom of the page!” she laughs.

Robyn says getting cell counts down and purging the herd of chronic *Staph* mastitis sufferers doesn't happen overnight. In addition to the DCT regime, the Judds heavily culled the highest cell count cows and the chronic reoffenders at the end of last season and bought in cows to replace them. “It will probably take about three years to get on top of it but we're starting to make progress this season with lower counts compared with last year.” ■■■

“Getting cell counts down and purging the herd of chronic *Staph* mastitis sufferers doesn't happen overnight.”

Dairy Women's Network opens up learning opportunities

While raising four children (David 19, Ashleigh 17, Caitlin 12 and Lauren 9) with Ian, Robyn Judd is strongly involved in the wider dairying community. After attending the inaugural Dairy Women's Network (DWN) conference, she came away impressed with the passion shown by the women there.

“I started a local group five or six years ago. We meet casually and infrequently but it's a great group to be involved with.” Robyn has since become a DWN trustee and has been on the DWN Board ever since – a role she loves.

She says men and women see things from different perspectives and have different approaches to solving problems. Thus they complement each other and can form a powerful team running a dairy business.

She says the DWN provides excellent educational

opportunities covering most aspects of dairying for women in the industry – including management of mastitis and milk quality – with dairy days planned to fit around family and farm commitments.

“I've met some great women through the DWN and everyone has a lot to learn and contribute.” Robyn says many members are also involved in off-farm enterprises and this adds greater depth to the experience shared through the network. ■■■

MSD is proud to be a Network Partner for the Dairy Women's Network.

