

References

1. Malcom D. et al (2006). Proceedings of the SAMM Plan Milk Quality Conference.
2. McDougall S. (2003) Intervet/Schering-Plough Animal Health data on file.
3. Shephard et al (2004) A comparative field trial of cephalonium and cloxacillin for dry cow therapy for mastitis in Australian dairy cows. AVJ.
4. Williamson J. et al (1995). The prophylactic effect of a dry-cow antibiotic against *Streptococcus uberis*. NZVJ.
5. Laven R. (2008). Vetscript article. March Edition
6. Woolford M. et al (1998) The prophylactic effect of a teat sealer on bovine mastitis during the dry period and the following lactation. NZVJ.
7. Berry E.A. and Hillerton J.E. (2007). Effect of an Intramammary Teat Seal and Dry Cow Antibiotic in Relation to Dry Period Length on Postpartum Mastitis. J. Dairy Sci.
8. Bradley A.J. et al (2010) The use of a cephalonium containing dry cow therapy and internal teat sealant, both alone and in combination. J. Dairy Sci.



Available only under Veterinary Authorisation. ACVM Registration No's: A3322, A7158, A4495 *Registered trademark. Schering-Plough Animal Health Limited, 33 Whakatiki Street, Upper Hutt. www.intervet.com. Phone: 0800 800 543. CEP-414-2010.



Reach your full dairy potential

Mastitis is a huge problem for New Zealand's dairy industry

Mastitis lowers milk quality, causes disruption to calving and milking, and reduces farmer returns. It creates costs for farmers through lost production, treatment, culls, and increases the risk of penalty grades from elevated bulk tank somatic cell counts and residues.

Successful mastitis management requires an integrated approach year round, but the dry period is crucial. The right advice at this time, backed with the right product, can reduce one of the biggest obstacles to dairy productivity and profitability.

Effective dry cow therapy, as part of a mastitis management plan, provides significant benefits in the following season.

With only one dry period each season, it's crucial to get the dry off right!

The goals of Dry Cow Therapy

The dry period is the most crucial time in your mastitis management programme. You have an opportunity to "recharge" the entire herd.

- Cure existing infections at dry off.
- Prevent new infections throughout the dry period.
- Protect against mastitis and reduce new infections around the calving period.
- Reduce somatic cell count and mastitis into the subsequent lactation.

Dry cow therapy has a very important role in maintaining milk quality.

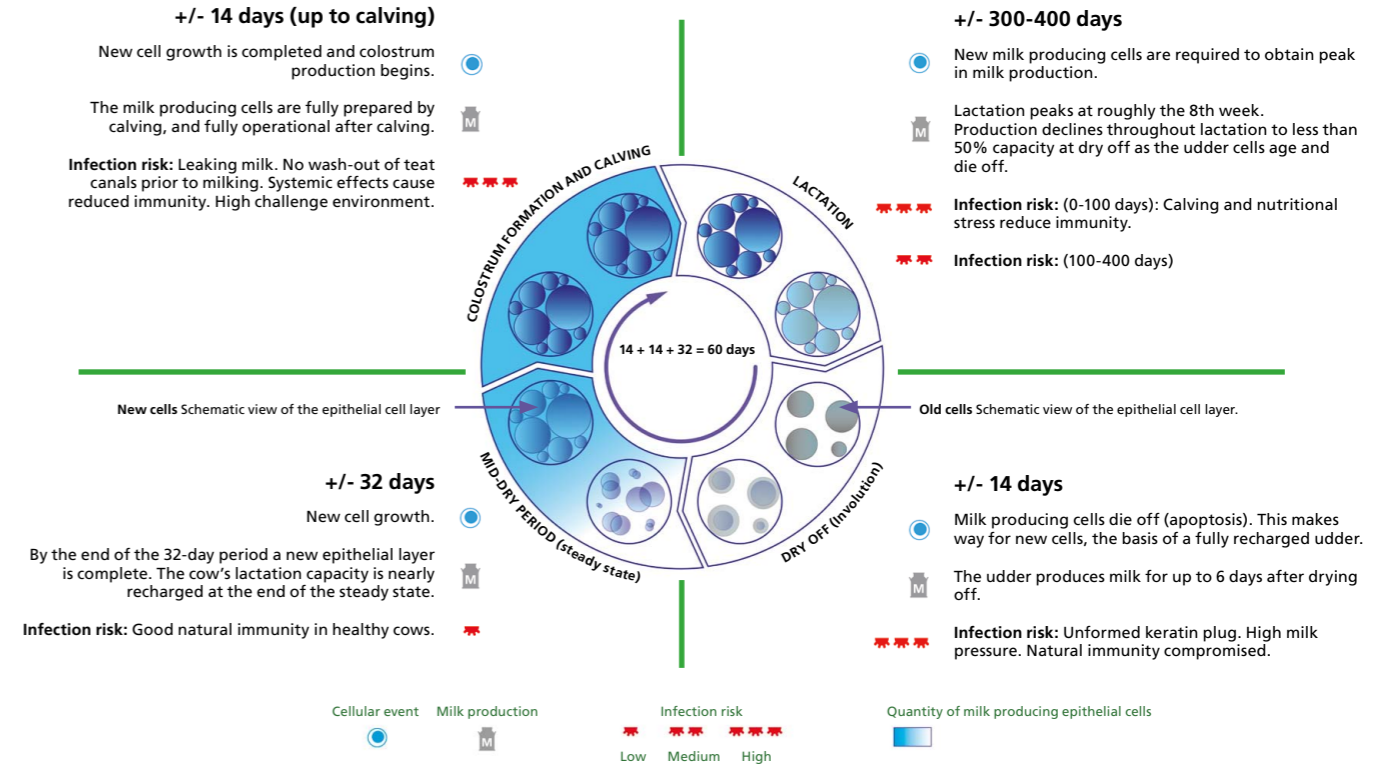
Local studies back up the advantages of long acting dry cow therapy in achieving all of the goals of dry cow treatment.



Why a 60 day dry cow period is better

- Promotes higher milk production by providing ample time for the restoration (recharge) of the udder's milk-producing cells.
- There has been shown to be increased milk production in cows dry for 60 days compared to those with shorter dry periods.
- There is more time to regain condition on cows (to recharge the cow as well as the udder).

Lactation optimisation over the 60-day period



Mastitis costs money

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

For every clinical case of mastitis, there will be 15–40 sub-clinical cases.



There are many risk factors for mastitis

Cow factors

- Previous history of mastitis
- Age of cow
- Leaking milk
- Milking speed
- Poor udder confirmation

Management factors

- Mastitis treatment technique
- Dry cow therapy use
- Selective vs blanket dry cow therapy
- Teat spraying/teat care
- Management of mastitis mob
- Nutrition and mineral supplementation
- Milking speed and technique
- Milking machine set-up and maintenance

Reduce somatic cell counts

The main factors affecting bulk tank somatic cell counts are:

1. Mastitis
2. Stage of lactation
3. Cow's age
4. Udder trauma
5. Management factors such as nutrition, teat spraying, dry cow therapy, culling and mastitis problem handling.

A high bulk tank somatic cell count means less money in your wallet.



A somatic cell is a pus cell

The more somatic cells in each millilitre of milk, the harder it is to make high quality products from that milk.

As well as problems in manufacturing, New Zealand studies indicate an increased somatic cell count creates significant production losses on farm. By halving the somatic cell counts a farmer stands to gain almost an extra 2% production.

Not to mention the gains made through the reduction in clinical mastitis that would occur¹.

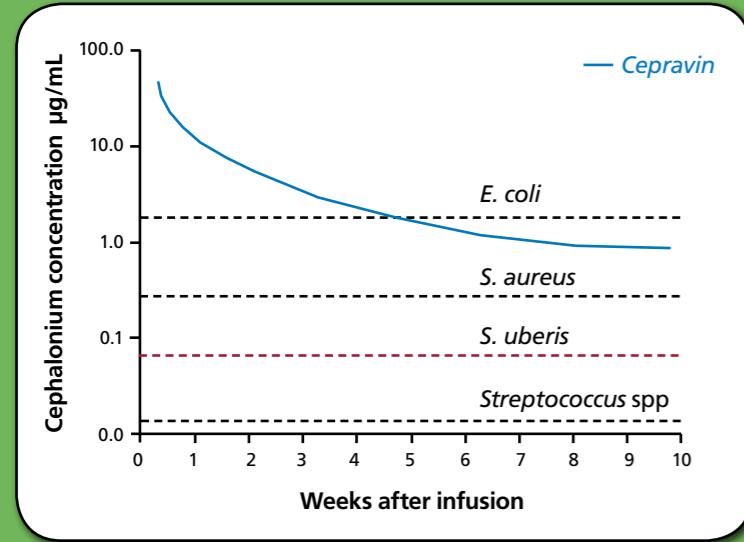
Long acting dry cow therapy has been shown to reduce the bulk tank somatic cell counts of the herd.

New Zealand studies have shown that increasing the percentage of the herd treated with a long acting dry cow therapy decreases the somatic cell counts².

Curing infections

With long acting dry cow therapy, the concentration of antibiotic is kept high enough to kill bacteria for longer, especially deeper in the udder tissues.

Concentration of Cepravin® vs time



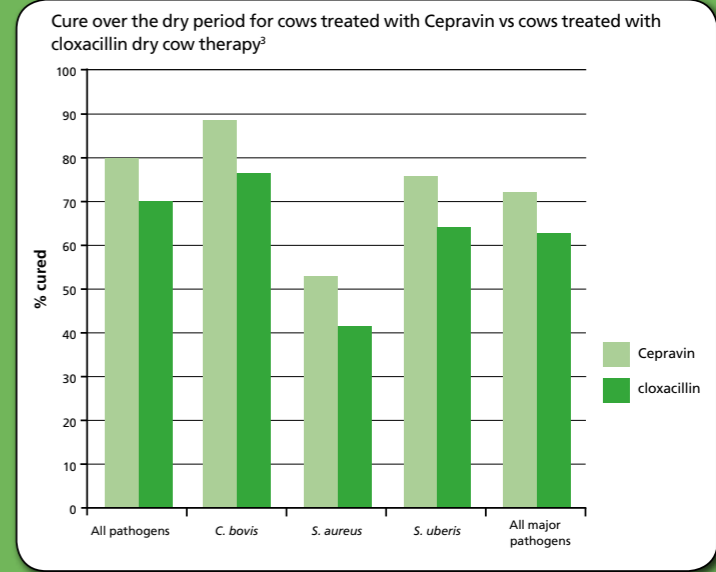
With long acting dry cow therapy, as the dry period progresses, the depletion of drug slows dramatically owing to changes in the physiology of the gland.

At 10 weeks after dry off the levels are well above those needed for protection against *Staphs* and *Streps*.

This study was only carried out until 10 weeks.

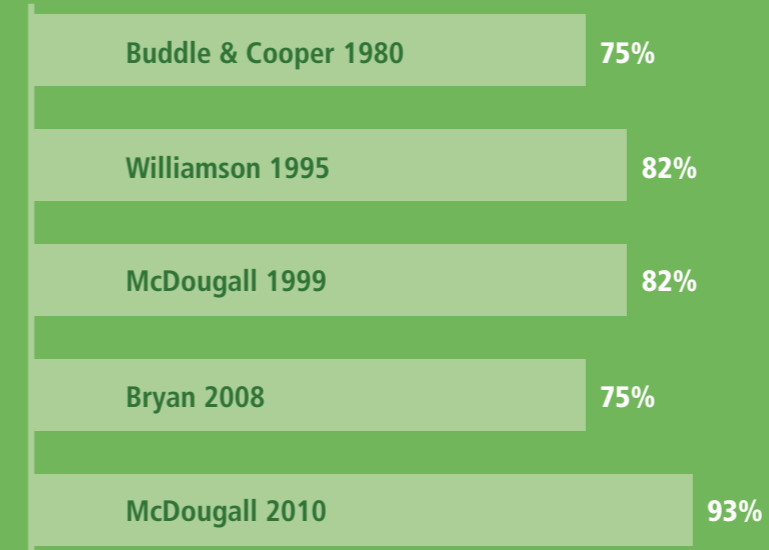
The reason dry cow therapy is more effective than treatment during lactation is because the antibiotic can be kept in contact with bacteria for a longer period.

Trial work³ has demonstrated an increased cure using Cepravin compared with a shorter acting cloxacillin dry cow therapy. Overall, Cepravin cured around 10% more of the cows treated and there were similar differences when looking at the important pathogens *Strep. uberis* and *Staph. aureus*.



	USE	Withholding periods
Cepravin Cephalonium	In conjunction with teat spraying and proper management of the cow during the drying off period, Cepravin Dry Cow reduces new infections at drying off and in the dry period, treats subclinical mastitis that may be present at drying off, and helps reduce somatic cell counts and mastitis in the subsequent lactation.	Long acting Milk 49 days + 8 milkings (min 53 days) Meat 30 days
Cefa-Safe® Cephalosporin	Cefa-Safe is an intermediate dry cow therapy that provides the excellent cure rates of cephalosporin therapy within a shorter dry period.	Medium acting Milk 35 days + 8 milkings (min 39 days) Meat 21 days
Bovaclox® Cloxacillin and ampicillin	Bovaclox is an ideal short acting dry cow therapy against a broad-spectrum of pathogens in low challenge situations.	Short acting Milk 30 days + 8 milkings (min 34 days) Meat 30 days

No competitor comes close to the amount of trial data using Cepravin on New Zealand farms.



Dry cow therapy objective	Evidence of effectiveness				
	Cepnavin alone	Short acting dry cow therapy	Generic cephalonium dry cow therapy	Internal teat sealant	Cloxacillin + internal teat sealant
Cure existing infections at dry off.	✓	✓	✓	X	✓
Prevent new infections throughout the dry period.	✓	✓	✓	✓	✓
Protect against coliform infections at dry off.	✓	?	✓	X	X
Protect against mastitis and reduce new infections at and around the calving period.	✓	<30 day dry period	✓	✓	✓
Reduce somatic cell counts and mastitis into the subsequent lactation.	✓	?	?	✓	✓
One tube per quarter - reduces labour input, teat canal damage and chance of introducing infection.	✓	✓	✓	✓	X
Dedicated year round manufacture and quality control.	✓	+/-	X	✓	✓
Global technical resource.	✓	+/-	X	✓	✓
Proven to get results season after season, under varying conditions.	✓	+/-	X	✓	X

Protection over the dry period

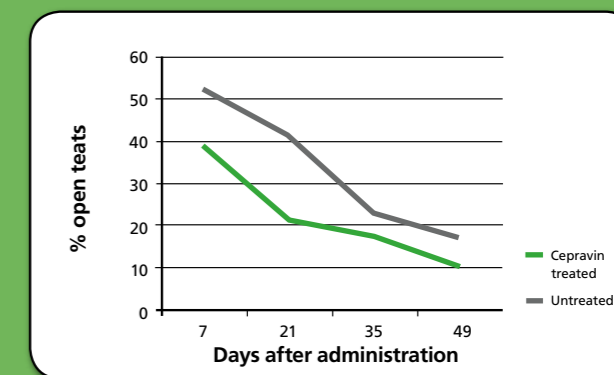
Long acting dry cow antibiotics prevent flare ups of clinical mastitis throughout the dry period. This is especially important if the cows are not able to be observed closely.

Long acting dry cow therapy has been shown in New Zealand to reduce the incidence of dry period mastitis from 12.3% to 1.2% over the dry period and at calving⁴.

Cepnavin promotes early teat closure⁵

It was in this trial that Cepnavin, the long acting dry cow therapy used, was shown to hasten the formation of the keratin plug in the teat canal. This effect has not been shown with other dry cow therapies.

This, combined with Cepnavin's persistence following administration, gives a significantly lower incidence of mastitis throughout the dry period.

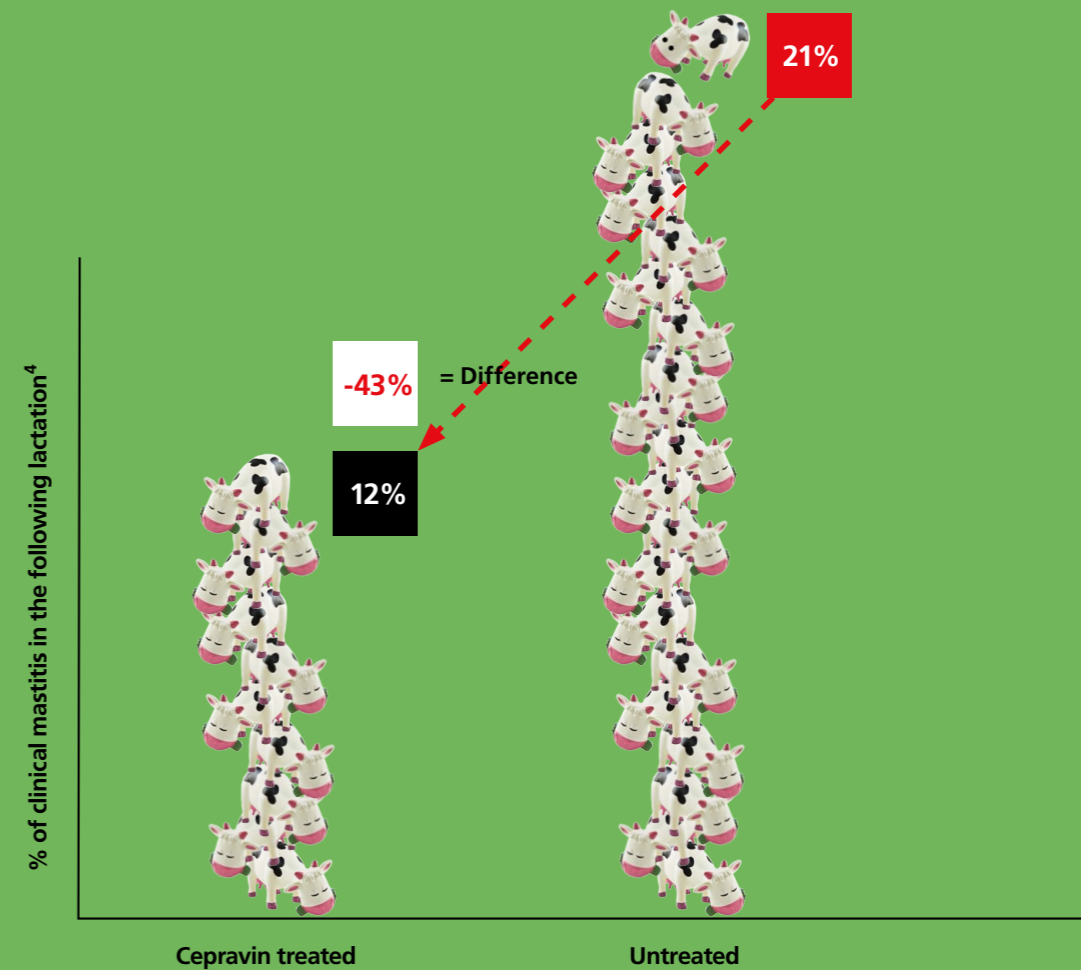


Prevention of mastitis into the following lactation

Much of the mastitis seen during calving and in early lactation is due to bacteria that have been picked up over the dry period.

New Zealand trial work has shown long acting therapy reduces mastitis by up to 50% well into the season.

The impact of long acting dry cow therapy continues into the following lactation



There is Cepravin.
Or there are two syringes,
per teat, per cow, per farm.
You do the maths.

To reduce mastitis around the start of lactation you could go to the effort of injecting a short acting antibiotic then inserting an internal teat seal into each teat.

With Cepravin you don't need to do this.

Adding an internal teat sealant is an extra hassle in terms of time and manpower.

Also it's using twice as many syringe nozzles, which increases the chance of damage to and infection of the teat canal.

Cepravin alone provides the same efficacy as a shorter acting dry cow therapy + internal teat seal, with better labour efficiency, convenience, safety and compliance and proven efficacy.

Because Cepravin alone gives such good results, the cost benefit of internal teat seal adjunct therapy needs careful consideration.



New dual tip syringe:

- ▶ Optimises the health of the teat canal.
- ▶ Minimises introduction of bacteria.

Anything less than Cepravin will deliver less.

When comparing Cepravin and a short acting dry cow therapy plus an internal teat seal, consider the following:

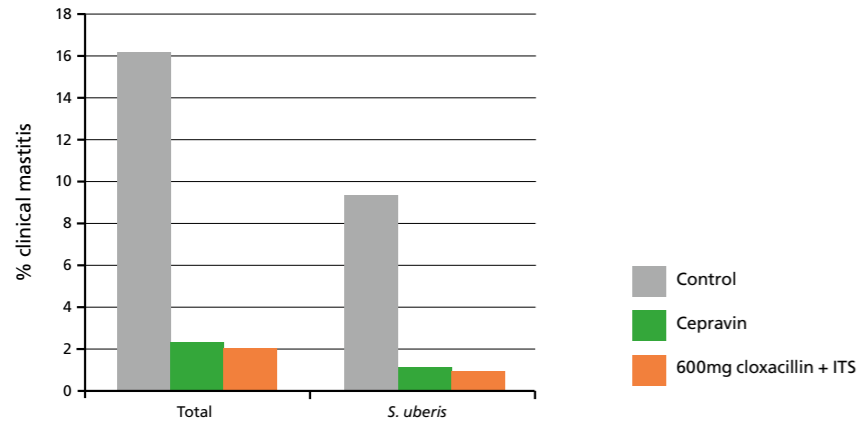
Efficacy	1 syringe of Cepravin will give farmers comparable results to 2 syringes, per teat, per cow, per farm.
Safety	1 syringe of Cepravin means less handling, less syringes and reduced risk of contamination.
Financial	1 syringe of Cepravin means minimal administration time for optimal return.
Convenience	1 syringe of Cepravin and the job's done.

What about the use of teat sealants?

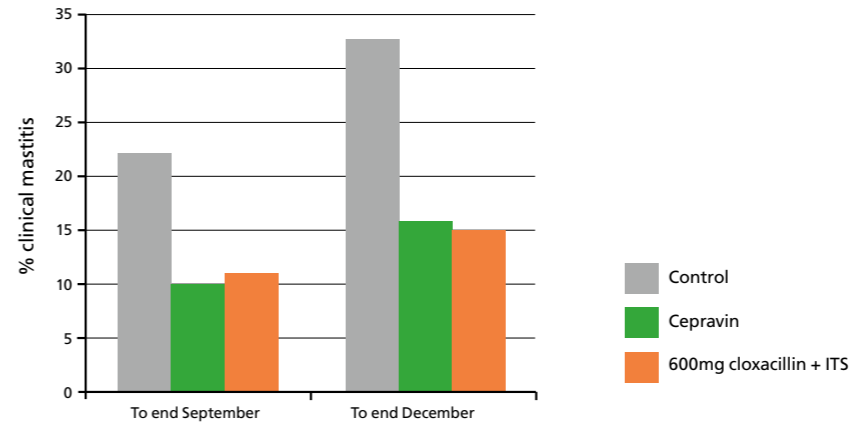
The combination of a short-acting dry cow therapy and internal teat sealant has been shown to improve results compared with short acting therapy alone⁵.

However, New Zealand trial work⁶ has shown that this combination does not improve on the efficacy of a long-acting cephalonium therapy used by itself.

Clinical mastitis during the dry period and calving



Clinical mastitis during lactation



If farmers are using a long-acting therapy already and feel that they need further protection at the end of the dry period, it has been shown that the addition of an internal teat sealant to the long acting therapy can improve the result^{7,8}.