

# NEWSLETTER

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**Nitrate poisoning**

The last time we saw any nitrate poisoning was May 2009. The cases that we did see then and in other years have been in May and June following some rain after a long dry spell.

Nitrate accumulates in green plants that are rapidly growing. The main culprits that we have seen are green oats, cape-weed, marshmallow and Italian rye-grass. As plants photosynthesize, they can move nitrates from the leaves down into the roots and stems. For this reason, nitrate poisoning is more likely first thing on a foggy morning.

Cattle do build up tolerance to nitrate and so are particularly susceptible when they have been on dry feed alone that contains only low levels of nitrate. Heifers are particularly vulnerable if they have been lot fed and then put out on agistment on some green weedy out-block.

Nitrate interferes with the blood's ability to transport oxygen, so animals affected with nitrate poisoning are distressed and breathing heavily. The "classical" sign of nitrate poisoning is that the blood is chocolate coloured but sometimes this is difficult to determine.

The risk of nitrate poisoning can be reduced if cows are strip grazed on risky paddocks and are not put on them when they are hungry, first thing in the morning or on foggy mornings.

Nitrate poisoning is treated with an intravenous injection of methylene blue.

We have available at the clinic some nitrate strips which we can use to give you a rough idea of the nitrate content of various weeds and pastures.



**Seasonal reminders:**

- Check cows for early signs of eye cancer when drying off. Eye cancers can progress to a state where they are beyond treatment during the dry period.

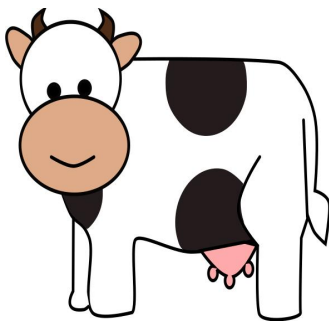


- A long dry period will help cure existing infections in the udder. Consider drying off high cell count cows a few weeks earlier to maximise their chance of a cure.

## Cepravin v Juraclox dry cow

We are convinced that Sureseal together with antibiotic dry cow is the best treatment to prevent mastitis at calving.

Once cows are treated with a combination of Sureseal with antibiotic dry cow the reduction in cases of clinical mastitis is so significant that most farmers have continued using a combination treatment.



Cepravin DC is more expensive than Juraclox and has a 49-day milk withholding period compared with 35 days for Juraclox. It is essential that you have accurate calving dates before you use Cepravin DC. Otherwise there is the risk of cows calving within the withholding period. The best way to get accurate calving dates is by pregnancy testing early. It is too late now to get accurate calving dates for most spring calving cows.

We have good evidence that Cepravin DC alone is better at preventing mastitis at calving than Juraclox alone. We do not have good evidence either way to say whether Juraclox combined with Sureseal is better than Cepravin DC alone.

We do know that Juraclox combined with Sureseal is less likely to give you residue problems than Cepravin DC alone.

We do **not** have any evidence to say that Cepravin DC is better than Juraclox at curing existing infections. There is no reason to treat high cell count cows with Cepravin DC and expect to get better cure rates.

The Pfizer mastitis survey that recorded the cause of clinical mastitis on five of our herds in the 2011 calendar year found that *E coli* mastitis was much more prevalent than we thought. The antibiotic in Cepravin DC is effective against *E coli* but the antibiotic in Juraclox is not.

If you suspect that you have an *E coli* mastitis problem at calving, then the most rational dry cow treatment is Cepravin DC plus Sureseal. The best way to determine if you have an *E coli* problem is to culture cases of clinical mastitis in fresh cows.

## Mastitis in dry cows

A recent case of mastitis in freshly dried off cows highlights the importance of good hygiene. Three out of 25 cows died from mastitis between 2 and 4 days after drying of.

The bug that caused this outbreak was *Pseudomonas* which we see only very occasionally. Unfortunately, *Pseudomonas* infections do not respond to any of the antibiotics that we are able to use in cows.



In this case tubes of Sureseal were left in an open bucket in the dairy where they were contaminated with manure. The tubes were washed with cold water and left to dry.

We know that *pseudomonas* is found in water and not in cow manure, so it is likely that the source of the infection was the water used to wash off the manure.

It is good practice to only get out as many tubes as you need for that day. It is also a good idea to leave the tubes inside next to a heater or fire to warm them rather than placing them in warm water.

## While you're here

At the start of each day we try to work out where to send each vet in order to get to each call on time. Of course, not everything goes to plan especially when there is an emergency or if a job takes longer than we anticipate.

If we are running late, we will try to ring and let you know. Similarly, if you have any extra animals that require attention above what was originally booked, we would appreciate it if you were able to ring and let us know.