

# NEWSLETTER

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**Seasonal reminders:**



- Carefully record dry cow product, date of administration and the treatment used. This will help avoid residue problems at calving if cows calve before their due date.
- Warm dry cow tubes the night before by leaving them in the house near the heater or fire. **DO NOT** put them directly in warm water as this increases the chance of contamination with bacteria.
- Vaccinate cows with 7-in-1 vaccine at dry off – this includes protection against Lepto, a serious human disease. Lepto causes a wide range of symptoms in people from mild aches and pains through to severe recurring flu like symptoms.
- Booster vaccinate cows with Rotavec-corona approx. 3 weeks before calving to help protect calves against the common cause of calf scours (through colostral immunity).
- Bull testing- it is best to have your bull team tested and vaccinated 6 weeks before you intend to use them.

**Worm Burdens in Adult Dairy Cattle**

**Which worm is most important to consider for adult dairy cattle?**

In adult dairy cattle it is *Ostertagia ostertagi* (Small brown stomach worm). Other worms of importance include *Cooperia* spp. (Small intestinal worm) and *Haemonchus placei* (Barber’s pole worm). Other important parasites of dairy cattle include liver fluke (*Fasciola hepatica*) and lungworm (*Dictyocaulus viviparus*).

**Do you need to drench your cattle?**

Generally, adult cattle over 3 years, don’t require routine drenching. To determine if cattle are infested with worms (*Ostertagia ostertagi*), a blood test can be used to determine pepsinogen levels and quantify the level of parasite burden in mature cattle. Pepsinogen is an indicator of the amount of damage the worms have done to the animal’s abomasum. Selecting 10 animals, ranging in age, for blood sampling would be appropriate.

**Faecal egg counts and drenching guidelines**

Faecal egg counts (FEC) are less accurate in adult cattle mainly because they develop immunity to the worms. Mature cattle: A high FEC (> 200 epg) means a high chance of an important parasite burden. However, a low FEC (< 50–100 epg) does not necessarily mean that the animal will not benefit from drench. A low FEC could be the result of poor sampling, dilution effect of the samples taken and adequate development host immunity.

**Blood pepsinogen levels and drenching guidelines**

Calves (< 6 months) normal: 1 IU/mL  
 Older stock normal: 1-3 IU/mL  
 >3 IU/ml is indicative of infestation and drenching is required.  
 >4.4 IU/ml is indicative of severe infestation and drenching is required.

**Do adult milking cows need drenching?**

As mentioned above, cattle over the age of 3 years generally don’t require routine drenching.

To determine if this class of animals have a worm burden, blood pepsinogen samples would be the test of choice.

### Is there a production response when blanket treating adult milking cows with a worm drench?

A meta-analysis (a study looking at all the relevant studies) found adult milking cows that have been treated with an anthelmintic (worm drench) have a milk production response between 0.35L/d. The study also found that cows treated in mid-lactation or strategically (several times during the year) had a higher production response than cows treated at dry-off or around calving. It was also found that first calving cows had less of a production response than older cows. This was unexpected as cows < 3 years generally have higher worm burdens than older cows. However, other researchers found that high producing dairy cows are more susceptible to gastrointestinal worms, which may suggest a higher treatment response in the older, higher producing animals.

### Is there drench resistance on dairy farms?

Anthelmintic resistance has been noted in many dairy herds in southern Australia. An Australian study assessed 20 herds for anthelmintic resistance against the 3 different classes of worm drenches and found resistance to "Mectin-based drench" in at least one worm species on 70% farms, "white-drench" 80% farms and levamisole on 25% farms. On three farms, resistance by Ostertagia ostertagi to all three anthelmintic classes was detected.

### How do you determine if your herd has anthelmintic (drench) resistance?

This would involve performing a faecal-egg count reduction test. This involves collecting faecal samples and performing a FEC, drenching the cattle and then collecting another faecal sample 10–14 days post-treatment faecal egg counts (FEC). Resistance is defined as <95% reduction in FEC results.

### Will your herd have a milk production response after anthelmintic treatment (drenching)?

As discussed above, anthelmintic resistance has developed on many farms, the previously measured responses to treatment are likely to overstate current efficacy and production responses.

### Zinc Sulphate Footbaths

As winter is upon us and with the recent rain event, some farmers have started to use Zinc Sulphate footbaths. There are few reasons why farmers will use Zinc Sulphate foot baths:

- 1) Hardening of hooves – reduce the severity and incidence of hoof lesions (Most common reason)
- 2) Control of Footrot (Interdigital dermatitis).
- 3) Control of hairy-heel wart (Bovine Digital Dermatitis (BDD)).

**Chemical used:** Zinc Sulphate Heptahydrate (white crystal powder) – comes in 25kg bags.

Zinc Sulphate is preferred over:

- i) Formalin as formalin is a recognised carcinogen and a concerning environmental contaminate.
- ii) Copper Sulphate as it is less caustic to the foot and a concerning environmental contaminate.

**-Mixing rate:** 5 - 10% solution – 0.5 - 1kg Zinc Sulphate added to 9L of water.

**-Ideal length of footbath:** At least 3m (so each cow steps in the bath twice with each foot).

**-Footbath Volume:** Calculating volume of Litres = length (m) x width (m) x fill height (m) x 1000.

**-Ideal depth of footbath solution:** 10 cm (cover up to the dew claw)

**-Footbath changing frequency:** Solution needs to be changed every 200-300 cows (depends on how dirty the cow's feet are).

**-Foot bathing frequency:** Dry weather = Once daily, Wet weather = Twice daily.

### When to treat lame cows?



Recent research has shown early treatment of lame cows improves the likelihood of recovery, reduced duration of lameness and reduce culling rates.

If a cow is lame for 2 weeks or more before treatment, only 15% are likely to recovery fully from the lameness event. These cows are also more likely to become lame in the opposite foot and are more likely to be culled from the herd.

### Treating lame cows

Some recent studies have shown treating a lame cow by lifting the affected foot, trimming the foot and paring out the lesion, applying a block or shoe to the unaffected claw and giving a NSAID course improves the clinical outcome greatly when compared to trimming alone, trimming and block, trimming and NSAID treatment. Cows treated in this manner are twice as likely to recover from the lameness event by day 35 post treatment.

Wooden blocks or plastic cowslips can be applied to the unaffected claw to lift the sore claw off the ground as well as protect the healthy claw from further wear and tear.

Penicillin (NOT Excenel) is the most appropriate antibiotic to use when there is an infection in soft tissues of the foot. A good rule of thumb is if there is any swelling above the hoof then antibiotics may be useful.

Penicillin is cheaper and more effective than Excenel (or Ceftiosan). The only advantage of Excenel is that there is no milk withhold.

Treating cows with an anti-inflammatory such as Ketoprofen or Metacam will improve cow welfare and may reduce duration of lameness.