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## BRASSICAS AND ANIMAL HEALTH

*(with reference to Collett et al, DCV conference 2015)*

It was interesting recently to see a case of photosensitivity in a cow in January when the spore counts for Facial Eczema (FE) were still low. Her teats were dark red, her white lower legs were swollen and weeping, and she was off milk and seeking shade.

This all fit with the history of feeding turnips. This crop in particular, but also other brassicas such as kale, rape and swedes, can be associated with photosensitivity secondary to liver damage. It is believed that glucosinolates or their nitrile metabolites are the culprit, causing changes to the bile ducts and liver tissue which is similar but different to that caused by sporidesmin in FE. This can be seen in blood with an elevation of the liver enzymes GGT and GLDH (although these increases can be inconsistent). There can also be kidney damage.



If the cows are not severely affected it appears that the liver damage is often not as bad as with FE and generally heals itself. So cows that recover should milk well the next season and do not need to be culled for it.

Other potential health issues associated with brassicas include:

- ◆ Rape Scald (primary photosensitization not associated with liver damage, from immature Rape).
- ◆ Redwater (DMSO in kale can cause anaemia).
- ◆ Acidosis and associated rumen/gut upset (constipation or diarrhea) – the carbohydrate in brassicas is highly digestible and it is crucial that cows are transitioned gradually onto crop otherwise acidosis is a risk. This can have a high death rate as the acid kills rumen bugs and results in bacteraemia and organ failure.
- ◆ Nitrate Poisoning – particularly a risk after conditions causing plant stress such as hot cloudy days after rainfall following a drought. A mob of cows may be found with multiple acute deaths and many recumbent and breathing hard/gasping. The nitrate knocks oxygen off haemoglobin causing the eyes and blood to look brown or grey. Call us immediately if you see this emergency and move the mob off that paddock!
- ◆ Clostridial Enterotoxaemia – lush brassicas can predispose to clostridium prefringens D which causes redgut and death in lambs.
- ◆ Trace Element deficiencies – metabolites of glucosinolates can prevent iodine uptake by the thyroid, potentially leading to goitre, seen as a throat swelling. Phosphorous levels can also be low and it is often recommended to supplement DCP when feeding brassicas particularly in the winter.
- ◆ Milk fever – or other causes of down cows such as acidosis, liver damage.
- ◆ Bloat/choke – gas builds up in the rumen if it cannot escape due to pieces of the bulb getting stuck in the oesophagus. Bloat stab to release the gas and probang to remove the obstruction may be necessary.
- ◆ Polioencephalomalacia – high sulphate or thiaminases can cause a vitamin B1 deficiency. The animals may be slow, or blind, or circling. High doses of Vitamin B1 may help, but prognosis is guarded.



## WHY SCAN YOUR DAIRY HERD?

- ◆ Instant results
- ◆ Get accurate dates for drying off decisions and differential feeding pre-calving
- ◆ Great price value
- ◆ Identify empties for early culling
- ◆ Reliable and accurate
- ◆ Flexible timing
- ◆ Uploaded to Minda automatically (Infovet clients)
- ◆ ID Numbers easy to double check
- ◆ Vets can check out other health issues or discuss repro data at same time



## **ON TARGET! : LIVELWEIGHTS AND CONDITION SCORING**

Following on from the scanning article, summer is a critical period for youngstock growth.

The biggest impact on stock wastage in NZ is the animals that do not reach target weight and struggle to get in calf as a result. With pasture quality being so variable with the summer weather, it is critical to monitor the liveweights accurately. This allows you to draft off a light mob and to focus on them with supplements.

If you want a hand with weighing youngstock, Kelvin is offering a service providing the electronic scales, NAIT wand and his assistance. The results are recorded electronically and emailed to you so you can easily identify any animals of concern. Measuring liveweight regularly and precisely allows you to get optimal results which will flow on to next season. Adult cattle likewise should have their condition monitored. If you want an unbiased fresh set of eyes, we are happy to condition score your herd for you. It takes a month to gain 0.5 BCS generally, so having regular scoring throughout the year is critical to give you the time to lift condition to meet the targets of an average BCS 5.0 at calving (5.5 for heifers) and 4.0 for mating.

## **MPI and dairy industry extend milk testing programme for *Mycoplasma bovis***

- The Ministry for Primary Industries (MPI) and its dairy industry partners have decided to extend the current *Mycoplasma bovis* milk testing underway in Canterbury, Otago and Southland into a national milk surveillance programme.
- The programme will involve testing 3 milk samples from every dairy farm. One sample will be taken from bulk milk as part of the regular sampling process at milk collection. Farmers will also be required to provide 2 samples from 'discard milk' (milk unsuitable for collection, for example, from cows with mastitis). *Mycoplasma bovis* is more easily identified in milk taken from otherwise sick animals, which makes testing of the discard milk a valuable surveillance tool.
- The extended milk testing programme enhances the existing nationwide *Mycoplasma bovis* surveillance activity, which includes tracing of animal movements from infected and suspect farms, vets looking for signs of the disease, testing of any animals with clinical signs, and testing all mastitis milk sent to laboratories.
- *Mycoplasma bovis* is not a food safety risk. It is a disease that affects animal welfare and production. It only affects bovines, including dairy cows and beef cattle. It is common in many food-producing nations (like Australia, the United States, and in Europe).
- The programme is expected to begin in February and will be rolled out region by region.
- In addition, any mastitis samples sent to the lab will routinely be tested for mycoplasma.
- So far all the herds that have tested positive have been linked directly with the original outbreak.
- Animal movement is the biggest risk for spread of disease
- NZVA recommendations for bulls are that on entry they should be isolated and monitored for at least a week, and trucked straight to slaughter.
- If purchasing 2nd season bulls, ensure the herd they were running with has been BMT tested clear for M. bovis



## Milking sheep –

a progressing industry?

The development of dairy sheep farms and the whole industry has got me pretty fascinated. There seems to be a worldwide appetite for end products including cheeses, yoghurt, infant formula and powder. There are 2 broad business models – the smaller flocks which have survived or thrived for a couple of decades making and selling boutique cheeses locally, and the large flocks which export powder to overseas markets. Maui Milk have even developed a new breed of dairy sheep – the Southern Cross, a mix of East Friesian, Awassi, Lacaune and Coopworths.

Sheep have the advantage of being manageable grazing, housed or a hybrid of both systems. There isn't the issue of bobby calves or billy kids. Their environmental impact is lower with regards to nutrient management, and they are an option for those areas marginal for cattle. The milk is highly nutritious, with twice the solids of cows' milk, 6 times as much calcium as human milk, and is suitable for the lactose

intolerant. Yield average estimated to be 400 litres over a 200 day lactation. There are some diseases which will need managing, including Caseous Lymphadenitis (a contagious Corynebacterial infection causing cheesy abscesses, primarily around the head and neck lymph nodes but also anywhere in the body) and Johne's Disease (Mycobacterial infection of the guts causing severe condition loss). Mastitis organisms are different to the bovine ones: CNS is a major cause of high SCC in sheep which has a massive impact on milk yield, whereas this is a minor player in bovine milk. It will be really interesting to see how this industry develops...



## HIND LACTATION

Why wean your fawns early?  
Hind lactation is driven by the fawn.

Lactation in hinds usually peaks about 3-4 weeks after birth and then slowly declines, similar to the pattern in dairy cows. By the end of February 85% of lactation is completed. Any suckling that occurs after this time is for social reasons to maintain the bond between fawn and hind.

Hinds can lactate well into winter if necessary but in these later stages most of the fawn's energy comes from what it eats, not from the hind.

Fawns start nibbling grass from birth which contributes to their rumen development. Pasture becomes a major part of their diet about three weeks after the closure of the oesophageal groove or rumen bypass has closed.

Early weaning of fawns has little effect on fawn growth rates but will enable hinds to recover condition in time for mating.

## WORMWISE – sheep, goats and calves

There is a LOT of worm resistance to drenches reported by the labs, which is defined as a reduction of <90% in faecal egg count after drenching. In fact resistance has already developed to one of the "new" sheep drenches recently developed.

- ◆ The wormwise.co.nz website gives some great advice for reducing the risk.
- ◆ Faecal egg counts are a great way of seeing if animals actually need a drench (why waste time and money?), and if a drench has done the job (7-10 days after drenching). Simply drop off some samples to our clinic – we can give you some plastic pots.
- ◆ How often do you need to drench? It depends on the pasture burden, stocking density, species grazing, weather impact on worm lifecycle, drench used...
- ◆ Paddocks that just graze youngstock will develop a higher worm burden.
- ◆ Co-grazing different species, or rotating youngstock with adult cattle, will reduce the worm burden.
- ◆ Warm, wet weather is ideal for worms and quickens their lifecycle – some species 14 days! Does this sound familiar in the Waikato?
- ◆ Oral drenches tend to have no residual activity whereas pour-on and injectable generally last a month. But oral drenches seem to be more effective in youngstock.
- ◆ Check the weight of some animals, the recommended dose rate, the dose actually delivered by the gun into a measuring jug, and that the product is not out of date!
- ◆ Combination drenches will reduce the risk of resistance.
- ◆ Levamisole (clear drench) is still the best for cooperia worms, which peak in the autumn
- ◆ Refugia allows the dilution of resistant worm eggs with "normal" eggs from undrenched animals, and the resistance genes generally have an energy cost which makes them less competitive. In practice, this means not drenching the best 10% of the mob, or similar strategy.
- ◆ Goats do not seem to have developed much immunity to worms compared to other ruminants, so even adults often need worming over summer. We recommend increasing the dose to about 50% above what sheep are advised.



