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## Keeping Herds Milking Through Summer

Pasture is now drying off with a drop in protein, energy and an increase in fibre as it matures.

This will bring some challenges to keep herds milking well through the summer if you are not drying off until May- June.

Traditionally a herd will reduce milk production by around 7% a month after peak milk production. This is normal but we need to make sure the drop is not larger than expected.

As pasture increases in fibre, lignin and digestibility, the milk reduction in herds consuming a mostly pasture diet can be considerable.

The cow can only eat a certain amount of bulk- once she is full she then has to sit down and digest this before being able to consume again. The more fibrous the diet the longer it takes to digest and the more energy is used to do this. High fibre diets are also heating (remember how well hay helps keep stock warm during winter) so this can make her less able to cope with hot weather too. High fibre diets affect the amount she can eat and therefore milk production

Grain, protein meals (canola) and rumen protein sources like lupins become even more important at this time

As this is going to be a record harvest year for grain, and prices are steadily reducing, it makes sense to use supplements in the bail to stop a crash in milk production. Milk prices have improved so there is now a good reason to keep the cows producing with higher per litre prices and back pays beginning.

Many farmers have already started feeding silage or will do so after Christmas, and silage quality will be discussed later in the newsletter.

Adding bypass proteins like canola meal, along with a fast starch like wheat and also the addition of some rumen protein like lupins can keep cows milking until dry off.

Each situation is different and the Browns technical staff can assist with your decision making.

While not all herds will need to do this (if they have irrigation or crops that may supply enough energy & protein) many herds will require more energy and protein as pasture quality drops away and it can be a good investment to "tweak" your ration cost effectively to take advantage of the better milk prices after Christmas

**On the right: Herds on mature pasture will need additional protein and energy to keep milking through summer**

- Keeping herds milking through summer
- What is Photosensitization (Photo), Ergovaline & Facial Eczema?
- Silage Quality this season and impact on herds
- Weigh your feed



A herd in Maffra area showing early signs of Photo Note raised areas on the white patches and hair over the shoulders standing on edge





## What is Photosensitization (Photo), Ergovaline & Facial Eczema? Causes, Symptoms and Treatments

About every 5 years we experience issues with severe Photosensitization (Photo), Ergovaline (Heat stress, "Cranky cow syndrome" etc), Lolitrem (Ryegrass Staggers) and Facial Eczema (FE), although it is around to some degree in most years.

The problem seems to come in a 5 year cycle when weather conditions are suitable. Conditions are just perfect for it now- and at Browns we are seeing a number of herds in all areas across Gippsland with clinical and subclinical issues

So now I will try and separate these issues and explain them. Some are related- some are not- but all cause herd health and production problems on farm.

### Ergovaline

This is a major toxin produced by the grass endophyte *Neotyphodium Spp.*

These toxins include Neurotoxins and Ergot Alkaloids, some of which are closely related to LSD. They are similar to Dopamine, Noradrenalin and Serotonin. These compounds are normally produced by the body and regulate appetite, cardiovascular function, gut motility, muscle contraction and temperature regulation.

Toxin production in pasture increases during the summer months, especially when the pasture goes to seed after summer rain and humid conditions.

The toxins are concentrated in the seed head, stem and crown of the plant.

Perennial ryegrass is the main offender but it can be seen in other pasture species too and only a small amount of pasture carrying this endophyte needs to be present in a pasture blend to cause trouble. High endophyte grasses will persist longer in a pasture sward due to the fact that the grass produces this endophyte to resist insect attack. But by preserving itself it causes huge health issues in the stock that graze it. **However it is still planted as it resists insect attack and persists well and is cheap compared to other ryegrass species so in a bad financial season there is a temptation to re-sow with a "cheap" feed.**

**It is not cheap when you have to deal with the health issues in your herd.**

### Symptoms in herds:

- Symptoms can be hard to pick but include:
- Heat stress (cows seeking shade or panting when air temps are only about 21-23 degrees Celsius)
- Cows with feet in the water trough or standing in the dam
- Ill thrift (loss of body condition or failure to increase BCS)
- Temperament changes (nervy, irritable, cranky cow syndrome, rushing to the dairy then refusing to go in, then won't come out without being chased out,)
- Stiffness in gait (jerky hind leg movement like marching soldiers)
- Low milk production and solids
- Reduced feed intake (cows not cleaning up paddocks and looking hollow – poor rumen fill)
- Scouring

Ergovaline is an ergot alkaloid and affects thermo regulation causing heat stress at often low daily temperatures like 21 degrees and it affects hormone production (Prolactin).

So it has an impact on milk production, and solids with a reduction in income to the farmer.

Researchers are now also suggesting that increased somatic cell count, infertility and the immune system can also be affected.

I have seen herds in paddocks within a kilometre of each other- one in the shade and standing in the water troughs and next door the herd are happily out in the sun grazing.

Subclinical levels of Ergovaline can be responsible for temperament changes and shows up as nervy and psychotic behaviour as well as udder sensitization.

On farm we have seen cows running to the dairy- then bolting back down the track running over the farmer in the process, refusing to enter the dairy/refusing to leave/ kicking the cups off, fighting or panting.

Not all herds exhibit all the symptoms but if your herd is behaving out of character,

has loose manure even though the pasture is mature or has unexplained drops in milk production it may be an Ergovaline issue.

**At Browns we have had success using Mycotoxin binders added to the bail feed to assist with Ergovaline- we are finding we need to use higher rates (30 grams per cow) than usual this season to achieve a result, so talk to your Browns tech support person to discuss options for your herd.**



**I have seen herds excreting bright green fluorescent urine along with other symptoms. I can only assume that this is the cow trying to get rid of the Chlorophyll from her body before it causes damage**

Information on Page 3



## Photosensitization (Photo) and Facial Eczema

Photo and Facial eczema are caused by the fungus *Pithomyces chartarum* on ryegrass which produces the toxin *Sporidesmin*. This fungus lives closer to the ground and likes warm moist conditions (So trash left after silage removal or topping paddocks behind the herd can create perfect conditions for this toxin to be produced). Ryegrass pasture also dies back around the crown and the fungus lives there happily. Grazing paddocks short means cows ingest more of the fungus/toxin.

*Pithomyces chartarum* is saprophytic and also lives in the soil and in the air and on decaying plant matter. (*Dairy Australia- "A review of Facial Eczema" updated 2013*)

It produces photo reactive compounds that absorb energy from the sun through the skin. These react and re-emit that energy causing tissue damage and burns. *Image on page 1 showing early signs of Photo*

Normally the gut absorbs Chlorophyll from green feed and breaks it down into a compound called *phylloerythrin*

**Phylloerythrin** is photo reactive and usually absorbed by the liver preventing it from circulating in the bloodstream. When the liver is damaged some amounts are left to circulate and react with the sun. *Images on page 2*

The amount of damage will depend on how much Chlorophyll (green plants) are being eaten- how damaged the liver is, how white the cow is and how much sunlight she gets. Scouring and sudden milk drop is often not recognised by the farmer. With facial eczema, skin lesions progress just like photo and large sheets of skin can peel off especially in Holstein's. Jaundice and red urine can be added to the list of symptoms for photo with facial eczema present.

In photosensitivity the skin is itchy, reddens and is then very painful as it reacts and swells (Nasal passages too). The cows rub their heads on the ground and poke sticks or grass up their noses to relieve the itching.

Cows can get photo on green oats or millet so be mindful that other feeds can cause the issue too- not just perennial ryegrass

### Preventative treatment:

- The use of Mycotoxin binders has been helpful in bail feed
- Zinc Oxide can be used. Zinc works by forming a complex with Sporidesmin which inhibits sporidesmin's ability to form oxygen free radicals and cause cell damage.
- High levels of Zinc are required- can be toxic so consult your nutritionist or vet (or both)
- Consider using a binder in preference if you suspect Ergovaline is also present in the herd as Zinc Oxide does not appear to assist with Ergovaline.
- Dilute the dangerous pasture using hay or silage and increase grain safely to assist energy intake and protein to assist tissue repair.
- Monitoring pasture for spore counts can be done through your vet or consultant. Samples must be collected in a paper bag and cut 1 cm above ground level to be accurate. Very useful but can take time to get a result so an outbreak can occur in the meantime.

## Silage Quality this Season and Impact on Herds

Silage this season has been patchy for quality. Early harvested silage will be of better quality but there is less of it, and later silage will be more fibrous and lower in energy. There is also the danger that late harvested crop may contain fungal spores/mycotoxins as discussed in the article on Ergovaline/ Photo/FE so this needs to be considered too.

The best way to check the quality you have harvested is for Browns to test it for you.

What is the point I hear you saying? I have done it so what I get is what I get?

True- But...if we test the protein, ME, NDF etc at least we can balance the shortfalls in the pit or bale silage with the supplement we need to feed.

At least you will know what you have harvested- good, bad or indifferent.

NIR testing for Browns clients is part of the free service we offer. After all if we all know what is in your pit we can help you make the most of it and ensure that you get the best return on your investment.

If it is very ordinary it may be better to sell to a beef producer and use the income to buy clover or vetch hay if you need to keep cows producing over the summer months.

At least you can make choices if you know what you are dealing with.

### Weigh your Feed

New seasons wheat and barley appears to be of excellent quality.

There are some batches that appear to have some wild oats in them as it was too wet for growers to get on paddocks to spray- but on the whole the grains are testing super well for energy and protein and the test weights are excellent.

Please – if you can regularly weigh your feed that would be most useful as new season's grain is much heavier and you may be feeding more than you think.

This can not only mess up those clients on recall orders but if you are feed budgeting it may cause that to be inaccurate too.