

St David's Farm Newsletter

September 2010

St David's Farm Practice Ltd,
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Avoiding mastitis at drying off / LDA risk factors / Reseeding

August 2010 disease issues

Seeing two fatal cases of toxic mastitis after drying off this month prompted this reminder. Clinical cases can occur from ongoing subclinical infection, but the really nasty cases are often caused by contamination of the udder at the time of drying off.

Infection is a risk when any intramammary tube is infused, whether it is orbeseal alone, an antibiotic or both. The risk of environmental mastitis also doubles with every 10 litres of milk over 10 litres the cow is producing at drying off. The following precautions help to reduce risks:

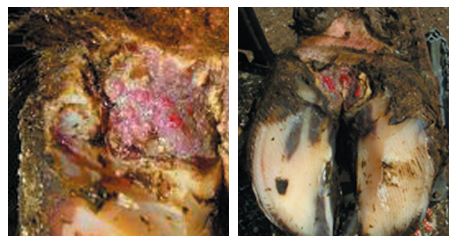
- Check for signs of a sub clinical case before drying off.
- For high cell count cows seek advice on appropriate treatment.
- Infuse dry cow tubes and orbeseal in a sterile way: wear clean gloves, predip first, wipe, apply spirit and post dip afterwards. Put a minimal amount of the tube into the teat. Thick barrier teat dip is a very good idea.
- Use adequate fly control.
- Monitor the cows closely for several days – don't just send them away on holiday.

Drying off high yielders is a vast subject but there are management tricks to help. Each farm differs so please talk to us if this is a problem. Reducing the cows feed intake, particularly with a sudden group change or drop in dietary

energy density works well. Milking once daily is not recommended.

Digital Dermatitis warning

In the dry summer we would expect the risk of DD to be lower but several farms have seen outbreaks of really aggressive cases. Introducing new stock – purchases, dry cows and heifers – is a major risk. The dry weather also seemed to allow a build up of thick manure on surfaces and in tricky corners of yards. This is likely to harbour high levels of the DD causing bacteria.



Farms who continue to footbath regularly through the summer have much less DD at housing. This is a plea to get those footbaths in use. Where clinical cases have already been seen antibiotic footbathing is required first. This makes the subsequent protocol more effective. Formalin is inappropriate for cows with lesions – it is very painful. After the antibiotic you can then move onto a regime of disinfectant. Please seek a protocol from your vet. Farms with no clinical cases can use a weekly or fortnightly disinfectant regime only. Incoming stock need attention. Purchased animals should have their feet sprayed

as standard in your biosecurity planning. Heifers and dry cows really benefit from a bath, or even just a soak with virkon from a spray bottle when they enter the herd.

Managing a fat dry cow?

Last month's newsletter focused on energy and disease. The problems of fat dry cows were explained and we can all agree that fat dry cows make for busy vets and should be avoided. Inevitably some cows do get fat and these require a toolbox full of ways to reduce the risk of problems. It is just too late to lose any weight with a month to go to calving. The following points help maintain intakes precalving:

- Provide highly palatable feed. Just relying on unchecked summer grazing is not good enough. It must not contain any mould and rejected feed must be cleared daily. In hot weather feed will spoil very quickly and twice daily feeding is required.
- Ensure adequate feed access. Transition cows need 1m of feed space each.
- Ensure feed is available 24hrs daily.
- Minimise group changes. Make sure cows are in the "near to" group at least 2 weeks precalving and additions to the group are once weekly only.
- Ensure adequate protein in the ration to maintain rumen function.

Around calving itself the following help to reduce the risks and problems of excess fat mobilisation:

- If you need to move the cow do it as close to calving as possible, not days before.
- Provide pain relief if calving is difficult.
- Ensure adequate fresh feed and fresh water available in the calving box at all times.
- Drench after calving with a calcium supply eg Aggers fresh cow or Botonic calcium paste.
- Consider drenching all fat cows twice daily for 2-3 days around calving with 250ml propylene glycol.
- Seek veterinary attention really quickly if she is unwell. Once the vicious circle of fatty liver establishes treatment is very difficult if not impossible.

Emily Simcock

LDA risk factors

Left Displaced Abomasum is a frequent diagnosis for us, and it's correction is the commonest surgery we perform.

Since 80-90% of cases occur in the first month after calving it is mostly a transition disease indicating an inability of the cow to cope with the change from the dry period into lactation. In order to prevent LDA's let's look at risk factors leading to them and how we can measure and reduce these.

When thinking about risk factors it is important to separate these risk factors from associations. In other words diseases which frequently occur together may appear to cause each other when infact both may share a separate hidden cause! In the case of LDA it often occurs with other diseases such as Retained Fetal Membranes and metritis, but research suggests that these diseases come from the same source that causes LDA and so are not the main risk factors for LDA we should be looking for. This source and a major risk factor for LDA as well as RFM/metritis is excessive negative energy balance before, during and after calving.

The diagram right shows results from a research study of cows blood sampled around calving then followed and recorded later when it was know whether the cow went on to have an LDA or not. Here the results are for NEFA's which are the bodies way of transporting fats in the bloodstream. Measuring these shows when fat is being broken down for fuel i.e. when a cow is in negative energy balance.

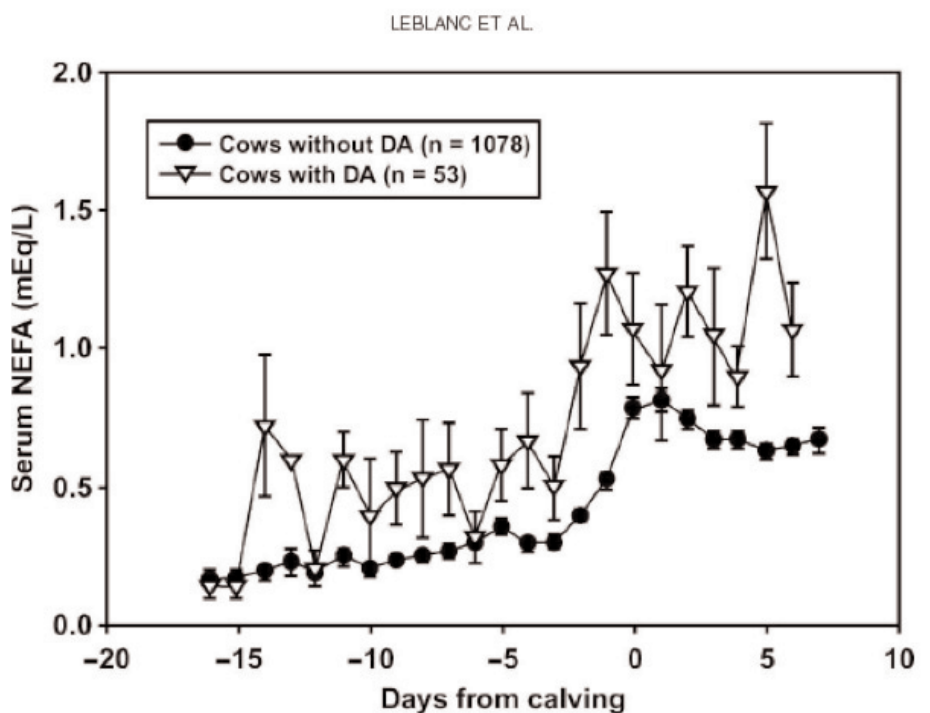
In this diagram the triangles are cows which went on to have an LDA and the circles are the cows which didn't. You can see the LDA cows had higher NEFA's i.e were in negative energy balance well before calving and indeed after it so proving the link between negative energy balance before calving and LDA.



This next diagram on the next page is the results for BHB's from the same study. BHB's are ketones and indicate sub clinical ketosis i.e. cows running out of energy from significant negative energy balance. You can see the LDA triangles increasingly markedly after calving. This confirms sub clinical ketosis as a result of negative energy balance as risk factor for LDA in the freshly calved cow.

So it would appear that negative energy balance in cows around calving may be behind much of the fresh cow disease we see. It is probably not just as

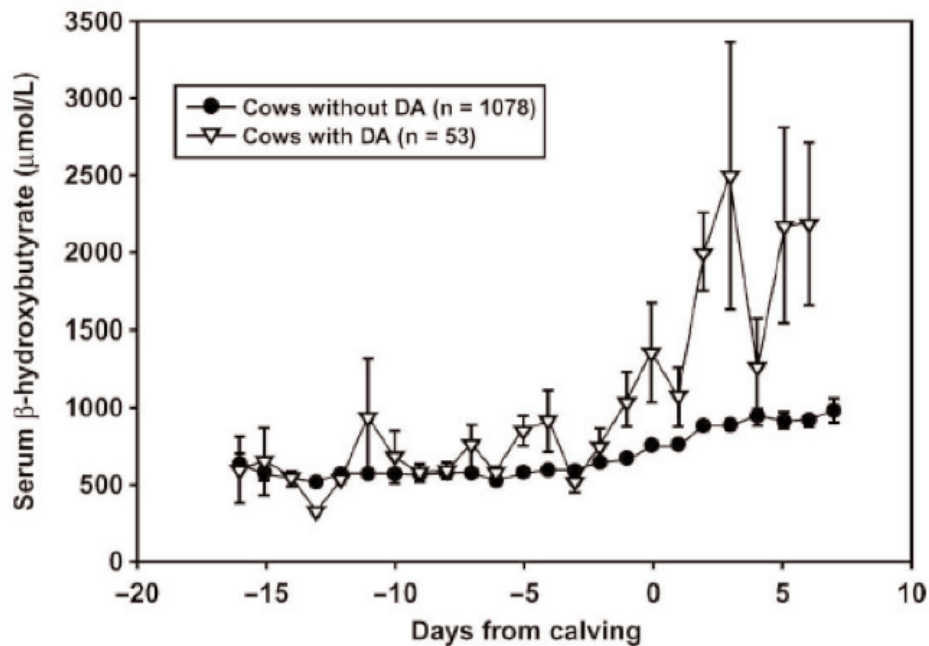
simple as this as we have not mentioned milk fever and it influence on fresh cow disease although its influence on LDA's is debatable. Forage: Concentrate ratios are also important in causing LDA's and it must be noted that conditions like RFM/metritis obviously decrease feed intake and so make worse negative energy balance and its associated problems. However our best approach to isolate LDA risk factors and make efforts to control them is getting a handle on the energy balance of cows around calving. Dry matter Intake around this time is down



35%, and so management needs to be spot on to maintain good energy balance. To help you manage these cows best we can measure the NEFA's and BHB's shown above so assessing the disease risk in the system. This is cheap and easy (6 pre calvers and 6 fresh calvers would be bled), and best carried out regularly e.g. quarterly so variations can be picked up before fresh cow health suffers. If fresh cow health is a struggle this information may help pin point areas to improve. The good thing about many fresh cow diseases being related is that a small number of tests can predict many diseases and so I would suggest is money well spent!

Jeremy Hamilton

PREDICTORS OF DISPLACED ABOMASUM



Reseeding

My name is Ben Smit and I joined the team at TCF in January 2010.

Before coming to England I first farmed intensively in Holland, then managed pasture based herds in New Zealand and South America. With my 'hands on experience' of pasture based systems I might be able to help farms to utilize the pasture in the most economical way. With good quality forage in the pit half the winter battle is won, and by offering grazed pasture to the animals at the right grazing height you will harvest it at the best possible quality and so you are in control of how much residual the animals will leave behind. That way surplus can be harvested for times when you need to feed out. If you can change your forage from a 10.2 Mj/kgDm to 11. Mj/kgDm and Protein % from 13 % to 15 % when the forage makes 40-85 % of the total diet you can cut your concentrated feed bill by a fair amount! This is the time of year to be thinking about reseeding, let's do that with a little help from reseeding expert Graham Ragg;

Reseeding grassland according to a 'best practice' protocol should pay for itself in additional milk or meat returns in the first year of production.

Estimating the total cost, including labour and machinery, to be around £190/acre, a 7:1 return on investment is a real possibility over the duration of a typical medium term ley. With increased reliance on home produced feed being a key contributor to the increased profitability, renewing an old pasture is a sound investment. Assuming a milk price of 25p/litre and even a conservative increase in pasture yield and quality, an effective reseed could well be worth £275/year in extra milk from forage in the first year. That's a handsome return on investment over a period of five years. Higher growth rates and tighter stocking densities are possible with lambs and beef finishers, grazing reseeded pastures means that similar arguments also apply to the beef and sheep sectors.

Such results are, however, dependent on reseeding being carried out effectively. To ensure a 'best practice' approach, a Grassland Reseeding Checklist, which identifies a number of key essentials for cost-effective reseeding should be followed. This begins with the initial decision of when to reseed and works through the entire process of soil testing, sward destruction, cultivation, sowing, fertiliser and early sward care. In the first instance, it's important to identify the right fields for reseeding,

this should be based on ryegrass content rather than the age of the sward. Ryegrasses are easy to distinguish from less productive fescues, bents and meadow grasses, by the pinkish-red tinge to their stem bases. Once they drop to below half the sward content you really need to be thinking about reseeding. If you want the best possible establishment and the least possible out of production, you should be reseeding in August or early September, allowing the old sward to be kept in the grazing or silage-making system right up to July or early August, if required. Warm soils mean better, more rapid establishment, providing there is sufficient moisture. The new sward then has the winter to develop, with tillering encouraged and frost kill minimised by pre-Christmas sheep grazing, coming into the next season full of heart and productivity.

Effective destruction of the old sward including established perennial weeds is critical to success too. While a simple surface kill may reduce trash, a full rate glyphosate spray is essential to really tackle perennials like docks, thistles, couch, Yorkshire Fog and other weed grasses. Seedling grasses need a clean start if they are to establish well and dominate the new sward. It can be heartbreaking to see a nice new ley

wrecked by couch and other perennials pushing through the seedbed early and out-competing the young ryegrasses. Use of an effective glyphosate spray will minimise the time taken out of production and maximise reseeding timeliness because it can be applied ahead of the last grazing or silage cut. It is important to allow about 5 days after spraying for the herbicide to penetrate right to the root tips, but then the field can be grazed or cut for silage safely and cultivated immediately afterwards. Cultivations should produce a fine and firm seedbed, without delay, to preserve as much soil moisture as possible. If you allow the ground to dry out significantly you could have a disaster before you have started. You will also be on a hiding to nothing if you don't make sure you get the soil P, K and pH status right. It is well worth having the soil tested and correcting any imbalances. You should also check the ground for compaction and poaching too, and subsoil any suspect or unduly damp areas to improve drainage. Otherwise, you will just encourage weed grasses, rather than the productive ryegrasses you have sown.

When selecting seeds mixtures, livestock farmers should look no further than the official Recommended Lists, and insist on the right blend of ryegrass and clover types. Always select listed varieties for their combination of yield and other desirable characteristics, like early spring growth, sugar content, ground cover, disease resistance and digestibility, matching them to specific

Table: Typical reseeding benefits

	Original pasture	New ley
Grass production (kg DM/acre)	3,000	3,300 (+10%)
ME content (MJ/kg DM)	10.2	11.0 (+8%)
Energy output (MJ/acre)	30,600	36,300
Stocking rate (cows/acre)	0.8	0.8
Energy for maintenance (MJ/cow/year)	25,500	25,500
Energy for maintenance (MJ/acre/year)	20,400	20,400
Energy remaining for milk (MJ/acre/year)	10,200	15,900
Milk production @ 5.2 MJ/litre (litres/acre)	1,962	3,058
Milk value @ 25 p/litre (£/acre)	491	766
Extra milk value (£/acre/year)		275

grazing and cutting uses for productive lifespans. I would also include a decent amount of clover. Research has shown it can increase the productive value of swards by over £70/acre, reduce nitrogen fertiliser requirements and significantly boost July and August grazing in particular. Some farmers will leave clover out of the mixture initially to allow more effective early weed control and establish the clover later. Advances in breeding mean there are some excellent new varieties available, and best practice means insisting on 100% quality throughout the mixture and varieties that are balanced to achieve a specific objective.

I recommend shallow drilling, if possible, as grass seeds generally prefer burial, rather than being left on the surface. Broadcasting is perfectly acceptable, providing the seed is harrowed in afterwards. In either case, roll before and after sowing to maximise moisture

retention and soil/seed contact. The seedbed needs to be firm enough to ride your push bike over it without sinking in. Avoiding seedbed N in most cases, treating the new sward around seedling emergence to minimise frit fly damage as well as using a selective weed killer (clover-safe, if required) to knock seedling weeds on the head as early as possible.

Doing the reseeding job to a 'best practice' protocol means using the high quality inputs and applying a high level of care and attention. Over the lifetime of the ley, the extra cost of best practice is negligible compared to the significant production benefits the new pasture will deliver. With the shortage of winter forage in some areas the sowing of Italian ryegrasses with exceptional winter growth might be able to shorten up the winter period by giving you a high quality forage early in the spring.

Ben Smit

