

Rearing young stock well is an important part of successful dairy farming. This job starts the moment the heifer calf hits the ground and continues through until she successfully joins the herd.

WEANING: is an important milestone for any heifer and its timing is not solely determined by age!

- The ideal time to wean is based on two important factors:
 - Weight:** The calves must have reached 20% of their adult liveweight (Jersey = 80kg, Cross bred = 90 kg, Friesian = 100kg).
 - Meal:** The calves must all be eating 1kg of meal daily as a minimum. Concentrate intake is a good indicator of rumen development.

GENERAL HEALTH:

There are some important and common causes of ill-thrift in weaners that you need to be aware of:

- Nutrition: lack of it, or poor quality. Pasture should be of high quality to encourage intake and meal feeding should continue for at least a month after weaning.
- Parasites: especially *Cooperia* but also *Ostertagia*, lung worm and liver fluke. Regular drenching is recommended up until a year of age with a double combination drench containing Levamisole (for *Cooperia*). Ideally this should be an oral drench e.g. Oxfen C®, Arrest C® or Scanda®.
- Trace element deficiencies: copper and selenium are vital for the growth and development of young stock. Our region tends to be low in both of these trace minerals so supplementation is recommended. Our standard supplementation regime involves a 10g Copacap® and a Selovin LA® injection at weaning.
- Infectious scours: *Yersinia* and *Salmonella* can cause enteritis in calves. Both bacteria are usually normal inhabitants of the gut and require some sort of break down in immunity to cause disease. The best way to avoid these infections is to keep stress levels low, avoid transport, feed and water deprivation, dietary changes, mineral deficiencies, extremes in temperature and concurrent diseases such as BVD and parasites. If your young stock on pasture develop a scour and signs of being unwell please call us for advice.
- Pasture related toxicities: as summer rolls around you need to remember that your young stock are also at risk of diseases such as facial eczema. Zinc dosing through the water is often impractical for young stock so alternative methods such as fungicide pasture spraying or zinc bolusing (e.g. Faceguard®) need to be considered if spore counts start to rise.
- BVD: raising persistently infected animals (PI) can be a huge waste of money and time, let alone the problems that come along with letting a PI heifer make it into the milking herd. If your herd is unvaccinated there is no way to guarantee that this year your cows have not produced a PI calf. The only way to be sure is to have all calves tested either via ear notch or blood testing depending on age.
- Other common diseases: pink eye, coccidiosis, pneumonia and B1/thiamine deficiency.

ESSENTIAL VACCINATIONS:

- Clostridial Vaccine e.g. 5in1 or 7in1:** these bacterial diseases are a common cause of sudden death in young, fast growing livestock. The vaccination is relatively cheap so if you consider the cost of losing a single animal this vaccine is a no brainer. Ideally the first vaccination should be given at weaning or ~12 weeks of age, followed by a booster 4 weeks later.
- Leptospirosis:** vaccination can be given in the form of lepto only, such as Leptoshield®, or combined with a clostridial vaccine such as Ultravac 7in1®. The initial vaccination should be given when the youngest replacement is 6 weeks old (i.e. 6-12 weeks) with a booster 4 weeks later. It is also recommended to give another booster the following May/June to bring the heifers in line with the rest of the herd (the time period between vaccinations cannot exceed 12 months).



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DAIRY MOOSLETTER

Well this spring has been one for the books for all the wrong reasons! By early September we had farmers telling us that they had recorded a years worth of rainfall already—with 5 months of the year left! It is a worry if this evens out and we go dry early, or continue with expected rainfall and to be honest I’m not sure which is better!

The wet and mud has meant a multitude of problems that we really didn’t need on top of the usual spring

- Loads of lame cows (see article on page 2)
- Teat condition has also been affected with the mud, leading to more teat sores. But a positive is that there seems to have been less mastitis (maybe due to more dry cow therapy used), and cell counts are generally lower than last season.
- Sick calves—and loads of them. It has been a very bad spring to be a calf. The number one issue has been scours, with Crypto being the main culprit. We have also seen mobs of calves with pneumonia from the wet and cold. If these cases were not treated promptly then the lung damage becomes too severe resulting in death. The surface water and mud has also meant more navel ill and joint infections.

Aside from the issues, the cows seem to be doing well. We have heard that there have been a lot less down cows this year, and cows tend to be milking well, with production generally ahead for the season.

At SRVS it is business as usual. Lots of routine metrichecking and blood sampling for trace minerals pre mating. We mentioned in the last notes the benefits of early metrichecking and therefore checking cows in batches and more farmers chose to check this way this season.

Tips for a successful Bull mating

Bull health—ensure all bulls that come on the farm are tested free of BVD and EBL and ensure they are vaccinated against BVD and IBR. Makes sure you see the certificate as well. We all know the disastrous consequences of either bulls introducing BVD to your herd, or your herd giving a bull BVD and making him infertile. There is evidence to suggest that you get bull infertility if they are infected with IBR over the mating period and therefore we have routinely been vaccinating bulls against it for the last few years. Tim and Michelle have also been doing more semen testing of bulls to ensure bull soundness as well.

Lameness—reduce the risk by getting the bull power right! Enough bulls in the team reduces the workload on individuals. Minimise walking distances – they are not used to walking long distances on tracks/concrete. Minimise disruption to cow flow – when bulls come to the shed with the cows they disrupt flow, which not only causes lame bulls but lame cows!! Train bulls to remain in the paddock. Use reflective paint on the poll to easily identify bulls in the dark. Have patience, it can take a few mornings to teach bulls not to come in with the cows, perseverance pays off! Move the cows in day/night grazing rotations to the bulls. If bulls are not cut out at the paddock do not leave them in the yard – cut them out and allow them to walk back to the next paddock.

Reduce the risk of fighting—organise the team early. They should be on farm in their team at the start of mating which gives them time to establish their social order. Alternatively try sourcing them from one farm/breeder. Only introduce new bulls to the team if a bull needs to be replaced. Keep working groups of bulls in different areas of the farm and move the cows in day/night grazing rotations. This will give the bulls a regular breather to maintain fertility. Run bulls of similar age and size. Use bulls between 18months and 4years of age.

So far, this year has been a testing one. The continual wet weather all year has led to some animal health issues which would not normally be a problem at this time of the year; one in particular is lameness. **Why has this year been so bad and what is this going to cost you for the season ahead?**

Rain, rain, and more rain. This has been the one single factor this year that has had the highest impact on the number of lame cows we have seen this year. Although the rain has not directly caused this lameness issue, it has had an effect in some way or another. It may have been the increased time standing cows on feed pads, or the severe damage to races that have continued to get out of control. Either way, both have increased the chance of damaging feet by inadvertently stepping on stones.

Race quality is probably the biggest issue at the moment on farms that are having large numbers of lame cows. The ground has been so wet for such a long period that carrying out track repairs has been difficult to do. By allowing cows to walk freely over bad races, there is still a high risk of them standing on sharp stones and causing damage, since most of these stones are hidden by mud. **These areas need to be attended to as soon as we have a few dry days.** *To determine how bad some parts of your tracks are, try walking on them in bare feet. This can give you some understanding as to what your stock have to walk on each day.*

It is really good to see that the basics of lameness prevention are being used every day. Allowing cows to walk freely with no pressure being applied and by using the backing gate to take up space as opposed to pushing cows, are essential in preventing lameness.

Every lame cow that is seen at the start of the season will have a huge impact on the rest of the season. The initial cost that is noticed by most dairy farmers is the time taken to treat the lameness, the cost of antibiotics if they are required, and subsequently milk out of the vat. To add to this lame cows will cycle less and show reduced heats, therefore reduced days in milk for the following season. Being lame during the mating period will also increase their chance of being empty, therefore also being culled at the end of the season. Other direct effects of being lame include a decrease in production and a decrease in body condition. The actual price per lame cow has been debated and an actual figure has not yet been agreed upon. *On average every lame cow will cost at least \$500 which is a combination of all of the above.*



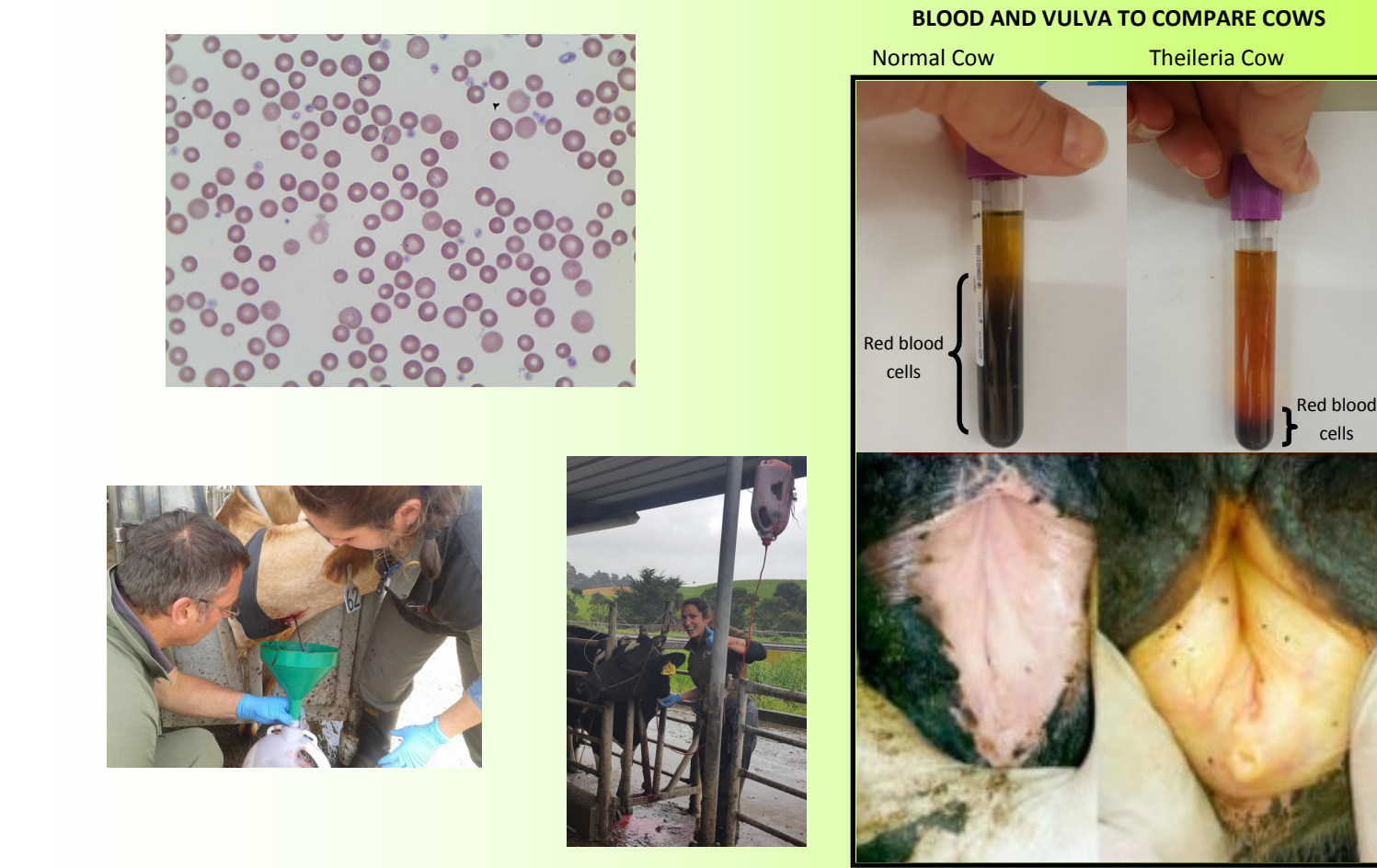
We have seen a spike of clinical theileria cases in the last 3-4 weeks. It probably started soon after that nice week of weather we had with no rain if you can remember that. We are seeing unusual presentations with some cows (dairy and beef) being clinically anaemic at calving, and then the more common presentation within 10 days of calving. Often these cows have another infection such as mastitis, metritis, RFM's etc.

There also appears to be an association with low phosphate levels in the cows. So if the herd has lower than ideal phosphate levels and clinical theileria is also present the affected cows are sometimes more severely affected and can go down hill to be nearly dead within 24 hours. Low phosphate levels are recognised as a cause of red blood cell damage but usually at very low levels. So there appears to be a double effect on the red blood cell damage here with low phosphate and theileria. This is certainly not clinically proven by trial data etc but talking to several "experts" there is an agreement that this relationship probably exists.

Treatment and management of affected cows is the same advice. Identify them as soon as possible so have the entire team looking for them. Then it is imperative to reduce the stress as much as possible – so OAD milking, as little walking as possible, take feed out to them if needed, treat any other health conditions that are present, B vitamin supplementation, TLC... We are doing blood transfusions on some severely affected cows with good survival rates and response post transfusion.

We have been advising that with sick cows you should only put the cups on them when they have an udder full of milk and this is the same with theileria cows. Anecdotally we have been told of cows not being milked for 3-4 weeks and then coming back into milk when they have recovered. I have suggested that to a couple of farmers and received the expected stare of disbelief however please think about not milking these cows for 3-5 days if it takes them that long to make an udder and take feed out to them, get them up on their feet so you can see nothing else has gone wrong with them and reduce the walking as much as you can.

Please talk to us if you have a lethargic animal. Have a look at their mucous membranes to see how pale/yellow they are and if anyone comes across some management or treatment practices that is achieving good results please let us know. We are going to have to develop some new strategies to manage this disease.



Getting cows back in calf early

Kristina

Ensuring cows are fully fed always comes first and foremost when wanting to get cows back in calf. However, you do have another tool up your sleeve to tighten the calving pattern, and that is treating non-cycler cows with a CIDR programme instead of waiting for them to start cycling on their own. By tail painting your herd 35 days before mating and recording heats, you can have a very good idea of the anoestrous cows in your herd before mating starts. This allows us to develop a plan to deal with them early and get maximum benefit from the intervention.

Research throughout New Zealand has highlighted the value of anoestrus treatment at the planned start of mating (PSM). Studies have shown that treating non-cycling cows with a CIDR programme at PSM advances conception date (and subsequent calving date) by 10 – 16 days. This means cows calve earlier and the extra days in milk give you a great return on investment, even when you include additional feed costs. It may be true that the longer you leave your non-cycling mob the less you will need to treat, but this is counter-intuitive for receiving the financial gain. ***The real gain you get from treating this mob early is in the days in milk the following season.*** Remember by treating non-cycling cows early you receive on average 16 days extra in milk production next year. Other advantages you get from treating early are:

- More compact calving over a shorter period.
- Treated cows calve earlier, and have more days in milk.
- Fewer non-cyclers the subsequent season.
- Faster genetic gain and additional AB heifer calves.

| | No Treatment | CIDR programme |
|------------------------------------|--------------|----------------|
| Extra days in milk | 0 | 16 |
| Kg MS/day | 0 | 1.3 |
| \$/Kg MS | \$6.75 | \$6.75 |
| Proportion extra AB calves | 0 | 0.1 |
| Value of AB calf (over bobby calf) | | \$400 |
| Total additional income | \$0.00 | \$160.40 |
| Extra costs | | |
| Treatment | \$0.00 | \$49.00 |
| Feed | \$0.00 | \$20.00 |
| Total extra costs | \$0.00 | \$69.00 |
| Net (\$/cow) | \$0.00 | \$91.40 |

*Additional feed costs based on requirement for an extra 5kg DM intake/day in milk at 25c/kg/DM

Further studies have been done to try and find new ways to manage your non-cycling mob. By splitting this group one week prior to PSM and for the first round of mating, significantly reduced the reproductive outcomes compared with leaving them in the main herd. This was put down to disrupting the social structure close to mating and having less involvement in sexually active groups. Once-a-day milking was also trialled from one week prior to PSM and for the first round of mating and found that the loss of milk production over that period was significantly larger than the cost benefit seen in reproduction. Please talk to your vet well before the planned start of mating to discuss the best treatment plan for non-cycling cows on your farm.

An early conversation around the subject now will prove ultimately far more valuable and constructive than a reflective one in autumn at scanning time, or next spring when calving drags out. Once late September/early October arrives, much of the scene on the farm is set for how mating (and next season’s calving) will play out – body condition score can’t be changed much now and feed levels are at the mercy of the weather. Early anoestrus intervention provides an opportunity to impact herd reproductive outcomes before mating starts and to maximise the farm’s production in the following season.

Heifer synchronisation for mating

Charlotte

The advantages of synchronising heifers are:

- Faster genetic gain and additional AI heifer calves, which is useful if you struggle to get enough heifer replacements, are trying to grow your herd size or would like to sell more AI calves.
- More compact calving over a short period
- More days in milk from earlier calving heifers, providing higher farm income
- More time for these heifers to begin cycling prior to the next mating period in the following year

There are two different programs that have been most commonly used historically:

Co-Synch Program

- Day 0: Insert CIDR/Dib-H and inject GnRH
- Day 7: Remove CIDR/Dib-H and inject PG
- Day 9: Inject GnRH and inseminate

A major advantage of this program is the AI day and time is fixed for the whole mob and therefore no heat detection is needed. This program is subtly different to the program used for cows (insemination occurs on Day 9 rather than Day 10) because heifers ovulate faster in response to prostaglandin.

Double PG Program

- Day 1: Inject PG
- Day 11: Inject PG
- Day 12-15: Inseminate to detected heats

This is a much cheaper program but does require several days of heat detection and inseminating. Some studies have shown the first service conception rates with the Double PG to be inferior to the Cosynch program and therefore pregnancy rates at 21 and 42 days are lower, but generally catch up by the end of mating.

The Double PG program in particular should only be considered on heifers that are well grown and showing good cycling activity. The target bodyweight for planned start of mating is 60% of predicted mature liveweight.

There are a few other things to consider that will ensure optimal outcomes for synchrony:

- Plan ahead regarding feed management and labour for an earlier, more compact calving in the following lactation
- Have well grown heifers – good frame size and body condition—remove freemartins!
- All animals tagged and recorded
- Good handling facilities for inserting devices and giving injections, and for the AI tech to do the inseminating
- Heat detection aids if using the Double PG program eg. Kamars or ‘scratchie’ heat mount detectors
- Adequate bull numbers to cover synchronised returns



If you want to discuss heifer synchrony further please get in touch with your vet.