September 2018

MOOZNEWS

The First Month of Lactation – Minimising Ketosis - Mat O'Sullivan

A good start to a cow's season requires careful management through the springer and colostrum period to ensure that she maintains a high dry matter intake. Initial focus should be placed on prevention of metabolic disease, optimising immune function, adequate feed allocation and manipulating cow behaviour.

However, the first month of lactation beyond the colostrum mob is still very critical. Most cows will spend this period in negative energy balance – i.e. more energy is leaving their system than coming in and therefore will lose body condition. This is why providing consistently high feed quality is imperative. We are already seeing many farms that are struggling to manage very high pre-graze covers due to good growth rates through the winter. These are impacting on voluntary intakes and may have lower ME.

Cows in significant negative energy balance may develop clinical or sub-clinical ketosis. Ketones are a by-product of inefficient fat break down and have a side effect of further appetite suppression.

Cows which are well fed/have a good appetite in the first month of lactation, will lose less weight and have better mating performance. Try some of the following

- Optimal pre-graze covers of 3,000 to 3,400 kgDM/ha in the first round will ensure good quality and easy harvest for the cow.
- Aim to get your milking cows eating 4% of body weight in DM ASAP.
- Use monensin (Rumenox/Rumensin Max), to increase feed conversion efficiency, by driving proprionate production. Clinical trials show boost in milk protein production and far less BCS loss. Use strategically from calving up until mating.
- Internal parasites – the biggest impact these have is on appetite suppression. Almost all farms will have high levels of over wintered larvae this year. We have seen cases of clinical disease from worms in R1 and R2's in the last month. Drench your herd by early September.
- Vitamin B12 – is a requirement for energy extraction. Deficient cows will lose appetite. We see serum B12 levels drop at the same time as spring grass goes lush. This is partly due to rapid transit times through the gut impeding B12 absorption. A good rule of thumb is when faeces starts becoming liquid look to give Vit B12.

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Sourcing Bulls with Low M bovis Risk

Many farmers are now already looking forward to mating and part of that may involve sourcing bulls to follow up the AI period.

A common question being posed from buyers and sellers alike is "will there be a commercially available M bovis blood test this season". Progress in this area has been pretty slow due to the complexity of test interpretation and the ramifications of providing an inaccurate status of a line of animals. It will be a case of watch this space, but it is likely that commercial blood testing will only be granted where certain criteria for a risk analysis have been meet and a minimum number of ~70 animals are in the line to be tested.

A technique for tonsillar swabbing of live animals for PCR testing has been developed, but very large sample sizes are required to provide confidence that a line is not carrying M bovis. Currently we do not endorse this type of testing in bulls because of the high risk of false negatives in healthy carrier animals.

In the meantime, we suggest sourcing only virgin bulls (i.e. – they have not previously been leased out), and those that have come from a minimum number of source properties. The ideal source would be e.g. a beef breeding operation that does not introduce any outside stock or a dairy farm which is essentially closed but has reared its own bulls from calves. Where possible ask for evidence of this from either the seller or agent.

Humeral fractures

At this time of year (calving through to mating) we see and hear about many cases of humeral fractures in R2's and R3's. The humerus is the large bone below the shoulder blade. When it breaks the animal will become immediately non-weight bearing in the affected leg (and will have to be destroyed).

Fractures often occur somewhat spontaneously – e.g. in bulling heifers and larking/galloping animals. We tend to see it in high producing animals and that are or have been in a state of severe copper deficiency. Copper is involved in an enzyme call lysyl oxidase – this enzyme gives bone elasticity.

Call your prime vet to discuss management and prevention.

Planning For Reproductive Success

– Reproductive Consults with your Prime Vet

The majority of farmers feel that 'Non Cycling Cows' are the greatest restraint in achieving good reproductive performance.

Achieving a high rate of pre-mate cycling will enhance both submission and conception rates.

Our reproductive consults are targeted with advice and monitoring to promote early resumption of cycling.

- Review of key reproductive problem areas from last season
- Regular BCSing and nutritional checks
- Manipulation of reproductive hormones through nutrition
- Strategic management of high risk (low BCS) cows
- Trace mineral profiling
- Time-lined KPI's leading up to mating
- Tailored tailpaint program and options for optimising non-cycler outcomes once mating nears
- Handy hints and tips gathered from top performing farms – Heat detection, Bull management, heifer mating, disease treatment and prevention.

- Heifers treated with Eprinex conceived 12.9 days earlier then their untreated herdmates in a New Zealand trial.
- In a separate trial adult cows showed an increase of 9 days earlier conception.
- New Zealand cows treated with Eprinex showed an increase in milk production of 0.03kgMS/cow/day over a lactation of 247 days – total production increase of 7.4 kg MS /cow.
- Treated cows graze 1 hour longer per day.

CALF DE-BUDDING SERVICE

We offer a calf de-budding service, using a gas powered dehorning iron and local anaesthetic to minimise discomfort to calves or checks to growth rates.

PLEASE BOOK IN CALF NUMBERS EARLY IF YOU WISH TO USE THIS SERVICE.

Book in batches of calves from 10 days of age onwards

$6.05 Excl GST ($6.95 incl)

Scours Outbreak in Calves - by Nicola Neal

A scour outbreak in your replacement heifers can have a devastating effect, not only on the calves but also the farm team. As always, prevention is better than cure.

1. Keep the environment as 'clean as possible" Don't overcrowd pens, allowing 1.5 sqm/calf and no more than 20 calves/pen.
2. Ensure all calves get a minimum of 2ltrs of fresh, good quality first-milking colostrum within 12 hours of being born and another 2 litres in the next 12 hrs.
3. Ensure good routine in the calf shed, with milk at a similar temperature and consistency at each feed.

If you start to see calves beginning to scour.

1. Spread calves out as much as possible, either across pens or out into clean paddocks, weather permitting.
2. Consider getting 10 blood samples taken from 2-8 day old calves to check if they are getting enough colostrum.
3. Increase disinfection of the calf pens, calf trailer and feeding equipment. Don't forget your boots and clothing too!
4. Get professional advice!
5. Ensure all scouring calves are getting adequate fluids each day. This is 6-8 litres of fluid/day.
6. Critically sick calves that can't get up may need IV fluids and or bicarbonate to get them up again. I recently treated a calf which was very close to death with bicarbonate into the vein and had it up and drinking within 3 hours.

Nursing Downer Cows

Downer cows are prone to a host of secondary problems including nerve damage, dislocated hips, muscle and spinal problems, which can be minimised when nursed appropriately.

Good nursing care includes:

- Providing shelter from cold and rain (ideally in a clean, dry shed)
- Thick bedding of hay, straw, sawdust, rice hulls or sand (at least 30cm deep)
- Barriers to prevent crawling and walking (if unable to walk when lifted)
- Lifted 1-2 times daily when able to support some weight, lowered when unable
- Rolled several times daily to take pressure off lower leg
- Access to high quality feed and water
- Teat disinfection twice daily, milking if udder leaking
- Moved using front-end loading bucket, not hip lifters.

For more detailed information see the Dairy NZ website or contact your prime vet.

Heifer Synchrony

Early calving heifers become early calving second calvers. Your heifers are also the highest BW animals you will breed. Early mating of your heifers will achieve early calving R2's with high BW calves.

Synchrony programmes ensure that heifers are mated over a short period and can be completed before mating starts in the cows. There are three options worth considering;

Heifer CIDR synchrony – Becoming increasingly popular. No fuss - just three yardings involved plus timed AI - no heat detection necessary. CIDRs can stimulate pre-pubertal (poorly grown) animals to cycle (prostaglandin has no effect on these). Nine days from CIDR insertion to insemination. Cost ~$28/head excl GST plus time.

Double Shot Prostaglandin (PG) – Two doses of PG given 11-14 days apart (we recommend 14 days). Mate to detected heat for 6 days post injection. For mating start date of e.g. the 16th of October, first injection required on the 2nd of October. Total cost ~ $11/head excl GST, plus Visit Fee.

Why Wait PG Programme – Mate to detected heat for 6 days and inject the rest with PG on day 6. Mate to detected heat for a further 5 days. Usually work on 60 - 70% of heifers remaining at day 6. Cost per dose ~ $5.50/head excl GST, plus Visit Fee.

Uddernews

Is your BMSCC less than 200?

We have to date had a near perfect run of weather for calving. Many clients are well up on milk production and covers are ahead of budget on many farms. There are however a number of farms with a BMSCC greater than 200. Take the opportunity now to get the BMSCC as close to 100 as possible as mating is not too far away and we often see a spike in BMSCC then.

If the BMSCC is high

- At a minimum strip the herd
- Preferably RMT the herd
- Ensure no cow enters the milkers without a clear RMT
- Make sure every teat of every cow is getting teatspray on it at every milking

If you can get the BMSCC close to 100 there will be very few cows in the herd with infection so the risk of passing bugs from cow to cow dramatically reduces. If your BMSCC is low when a cow does get an infection the BMSCC will jump or spike more dramatically making the tanker docket a far more sensitive tool for detecting if there is a new infection and allows you to go looking for fewer cows earlier.

If your BMSCC is close to 100 now it is unlikely you will have an issue with SCC all season as long the cows are milked well and the teatspray gets on the teats.

If you need some help reducing your BMSCC please contact your nearest Veterinary Centre clinic.

High Coccidiosis Risk in Calves

In moist and cool conditions coccidia may survive for up to two years on pasture. We have now had three favourable seasons in a row for coccidia survival and farms with dedicated calf rearing paddocks are at high risk. Calves are typically greater than 3-4 weeks of age and present with a bloody diarrhoea which may contain gut lining. The tail area is often smeared with this bloody diarrhoea. Calves appear very uncomfortable and will be seen straining with tails held in the air. A metallic sheen may also appear on the surface of faeces after a couple of hours. In severe cases up to 10% deaths can occur due to anaemia and dehydration and growth checks in survivors may remain for many months.

Calf meals which contain coccidiostats are only protective once calves are ingesting about 1kg/day. If treating/preventing an outbreak we recommend Deccox for at least four weeks, starting 2-3 weeks after being on pasture or Toltrox as a singular oral dose 3 weeks after being on pasture. Amphoprim can be used in severely affected animals as it also gives anti-bacterial protection.

BVD Bulletin

Over the last 2 seasons we have seen herds that have had found persistently infected (PI) animals in the milking herds when the bulk milk samples have been tested. These were herds that had gone for several seasons with no active BVD infection in the cows. When looking back as to the cause of the break down the likely reason was replacement heifers that had been kept out of R2 heifers from 2 seasons prior. The R2 heifers had been grazed at run offs or graziers where there were other cattle of unknown BVD status. The assumption was that the replacement heifers had come in contact with these cattle while they were in the first third of pregnancy and as a result produced PI calves. The only way to protect against this situation is to vaccination your heifers to stop them getting infected during the critical first third of pregnancy.

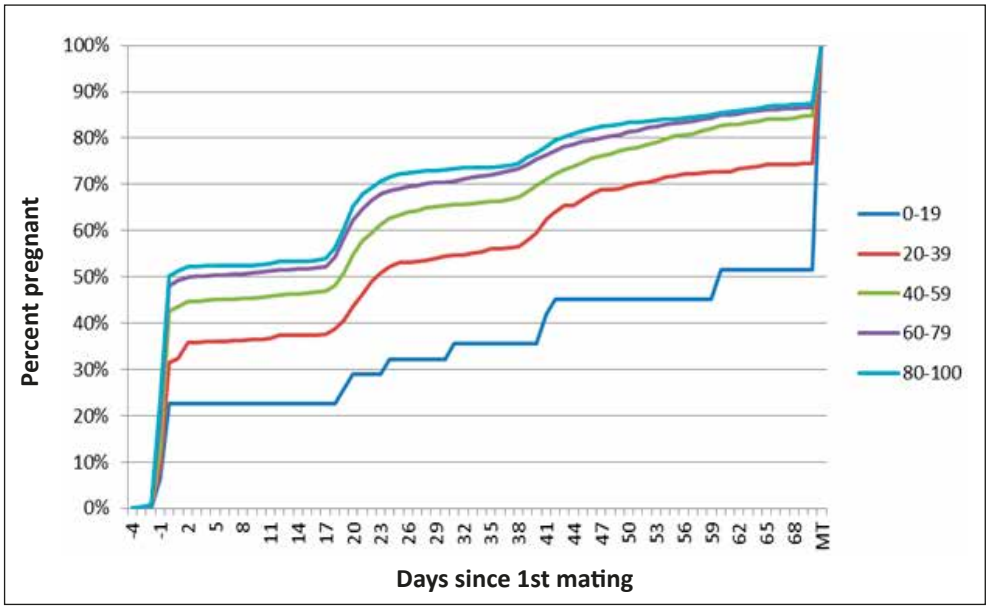
If you are looking to AI your R2 heifers this season to keep replacements from them, and they are at grazing I would strongly recommend vaccinating them. The heifers require 2 injections of vaccine 4 weeks apart. There is still time to do this prior to mating this year. If you are in this situation call your prime vet to discuss it.

Backing Winners – Which Cows Should Be Treated with a CIDR?

Three seasons ago the reproductive outcomes were examined from 8,500 non-cycling cows treated from 64 farms in our practice.

This is the biggest single study conducted in NZ on CIDR outcomes at a commercial level. From this study we were able to identify the optimal number of days-in-milk when treated, best time to treat relative to PSM and the optimal age of treatment. Overall the average first service CR was 47% which is extremely good for cows being mated on the first oestrus for the season. Cows under five years had the best response. Optimal first service conception rate occurred from cows >45 Days in Milk (DIM)and optimal MT rates in cows >40 DIM.

Relationship between Days since calving at treatment and Reproductive Outcome



Setting Up a Non-Cycler Programme

Getting the best results takes good planning. Where applicable back the cows likely to give the highest returns. From our studies the best returns come from non-cycling cows calved at least 40-45 days before treatment.

For a herd which starts mating on the 23rd of October that intends to treat non-cyclers 9 days before the PSM they could follow the plan below.

- Cows calving after the 1st of Sep are identified as late calvers with a stripe over the hips. (Those calving after the 20th of Sept are marked with a stripe over the hips of another colour)
- Tailpaint should be applied to all cows on the 18th of September.
- August Calving non-cylers treated on the 14th of October.
- September calving non-cyclers (calved by the 20th of September) treated on the 3rd of Nov (day 10 of mating).
- Very Late calvers and those other cows not mated treated on day 24 of mating 16th of Nov.

Metrichecking Cows – How to Optimise the Outcome

Endometritis is an infection of the lining of the uterus. Any cow which has an infection in her uterus will suffer a delay in resumption of cycling activity (one cause of non-cycling cows). If infection is still present at the time of insemination then this will interfere with sperm and embryo survival. Long standing uterine infections will also cause permanent uterine scarring. If the surface of the uterus is scarred, implantation and survival of the embryo is impaired.

Trials have shown that cows treated with a Metricure 7-28 days post calving have far better subsequent reproductive results than cows treated 5-8 weeks post – calving. Checking and treating in calving batches will improve results.

Waiting till early October to do a singular whole herd check is an opportunity cost/lost. Uterine infections (although still present), are harder to detect due to the low volume of discharge from the cervix. This leads to a large proportion of uterine infections being missed. Going to the trouble of Metrichecking a whole herd in October and finding just 2% is probably not an economic exercise.

Cows calved by the 25th of August, should be metrichecked now (early Sept). Cows calving 25th Aug – 15th Sept should be checked late Sept. Use a simple identification such as tailpaint to identify early verse later calvers.

- Dirty cows have ~20% higher empty rates than healthy herd mates
- Untreated dirty cows conceive on average 2-3 weeks later.

Premating Check List

- Tail Paint – this should go on 35 days before (~ 18th September) the planned start of mating. Any cows calving after the 1st of September should get a different colour tail paint to identify late calvers for the purpose of non-cycler treatment.
- Metricure all 'at risk' cows 2-3 weeks post calving ('at risk' cows = RFM's, vaginal discharges, dead calvings)
- Metricheck herd in batches. Identify with tail paint and check 7-21 days post calving.
- Ensure adequate trace element status – blood test herd in late September early October. Selenium, Iodine, Copper, Zinc and Vitamin B12 deficiencies can all affect reproductive performance. Vitamin B12 levels are generally low in the months from late September to December. Strategic use of vitamin B12 in mid/late September and again four week later anecdotally increases submission and conception rates (CR).
- Multimin Injection given two to four weeks pre-mate increase 6 WICR by 3 - 4%. (national & local trials)
- Consider BSCing your herd in early/mid September and again at P.S.M. This will help with strategic decision making.
- Run light cows as a separate herd at least 3 - 4 weeks before PSM and feed preferentially and or OAD milk.
- Drenching lighter animals and heifers will give a significant reproductive boost. In the Eprinex trial involving the Lincoln Dairy Farm, treated heifers conceived on average 12.9 days earlier than untreated heifers.
- Feeds or feed additives such as grains or Rumensin, boost proprionate production in the rumen, which may indirectly increase submission rates.
- Feeds with a higher fat content (e.g. PKE) fed just before and through the mating period may increase C.R.
- BVD vaccinate heifers and cows in herds where BVD has been diagnosed or in herds experiencing higher than normal embryonic loss, abortion and empty rates. Animals should be vaccinated twice, four weeks apart with the final dose at least two weeks before PSM.
- Start sourcing bulls now. Try to establish a low risk M. bovis source (ask your vet). Ensure they are BVD vaccinated and blood tested BVD free. Consider also getting bulls vaccinated for Pink Eye if this has been a problem in the past.
  A 600 cow herd using AI for 6 weeks will require 7 bulls in the herd at all times, plus 7 extras to rotate on an every second day basis.
  A 600 cow herd which AI's for just 4 weeks will require 10 bulls in the herd at all times and 10 extra to rotate.
- Work out your intended planned start of mating, and book in your synchrony programs with Vet and AI tech now.
- Plan to start mating heifers 5 - 10 days earlier than the herd.
- Submit non-cyclers for treatment 5-10 days before PSM.
- Book in a Reproductive Consult with your vet.

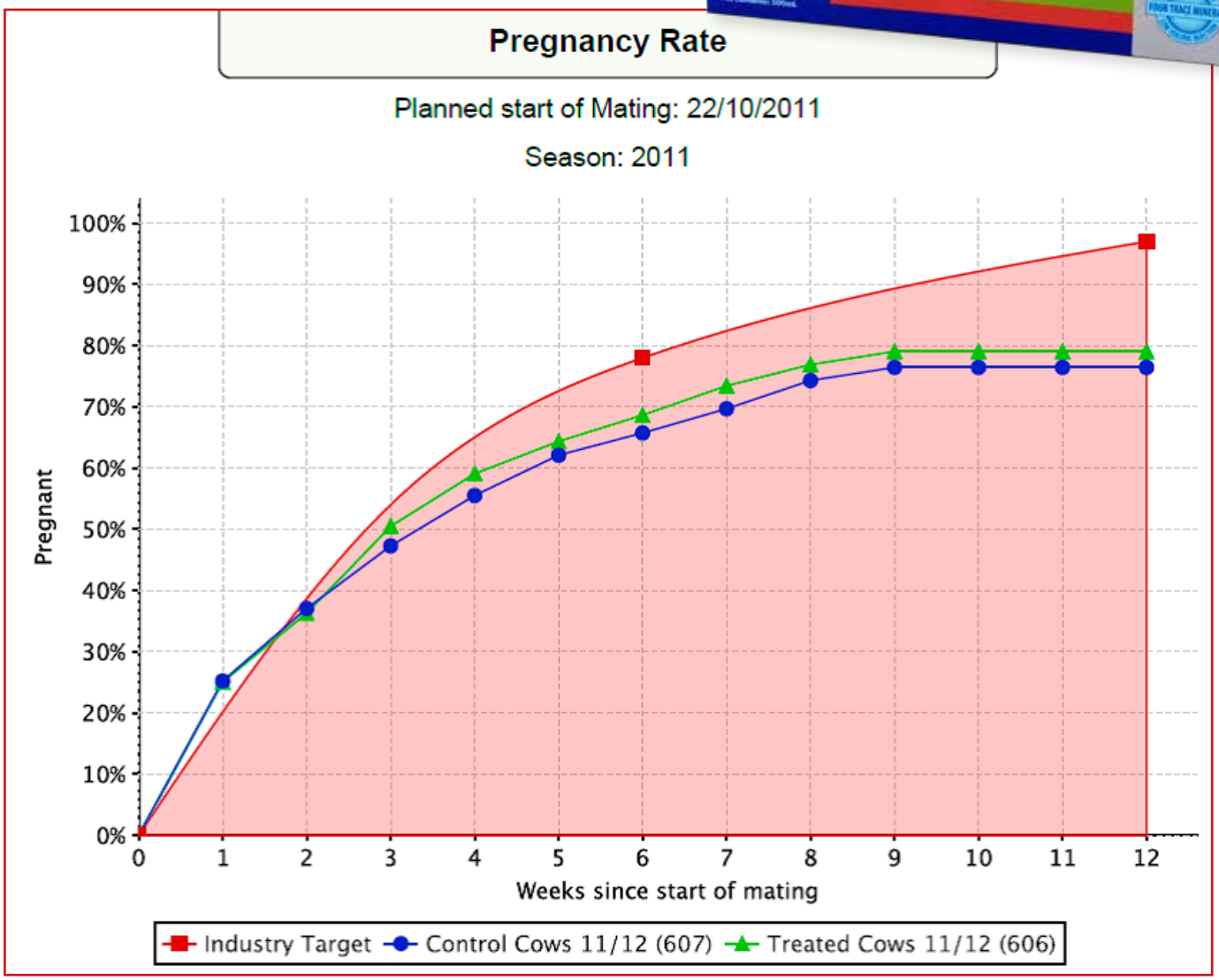
Multimin Injection Premating to Lift Reproductive Performance – a Vet Centre Trial

A local 1,200 cow farm receiving a well reputed trace mineral blend had premating bloods and livers taken. Serum selenium average 880 units and liver coppers averaged 790 units. Both of which are very good and would under normal circumstances not be recommended to give additional supplementation.

Half of the herd (606 even ear tag # cows) were given Multimin (a 5ml dose), 3 weeks before the PSM. All cows on the farm continued to get minerals through the dos-a-tron throughout the entire lactation.

The result

The Multimin treated cows referred to as 'treated cows' are in green in the graph below and the non-treated cows are referred to as 'control cows' and are in blue.



From 4 - 7 weeks after the start of mating there was a 4% difference in pregnancy rate between the treatment and control groups in favour of Multimin. By the 9 weeks there was a 3% difference in Not In-Calf Rate

This difference meant 22 extra Multimin treated cows got in calf over the seven-week AI period and the median conception date was shifted forward by 2.3 days.

At a $6.50 pay-out this would provide a gross return of $20/cow treated in additional milk production, a $30 return for reduction in empty rate (from a nine-week mating - using pregnant value minus cull value) and another $5/cow treated attributed to additional heifer replacement.

Total net return = $51/cow treated. The Return on investment (ROI) in this case was 14:1

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