REPRO SEASON

As scary as it may sound, whilst you are up to your armpits trying to calve cows and knee deep in mud, we need to be thinking now about the upcoming mating season.

Our main driver for a successful repro season is the 6-week in-calf rate. A high 6-week in-calf rate gives us the best chance to maximise days in milk, which at the end of the day, is what it is all about!

This will also result in more AB calves, fewer non-cycling cattle the following year and more likely to have more cows in calf by the end of the breeding season.

Every 1% increase is worth $4 per cow. So for a 400 cow herd, increasing the 6-week in-calf rate from 60% to 70% is worth an extra $16,000! The graph below shows the 6-week in-calf rate for all the VetEnt Otorohanga farms – you can see the wide range from 50% to 85%.

There are many causes for this range in 6-week in-calf rate, but the rest of this article will focus on one aspect of it: non-cycling cows.
Non-Cycling cows are cows not seen in heat either in the pre-mating period or during the mating period...

Why do you need to be concerned with non-cyclers?
Non-cyclers depress both of the two key drivers of 6-week in-calf rate which are:
- 3-week submission rate
- Conception rate to first insemination

Options for non-cycling cows:
• Once-A-Day? – Milking cows OAD will reduce the energy demand of cattle and reduce lameness risk. There have been mixed reports on how effective this method is for reducing non-cyclers – DairyNZ did not find any benefit from placing animals on OAD for a short period of time; however, we have had several local farms praise the benefits of going OAD when done early enough.

• Preferential Feeding? – There is no reproductive benefit of separating animals and preferentially feeding non-cycling cattle. If they are non-cycling because of energy status, then it is too late to change this by feeding them more unfortunately. In fact, one DairyNZ study actually demonstrated a decrease in the pregnancy rate using this method, possibly due to social stress of changing the make-up of a herd.

• Teaser bulls? – Teaser bulls have had a resurgence over the past few years, partly as a result of some good quality New Zealand studies. Teaser bulls do not turn a true non-cycler into a cycling cow. However, these animals are excellent at picking up those cows with very weak or short heats that we may have missed otherwise. New Zealand data have shown an increase in Submission Rates by 7% with the use of Teaser Bulls. So, although teasers won't reduce the number of 'true' non-cycling cattle, they will often improve the submission rates. Mycoplasma bovis risk needs to be assessed, but commercial Teaser Bull providers are doing their best to minimise this risk.

• CIDRs? – Although there are several objections to the use of CIDRs for non-cycling cows, the reality is that they do improve the 6 week in-calf rate! NZ research has identified that CIDRs result, on average, 16 days extra in milk compared to not treating with CIDRs. These extra-days in milk result in CIDRs being cost-effective even in a low payout year. Once an animal has been identified as a non-cycler just prior to the planned start of mating, the best thing may just be to put a CIDR in her!

For any of these options though, we need to have identified cows that are non-cycling. So… On Your Marks, Get Set, Tail Paint!

"That cow’s got mastitis, What should I treat her with?"

This is a question we commonly get asked, as there are many many different choices when it comes to drugs to treat mastitis.

1. Should I treat her at all?
Firstly, slight changes in milk colour and positive reactions on the RMT, even the odd fleck in the milk do not necessarily mean the cow has an infection that requires treating. It does indicate she has an increased cell count but not necessarily an infection. These cows may be only just out of the transition milk period and just require a bit more time for the cell count to return to normal, or they may have had an infection, been treated or self-cured and the cell count still needs time to come back down. Feel the udder: a hot or hard quarter is indicative of an active infection that requires treating.

Secondly, if this is a cow with a chronic high cell count and a history of recurring mastitis, would it be better to cull her instead?

2. Is it a heifer or a cow with multiple quarter mastitis?
In these cases an injectable antibiotic may be preferable to multiple tubes of an intramammary. In most instances Mamyzin or Penetheject will be your first choice.

3. What Bug is it?
Last month’s article talked about the value of taking a sterile milk sample before you treat the cow. This the only way we can tell which bug is causing the mastitis and then know which antibiotic is going to be the best treatment.

So what are the bugs that cause mastitis in dairy cows?
Whilst there are a huge range of bugs that can cause mastitis, there are four main groups of bacteria responsible for the majority of cases.
- Strep uberis and other Streptococcus species: These are environmental bacteria commonly picked up at or around calving or as cows lie down on the pasture.
- CNS Staph: These bacteria live on the cows skin.
- Staph aureus: This bacteria is spread from cow to cow during...
the milking process. Often the infections are sub-clinical causing chronically high cell counts but no clinical signs of mastitis.

Coliforms (eg E coli): These bacteria are found in cow faeces. Many cows will self-cure without showing clinical signs, whilst some animals will become systemically sick and potentially die.

Taking a milk sample will tell us which of these bugs is present and then we can decide on the best course of treatment.

So what do I do in the meantime while we are waiting for culture results? Which antibiotic do I choose?

Recent data indicates that with the first three groups of bacteria above, the treatment with the highest cure rate is still penicillin and hence the recommended first choice antibiotic for any case of mastitis is one that contains penicillin (Intracillin, Penclox, Manyzin).

But I have heard that Staph aureus mastitis is hard to cure and penicillin isn’t strong enough, shouldn’t I use something else?

It is true that Staph aureus mastitis is hard to cure, and cure rates can be as low as 25%, but in most cases penicillin is still the best treatment to try. A very small number of Staph aureus strains are penicillin resistant, but treating these with other drugs (such as Cloxacillin, Tylosin, Oxytetracycline) is likely to have quite a poor cure rate anyway and these cows are best culled in order to prevent spreading the bacteria to other cows in the herd.

The key to curing Staph aureus cases is related to the length of treatment. The usual three tubes that is required to cure a simple Strept uberis infection is just not long enough for a Staph aureus infection, hence the recommendation is to continue treatment with a penicillin-based drug for a further three treatments (Intracillin or Penclox) rather than change the type of antibiotic used.

How do I tell if the mastitis is Staph aureus or not?

As we talked about above, the only way to tell for certain is to take a milk culture. If the sample is taken before starting treatment with Intracillin and brought into the clinic, the result will be available in 48hrs. If the sample is then positive for Staph aureus, treatment can continue with either intracillin or Penclox; if the sample is not Staph aureus then treatment is stopped at three tubes of Intracillin.

What about the 4th group, the coliforms?

This group is less common than the others and may cause cows to become sick with mastitis. In these cases where the cow is sick your vet will advise you on the best course of treatment. For farms that have a larger proportion of coliform mastitis cases, the treatment we recommend is Spectrazol MC. To know whether your farm has a tendency for coliform mastitis you will need to bring in milk samples for culture from a number of mastitis cases, also have a chat to one of our vets about what risk factors for these bacteria may or may not be present on your farm.

Are there other things that can cause mastitis?

There are other causes of mastitis such as fungi, algae and other bacteria, but these are rare in comparison. These will only be picked up on if milk culturing is done. If found, specific advice can be given. If milk is not cultured then these “other” cases may appear as though your treatment isn’t working, when in actual fact you may have a mastitis pathogen that just isn’t cureable with antibiotics at all.

What does VetEnt recommend?

- Take a sterile milk sample from every mastitis case.
- Start treatment with Intracillin
- Receive culture results and:
  - If Streptoccocus species: finish treatment after three tubes.
  - If Staph aureus: continue treatment for a further three tubes of Intracillin or Penclox.
  - Staph aureus cases that do not cure: should be considered for culling
  - Anything else: follow vet advice
- If you are having issues with curing mastitis cases, or think you might have coliform mastitis issues, please ring the clinic and speak to one of our vets. We can make a specific treatment plan that works for your farm.

Reminders:

With mating looming quickly, now is the time to be thinking about what heat detection aids you will be using to optimise your mating performance.

Estrotect Heat Detectors are an economic, easy-to-use and highly effective heat detection aid available to farmers.

Estrotects are a business card sized patch that sticks onto the cow’s rump. With each mount, the surface will gradually turn from silver to a bright colour (of which we have several options) alerting the farmer she is ready for AI.

The benefits of Estrotects is that they only need to be applied once per cycle, in comparison to tail paint which must be applied or touched up daily.

See VetEnt for options that may suit you, such as tail paint and Estrotects.