

## Rearing Calves:

Rearing of replacement calves is one of the most important things to get right, right from the start. These animals are the future breeding stock of your herd. Sick calves are also both costly and time consuming. Great calf rearers plan well in advance and are well organised for the rush of calves.

- **Pick good staff** who are interested in the outcome
- **Have good clean and dry bedding** – would you like to lie on it?
- **Have adequate space** – Approximately 2 square metres per calf and a max of 15 calves per pen.
- **Use an all-in-out system.** Don't move calves from pen to pen and don't mix calves of different age group. Calves in the same pen should be within a week of age.
- **Good ventilation** - but no draughts. Can you sit in the pen on a cold wet day, without getting cold from the draughts or wet from the rain?
- **Consistent feeding routine** including milk volume, temperature and concentration. Also make sure you are cleaning feeding equipment daily.
- **Have fresh water available.** It is amazing how much water they can drink – especially if there is hay or meal available.
- **Hygiene** of the calf rearers is very important. It is ideal to wash boots in between pens so you don't pass on bugs from one pen to another. Also wear gloves to protect against the zoonotic risk.

Great calf rearing starts with calves getting **adequate colostrum** within the first 12 hours of life. By 12 hours of age the calves gut will only absorb 5% of colostrum antibodies. Therefore **feeding colostrum quickly** is the single most important factor in ensuring calves gain adequate immunity. Even in ideal environments a large percentage of calves still don't receive adequate colostrum from their mothers, so they miss out on vital antibodies. Great calf rearers pick up calves **twice** daily and collect colostrum and stomach tube each calf as it enters the calf shed. **2 feeds of 2-3L within the first 12 hours** is the gold standard. Make sure this is **good quality FIRST milking colostrum only.**

## Vet Profile - Emma Oliver



Emma has been looking after our small animal patients since January 2014, and will be a familiar face to our small animal clients. Emma works out of all three of our clinics, but is mainly based at Edgecumbe. She likes working with

small animals, and enjoys working through the interesting cases that come in...Particularly when they go home again, feeling better!

Growing up in the U.K. and graduating from the University of Liverpool, Emma made the move to the southern hemisphere in October 2013. She was quick to acquire a new addition - a Springer Spaniel called Maisy. Maisy has been adopted by Emma's mum, and currently lives up in Auckland.

When not treating and vaccinating our furry friends, Emma can be found enjoying the 'Kiwi lifestyle' - swimming, tramping, cycling...and baking.

## Tube feeding Colostrum to new born calves:

Some of you may have seen an article in the rural press relating to the negative effects of tube feeding.

These articles have claimed that tube feeding can damage the underdeveloped rumen. There is little basis for this claim, and the positive benefits of tube feeding far outweigh any small risk of damage.

The reality is that the tube goes nowhere near the rumen, and any milk which enters the rumen is quickly moved into the abomasum.

The important thing is that for calves to be healthy, they need to get 2-4 litres of good quality colostrum within 6-8 hours of birth. One of the best ways to guarantee this is to stomach tube calves with fresh colostrum as soon as they are collected.

Please do not hesitate to use the stomach tube where necessary.

## Transition Feeding:

Feeding through the transition from dry period to lactation is very important, but the seeds of success are sown much earlier.

The most important determinant of a successful transition is cow condition. If cows are not at an optimum condition, (BCS 5 for mature cows and 5.5 for heifers and 3 year olds) a month before calving, then transition is already compromised.

Cows above or below optimum condition score are at an increased risk of metabolic and infectious diseases, like milk fever, ketosis, mastitis and metritis.

As cows will not gain much, if any, condition in the month before calving, it is important to dry cows off in good condition, or dry them off early if they are thin, to allow enough time to fatten them up.

High BCS, although less common than low condition, can be even more difficult to manage. These cows should be milked as long as possible and fed no more than maintenance over the dry period, to limit the risk of milk fever and ketosis.

Metabolically, cows will transition better if they are not over fed in the month before calving. Cows which are at BCS 5 or greater should be fed 80-90% of their metabolic requirements, and cows less than BCS should be fed 100% of requirements but no more!

One of the main objectives in transition management is to avoid metabolic diseases such as milk fever and ketosis.

It is important to avoid sudden changes in diet composition around calving. If possible, feed the same diet to the springer cows as you will feed after calving, changing only the quantity of fed.

Add magnesium to the springer diet, preferably magnesium chloride or sulphate in the water, and mag oxide on the feed. Continue after calving.

Supplement colostrum cows with 100gm/cow/day of calcium (250gm lime flour)

Minimise condition loss after calving by fully feeding cows, and consider the use of ionophores such as Rumenox, to reduce sub-clinical ketosis. Rumenox has been shown to reduce condition loss post-calving by half a condition score, and increase both milk protein yield and 6 week in calf rate. Drenching daily with Rumenox, or adding to the dosatron will effectively prevent bloat.

Along with calcium and magnesium supplementation, drenching freshly calved cows with a starter drench such as starter plus or jumpstart has been shown to reduce milk fever and other metabolic problems.

Don't forget to treat for worms. New Zealand trials by Merial-Ancare showed an increase in milk solids of about 7-9 kg per cow, and in 2 year old heifers a 13 day shorter calving to conception interval, following a single application of Eprinex at calving. Even on a low pay out that is increased productivity worth having!

## Calving Cows.

Checking your springer mob every couple of hours through the day is ideal so you can keep an eye on what is going on and who is calving and not calving.

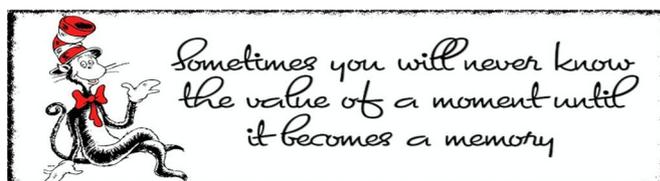
If you see a cow starting to calve and has been straining for around an hour and a half with no progress then it is time to bring her in and check what is going on.

### Things to Do

- If you think she has started and nothing's happening get her in and check.
- Be clean, have water available and clean up before checking inside.
- Identify which position the calf is in. Know how to tell a front leg from a back. In front legs the first two joints both flex the same way and in the back they flex the opposite way. If you find front legs there should be a head somewhere too.
- Once everything is lined up and you start pulling the calf should keep moving. If it comes to a stop don't just pull harder. Check the calfs tail is pushed down if coming backwards.
- Know how to put on a head rope properly. It goes behind the ears and through the mouth. It keeps the head straight and you won't break anything.
- Always check for another calf or any damage once you deliver one. If there is contamination or heavy bruising give penicillin to prevent infection. A shot of oxytocin will help close down the uterus and expel membranes.

### Things not to do:

- Don't leave cows if you are not sure if they have started or not. These often turn into rotten fizzers, due to twisted uteruses or malpositioned calves.
- Don't start pulling until you are sure the calf is coming properly, that is two front legs and head all belonging to the SAME calf or two back legs.
- If the calf won't enter the pelvis something is wrong! Stop!
- If it doesn't seem right it probably isn't. Stop.
- Don't try for too long trying the same thing over and over, eg. Trying to get a leg up. Stop and try something else.
- If things aren't going well get help. Everything gets harder the longer things go on.



## Dealing with Down Cows in the spring.

Down cows are problems we face ever calving season with most cases occurring 2 days before to 2 weeks after calving. There are many causes of 'downer cows' and they can be one of the most frustrating conditions during the spring.

### Major causes of down cows include:

- Metabolic Diseases – milk fever, grass staggers or ketosis
- Extremely sick cows – toxic mastitis, acute metritis
- Musculoskeletal injuries – calving paralysis, fractures and dislocations.
- Calving - dystocia

### Treating down cows:

The first step is to examine the cow and try determining why she is down. For metabolic cases give a mixed metabolic bag with calcium and magnesium under the skin or SLOWLY in the vein. Dextrose can also be given in the vein for energy. Oral supplementation of calcium and energy should also be given. Make sure she is sitting up and swallowing.

### Supportive care of down cows:

The longer a cow is down then the less likely she is to get up. Within 6 hours they will start to develop muscle and nerve damage. This means even if you treat the reason they went down to begin with the muscle damage means these cows won't get up. Animals that don't respond to initial treatment need an effective nursing plan.

- **Bedding and shelter** - Ensure cows are warm, sheltered, and on dry and soft bedding e.g. hay. For shelter you can use a cow cover or stack hay bales to block the wind.
- **Rolling** - Roll the cow to the alternative side multiple times daily.
- **Lifting** - Lift cows carefully with hip clamps (ideally with a supportive strap behind the front legs) for 5 minutes, 2-3 times a day. Cows should never be left unattended or moved to a new location in hip clamps.
- **Milking** - Hand strip the cow while she is lifted to prevent secondary mastitis.
- **Water and feed** - Have clean fresh drinking water available and extra food such as silage, meal or hay. Down cows are dehydrated and energy deficient. Ideally, stomach tube and drench with 25l of warm Electrolyte and energy drench daily. We have stomach tubes and pumps available.

If you are unsure why a cow is down its best to get us out early so we can help diagnose. Blood tests can also be done to help determine the cause and give a prognosis of whether she is likely to get up or not. It's much better to put your time into a cow that has a good chance of getting up rather than wasting it on a cow that has no hope.

## Ha ha ha

Knock knock - Who's there?

Moustache!

Moustache who?

I moustache you a question, but I'll shave it for later.



## Calf Scours

Calf scours remains one of the most widespread diseases affecting young calves. In severe cases an outbreak can kill up to a third of infected calves.

### Common causes of scours in young calves include:

- Nutrition – any age
- E.coli – 1-4 days old
- Rotavirus – 4-14 days old
- Cryptosporidium – 4-28 days old
- Coronavirus – 5-20 days old
- Salmonella - >7-10 days

### What to do in an outbreak of Scours:

- **Call the vet** – for advice, diagnosis and treatment.
- **Identify sick calves early:** Mild dehydration may be the first signs that the calf is sick

Dehydration Early Signs	Dehydration Late Signs
Slow to drink	Unable to stand
Slow to get up or move	Sunken eyes
Reduced milk consumption	Increased respiratory rate
Droopy ears and dry nose	Absent or weak suck reflex
Standing apart from mob	Other signs of disease e.g. scouring.
Rough coat	
Temp >39.5°C	

- **Isolate** – Remove all calves to a sick pen, ideally in a separate shed where they have no contact with healthy calves.
- **Hygiene** – Have the minimum number of people possible entering the calf sheds. Feed the healthy sheds first. Ideally have separate equipment for the sick shed and the clean shed. Use virkon to disinfect all equipment and change gloves between each pen.
- **Clean calf sheds** – Remove/burn shavings with diarrhoea daily. When the shed is empty, remove all shavings, spray with Virkon and have 1 week calf free before reusing
- **Treating Dehydration** - oral electrolytes are the mainstay of treatment and will replace the lost water and salts. Do not withhold milk for more than 24 hours as calves need it for energy and to reduce weight loss. Ideally they need 4 feeds a day. 2-3 feeds of electrolytes and 1-2 feeds of milk aiming for 2L per feed. Separate milk and electrolyte feeds by at least 2h. Also leave ad lib electrolytes available overnight
- **IV fluids** – any calf unable to stand needs immediate veterinary treatment. Vets can give fluids directly into the vein in these severe cases or for valuable calves.
- **Faecal samples** – directly from the calf not the ground, can be tested in-clinic or sent to the lab.
- **Evaluate colostrum management** - Are calves receiving adequate colostrum. Blood tests can be done to check GGT and IgG levels.
- **Scourban** – helps coat the damaged intestines, firms the faeces which reduce the amount of fluid lost and dehydration. It also contains antibiotic.
- **Antibiotics** – prescribed by the vet. Also useful in viral or parasitic infections to prevent secondary bacterial infection.

# Start the season off on the right teat!

## Teat spray springer mob 2-3 times per week:

- If dripping a lot of milk then lightly milk to reduce pressure. Check for mastitis.

## Prevent cows leaking milk:

- Heifers/cows that are leaking milk are at great risk of getting mastitis.
- Adjust springers feeding levels to prevent excessive bagging up and feed hay.

## Pick cows & calves up TWICE daily from springer mob & milk them ASAP:

- Essential to have the shortest time between calving and the first milking to reduce mastitis.
- Colostrum quality significantly reduces in the first 12-24 hours. There is a short 6-8hr window where the colostrum immunity is absorbed by the calf. Giving calves fresh high quality colostrum prevents navel/joint infections & diarrhoea.

## Strip every cow during colostrum period (8 milkings) & RMT before going into vat:

- Colostrum contains high level of SCC. Care needed in the first few weeks not to get a SCC grade.
- Heifers & older cows may take 10 milkings to change from colostrum to milk giving a positive RMT on 4 quarters.
- RMT positive cows need to be monitored and if not resolving take milk culture.

## Mastitis and colostrum mob needs to be milked TWICE daily:

- Mastitis will cure faster if the bugs are stripped twice daily compared to once daily.

## Milk cultures:

- Take sterile milk sample before treating mastitis. Label with date, quarter & cows number.
- Store in freezer & take to vet to get tested if mastitis recurs or does not resolve.
- ID the bug and what the best treatment is.
- Can't be taken if cow has had antibiotics within the last 10-14 days.

## All cows treated with intra-mammary must have teats wiped clean first:

- Some bugs that live on teats/mud/hands can cause a more severe mastitis that's not fixed by the treatment inserted. This may result in the mastitis taking longer to cure or recurring!

## Only partially insert intra-mammary tubes into the teat:

- Full insertion risks inserting bacteria and can damage the teat canal causing blind quarters.

## SPRING mastitis treatments:

Penicillin based products are best as environmental bacteria most commonly cause spring mastitis.

- **Clavulox**, **Intracillin** or **Penclox** should be the first choice of intra-mammaries used.
- **Penethaject**, **Mamyzin** or **Masticillin** injection if multiple affected quarters, mastitis is severe or in a heifer.
- **Orbenin LA**, **Mastalone**, **Lincocin Forte** or **Tyloguad** used if other products have not worked or the mastitis recurs.

## New Product:

It appears from recent work that many farm staff have had trouble with tube feeding a large number of calves on dairy farms.

They have killed some and had physical struggles. In the light of this a new safer and easier device has been developed. It has been trialed with students who had no previous experience. TrustiTuber looks to have many extra advantages over previous products.



## Maternity Leave:

As most of you will know by now, Kim is about to go on Maternity leave.

We will have a new vet starting to cover Kim's

leave, her name is Laura Taylor. She has 3 year's experience, and has just finished a stint working in Australia. Laura hails from the UK.

Laura will be with us for a year to cover Kim's absence.

We wish both Kim and Jason all the best with their new arrival into their family, due in early August.

We look forward to having Kim back in the near Future.



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