



See more calf health information at www.healthycalves.co.nz

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Keeping your calves healthy

A guide for calf rearing



**Your calves are valuable.
They represent your
future herd and income.**

Why else would you put so much effort into rearing them, and take so much pride in seeing them reach their full potential?

Healthy calves will always be your best performers. But it's worth remembering that calves are not just smaller versions of adult cows. From birth to weaning, they are as delicate and vulnerable as any baby animal. They are much more susceptible to disease and ill health, and much more likely to suffer badly or even die as a result.

When you've invested so much time, effort and money in your calves, the last thing you want is for disease and ill health to undermine their future production and your income, or cause you and your animals any distress.

This guide will give you the key ways to protect your valuable calves from the main threats to their health and wellbeing. So you can be confident that they'll reach their full dairy potential.



Keys to healthy calves

Keep calves sheltered

- ▶ It's best practice to ensure calves are sheltered for at least three weeks. Exposure to wind and rain can kill young calves, and is a significant cause of poor performance. It also means feeding requirements increase significantly – which is a cost to you.
- ▶ An ideal shed will be twice as deep as it is wide. The shed should be dry and draught-free.
- ▶ Consideration should also be given to which way the opening of the calf shed faces – ideally this should be north facing and definitely not south facing.

- ▶ Don't pack calves in too tightly – no more than 20 calves per pen, with a minimum of 1.5 square metres per calf, and no more than 100 calves per shed.
- ▶ Make sure the shed does not contain any treated timber or old lead paint, as calves are prone to sucking on the woodwork.
- ▶ Good drainage, effluent removal and ventilation are essential. If there is an ammonia smell in the shed, the ventilation is not adequate. There should be no water on the ground in pens or feeding areas.



Keep everything clean

- ▶ Good hygiene is vital for keeping calves healthy. You need to be diligent about ensuring their environment is clean.
- ▶ Before and after calves are transported, spray their cords with iodine.
- ▶ Before calves enter the shed, sterilise the shed, bedding and any equipment with a virucidal disinfectant. Once calves are in, disinfect twice a week.
- ▶ The bedding, which can be straw, shavings or bark, must be clean and dry, and not dusty. Make sure there are no treated timber shavings in their bedding that they might eat. It's recommended that the bedding be at least 300mm deep, so keep adding to it if the levels drop.
- ▶ Keep the shed completely free of rodents or birds – they can spread disease.
- ▶ Drinking water should be clean. Muddy water pooling on the ground can be a breeding ground for the causes of infectious scours, so it's vital to ensure good drainage.



Ensure a good colostrum intake

- ▶ The Animal Welfare (Dairy Cattle) Code of Welfare 2010 states: 'To ensure their welfare, newborn calves must receive sufficient colostrum or a good quality commercial colostrum substitute (Minimum Standard No. 3: Feeding Newborn Calves)
- ▶ It is vital that newborn calves receive high quality colostrum within the first few hours of life. Calves that do not receive enough colostrum are much less likely to reach their potential. They will also have significantly less resistance to disease – a 40% increase in death rates can occur if calves do not receive adequate colostrum.
- ▶ Calves need colostrum equivalent to 10–15% of their body weight – i.e. 2–3.5 litres – within the first six hours of life, and again within the next six.
- ▶ Undiluted colostrum from the first two milkings will provide the highest levels of nutrition and immunity through protective antibodies.
- ▶ Colostrum from cows vaccinated against infectious scours will boost the protective antibody levels even further – and will provide protection for at least four weeks after birth.
- ▶ To provide further protection during the period calves are most at risk, dairy calves need 2-3 litres of stored colostrum every day as part of their diet, for a minimum of three weeks. Beef calves suckling well will get antibody-rich milk for at least four weeks.



Plan to reach your full potential

- ▶ Young calves are vulnerable to disease and more likely to suffer or die as a result. A planned disease prevention programme is the best way to minimise the risk, so consult your vet about a programme for your farm.
- ▶ Calf scours has been identified as the biggest problem faced by calf rearers:
 - Nutritional scours can be caused by factors including the feeding of cold milk, changes in diet, and environmental stresses.
 - Infectious scours is the biggest threat to calves – it spreads very fast, especially in the more intensive rearing environments, and is often fatal.
 - The main cause of infectious scours is rotavirus. Other causes include *Cryptosporidium*, *E. coli*, and coronavirus.
- ▶ Once infectious scours has struck, there is no cure and any treatment is really just aimed at 'damage control'. The cost and emotional stress of treating an infectious scours outbreak can be immense.
- ▶ Calves that survive usually fail to thrive, so there is a long-term cost to production on top of the immediate costs incurred through an outbreak, such as treatment and extra labour.
- ▶ To help prevent the spread of scours:
 - Avoid mixing calves once they've entered the barn – keep the same group in one pen for at least the first three weeks in an 'all in – all out' policy.
 - Look out for signs of ill health: sunken and teary eyes, droopy ears and posture, decrease in urination.

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- ▶ If scours does hit, you will need to know whether it has a nutritional or infectious cause. Your options are:
 - Taking a calf's temperature. Calves with nutritional scours will usually have a normal body temperature of around 38–39.5°C. Calves with an infection will always have a temperature above 39.5°C in the early stages of the disease. However once dehydration sets in, temperatures will often fall to normal or below normal.
 - Sending faecal samples away for laboratory testing. This is the only sure way of determining the cause, and essential when deciding on a programme of prevention for the following season.
- ▶ Regardless of the cause, the effect on calves is the same – an onset of diarrhoea that can be very sudden and severe, leading to dehydration and potentially death. A severe outbreak can kill up to a third of infected calves.
- ▶ Calves with scours need to be treated immediately, for example, with water and electrolytes – your vet can advise you on the appropriate treatment. You should ensure you have a treatment plan in place before the start of the calving season:
 - Use separate sheds to keep scouring animals away from healthy ones.
 - Calves with scours caused by *Cryptosporidium* can be treated and prevented with Halocur®.
- ▶ Once calves are grazing, they will be susceptible to internal parasites. Your vet will be able to advise you on a suitable parasite control programme.
- ▶ If you have any doubt, you should always contact your vet.



Vaccination is what you do when you care – for your animals, your family, yourself and the success of your business

- ▶ Infectious scours is hell to experience. It takes an emotional toll on you and your family, and a financial toll on your business that can affect your potential for years.
- ▶ One of the best ways to minimise the risks of your calves being hit by infectious scours is to vaccinate.
- ▶ A single shot of Rotavec® Corona provides the protection your animals need against infectious scours.

Rotavec Corona. One shot. The protection you need against calf scours

- ▶ One-shot vaccine given to cows to help prevent infectious scours caused by rotavirus, coronavirus and *E. coli*, decreasing the risk of calf diarrhoea and mortality.
- ▶ Wide vaccination window allows flexibility: Maximise herd coverage by vaccinating the whole herd at 3 weeks prior to planned start of calving. Or individual cows can be vaccinated any time between 12 and 3 weeks before they calve.
- ▶ Boosts IgG levels in colostrum during the critical period when antibodies are passed on to the newborn calf either by suckling or by being fed colostrum.

- ▶ Rotavec Corona cross protects against many serotypes.
- ▶ Maintains high levels of protective antibodies in the milk for at least 28 days after calving.

Ask your vet about a vaccination programme with Rotavec Corona – New Zealand's most convenient vaccine for infectious scours.

Find out what really happens when scours hits



Elly Weatherstone and husband Stu are fourth generation dairy farmers in the Wairarapa. They have 1350 Jersey cows.

Elly rears 370 Jersey calves, 120 Jersey bulls and 850 Bobbies.

Elly Weatherstone believes women make the best calf rearers. "It's a nurturing job, which takes a lot of time and requires a lot of patience. I really enjoy it, I love the animals, and it's been really nice to work with Stu on the farm. Most of the time!"

Her last calf rearing season, though, is one Elly would rather forget. "When we first came across scours it was devastating – and it happened so quickly! The calves would come in healthy and happy, but after a few days they'd be off their milk, and then they'd get the scours. Some mornings I'd come in and they'd be dead. It was heartbreaking."

Trying to save her sick calves added to Elly's already full workload. She separated the calves into sick pens, gave them electrolytes and "went through tubs of Virkon!"

She brought in her vet, who took blood samples. "It came back as rotavirus."

The following season, Elly and Stu decided to vaccinate with Rotavec Corona. "We have never looked back," she says.

Elly recommends vaccination to anyone who's experienced the misery of scours. "When you're the calf rearer, it's just horrendous trying to look after all these sick calves. But once you've vaccinated, it's amazing. If you keep up a high standard of cleanliness and make sure the calves get enough colostrum, then you'll have happy, healthy, strong calves."

See www.healthycalves.co.nz for further real life stories.

Rotavec Corona gives farmers the protection they need against calf scours

Rotavec Corona provides protection against infectious scours caused by rotavirus, coronavirus and *E. coli*, decreasing the risk of calf diarrhoea and mortality.

A single 2mL dose to the pregnant cow massively boosts protective antibody levels in colostrum, which are then passed on to the newborn calf either by suckling or by being fed colostrum.



Maximise herd coverage by vaccinating the whole herd at three weeks prior to Planned Start of Calving. Or individual cows can be vaccinated any time between 12 and 3 weeks before they calve.

All cows and heifers only require one shot of Rotavec Corona, irrespective of vaccination history.

Halocur[®] provides successful control of cryptosporidiosis

For the prevention of diarrhoea caused by *Cryptosporidium parvum* treat all newborn calves within 24–48 hours of birth.

For the treatment of diarrhoea caused by *Cryptosporidium parvum* ensure rapid control of clinical signs. Treat all diagnosed cryptosporidiosis calves within 24 hours of onset of diarrhoea.

