



DAVIESWAY Est. 1911
IDEAS TO FARM, EVERYDAY.



DASCO Est. 1960
HYGIENE • HEALTH • NUTRITION

home of world-class dairy equipment & innovation

Photo: Ellen Hunt.

RAISING CALVES

... a fresh perspective

WORLD-FIRST

5-litre compartment calf feeder



**NEW
PRODUCTS**



**5 LITRE
COMPARTMENTS**

POWERFUL PROBIOTICS





When you're time-poor, and you want to give your calves their best possible defence against dehydration, Electro-G is the answer..

Electro-G not only mixes easily in warm water, this highly palatable, powdered electrolyte offers an immediate energy source, with alkalising levels that correct acidosis.

Electro-G is safe to be fed directly before or after milk – rather than having to wait the historic two to three hours. Why? Because Electro-G doesn't contain sodium bicarbonate, which can inhibit the formation of casein in the abomasum.

Calves need energy and protein to maintain their weight and immune system when they are sick. So, it's important to continue to feed milk (in a separate feed), while supporting their recovery with high-spec electrolytes.

Make sure your calves have everything they need to support their growth and development.

Electro-G:

- Supplies rapid energy
- Corrects dehydration
- Restores sodium levels
- Improves protein utilisation
- Restores intracellular potassium levels



Product Code

- ELG1 – 1.75kg
- ELG4 – 4kg
- ELG8 – 8kg
- ELG16 – 16kg

Available in four sizes to meet every farmer's needs:



Please call for more information 1800 666 269

WELCOME

I am excited to join the Daviesway/DASCO's calf-rearing team after using so many of its products as a customer. Let me start 2021 by wishing everyone a Happy New Year.

I appreciate there is no single perfect way to rear a calf. If there was, we'd all be doing the same thing. However, there are some exciting additions within Daviesway's calf-rearing division, which will make a meaningful difference to many calf rearers this season.

PRIVILEGED TO SHARE EXPERIENCE

As a contract calf rearer I reared 500 calves – bought in from up to seven different dairies every season – so I have been exposed to many different calf-health challenges along the way.

My calf-rearing specialist role within Daviesway/DASCO now includes visiting farms to offer a fresh perspective, and my goal is to help find solutions to whatever challenges you may be facing. Sometimes it's as simple as bouncing ideas around, discussing your options and making some small adjustments to achieve significant results.

Everyone's situation is different, and finding what works for you, your farm, your environment, your infrastructure, your calves, your finances, and your people, usually involves some trial and error.

I CAN HELP WITH IN ANY (OR ALL) OF THE FOLLOWING GENERAL AREAS:

- Calf-rearing audit – a great way to identify where to start
- Calf-shed design and pen layout
- Pen construction and bedding options
- Hygiene and sanitising procedures
- Colostrum management
- Stress minimisation and management
- Feeding programmes
- Milk-transfer pumping systems
- Milk-feeding equipment options
- Calf-handling protocols
- Calf-health assessment checklist and protocols
- Paddock layout and shelter options

STRESS LOWERS IMMUNITY AND INHIBITS GROWTH

Rearing calves successfully is a challenging and demanding job, but it should also be rewarding and enjoyable. And, there is nothing better than seeing calves survive and thrive.

My calf-rearing operation is named "Calm Calf Contract Calf Rearing", and I developed my system based on the premise that a happy calf is a healthy calf.

We all know the five widely promoted "Cs" of calf rearing are:

- colostrum
- calories
- cleanliness
- consistency
- comfort

This edition we carry a story on page 2, which is close to my heart. It focusses on how reducing stress in calves can strengthen their immune system and encourage growth.

And, after reading it, you might like to add a sixth "C" to the list above – "cuddles". This is because science has now proven that stress has a physiological effect which compromises the immune system, helping create a gut environment that is more vulnerable to disease.

NEW PRODUCTS

This season, we are also pleased to introduce some new additions to our range – including **Electro-G**, an electrolyte that can be fed immediately before or after milk. This is potentially a gamechanger in the early treatment of sick calves. We can feed it this way because it doesn't contain sodium bicarbonate, which can inhibit the formation of casein in the abomasum.

We have also responded to world studies that show rapid early growth is the key to increased lifetime production by introducing the **Stallion 5x5-litre compartment milk feeder**; this allows up to five litres to be fed per calf individually.



CINDY LUCAS

Calf rearing specialist – Daviesway

Mobile: 0427 192 421

Email: cindy.lucas@daviesway.com.au

Cindy Lucas joined Daviesway late in 2020, bringing with her many years of experience rearing upward of 500 calves every year.

WORLD'S BIGGEST PROBIOTICS TRIAL

We introduce what is potentially the world's biggest independent trial on probiotics within a 5500-head, commercial calf-rearing operation in northern Victoria on page 10. This represents a substantial commitment to the industry.

Heading into 2021, our team is committed to supporting our customers so you can achieve the best possible results within this rewarding side of the industry.

If you have any questions, please do not hesitate to contact me or our team at Daviesway.



COMPARTMENT FEEDERS





A calf's growth rates and ability to fight disease is more closely intertwined with their carers than most people realise.

Don't underestimate stress's negative impact on calf GROWTH and IMMUNITY

Calf rearers who take the time to play, care and patiently build their calves' confidence are adding to both their growth rates and their ability to fight disease – without even realising it.

The science on this undervalued conversation is now deafening and unequivocal.

Sustained stress has been proven to have a negative physiological effect – compromising a calf's immune system – and helping create a gut environment that opens the door to pathogens.

It's a hidden challenge that hasn't been given enough air time, according to Daviesway's calf-rearing specialist Cindy Lucas.

So, before team members or employers check the clock and start to hustle in the calf shed, take a moment to appreciate that time is a valuable investment in your herd's future health...

- increased heart rate, while heart contractions strengthen (the heart pounds)
- preventing or inhibiting tissue cells' acute reactions to trauma and/or toxins

FLIP SIDE OF PROLONGED STRESS

However, if the stress is sustained, things can take a sharp turn down the wrong track.

Among the physiological changes associated with anxiety is the reality that stress inhibits normal body functions; reduced blood flow then causes reduced abomasal hydrochloric-acid secretion, which impacts the calf's nutritional intake. In turn, that results in the production of digestive enzymes, thus weakening the abomasal milk clot.

Cortisol also has a direct negative impact on the calf's immunity, which has clear implications for its response to pathogen exposure and disease pressure.

SO, HOW DOES STRESS AFFECT A CALF?

When a calf is stressed, its brain signals the adrenal glands to start producing cortisol, a steroid hormone that prepares the animal for fight or flight. This normal defence mechanism is helpful for short-term stress, and is designed to help a calf's chances of survival in the heat of the moment.

Cortisol's impacts include:

- increased blood pressure
- blood diverted from non-essential organs (e.g.: the gut) to feed the muscles & the brain
- falling sugar uptake by body cells, with corresponding increased sugar levels in the blood



BIOCALF

Double the strength of standard probiotic powders

Electrolytes are another important tool to help calves manage stress.
Photo: Ellen Hunt.



Prolonged stress creates:

- decreased white blood cell movement to infection sites, and decreased phagocytosis (which is when body cells ingest foreign material)
- decreased interferon production (the body's alarm system for viral infections)
- decreased production of two types of white blood cells (eosinophils and lymphocytes)
- decreased antibody production

WHERE EVERYTHING STARTS

Perhaps somewhat surprisingly, calf stress can begin during gestation – through heat stress for the pregnant dam, general cow health or maternal stress.

The repercussions of this on the calf's health and performance is still being defined. However, what is known is that maternal stressors during late pregnancy not only influence colostrum, they also compromise adequate intestinal development in the foetus.

In plain speak, it limits the calf's ability to absorb nutrients, bioactive compounds and valuable tools for critical initial immunity from the colostrum (which include immunoglobulins, cytokines and immune cells).

This challenges the valuable passive immunity transfer from the dam's colostrum, and the calf's intestinal maturation (which it needs to establish a mature postnatal mucosal immune system), and to digest and absorb nutrients in its milk or milk replacer.

FIRST PERSON TO HANDLE A CALF VITAL

Birth is obviously stressful, but what happens next is critical for so many other reasons.

It has been proven that the first time a person handles or transports and feeds that calf will be permanently imprinted on the animal.

Cindy said, *"It has a profound influence on how a calf responds to people – and handles stress – for its entire life. And I can't underscore how important that first contact is for the calf's health, growth and immunity."*

CONFIDENCE BUILDS COMMUNICATION

Cattle are a prey species, and their natural survival instinct is to mask sickness or weakness.

However, if a calf has confidence in its surroundings and its rearers, there are several benefits to easing that survival instinct which can change results.

BIOBOOST

40 times more concentrated probiotic paste



Available in 80g or 300g (requires an applicator gun)



"There is no doubt that a happy, confident and relaxed calf will exhibit play behaviours every day," Cindy said.

"That play routine then becomes a useful, early red-flag for you if they are feeling unwell. Because they can then communicate that so much better to their carers."

"And, if we can catch health challenges early, the long-term prognosis is always much more positive," she said.

GREAT WAYS TO MANAGE STRESS

There is no getting around some stressful moments in a calf's life – such as disbudding and weaning. However, if the calf trusts its carers, it shouldn't have to feel like every event is a potentially life-and-death situation.

If that confidence comes together with some other proactive and simple strategies, life in the calf shed can be transformed.

A good rule of thumb is to try to limit stressful events to one at a time, to give supportive care to minimise any negative impact, and to make sure the calves are strong enough to cope with the event (for example, disbudding).

SUPPORTIVE TREATMENTS

Daviesway is sharply focussed on supporting calf rearers with a specialist calf-rearing team for advice and support, and several ground-breaking products.

Among these is BioBoost – a high-strength, oral probiotic treatment paste – which is a valuable first course of action. Its unprecedented strength and micro-encapsulated probiotics have been formulated for a reason. The lower gastrointestinal (GI) tract drives 70-80% of a mammal's immunity, and the micro-encapsulated coating allows the probiotics be delivered to the rumen and come to life in the lower GI tract, where they can outcompete pathogenic bacteria and do their best work.

Combined with good bacteria, yeast and vitamin E, this natural product provides a powerful fuel for a calf's immune system. The yeast keeps, or returns, the rumen's pH to/at an ideal 6.7, while vitamin E is for energy.

The first time a person handles a newborn calf has a profound impact on how it reacts to people for its entire life.

A five-gram dose – given on the tongue – naturally stimulates the calf's suckling response, which produces saliva.

"BioBoost is an easy-to-use and invaluable tool for lowering stress and supporting recovery," Cindy said.

BioCalf is BioBoost's sister product. It's a double-strength daily probiotic milk-additive powder for calves – which contains Australia's only all-natural coccidiostat – and is added to the milk every day at one gram per calf. It maintains a strong baseline for a calf's immunity.

Electrolytes are another important weapon in helping calves manage stress.

A new product to Daviesway's extensive range is Electro G – a high-performance electrolyte with a clear advantage. It can be safely fed immediately before or after feeding milk because it doesn't contain sodium bicarbonate as its alkalising agent, and should always be in a separate feed.

EASE STRESS IN TRANSIT

Before and after travel, it is recommended to give calves a five-gram dose of BioBoost. It is also ideal to feed electrolytes after calves arrive at their destination to off-set any challenge to their digestive systems brought about by change and travel.

THINK ABOUT IT

There is no doubt that prevention and/or early intervention are the cornerstones for healthy calves.

As well, observation is another primary tool when it comes to managing emerging challenges.

It doesn't have to be hard, and it does pay when calf rearers are consistent and kind.

"It makes complete sense to me that confident calves can relax more, eat more, rest more completely, resist disease and grow quicker," Cindy said.

References and more reading:

- *Calving Ease*, November 1996 (revised Jan 2004), "Stress and Calf Management", Dr David Hale, Perry Vet Clinic
- Iowa State University Extension and Outreach, "Handling, Stress and Fear in Dairy Calves", Jennifer Bentley (and others)
- *Journal of Animal Science and Biotechnology*, "Gut Health, Stress and Immunity in Neonatal Dairy Calves - the Host Side of Host-Pathogen Interactions", Johan S Osorio
- *Journal of Dairy Science*, "Stress, Immunity and the Management of Calves", Lindsay E Hulbert and Sonia J Moisa
- University of Nebraska-Lincoln, "Calving Difficulty and Calf Response to Stress", Todd Cappel, Andrea Bueno, Edd Clemens

For more information please call 1800 666 269 or visit daviesway.com.au



Janine Barr has her calves headed in the right direction.

Warren Farms

FROM LOSS, TO SURVIVAL, TO THRIVING



The calves are more content on BioBoost and BioCalf, according to Janine Barr.

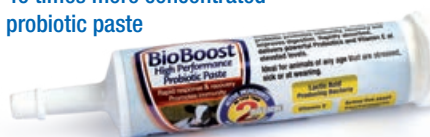


BIOCALF

Double the strength of standard probiotic powders

BIOBOOST

40 times more concentrated probiotic paste



Carrying the responsibility of rearing 1100 calves a year is not for the faint-hearted in any operation.

Janine Barr has stepped up to the challenge for the past five years at Rod and Jess Warren's property at Winnindoo, approximately 180km east of Melbourne.

Warren Farms milks 950 cows on 486 hectares (1200 acres), with 282ha (696 acres) dedicated to the milking herd. They rear their heifer replacements, along with some Angus-cross (for young vealers) and Holstein steers (to finish).

But with big numbers of calves, the potential for disease to spread like wildfire is always lurking.

The spring of 2019 – with 20 new calves hitting the calf sheds every day – went down as one of Janine's toughest.

She said it was devastating to cope with the significant losses, and has been working hard ever since to make sure it never happens again.

BIG CHANGES, BIG RESULTS

Janine incorporated several new protocols and products into her calf programme last spring, and the results are in.

That 2019 spring cost the Warrens 20% of their 750 calves.

In 2020 – despite a wetter and colder start to the spring, and an extra 640 calves – losses were slashed to 6%.

"I am over-the-moon pleased with those results, because I am very passionate about my job and my babies," Janine said, *"and 2019 was extremely tough on everyone."*

Remaining curious and open to everything in her search for improvement, Janine had initially incorporated a liquid probiotic last spring, before speaking to Daviesway's Peter Parniak at the start of calving.

Janine Barr enjoys seeing her calves graduate to the milking herd.

Available in 80g or 300g (requires an applicator gun)



Peter recommended changing to Daviesway's two high-strength probiotic formulations, BioCalf and BioBoost. He also introduced her to Daviesway's calf-rearing specialist, Cindy Lucas

Combining high-strength probiotics with good bacteria, yeast (which keeps or returns the rumen's pH at an ideal 6.7) and vitamin E (for energy), this natural product is powerful fuel for a calf's immune system. It also offers a natural high-strength option before antibiotics.

OUTDISTANCING THE COMPETITION

BioCalf is BioBoost's sister product. It is a double-strength daily probiotic milk additive powder - which contains Australia's only all-natural coccidiostat.

Janine initially used the BioBoost and BioCalf on one group of calves, and the liquid probiotic on another group, so she could identify and track the impact of all the products.

"I was quite surprised to see there was a massive difference," Janine said.

"I noticed with the BioCalf and the BioBoost that the calves were noticeably more settled and content, before and after feeding. They were happier in general, and they seemed to be more full."

"And they played more. It was really lovely to see. Their coats were also shinier and they were so bright-eyed. It didn't take me long to switch everything to the BioCalf and BioBoost."

"A couple of my little heifers were a little bit small when they were born. I gave them the paste rather than reaching for the antibiotics in the first instance, and found it to be really good."

FASTER GROWTH RATES

Janine noted faster growth rates for the calves on BioBoost and BioCalf last spring.

"They looked better right through, and Rod [Warren, owner] has just delivered a heap of steers we've reared for his father after weaning. His father even commented on how well they looked this year. We've had a fantastic turnaround."

"I've been pretty chuffed with how the calves came through, to be honest. Cindy [Lucas, from Daviesway] was really good too. She sent me a lot of good information and that gave me a lot of confidence moving forward. It's very rewarding to see the big difference in them this year."

Janine feeds her calves a total of four to five litres a day (in two feeds) for the first week, depending on their size and breed, and pushes them up to six litres a day from week two.

"I also paid close attention in the spring to make sure the size of my calves matched in each pen so they could easily compete," Janine said.

Once Janine is happy with their progress, they graduate to a larger pen on the "calfateria" with grain, seaweed meal and fresh water. They then move to groups of 35-40 per paddock, eating around 2-3kg per calf of mixed grain with calf pellets. A hay ring of oaten or grass hay is also offered ad lib and leftover canola meal is added in.

"The calves come so fast, it's easy to get overloaded in the shed, so we were making pens everywhere to keep the calves dry and clean. I wanted clean bedding and clean water and make sure all their feed troughs were cleaned out every day."

"In the paddock, they have hay, grain and water, and we make sure we keep up with their vaccinations."

AMAZING TO WATCH

Being responsible for the next generation never gets old for Janine, and she says she is ready for this autumn's calving of 350 cows, which starts on March 5. She is also excited to see calves she has reared graduate to the milking herd.

"I now have a lot of my heifers running through the dairy, and it's pretty amazing to watch that, and see how I'm contributing to our operation," Janine said.



Warren Farms commissioned a new 60-stand dairy in 2020 through Daviesway.



Janine Barr is passionate about her calves.



PLATINUM CALF REARING RANGE



CALF SHED HYGIENE

Stalosan F an organic powder for sanitising bedding (sawdust, rice hulls, wood shaving, wood chips, hay and straw).

DOSAGE

- Spread at 50g/m² under bedding, using a hand held kitchen sieve to sprinkle lightly
- Apply weekly for maintenance, can be safely applied to the top of bedding
- Spot treat pens as needed

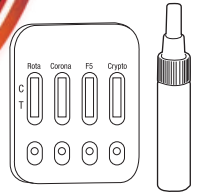


Australian made, non-irritant, biodegradable germicidal detergent and general disinfectant.

- Use for cleaning and disinfecting animal housing
- Can be used for general farm and home disinfecting and sterilising

DOSAGE

- 200ml per 10 litres water



SCOUR TEST KIT

A simple and accurate cassette style test kit, to identify pathogens in calf manure.

- Contains 5 separate tests
- Each test covers E. Coli, Rotavirus, Coronavirus and Cryptosporidia
- Results in 15 minutes
- Does not test for salmonella as it requires a culture for identification



COLOSTRUM

Suitable for use as a colostrum replacement, or as a colostrum booster.

- Mix powder with warm water, then add to colostrum, or feed as is
- Can be used for calves, lambs, foals, kids, piglets and other new born animals

DOSAGE

- 200g in 650ml warm water



PROBIOTICS

Multi-strain encapsulated probiotic paste, also contains yeast.

- Use for sick calves or at times of stress
- Available in 80g or 300g (requires an applicator gun)

DOSAGE

- 5g dose for calves, placed on their tongue



High dosage probiotic powder designed to be added to whole milk and milk powder.

- Contains probiotics, yeast and a yucca extract to protect against coccidiosis

DOSAGE

- 1g per calf per day – mix in warm water in shaker then add to milk and milk powder
- Feed during early stages of milk feeding while the calf's digestive system is developing – can assist with immune response and gut health



ELECTROLYTES

For use as a supportive treatment option for sick, dehydrated or stressed calves.

- Highly palatable, rapidly absorbed, immediate energy source, corrects dehydration and metabolic acidosis, and replaces vital electrolyte salts
- Does not contain Sodium Bicarbonate, so can be fed immediately before or after a milk feed – suitable for calves still on cows

DOSAGE

- 50g per 1 litre warm water



For use as a rehydration treatment, or as a preventative pre-hydration treatment.

- Contains Bi-Carb as a buffer to reduce GI acid levels, and dextrose for energy
- Also contains Vitamin C

DOSAGE

- 50g per 1 litre warm water
- Feed 2 hours before or after a milk feed



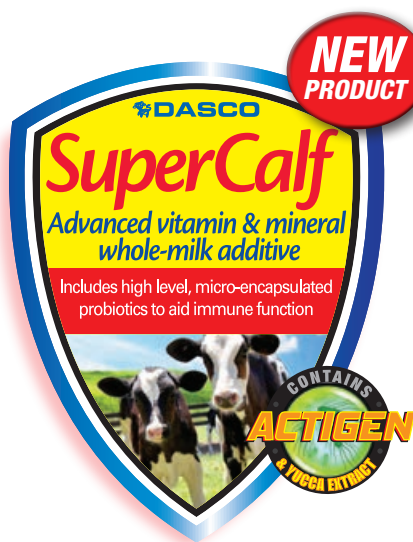
SUPPLEMENTS

Seaweed based liquid supplement with added minerals and vitamins.

- Can be added into milk or water, or fed as an oral tonic (using a drench gun or syringe)

DOSAGE

- 10ml per dose, can give unlimited doses if required



High strength Probiotic powder additive that includes advanced vitamins and minerals.

Designed for use in whole milk.

DOSAGE

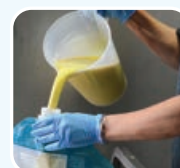
- 10g per calf per day
- Contains Actigen & Yucca extract

TUBE FEEDING



COLOSTRUM MANAGEMENT

TRUSTI PASTEUR



PORTABLE CALF HOUSING

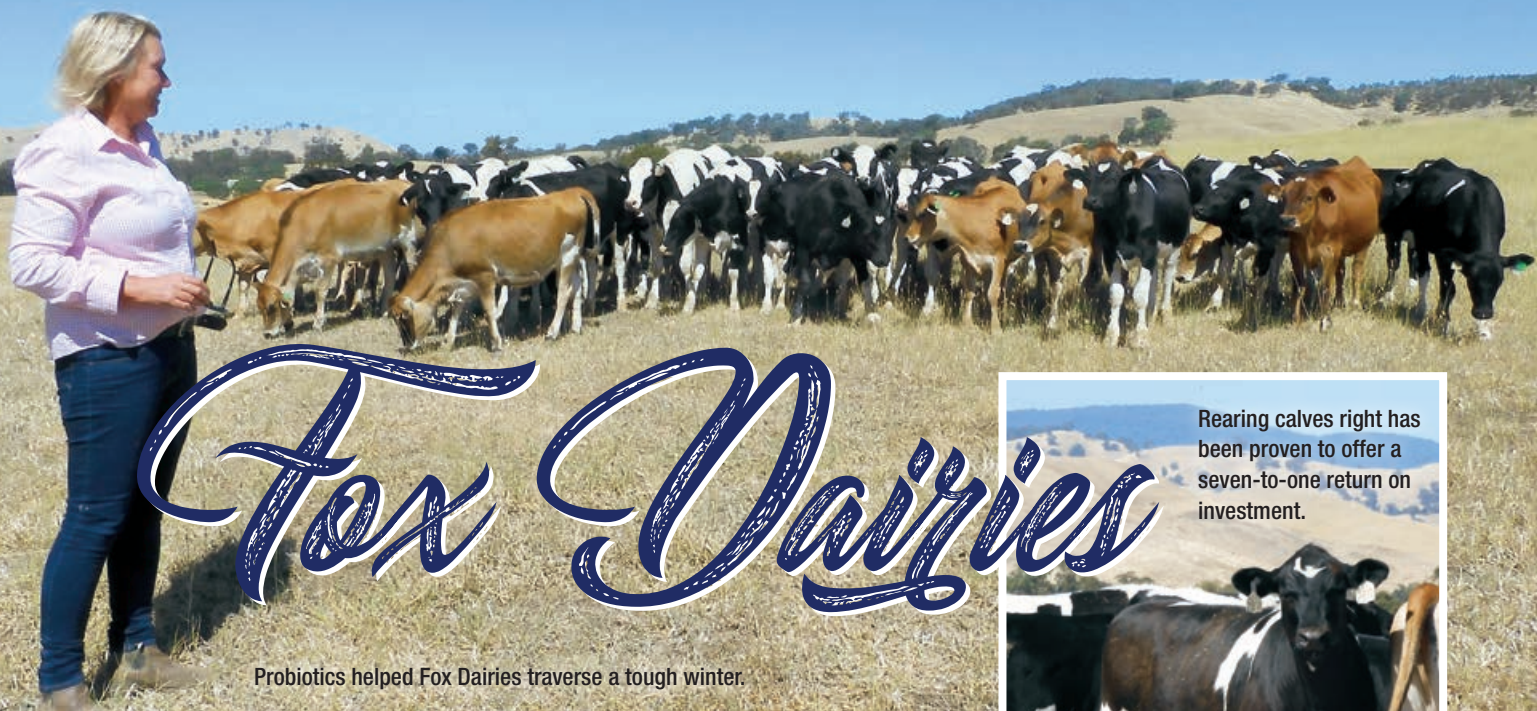
CALF-TEL HUTCHES

Simply the best, most cost-effective housing systems for raising healthy calves.



CALF-TEL MULTI-MAX

HUTCH Size:
220cm (L) x 273cm (W) x 183cm (H)



Fox Dairies

Probiotics helped Fox Dairies traverse a tough winter.

Rearing calves right has been proven to offer a seven-to-one return on investment.



A FOX DOWN A RABBIT HOLE

Fox Dairies faced a massive challenge last spring as the intensity of calving threatened to take over their farms.

Glenn and Fiona Fox own three dairies at Tatura, Stanhope and Wyuna in Victoria's Goulburn Valley. They collectively milk 1800 head – mostly crossbreds – with some Holsteins and a handful of Jerseys.

The Wyuna herd milks 800 cows on 324 hectares (800 acres) through a 50-stand rotary and supplies Coles. The Stanhope herd milks 600 head through a 40-a-side swingover herringbone on 259.2ha (640 acres). The Tatura operation milks 400 head through a 24-a-side swingover herringbone on 202.5ha (500 acres). The Stanhope and Tatura businesses both supply Lactalis. This spring they also made the most of a great season, storing 2000 dry tonnes of fodder.

Glenn and Fiona, who employ managers on all three properties, live an hour and 40 minutes from the nearest farm on 486ha (1200 acres) at Merton, near Mansfield.

In a normal year, the calves from all three properties are finished on the Mansfield property after weaning.

The Foxes sell all their bull calves at 120-130kg and their Holstein heifers to export, retaining the crossbred heifers as herd replacements. They finish their steers on grain once they hit 200-250kg, pushing them through to 420-440kg (with an average dress out weight of 200kg).

DEALING WITH COLD AND TRAVEL

To achieve a flat milk supply, all farms calve three times a year.

Fiona candidly says last spring was an anomaly.

"We had 20 calves coming every day at one of the farms, and we just didn't have the infrastructure to cope with it."

"It was the middle of winter, and it turned into a bit of a disaster. We had to get some of them off the farms. We decided to bring the overflow to our property, and rear 180 here."

However, the Foxes weren't set up for calves on their Mansfield property. Fiona rides, and luckily her stables could become the heart of the calf operation; they also added medium square hay bales for shelter in the horse paddocks as a place for the older calves to graduate.

The overriding challenge was that Mansfield is colder than the Goulburn Valley and the 2020 winter was bitter.

"When the first load arrived, they were aged anything from a few days up to 10 days old, if they were lucky. The weather was terrible, and between the stress of travelling, and the whole change they faced, we lost a number of them to pneumonia and crypto [cryptosporidium]," Fiona said.

"We'd have days that didn't get above eight degrees Celsius, and when you add in the wind-chill factor, it became a bit of a nightmare."

"That was a pretty steep learning curve."



BIOCALF

Double the strength of standard probiotic powders



BIOBOOST

40 times more concentrated probiotic paste



Available in 80g or 300g (requires an applicator gun)

BIOBOOST HAD AN IMPACT

Two more loads arrived after the initial one, and with each subsequent delivery, Fiona was drilling down to ease the additional pressure points that the weather and travel were adding to her job.

A conversation with Daviesway's calf-rearing specialist Cindy Lucas yielded a recommendation to dose all calves with BioBoost – an oral probiotic treatment paste which is a valuable first course of action for new, stressed or sick animals.

Combined with extreme levels of probiotics, good bacteria, yeast (which keeps or returns the rumen's pH at an ideal 6.7 for digestion) and vitamin E (for energy), it is ideal for easing the stress of travel.

BIOBOOST BEFORE TRAVELLING

For the subsequent loads, they got their managers to give the calves BioBoost on-farm, before they loaded up. The Foxes then began feeding electrolytes upon the calves' arrival.

"That was even better again," Fiona said. "And, we kept a close eye on them when they arrived; if they looked even slightly 'off', we give them some more BioBoost. By the time the third load arrived, we had it sorted."

They weaned at 10 weeks – two weeks earlier than usual – at 80-90kg.

Fiona said putting Glenn and herself back in the firing line of day-to-day care made them consider their whole calf-rearing operation. They decided to invite Cindy to assess the calf rearing practice on all three farms.

"Because we're not on the farm day-to-day anymore, it's harder to stay in touch with what's happening."

"Cindy helped us with everything from our protocols and procedures right down to how many calves we should have per pen, how big our pens should be, how we were treating sick calves, and the general welfare of our animals. Her influence and services really helped our business. It was not only about the products for us. The main advantage was her wealth of knowledge – which often wasn't even related to the products Daviesway sell."

"Her ongoing support has been extremely beneficial, and her regular visits are now a key factor in our calf-rearing operation."

PLAYING THE LONG GAME

Now Fiona has got all the weaned calves from every farm – and blended them with the calves she reared on probiotics at Mansfield – one observation hasn't escaped her.

"As time has gone on, the ones I've reared here on the probiotics definitely look stronger and better calves," Fiona said.

"They're all the same age, but their size is better, their coats are healthier, they're more playful, and they have more condition on them."

Fiona is now encouraging their managers to give every calf a dose of BioBoost as it transitions from the calving paddock to the calf shed, and to start using BioCalf – BioBoost's sister product – in its milk every day thereafter.

BioCalf is a double-strength daily probiotic milk-additive powder for calves. Containing Australia's only all-natural coccidiostat, it maintains a strong baseline for a calf's immunity.

"You do need some vision to take on the BioCalf because it is a longer-term response," Fiona said. "It's possibly not as noticeable on-farm early on, simply because it is not as flashy in the first instance."

"But I think the end result is where you really see the good it does – I'd say from around that 10 weeks of age."

OTHER ADDITIONS

The Foxes also began using Danish sanitiser Stalosan F, which is non-toxic with almost no smell. Stalosan F contains two powerful, naturally occurring antimicrobials that don't impact on a calf's mucous membranes, respiratory system or hooves like hydrated lime can.

Fiona said another lifeline was the Trusti Tuber. Dubbed the safest tube-feeder on the market, it comes with a weight gauge for safer use and a peach teat cap for an easy transition between the teat and the four-litre tube bottle.

"I wish we'd had them in the first two weeks, to be honest. They were so easy to work with," Fiona said.



Supporting results

Fiona said in six months they have changed many things.

"It's all the one percenters that made a big difference, and Cindy was really great with all that."

"Cindy and I will be sitting down at all the farms and discussing those changes the end of the season, and see how it panned out, so we can use what we've learned for their next calving," Fiona said.

"And, while it's hard to pinpoint exactly what of the products worked the best, the BioBoost was an easy thing to measure because the result was instantaneous, and I'm sure it carried our calves through to a better finish."

Sacrifice on price, not quality

Germidet

Australian made, non-irritant, biodegradable germicidal detergent and general disinfectant.



GERMIDET vs VIRKON S
(Per 100lt solution)

\$16.20* vs \$39.00*

Stalosan F

Stalosan F an organic powder for sanitising bedding.



*prices may vary



L-R: Daviesway's Hamish Hunt, Rochester Veterinary Practice's Ash Phipps, and Calflink's Louise Barnard check the calves in the trial. Photo: Ellen Hunt.

'GUTSY, FAIR-DINKUM' TRIAL FOR PROBIOTICS

Daviesway and Calflink have teamed up to conduct potentially the biggest study of probiotic use in a commercial operation that the global industry has seen.

Calflink's Cameron Renshaw, who with his team will rear 5500 calves this year in northern Victoria, said that understanding how probiotics fits their operation is critical as the business continues to grow.

Calflink carries a long-term aspiration to help the industry move as close as possible to being "bobby-calf free". Already, it is becoming a dominant player in F1-production systems within the southern Australian dairy market.

The Elmore-based business is distinctive in that it offers Australian dairy farmers a solid and predictable return on F1 beef-cross calves, using the lower end of dairy herds for terminal cross-breeding with quality genetics.

WHY STUDY PROBIOTICS?

Calflink's scale, combined with the expertise level and consistency within its team – along with its sharp focus on animal welfare – flagged the operation early as an ideal commercial test option. Cameron said his conversations with Daviesway/DASCO's Hamish Hunt convinced him they were on the same page.

The study is being undertaken to determine the potential of probiotic use at different dosages and modes of delivery – with the goal of reducing antibiotic use in calves and improving their wellbeing.



BIOCALF

Double the strength of standard probiotic powders

INDEPENDENT SCIENTIST AND VET INVOLVED

Adding independent scientist Jess Conlon, and Rochester veterinarian Ash Phipps to the mix, introduced a level of transparency that Cameron and Daviesway were both comfortable with.

Cameron said, *"We got involved from the point of view that we've seen a number of products come on the market in the calf-additive space, and for the bulk of them we felt the marketing outweighed the scientific validation."*

"And in line with that, we've been operational now for enough time and we have a business that is ready to start to have a fair dinkum look at which products – if any – will potentially suit us."



BIOBOOST

40 times more concentrated probiotic paste

Available in 80g or 300g (requires an applicator gun)

LARGE-SCALE STUDY ROBUST AND TRANSPARENT

Up to 1200 calves are involved in the six-month trial, which is using BioBoost* and BioCalf**, with results expected to filter through in March.

“Fundamentally, there were two outstanding things that gave us comfort to be involved,” Cameron said. “One, was that it was to be on a large scale, which we haven’t seen before. Two, was that it’s being independently run and analysed, and three, is that Daviesway are going to come along on the journey with us, and – regardless of the findings – they will publish them at the end of it.”

Cameron notes that Calflink’s antibiotic use is well within scope and soundly managed by its specialist animal welfare leader, Louise Barnard (who carries a Masters in Animal Welfare and Bachelor of Agricultural Science).

However, given that their calves are all trucked to Calflink at a young age from different farms, making sure their transition is as seamless as possible remains a key part of their success.

Cameron said, *“We are focussed on ethically reducing the use of antibiotics in the system. In saying that, I do think there is still a spot for antibiotics in animal production. But reducing their use is a priority.”*

“So, it’s great that we’ve got a trial of this magnitude going on in the industry for probiotics.”

‘POSITIVE THING FOR INDUSTRY’

And, Cameron believes this is just the start.

“With Calflink’s size, the skillset within our team, and the resources we have, I think we’ll find more of these gutsy fair-dinkum commercial, well-structured and well-managed trials happen moving forward.”

“Because while it does appear that there are plenty of trials within industry, they are generally clinical studies involving around 25 calves. In this study, we will have hundreds go through the programme within a commercial operation.”

“The objective of using probiotics is to reduce their stress, because a calf’s wellbeing translates directly into stabilised weight-gain.”

– Hamish Hunt

“It’s a positive thing and – regardless of what we find – the industry will be better off for it.”

Daviesway’s Hamish Hunt said the conversation with Calflink began with Cameron wanting to achieve a seamless transition for their calves on arrival.

“The objective of using probiotics is to reduce stress,” Hamish said.

“Because a calf’s wellbeing translates directly into stabilised weight-gain.”

“It also reduces costs – in terms of intervention with drugs. Both of these things are fundamentally important in terms of the business,” Hamish said.



Calflink’s Louise Barnard has a Masters in Animal Welfare and a Bachelor of Agricultural Science. Photo: Ellen Hunt.

OPTIMAL LEVELS

Hamish acknowledged that the overwhelming majority of antibiotic interventions during the first four weeks of calf rearing happened because of intestinal or respiratory disease or trauma.

"I'd been in discussion with Cameron over a period of time. He had expressed an interest in the probiotics; he had tried them, and he'd seen some positive responses. What he now wanted to know was, 'What was the optimal dose rate for the maximum effect?'"

"The data on probiotics is available internationally – but not at the level of detail that we were interested in. On a circumstantial basis we're seeing some great results with animal and human welfare. But, we wanted a big study, so it was statistically relevant and robust."

"There are industry dose rates, and there is a general consensus that probiotic loads should be higher, not lower. The role the organisms have is to provide stability in the rumen and lower gut, they are measured in the billions of colony forming units [CFUs]."

"We're looking to understand if it is possible to quantify how many billions of CFUs are needed for measurable results."

DOLLAR BENEFIT FOR PROBIOTICS

Hamish said the industry has reached this position without a study of such magnitude for one reason.

"Because the animals to this point have not always been valued. Cameron values his animals. He wanted to understand the things that drive bowel irritation in that first transition."

"Some would say that work on probiotics should have been done – and I'd agree. But I'd also add that it has been done to some degree in some places, but not in such a comprehensive and independent study in a commercial operation like this."

"Because this is the first time – to my knowledge – that someone has taken a very large number of animals, coming in from all types of different operations year-round, and committed to an undertaking such as this."

"The end-game is to find a dollar benefit of using probiotics."

***BioBoost** – an oral probiotic treatment paste – which is a valuable first course of action for new, stressed or sick animals. Its unprecedented strength and micro-encapsulated probiotics allows them to be delivered to the rumen and come to life in the lower gastrointestinal tract, an area that drives 70-80% of a mammal's immunity. Combined with extreme levels of good bacteria, yeast (which keeps or returns the rumen's pH at/ to an ideal 6.7 for digestion) and vitamin E (for energy), it is ideal for easing the stress of travel.

****BioCalf** – a double-strength daily probiotic milk-additive powder for calves, containing Australia's only all-natural coccidiostat. Added to the milk every day, it maintains a strong baseline for a calf's immunity.

"We have a business that is ready to start to have a fair dinkum look at which products - if any - will potentially suit us."

- Cameron Renshaw.

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