DairyNZ

Preventing and managing lameness

A farmer's guide to lameness on New Zealand dairy farms

For more information visit **dairynz.co.nz**

DairyNZ
Corner Ruakura and Morrinsville Roads
Private Bag 3221
Hamilton 3240
Phone 0800 4 DairyNZ (0800 4 324 7969)

DNZ10-094
2025

Contents

Why lameness matters

Lameness can have wide-ranging impacts on both farm economics and animal welfare if not managed effectively.

Economically, lameness is one of the top most costly diseases on dairy farms. It requires time, energy, and skill to treat, while also reducing milk production, causing weight loss, and delaying cows from getting back in calf. These factors combine to significantly reduce farm profitability. From a welfare perspective, lameness is a painful and debilitating condition, regarded as one of the most serious welfare issues facing the dairy industry.

Effective prevention and management of lameness are therefore critical, not only to protect cow wellbeing, but also to support the long-term productivity and profitability of the farm.

How is your farm performing?

The first step in understanding your lameness situation is to keep records of lame cows and benchmark yourself.

Incidence: number of cows treated by trained staff over one season (usually June - May)

Average = 14%
Top farmers achieve = 8% or less
Seek help if above = 20% for the season or 5% in one month

Prevalence: number of cows scoring 2 or 3 on lameness score measure at a single scoring event

Average = 3%
Top farmers achieve = 1.5% or less
Seek help if above = 5%

Duration: the number of days to become non-lame after treatment

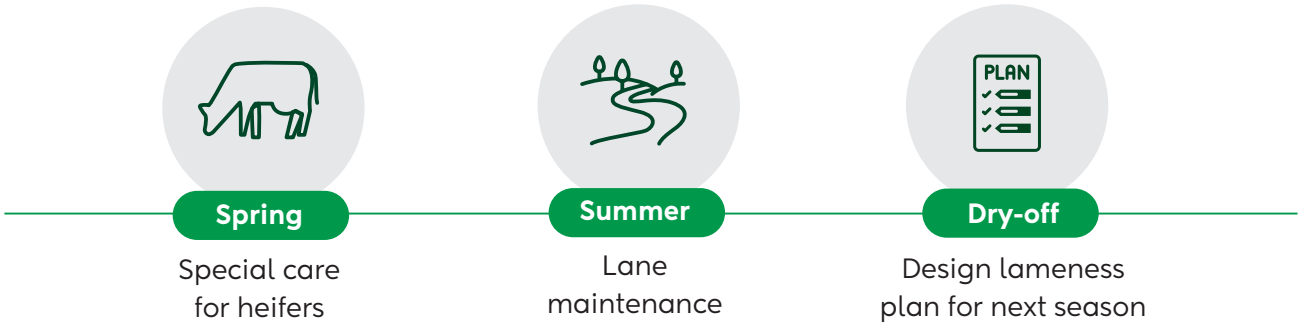
Average = 7-14 days
Top farmers achieve = seven days or fewer
Seek help if above = 14 days or more

If you reach any of the 'seek help' triggers or are concerned how your farm is performing, seek professional advice from your veterinarian, hoof trimmers or other trusted animal health advisors.

Section 1 | Seasonal overview of lameness

Good stockmanship, prompt treatment and maintenance of infrastructure should be a year-round focus. There are times in the season when aspects of lameness management are particularly important.

Figure 1. Key lameness dates



All cows have the potential to become lame. Lameness management should be aimed at reducing:

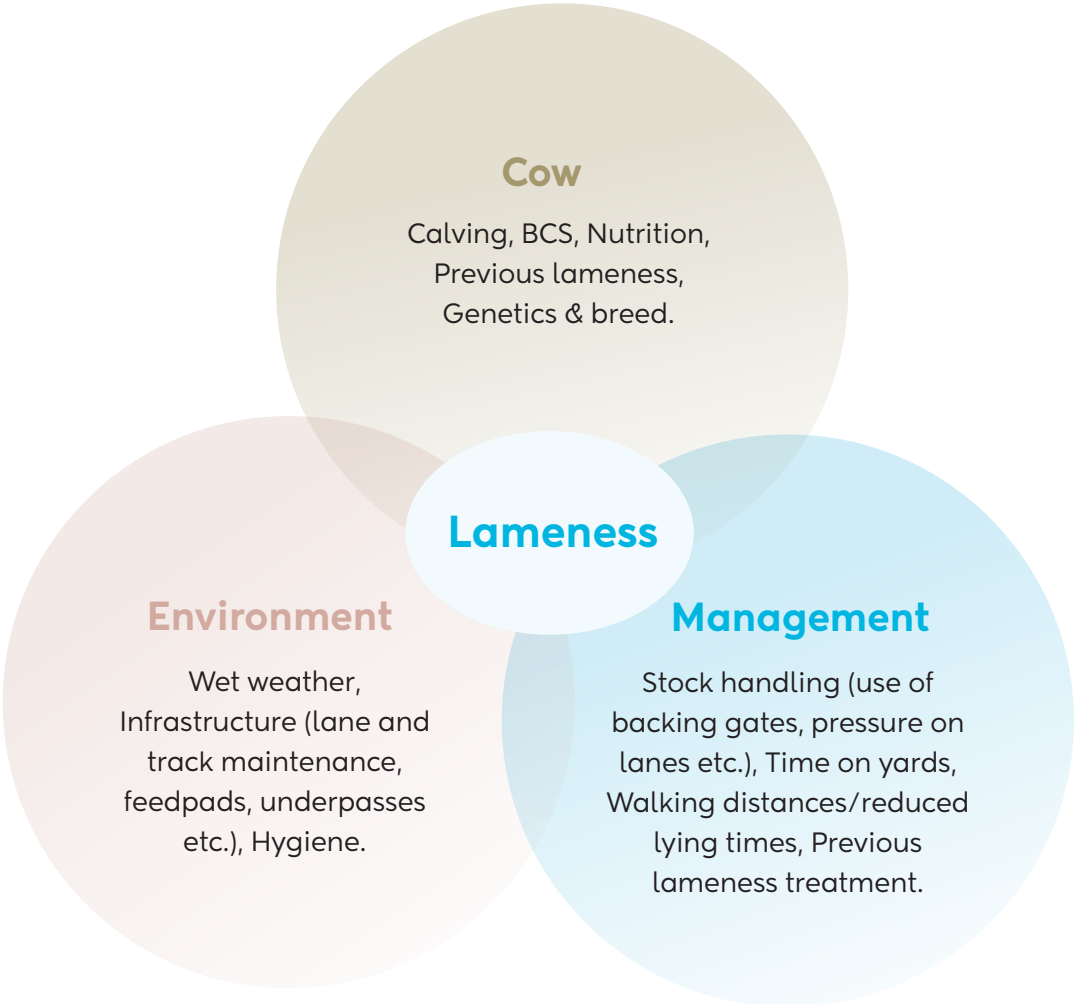
- underfeeding
- poor quality facilities
- walking long distances
- long periods of time on concrete
- poorly maintained races and yards
- pushing cows on races or in the yards

Take extra care with heifers. Damage done in the first lactation can lead to life-long lameness problems.

Section 2 | Lameness risk factors

Cows become lame when a combination of risk factors occur. It is the interaction of the cow, her environment and management that leads lameness on farm.

Figure 2. Lameness risk factors



Calving

Calving triggers changes in the hoof that makes a cow far more susceptible to damage and lameness. During calving, the cow's ligaments relax to aid calving, however this relaxation occurs across the whole body including the hoof. This means the bones in the foot are not held in place as tightly and can move around. This movement puts pressure on the live tissue ('corium') and makes the hoof very vulnerable to hoof diseases, such as white line disease and sole injury. This risk period lasts for around 8 weeks post calving, and heifers are especially affected.

Body condition

A cushion of fat in the hoof helps with shock absorption. If the amount of fat is decreased, then the cow will be at an increased risk of lameness. This can occur:

- at and after calving when cows naturally lose body condition
- when a cow becomes sick (including being lame)
- in heifers as they naturally have much less fat in their digital cushion.
- in older cows, the ability of this fat to cushion decreases. This is made worse if they have previously been lame.

Nutrition

The relationship between nutrition and lameness is complex; many links have been suggested but the evidence of their importance, particularly under NZ conditions, where the predominant feed is pasture is limited.

A well-fed cow is the best thing to aim for to keep both the animal and the hoof healthy. There may be some links with specific feed make-ups, such as low fibre and high starch/sugar content. Conditions such as acidosis and laminitis can contribute to increased lameness rates.

If feeding a diet containing 40% or more of a high starch or sugar supplement (e.g. grain, fodder beet) there is a risk of rumen acidosis and laminitis. Cows need to be transitioned onto these feeds slowly, and final intakes regulated to prevent rumen acidosis. Visit **dairynz.co.nz/transition-cows** and consult a nutritionist or your veterinarian to discuss appropriate strategies.

Evidence supporting the use of dietary supplements such as biotin and zinc is inconclusive. Improvements in hoof health only impacts newly formed hoof tissue, therefore it takes several months to see any possible benefits.

Supplementation also needs to be continuous (including over winter) and will only produce a response if correcting a deficiency.

Wet weather

More lameness occurs in wet seasons and a high incidence of lameness often occurs after periods of heavy rain.

Short term wet weather: Lameness can increase within 1-3 weeks of severe wet weather. There are two reasons for this. The first is that wet conditions are ideal for the development of foot rot (infection of the skin between the claws). The second is that in cows with hoof damage, but which are not yet lame, wet conditions can soften and weaken the horn making lameness more obvious. Poor track conditions, also caused by wet weather, means stones are more likely to get into the already damaged white line.

Long term wet weather: A hoof that is exposed to wet conditions is softer, especially the sole and white line. This increases the chance of hoof damage which can lead to increased lameness six to eight weeks later. If cattle are exposed to wet conditions over long periods, the constant softening of the hoof can lead to excess wear and thinning of the sole. The combination of wet abrasive concrete and soft easily worn hooves can result in significant numbers of animals becoming lame.

Infrastructure

The design and maintenance of infrastructure (including tracks, feedpads, underpasses and yards) can play a significant role in lameness risk on farm. How cows are moved on these surfaces also plays a large role; when cows are given enough time and space to ensure careful foot placement it reduces the risk of trauma.

Physical trauma

Lameness occurs when the hoof is damaged. Damage can occur when:

- Repeated twisting and turning of the hoof on hard surfaces results in weakness and inflammation, and the white line separating, allowing stones and dirt in, causing white line disease.
- A cow has a very thin sole and stands on a sharp object damaging the corium. This only occurs in about 1% of lameness cases.

Physical trauma usually only causes lameness after the hoof has been compromised by other risk factors (refer to figure 3).

Previous lameness and inflammation

Damage and inflammation in the hoof leads to permanent changes in the bone (coffin bone). This change is similar to arthritis. The degree of this change is linked to the lameness history of the cow. The changed bone puts inappropriate forces within the hoof, which in turn can lead to further lameness. This may explain why older cows are more prone to lameness.

Research has shown reducing inflammation (through the use of anti-inflammatory drugs and hoof blocks) improves treatment response.

Biosecurity

Digital Dermatitis (DD) is the most important infectious cause of lameness in dairy cattle worldwide. It is now affecting New Zealand dairy herds. Research indicates that long periods standing in wet, dirty conditions increase the risk of DD. The biggest risk of introducing DD on to your farm is from buying or bringing in infected cattle. Other risk factors include cows standing in slurry and the use of off- paddock facilities, especially freestall barns. For more information, ask your vet.

Breed

Under New Zealand conditions, Jersey and cross-bred cows may be associated with a lower risk of lameness than Friesian cattle. The underlying reason for this difference is unclear. Within any herd, there is significant variation between cows. This means that selecting traits that protect against lameness, such as good movement and conformation, will likely reduce lameness risk over time.

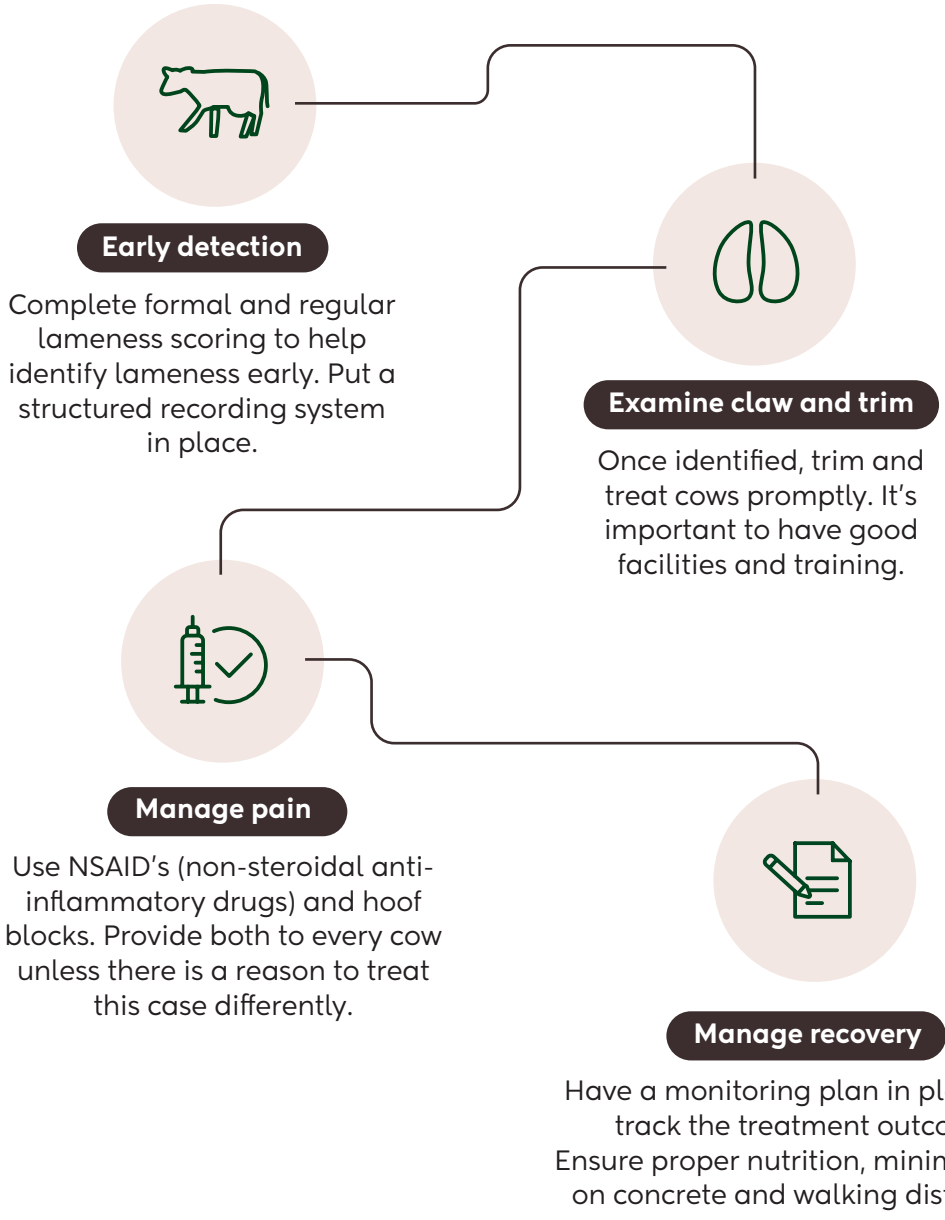
Cows become lame when a combination of risk factors occur. It is the interaction of the cow, her environment and management that leads lameness on farm.

Section 3 | Overview: Prevent, Treat & Manage Lameness

Early detection and prompt, effective treatment of lame cattle provides one of our best opportunities to control lameness in New Zealand.

Improving how we treat lame cows improves animal welfare and results in rapid cure rates. Recent New Zealand based research shows early detections and treatment can massively improve long-term outcomes and prevent further cases of lameness. While this can seem daunting, it can be broken down into four key tasks. While improving all areas is ideal, even starting with just one can make a positive difference.

Key task for managing lameness:



Early detection

Cows don't show obvious signs of pain until things get really bad. As a result, many lame animals remain within their normal herd position trying to hide until their condition worsens. Regular herd lameness scoring can help identify them early. Treating this as a formal routine, where someone is tasked with looking for lameness, can improve detection rates. Fortnightly scoring using the lameness scoring guide (pg. 11) is ideal, but checking half the herd at cups-off every two months is a great start. Do what works for your system.

Examine claw and trim

Once identified, animals must be trimmed and treated promptly for the best outcome. This requires good facilities and training, particularly for applying blocks and using tools like grinders. Assess your current setup and consult your vet or hoof trimmer for training opportunities. It can be a game-changer for both the cow and you. Record all cases of lameness into your herd management software (or other).

Manage pain

Provide NSAID injections and hoof blocks. Recent New Zealand data aligns with international research, showing these treatments significantly improve recovery times and reproductive outcomes for lame cows. Aim to provide both NSAIDs and blocks for every cow unless there's a good reason not to.

Manage recovery

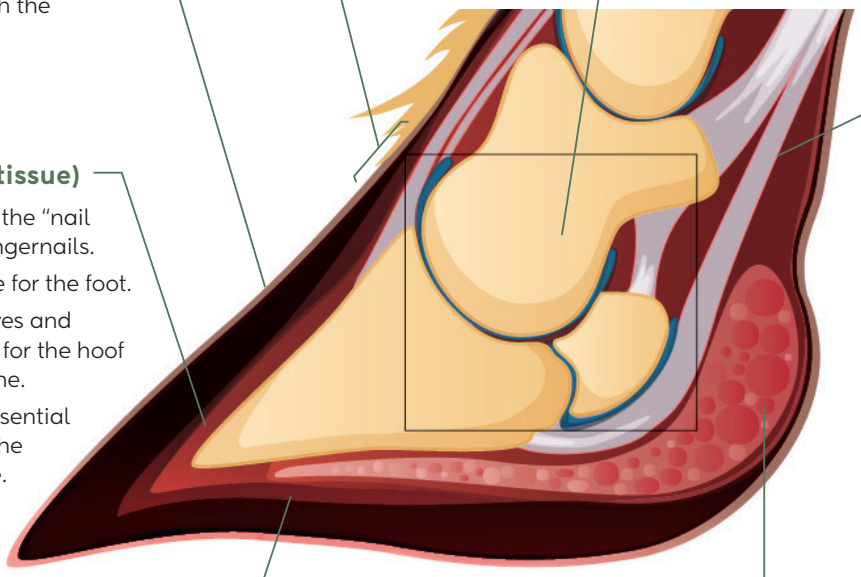
Managing recovery can help improve the outcomes and is something that all farmers can implement. This includes ensuring proper nutrition to prevent excessive body condition score loss. Create a recovery monitoring plan to evaluate treatment success – when does a lame cow need to be looked at again? And finally minimise time on concrete and reduce the distances lame cows are required to walk – once-a-day milking can assist greatly here.

Section 4 | Lameness identification

Structure and function of the hoof

The first step of lameness identification is understanding what a normal healthy hoof looks like.

Figure 3. Parts of the hoof



Wall (horn)

- The wall grows from the coronary band.
- Very hard.
- Grows at approximately 5 mm per month, so takes several months from growing to being in contact with the ground.

Coronary band

- Pale hairless band at junction of the hoof and the skin.

Coffin bone and joint

- Main bone in the hoof.
- It is held in place by ligaments.
- Joint can become infected or injured.

Ligaments

- Run down to the hoof and hold the bones in place.
- Allow the cow to move her foot.

Corium (live tissue)

- Equivalent to the "nail bed" of our fingernails.
- Support tissue for the foot.
- Contains nerves and blood vessels for the hoof and coffin bone.
- A source of essential nutrients for the hoof structure.

White line

- A junction where the wall and sole meet.
- As it is a junction it is a weak point and is softer than the wall and sole.

Sole (horn)

- The sole grows downwards from the corium.
- Sole horn is softer than the wall horn.

Digital cushion

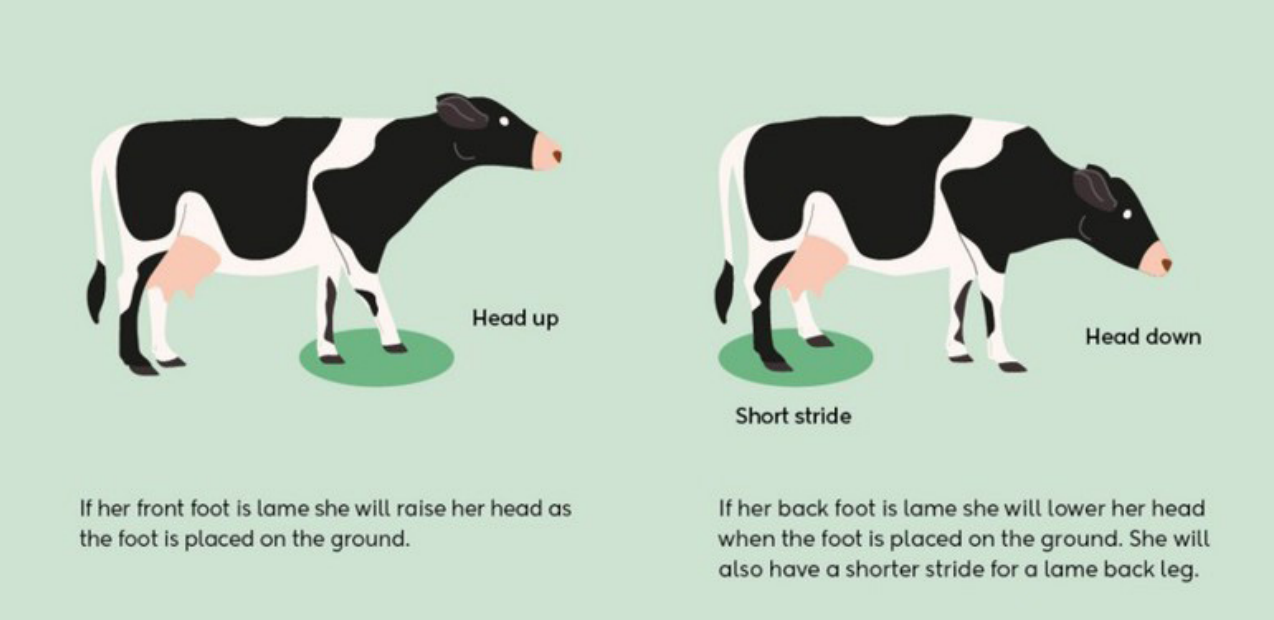
- Contains fat and tough elastic tissue.
- Acts to absorb and spread out the force on the hoof from the weight of the cow as she walks.

The Wall (horn) and Sole (horn) are like fingernails, they protect the underlying tissue. They are 'dead' and therefore, trimming them is painless.

How to identify a lame cow

The DairyNZ lameness scoring system rates cows and gives recommended actions to take. Lameness scoring can be used at a herd level to monitor lameness throughout the year but its greatest value is to help you identify individual cows that need lameness treatment. Carry out lameness scoring on flat, even surfaces when cows are walking at their own pace.

As a prey species, cows hide pain, so early signs of lameness are subtle. Early identification and treatment are key to rapid recovery and minimising the effect of welfare and productivity. Having everyone on farm trained in lameness identification improves early detection.



Note: The cow might be lame in more than one foot – this can make lameness more difficult to spot. If in doubt, draft her out and examine.

View the lameness scoring video at **dairynz.co.nz/lameness-scoring**

Lameness scoring guide

Score	Walking speed	Stride	Weight bearing	Backline	Head
0 Walks evenly	Confident. Similar walking speed to a person. Maintains position in the herd.	Long, even and regular. Rear foot placement matches front foot placement.	Evenly placed and weight bearing when standing and walking.	Straight (level) at all times.	Held in line or slightly below the backline and steady when walking.

No action required

No action required – this cow is normal.

Score	Walking speed	Stride	Weight bearing	Backline	Head
1 Walks unevenly	Not normally affected, should easily maintain position in the herd.	May have uneven stride and/or rhythm. Rear foot placement may miss front foot placement.	May stand or walk unevenly but difficult to identify which leg/s are affected.	Straight when standing, may be slightly arched when walking.	May have slight bob and or may be held lower than normal.

Minor action required

Record and keep an eye on her – some cows normally walk unevenly.

Score	Walking speed	Stride	Weight bearing	Backline	Head
2 Lame	May be slower than normal; may stop, especially when turning a corner.	Shortened strides rear foot placement falls short of front foot placement.	Uneven – lame leg can be identified.	Often arched when standing and walking.	Bobs up and down when walking.

Action required

This cow is lame and needs to be recorded, drafted and examined within 24 hours

Score	Walking speed	Stride	Weight bearing	Backline	Head
3 Very lame	Very slow, stops often and will lie down in paddock. Cannot keep up with the healthy herd.	Shortened and very uneven. Non lame leg will swing through quickly.	Lame leg easy to identify - 'limping'; may barely stand on lame leg/s.	Arched when standing and walking.	Large head movements up and down when walking.

Urgent action required

This cows is very lame and needs urgent attention. Draft and examine as soon as possible.

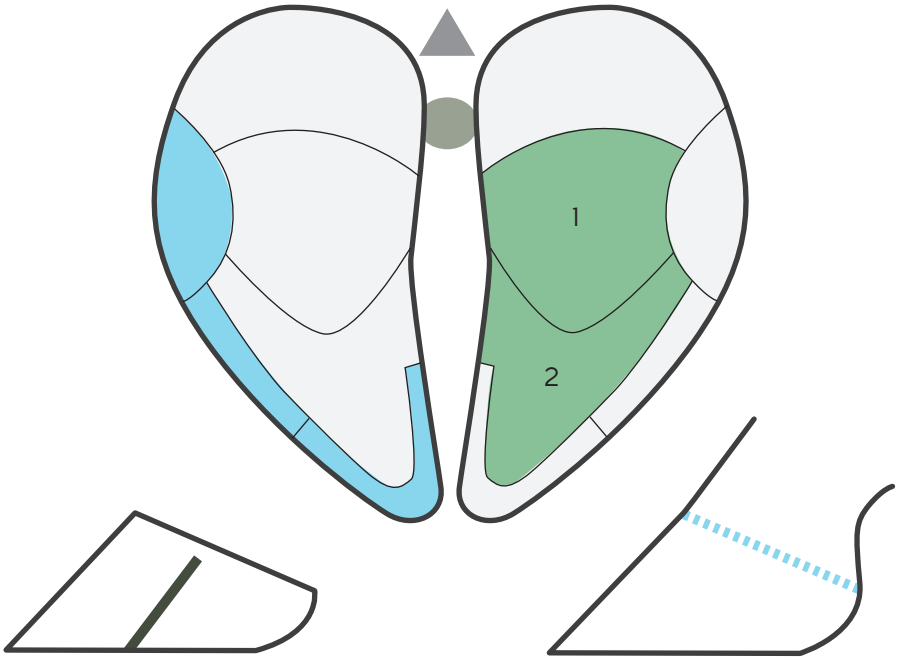
Section 5 | Types of lameness

Main types of lameness

Almost all of the lameness (90-95%) in New Zealand is the result of problems in or near the hoof, and this should be first place to look when assessing the type of lameness. Sometimes lameness can occur higher up the leg, for example, a hip injury from cows riding, but this is far less common than lameness in the hoof.

The main types of lameness in New Zealand are:

- white line disease
- sole
- hoof wall crack
- foot rot
- digital dermatitis



Inside view **Outside view**

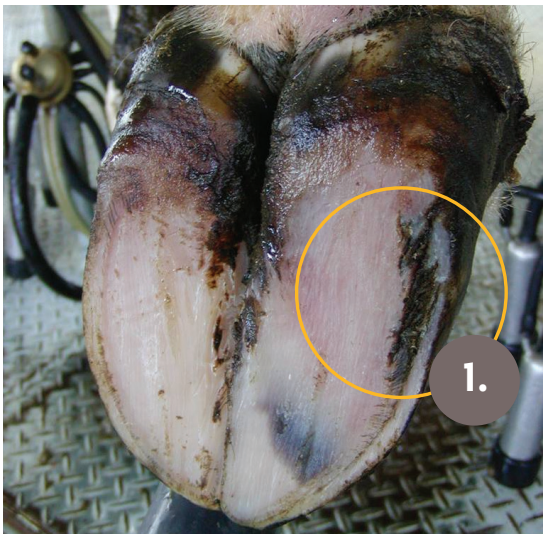
Key

- White Line disease
- Above coronary band - White Line disease break out point
- Sole
  - Haemorrhage / bruise (1 or 2)
  - Abscess(2)
  - Ulcer (1)
- Hoof wall crack
- Digital dermatitis
- Footrot

White line disease

What does it look like?

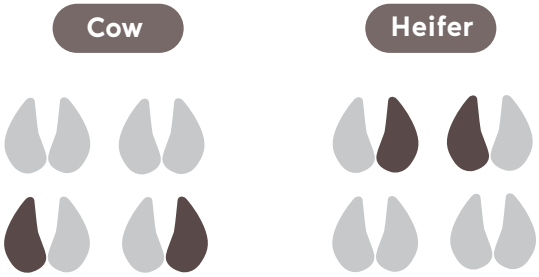
- wall is split away from the sole and may be filled with sand and gravel. 1.
- break out or abscess at the coronary band or at the back of the heel. 2.
- when the outside wall is trimmed, a dark line can be found running vertically up the hoof from the sole to the coronary band or heel. 3.

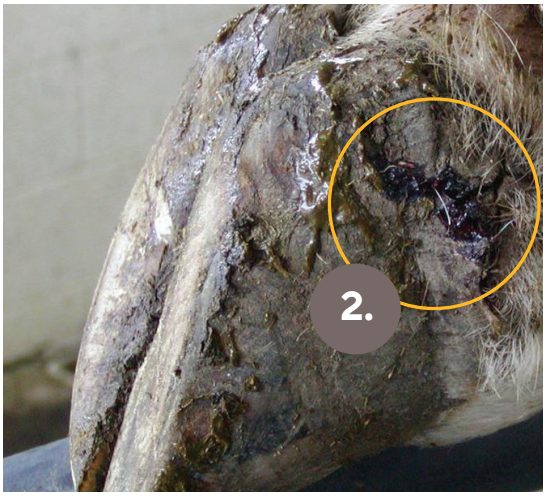


Where in the hoof?

Mostly seen in:

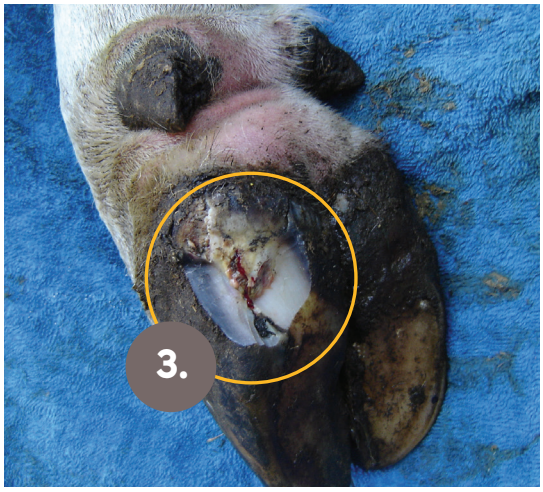
- back foot outer claw in mixed aged cows.
- front foot inner claw in heifers.





How does it happen?

- the white line is a weak point in the hoof which is easily injured.
- at calving or other periods of stress, the white line becomes more susceptible.
- twisting and turning of feet on tracks and yards causes the white line to separate.
- stones are forced upward into the white line which results in further separation of the wall from the hoof.
- if this continues, stone and bacteria will reach the sensitive tissues of the hoof causing pain and infection.



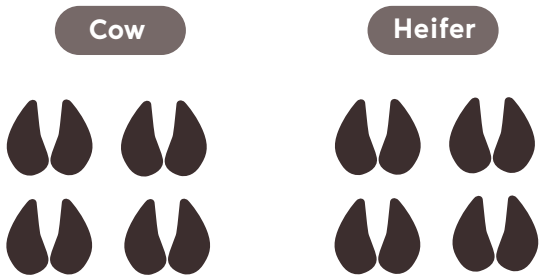
Sole bruising (or haemorrhage)

What does it look like?

- reddish/dark brown areas on the sole
- patches can be localised or they can cover large portions of the sole
- often the cow is lame in more than one foot and they are stiff when getting up and walking.

Where in the hoof?

- more likely to be outer hind limb in cow
- common in heifers in their first few months of lactation.



How does it happen?

- from changes in the hoof at calving
- from very thin soles.

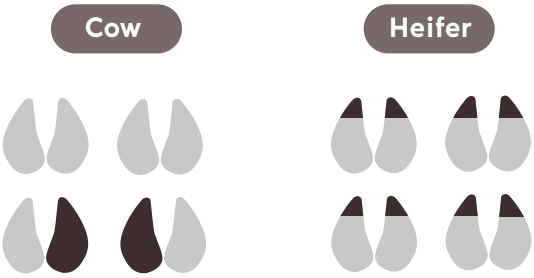
Sole abscess

What does it look like?

- have a dark hole or crack in the sole
- may lead to a pocket of pus.

Where in the hoof?

- are common in toes of heifers
- are common in inner claw of rear feet in cows



How does it happen?

- not understood
- from changes in the hoof at calving.

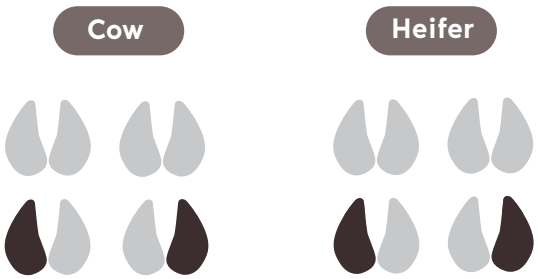
Sole ulcer

What does it look like?

- has a reddish/dark brown area that is often soft.
- underrun horn.
- can be very painful.

Where in the hoof?

- are usually found on outside claw of rear feet.



How does it happen?

- can be from long periods of standing on concrete e.g. feed pads.
- sometimes happens after prior severe lameness where the claw has become deformed.

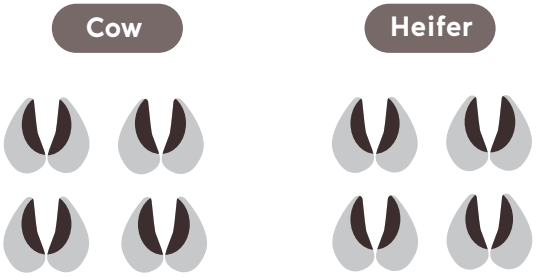
Hoof wall crack

What does it look like?

- a vertical crack is found usually on the inner wall of the claw.

Where in the hoof?

- cracks appear in both front and back feet on any claw.



How does it happen?

- damage to the soft tissue between the claws that then grows down as a crack. Risk factors are the same as for foot rot.
- poor conformation of feet e.g. corkscrew.

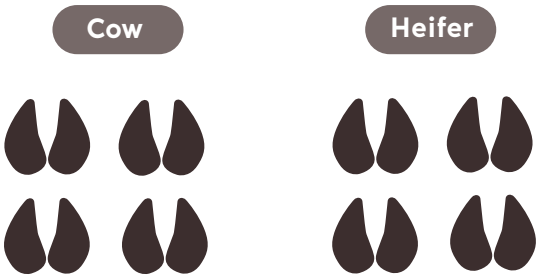
Foot rot

What does it look like?

- skin between claws is broken.
- swelling and heat below the dew claws.
- it often smells.

Where in the hoof?

- foot rot can be found in any of the feet.



How does it happen?

- usually, the skin between the claws is broken by a stone, especially under moist hoof conditions.
- bacteria then invade the soft tissue causing an infection.
- the onset of foot rot is rapid and will continue for at least a week or until complications set in.
- it is a very painful condition.

Digital dermatitis

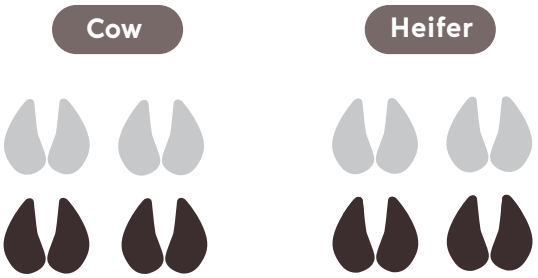
What does it look like?

- red or grey lesion on skin above hoof – usually between heel bulbs.
- the red surface of the ulcer is sensitive to water pressure or touch.
- can progress and have a wart like appearance.
- the infection may get deeper into the hoof, causing erosion and underrunning of the heel horn.

Note: internationally farmers commonly refer to digital dermatitis as 'hairy wart' or 'strawberry disease'.

Where in the hoof?

- usually the back feet (80%).



How does it happen?

- digital dermatitis is contagious, so it can be spread from cow to cow.
- various bacteria can break the skin, usually at the back of the foot and an infection sets in.

Section 6 | Treating lameness

Treating lame cows

Ensure you have adequate facilities and use the correct techniques for handling cows or get a vet or hoof trimmer to do it for you. Good facilities improve lame cow management by reducing stress for you and the cow, keeping the farm team safe and are more likely to be used to provide prompt and correct treatment.

Good facilities have:

- shelter
- running water
- non-slip surface
- good lighting source
- safe work area for people
- safe method for restraining cows
- purpose built crush that allows safe access to all legs

Ensure the leg is positioned within the natural range of motion for the cow to avoid discomfort. If you do not have a crush available you can use the herringbone or rotary dairy shed, but this is less safe for you and the cow, and is difficult to inspect front feet.

Remember, a cow may be lame in more than one foot; you may need to check multiple feet.

Take care when using a head crush

When using head crush, react immediately if a cow goes down on her knees as it puts pressure on her airway. Cows often don't let you know they are suffocating.

Good practice is to put a strap under the cows chest just behind the front legs to prevent the cow kneeling.

Tools for treating lameness

A fully equipped and well-maintained tool kit can save time and reduce frustration when treating lame animals. Regularly check your kit and replace the contents.

The following tools are used in the treatment of lame cows:

Tool kit contents

Hoof test pliers	These are used to identify the correct claw and locate the injured area.
Hoof knives	One right sided, one left sided. Narrow blades with single edge knives are the best as they allow good access between claws in comparison to wide blades or doubled sided knives.
Hoof knife pouch	It is important to protect your knives and keep them sharp. Use an old rubber inflation (liners) or piece of alkathene as a pouch to store your knives when not in use.
Hoof trimmers	Single or double action trimmers to trim overgrown toes.
Hoof grinder	With appropriate training, some farmers find the use of a hoof grinder useful. Caution must be taken to not remove healthy sole.
Hoof blocks or slips and glue	Blocks or slips for either left and right claws.
Hoof-drying tools	e.g. methylated spirits or heat gun
Sharpening stone	Used for knife sharpening.
Fine round chainsaw file	1/8th or 4mm or less. Use only to shape inside edge in preparation for sharpening with diamond sharpener.
Diamond hoof knife sharpener	Used for sharpening inside the curved part of the hoof knife.
Antiseptic Spray	e.g. Iodine or gentian violet.
Anti-inflammatories	Consult your veterinarian for the appropriate NSAID for your farm.
Antibiotics	Generally, only needed to treat foot rot. Consult your veterinarian for the best option for your farm.
Leg rope or strap	3m of large diameter (at least 3cm wide) soft rope or webbing. This prevents injury from rope burn on the cow's leg.
Back bar or rope	This is to go behind the cow when treating in a herring bone shed or where the crush doesn't have one. Use 4m long rope or a pipe bar.
Glove or wrist protector	For the hand holding the foot.
Recording booklet or device	To record all lame cows and treatment.

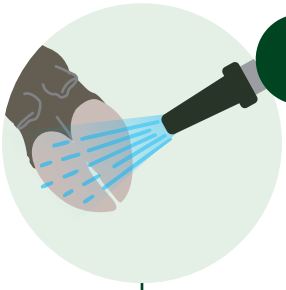
Training is recommended for the following:

- Restraint
- Use of hoof knives
- Use of grinder
- Application of hoof blocks
- Use of hoof testers

Tip: Vet clinics and hoof trimmers sometimes provide sharpening services.

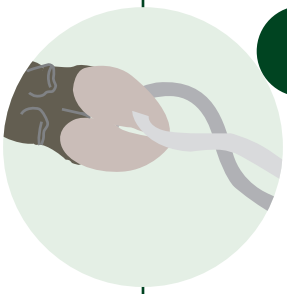
Foot examination

To ensure correct treatment and prevention, identify the type of lameness the cow has by examining the foot. You may need to check multiple feet.

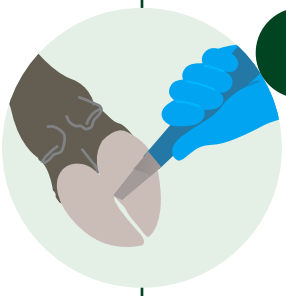


1. **Clean** the foot with running water.

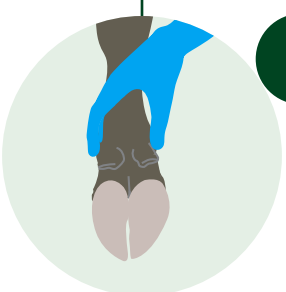
2. **Check** between the claws for any trapped stones, breaks in the skin, swelling or heat.



3. **Squeeze** carefully to test the claws with a hoof tester. A positive response will be muscle twitching higher up the leg. Not necessarily the cow trying to pull her leg away.



4. **Scrape** clean the sole with a scraper or hoof knife and check for any holes or cracks.



5. **Search** only if you find nothing in the foot do you start looking further up the leg for other possible causes.

Call your vet or hoof trimmer if you are unsure about a lesion or the lameness does not improve after treatment.

Treatment principles

Return hooves to the ideal shape so that they are balanced, more able to support the cow's weight and less likely to be affected by future problems.

Reduce pressure on a lesion by removing the horn around the lesion. This reduces pinching and aggravation of the lesion by the hard horn. It also allows dirt and slurry to drain from around the lesion which decreases the chance of an abscess forming. Remove damaged horn to promote the growth of healthy new horn.

Transfer the weight to the other healthy claw by either paring down the sole of the affected claw and/or putting a block/slip on the healthy claw. Blocks should be used by default, unless there's an obvious reason not to (e.g. a lesion on the opposite claw). This transferred weight helps cows to walk with less pain and aids healing. Avoid causing bleeding, trimming too deep and provide pain relief.

If a cow does not heal or improve within one week after treatment, contact your veterinarian.

For more Indepth information on treating different types of lameness, visit **dairynz.co.nz/treating-lameness**

Recording and marking lame cows

Clearly marking and separating lame cows is good practice. This allows everyone on the farm to monitor the cow and reduces risk around antibiotic withholding periods. Accurate records help to detect cows that continue to get lame. Good records also allow you to evaluate and monitor your progress in managing and minimising lameness. Mark and identify lame cows with spray paint or other methods.

Section 7 | Lameness prevention

Stockmanship

Research has shown the number of lame cows on a dairy farm is closely related to the knowledge, training and awareness of the people who work with the cows.

Good stockmanship has many benefits on farm including reduced accidents, easier working conditions, saving time in routine tasks, improved milk yield and happier farm teams as well as better welfare for the cows and reduced lameness.

Poor cow flow is not usually a problem with the cows, but a problem with the environment. If cows are consistently slow on tracks and races investigate the cause and correct it.

Bringing cows to the dairy

Allow cows to walk at their own pace along tracks and through gateways. Cows walk about 3km per hour, this is slower than the average walking speed of people. The use of timed gate latches allows cows to start making their way to the dairy, providing efficiencies for the farm team.

This is an example of a herdsperson putting too much pressure on the cows as shown by raised heads. The cows can no longer watch where they place their feet or avoid more dominant cows.

Movement in groups is best as cows will follow their herd mates. If the herd stops, don't put pressure on the rear cows. They won't move if the dominant cows in front of them have stopped. Move to the front of the herd and encourage the front cows to continue moving.

A cow's hearing is very sensitive. Avoid using noisy vehicles such as a tractor to move the herd. Talk in low tones to encourage the mob to move forward, try not to whistle. Avoid using dogs unless they are particularly quiet.

Talk to cows to keep them moving, but don't frighten them. Use positive interactions such as a stroke, rub, or gentle contact. On larger farms that run two herds, consider separating heifers from older cows to reduce bullying.

Cows walking with their heads down so they can see where to put their feet.

Moving cows on the yard and in the dairy

Cows thrive on consistency and respond best when they have a clear routine. A frequently observed area for improvement in stockmanship is the use of backing or top gates. Another common practice to review is milkers leaving the pit or cups-on position to enter the yard, as this can sometimes produce unintended effects.

Read more on good cow flow at **dairynz.co.nz/stockmanship**

Using the backing gate or top gate

- Ensure the farm team uses the same routine and system when using the top or backing gate.
- It is good to have a buzzer, or noise associated with movement of the backing gate to provide warning to the cows.
- Electrified gates are not necessary as cows are very sensitive and fearful of electricity, which can result in poor cow flow and slower milking times.
- The control panel or switches for the gates need to be positioned so milkers do not disrupt the cows walking into the dairy.
- Having a mirror to see how tightly cows are packed in is useful.
- The first gate movement should be after 15 minutes, about two rows or rounds. Cows need this amount of time to re-form their milking order on arriving at the yard.
- Ensure the backing gate does not come in contact with the cows.
- Each gate movement (for both backing and top gates) should only last 3-5 seconds and should only be used to fill up space in the yard, not to move cows. Get your electrician to install a timer on the forward switch or button.

This backing gate is being used correctly to take up space. Cows are still able to rearrange their order and their heads remain down.

Managing bulls in the herd

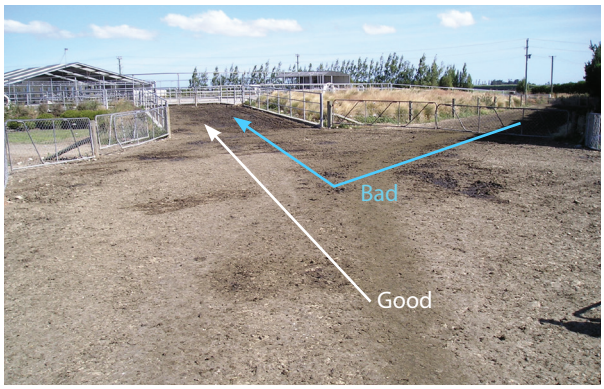
Lame bulls have reduced fertility, and an episode of lameness often puts them out of action for the remainder of the breeding season. Bulls face additional risks from riding cows, fighting, and not being used to long walks on tracks. When they enter the shed with cows, they can disrupt cow flow, create health and safety risks, and delay milking.

Train bulls to stay in the paddock or move to the next one as the herd walks to the dairy. This usually takes a few tries. If training isn't successful, or bulls must pass through the shed, let them walk in with the cows but cut them out at the shed. Move them straight to the next paddock, don't leave them in the yard. Lame bulls are more difficult and dangerous to treat than cows, and sedation is usually required. Consult your veterinarian if you have lame bulls on farm.

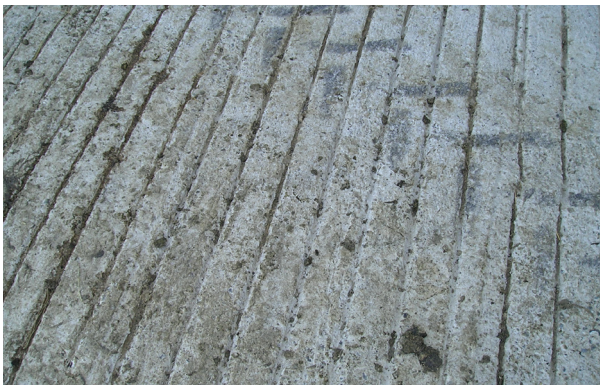
Infrastructure

The dairy shed and yards

Creating a good environment in the dairy is key to efficient milking and reducing lameness. To help with a good dairy and yard set up, the yard entrance should be at least as wide as the track leading to it. Avoid sharp turns into the yard, keep concrete surfaces clear of stones, in good repair and make sure they are non-abrasive but not slippery. Eliminate factors that make cows reluctant to enter the yard and dairy e.g. poor lighting, slippery surfaces, rails the wrong height, pipework that injures cows and negative human actions such as yelling. Ensure the yard is the right size for the herd, this is at least 1.3m²/cow for jersey cows and 1.5m²/cow for Friesians.



Sharp turns slow down cowflow



Textured concrete gives more traction without slipping

Good amount of space in the yard. Notice all heads are down.

Yard too small for number of cows. Notice some heads are up.

For more information visit **dairynz.co.nz/milking**

Farm tracks

A well-designed, constructed, and maintained farm track is essential for reducing lameness, improving cow flow, and minimising time and maintenance costs. Tracks should be wide enough to prevent crowding, with proper drainage and regular maintenance to avoid potholes and mud buildup. Ensuring effective gateway access and fencing off drains also help to reduce injuries and stress on cows.

When constructing new tracks, professional contractors are recommended to ensure proper base and surface layering for durability and cow comfort. The foundation should be compacted, well-drained, and made from appropriate materials like crushed limestone or volcanic rock. The surface should be smooth and comfortable, avoiding sharp stones that can damage hooves. Regular grading and drainage maintenance prolong the track's lifespan and keep it in optimal condition.

Intersections between tracks and yards require special attention to prevent mud buildup and cow traffic issues. Using lime fines, proper drainage, and compacted surfaces helps keep these areas dry and safe. Bridges and underpasses should be designed to maintain smooth cow movement, with sufficient width, good visibility, and minimal gradient to prevent hesitation and stress. Proper track management is a key part of lameness prevention, improving both cow welfare and farm profitability.

For more information visit **dairynz.co.nz/milking/tracks/**

DairyNZ

dairynz.co.nz