Our story

At FIL, we’re dedicated to understanding and improving farming practices, conditions and performance here in New Zealand.

We’ve been bringing dairy farmers like you - our extended family - trusted and proven solutions since 1978. To this day, our products are made locally in the Bay of Plenty and have been specially formulated to perform in NZ’s unique conditions.

Our people are our difference. We share your commitment to optimising farm performance, which is why we’ve developed a range of best-practice tools and a supportive team who have your back. Your local FIL Area Manager will work with you to build capability on-farm by offering advice, training staff and setting high standards.

Our connection to GEA gives us access to global insights and support, allowing us to bring home innovative and cutting-edge technology to help Kiwi dairy farmers produce world-class, quality milk.

We’ve got farmers who’ll testify that FIL products are the best on the market, and we’d love to prove it to you too.

Contents

<table>
<thead>
<tr>
<th>Building capabilities on farm</th>
<th>Animal markers</th>
<th>4</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shed hygiene</td>
<td></td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>Acid detergents</td>
<td></td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>Alkali detergents</td>
<td></td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Speciality cleaners</td>
<td></td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>Cleaning elements &amp; safety</td>
<td></td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td>Teat care</td>
<td>Animal health</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Teat sprays</td>
<td></td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Emollient &amp; creams</td>
<td></td>
<td>16</td>
<td>31</td>
</tr>
<tr>
<td>Teat care programme</td>
<td></td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Teat care automation</td>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>
Building capabilities on-farm

We’re here to help you do things right on-farm through knowledge powered performance.

Our people are our difference

Extensively trained and not afraid to put on their overalls, our nationwide team of Area Managers are experts in shed hygiene, teat care and animal health. From troubleshooting grade issues to implementing tailored teat care and cleaning programmes based on your specific environment, we’ve got all bases covered to ensure your operation performs.

Teamwork

We’re all about upskilling your staff and arming them with best practice solutions, enabling them to make informed decisions to drive performance on-farm. Your FIL Area Manager will build capability within your team through expert advice, on-farm training and hands-on help.

Our service

Here’s some of the ways we can help:

- **STAFF TRAINING**
  Training on chemical safety, mixing and dilution rates, application of teat sprays and plant wash procedures.

- **BULK MILK TESTING**
  Uncovering the type of pathogens in your herd to determine the source and a prevention plan.

- **PLANT HEALTH CHECKS**
  Checking your equipment to make sure things are working properly and products are being effectively distributed.

- **EXPERT PRODUCT ADVICE**
  Managing on-farm costs with a tailored teat spray and hygiene programme that is right for your cows and environment.

FIL Area Manager Fraser Stewart delivering an on-farm consultation.
FIL AREA MANAGER ALEX COCHRANE
INSPECTING THE VAT FOR PROTEIN BUILDUP & CLEANLINESS.

Have you got these FIL tools to support best practice on-farm?

• Milking plant check list
• Wash programmes
• 20L teat spray mixing bucket
• Teat spray charts
• Heat detection brochure
• Red acid measuring jug
• Blue alkali measuring jug
• Safety chart
Shed hygiene

A performing milking plant is one that’s clear of any bacteria and buildup.

Ensure a pristine clean with FIL’s high-quality detergents and specialist solutions

FIL innovations are based on what really works on NZ farms. Our reformulated detergents and specialty cleaners cater for a range of plant types and on farm conditions.

Tailored programmes

Our FIL Area Managers are extensively trained and experienced in implementing stringent shed cleaning practices.

We’ll tailor a cleaning routine that suits your setup. Taking into account plant turbulence, we’ll advise you on the right chemicals and ideal wash temperatures, while ensuring the solution has plenty of contact time to clean effectively.

Preventative techniques and teamwork

We’re all about empowering your team; training them in effective product usage and chemical safety, helping them to understand what causes grades and how to avoid them. When you do grade, we’ll help you get to the root of the problem and get you back milking ASAP.

Quality products, attention to detail, preventative techniques and teamwork equals quality milk. It’s a simple formula, and we’re here to help you make it all add up.
Acid detergents

Acid detergents remove mineral deposits from all milk contact surfaces of the plant and silo.

Quantum Clear Acid

Our Eco Warrior. Certified for organic dairies. Quantum Clear Acid leaves no residue traces and uses less water.

Why choose Quantum Clear Acid?
- Over 25% reduction in water usage
- Around 25% reduction in wash time and power consumption
- No residue traces
- Low rinse
- Biogro certified for organic dairies

Other things you should know:
- 1.5ml/L water use rate
- High strength Citric Acid-based cleaner (390g/L)
- For use with compliant water only
- For high turbulence plants
- For hot water use only
- Use with alkali washes every alternate day
- Quantum Clear Acid is clear in colour

Available in 20L, 100L and 200L

Jetset Acid

An economic low to medium foam acid detergent designed for mature sheds with little turbulence.

Why choose Jetset Acid?
- Low to medium foaming in hot water
- Compatible with a wide range of water types

Other things you should know:
- 309g/L total acids
- Recommended for hot water but suitable in all water temperatures

Available in 20L, 100L and 200L

Impact Red Acid

A low foaming acid powder detergent for cleaning the milking plant and milking silo.

Why choose Impact Red Acid?
- Low controlled foam acid powder
- Packed in convenient sachets for a measured dose

Other things you should know:
- Recommended for use in hot water for optimum results, but is suitable for cold
- Recommended for use in manually operated plants and milk silos
- Easy tear foil sachets for safe and pre-measured use means no product wastage
- Compatible for use in most water types
- Not a dangerous goods product

Available in 100 x 150g sachets
Quantum Red Acid

Our ultimate performer. Low foam with a unique surfactancy matrix, Quantum Red Acid is built to deal with NZ’s challenging water conditions.

Why choose Quantum Red Acid?

- Very low risk of residue traces
- Unique surfactant matrix for a better clean
- Buffers difficult and non-compliant water
- Delivers cleaning performance in low turbulence and difficult to clean plants
- Refined and proven over 20 years

Other things you should know:

- Can be used at a 1mL or 1.5mL per L water use rate, depending on water quality
- 400g/L Phosphoric and Organic Acids
- Recommended for hot water but suitable in all water temperatures
- Quantum Red Acid is red in colour

Available in 20L, 100L and 200L.
Alkali detergents

Alkali detergents remove fat and protein and are a crucial component of the cleaning process.

Quantum XL liquid Alkali
An ultra-low foam liquid detergent that prevents bacteria grades in the milking plant. For optimal results use in conjunction with FIL acids and follow the FIL wash programme.

Why choose Quantum XL?
• Recommended for high turbulence machines
• Recommended for automated washing systems
• Ultra-low foam ensures no residues are left behind

Other things you should know:
• Suitable for hot water wash only
• Use in conjunction with a daily routine acid wash
• Ideal for twice weekly (or more regular) cleaning to prevent protein buildup
• Can be combined with FIL C3 to enhance cleaning
• Compatible with all water types

Quantum Powder
A low foam heavy-duty chlorinated powdered alkali detergent recommended for use in all types of milking machines and silos.

Why choose Quantum Powder?
• Very high strength alkali detergent
• Stable chlorine formulation removes fat and protein
• Recommended for manual washing systems

Other things you should know:
• For use in hot water only
• Use in conjunction with a daily routine acid wash
• Ideal for twice weekly (or more regular) cleaning to prevent protein buildup
• High strength chlorine to remove protein, fat and stubborn milk deposits
• In powder form for easy measuring and usage
• Compatible with all water types

Available in 20L, 100L and 200L

Impact Blue
A low foam heavy-duty chlorinated powdered alkali detergent recommended for use in all manually operated milking machines and silos.

Why choose Impact Blue?
• Very high strength alkali detergent
• Stable chlorine formulation to remove protein and fat
• Packed in convenient sachets for ease of use and limited product wastage

Other things you should know:
• For use in hot water only
• Use in conjunction with a daily routine acid wash
• Ideal for twice weekly (or more regular) cleaning to prevent protein buildup
• Easy tear foil sachets for safe and pre-measured use, limiting wastage
• Compatible with a wide range of water types

Available in 50 x 300g sachets
Specialty cleaners

Including multipurpose cleaning products and water treatments, we’ve got a range of specialty cleaners for all the extra jobs around the farm.

**Koncrete Kleaner**
A heavy duty all-purpose concrete cleaner for use on all concrete surfaces around the farm and home.

- Eliminates stubborn bacteria and algae buildup on concrete surfaces
- Has long term residual action preventing the regrowth of algae and slime for up to 2 months
- Best applied using a knapsack
- Non chlorine

Available in 5L and 20L

**Antigerm**
An excellent general-purpose disinfectant and antiseptic that cleans and kills germs. Great for use on the farm and around the house.

- Suitable for use in first aid, disinfecting surfaces, and cleaning floors and drains
- Not for use on milk contact surfaces

Available in 5L and 20L

**C3**
For use in both the shed and the home, this heavy-duty chlorinated cleaning chemical can be used for a variety of cleaning purposes.

- Biogro certified for organic dairies

Available in 5L, 20L, 100L & 200L

**Corrects grade faults**
C3 removes bacteria buildup from the milking plant. Combine C3 with a hot alkali detergent wash to correct grades or add to your pre-season heavy-duty chlorinated alkali wash.

**Makes water safe**
C3 treats water with high microbial contamination content by neutralising the microbes responsible.

**Kills moss, mould & algae**
Spray C3 onto concrete surfaces, walls, roofs and masonry to remove moss, mould, mildew, and algae.
Dairy cows need at least 3 litres of fresh drinking water to produce 1 litre of milk. This means your cows need around-the-clock access to ample water to produce quality milk. Our Trough Tablets create clean drinking water by controlling slime in stock water troughs.

- Contains copper sulphate and zinc sulphate
- One tablet will treat up to 1,000L of water
- Treat trough every 6 weeks
- Use at any time of the year
- Suitable for all water types
- Convenient 5 pack

Available in 10kg buckets

High strength chlorine rods and tablets for treating water contaminated by bacterial pathogens.

- Prevents the growth of bacteria and algae
- 300g rods for use in the Farm Chlor Chlorinator to treat farm water
- 7g tablets to treat animal water troughs for up to 4 weeks
- Only solid chlorine product approved by MPI for dairy shed use

Available in 10kg buckets
Cleaning elements & safety

There are 4 key elements that make a clean dairy.

1. Turbulence

Turbulence is created by flushing pulsators injecting air and water into the milk line. The injection of water and air creates a turbulent flow of wash water through the milk line, also known as a slug.

Many plants have areas which lack in turbulence such as milk lines, receiving cans and milk meters, or have parts that need to be manually cleaned, like the top filter cage, door seal on the silo, and the receiving can.

You need to select the product best suited to your setup based on whether you have a high or low turbulence machine.

2. Chemical

Using the right product solution for your cleaning system ensures soils and bacteria are removed from the plant and bulk milk silo, leaving you with a clean and hygienic plant.

Acid detergents contain acid that dissolves minerals and acts as a sanitiser. An acid detergent must be used to clean the plant morning and night.

Alkali detergents typically contain caustic soda and surfactants and may require additional sodium hypochlorite to be added. Caustic soda dissolves fat while chlorine destroys protein deposits. An alkali wash should be done at least twice a week using hot water, followed by an acid rinse.

FIL’s specially formulated acid and alkali products provide a pristine clean. The range offers variable foam and low dose rate products, as well as water and cost savings.

GEA’S FIL ACID AND ALKALI PRODUCTS TABLE

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Cleaning Temp</th>
<th>Machine Turbulence</th>
<th>Foaming</th>
<th>Suitable Water Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acid</td>
<td>Alkali</td>
<td>Hot</td>
<td>Cold</td>
</tr>
<tr>
<td>Quantum Clear</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Quantum Red</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Jetset</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Impact Red</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Quantum XL</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Quantum Powder</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact Blue</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Temperature

Hot water gives your acid and alkali products optimal cleaning power, speeding up the process by melting fat and killing bugs. The ideal temperature for a hot water wash is 85°C. Water above 85°C can cause many issues such as baking on soils, breaking down chemical and causing alkali to be dangerous. Plus, it is expensive to heat and hold water at such a high temperature.

Be sure when recirculating hot water that it is dumped at no less than 55°C. It is essential to have a thermometer located in the shed.

4. Contact Time

Once the product and the wash temperature are correct, it’s very important that the solution has plenty of contact time to dissolve the soils and clean effectively.

In a manual system it is recommended that 10L of wash solution is used per set of clusters. Where a manual plant is setup for recirculation, 4-7 minutes is recommended, depending on temperature.

Automatic systems substitute volume for time. A smaller amount of water is used and recycled to achieve volume, normally in 4-7 minutes. Once the wash is completed you must rinse the plant with cold water at 5L per cluster to ensure no detergent residues are left in the plant.

Chemical Safety

Safety is extremely important when handling acid and alkali chemicals in the shed, and strict safety measures must be followed.

• Gloves and safety goggles must be worn when handling chemicals
• Never mix acids and alkalis
• Safety Data Sheets must be stored in a dry place on site - these can be obtained from the FIL website
• Chemicals must be stored safely

SAFETY DATA SHEETS
Safety Data Sheets for the full range of FIL detergents and specialist solutions are available at:
www.fil.co.nz/safety-data-sheets-2/
Teat care

Look after your most important asset with NZ’s leading range of teat care products.

Healthy cows perform better. With quality products and unmatched expertise, we can help prevent mastitis and put more milk in your vat.

Preventative techniques and teamwork

We’re all about building the capabilities of your team, helping them to understand what causes mastitis, how it affects production, and how to prevent it.

Get your local FIL Area Manager on-farm to train your staff on the fundamentals of a healthy udder:

- Why teat health is important
- Challenges teats face
- Signs of unhealthy udders and the causes
- Teat scoring

Your FIL Area Manager will work with you to prescribe the right teat care products for your specific environment and pathogens. They’ll also implement a teat care programme that incorporates dilution rates, mixing techniques, spray patterns and amounts, and how to spray correctly for optimal coverage.

Protect your most important asset

Our proven teat care products contain special agents formulated to achieve healthy udders: iodine, chlorhexidine, emollients and Manuka honey. Our teat sprays, teat conditioner and teat creams are designed to protect teats - your most important asset - by helping to prevent drying, chapping and infection.
Teat sprays

Our range of chlorhexidine and iodine-based teat sprays are formulated with quality ingredients designed to protect your herd’s udders.

Iodoshield Active
An iodine-based teat spray with Manuka honey and emollient, for use as a post milking aid in the control of mastitis.

Why choose Iodoshield Active?
Iodoshield Active is great for killing bugs especially in wet, muddy conditions or if your cows are in a barn or feed pad situation. The emollient aids in conditioning teats, reducing drying and chapping to help prevent mastitis.

Other things you should know:
• Iodine-based teat spray
• Best for high-risk environments
• Excellent bug killing power
• Contains Manuka honey to restore cracked and chapped teats and to help the product adhere to the teat for longer
• Contains 23g/L iodine and 55% mixed emollients - this high ratio of mixed ingredients makes the solution very effective at killing bugs while being gentle on cows’ teats
• The brownish red colour makes it highly visible on cows’ teats
• Suitable for both automatic and manual sprayers
• Approved for use in organic dairies - USDA NOP

Available in 20L, 100L and 200L

Teatshield Active
A chlorhexidine-based teat spray with Manuka honey and added emollient, for use as a post milking aid in the control of mastitis.

Why choose Teatshield Active?
Teatshield Active has been built with an advanced emollient matrix to assist with cell rejuvenation and conditioning of cracked and damaged teats. Green in colour and highly visible on cows’ teats, you will be able to see if optimum spray coverage has been achieved.

Other things you should know:
• Chlorhexidine-based teat spray
• Best for medium-risk environments
• Excellent teat maintenance
• Contains essential skincare components, including Manuka honey to restore cracked and chapped teats and to help the product adhere to the teat for longer
• Contains 44g/L chlorhexidine and 55% mixed emollients - this high proportion of mixed ingredients makes the solution effective in maintaining healthy teats
• Green in colour, the product is highly visible on cows’ teats
• Suitable for both automatic and manual teat sprayers
• Approved for use in organic dairies - USDA NOP

Available in 20L, 100L and 200L

Teatshield
A chlorhexidine-based teat spray with added emollient, for use as a post milking aid in the control of mastitis.

Why choose Teatshield?
Teatshield is a great product for all round use and maintenance. With added emollient, it aids in conditioning teats, reducing drying and chapping to help prevent mastitis.

Other things you should know:
• Chlorhexidine-based teat spray
• Best for medium-risk environments
• Good teat maintenance
• Contains 44g/L chlorhexidine and 44% mixed emollients
• Blue in colour, the product is highly visible on cows’ teats
• Suitable for both automatic and manual sprayers

Available in 20L, 100L and 200L

Teat sprays

Our range of chlorhexidine and iodine-based teat sprays are formulated with quality ingredients designed to protect your herd’s udders.

Iodoshield Active
An iodine-based teat spray with Manuka honey and emollient, for use as a post milking aid in the control of mastitis.

Why choose Iodoshield Active?
Iodoshield Active is great for killing bugs especially in wet, muddy conditions or if your cows are in a barn or feed pad situation. The emollient aids in conditioning teats, reducing drying and chapping to help prevent mastitis.

Other things you should know:
• Iodine-based teat spray
• Best for high-risk environments
• Excellent bug killing power
• Contains Manuka honey to restore cracked and chapped teats and to help the product adhere to the teat for longer
• Contains 23g/L iodine and 55% mixed emollients - this high ratio of mixed ingredients makes the solution very effective at killing bugs while being gentle on cows’ teats
• The brownish red colour makes it highly visible on cows’ teats
• Suitable for both automatic and manual sprayers
• Approved for use in organic dairies - USDA NOP

Available in 20L, 100L and 200L

Teatshield Active
A chlorhexidine-based teat spray with Manuka honey and added emollient, for use as a post milking aid in the control of mastitis.

Why choose Teatshield Active?
Teatshield Active has been built with an advanced emollient matrix to assist with cell rejuvenation and conditioning of cracked and damaged teats. Green in colour and highly visible on cows’ teats, you will be able to see if optimum spray coverage has been achieved.

Other things you should know:
• Chlorhexidine-based teat spray
• Best for medium-risk environments
• Excellent teat maintenance
• Contains essential skincare components, including Manuka honey to restore cracked and chapped teats and to help the product adhere to the teat for longer
• Contains 44g/L chlorhexidine and 55% mixed emollients - this high proportion of mixed ingredients makes the solution effective in maintaining healthy teats
• Green in colour, the product is highly visible on cows’ teats
• Suitable for both automatic and manual teat sprayers
• Approved for use in organic dairies - USDA NOP

Available in 20L, 100L and 200L

Teatshield
A chlorhexidine-based teat spray with added emollient, for use as a post milking aid in the control of mastitis.

Why choose Teatshield?
Teatshield is a great product for all round use and maintenance. With added emollient, it aids in conditioning teats, reducing drying and chapping to help prevent mastitis.

Other things you should know:
• Chlorhexidine-based teat spray
• Best for medium-risk environments
• Good teat maintenance
• Contains 44g/L chlorhexidine and 44% mixed emollients
• Blue in colour, the product is highly visible on cows’ teats
• Suitable for both automatic and manual sprayers

Available in 20L, 100L and 200L
Emollient & creams

Active Teat Conditioner
An emollient enriched skin conditioner for adding to FIL teat sprays during early lactation and challenging periods.

Why the need to add extra emollient?
Water and mud strip the protective natural oils from skin. The cold, wet, muddy conditions experienced during early lactation induce hardening and thickening of teat skin, causing drying and chapping.

The resulting cracks and teat sores are painful, making cows uncomfortable during milking which causes them to kick and stomp. Plus, if a cow is uncomfortable her milk let-down will likely be poor.

It’s important to provide teats with extra support during early lactation or in high-risk periods by adding extra emollient to increase overall condition and aid protection.

Other things you should know:
- Contains quality skincare ingredients such as Aloe Vera, Allantoin and Manuka honey
- Increases overall teat condition, leaving teats supple, less prone to drying and cracking, and better protected
- For use in challenging periods i.e., cold, wet, windy weather conditions often experienced during early lactation
- Biogro certified for organic dairies - not certified to USDA NOP & COR

Available in 20L, 100L and 200L

Active Teat Cream
This is a uniquely formulated product, designed for the treatment and protection of cracked and chapped teats in dairy cows.

Why choose Active Teat Cream?
Active Teat Cream is an iodine-based antiseptic cream with Manuka honey which is quickly absorbed into the teat surface to restore cracked, damaged and severely chapped teats.

Other things you should know:
- Always apply to teats after milking
- Antiseptic iodine and Manuka honey combination provide intensive care to severely cracked or chapped teats
- Iodine kills bugs while the honey helps to nourish
- Water soluble and non-greasy, easy to wash from hands
- Approved for use in organic dairies - USDA NOP

Available in 2L pail and 500g flexi pack

Emollient Salve
Designed to create a protection barrier for teats, keeping them soft and supple.

Why choose Emollient Salve?
Emollient Salve is a waterproof lubricant used to protect teats.

Other things you should know:
- Always apply to teats after milking
- Antiseptic lubricant and emollient barrier
- Waterproof so will last on teats for longer in wet weather
- Assists in the prevention of mastitis by ensuring teats do not dry and crack

When to use?
During early lactation or at times when teat condition and udder health is challenged by harsh weather conditions.

Available in 2L pail and 700g flexi pack
Teat care programme

You should always mix by adding the teat spray and teat conditioner to the water.

1. Add water to 20L bucket
2. Measure teat spray in 5L jug. Add to water and stir
3. Measure Active Teat Conditioner in 5L jug. Add to mixture and stir
4. Ensure products are well mixed

How to spray correctly

Spray in a circular motion to ensure full coverage of all teats. You can check to see how effective your spraying is by using a dry paper towel or by looking at the teats - effective coverage has been achieved when droplets are forming at the teat ends.

DILUTION RATES BASED ON A 20L MIX:

<table>
<thead>
<tr>
<th></th>
<th>Iodoshield Active</th>
<th>Teatshield Active</th>
<th>Teatshield</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>During early lactation and HIGH Risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>15L</td>
<td>15L</td>
<td>15L</td>
</tr>
<tr>
<td>Teat Spray</td>
<td>3L</td>
<td>3L</td>
<td>3L</td>
</tr>
<tr>
<td>Active Teat Conditioner</td>
<td>2L</td>
<td>2L</td>
<td>2L</td>
</tr>
<tr>
<td>Active level</td>
<td>3,450ppm</td>
<td>6,600ppm</td>
<td>6,600ppm</td>
</tr>
<tr>
<td>Emollient in use</td>
<td>15%</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Mid lactation and MILD Risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>16L</td>
<td>16L</td>
<td>16L</td>
</tr>
<tr>
<td>Teat Spray</td>
<td>2L</td>
<td>2L</td>
<td>2L</td>
</tr>
<tr>
<td>Active Teat Conditioner</td>
<td>2L</td>
<td>2L</td>
<td>2L</td>
</tr>
<tr>
<td>Active level</td>
<td>2,300ppm</td>
<td>4,400ppm</td>
<td>4,400ppm</td>
</tr>
<tr>
<td>Emollient in use</td>
<td>12%</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>LOW Risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>18L</td>
<td>18L</td>
<td>18L</td>
</tr>
<tr>
<td>Teat Spray</td>
<td>2L</td>
<td>2L</td>
<td>2L</td>
</tr>
<tr>
<td>Active Teat Conditioner</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Active level</td>
<td>2,300ppm</td>
<td>4,400ppm</td>
<td>4,400ppm</td>
</tr>
<tr>
<td>Emollient in use</td>
<td>5.5%</td>
<td>5.5%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

*Add Active Teat Conditioner in poor weather or when teat condition suffers.
Teat care automation

Eliminate manual mixing and guesswork with integrated solutions for automatically mixing and delivering teat spray.

IntelliBlend

Designed specifically for New Zealand dairy farming, the IntelliBlend is a robust and reliable solution for automating your teat care routine.

- Draws teat spray and emollient straight from the drum
- Accurately mixes 'ready to use' (RTU) teat spray at set ratios of concentrate to water
- Self-primes and prepares RTU teat spray on demand when switched on before milking
- An audible alarm notifies staff when teat spray and emollient drum contents are running low and again when the drum is empty
- Suited to larger herds

Auto Mix + Spray

Automatically mixing and delivering teat spray fresh every milking, the Auto Mix + Spray helps to maintain teat condition, prevent mastitis and enhance efficiency.

- Draws teat spray out of the drum, mixes it and delivers it to the spray nozzle
- Rates are locked into the memory for daily use
- Settings can be altered at single % ratios to counter negative influences on teat condition
- Warning light flashes when drums are running low

Both the IntelliBlend and Auto Mix + Spray work with any teat spray system or as standalone units. Being pressurised units, both can be retrofitted into any system: Wet-It, wand, ambic or on-platform (GEA iPUD).
THE INTELLIBLEND AND AUTO MIX + SPRAY CAN BE RETROFITTED TO THE GEA IPUD ON-PLATFORM TEAT SPRAY SYSTEM
Locally made in Rotorua, FIL tail paint has been trusted by dairy farmers for over 30 years. With proven formulations and bright, long-lasting colours, our range of oil-based and water-based paints offer a reliable and cost-effective heat detection tool. Containing fluorescent pigments, our markers are specifically designed for quick identification and to mark cows for up to 21 days, subject to conditions and correct application.

**Accurate heat detection**

Accurately determining when a cow is on heat ensures a more successful mating period, providing a higher insemination rate and ultimately, pregnancy rate.

With an effective painting plan in place, you can identify almost 90% of cows on heat. Applied properly, it will reliably provide a visual indication of when a cow has stood to be mounted, and consequently rubbed, to show that she’s on heat. The duration of oestrus activity is between 6 and 24 hours, while the period when the cow stands to be mounted lasts, on average, less than 8 hours.

**Animal markers**

Still the most widely used heat detection aid in NZ, our animal markers are a cost-effective and easy to use herd management tool.
Heat detection

**Tell Tail**
Our most popular type of tail paint, Tell Tail is an oil-based paint that provides vivid colour and adhesion in all weather conditions.

**Tell Tail applicator 1L**
Oil-based tail paint recommended for use in heat detection on dairy cows.

**Why choose Tell Tail applicator?**
- Easy application with specifically designed applicator bottle with brush
- Six fluorescent colours available to enable a systematic painting plan for each stage in the ‘detection to pregnancy’ cycle
- Lasts up to 21 days, subject to conditions and correct application

**Tell Tail aerosols 500mL**
Fluorescent aerosols used as a general marker for highlighting treatments or colostrum cows. Can also be used for heat detection.

**Why choose Tell Tail aerosols?**
- Quick and easy to use in convenient aerosol application
- Six fluorescent colours available, so you can use different colours for different purposes or during various stages in the mating process
- Lasts up to 21 days, subject to conditions and correct application

**Detail**
Our water-based range that is more environmentally friendly and gentle on cows and operator.

**Detail applicator 1L**
Water-based tail paint recommended for use in heat detection on dairy cows.

**Why choose Detail applicator?**
- Low irritant and gentler on cows, especially those severely rubbed
- Easier application and clean up
- Environmentally friendly
- Six fluorescent colours available to enable a systematic painting plan for each stage in the ‘detection to pregnancy’ cycle
- Lasts up to 21 days, subject to conditions and correct application

**Detail 10L pails**
Perfect for larger herds or to reduce plastic and product wastage, the Detail 10L pail is an economical option. The same water-based formula as the Detail applicators, but in handy bulk packaging. Pair with a Tail-Mate roller for easy application.

- Six fluorescent colours available
Tail painting provides a visual indication of when cows are coming onto or are on heat. When mounted by other cows the paint is rubbed, allowing you to easily track your herd’s reproductive activity.

**HOW TO APPLY TAIL PAINT**

Ensure area is clean and dry and remove loose hair. Apply tail paint forward along the spine from the tail head in a strip 15cm long by 5cm wide.

Healthy, non-pregnant cows free from infection will cycle every 18-24 days.

Research shows the ‘in heat’ period typically lasts 6-24 hours. The average is 14 hours, shortest 2 hours, and longest 28 hours.

**COLOUR PROCESS OF HEAT DETECTION**

**PRE-MATING HEATS**

1. Paint all cows with red tail paint approximately 3 weeks after calving. Observe the painted area for signs of the paint being rubbed - when it has been rubbed, the cow has started her cycle. In cases where it is not rubbed (non-cycling cows), seek advice from your animal health professional.

**DETECTING HEATS**

2. Paint all cows with green tail paint immediately before commencing your artificial insemination programme. This identifies cows coming into heat on a daily basis.

**INSEMINATION**

3. After inseminating the cows immediately paint them blue. This will tell you if she has held to the service - if the paint rubs off, the cow is not pregnant.

**PREGNANCY CONFIRMATION**

4. Paint all cows with yellow tail paint when pregnancy is confirmed.

Tail paint is rubbed off, and hair has been removed from the flank.
HEAT DETECTION TIMELINE OVER 12 WEEKS

<table>
<thead>
<tr>
<th>Breeding Program</th>
<th>PLANNED START OF MATING (PSM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-mating</td>
<td>RED - PRE-MATING HEATS</td>
</tr>
<tr>
<td>1st round of insemination</td>
<td>GREEN - WHEN HEAT DETECTED</td>
</tr>
<tr>
<td>2nd round of insemination</td>
<td>BLUE - WHEN COW INSEMINATED</td>
</tr>
<tr>
<td>Pregnancy Confirmation</td>
<td>PINK - FOR RETRUN INSEMINATION COWS Optional</td>
</tr>
<tr>
<td></td>
<td>ORANGE - LATE CALVING COWS For seasonal or synchronised mating programs only</td>
</tr>
<tr>
<td></td>
<td>YELLOW - ONCE CONFIRMED PREGNANT AFTER 12 WEEKS</td>
</tr>
</tbody>
</table>

- 30 days prior to PSM
- PREGNANT AFTER 12 WEEKS
- PRE-MATING HEATS
- WHEN HEAT DETECTED
- WHEN COW INSEMINATED
- FOR RETRUN INSEMINATION COWS
- LATE CALVING COWS
- ONCE CONFIRMED PREGNANT AFTER 12 WEEKS
General markers

Easily manage your herd by clearly marking individual cows.

From products specifically formulated to stay on the udder, to temporary foaming aerosols for drafting cows, we have a variety of animal markers for all your herd management needs.

Herd management

Made in NZ and based off the needs of Kiwi dairy farmers, our animal markers solve a variety of herd management requirements including drafting out, milk withholding periods and general marking.

The main use of animal markers is to ensure contaminated milk is kept out of the milk silo.
Tell Tail aerosols 500mL
A general-purpose aerosol paint for heat detection, animal identification, or tail paint top up.

- Quick and easy to apply with convenient aerosol application
- Six fluorescent colours available for animal management efficiency: use different colours to mark animals for different purposes
- Weather resistant
- Fluorescent colours ensure marking is clearly visible
- Lasts up to 21 days, subject to conditions and correct application

Udder Mark aerosols 500mL
Specially designed for use on udders, the low irritancy formulation ensures there’s no discomfort to the cow.

- Red to indicate STOP/’don’t milk’ into silo
- Green to indicate GO/’safe to milk’ into silo
- Vivid colours are clearly identifiable on the udder, even in poor light
- 360° any way actuator valve for application from any angle
- Formulated to mark the udder for up to 8 days

Foam Mark foaming aerosol 265mL
A fluorescent foaming aerosol used to temporarily mark cows for drafting out of the milking herd.

- Foam rises to form a coloured blob when sprayed on the rump of the cow
- Foam blob can easily be spotted when looking across the top of your herd
- Lasts up to 30 minutes
- Fluorescent pink colour stands out on all breeds of cows

WHEN A COW IS IDENTIFIED TO REQUIRE MEDICATION FOLLOW THE M.R.S.T. PROCESS

**MARK**
Mark cows that are sick and require treatment. Mark which quarter is affected. The + is used to clearly identify the quarters, with the top being front.

**RECORD**
Clearly record her number and treatment details on a board in the shed and add to your animal health records.

**SEPARATE**
Separate sick cows and cows for treatment from the milking herd.

**TREAT**
Treat the sick cows with the appropriate medication.

TRAFFIC LIGHT SYSTEM
Clearly identifying cows with health issues, or potential health issues, allows you and your staff to effectively manage your herd. Using animal markers to implement a simple traffic light system is just one solution.

**RED - STOP**
do not milk

**ORANGE - CAUTION**
needs checking before cupping

**GREEN - GO**
can rejoin the herd
Spray markers

Trace where you have been with highly visible spray marker dyes for adding to pesticides and herbicides.

**Been There**
Highly visible red spray marker dye for adding to sprays.

- Great way to trace where you have been when spot spraying
- Prevents spray duplication, reducing spray wastage
- Highly visible red colouring
- Simple dilution rate
- Compatible with herbicides and pesticides commonly used in NZ
- All sprayers must be thoroughly rinsed after use

Available in 1L, 5L and 20L.

**Done That**
Water based and highly visible blue spray marker dye for adding to sprays.

- An alternative colour to **Been There**
- Highly visible blue colouring
- Great way to trace where you have been when spot spraying
- Water-based dye that cleans up easily in soap and water, no lingering mess or stains
- No blockage of nozzles and gunking up in containers
- Compatible with most New Zealand registered herbicide and pesticide sprays
- All sprayers must be thoroughly rinsed after use

Available in 500mL bottle, 5L and 20L.
Animal health

Look after the health of your herd and your cows will produce better quality milk. FIL’s range of animal health products provide you with a toolbox for preventing infections, supplementing animals and preventing or treating bloat.

**Antibacterial Solutions**

- **Formalin**
  A general-purpose disinfectant used to treat and prevent footrot.
  - Kills bacteria and helps to harden hooves
  - Most effective when used as a foot bath so the cows’ hooves are completely covered with the solution for maximum penetration into the skin
  - Suitable for sheep, goats and cattle

  Available in 20L and 200L.

- **Footrot Aerosol**
  A strong antibacterial aerosol spray solution specially formulated for the treatment of footrot in sheep, goats and cattle.
  - Convenient aerosol for easy application
  - Eliminates spread of infection as there is no need to touch the infected area

  Available in 250mL aerosol.

- **Stockholm Tar**
  A strong antibacterial solution for treatment at de-horning, or to seal shearing cuts and cracked hooves in cattle, sheep and horses.

  Other uses
  - Provides natural seal on exposed plant branches after pruning
  - A good possum repellent - paint at the base of trees to keep them off

  Available in 500mL applicator and 5L.

**Animal nutrition**

- **Blackstrap Molasses**
  A liquid energy supplement containing nutrients and sugars to help maximise milk production.
  - Suitable for dairy cows
  - Add to feed to increase palatability
  - Natural source of instant soluble carbohydrates
  - Biogro certified for organic dairies

  Available in 5L and 25kg bucket.

- **Spray Iodine**
  An iodine antiseptic solution for sanitising calf navels.
  - A great way to prevent infection by applying to calf navels as soon as possible after birth

  Available in a handy 750mL spray bottle that can be easily refilled with Stock Iodine.

- **Stock Iodine 2.5%**
  A versatile iodine solution for adding to drinking water with an iodine deficiency.
  - Can be added to troughs or administered through an in-line dispensing system
  - Can be decanted into Spray Iodine bottle
  - Easy and reliable ready-to-use solution
  - Biogro certified for organic dairies

  Available in 1L, 5L and 20L.
Bloat is caused by persistent foam or froth in the rumen, preventing the belching of trapped gases. It is more common in spring when there is rapid plant growth combined with severe frosts - cows go on fresh pasture, hungry after the morning milking, and tend to gorge.

Beat bloat with our remedies for preventing and treating bloat in cattle.

Bloateze

A high strength alcohol ethoxylate bloat remedy, used for the prevention and treatment of frothy bloat in cattle. Bloateze is suitable for trough treatment.

- Strong long-acting product with a low dose rate
- Suitable for drenching, pasture spraying and trough treatment
- Easy to mix, even in cold water
- Very cost effective

Available in 5L, 20L, 100L, 200L

Bloateze DFA

Specifically formulated for application via in-line dispensing systems and safe to use through alkathene piping, Bloateze DFA is a reliable aid in the prevention and treatment of frothy bloat in cattle.

- Suitable for drenching, trough treatment and pasture spraying
- Approved for use in organic dairies - USDA NOP

Available in 5L, 20L, 100L, 200L

Preparation is key when mixing bloat remedies

Drenching

Adding the bloat remedy to good quality water protects the product’s efficacy and solubility. Best practice is to fully dissolve the product by thoroughly mixing prior to drenching.

Trough treatment

Stock should not have access to untreated water sources. Commence trough treatment 3 weeks before the onset of bloat to maximise effectiveness.

Be cautious with additives

The risk is that the mix may solidify, particularly when adding magnesium (due to it raising the temperature of the mix).
Agrecovery Recycle Programme

The safe and sustainable solution for the disposal of unwanted agrichemicals, and the recycling of empty containers, drums and IBCs.

We’ve teamed up with Agrecovery to ensure dairy farming is sustainable and the environment is taken care of by giving our customers a convenient way to recycle FIL containers, drums and IBCs. Better yet, we’ve covered the cost, making this service completely free to our customers.

Agrecovery shred the unwanted packaging for use in recycled plastic goods, such as underground cable piping. To find out more about this programme, call 0800 247 326 or visit www.agrecovery.co.nz

Small containers: FIL containers smaller than 60L

Small FIL containers can be dropped off to over 70 collection sites around New Zealand. To find your nearest collection site, visit www.agrecovery.co.nz or call 0800 247 326.

Large drums: FIL containers larger than 60L (including IBCs)

An Agrecovery truck will collect these on their next run through your area. Book your collection online at www.agrecovery.co.nz or call 0800 247 326.

All containers and drums must be empty, triple rinsed and free from residue and dirt before they can be dropped off or collected. See Agrecovery’s website for the full process.

Unwanted chemicals

Unwanted or expired FIL chemicals can also be collected by Agrecovery. The chemical will be collected in its existing drum/container and the drum will be sent to recycling.

There are regional collection dates scheduled throughout the year. Book your collection online at www.agrecovery.co.nz or call 0800 247 326.
Sheep & goat solutions

Specially formulated for small ruminant dairy farming.

**Fleece Mark**

A vibrant general-purpose fleece marker aerosol for sheep.

- Readily and completely scourable
- Highly visible
- Colourfast and durable
- Weather resistant and non-irritant
- Tried and proven formulation over 25 years

**Di-oxishield**

A chlorine dioxide-based teat spray for use as a post milking aid in the control of mastitis for goats.

- A unique two-component teat spray, specifically formulated to improve the performance of dairy goats
- Highly effective at killing mastitis-causing pathogens and minimising residues
- Once Part A and Part B are mixed, the green ‘Ready To Use’ teat spray is highly visible on goats’ teats
- The 1:1 mixing ratio of 1-part Di-oxishield Part A and 1-part Di-oxishield Part B makes hand mixing simple for all staff
- Chlorine Dioxide has been proven highly effective in the European and US markets as an alternative to iodine and chlorhexidine teat sanitisers
- Use with the FIL IntelliBlend automatic teat spray mixer and dispenser for accurate dosage and better efficiency

Available in 20L, 100L and 200L

For optimum results, mix Part A and Part B daily
We live our values.
Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.