



FIL

THE DAIRY FARMER

FARM INNOVATION / HYGIENE/ ANIMAL HEALTH / MARKERS / NUTRITION

MAKING YOUR JOB EASIER

WINTER 2008

30 YEARS ON AND INNOVATION STILL STRONG

The product name 30 Plus may sound like a code word, and in some ways it was a code 30 years ago for “innovation,” a strength that set FIL apart from its competitors right from the beginning.

30 Plus was one of FIL's very first products for cleaning farm dairy plants. By today's strict hygiene standards 30 Plus would probably struggle to keep up. However in its time it represented a cost saving, innovative break through for Kiwi dairy farmers as more adopted herringbone dairy sheds, and a few were even building early generation rotaries.

FIL founders Dave Hancox and Arthur Jordan had seen the potential in products like 30 Plus when they bought out a small Wanganui business “Farmers Industries Limited”.

“30 Plus could be used in cold water, a first for the time and a major cost saving over hot water detergents,” says Arthur.

“It could also be re-used in following milkings. It really formed the springboard to future innovations in dairy hygiene which is still the basis for FIL's success today, albeit with other higher profile products in the range now.”

He attributes John McPhail, the original owner of Farmers Industries Limited with getting the company established

with some core products that answered the needs of farmers, including the spray marker dye Been There and of course Tail Paint.

Working with John, Dave Hancox combined his skills to innovate and advance products, allowing for the unique conditions that Kiwi farmers operated under with high cow numbers and few staff. It was this innovation that delivered the FIL tail paint applicator bottle in the early 90s.

Not only was it the answer to dairy farmers' needs as they clambered over rails clutching paint brushes and tins of sticky paint.

“It also boosted our share from 50% of the tail paint market to 93%.”

He also attributes many of FIL's latest innovations to the tireless energy of Business Development Manager Trevor Gulliver. Trevor has spent hours of his own time experimenting with applications and components for innovations like the Backpack Tailpainter.

Today the tail paint market has opened up internationally as more farm systems adopt aspects of New Zealand's dairying systems. South America is still developing rapidly, but major tail paint markets now lie in Ireland, the USA and Australia. With FIL on the look out for a CEO to take over Dave and Arthur's management role, the company is poised for significant growth on the back of dairying's success, locally and globally.



MYSTERY CREEK LINKS TO FIL INNOVATION

MYSTERY CREEK FIELD DAYS 2008 IS A BIG YEAR IN FIL'S HISTORY, AND SETS THE SCENE FOR A FUTURE OF INNOVATION AND CONTINUING GROWTH.

This year FIL celebrates 30 years of being proudly New Zealand owned and operated. It also marks the unveiling of a new company brand to take FIL forward within New Zealand - and beyond to burgeoning export markets.

Mystery Creek will give many of FIL's valued farmer clients the chance to see the crisp new image of FIL. As the company has grown and become more diverse, the fresh new colours and image better capture what FIL has become – a solutions focussed company developing products that work for demanding dairying businesses.

A visit to the new stand is also a chance to ask the tough questions to the team of skilled Area Managers about

what makes FIL's products so effective on modern dairy farms. The team at FIL want their valuable customers to share in the benefits of the company's vision and innovation. All dairy farmers visiting the site at Mystery Creek will have the opportunity to enter a draw to win \$3000 worth of FIL product. (Terms and conditions apply.)

The full range of solution focussed, high quality products will be in the draw – this includes the newly released Iodoshield Active with its active honey base, a Booster Block Big Boy, a Backpack Tailpainter and other products.

The FIL stand is located as in past years in the main pavilion at PC61, right in the heart of the country's biggest tribute to agribusiness. The stand will highlight

the cornerstones of FIL's new corporate identity – animal health, dairy hygiene, markers and nutrition, with key products from each area showcased.

Iodoshield Active will feature prominently as FIL's newest release and answer to improving teat condition, helping lower somatic cell counts and maintain healthy teat condition, all year round.

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A WORD FROM FIL:



Visit our site PC61 in the
Mystery Creek Pavillion
11-14 June 2008



FIL

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SIMPLE ADVICE FOR STARTING GRADE FREE THIS SEASON

Mike Rose, Area Manager for Morrinsville, Te Aroha and Paeroa



Down time over winter for farm dairies is the time to identify any problems and aspects of plant hygiene, components and rubberware that may need attention before the demands of spring leave too much to do and too little time to do it.

Mike Rose, FIL's new Area Manager for Morrinsville, Te Aroha and Paeroa has some valuable tips for identifying potential problems before they cause grades in the early milk consignments of spring.

“Last season was a nightmare for many farmers through the Hauraki area with a one in a hundred year drought reducing production by at least 20% in most places. Getting things right at the start of this season will help set a great tone for a year where returns continue to look very positive,” he says.

KEY AREAS FOR A WINTER PLANT CHECK:

MILK SILO.

- 40% of grades occur here, yet are easily avoided with a pre-season check.
- Visual check for “rainbowing” and protein build up.
- Spray ball inspected for blockages and grit.
- Silo paddle may require scrubbing and donut seals on outlet require replacement.
- Three way tap may need checking.
- It could be time to decide on installing a recycling

- system for silo wash water.
- Check chiller is operating efficiently.

MILKING PLANT.

- Check sanitary trap, receiving can, pulsator line and clean if necessary. Milk residue can often build up as a result of plant flooding through the season.
- Replace all liners if they have exceeded 2500 cow milkings, while all other joiners, seals and elbows will require replacement every second season.

MILK ROOM.

- Check vacuum pump and replenish oil if required.
- Check milk filter, replacing rubber bung and washers if worn.
- Plate cooler will need opening to check joins, be sure to measure distance before splitting plates.
- Delivery line from cooler to bulk milk silo will require inspection.

WASH SYSTEM.

- Check there is sufficient hot water and temperature is at 85°C.
- Replace cracked or perished jetters and check rate of flow and turbulence through plant system.

If you have any doubts about hygiene issues, or wish to have new staff trained on hygiene management, your local FIL Area Manager has the knowledge and products to keep your dairy grade free this season.



IODOSHIELD ACTIVE + EXCELLENCE IN TEAT HEALTH

Iodoshield Active* signals a new era for teat health. This unique teat spray formulation contains a number of essential skin care components as well as 100% natural honey.

“The results from this product speak for themselves. After a couple of weeks continued use, teat condition improved dramatically. Teat health for the herd now is the best we have ever seen.”
Henry and Alison Van Hout, Waikato.

*NZ Patent Application No. 556391

NUTRITION



FIL NUTRI-MAG

MAGNESIUM – WHY DO WE NEED TO SUPPLEMENT?

- It plays a critical role in muscle control and nervous system function.
- Up to 50% of NZ dairy herds are estimated to be deficient in it at high stress periods of the year.
- The level in NZ soils is believed to be declining due to lower use of Mg fertilisers.

NUTRI-MAG DUSTING AND DRENCHING - A SEASONAL SOLUTION

FIL Nutri-Mag is a high quality highly refined product sourced from Australian mines with a maximum degree of fineness. Fine particle size ensures maximum surface area for more effective dispersion if spreading and optimal mixing in drench systems. In a market cluttered with poorly mined alternatives, Nutri-Mag is the class leader for quality and effectiveness.

PRODUCT FEATURES:

- Nutri-Mag delivers 95% pure Magnesia (MgO).
- Nutri-Mag is ultra fine mesh 320 natural Magnesia.
- Convenient 20kg bags for ease of handling.
- Ultra fine magnesium oxide powders are easily absorbed through rumen via drenching or feed intake.

FIL recommends talking to your vet or farm advisor for optimal dosage and control programmes most suitable to your farming system.



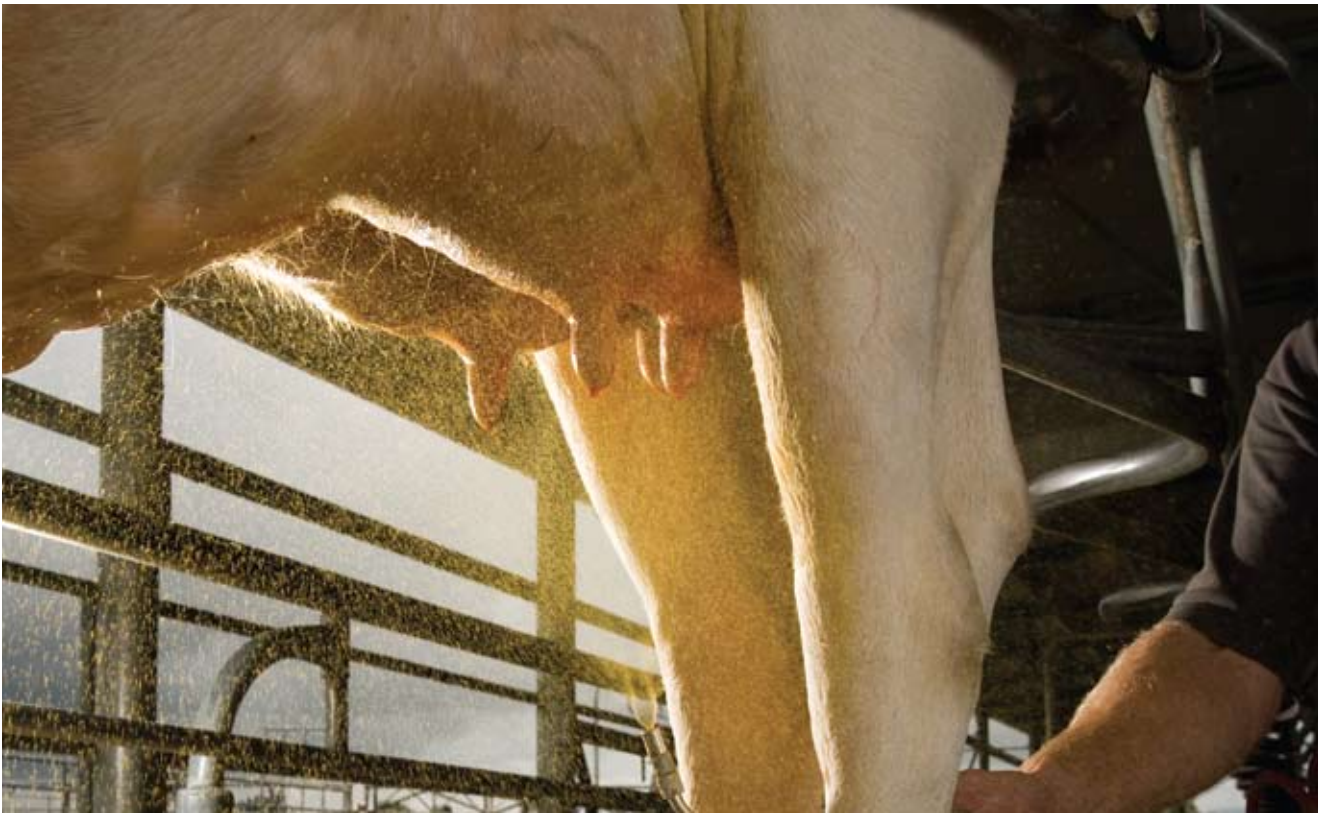
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FARMER TRIALS KEY TO IODOSHIELD ACTIVE’S SUCCESS

WHEN IT COMES TO TRIALLING NEW PRODUCTS FOR THE INDUSTRY, FIL LETS FARMERS WEAR THE LAB COATS AND EVALUATE HOW GOOD A PRODUCT REALLY IS IN THE FIELD.



Matamata farmer Henry van Hout is just one of eight dairy farmers FIL involved in trials for their newest product Iodoshield Active. Henry and the other farmers allowed trials on their herds to provide valuable data to perfect the Iodoshield Active formulation.

This included whole herd evaluations of teat condition, based on the National Mastitis Council’s protocol for teat scoring.

The result of input from farmers like him has been the release of the most proactive, conditioning teat spray available on the market today. The eastern Waikato farmer was very keen to play a role in developing a more effective, healing teatspray solution.

“We have had problems using iodine sprays in the past, the teats tended to crack and dry out in late winter early spring under the harsh conditions.”

Henry needed to add a lot of emollient to the mix over that time, pushing up the cost. Iodoshield Active was launched by FIL in March after two years of trials, and farmer interest has been unprecedented. The appeal lies in a treatment that delivers exceptional surface coverage and on going protection to the teat surface.

“What we particularly noticed was the ability of Iodoshield Active to last well on the teat surface between milkings, you could still see it there several hours after it went on. If iodine treatment can last like that, then you know it must be doing the job,” says Henry. With some of his herd exhibiting cracked dry teats before trialling Iodoshield Active, Henry initially thought he may need to add emollient to the mix.

FIL Business Development Manager Trevor Gulliver says the honey included with the formulation acts as an “envelope” holding the iodine and skin care formulations in place on the teat surface.

“They came right without it, and in a fairly quick period of time. Their teats felt softer and had a smoother surface to them after using the spray for a few weeks.”

Inclement weather conditions in early lactation can be a real challenge to teat health. So as to ascertain the performance of the teat spray in all conditions FIL deliberately selected trial farms across a number of areas.

“Farmers in the Murchison region experienced awful conditions over spring last year, but the trial farm reported they had never seen such good teat condition,” says Trevor.

In coastal Taranaki farmers often are not able to apply iodine as a teat spray because of the high level of iodine already in the maritime environment causing teats to crack and dry out. However trial farmers found applying Iodoshield Active actually improved teat condition.

“The honey not only acts as a healer, it locks in the moisture around the teat surface, the adherence is exceptional,” says Trevor.

Results from the trials indicated uniform success with Iodoshield Active regardless of location. A five month trial with a 700 cow herd comparing Iodoshield Active to ordinary iodine teat spray resulted in the Active mob scoring a perfect “5” for teat condition, against “3.5” for the mob treated with traditional spray.

“It has certainly worked for us here, I would not be rushing to use anything else,” says Henry.



ANIMAL HEALTH

FIL METABOLIC INJECTABLES



FIL is continually seeking new and improved solutions to daily dairy farming demands, whether it is an easier way to tail paint cows or a more effective teat spray formulation. With the value of dairy cows at an all time high, FIL has recognised the need for farmers to have access to high quality, easily dispensed metabolic solutions over spring time.

With a larger number of herds dried off early, the likelihood of milk fever exhibiting itself is even greater this spring if cows have had increased time to put on condition after the drought. Double Cal and MinBal 4 in 1 are the answer to save time, stress - and cows this spring.

DOUBLE CAL:

Double Cal is a Calcium Borogluconate solution for the treatment of milk fever at calving, and an aid in preventing its inception during the first weeks of lactation.

Usage situation:

When symptoms of milk fever present themselves, normally in early lactation and within days of calving. These include muscle tremors, weakness, glazed eyes, dry muzzle. Older cows in a high condition score state are also increasingly likely to exhibit signs in the final weeks of pregnancy.

Active Constituents:

Calcium Borogluconate 400g/L
Stock suitability: Cattle, sheep, goats
Pack size: 500ml

MINBAL 4 IN 1:

MinBal 4 in 1 is a four mineral blend of vital metabolic elements – Calcium, Magnesium, Phosphorous and Glucose. This broad range of minerals will treat conditions often including a combination of ketosis, hypomagnesaemia and milk fever.

Active Constituents:

Calcium (Calcium Gluconate) 27.5g/L
Magnesium (Magnesium Hypophosphite) 4.7g/L
Phosphorus (Hypophosphite) 12.1g/L
Glucose 182g/L

Stock suitability: Cattle, sheep, goats
Pack size: 500ml

Usage situation:

Muscle tremors, flickering eyelids, convulsions, nervous twitching, glazed eyes. Ketosis will also be indicated by acetone (milk and urine) smell to breath and may not appear until four weeks post calving.

KEY FEATURES OF FIL METABOLIC INJECTABLES

Convenience: Easily stored bladder packs ideal for stashing on farm bikes, in emergency calving packs and overall pockets.

Targeted Treatment: Specific metabolic for specific problem, keeps treatment costs minimal and response time quicker.

Sterile, safe and simple: An administering set included saves time and ensures the enclosed needle is clean and sterile for infection free treatment.

TRANSITION COW MANAGEMENT – DECONSTRUCTED



David McDonnell BVSc MACVS

What a complex plethora of suggestions, advice and remedies you get bombarded with from late Autumn until calving to help this ‘cow’ transit from the dry period into peak lactation.

It seems every ill, malady, mastitis case and failure to conceive relate back to this period of ‘poor’ transition management. To a certain extent this is true, and yes, it can be very complex as ‘Figure 1’ illustrates.

The meaning of ‘Transition Management’ has somewhat broadened over the last 10-15 years. It covers the period three weeks pre-calving to three weeks into lactation. In the early instance, for New Zealand, we focussed mainly on the macrominerals such as Magnesium and Calcium for metabolic disease and trace elements, such as Cobalt, Selenium and Copper for production responsive diseases, mastitis and retained placenta.

Over time, the focus has shifted to energy metabolism – dry matter intake, type of energy, and metabolisable energy requirements. Metabolic disease has been revisited again via the Dietary Cation-Anion Difference (DCAD) in the last seven years. The inclusion of controls for peripartuient diseases such as mastitis, lameness and herd fertility has been advocated at this time.

It is frustrating, as a veterinary clinician, to see that the key messages of this change period is often ‘lost’ to some of the more exciting current research sound bites that may or may not be relevant.

In fact 80% of what goes wrong in a cow (health wise) occurs around this time so whilst as farmers and veterinarians, we embrace the arrival of new technologies and knowledge we must keep our focus foremost on these areas:

- 1. Magnesium status
- 2. Metabolisable energy requirements
- 3. Trace element status
- 4. Mastitis.

Over simplification does not do justice to the considerable research efforts, and professional advice available in this area. Many farmers are quite conversant on topical issues surrounding this area and the contemporary measures to deal with the problem.

However, often on further investigation and questioning, veterinary experience uncovers a real gap

in the knowledge in the fundamentals of what really is important. Namely:

- 1. Giving transitional cows the required amount of elemental Magnesium daily
- 2. Giving transitional cows the required amount of Metabolisable Energy (ME) daily
- 3. Adequate trace element status for production – Cobalt, Selenium and Copper
- 4. Milking management.

1. MAGNESIUM:
The mathematics is simple – a transition cow is on a diet unsuitable to maintain Magnesium status for calving. The result is an increased chance of milk fever (low Calcium). See ‘Table 1’.

Supplementation is necessary to balance this deficit. The choice of Magnesium – whether it is Magnesium Oxide (Calcined Magnesite), Magnesium Chloride or Magnesium Sulphate (Epsom salts) is irrelevant; the real driver on the size of the deficit is the dry matter allowance.

It is important also, to calculate correctly that the cows are getting sufficient elemental Magnesium once the allowances for product Magnesium content, availability, wastage and variances of delivery technique are taken into account. Use a professional as an independent sounding board to check the calculation. Some notable areas to consider potential traps are when mob sizes change, power drenching systems deliver inadequate doses of poorly suspending Magnesium Oxide, or extended periods of rain result in cows drinking from alternate sources of water and not from in-line systems.

2. METABOLISABLE ENERGY:
The variety rations available over and above the staple of grass forage means that to calculate the energy supplied to a cow, we need to think in terms of Metabolisable Energy (ME) supplied in a kilogram of dry matter. It can vary by up to 45% between each type of feed! Current recommendations on requirements have increased over those previously.

For example, a Holstein-Friesian (500kg) cow requires 100 MegaJoules ME. That means at least 12.5Kg dry matter/cow/day needs to be offered of winter saved pasture to get intakes of 9Kg dry matter/cow/day.

Access to information on feed values, and tools to measure feed quantity are both readily available.

Table 1: Magnesium Supply & Demand.

FEED SUPPLY	
450kg Friesian 10 KgDm/day @ 0.22% Mg in pasture	22 grams/day elemental Magnesium
-less wastage (only 15% availability)	18.7
	3.3 grams/day
FEED DEMAND	
Maintenance	1.0
22 litre @ 0.12 g/l	2.64
	3.64 grams/day
Leaves a deficit of	0.34 grams/day

However, examples still abound of poor calculations on correct feed allowances for dairy cows.

The most severe situation is cows down pre-calving but more common is the insidious body weight loss occurring in the transition period prior to calving. Feed supply is often limited at this time, but it is still a great sin to restrict cows pre-calving.

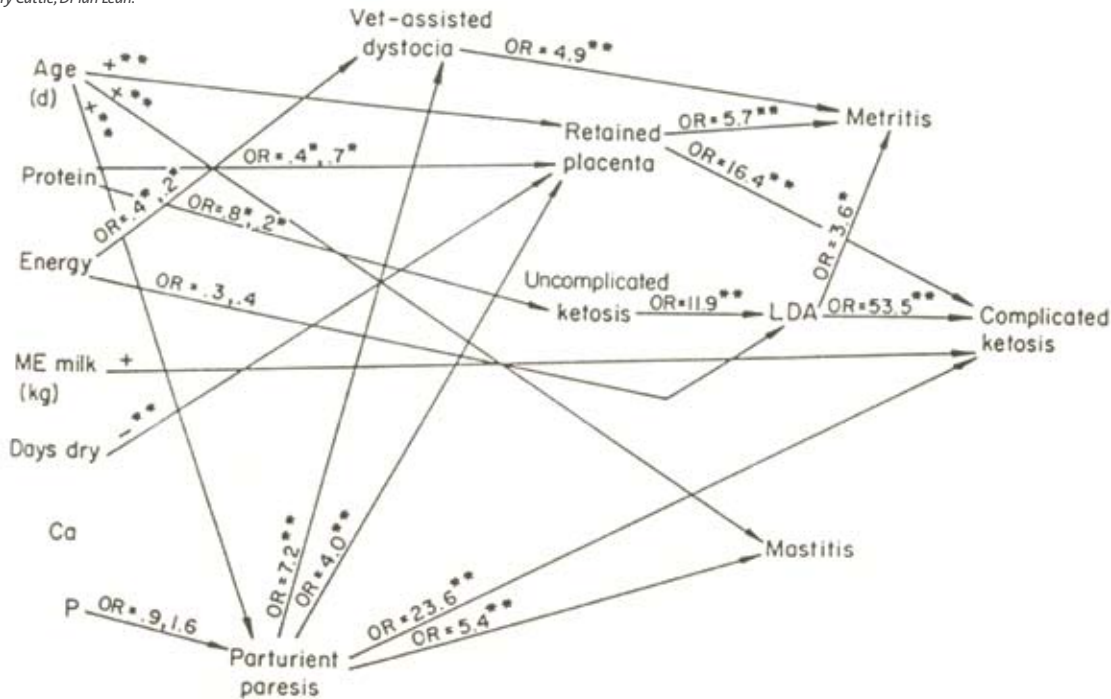
3. TRACE ELEMENTS:
This area still attracts a lot of discussion and questions. It is important to address this issue methodically and put it to rest with sentinel monitoring. Establish if there is a need to supplement through blood tests in late Winter-early Spring or liver biopsies in Autumn. Then check the sufficiency of the supplementation programme once established with similar testing. Cobalt and Selenium, as a general rule, can be supplemented to animals via fertilizer application in the soil with little interference to uptake. Copper, on the other hand, is likely to be interfered with by other minerals ingested and direct supplementation to the animal is preferred.

4. MASTITIS:
Mastitis at calving represents about half the cases encountered for the whole season. Particular management around the transition cow/heifer is important. Most cases of Spring mastitis can be attributed evenly to either early dry period infections which have re-emerged (and can be cured/prevented with dry cow therapy/sealant) or infections gained in the last two weeks (which can be prevented by the selection of appropriate dry cow therapy or a teat sealant that remains throughout the whole dry period). In the case of heifers new information about teat sealants is available.

Milking management of the newly calved cow is to remove the calf as soon as practical. It is critical that adequate colostrum has been ingested by the calf (usually >4 litres) by 3-8 hours old. It is important that the freshly calved cow is completely milked out by 12 hours post-calving and checked for mastitis in the colostrum group daily. Calving cows should calve on clean pasture (ideally have a calving group with no back fencing and 10% green clumps). Teat spraying is essential.

If you approach the ‘transit period’ with a clear focus on targeting the key areas discussed above, it will be a big ‘hit’ in terms of minimising those diseases that affect production. It does not necessarily have to be too complex so that you or your staff loose their way on what is important. In fact, many well-run farm systems that achieve good results are very simple - critical targets are met with thorough planning well before transition is upon you.

FIGURE 1: MASTITIS TRANSITION PERIOD
Source: Nutrition of Dairy Cattle, Dr Ian Lean.



EMISSION REDUCTIONS A SCIENCE AND FARMING CHALLENGE

REDUCING GREENHOUSE GAS EMISSIONS FROM RUMINANT LIVESTOCK AS PART OF NEW ZEALAND’S GREEN HOUSE GAS POLICY IS A BIG CHALLENGE TO NEW ZEALAND’S AGRI-SCIENCE COMMUNITY.

While New Zealand green house gas emissions only account for .2% of total world emissions, livestock make up half of our total greenhouse gas emissions.

Approximately \$70 million has been dedicated by MAF in the next five years to getting those emissions down. This is in addition to the \$25 million being spent by the industry led Pastoral Greenhouse Gas Research Consortium.

Harry Clark, of AgResearch, is leader of a team of scientists researching methods for reducing livestock methane emissions which make up close to a third of all New Zealand’s emissions. He makes no attempt to pretend the task ahead is simple given the complex nature of the rumen (the main site of digestion in cattle and sheep) that supports billions of microbes dedicated to producing exactly what he is tasked to reduce.

The task he says is to try and reduce or stop methane production without reducing rumen efficiency. Researchers are tackling the issue from three angles; manipulating the feed, altering the microbial processes in the rumen, or thirdly finding how the animal itself influences the bacterial population, and hence the quantity of methane produced.

FEED TYPE

Some feeds are high in tannins and these produce less methane per unit of feed than grasses. However these types of feeds can also be problematic to feed and harvest. In general they don’t grow as well as grasses meaning that there is no economic advantage to use them unless there is a methane reduction incentive of some sort. Longer term solutions may lie in such developments as high sugar ryegrasses that may deliver improved animal performance as well as lower emissions.

RUMEN MICROBES

The microbes responsible for turning hydrogen in the rumen into methane could be manipulated to reduce their output. However Dr. Clark says this is a highly complex system not easily tinkered with.

One option could come from the study of wallabies that have a high fibre diet, yet have acetogens rather than methanogens to “mop up” the gut’s hydrogen meaning that they do not produce methane. Acetogens in turn provide a useful energy source for the animal in the form of acetate.

ANIMAL MAKE-UP

Dr Clark and his team are also studying how individual animals exhibit different emission levels as a result of some characteristic in their genetic or physiological make up. Work to date shows the ability of lower emitting animals to consistently exhibit lower emissions is erratic.

“The fact is though individual animals seem to be exhibiting some level of control, we do not understand the mechanisms responsible. Possible candidates are the make up of their saliva, differences in rumen volume and differences in the rate at which food is digested” says Dr Clark.

“If we could reliably identify these high and low producing animals it may be possible to incorporate the low emissions trait into breeding programmes”

Work with LIC has already begun to identify gene markers that may contribute to identifying animals with high and low methane emissions. Much of New Zealand scientists’ initial research has related to developing the techniques to study rumen microbial populations and New Zealand now has one of the most advanced programmes of rumen microbiological research in the world.

Dr Clark says the rumen is one of the most challenging areas of animal biology to research. It requires highly anaerobic conditions, not easily replicated outside of the rumen, and the presence of a wide variety of different types of microbes each of which contributes to the efficient functioning of the ruminant digestive system.

“Another issue for grazing animals is even if we develop the technology to address emissions, how will we give it to the grazing animal?”

Vaccines are just one of the options being examined, along with rumen modifiers including ionophores and Diamond VXP™, distributed here in New Zealand by FIL.

KONKRETE KLEENER BLITZES MOULD AND ALGAE

FIL’s new Konkrete Kleener has been developed specifically for farm dairies and has a different mode of action and formulation to traditional concrete cleaning products.

Once applied to the surface, Konkrete Kleener will assist in the removal of all mould and algae build-ups, then assume an “in situ” cleaning mode providing a long lasting on-going solution to slippery, dangerous concrete surfaces.

“This unique formulation will last for several weeks unlike other concrete cleaners that use sodium hypochlorite in their formulations,” says FIL’s Business Development Manager Trevor Gulliver.

Konkrete Kleener is best applied using a watering can, knapsack or similar type applicator.

As this product is absorbed into the surface of the concrete, it will be 12 – 14 days before any noticeable

improvement in the cleanliness of the concrete is observed.

Recommended dilution rate is 1-5 in water. It is not necessary to wash Konkrete Kleener from the surface following application. When applying to concrete surface outdoors, simply apply and leave on.

Konkrete Kleener is suitable for use over mating season, thanks to an absence of chlorine compounds that can render sperm in AB straws infertile.

“Like all FIL products Konkrete Kleener was developed in close trial with dairy farmers. It fulfils FIL’s aim to deliver effective, specific solutions to every day on-farm problems,” says Trevor.

HYGIENE:



FIL QUANTUM RANGE

A solution to all dairy hygiene conditions lies in FIL’s Quantum range of farm detergents. All have been formulated to cope with the varied water temperature, hardness and pH levels experienced throughout the country.

QUANTUM BLUE

The latest change to the Quantum range has been the reformulation of Quantum Blue detergent, one of the company’s most successful acid detergents. New surfactants have lifted Quantum Blue’s cleaning and sheeting ability ensuring greater coating of the chemical on all stainless surfaces.

FEATURES:

- High compatibility with water types - suitable for hard water areas and high iron levels.
- Low foam – high sheeting ability - ideal for high turbulence machines.
- Low toxicity - due to absence of Benzalkonium Chloride.
- Good temperature performance - ideal across all ranges of temperature cleaning.
- Maximum plant surface coverage - ensuring complete bacterial removal.

QUANTUM GOLD

Quantum Gold is ideally suited to situations requiring higher levels of detergent foam than Quantum Blue, to wet and clean less accessible pipe bends, valves and components. It shares the same product benefits as Quantum Blue, delivering a high standard of cleanliness and hygiene.

FEATURES:

- Suitable for all temperature cleaning.
- Compatible with a wide range of water types.
- Contains Phesphoric Acid 400gml.

QUANTUM XL

For machines that require high turbulence and low foam properties, XL is the solution.

FEATURES:

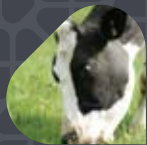
- Good temperature performance - suitable across all temperatures for cleaning.
- Compatible with wide range of water types – performs well in hard water and high iron areas.
- Contains Sodium Hydroxide – a safe effective alkaline compound.

QUANTUM POWDER

Dual purpose sanitiser and alkaline detergent to deal to fat and protein build up. Caustic components remove fat deposits and chlorine destroys protein accumulations. Chlorine compounds also assist in destroying bacteria outright.

FEATURES:

- Low foaming - suitable across all machine types and levels of water hardness.
- Sanitiser - combination of alkaline pH and chlorine chemical ensures complete bacteria kill every wash.
- Powdered formulation - ensures exact measure for optimum performance every wash.
- High strength - will remove the most tenacious milk deposits.



MAINLAND VIEWS



CENTRAL PLAINS DEALS TO DRY

ONE OF THE DRIEST SUMMERS ON RECORD HAS HEIGHTENED AWARENESS OF THE VALUE OF GOOD WATER SUPPLIES. IT ALSO CAME AS HEARINGS BEGAN ON ONE OF THE COUNTRY'S LARGEST IRRIGATION PROJECTS.

The Central Plains Water (CPW) scheme will not only be one of the country's biggest, it will also bring significant multiple land use opportunities to the upper central Canterbury Plains. The proposal involves the construction of an earth dam in the Canterbury foothills to provide storage for 280 million cubic meters of water.

The scheme will harvest water from the Waimakariri and Rakaia Rivers, to fill a reservoir covering 1200ha. An extensive canal system will traverse 450km and distribute water to 370 farms, covering a total of 60,000ha. The proposed dam will hold sufficient water to adequately irrigate farms in the target area for three months over summer. With predictions that global warming will make Canterbury summers drier and longer, interest in the scheme among land owners has been strong.

A director of the CPW scheme, John Donkers says there is interest in dairying as a land use option should the scheme proceed. However the project also opens the way for many high value crops where present expansion is limited by the lack of consistent water supply. This includes seed crops. Canterbury presently grows 50% of the world's carrot and radish seeds and vegetable seed crops now total \$45 million. The clover and grass seed industry is now valued at \$100 million.

"Farmers are not necessarily looking for more area to dairy on, just a more reliable source of water supply. At present farmers are beholden to electricity companies for irrigation power, at considerable expense."

It is possible under the scheme for water to be piped to the farm gate, with pressure generated from the Plains' natural fall. Land owners then have the opportunities to replace power cost with the fixed cost of irrigation infrastructure.

While this adds considerable cost to the upfront capital value of the project it will result in lower operating costs over the longer term. John Donker's own property presently pulls water from 100m underground at a cost of \$800/ha/year, of which approximately \$500/ha is electricity and network charges.

He notes that with the ever rising cost of dairy conversions, now approaching \$50,000/ha it is possible the switch to dairying may slow, while the relatively lower cost of growing crops and benefiting from reliable water source may see even greater variety in Canterbury land use, particularly if cropping continues to enjoy higher returns.

Should it go ahead CPW will be one of only two stored water projects used for irrigation in the country. The other is the Opuha Dam project further south.

"The country is not short of water, rather New Zealand has always had a "run of river" mentality and a storage scheme like this eliminates the "salami slicing" approach taken by individual land owners to their water resources in the past."

While the water supply from the rivers into the CPW storage dam will be lower in reliability than existing schemes, storing that water in one central large dam site will make the delivery more reliable than most existing schemes.

John Donkers says large scale irrigation projects always rely on a long term view, particularly given the slowing influence of the Resource Management Act.

"Many supporting CPW recognise this, but they are committed to the process for the long term opportunities that irrigation water provides for their kids and their grand kids, rather than for themselves."

MIGRANT STAFF EASE LABOUR WOES

The labour shortage in dairying has meant farm employers have responded by offering many more flexible options to staff, and have often looked much further afield when recruiting those staff.

Employing migrant labour is relatively new to the industry, and an option that the primary sector has usually left to the seasonal sectors like horticulture. However there is an increasing mutual need developing between overseas staff who want to work on Kiwi dairy farms, and dairy farmers keen to employ them.

There is a drive in places like Chilean agricultural schools for students to get experience in New Zealand's pastoral systems, and bring that experience back home to capitalise on the country's huge land resources.

Christchurch based training provider National Trade Academy has six students here training at the Academy's campus outside of Christchurch.

The students are placed on farms after nine weeks. Managing Director Craig Musson says for many the skill most migrants have to learn relates to understanding the repetitive systems that make large scale New Zealand dairy farms so successful.

They also had to learn that dairying in New Zealand was a seven day a week job. Lisa Fraser of HR and recruitment specialists ATR Fegan cautions farmers to do due diligence on any agency offering migrant staff for employment.

"This should include how familiar the business is with the unique cultural considerations required."

Lisa says although an assessment of a person's skills and experience is needed, it is equally as important to have a thorough understanding of that person's cultural background.

How well supported those staff are on arrival and the help they get to adjust in a foreign country will play a significant part in how well they perform on the job.

Large conversion farms around South Canterbury have provided a focal point for many of the migrant workers coming to New Zealand. Dean McConnell of Dairy Farmers New Zealand says rural schools are adjusting to more students who have English as a second language, requiring teacher aides and extra assistance.

He cautions employers need to be sure the position they seek to fill with migrant staff is one that the Immigration Department classes as being in short supply.

"I have seen guys apply for a visa, be told it is not a position short of staff, and then return with a different job description, and be granted a work visa for basically the same job."



For the late autumn and early winter period (May- July), mild conditions are very likely in many areas according to NIWA’s National Climate Centre.

Despite the overall temperature expectation, cold outbreaks typical of winter will nevertheless occur from time to time. There are signs that drier than normal conditions will likely continue in Westland, Fiordland, Alpine areas of the South Island and Southland.

For the three months as a whole, above average temperatures are the most likely outcome in many regions, with only a 10% chance of below average temperatures occurring. Soil temperatures are very likely to be above average as well. Above average temperatures are expected to continue in the seas around New Zealand.

Normal or below normal rainfall, and below normal river flows and soil moisture are likely in the west and south of the South Island. This outlook reflects the effects of a moderate but waning La Niña, with generally more north easterly winds over the country, bringing milder and wetter than normal conditions in the north and east of the North Island.

OVERALL PICTURE

TEMPERATURE:
Air temperatures are very likely to be above average in many areas. Despite the overall temperature expectation, cold outbreaks typical of winter will nevertheless occur from time to time. Sea surface

temperatures around New Zealand are expected to remain above normal.

RAINFALL, SOIL MOISTURE, AND STREAM FLOWS:
Rainfall is expected to be normal or above normal in the north and east of the North Island and normal or below normal in the west and south of the South Island. Normal rainfall is likely in other places. Above normal soil moisture and river flows are expected in the north of the North Island, with normal or below normal soil moisture and river flows likely elsewhere.

REGIONAL PREDICTIONS FOR THE NEXT THREE MONTHS:

NORTHLAND, AUCKLAND, WAIKATO, BAY OF PLENTY:
Above average temperatures are very likely with above normal rainfall likely. Soil moisture and stream flows are likely to above normal for the season as a whole.

CENTRAL NORTH ISLAND, TARANAKI, WANGANUI, MANAWATU AND WELLINGTON:
Above average temperatures are very likely. Normal rainfall is likely, with normal or below normal soil moisture and stream flows.

GISBORNE, HAWKES BAY, WAIRARAPA:
Above average seasonal temperatures are likely. Above normal rainfall is likely, with soil moisture and stream flows likely to be normal.

NELSON, MARLBOROUGH, BULLER:
Above average temperatures are very likely. Normal rainfall, soil moisture and river flows are likely.

WEST COAST, ALPS AND FOOTHILLS, INLAND OTAGO, SOUTHLAND:
Above average temperatures are very likely. Normal or below normal rainfall, with below normal soil moisture and stream flows likely.

COASTAL CANTERBURY, EAST OTAGO:
Above average temperatures are likely. Near normal rainfall, with normal or below normal soil moisture and stream flows likely.

BACKGROUND

CLIMATE AND OCEANS:
In the New Zealand region, mean sea level pressures are expected to be higher than normal to the south of the South Island and lower than normal to the northwest of the North Island, with more winds from the northeast than normal over the country.

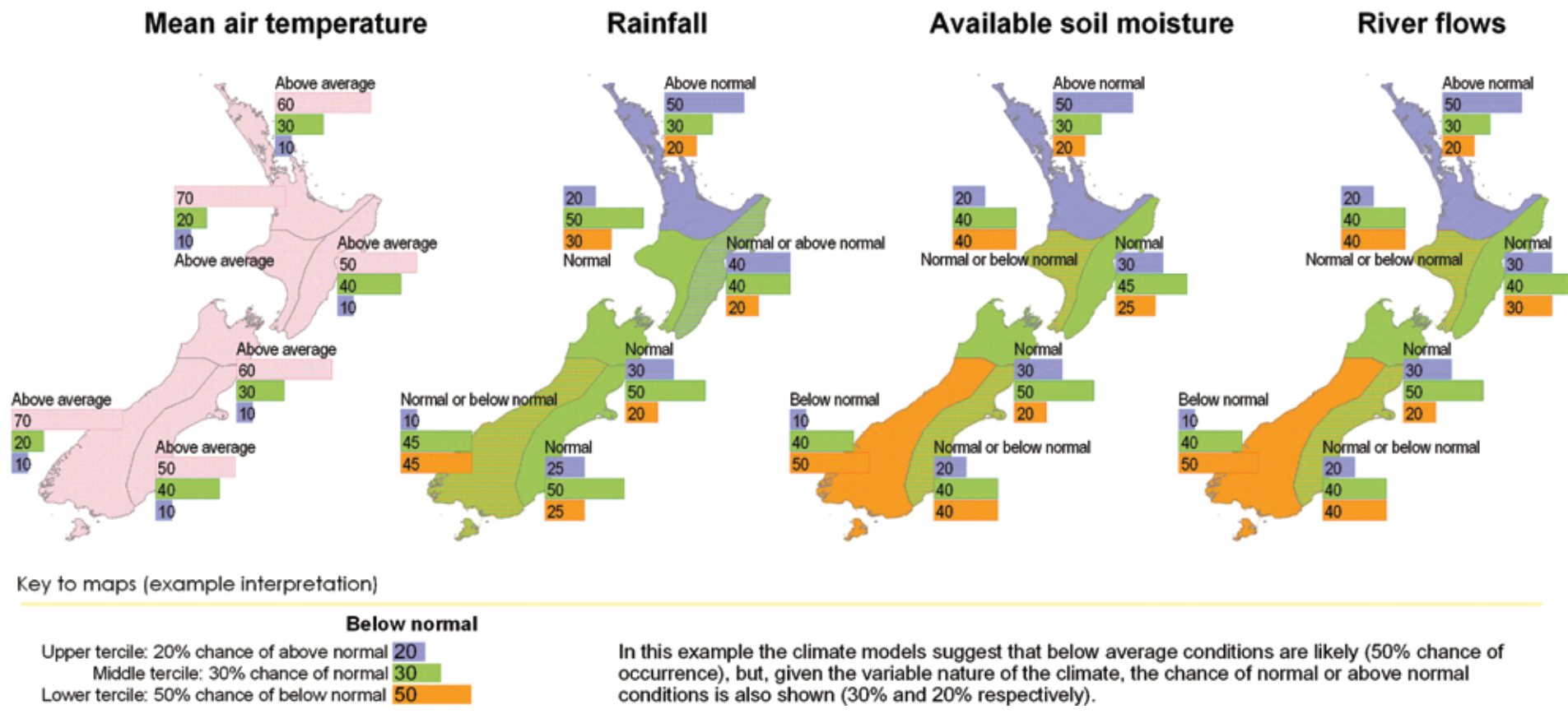
La Niña is now weakening in the tropical Pacific, and is expected to ease to neutral conditions by July. At the ocean surface, below normal temperature anomalies have eased dramatically across much of the Equatorial Pacific. The Southern Oscillation Index is +1.0 and falling. Most climate forecasting models indicate conditions in the neutral range during May-July, or easing to neutral by the beginning of spring.

For further information on climate, please contact:
Dr Jim Salinger, NIWA National Climate Centre, Auckland
Tel (09) 375 2053, mobile (027) 521 9468
Geoff Baird (04) 386 0543, mobile (027) 229 6314

For further information on river flows, please contact:
Dr Alistair McKerchar, NIWA National Climate Centre, Christchurch
Tel (03) 343 7870

OUTLOOK FOR MAY TO JULY 2008:

More info can be found on NIWA’s Website at:
www.niwascience.co.nz/ncc
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PIRONGIA PART OF THE PASTORAL ENGINE

Mark Brown and his wife Penny farm with Mark’s brother Paul on the 165ha family property that borders the Pirongia village.

Nestled in the shadow of Mount Pirongia in the Western Waikato, the Pirongia area is home to the Brown family, and the site of a village once destined to be the Waikato’s main centre.

Although long since usurped by Hamilton, the Pirongia area is a picturesque and productive part of the pastoral dynamo that keeps centres like Hamilton ticking over.

After visiting over 50 countries in two years while on his OE, Mark says he knew coming back to Pirongia was a good move. Its benign climate makes it an excellent dairying base and its proximity to other parts of the region make it an attractive place to live and work.

The two brothers have a good working relationship, and some years ago recognised the need to intensify their dairying operation.

“Land values have simply got so high here, possibly more than anywhere, and we needed to be getting a greater return off the land we had. We opted to go for a new dairy that provided smarter technology for feeding the herd,” says Mark.

They built a state of the art 46 bail rotary cow shed three years ago that features technology even now only just being acknowledged in New Zealand, but is relatively common place overseas.

The Waikato Milking Systems dairy features a built in weight monitor linked to a meal feeding system that dispenses meal according to the cow’s weight and production.

A software upgrade this season means meal will be dispensed based on the cow’s condition score and weight, entered at the start of the season.

“The programme will allow her to gain or lose a certain amount of weight through the season and adjust the feed amount accordingly to maintain her optimum condition.”

All cows have pedometers strapped to their legs for monitoring walking activity which increases when they are on heat. Those that are on heat can then be drafted out automatically.

Coupled to sensors for detecting mastitis and monitors for measuring milk flow, the dairy has not only boosted production profitably, it has also made herd management easier and more interesting.

“You have a lot more data to base your decisions on which is immediate, and you can act on it straight away. For example we have just dried off our 50 lower producers and the information comes as a report, all based on the last 10 day averages and we don’t need to herd test to get the data now.”

The ability of the system to generate a cow efficiency report opens up many possibilities for future breeding options within the herd.

From the report they can determine how much milk individual cows are generating for the amount of meal they are being fed. From here decisions on AB can be made, and Paul has been paying close attention to protein production and udder confirmation, given the

pressure the extra feed inputs put on the cow’s ability to withstand the extra volume produced.

Mark says the custom feeding system has been important for lifting the farms production to around 465kgMS/cow, but what is growing in the paddock is still the first focus, particularly given the hike in grain prices over the last year.

A keen rugby player, Mark says he has given the game up, the rigours of dairying being enough without the punishment of rugby.

Like many in the area however he appreciates the support FIL’s rep Dave Hewson has provided the club over the years in sponsorship and prizes, while the on farm service has been as consistent as the products’ quality.

Meantime Pirongia continues to become a vibrant village in the rural heartland, putting on a legendary Boxing Day race event that attracts thousands every year.

Larger lifestyle sections abound and Mark says there is a nice level of diversity between long time locals and recent migrants from the city and beyond.



ABOVE: BROTHERS PAUL & MARK BROWN

FIL HAVE GOT THE COUNTRY COVERED.



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3. Mike Rose
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4. Dave Hewson
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5. Allan Clarke
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6. Phil Gulliver
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7. Clint Humphrey
Southern
North Island
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8. Ian Grooby
Northern
South Island
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9. Glen Palmer
Southland
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11. Gavin Dunn
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Tokoroa / Putaruru
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12. Keith Stockman
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14. Greg Duncan
Cambridge/
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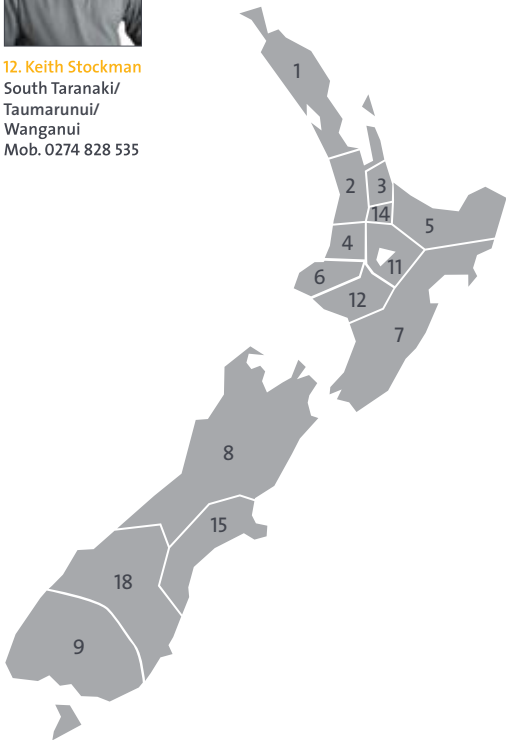
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