

# CONNECT

Updating shareholders about their co-operative

## Well positioned to help you in the exciting year ahead



### Staying in touch

**As our financial year comes to an end, it's clear that your co-operative will face 2020 in a strong position. While fertiliser sales were back a little – primarily due to weather conditions – the fundamentals of the business were sound.**

This steadfast approach will allow the business to support its shareholders into the long term just as a successful co-operative should.

More details will be available once the accounts are finalised and I encourage you to check your preferences in MyRavensdown if you'd like to receive a copy of our integrated (annual) report when that comes out in August.

For me, the past few months have been about meeting the global providers we work with to deliver surety of supply of quality agri nutrients. There are some fascinating innovations being developed by these massive businesses and we are ensuring that the needs of NZ farmers are part of those new developments.

### Advocacy to the fore

**There's been some media noise about farmers, their nutrient use and the environmental impacts involved.**

As I've written before, here at Ravensdown we are excited about what the agri-sector can achieve and proud of how we help farmers reduce their environmental impacts and optimise value from the land.

The message to ministers, regional councils, policy makers and groups like the Primary Sector Council is the same.

Producing food for humans or animals creates a need for nutrients and tackling the ecological harm affecting some of our waterways creates a need for better nutrient management. Both these needs are important to New Zealand in so many ways. And there are so many ways that Ravensdown helps meet those two needs.

Many farmers are already making improvements to their nutrient management. This has been leading to reduced impacts and costs as well as the potential to increase production.

### Evidence of progress

**Good advice and smarter farming practice is starting to deliver some progress. The National Science Challenge "Our Land and Water" has found that phosphorus has decreased at 40% of measured sites in streams and rivers since 1994 and by 65% of sites since 2004.**

The second national LAWA trend report on river water quality between 2008 and 2017 showed that, at 60% of the sites measured, improvements in the amount of ammonium (nitrogen) were being seen.

Ravensdown has a range of services and products to help farmers use fertiliser responsibly. These include environmental audits and precision testing, mapping and spreading, so farmers know exactly what to use where. Products like N-Protect reduce nitrous oxide emissions. We have the country's biggest network of farm environmental consultants who help farmers come up with ideas to reduce impacts.

These are not pie in the sky innovations on the horizon or complicated options exclusively for big corporate farmers. These solutions are available today. The questions for anyone wanting to improve the reputation of farming is "How many of these solutions am I using here and now?"

As ever, your team is determined to help and you can also get in touch with me any time via email [CEO@ravensdown.co.nz](mailto:CEO@ravensdown.co.nz).

Thanks for your support!

Greg Campbell, Chief Executive



## Inside

If you have any suggestions of items to include in Connect, then please email [Newsletter@ravensdown.co.nz](mailto:Newsletter@ravensdown.co.nz)

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# ClearTech® effluent treatment system gains recognition as research continues

## Innovation award for water system Ravensdown's ClearTech® dairy effluent treatment system has taken first prize in the South Island Agricultural Field Days' Agri Innovation Awards.

The system uses a coagulant to bind effluent particles together in order to settle them out from the water. This clarifying process reduces freshwater use, helps existing effluent storage go further and reduces the environmental and safety risk linked with farm dairy effluent (FDE).

The pilot project, which was installed at the Lincoln University Demonstration Farm in May 2018 was the result of detailed work and represented a \$1.5 million investment by Ravensdown.

"Farm Dairy Effluent is 99% water," explains Product Manager Carl Ahlfeld. "When the particles can be separated, this means cleaner water to wash down the dairy yard or irrigate on to paddocks and less volume of effluent that has to be stored and used safely."

The judges commented on the calibre of entrants across the Agri Innovation Awards and were impressed with the collaborative approach to the development of ClearTech. "The application of known technology, used elsewhere, to solve a widely recognised farm-scale problem was truly innovative. It was a bonus that ClearTech would also enhance our clean, green image."

Carl believes the development is important because "the dairy sector's nutrient and bacterial impacts on waterways are under scrutiny, farmers want to demonstrate they are doing the right thing and the government and regional councils are committed to good farming practice."

"The sector is crying out for workable solutions that help reduce risk, improve reputation and be cost effective. However, with the safety of farm staff, communities and livestock at stake, any practical solutions need to be thoroughly tested," concluded Carl.

Recent Lincoln University studies showed the *E.coli* concentrations measured in



"The sector is crying out for workable solutions that help reduce risk" says Ravensdown Product Manager Carl Ahlfeld.  
Photo: David Alexander

the ClearTech clarified water were also significantly reduced (by around 99.9%). The average concentration of *E.coli* in the clarified water was 83% lower than the critical value that is often used to designate water as being suitable for recreational purposes in New Zealand.



Before and after: the fire seems to have started in the conveyor intake system.



Before and after: the roof and cladding in store 15 was completely replaced before taking delivery of a potassium chloride shipment.



## Christchurch repairs on track Thanks to an amazing team effort, the Christchurch stores damaged in an October fire are back in operation.

That's the assessment of Works Manager Peter Hay. "We've tried to keep any disruption to a minimum and would like to thank all visitors to the site in that time for their flexibility. There's certainly been a massive amount of work being done to ensure the essential nutrients have remained available."

Customers were able to pick up products less than 48 hours after a fire damaged four out of its 13 stores on its site.

"The speed of the recovery and rebuild is not as important as the safety of any of the staff and contractors that have worked so hard on getting Christchurch back up and running," added Peter.

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# Working hard to ensure quality products remain available

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## Securing a source of potash, sulphur and magnesium

**Our procurement team recently visited the Werra mine in Germany which contains a manufacturing complex for sulphate of potash (SOP) and kieserite.**

This mine is of historical importance as the US army discovered bunkers containing a trillion dollars of gold, silver, artworks and cash reserves near the end of WWII. The complex is 840m at its deepest point and contains 600km of tunnels. There is an

underground theatre used for concerts and company events.

The complex supplies New Zealand soils that are sensitive to chloride or salt with a reliable soluble source of potassium. The sulphur in the SOP helps with plant protein synthesis and enzyme function. The potassium is involved in helping photosynthesis among other things. SOP contains a low salt index which helps the plant avoid taking up excess water and is mainly used for high-value horticultural crop production. Kieserite contains potassium, sulphur and magnesium



Chad Gillespie explores the Werra mine

and is typically used in cropping, horticulture, market gardening, and for maize production.

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## Seadown on the up

**The Seadown Service Centre near Timaru has evolved since getting started in the 1960s. It is the third busiest despatch site for Ravensdown, after the Napier and Christchurch works sites.**

Seadown is now benefitting from a major three-year development programme which aims to improve efficiency, quality and customer service through reduced waiting times. Long-term projects to be phased in include the addition of a second despatch lane allowing for better customer throughput, and implementation of a precision blending plant to enable the Seadown Service Centre to provide fit for purpose mixes and coated products.



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## New Lime Quarry Manager

**Roger Buckingham has mined gold and ironsand. Now it's lime's turn at the Geraldine quarry. "My passion for operating machines started with the New Zealand Defence Force," said Roger.**

"It really was a great way to see the countryside and really appreciate how lucky we are to live in such an amazing country.

I first got into mining in 2007 taking up a position as a truck operator with Oceanagold. This is where my passion for mining kicked off, in the gold-bearing hills of Macraes which is nestled away in the Otago back country. I spent 12 good years working for Oceanagold, raising my two sons with my wife Nicola who grew up on a farm in Macraes.

I was also lucky enough to spend a year working for NZ Steel at Waikato North Head mine site. This was a real challenge as I was working away from the family and working with iron sand in a whole new process of mining for me. While working with NZ Steel I gained my A Grade Quarry Manager's certificate which set me on the path to working for Ravensdown.

I was very excited to be offered the position of Quarry Manager at Geraldine Lime. Geraldine Lime is set in the picturesque hills of the Kakahu district in South Canterbury. Here we carve out of the hillside quality products, such as aglime, track rock and rut rock for our local farmers so they can also produce a quality product. My goal with Ravensdown is to make sure we can



New Lime Quarry Manager Roger Buckingham

continue to provide these services to our local farmers and shareholders for a long time to come."

# Customers can now place orders from their farm map

## HawkEye® goes mobile

**HawkEye® is map-based software from Ravensdown that helps farmers make smarter decisions for better farm and environmental outcomes.**

More than 1,000 shareholders are using it to gain more control of their nutrient planning and other key decisions.

Every shareholder is able to try HawkEye now and place online orders direct from a map of their farm. Online ordering helps ensure correct nutrient data is applied from the start, meaning accurate, effort-free nutrient reporting later in the season.

The latest changes to HawkEye allow customers to:

- Visually manage orders so that product goes on the right place, they order the right amount, and duplicates can be avoided
- Provide an electronic or PDF map to spreaders (depending on their in-truck technology), ensuring jobs aren't "lost in translation"
- Place ordering over a mobile phone once that functionality becomes available

"This is important for shareholders because it's a bit like online banking - it puts you in control," says Tim Roulston, National Services Manager. "We've had great feedback on how easy and visual the tool is to use. You don't have to close the map and then go to a different screen. You see what's needed where and you can do something about it right there on the map."

"The next step is ordering from mobile phones and we're confident that shareholders will see the benefit of these new ordering options," added Tim. "We all know how important compliance is becoming and a verbal order to a spreader is prone to duplication or the wrong rate being applied. When you order online, you've got the proof to show others if needed which is only going to help with traceability."

"We have over 12,000 farm maps loaded on to the HawkEye system so, if you're a farmer considering giving it a go, chances are that yours is on there. This isn't just a tool for the tech savvy. It's something that will become the new business as usual, just as it has in other sectors."



Rangii Holland is part of the HawkEye support team

Ordering currently supports ordering bulk fertiliser for spreader (by contractors or the farmer). Customers that purchase bulk bagged fertiliser, use Nitrogen splits, or other products; should continue to use their current ordering preference including My Ravensdown or the Customer Centre.

# Speaking up for farmers and staying ahead of regulation



Rebecca Hyde will provide national technical leadership for Ravensdown

## Nuffield Scholar joins environmental team

Ravensdown has appointed Nuffield Scholar Rebecca Hyde to its environmental team in the newly established role of Technical Discipline Lead, Farm Environmental Consulting.

Rebecca will provide national technical leadership for Ravensdown's farm environmental consulting service, with an initial focus on the OverseerFM software programme.

The changes to Overseer will mean the tool will be easier to use and its reports will be easier to understand. The old PC-based version of Overseer will be switched off in June 2019 and Ravensdown staff have already been helping customers migrate their data into the new improved version.

"Helping farmers get ahead of regulation is incredibly important. We need more resource across the sector in assisting farmers executing their environmental assessments and creating plans for impact reduction. I'll be helping as Ravensdown continues to build its farmer-facing capability."

## Engaging with regional councils Ravensdown actively engages in regional council Resource Management Act planning processes.

This can take the form of participating in stakeholder groups early on and also in the more formal submissions and hearings process once the draft plan is publicly notified.

Once the hearing commissioners have issued a decision on the plan review or plan change, Ravensdown specialists review it and make a call on whether to lodge an appeal to the Environment Court.

According to Anna Wilkes Environmental Policy Specialist, the co-operative represents shareholders in regional planning processes because the processes are complex and drawn out and have increasingly material outcomes for farmers' ability to farm.

"Until recently, farming activities have largely been permitted, with the exception of dairy effluent disposal and the taking of water which typically require resource consent.

More frequently we are seeing requirements for land use consents to farm, often accompanied by a Farm Environment Plan, which may also require some form of independent auditing or certification by the Council," said Anna.

"We see value in participating in these processes to ensure that regulation is equitable and to be in a strong position to advise and guide shareholders on changes in regulation and the requirements for compliance."

## Did you know?



There are currently **27** staff in the Ravensdown Environmental team (the largest farm environmental consultancy in New Zealand).

**27**



Over the past year, **2,110** square kilometres have been assessed by Ravensdown consultants for environmental mitigations.

**2110**



Since it started in 2013, the service has dedicated nearly **40,000** hours in helping farmers with their compliance and mitigations.

**40000**

# Sustainability central to the co-operative's efforts

## **New Sustainability Manager** Ravensdown has appointed Allanah Kidd to the newly created position of Sustainability Manager as the co-operative continues to take action on how it manages its environmental, economic and social impacts.

With a background in environmental management, Allanah has 14 years' experience supporting national and international organisations with similar challenges.

"Ravensdown is already doing a lot to help farmers reduce their environmental impact and it's important that it does what it can to lower its own," said Allanah. "It's already made a start and has an ambitious vision and there's an opportunity to bring initiatives together and demonstrate progress in a transparent way."

"The co-operative is a large complex business. It generates its own electricity as

part of the superphosphate manufacturing process and is experimenting with electric vehicles like forklifts and field-based EVs. But like many larger businesses grappling with reporting on and reducing its carbon footprint, there is plenty to do."

Allanah was previously a United Nations climate change officer based in Fiji before relocating to the Waikato to join Beca as a senior environmental scientist.

Ravensdown chief executive Greg Campbell said Allanah was a key addition and he was delighted to attract such high-calibre applicants.

"Signing up to the Climate Leaders Coalition and reporting on progress throughout the business sends a signal that sustainability matters to us. But signals need to be turned into action plans and then delivery needs to take place on a broad range of fronts."



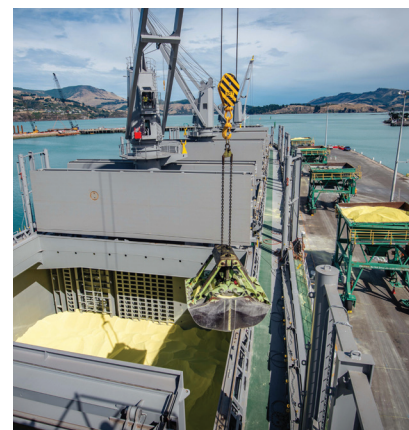
## **More efficient ships take bite out of emissions**

### **The brand new Remy Enterprise is on long-term charter to Ravensdown's shipping joint venture (RSS).**

Remy Enterprise is seen here on its maiden voyage from Vancouver, delivering sulphur to Napier, Lyttelton and Dunedin and returning back to China with a cargo of export logs.

Remy Enterprise is one of a series of newer, larger, more efficient vessels chartered by RSS. Fuel efficiency is 20% better and the vessels are 20% larger which is better for long-term sustainability.

Fuel typically accounts for 25-40% of total shipping costs, so reducing fuel use by 20% equates to a saving of around 5-8% on costs when utilising these vessels. Further benefits are possible by increasing



The Remy Enterprise at Lyttelton port delivering sulphur.

parcel sizes, which both lowers the cost per tonne and gives the opportunity to bring in less vessels per year. These cost advantages are passed on to shareholders. Shipping accounts for 75% of all Ravensdown greenhouse gas emissions. Using a combination of slow-steaming and newer, more fuel efficient vessels can play a significant role in reducing those emissions.

# In brief: Items from around the traps



### Happy hapu in Taranaki

Ngāti Tawhirikura chairperson Ngamata Skipper thanked Ravensdown for the pā on the old New Plymouth store's site being handed back to her hapu.



### All smiles for young Young Farmers

Winners in the Junior Young Farmer of the Year point out Ravensdown's backing and prizes for that competition.



### Leadership course piloted

As a sponsor of the Agri Women's Development Trust, Ravensdown was happy to support a pilot course on Professional Women's Leadership. Julie Gaukrodger, Technical Manager Agronomy and Agri Manager Beccs Lough attended.



### Scholarship to fan of precision ag

Third-year Massey student, Tom Wilson is over the moon about receiving the 5,000 per year Ravensdown Hugh Williams Memorial Scholarship.



### Fert facts connect to food

Anyone interested in the important topic of fertiliser and where their food comes from would benefit from visiting our new Fertiliser Facts page on the Ravensdown website.



### The Oscars for Groundspreaders

The NZ Groundspread and Fertilisers Association is launching a new awards programme to support the areas of health and safety and innovation. Ravensdown is happy to sponsor because application is such a big part of smarter farming.



### Never tired of cleaning rivers

Chief Financial Controller Anna Stewart pulls a tyre out of the sand at the Waimakariri estuary as part of a volunteer clean up. Each employee is given a day to "lend a hand" for a variety of good causes.



### Giving stigma the boot

Napier-based laboratory ARL joined the whole co-operative in raising thousands of dollars for mental health through Gumboot Friday.



### Awards season reason

Shareholder Ryan Goble (right) receives his Pasture Management Award from Mike Davey at the Taranaki regional NZ Dairy Industry Awards.

# Developing the sector requires long-term commitment

## Development programme's fifth anniversary

**Ravensdown is celebrating five years of developing new agricultural talent through its development programme.**

The successful initiative has supported 39 university graduates with degrees in agricultural-related, environmental and related disciplines into fulltime careers in the sector.

"What is especially interesting is the variety of backgrounds those who have completed the programme come from," says Ravensdown Training Manager and Mentor Gordon McCormick.

"It's not just those from rural backgrounds - there's an increasing number of urban people looking to take part, who see big opportunities in what's a very dynamic agricultural industry."

This year the programme is supporting seven graduates into work. One is Timaru's Laura Cockroft.

"I'm not from a farming background but from a young age I had an interest in agriculture and spent my holidays working on farms in South Canterbury," Laura says. "Now that I've finished my Bachelor of Agriculture from Lincoln University, I'm super-excited to join the programme and hopefully secure an agri manager position with Ravensdown."

Claire Verhaegh, who began her agricultural career journey on her parents'

dairy farm in Riverton, is also excited to be in this year's intake.

"I applied for the programme because I truly believe that every person at Ravensdown had a similar belief towards agriculture as me. If New Zealand is to continue farming successfully, we have to embrace smarter farming - something that's more important now than ever."

At the start of each year, Ravensdown takes on a group of graduates and provides them with a wide range of opportunities to gain experience in different fields of the co-operative before heading into fulltime positions.

Having grown up on a well-known dairy farm in Taranaki, Taylor Bailey completed the development programme in 2015 and is now a Ravensdown agri manager in the Waikato.

"The programme was great because it provided me with a good understanding of what Ravensdown is all about. I love my job and helping farmers make smarter decisions, which is easier today with all the great technology we have at our disposal. There's a tech revolution happening in farming and it's exciting to be part of it."

The development programme is offered to those who have recently graduated university or have been working for a few years after studying. All graduates must be involved with the programme for a minimum of six months before heading into fulltime positions with Ravensdown.



Claire Verhaegh (left) and Laura Cockroft (right)

## Stronger granules and cleaner machines

**Superphosphate granule strength is vital for accurate, dust-free spreading.**

But it's not easy because a stickier mix meant increased machine down time and huge effort to clean out the blades.

The Napier manufacturing team tweaked the process and modified the plant to produce a granule of 4kg crush force and greatly extended the time between machine cleans.



Strength in numbers: the analysis of Napier process engineer Julian Annett Chee and the modifications to the plant led to a stronger granule

### See you at

#### South Island Dairy Event

25 - 26 June, ILT Stadium, Invercargill

#### FMG Young Farmer Contest Grand Finals

4 - 6 July, Napier

#### Groundreaders Association Conference

7 - 10 July, Wairakei Resort, Taupo

#### NZIPIM annual conference

5 August, Christchurch