



**Response
Resilience +**

Team. Work.



Lauren Kensington, Compliance Manager, is part of a Ravensdown team helping the team of five million. As well as keeping the nutrients **flowing**, the co-operative is investing in **resilience**. Lauren is in front of the new stormwater management solution in Christchurch. Read more on **page 33**.

A better New Zealand depends on **smarter farming** more than it ever has. Smarter farming is about optimising **productive** food-creation systems while reducing **environmental** impacts. We're looking to innovate and collaborate so that the agsector plays a central role in the country's recovery by **creating** the export dollars that our economy and society so desperately need.

We don't have all the answers and we've got some improving to do. We'll continue to listen in order to **learn**, focus on the science and take care of each other.

About the report

This report is the co-operative's second integrated report and sets out its key integrated strategies, governance, performance, outlook, risks and opportunities. The primary purpose is to explain to all stakeholders how the co-operative creates value in the short,

medium, and long term; and how it eliminates, mitigates, and/or reduces the erosion of value over time.

The full set of audited accounts is available in a separate annual report on our website.

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A vital role

NEW ZEALAND'S FARM NUTRIENT AND ENVIRONMENTAL EXPERTS

COVID-19 reminded everyone how essential food needs essential fertiliser. Ravensdown's role as the farm nutrient and environmental experts has never been more relevant.

Ravensdown exists to enable smarter farming for a better New Zealand. Our products, expertise and technology help farmers reduce environmental impacts and optimise value from the land. Whether it's food grown for livestock or for humans, we are an integral part of the food creation process. We are the only co-operative on the planet that tests for, advises

about, buys, ships, stores, spreads, measures and maps food-creating nutrients and fertiliser in a truly integrated way.

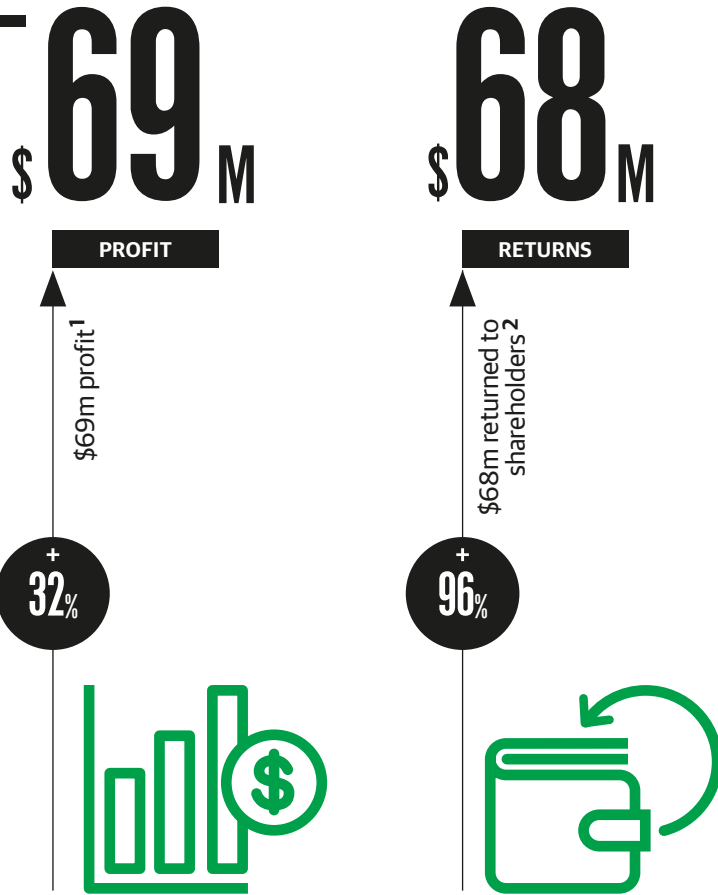
As a co-operative, we are here to supply the right amount of farm nutrients to our customer-owners; not the largest. We also provide products and services in environmental mitigation, agronomy and animal health sectors. When it comes to the growing prosperity of New Zealand, stronger rural communities and a progressive, environmentally considerate agsector, Ravensdown is part of the solution.

Because those buying the fertiliser own the business, the co-operative's advisors recommend the right amount to achieve each shareholder's goals.

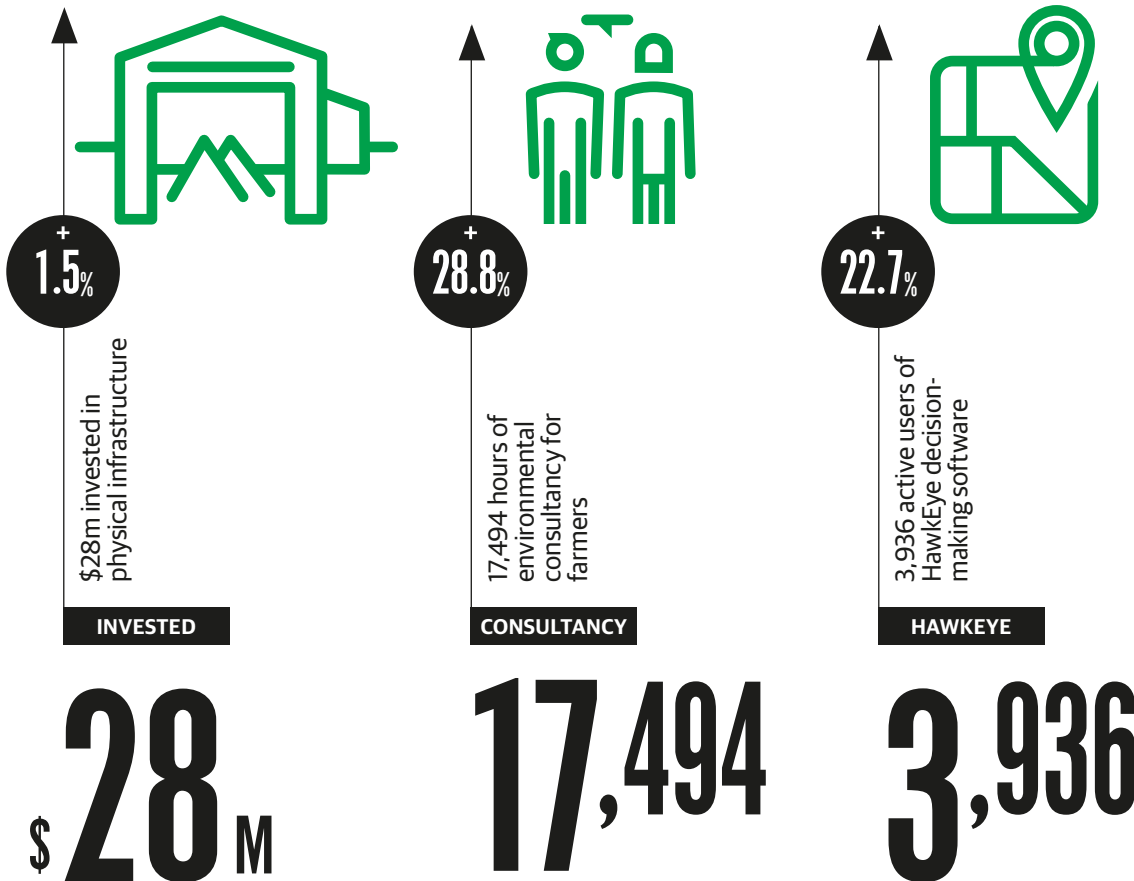


KEY HIGHLIGHTS

Value for our stakeholders takes many forms. We're helping **farmers** to help New Zealand bounce back.



- Notes:
- 1 From continuing operations and before tax, rebate and bonus shares.
 - 2 In form of \$25 per tonne rebate for those buying between 1 June 2019 and 31 May 2020 plus bonus share issue representing \$40m in value for those purchasing in prior three years.
 - 3 Scope 1 and 2: 2030 target is 15% reduction from CY 2017-18.

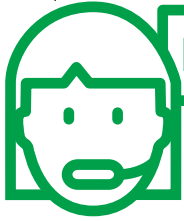


32,000

CALLS

32,000 calls handled by Customer Centre in last quarter during COVID-19 pandemic.

+30%



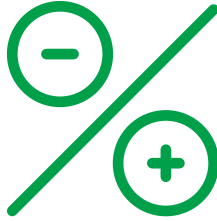
HOW CAN I HELP?

74%

EQUITY

74% equity ratio after rebate \$14.3m cashflow and no net debt.

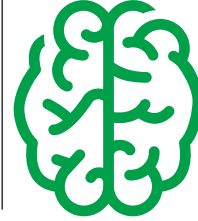
+4%



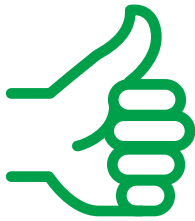
\$5M

R+D

\$5m on R&D funding (\$23m in total across last five years)



Net Promoter Score increased: customers were much more likely to recommend Ravensdown.



SATISFACTION

40

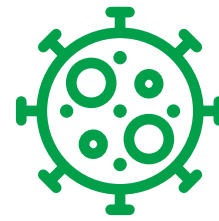
14,905 tCO₂e emissions of carbon dioxide equivalent³



EMISSIONS

14,905

90% of staff felt they were receiving right information through COVID-19 Lockdown



COVID-19

90%

Hard- earned resilience

JOHN HENDERSON

Welcome to your **integrated** report on a year like few others. On behalf of the board, I am happy to report that Ravensdown ended the year in a **very healthy position** while being able to help farmers with their essential mission to grow the food that will help New Zealand's recovery.

As farmers faced the twin challenges of crippling drought and global pandemic, Ravensdown was entrusted to keep the **essential nutrients** flowing. Working throughout lockdown, the team responded by ensuring fertiliser and other necessary inputs remained available throughout the nationwide network.

PAST DECISIONS HAVE PLACED RAVENSDOWN IN A STRONG POSITION TO SUPPORT ITS SHAREHOLDERS AS THEY ADAPT.



From its continued operations, Ravensdown recorded a 32% increase in profit before tax, rebate and an earlier issue of bonus shares.

As well as earning \$69 million we issued bonus shares worth \$27 million, plus tax benefits of \$13 million, and distributed \$28 million in the form of a \$25 rebate. The total return to farmers from our co-operative this year came to \$68 million.

Yet again, last year ended with a strong balance sheet: with equity ratios before rebate of 77% and 74% after rebate, no net debt and operating cashflows of \$143m. We can be cautiously optimistic. But just as farmers are budgeting with caution, we are seeing an uncertain year ahead as recession looms, commodity prices remain volatile, new regulations evolve and a COVID resurgence threatens.

These risks are best managed through an appropriate retention of earnings and continued monitoring of our costs. This is so we can focus on company resilience and upgrading our network of physical assets and keeping prices competitive.

Strategy working

Our strategy refresh three years ago was about orientating the whole business towards enabling smarter farming. Since then, decisions were made to expand

our environmental and nutrient management advisory services, to invest in precision blending and spreading capabilities and to commit to a new generation of decision-making and compliance technology.

As a result, we are now better placed to help shareholders adapt to, and get ahead of, changing regulations at central and regional government level while trying to protect their production.

Another consequence of this strategic focus is that the value of the company has risen over the past three years thanks to prudent management and the building of reserves. In March, an additional and totally separate bonus share issue was made to shareholders who have purchased over the prior three years. This rewards loyal shareholders and puts some of the accumulated value in their hands.

Grateful for support

None of this value creation would be possible without the support of our farmer shareholders and a dedicated team of people who are driven to see them succeed. The Ravensdown team deserves all our thanks. In the totally unexpected COVID situation, Ravensdown people adapted in the ways we've come to expect.

Able led by its leadership team, we must acknowledge the role of the Primary Industries' CEO of the Year, Greg Campbell.

I would also make special mention of the contribution of my fellow directors Scott Gower and, in the case of Stuart Wright, Deputy Chairman, as they step down after the maximum 12-year term has been reached. Their insights and efforts have helped as Ravensdown has been making the transition towards a smarter farming-focus rather than being purely an importer and maker of fertiliser. The Board restructuring commenced in June 2018. Scott Gower's area will be merged into the three remaining North Island areas, effective from this year's Annual Meeting, completing the process to reduce elected Board members to three in each island. This will complete the process of the board moving from eight to six farmer-elected directors.

Resilience is the process of bouncing back. And the whole agsector has a vital role to play in helping New Zealand bounce back and we are proud of the contribution Ravensdown is making. There will be uncertainty and obstacles ahead, so it's wise to be cautious. But there are also opportunities and prospects for improvement which give us a good deal of optimism for the future.

Response to be proud of

GREG CAMPBELL

We embarked on a journey of integrated reporting four years ago. A transparent approach to disclosing progress, thinking ahead and being clear how we **add value** was the right thing to do for our stakeholders. When combined with a **strategic framework** and a focus on the fundamentals, it also helped the process of building a more **resilient** business.

In the year ending 31 May 2020, this resilience showed its value in so many ways and meant that the co-operative could **respond** when shareholders needed us most and when New Zealand needed the agsector most.

THE SUPPORT FROM SHAREHOLDERS AND THE EFFORT FROM STAFF ARE TRULY HUMBLING.



Supporting each other

Helping our farmer shareholders get through an unprecedented situation while delivering a strong result will be a lasting source of pride for all those involved with this year's achievements.

With so many other concerns, shareholders appreciate the comfort that, when it comes to the dependable supply of essential inputs, nutrient management services and environmental consultancy, they have one less thing to worry about.

Being deemed an essential service during COVID-19 lockdown, and by ensuring necessary nutrients were available to farmers during

autumn, meant the year ended strongly. This strong result is down to resolute support from shareholders, a dependable supply chain despite massive challenges, a proactive approach to cost reduction and an outstanding effort from all staff.

While the response was exceptional, especially from our frontline workers, it was only made possible by the resilience of the organisation and its business model. The resilience demonstrated by the business was no accident, but deliberately built over five years of steadfast focus on fundamentals and performance. Such a consistent performance could possibly be seen as 'boring' but this reliability has real value for all stakeholders in

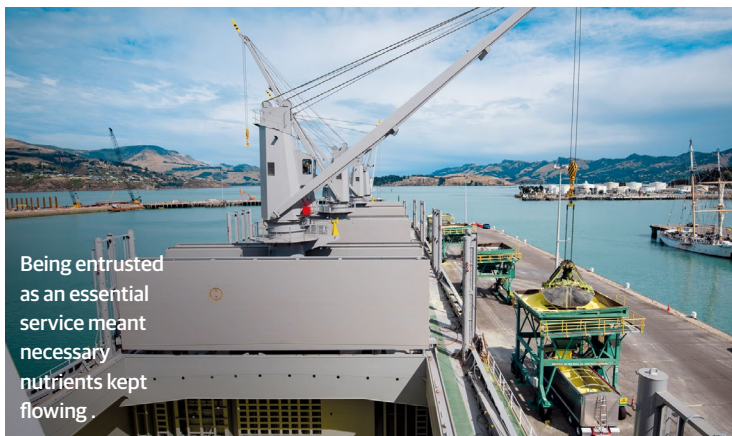
a world that has seen such dramatic changes of fortune.

Volatility and uncertainty dominate the forward view, but our strong position, our vigilance on costs and valued role in helping with New Zealand's recovery, means we can face 2020-21 with cautious optimism.

Improving from strong position

As well as ending the year with no net debt (\$6m cash in the bank) and distributing \$68 million to farmers, the year also gave us insights into how we can adapt. Remote working, online ordering and service innovations like contactless despatch showed the way we could work flexibly and safely. While the new normal is still a way off, these changes could only be attempted because of previous investment in enabling technology and an agile mindset from the team.

Ravensdown made comparable investments in its value-delivering infrastructure (\$28 million) and, while some capital projects will be deferred in 2020-21 due to a level of uncertainty and prudence, we are still forecasting necessary capital projects to protect



Being entrusted as an essential service meant necessary nutrients kept flowing.

operations and services. Our repairs and maintenance efforts are geared toward safety, efficiency and protecting value. We have also invested in areas such as dust management, asbestos removal and stormwater projects, which are about being a responsible employer and good neighbour.

Accelerating innovation

We maintained our investment in research and development (\$5m) and have seen more interest in our award-winning effluent management system – ClearTech. Adoption of the HawkEye mapping tool, which helps with nutrient decision making and demonstrating compliance, leapt by 23%. Collaboration with companies such as TracMap and Fonterra have helped with spreading technology and nutrient planning.

While precision aerial spreading is still in its infancy,

the technology was applied to 152,765 hectares of land: an increase of 40% on last year.

In a year where environmental regulations became a reality for many, our environmental consultancy, built over the past seven years, was busier than ever. Hours of environmental consultancy delivered to farmers increased by 29%. The highly trained field-based team delivered 9,501 agronomy plans and is well positioned to help farmers with government-mandated Farm Environment Plans.

Impact on fertiliser

During COVID, nitrogen was used as a tactical tool to create feed as farmers held more stock on farm due to lockdown-created disruption at meat processors. After a drought-enforced break from fertiliser application, farmers endeavoured to 'catch up' as they prepared for spring

recovery. The manufacturing, supply chain and spreading teams pulled out all the stops and did a magnificent job under a lot of pressure to keep all the nutrients flowing.

All food sectors need nitrogen to supplement plant growth and pasture-based systems often need it to complement clover in the shoulders of the seasons. As a tool, nitrogen can be used wisely or unwisely. Our teams of certified advisors recommend good management practices and the focus is always on the 'Four Rs': right place, right time, right product at the right rate. In conjunction, products such as Serpentine Super can help reduce risk of phosphate run-off and coated urea like N-Protect, helps cut farmers' greenhouse gas emissions.

In terms of our own footprint, Ravensdown's total emissions reduced by 5.3% (69,234 tCO₂e). We've been

Carefully managed nutrients create the healthy food that benefit overseas customers and New Zealanders.



Image courtesy of Dave Allen

looking at our own use of fossil fuels and evaluating suppliers. Due to our urea supplier's scale and efficiency, the carbon footprint of offshore manufacturing and transport is still less than domestic manufacture.

Learning the lessons

There were lowlights in an eventful year. Despite us hitting our target of total injury frequency rate, there were still 14 individual recorded injuries at work. In April, one of Aerowork's most experienced topdressing pilots was killed when his aircraft crashed soon after take-off. Attending his memorial, it was clear how much he was admired and respected by shareholders and colleagues alike. We will report on progress as the Civil Aviation Authority continues its investigation and we remain determined to learn any lessons needed.

In October 2019, a shipment of urea was unable to discharge due to unsafe cranes on the vessel. Delays in supply to the wider Canterbury region demonstrated the impact of an interrupted supply chain. As a result, vessel scrutiny has been tightened up and improved planning increased 'safety stock' levels for key product lines during peak seasons.

Sourcing additional rocks

The purchase of phosphate rock from OCP, which includes rock from Western Sahara, is legal. To manage possible supply risks, we continued to explore additional sources of phosphate rock from the few places in the



Agri managers focus on the Four Rs – right place, right time, right product at the right rate.

world that export. We trialed additional phosphate rocks from Phalaborwa in South Africa, Nauru and Togo. This effort has been a major undertaking from all staff and all the new sources presented some challenges – including increased cadmium levels (although below the voluntarily industry-set limit).

We monitor OCP as it continues to comply with the UN framework for trading with territories where the sovereignty is not yet decided. We strongly support the UN's efforts to encourage a political settlement, which is the best way to help all the local people in the region.

Managing the new agility

With the processes and systems put in place during COVID-19, we would be able to pivot quickly if or when any local or national lockdowns had to return. Customers showed a preference for digital tools and communications methods. We

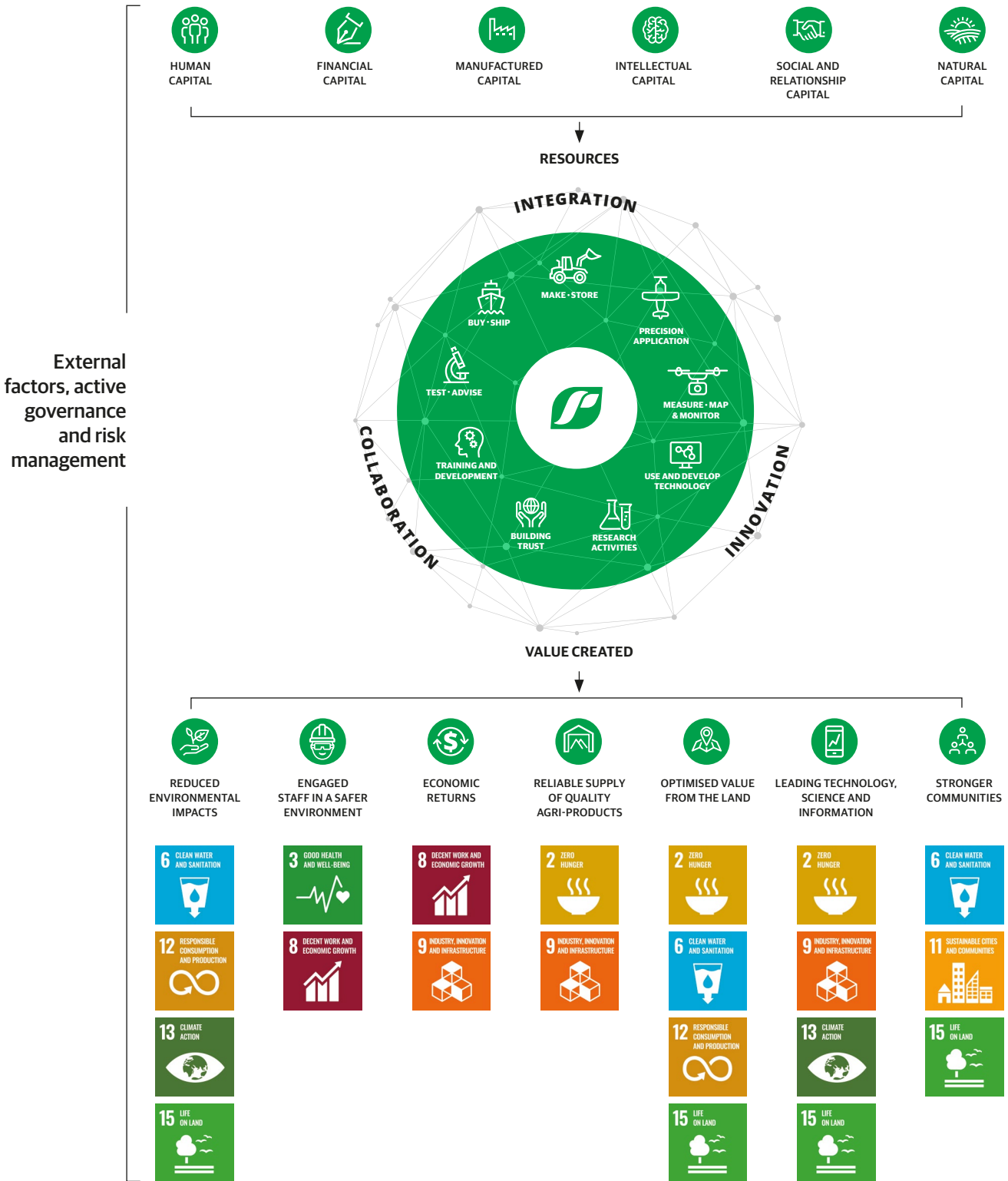
will continue to make it easier to do business with us and to focus on delivering a consistently excellent customer experience.

The response contributed to a massive leap in customer satisfaction with a Net Promoter Score, which compares endorsers versus detractors, leaping from 26 to 40 (26 is considered a very good score for an industry such as ours). The employee engagement survey conducted before COVID-19 showed that we still have work to do. But the company's response was appreciated by staff. A post-lockdown survey showed over 90% felt they were receiving the right amount of information and 96% said they had the technology they needed to do their jobs.

There's a lot of pride in Ravensdown's contribution to New Zealand's recovery and I'd like to thank all the team for their massive effort under some challenging circumstances.

HOW WE DEFINE AND CREATE VALUE

Our business is impacted by, and has an impact on, all six capitals described in the Integrated Reporting Framework as specified by the International Integrated Reporting Council (IIRC). More details are available from the interactive business model in our Integrated Reporting website.



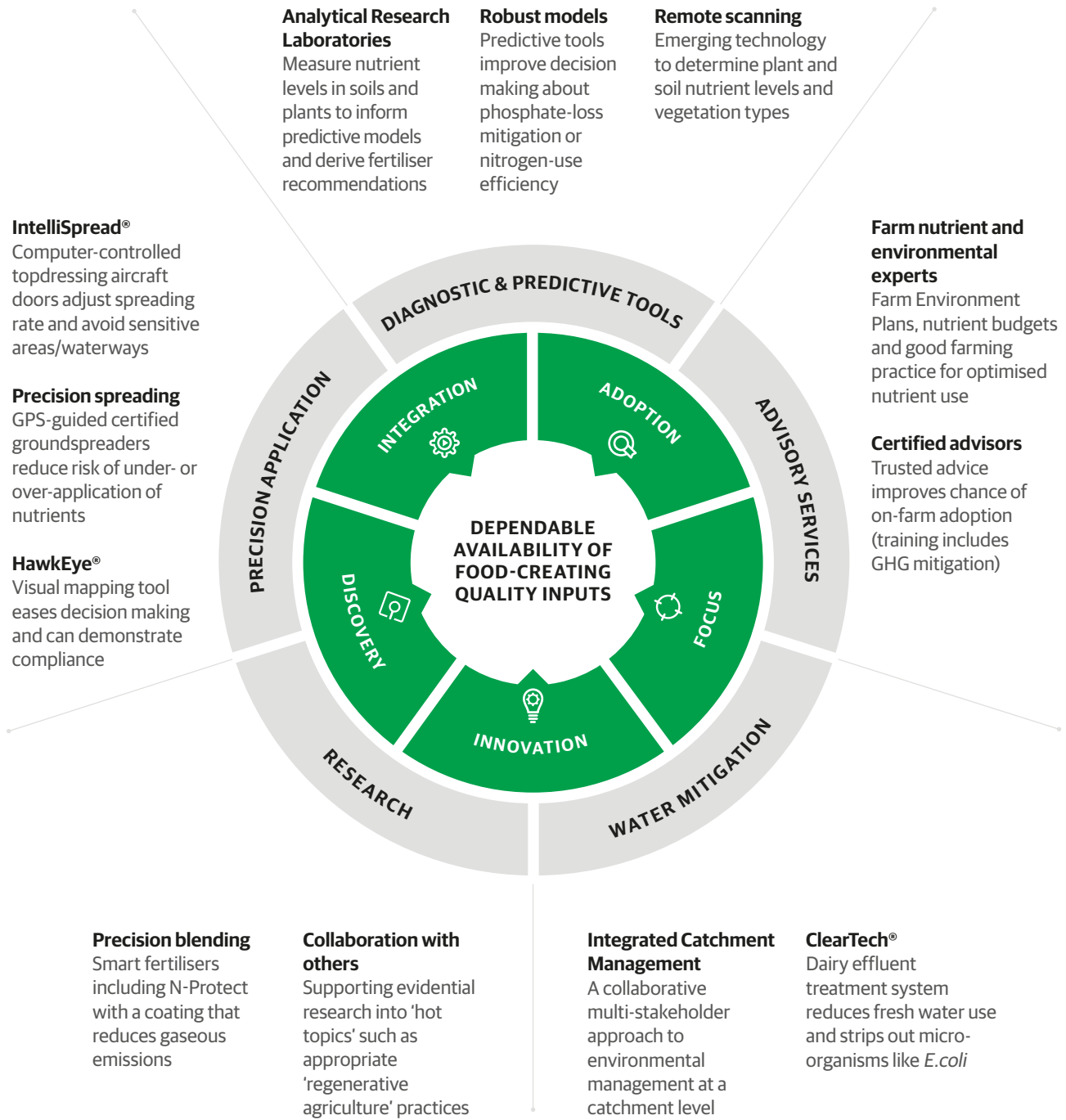
External factors, active governance and risk management

Refer to **page 71** for the full list of United Nations' Sustainable Development Goals.

To enable smarter farming for a better New Zealand —
Ka pūkekotia a rongomātāne, ka poho kererū a Aotearoa

MEETING THE CHANGING NEEDS OF CUSTOMERS

The importing, manufacturing and storage of nutrients is at the core of our essential supply service. Current and future solutions are geared around helping farmers optimise value from the land as well as reducing their environmental impact.



ENGAGING WITH OUR STAKEHOLDERS

Listening to stakeholders over several years has led to a better understanding of how they like to engage with us and what matters to them. This is changing quickly after COVID-19 and more engagement will be vital in a volatile world.

CUSTOMERS & SHAREHOLDERS



OUR PEOPLE



SUPPLY & RESEARCH PARTNERS



COMMUNITIES



REGULATORS



GOAL

To put the customer at the centre of everything we do

To choose the best people, keep them safe and enable them to do their best

To develop long-term relationships based on integrity and trust

To lead in the field of sustainability: clearly positioned as a key player in solutions to environmental concerns and consistently extending our social licence to operate

HOW WE ENGAGE

- In person with tailored advice from our field-based team.
- Accessible, personalised remote advice from customer service teams.
- Annual customer satisfaction surveys.
- Field days, shows and events showcasing new products and services.
- Annual General Meeting and shareholder get togethers.
- Magazines (Ground Effect), newsletters and updates.
- Digital channels such as apps, websites, email and social media.

- Regular direct engagement with and by managers.
- Regular employee engagement survey.
- Staff and team events.
- Social events and social clubs.
- Induction, training and specialist workshops.
- Integrated report and other roadshows.
- Enablers' Group (regular meetings of direct reports to the Leadership Team).
- Leadership Team live virtual Q&A sessions.
- Yammer (internal social media) and Ravnet (intranet).
- GM/CEO video updates posted via email and the intranet.

- Regular visits with and by our suppliers.
- Dedicated procurement team.
- Collaboration on sustainability with suppliers.
- Supplier evaluation and feedback surveys.
- Collaboration with leaders at agri-science institutions.
- Work on and support a wide range of research projects to enable smarter farming.

- Formal site-specific engagement with surrounding communities.
- Open days.
- 'Lend a Hand' day – one day a year for all staff members to volunteer in their communities.
- Publication of annual Integrated Report.
- Social media channels.
- Community based surveys to measure our environmental performance against regulations (as required by consents).
- Local community groups and schools where possible such as supporting fundraising and programmes.

- Direct engagement with central and local government at multiple levels from Chief Executive to policy and compliance teams.
- Participation in Council-led stakeholder groups sharing knowledge and influencing policy direction as it relates to farming and our own operations.
- Submissions on new policy and guidance.

CUSTOMERS & SHAREHOLDERS	OUR PEOPLE	SUPPLY & RESEARCH PARTNERS	COMMUNITIES	REGULATORS
NEEDS AND EXPECTATIONS				
<ul style="list-style-type: none"> ▪ Consistent, timely delivery of quality products, services and experiences. ▪ Easy access to customised, up-to-date and informed farm solutions and services. ▪ Innovative tools, solutions and products for financially and environmentally sustainable farming. ▪ Trusted, long-term relationships. 	<ul style="list-style-type: none"> ▪ Good health, safety and wellbeing. ▪ Strong positive culture and working environment. ▪ Personalised training and career development. ▪ Diversity in the workplace. ▪ Good remuneration, benefits and conditions of employment. ▪ Smart tools to enable staff to perform their duties effectively and efficiently. 	<ul style="list-style-type: none"> ▪ Robust and reliable supply chain. ▪ Long-term trusted relationships with mutual benefit. ▪ Loyal, committed customer. ▪ Values alignment. ▪ Foundation of research engagements is robust science. 	<ul style="list-style-type: none"> ▪ Health, safety and environmentally conscious operations. ▪ Social development – employment, investment, development and learning opportunities. ▪ Respond to incidents and complaints quickly and responsibly. ▪ Positive transparent relationship. ▪ Transparency in reporting. ▪ Respect for cultural views. 	<ul style="list-style-type: none"> ▪ Effective management of legislative requirements, in particular health and safety, environmental and labour requirements. ▪ Farm compliance for nutrient traceability, nitrogen use and consent compliance. ▪ Positive and proactive relationship. ▪ Contribute to relevant calls for submissions. ▪ Publicly reported carbon footprint.
RESPONSE				
<p>We offer a wide breadth of service and integration to farmers across all aspects of the farming operation (see page 13). We regularly engage with our customers and shareholders to become the service and solutions provider of choice in the agsector.</p>	<p>We engage with our people to create an environment where smart passionate people can thrive and succeed while being safe and happy. Empowering people and keeping them safe is hardwired into our values as a co-operative.</p>	<p>We build long-term relationships based on integrity and mutual trust. This ensures that Ravensdown is provided with superior products and services as well as ongoing development of exclusive and innovative solutions for the benefit of New Zealand farmers.</p>	<p>We engage with communities, neighbours and tangata whenua to understand our actual and potential impacts on interested parties. We appreciate our licence to operate and continually seek ways to better care for and have a positive impact on the communities and environment in which we operate, while making a positive contribution to New Zealand's development.</p>	<p>We engage with national, regional and local levels of government and industry bodies regularly and meaningfully to ensure our operations are compliant, to work towards best practice, to contribute to new legislation and ensure workable compliant practices for all our stakeholders.</p>

RESILIENCE THROUGH STAKEHOLDER RESPONSE

In a year of volatility around the world, staying close to stakeholders was more important than ever. While many of the significant issues for stakeholders were unchanged by COVID-19, the pandemic did bring some changes in how Ravensdown engaged with those who care most about the co-operative and those we care about.

Engaging on climate

As one of the most serious long-term issues all businesses face, climate change remains of interest to many of our key stakeholder groups. In a year of new Zero Carbon legislation, this has been as high on the agenda as ever.

On behalf of our shareholders, Ravensdown's submission on the proposed Bill was comprehensive and constructive. We voiced support for New Zealand's ambition to reduce emissions in line with the Paris Agreement with cross-party agreement on enduring GHG targets and establishment of an independent Climate Change Commission. In December, we also submitted on the Climate Change Response (Emissions

Trading Reform) Amendment Bill to guide improvements to the performance of the NZ ETS.

We met our obligations under the Climate Leaders Coalition to measure and publicly report our GHG, set a public emissions reduction target consistent with keeping within 2°C of warming and to work with our suppliers to reduce their emissions as well.

Representatives attended the first anniversary event of the Climate Leaders Coalition, and in September Ravensdown staff were panellists for a related Sustainable Business Council (SBC) workshop. In February, we took part in a Business Carbon Transition Planning workshop attended by the Climate Change Commission. We performed well in our first member review by SBC receiving plenty of insights to help us improve.

Ravensdown is also investing in further training and certification of its advisors on climate change implications for farmers and to upskill in the technology they use and the products they can recommend.

Staff receive quarterly updates on our sustainability performance and our current



The aglime team were keen to explore better ways to dry product.

projects and have full access to a Sustainability Portal for submitting ideas, accessing resources and asking questions.

COVID-19 resulted in a temporary but severe reduction in travel-related carbon emissions. With more acceptance of remote working and online collaboration tools, flexibility in travel arrangements may bring lasting gains.



Attended Sustainable Business Council-climate transition workshop.



Collaborating with the Climate Leaders Coalition.

Engaging on water

Water quality remains of interest to a wide variety of stakeholders and this year saw an unprecedented amount of consultation around emerging regulatory frameworks.

Ravensdown staff engaged extensively with regional councils throughout New Zealand. In the majority of cases we submitted on behalf of shareholders – ensuring their interests are represented and that impending rule changes are based on the latest scientific evidence. We also seek to have operative plans that can be reasonably implemented by farmers. Engagement took place across multiple levels – including council chief executive, sector director, policy, consents and compliance personnel.

This year Ravensdown was involved directly in 22 central or local government written responses to policy and planning processes, such as healthy waterways or notified plans from regional councils that all required thorough reading and a considered position.

We elected not to submit on three of the 22 processes



Directors, customers and staff meet at shareholder functions to discuss policy.

and in some others we joined the appeals of other parties. The regional plan submissions covered Waikato, Hawke’s Bay, Horizons, Wellington, Marlborough, Canterbury, Otago and Southland.

Our shareholders benefitted from our staff having a sound understanding of the regulations and being able to translate them into plain language for on-farm actions. Councils also benefitted from our field-based teams’ ability to help them implement their regulations.

In September 2019, the government released its Action for Healthy Waterways discussion document which proposed new environmental

regulations. Our written submission was one of 17,500 – a huge number of submissions for a policy consultation process which indicates the level of community interest in freshwater outcomes. In May 2020, following analysis and consideration of the submissions by an Independent Advisory Panel, significant changes to the proposed regulations have been signalled through a series of information sheets. We are using this information to build an understanding of the potential impacts on our farmers so that we are well-placed to advise on what may be required to comply.



Principal Environmental Consultants like Colin Tyler advise customers and give input into regional submissions.



Hornby Residents’ Association visit Christchurch Works.



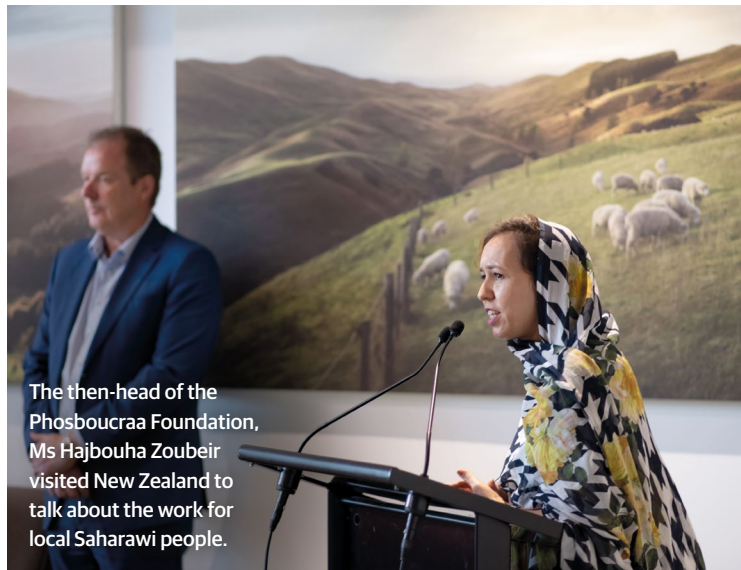
Engaging on Western Sahara

Phosphate rock continued to be sourced from Western Sahara via our supply partner OCP. The risk to New Zealand of disruption to supplies from OCP are significant as Morocco controls 70% of all the world's commercially available phosphate reserves. As the agsector has exposure to this risk, the industry communicated with sector stakeholders so that a co-ordinated approach could be agreed.

Engagement with OCP was extensive throughout the year and included due diligence organised through the Fertiliser Association of New Zealand as this is an industry issue. We remain confident that OCP is conducting itself in line with the UN expectations of trading with territories where sovereignty is undecided.

Briefings about the importance of and progress on the topic were sent to a variety of political representatives and policymakers. Media were updated via briefings and interviews, especially when shipments were arriving at the ports of Lyttelton and Dunedin where a handful of activists organised a peaceful protest.

OCP and Phosboucraa share reports on sustainability and community benefits.



The then-head of the Phosboucraa Foundation, Ms Hajbouha Zoubeir visited New Zealand to talk about the work for local Saharawi people.

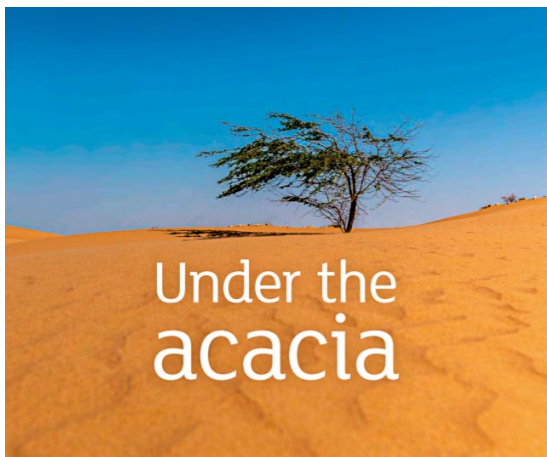
Open communication channels were maintained with the activists; their concerns were acknowledged while a difference of opinion continues to exist.

Union representatives expressed satisfaction with Ravensdown's constructive approach to dialogue as the Rail and Maritime Transport Union requested a letter handover to be facilitated between representatives of the union and the master of the arriving vessel. Unions were reminded how many jobs depend on the movement of agricultural inputs and outputs including at the ports.

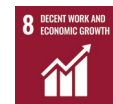
Information on ship arrivals was shared openly and effective communication with all our stakeholders helped to ensure any protest activity was safe and involved minimal disruption. We received fantastic support from these stakeholders leading up to and during the vessel discharge process.

Less than five calls were received from shareholders on the topic and staff received a briefing from an OCP delegation who visited New Zealand prior to COVID-19.

The number of other reliable suppliers of quality rock is severely constrained, but efforts were made to explore the potential of Togo phosphate as an additional source. Phalaborwa and Nauru rocks have been trialled and have proven unsuitable for our requirements. Progress will be relayed in next year's integrated report.



An OCP delegation to Ravensdown was joined by the Moroccan ambassador.



Engaging on COVID-19

In terms of engaging with stakeholders such as customers and staff, COVID-19 dominated the final quarter of the financial year. Many of the lessons learned during the immediate response such as remote working and use of digital technology have carried forward into the current year.

During lockdown, the co-operative sent weekly emails to customers, maintained a dedicated web page for all updates and organised proactive calls to customers so all those ordering or picking up products were clear on altered procedures. Direct and timely guidance on availability was appreciated as farmers grappled with a weather window between drought and the onset of winter.

While face-to-face advice, fielddays and shareholder events were not possible, the field-based team worked hard to stay in touch with customers - primarily through phone contact. The noticeable increase in social media such as Facebook meant updates and messages from other agsector organisations could be easily shared.

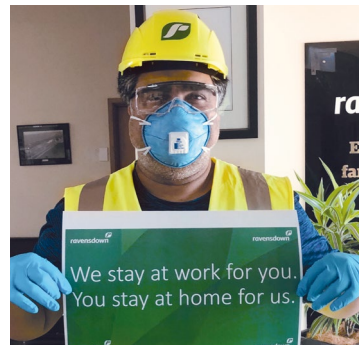
Where possible Ravensdown supported events that had changed to online formats by producing webinars, participating in virtual events, sharing video content and producing online learning modules. In addition, some community groups that missed out on funds associated with supporting events were given donations.

Because IT systems were designed with risks of disruption in mind, the Customer Centre was able to answer 32,000 calls in the last quarter (30% more than the same time last year). All employees transitioned to working from home without any service-impacting issues. Office-based employees who worked from home could ask the leadership team their questions in regular interactive video sessions.

Weekly video updates provided clarity of direction while details on changing guidelines that matched government advice were shared promptly. While travel and face-to-face interaction stopped, adoption of Microsoft Teams meant online working



Customer Centre staff working from home took a third more calls with no service impact.



Each employee did what they could to keep operating safely during lockdown.

and collaboration have become more flexible.

A staff survey carried out after the lockdown showed over 90% felt they were receiving the right amount of information and 96% said they had the technology they needed to do their jobs.



Interactive Q&As with the leadership team were popular with many staff.



RISKS AND OPPORTUNITIES

Key risks and response

Ravensdown has a comprehensive risk management framework to identify, assess and monitor new and existing risks. Annual risk updates are performed and risk improvement plans created and acted on.

The Chief Executive Officer and the leadership team are required to report to the Board and

Audit & Risk Committee on high risks affecting the business and to develop strategies to mitigate these risks.

Additionally, management is responsible for ensuring an appropriate insurance programme is in place and reviewed annually.

TOP ENTERPRISE RISKS	OUR RESPONSE
<p>Interruption to the supply of key fertiliser inputs, arising from either global or domestic events or constraints</p>	<p>Response: We have enduring relationships with long-term suppliers of our key fertiliser inputs which we continue to assess. We explore back-up options, to ensure we can meet supply commitments to our customers.</p> <p>COVID impact: The relationships with our key suppliers came to the fore both internationally and domestically, with very minimal disruption to our supply chain. Where we encountered state-imposed border restrictions, we were able to source product from secondary suppliers.</p> <p>Medium/long-term view and Opportunities: Keep developing second sources as back-up supply options whilst maintaining the long-term relationships with our high-performing supply partners.</p>
<p>Inability to deter or recover from cyber security risks</p>	<p>Response: We continue to invest in strengthening our existing security systems, processes and practices to detect, prevent or recover from cyber security threats. A 'red team' (deliberate cyber-attack test) engagement with an international consulting firm identified further areas for improvement and these are nearing completion.</p> <p>COVID impact: COVID has resulted in a higher proportion of our staff working from home and has consequently increased the risks associated with remote access. Remote access security is an ongoing focus for the IT team, including the introduction of Multi Factor Authentication (MFA) to protect all sensitive systems.</p> <p>Medium/long-term view and Opportunities: Cyber threats will continue to grow in volume, with phishing and ransomware attacks likely to remain the largest threat given their relative effectiveness. The growth in cloud platforms and services is making it easier for hackers to operate globally and bringing greater risks to New Zealand. Security controls for both personal and business mobile devices will be increasingly important as hackers seek to use this vector to commit fraud or gain company information or system access.</p>

TOP ENTERPRISE RISKS	OUR RESPONSE
<p>Changing government and shareholder priorities affecting our industry in relation to climate, emissions and the use or protection of natural resources</p>	<p>Response: We will continue to meet with central and regional government to provide examples of optimising farm production while managing within environmental limits.</p> <p>COVID impact: Export earnings from a productive agsector will help fund the social and economic recovery in New Zealand.</p> <p>Medium/long-term view and Opportunities: The demand for Farm Environment Planning, proof of placement compliance and environmental mitigation will become even more important.</p>
<p>Failure to embed a culture, systems and processes that prevent or can appropriately respond to material safety, health or security dangers or incidents</p>	<p>Response: Our Safety and Wellbeing strategy has a focus on three key pillars – visible leadership, critical risks and simplified systems and assurance. Key metrics are in place to support visibility of performance against each of these pillars and a strong culture of reporting hazards and incidents is encouraged.</p> <p>COVID impact: Protocols for field teams, office-based employees and essential service workers in operations and supply chain have been developed for each of the Alert Levels. These have been tested and modified based on experiences at each of the Alert Levels.</p> <p>Medium/long-term view and Opportunities: Ensuring a clear implementation plan for each of the key pillars is in place, understood and supported across all parts of the business.</p>
<p>Changing public opinion on the role of agriculture in New Zealand</p>	<p>Response: With improvements and even better environmental mitigation, New Zealand's well-managed pasture-based systems can remain the envy of the world.</p> <p>COVID impact: More positive disposition towards farming due to food security and the sector's potential contribution to the nation's economic recovery.</p> <p>Medium/long-term view and Opportunities: Align where practical with government plans to increase primary sector export value by \$44 billion by 2030, attract 10,000 more New Zealand workers by 2024 and help farmers with their greenhouse gas emissions.</p>
<p>Ravensdown losing its social licence to operate</p>	<p>Response: Engaging with stakeholders in order to move from acceptance to approval. Explain trade-offs where relevant and report transparently on our commitment to continuously improve our environmental footprint and sustainable business practices.</p> <p>COVID impact: With society focusing on job security, debt and export earnings, we will demonstrate the essential role we play in the agsector's contribution to the country's recovery.</p> <p>Medium/long-term view and Opportunities: Collaborate with others in the agsector to keep up the positive associations with food creation. Continue to educate about fertiliser as a tool to create food – to be managed appropriately alongside environmental objectives.</p>

FINANCIAL HIGHLIGHTS

As the country faced the unprecedented challenge of COVID-19, it was Ravensdown's financial strength that enabled value to be delivered to stakeholders as outlined in this report. The response continues and the position remains strong, yet caution is justified.

Being entrusted as an essential service and operating throughout all alert levels made a significant difference. When combined with lower costs, reduced inventory and strong cashflows throughout the pandemic response, the year ended solidly from a financial perspective. The level of uncertainty as we entered the pandemic response and as we looked at the short to medium term future resulted in Ravensdown implementing a precautionary cost containment plan.

Ravensdown has recorded a 32% increase in profit to \$69 million from continuing operations before tax, rebate and an earlier issue of bonus shares. The profit increase compared to last year was attributable to almost identical group revenues (\$750 million), slightly higher margins and reduced costs. Overall, we have seen our operating costs reduce,

primarily due to our response as the pandemic took hold.

Some cost reductions were the deferral of some improvements at several of our store locations and these will be undertaken in the future. We continued our asbestos replacement programme, increasing our spend to \$2.5 million during the year. Although this reduced overall profit, the benefits certainly outweigh the cost. We were able to maintain our funding of research and development at the same level (\$5 million) as a better New Zealand depends on smarter farming more than ever.

During the year, we had very strong operating cashflows of \$143 million (2019 \$31 million). This allowed us to fund our capital investment programme as well as pay off all our net debt. In fact, we ended the year with \$6 million of net cash (2019 \$69 million net bank debt). This was primarily a result of reduced inventory and prompt customer payments.

In terms of capital investment, we continued to refresh our current infrastructure, invest in new plant, technologies, systems and products. Our combined investment in property, plant and intangibles was also the same as 2019 at \$33 million.

In March 2020, we issued bonus shares of \$27 million which, when combined with the tax benefits to shareholders of \$13 million and the rebate payable in August, results in \$68 million of value distributed to shareholders.

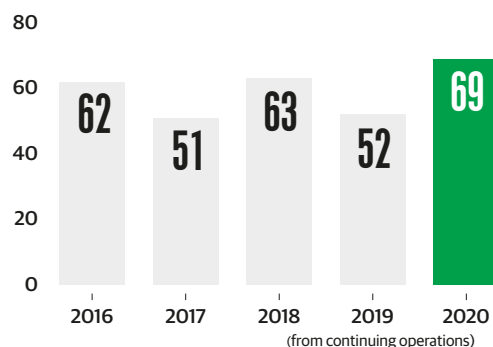
The bonus share issue was based on the prior three years' qualifying purchases. Under accounting standards, this is recognised as a reduction in revenue this year. To assist readers, we have included profit before rebate and bonus shares in our analysis of performance. Although this is a non-GAAP measure, the Directors consider this to be a key performance measure of Ravensdown, and an important factor in determining the amount of distributions made to shareholders.

Combining the operating result and the retention of the non-cash bonus share issue has seen equity increase by \$24 million to \$474 million.

With a high level of uncertainty still in play, we will continue to be prudent in the coming year as we assess our customers' needs, suppliers' positions and our business requirements - while planning accordingly.

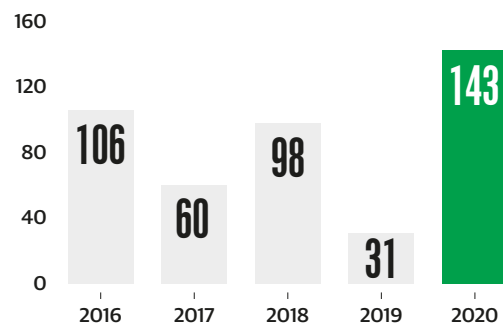
The full set of audited accounts is available in a separate annual report on our website.

NET PROFIT BEFORE REBATE, BONUS SHARES AND TAX (\$M)

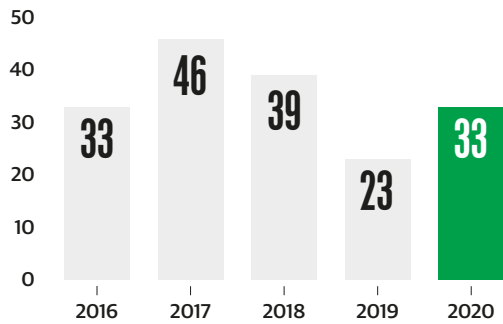


Strong increase in net profit before rebate, bonus shares and tax, is the combination of cost reductions, product mix and additional margin

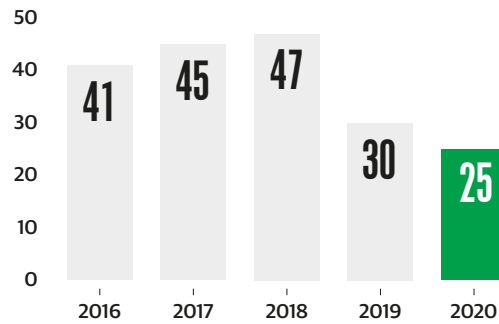
OPERATING CASHFLOW (\$M)



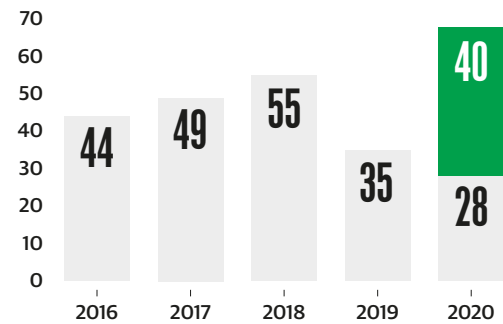
Strong increase in operating cashflows reflects decrease in inventory and increase in accounts payable

NET CAPITAL EXPENDITURE CASHFLOW (\$M)

Net capital investment includes investments in intangibles. 2019 comparative included sales proceeds of \$10M

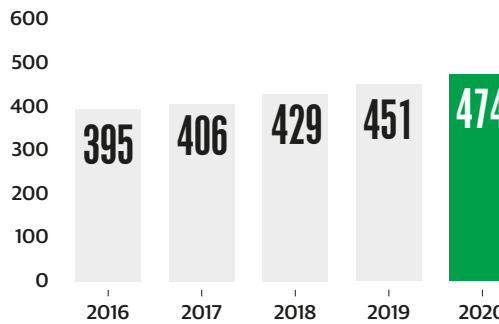
SHAREHOLDER REBATE (\$/T)

In 2020 our rebate of \$25 enables the company to reward our shareholders whilst strengthen our financial position

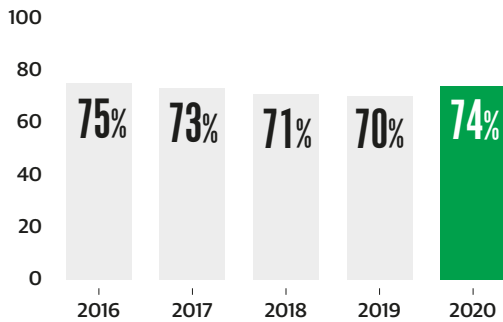
VALUE OF SHAREHOLDER DISTRIBUTIONS (\$M) (INCLUDING TAX CREDITS)

■ Rebate ■ Bonus issue

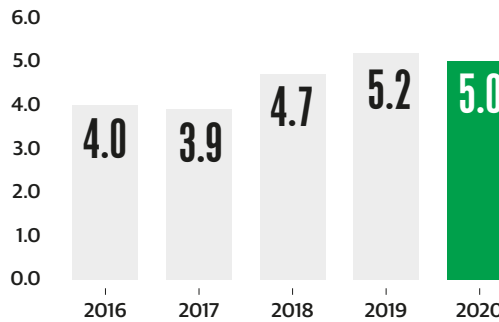
In 2020 we made two distributions: our annual rebate and a bonus share issue, totalling \$68m including tax credits

TOTAL EQUITY (\$M)

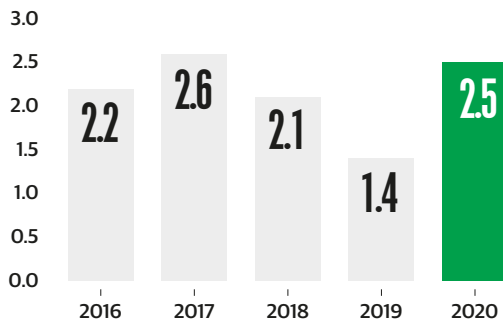
We have continued to add shareholder value with increasing total equity

EQUITY RATIO (%)

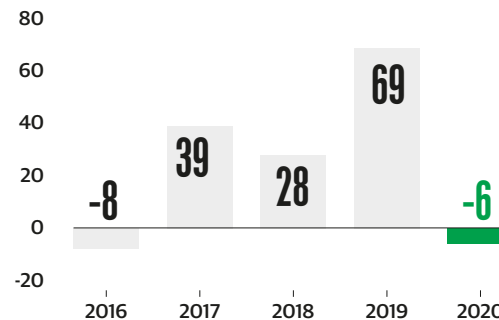
The equity ratio remains in our targeted band

RESEARCH AND DEVELOPMENT (\$M)

We continue to fund research and support development of new initiatives

ASBESTOS REPLACEMENT (\$M)

We are committed to our programme of replacing asbestos throughout our network

NET BANK DEBT (\$M)

At year-end we had net cash in the bank as a result of decreased inventories on hand and strong sales

Reducing environmental impacts + optimising value from the land

OUR STRATEGIC FRAMEWORK

Ravensdown is **clear** on why it exists and how it helps turn this goal into reality. The following pages of the Integrated Report are focused on how we are progressing on our **five priorities** listed on page 25.

WHY

To enable smarter farming for a better New Zealand.

HOW

By providing products, expertise and technology to help farmers reduce environmental impact and optimise value from the land.

WHAT

01.

Trusted and Leading

We have an ambition to lead and will never stop trying to do what we say we will do.



PAGE

26

02.

Quality Agri Products

Quality is about delivering promised performance - how it is experienced is the bedrock of our offering.



PAGE

36

03.

Enabled People

Working smarter and farming smarter go hand in hand - we focus on helping our people thrive and achieve.



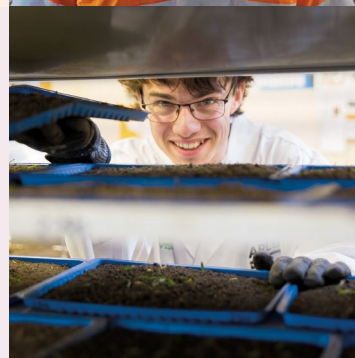
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04.

Science

We work with others to discover new approaches to the thorny challenges - the science never stops moving and neither will we.



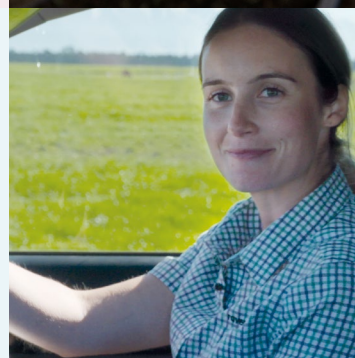
PAGE

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05.

Technologies and Services

Armed with supporting technology, our employees work with each other and customers to deliver excellent service.



PAGE

56



TRUSTED AND LEADING

On the front foot



Trust is built by **accounting** for multiple perspectives and being **transparent** across a range of measures. We aim to lead by prioritising **environmental** sustainability and **social** responsibility.

40

Net Promoter score®

2018 - 19 **26**

2017 - 18 **19**

Net promoter score

The Net Promoter score (NPS) is a measure of customer loyalty and is an absolute number between -100 and +100 based on how likely you are to recommend Ravensdown to a friend or colleague. A significant increase in the NPS was recorded this year. With droughts and COVID-19 affecting customers during the survey period of March and April, this increase is gratifying and shows the strong relationships formed with

customers continue to add value. A focus on improving the customer experience and consistent product quality are among contributing factors. The NPS trend for the last three years is positive and combined with other service and quality indicators suggests Ravensdown is performing extremely well overall. A score above 20 can be considered good and 40 is a great score. In light of the positive trend, we would hope to achieve a consistent NPS of 23 or above.

57%

Staff Engagement index

2018 - 19 **68%**

2017 - 18 **66%**

Engagement survey

Employee engagement is an outcome of employee experience. While we have undertaken regular climate surveys for approximately 20 years, we have only measured engagement since 2017. We surveyed employees in February 2020, before the dramatic impact of COVID-19 was widely known in New Zealand, and the result was below where we would have liked. A further 'Lessons Learned Survey', sent after the Alert Level 4 lockdown, encouraged our people to help us understand the impact this had on their engagement and experience. Our goal this year was to remain in the top quartile for engagement. While that was achieved against an Australia and New Zealand (A&NZ) agsector benchmark of 54%, we have more to do to reach A&NZ best employer status.

Participation remained high which is indicative of the passion, commitment and continuous learning mindset of our people.

We have created a strategic culture and people framework to support our short and long-term objectives, including engagement. The framework will ensure we are being deliberate about the employee



A new framework aims to provide more focus on a positive working environment and engaging leadership.

experience we provide for our people. Particular areas of focus for the next 12-24 months will be on providing a positive work environment for all our people, as well as engaging leadership.

COVID-19 Lessons Learned Survey

COVID-19 presented many challenges and opportunities for Ravensdown and the co-operative adapted to new ways of working quickly and effectively.

The COVID-19 Lessons Learned Survey was designed to assess our response to a specific event in the areas of leadership, communication, engagement, safety and wellbeing, and new ways of working. Although situation specific, the data from the survey, when considered alongside the Employee Engagement Survey feedback, gave further clarity to where our focus areas should be over the next 12-24 months.

The feedback from the survey taught us that we can be quick to adapt, flexible and responsive as an organisation. It also highlighted some new ways of communicating that will potentially address some of the trends coming through in our engagement surveys.

Survey participation was again high with 404 responses across all areas of the business

and confirmed that our people appreciated our swift and prudent response to COVID-19. People reported feeling communicated with, support from Ravensdown was a real strength and a sense of pride to work for a sustainable and successful co-operative in the agri-sector.



Video conferencing proved a flexible alternative when sharing information.

88%

Participation rate

Goal: 85%+ (average participation rate for Kincentric's A&NZ Best Employers)

2018 - 19 **89%**

2017 - 18 **90%**



TRUSTED AND LEADING CONT.

94%

% direct spend under management with long-term supply partners

Target: >90%

2018 - 19 **91%**

2017 - 18 **88%**

Target: achieved



Suppliers were effectively managed so essential nutrients remained available.



Long-term supply partners

There was a significant risk of supply chain disruption during COVID-19 restrictions. Due to excellent relationships with world-class businesses, Ravensdown has received, and continues to receive, first-rate support from key suppliers. Supply chain risk mitigation has been assisted by:

- Our suppliers' infrastructure, people and processes.
- Recognition of agricultural support services as essential services globally.
- Weekly collaboration on order progress.
- Understanding restrictions and supply chain risks in the countries we source product from, including availability of containers, as was the case for our European suppliers.

Where risks have been highlighted and can't be adequately mitigated, the procurement team's strategy to cultivate secondary suppliers on key product lines has paid off,

with three such suppliers successfully engaged at short notice to supply product lines otherwise at risk of non-supply. In conjunction with our trucking partners, we overcame disruption to domestic freight caused by the closures of non-essential businesses so that supply to our New Zealand network was uninterrupted.

Ravensdown has many long-term relationships based on integrity and trust to ensure we get the best value for our spend. "Spend under management" is the percentage of our total direct spend with preferred suppliers that are actively managed. This indicator shows how:

- We capture value through collaboration with the best suppliers.
- Product quality is uppermost in commercial discussions.
- Risks are managed.
- Positive commercial outcomes are achieved.
- We ensure continuity of supply in challenging times.

Sustainable supply chain

It is important to Ravensdown that we engage with suppliers who share our vision and values and undertake their businesses in accordance with our own Code of Conduct. To this end, our Supplier Code of Conduct outlines the expectations Ravensdown has for suppliers to act in an ethical and just manner. For more information please visit <https://www.ravensdown.co.nz/supplier-code-of-conduct>. A survey on suppliers' sustainability was postponed due to COVID-19 but will be completed in the current

year and will be reported in the next Integrated Report.

This year, progress included:

- Sustainability being more fully embedded in our policies and processes.
- Updated expectations shared with our preferred suppliers.
- Fully defined sustainability criteria used to assess and evaluate supplier performance and award new business.
- A takeback scheme for bulk fertiliser bags at all stores. More than 116 tonnes of bulk bags were recycled in 2019. We are working on communication and

awareness to increase this in the coming year.

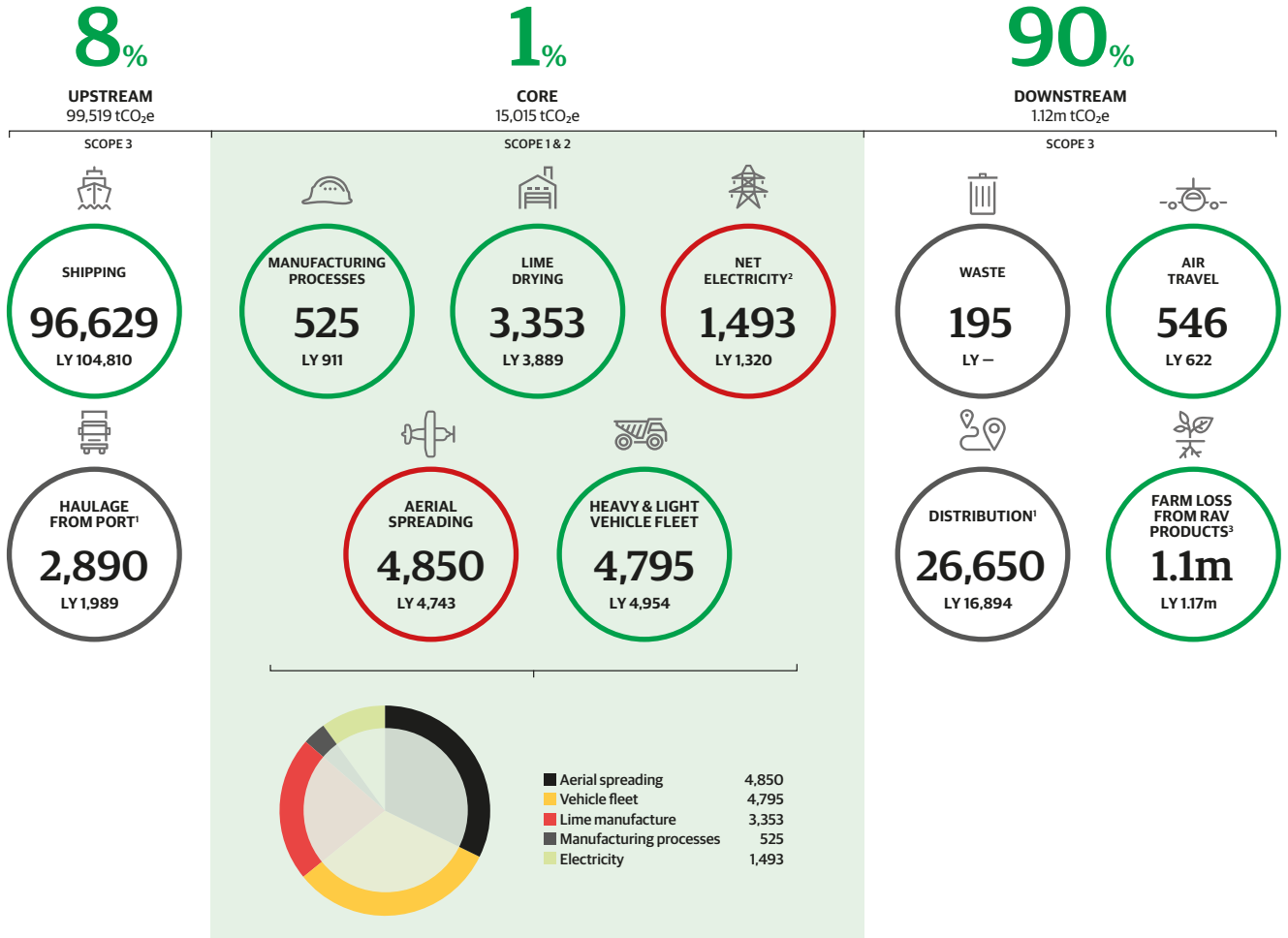
- Support for Agrecovery's 'one-stop' recycling events around the country which ensured that a further 4.3 tonnes of bulk bags were recycled. We form part of the industry advisory group for development of a national product stewardship scheme for agricultural plastics.
- E-waste recycling, with over a tonne recycled through a social enterprise in 2019. We are working to identify secondary uses for e-waste in the future.

Carbon footprint

Ravensdown calendar year 2019 Greenhouse Gas Inventory

All totals represented as tonnes of carbon dioxide equivalent

● Down ● Up ● No material change or new addition



Note:

Scope 1: sources owned by company. **Scope 2:** purchased electricity. **Scope 3:** sources not owned or directly controlled (<https://ghgprotocol.org/corporate-standard>)

¹ new, NZ-specific emissions factor used for distribution this year; no actual emissions increase occurred.

² Net electricity includes electricity purchased from the grid, electricity exported back to the grid from generation and transmission losses.

³ N fertiliser (N₂O) loss and Lime (CaCO₃) loss.

1.23m

Ravensdown Carbon Footprint

(tCO₂-e) CY

2018 **1.3m**

14,905

Scope 1 and 2

Target: 2030 target 15% reduction from CY 2017 / 2018 levels

2018 **15,664**





 TRUSTED AND LEADING CONT.

Ravensdown believes that every company has a responsibility to take action against climate change. In the two years since Ravensdown first reported its carbon footprint, the carbon footprinting methodology has matured resulting in more robust data, ease in collecting and calculating the footprint, accuracy in results and more in-depth analysis of performance. Total emissions have reduced by 5.3% (69,234 tCO₂e), which is good progress towards our target reduction. Carbon intensity per tonne of production also shows a downward trend.

For the 2019 calendar year, Ravensdown total organisational emissions are 1,237,619 tCO₂e. Scope 1 emissions decreased (6.7%), scope 2 emissions decreased

(17%) and scope 3 emissions decreased (5%). The carbon footprint is calculated by calendar year; therefore, any COVID-19 impacts did not contribute to this reduction. This year, progress included:

- A conscious effort to minimise the use of coal in lime processing. By careful mine planning, assessment of the need for drying, and some infrastructure improvements, coal use reduced by 14% this year.
- A scoping study to assess available alternative fuels to coal has identified some promising renewable and carbon neutral options. We have trialled wood chip as an alternative to coal for firing the driers and are progressing with further trials in the coming year.
- Diesel is used to restart the sulphuric acid plant after annual maintenance. This year we have achieved cleaner diesel burning due to improved control of the air/fuel mixture at Christchurch following success at Napier and Dunedin. Napier in particular has also boosted the energy efficiency of its restarts.
- Increased adoption of N-Protect, the coated urea product that helps reduce on-farm emissions resulted in an emissions reduction of 6-7%.
- We source from gas-based (not coal) urea suppliers. Due to our supplier's scale and efficiency, the carbon footprint of offshore manufacturing and transport is still less than domestic manufacture.

- We source phosphate rock from Phosboucraa, which has an outstanding sustainability record, including 99% renewable energy consumption, 100% desalinated water consumption, with excess distributed to the community, and 100% of profits distributed to social and community projects.
- Transport emissions from truck haulage increased substantially due to a new emissions factor; there was no actual increase in activities.
- There are limited opportunities for reducing the footprint resulting from aircraft operation at this point, but Aerowork met with technical specialists at Air New Zealand this year and identified many common opportunities to improve aircraft fuel efficiency and drive change.

Ravensdown collaborates with other businesses through membership of the Sustainable Business Council, Climate Leaders Coalition and Aotearoa Circle.

Limited assurance for our GHG emissions inventory has been provided by EY. Their statement is available at <https://integratedreporting.ravensdown.co.nz/>

Each sulphuric acid plant generates electricity. More efficient processes result in less diesel used in restarts.



Aglime helps regulate soil pH. Coal used to dry aglime fell by 14%.

Environmental Performance

This year, two large-scale environmental audits were completed across all sites, one assessing legal compliance and one assessing management systems. Through this exercise we gained good oversight of risk across the network and identified a range of opportunities. We have increased environmental monitoring overall, to monitor performance and identify and address problems early. In some cases, resource consent conditions requiring monitoring have been lifted due to compliance over many years.

There was a single regional council intervention in the year compared with four in the prior year. Further improvements were required



to the stormwater management system at the New Plymouth store. This new store was built with a stormwater retention pond that unfortunately did not perform as intended, so the corrective action has been an upgrade of the pond with a wetland to improve the quality of the water discharged. This has also included a safer access point for employees and council staff taking water samples.

We also had six notifiable exceedances of our consent conditions. None of these caused adverse environmental impacts but were an indication of where our control systems require improvement. These included fluoride discharges at Napier works, sulphur dioxide at Christchurch works and stormwater pH at Dunedin works.

Enhancement work under construction at New Plymouth.

1.24

SO₂ discharged to air (kg SO₂ per tonne of fertiliser manufactured)

2018 - 19 **1.08**
2017 - 18 **1.20**

Air Quality Management

The three superphosphate manufacturing sites hold consent to discharge sulphur dioxide from our sulphuric acid plants and fluoride from superphosphate up to allowable levels.

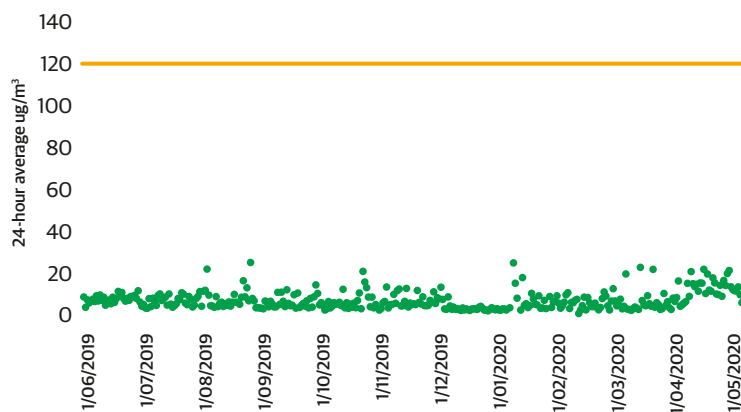
Discharge mass of sulphur dioxide and fluoride per tonne of product manufactured both increased over the past 12 months. Whilst this was an increase it sits at a similar level to the discharge of 2018-19.

0.004

F discharged to air (kg F per tonne of fertiliser manufactured)

2018 - 19 **0.0035**
2017 - 18 **0.0035**

DAILY AMBIENT SULPHUR DIOXIDE LEVEL - CHRISTCHURCH



● Monitoring site — Guideline (MFE 2002)





TRUSTED AND LEADING CONT.



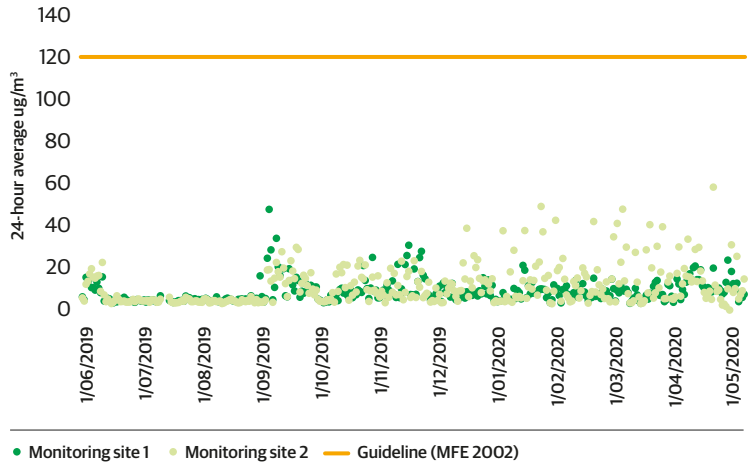
Dust curtains were installed within the superphosphate bays at the Manunui and Masterton stores with further installations planned.



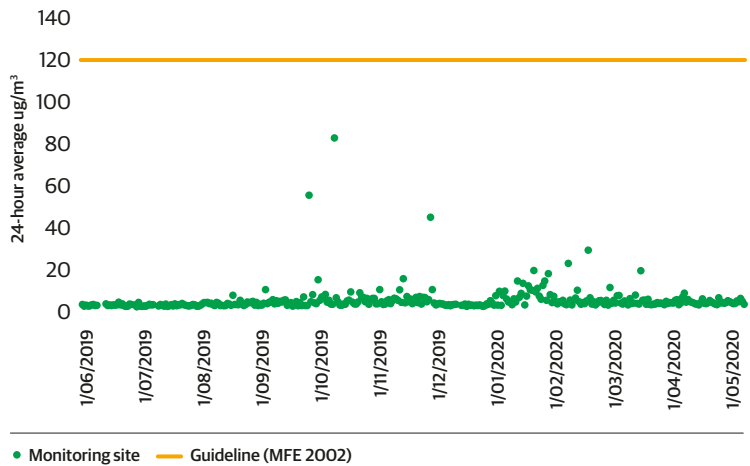
In addition to monitoring of direct discharges from the stacks, levels of contaminants in ambient air are monitored around the manufacturing sites and compared against air quality guidelines set by the Ministry for the Environment. Daily sulphur dioxide and fluoride levels are well below guideline levels for public health. Independent vegetation surveys are carried out in the community around each of the manufacturing plants every two-three years to identify any environmental effect of fluoride in ambient air.

Investments were made at Christchurch Works to improve air quality with ducting upgrades on the bio-filter for improved fume scrubbing and improved air extraction from the sulphur pits to reduce odour. Instrumentation was also upgraded at Christchurch to allow better control of SO₂ outputs and a new second SO₂ stack analyser - as already installed at the other two manufacturing sites - provides

DAILY AMBIENT SULPHUR DIOXIDE LEVEL - DUNEDIN



DAILY AMBIENT SULPHUR DIOXIDE LEVEL - NAPIER

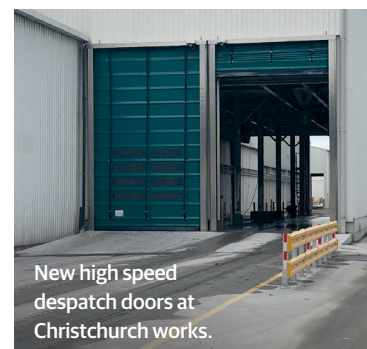


additional reliability for stack discharge data.

Dust is an important aspect for Ravensdown to manage across its network. This year progress included:

- Consideration of dust management in the design of the replacement intake system at Christchurch works.
- Installation of fast-acting roller doors at several sites to minimise dust excursion from operations.
- Upgrade of the dust monitoring instrumentation at Christchurch Works.

- Researching and implementing the use of dust suppressants.
- Building and retrofitting improved intake and despatch systems that minimise dust levels.



New high speed despatch doors at Christchurch works.

Stormwater Management

We have embarked on a large-scale stormwater improvement project at Christchurch works. Three large stormwater basins and associated pipelines divert “first flush” run-off from the city stormwater system, thereby reducing the impact on the downstream waterways.

This year progress across other sites included:

- Sealing internal/access roads was undertaken in Napier, Nelson, Stratford and Hokitika stores and Dipton lime quarry to improve housekeeping practices.
- Napier works undertook native riparian planting around the settling pond.
- Christchurch works installed drain guards at all stormwater sumps.
- More native planting at Hokitika and Nelson store.
- A stormwater pond was constructed at Geraldine Lime to capture and treat stormwater run-off from the quarry before being discharged from the site.
- Morrinsville store has stopped spraying drains to allow vegetation to take up stormwater run-off from the site.
- A 'rain garden' has been installed at the Bluff store to manage stormwater run-off from our site and hillside properties to the rear.
- Technical investigations have been ongoing at Seadown to address non-compliance with the stormwater discharge permit conditions.



Napier works planting.



Hokitika planting.



The new Christchurch stormwater solution captures run-off preventing nutrients heading into downstream waterways.



TRUSTED AND LEADING CONT.

Investment in infrastructure

By investing in our infrastructure, we are delivering better outcomes for our shareholders, and internal and external stakeholders.

2019-20 INFRASTRUCTURE INVESTMENT EXAMPLES		OUTCOME
Land, buildings and other infrastructure	New lime shed at Supreme.	Availability at busy times and operational efficiencies.
	Design and commence construction of new intake for Christchurch Works to replace fire-damaged system (finishes late 2020).	Reliability, ease of operation and maintenance, improved efficiency, environmental performance and safety.
	Traffic management improvements at all sites including signage, barriers and road network changes.	Safety of employees and visitors by segregating pedestrians and light vehicles from heavy vehicles.
	Re-cladding of the superphosphate store roof at Dunedin Works.	Asbestos removal, improved product quality, improved lighting for employees and reduced environmental impact by minimising loader and truck tracking.
Plant, machinery and vehicles	Seadown screening plant replacement and electrical upgrade.	Safety, efficiency and product quality.
	Nelson/Seadown weighbridge replacement.	Maintaining asset value of a fit-for-purpose solution.
	N-Protect coating plant upgrades at Nelson and Napier wharf stores. Upgrade to Bluff and New Plymouth plants.	Capacity to meet increasing product demand with added logistics efficiency.
	Aircraft loader upgrades and replacements.	Reliability, efficiency, improved work environment for staff and compliance.
	Modern, compliant electrical and control system upgrades at Napier and Dunedin Works.	Safety, asset protection and reliability.
Software	HawkEye platform and development of spreading systems.	Adoption of HawkEye, support for Farm Environmental Plan creation and enable better resourcing of field-based team.
	Despatch automation at stores for contactless process.	Efficiency, safety/traffic management on site (drivers remain in truck for duration of despatch process).

2019-20 INFRASTRUCTURE INVESTMENT EXAMPLES		OUTCOME
Software	COVID-19 management systems including contact tracing, travel approvals/tracing, health testing, status recording and site audit management.	Agility to adjust to government guidelines to efficiently maintain staff safety and continue operating as an essential service.
	Entire company laptop and smartphone fleet upgraded.	Reliability, flexibility and effectiveness of modern working tools.
	Rollout of productivity tools such as Microsoft Teams including OneDrive Advanced Training.	Enhanced productivity, enhanced collaboration, lowered travel costs and effective remote working.

27.9m

\$ investment in property, plant and equipment

2018 - 19 **27.5m**

2017 - 18 **33.6m**

2.5m

Asbestos replacement \$m

2018 - 19 **1.4m**

2017 - 18 **2.1m**

In the year 2020-21, planned significant investment in some key areas such as:

- Replacement process vessels at the Napier acid plant.
- Improved scrubbers for environmental control of air discharges at Napier Works.
- Safety improvements such as electrical upgrades and improved guarding and barriers.
- Improvements to Seadown despatch and intake.
- Improved capacity to manufacture N-Protect.

- Ongoing HawkEye development.
- Electronic despatch systems.
- Further asbestos replacement.



Dunedin asbestos roof replacement.



New lime shed at Supreme Lime to increase availability and operational efficiency.

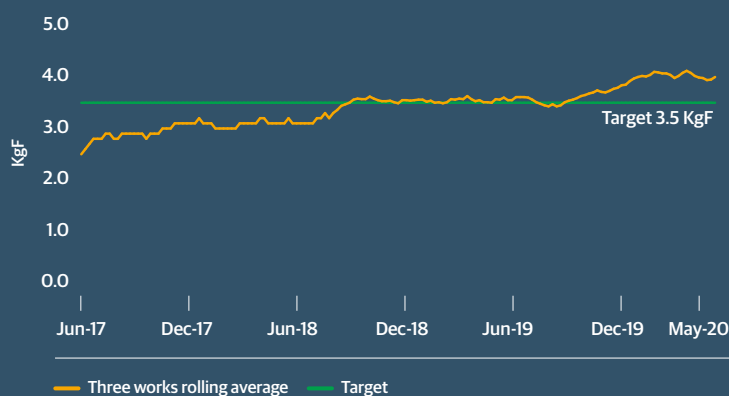


QUALITY AGRI PRODUCTS

Reliability + dependability

Whether it's fertiliser, lime, seed, agchem or animal health products, **farmers** and **growers** need products that are fit for purpose, suitable for **New Zealand** conditions and available when needed.

SUPERPHOSPHATE COMPRESSIVE STRENGTH



Compressive strength

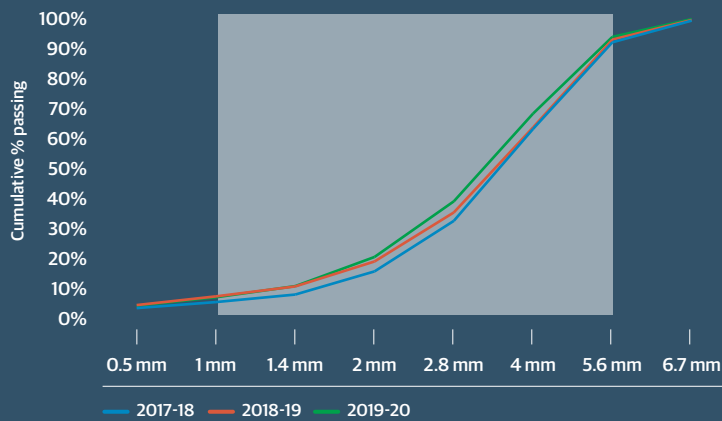
Granule compressive strength offers agronomic and environmental benefits, helping ensure the right

nutrients are applied in the right place at the right rate. Ravensdown's goal is to increase the compressive strength of our manufactured

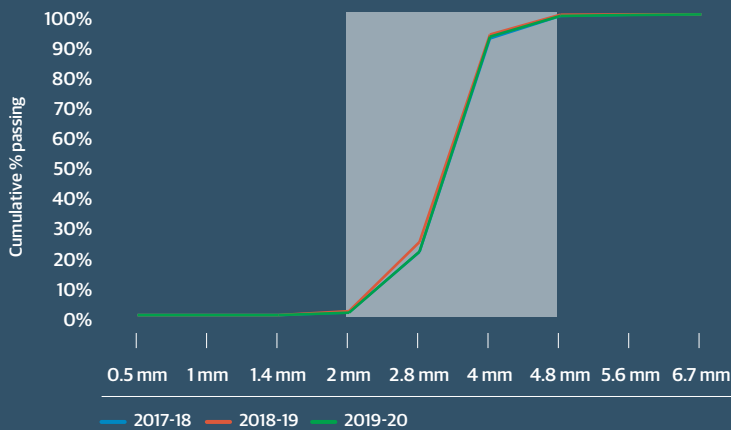
superphosphate and maintain granular integrity. Increased compressive strength means the fertiliser granules break down less during handling and blending. This means less dust and better, more precise spread during application.

Our results over the last 21 months have been achieved through operational focus and sourcing quality rocks.

SUPERPHOSPHATE PRODUCT SIZING 2017 - 2020



UREA PRODUCT SIZING 2017 - 2020



Particle sizing distribution

Particle size is a crucial quality metric. The ideal sized granule will improve coverage and spreading efficiency and reduce dust. Some variation is needed, but either extreme will have implications for the environment and for precision spreading.

We have set a target particle sizing band for each product (superphosphate: 1.0mm to 5.6 mm and urea: 2.0mm

to 4.8mm). The target is to ensure that we provide high quality products to improve environmental outcomes and optimise performance. Ravensdown continues to improve our focus on achieving ideal particle sizing.

We have a strong focus on granulation quality from the manufacturing teams, and care and attention from our despatch and stores teams.

Managing phosphate's footprint

We know our stakeholders care about dependable, consistent and affordable access to phosphate that doesn't create undesirable levels of dust, odour or cost. When sourcing phosphate rock from the few countries that export rocks that Ravensdown can use, the challenge is to balance qualities like the environmental, physical and agronomic performance with issues like risk of accumulated cadmium. Ravensdown carefully manages phosphate rock supply to ensure superphosphate is affordable and effective in order to keep New Zealand farming competitive, while minimising these risks.

Our goal is to continue to improve our quality by evaluating different rock blends and making process and operational improvements. We intend to more widely share our quality information so our staff, spreaders and customers can have the confidence in our manufactured products.



QUALITY AGRI PRODUCTS CONT.

93.8%

of Ravensdown fertiliser tonnage sold were Fertmark registered components

2018 - 19 **93.9%**
2017 - 18 **93.8%**

Fertmark standards

The Fertmark programme was set up in 1992 to give New Zealand farmers confidence in the chemical quality of fertiliser, lime and associated claims. The scheme is managed and annually reviewed by the farmer-controlled Fertiliser Quality Council.

Ravensdown maintained all its registrations in 2019-20 and

has the highest number of Fertmark product registrations of any company. These products are independently audited every six months, with audit samples compared with Ravensdown's own internal quality control results. All Ravensdown lime quarries and major fertiliser products are Fertmark registered.

75

Overall product quality rating for fertiliser, lime, agchem, seed and animal health products

2018 - 19 **74**
2017 - 18 **74**

Product quality ratings

Overall product quality as rated in the annual customer satisfaction survey lifted slightly to 75 out of 100, equivalent to a very good rating on a scale of 0 = poor to 100 = excellent.

All products have performed consistently well, reflecting an ongoing focus on quality from procurement, through transport, handling, storage, testing and ensuring regulatory compliance.



Drier and lighter storage assists with quality.

Fertiliser sales
Total fertiliser sales were slightly down on 2018-19, primarily due to the impact of droughts.



Sulphur and phosphate are converted into plant-available form through superphosphate manufacturing.

0.085%

Quality complaints as a percentage of total orders

Target: <0.1%

2018 - 19 **0.045%**

2017 - 18 **0.065%**

2,795

In-house quality tests

2018 - 19 **2,825**

Quality control through supply chain

Ravensdown is in the process of reviewing this measure. Some areas under consideration are:

- Continued quality testing of product on receipt into New Zealand.
- Increased physical quality testing of products at our port stores prior to despatch.
- Analysis of product attrition from supplier to receipt and on to despatch.

We have had two significant quality-impacting events during the year impacting our performance (see below). We have audited our key sites and are implementing actions to improve quality of despatched products.

EVENT	ACTION	OUTCOME	FUTURE ACTION
Fines in urea – South Canterbury.	Updated processes and management of stock.	Product quality maintained due to improved handling within the store.	Plant improvements to mitigate the issue.
Contamination of cropping products during the bagging off process – Canterbury.	Updated processes, improved planning, increased resourcing, and alternative processing plant.	Maintaining product quality. Improved output. Better utilisation of plant and resources.	Investment in improved product storage and handling infrastructure for these products; procurement planning that supports inventory stockturn.



Communication with transport providers and spreading companies was vital throughout the year – especially through COVID-19 alert levels.



QUALITY AGRI PRODUCTS CONT.

100%

Bulk vessel applied fertilisers imported as "low risk" biosecurity

Target: >95%

2018 - 19 **98%**

2017 - 18 **97%**

Target: achieved

Low-risk imports and quality

This year 100% of our shipments met our low risk measurement, the majority from long-term preferred suppliers, but also including a small parcel from a new supplier. Recent independent

audits of suppliers have been impacted by COVID-19. Due to our continued high performance and long history of compliance in managing biosecurity risks, Ministry for Primary Industries (MPI) was satisfied we were managing biosecurity risks to the necessary standard.

98%

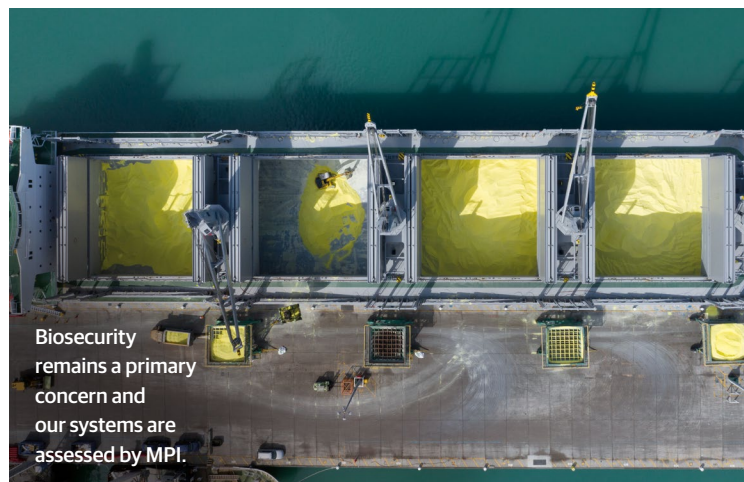
Bulk vessel fert imported met our spec for physical and chemical quality

Target: >95%

2018 - 19 **97%**

2017 - 18 **97%**

Target: achieved



Biosecurity remains a primary concern and our systems are assessed by MPI.

91%

Direct suppliers' performance is evaluated

Target: >90%

2018 - 19 **86%**

2017 - 18 **85%**

Target: achieved

International suppliers' performance evaluation

High-performing suppliers are key for delivering value to our shareholders. We regularly evaluate supplier performance against a standard set of criteria which allows:

- Improvement in areas where it is needed.
- Recognition of high performance among their peers.
- Performance evaluation during the term of a contract.



Supplier evaluation progress

2018-19	2019-20	NEXT YEAR
<ul style="list-style-type: none"> ■ 100% of fertiliser direct suppliers evaluated ■ Commenced evaluating non-fertiliser direct suppliers 	<ul style="list-style-type: none"> ■ 100% of fertiliser and Animal Health direct suppliers evaluated annually or biannually ■ Design and testing of improved supplier management tools 	<ul style="list-style-type: none"> ■ Commence evaluating preferred Indirect Suppliers ■ Implement Supplier Relationship Management tool ■ Supplier Relationship Management training

280

mg Cd/kg P maximum cadmium in all phosphate products

Cadmium management

Cadmium naturally occurs as a trace impurity in phosphate rock. Evidence to date indicates that cadmium in New Zealand soils poses little concern, but it needs to be managed over the long term. This year, research was carried out on additional phosphate rock new sources from Togo and Nauru. Testing of the resulting superphosphate granule is still ongoing. The new sources did result in the production of superphosphate with higher cadmium levels compared to superphosphate made when using Boucraa rock from Western Sahara. Despite this increase, the target level was still achieved.

Through the Fertiliser Association of New Zealand, a maximum limit has been monitored since 1997. Ravensdown has been consistently below the limit of

280mg Cd/kg P over the past 10 years with the long-term average being well below that limit - in the order of 185mg Cd/kg P.

Through integration between our sourcing, manufacturing and advisory services, we will continue to be vigilant in the area of managing cadmium accumulation. New testing regimes will also be supported, and we will continue to collaborate with stakeholders via the Cadmium Working Group. Where there are localised effects, a Tiered Management System means alternative products are recommended and provided.



The focus is on availability of quality inputs such as fertiliser, lime, seeds agchem and animal health products.



ENABLED PEOPLE

Compassion + responsiveness



Enabling people takes constant **focus** and a positive, safety-oriented culture. Learning and development have always been prioritised, and staff and contractor **wellbeing** is increasingly important.

This year, Ravensdown suffered the devastating **loss** of one of our Aerowork team in an aircraft incident. Investigations are still ongoing and will continue for some time as we endeavour to determine what happened and **share** our learnings across both the business and the wider aviation industry.

Health and Safety

Revised Safety and Wellbeing Strategy

There has been significant change in our safety and wellbeing focus areas over the last 12 months, with the development of a revised Safety and Wellbeing Strategy which

has been rolled out across the country via 17 roadshows led by the Leadership Team. At the centre of the strategy are three core pillars:

1. Critical Risk Management
2. Visible Leadership
3. Simplified Systems and Assurance

With a restructure of our centralised national resources, focus is on implementation of the strategy, supported by risk management training which has already been completed across all operations and supply chain, with field teams to follow.

Focus on Critical Risks

Critical risks have been identified throughout the business and key projects are underway to improve how we manage the following priorities:

- **Traffic Management:** a risk management standard has been developed to specify the minimum requirements sites must meet to prevent people-vehicle and vehicle-vehicle interactions that could result in a serious injury or fatality. The standard has been progressively rolled out through operations, stores and quarries. Once fully implemented, our focus will be on verifying controls and continuing to build understanding of traffic management risk in the business.

- **Hazardous Energy Isolation:** a suite of hazardous energy isolation procedures, roles and verification methods have been developed and are being progressively implemented. The next stage of the project is to develop and roll out hazardous energy e-learning training to our staff.
- **Contractor Management:** reviewing and improving how we pre-qualify, manage, and evaluate the performance of our contractors and their work. This includes introduction of new technology to improve the safety aspects of contractor management.
- **Driver Training:** on-road driver training has been implemented for 108 of our field-based staff.

The off-road component has also begun with eight staff having completed the programme. The scheduled rollout of this programme was disrupted due to COVID-19, but has now been reinitiated and is a focus for the coming year.

Hazard and incident management

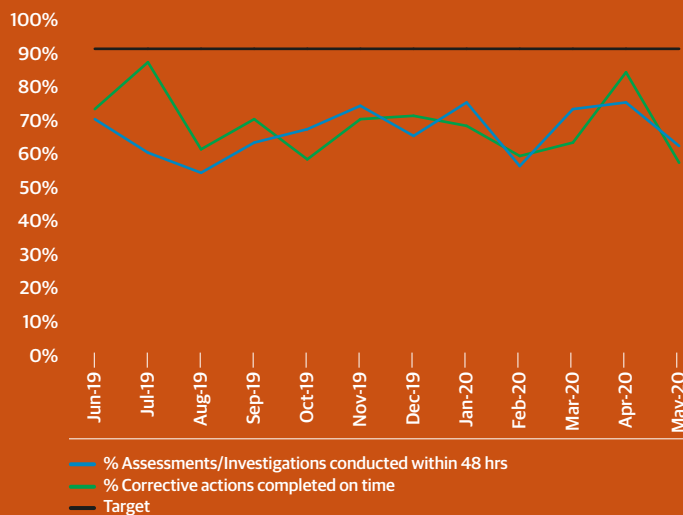
Two of our performance measures are intended to build trust in our system and ensure that if someone reports an issue, it will be addressed in a timely manner. These key performance measures are:

- **Assessing/investigating hazards/incidents** within 48 hours of them being reported.
- **Completing corrective actions** on time.

Although we have seen consistency in our safety reporting rates over the past year, our performance against the above key measures has remained relatively static.

In some cases, this reflects us taking the time to get an investigation or action right, but it is not enough.

PERFORMANCE AGAINST PROCESS INDICATORS



Our new strategy will bring focus to the important things we must get right to keep our people safe.



ENABLED PEOPLE CONT.

871

Total events reported
 2018 - 19 **839**
 2017 - 18 **714**

64%

Reported hazards and incidents assessed / investigated within 48 hours
 2018 - 19 **68%**
 2017 - 18 **43%**
Target: > 98% not achieved

2.20

Rolling 12-month Total Recordable Injury Frequency Rate average (per 200,000 hrs)
 2018 - 19 **4.4**
 2017 - 18 **4.7**
Industry benchmark 3.13: achieved

1.41

Rolling 12-month Lost-Time Injury Frequency Rate average (per 200,000 hrs)
 2018 - 19 **1.96**
 2017 - 18 **1.44**
Industry benchmark 1.48: achieved

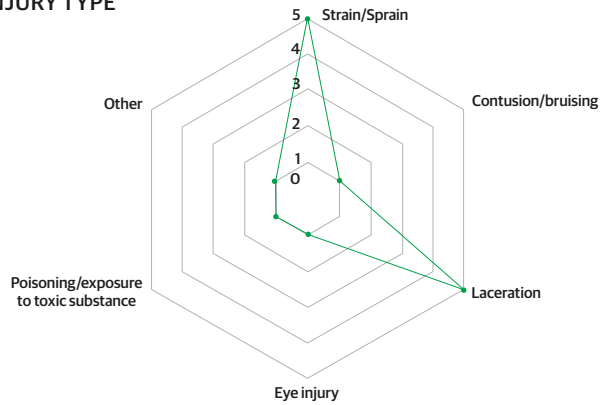
Recordable Injuries

In the 2019-20 financial year, 14 of our people sustained a recordable injury, meaning they were injured to the extent that they needed medical treatment,

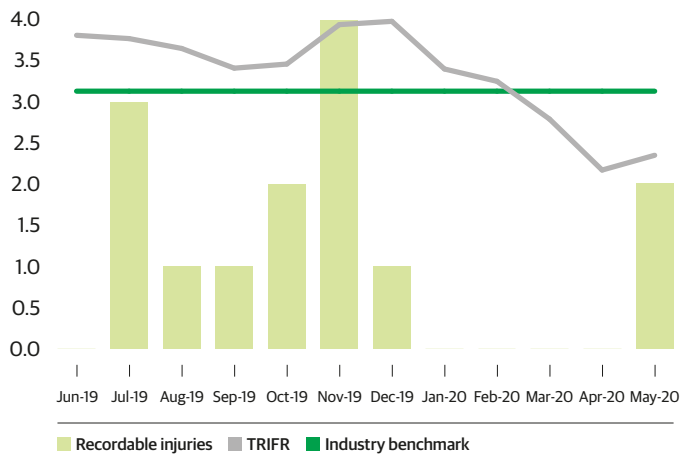
restricted duties, or time off work. This is a significant decrease from the 27 recordable injuries reported last financial year. Reducing this number further remains a key focus.

2019 / 20 TOTAL NUMBER OF RECORDABLE INJURIES

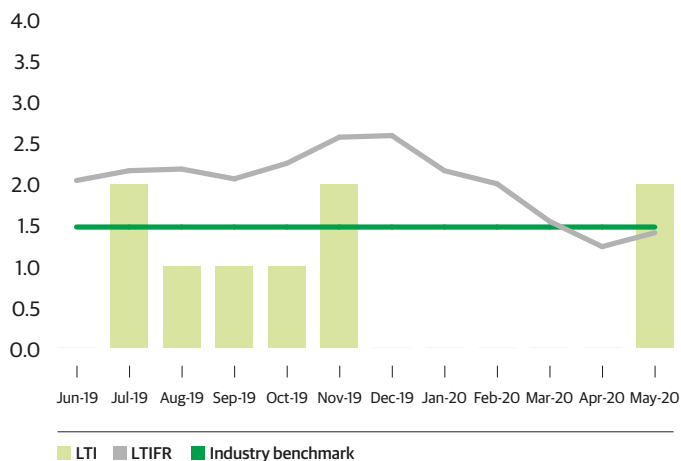
BY INJURY TYPE



TRIFR 2019-20 FINANCIAL YEAR (PER 200,000 HRS)



LTIFR 2019-20 FINANCIAL YEAR (PER 200,000 HRS)



Focus on Injuries

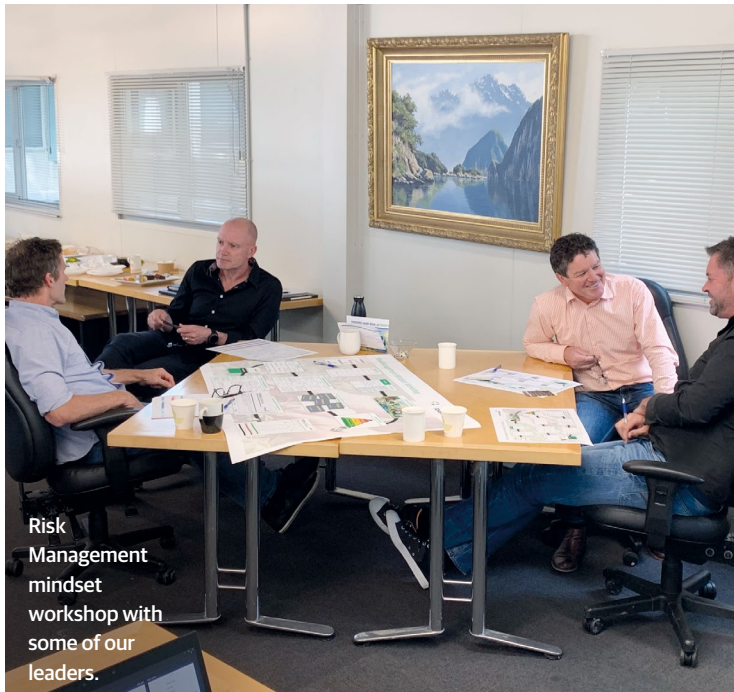
Total recordable injury frequency rate (TRIFR) and lost time injury frequency rate (LTIFR) targets have been achieved this year*. LTIs are defined as when an employee is unable to perform any of their regular duties and requires time off to recover. The number of musculoskeletal injuries has continued to decrease this year, from 63% to 33% in 2019-20. While this is a really positive outcome, this area remains a focus along with other critical risk areas such as Traffic Management.

Part of the new strategy is a focus on safety conversations, where leaders engage one-on-one with employees to discuss

the safety aspects of the task at hand. This demonstrates leadership commitment to safety and also allows employees a direct channel through which feedback can be provided on any safety-related concerns or ideas.

The engagement survey's safety dimension comprises four safety and wellbeing questions. This year, we received a positive perception score of 77% on the combined topics below:

- Workplace safety and security
- Physical work environment
- How effectively and quickly safety issues are addressed
- Wellbeing



Risk Management mindset workshop with some of our leaders.

9

Total lost time injuries
2018 -19 **14**
2017 -18 **14**

14

Total Recordable injuries
2018 -19 **27**
2017 -18 **33**

66%

Corrective actions are completed on time (on or before their due date)
2018 -19 **69%**
2017 -18 **53%**

Target: > 98% not achieved

77%

Engagement survey results relating to safety dimensions
2018 -19 **83%**
2017 -18 **80%**

1,045

Safety conversations logged



*# Annual Zero Harm Benchmark Report
As in previous years, figures exclude contractors



ENABLED PEOPLE CONT.



Thrive wellbeing programme

Wellbeing

Wellbeing is a global topic and a strategic business imperative that has been defined by the World Health Organisation as "Every individual realising his or her own potential, coping with the normal stresses of life, working productively and fruitfully, and making a contribution to her or his community."

At Ravensdown, we believe that looking after the wellbeing of our people is the safe thing to do, the smart thing to do, and the right thing to do. We know that if we look after our people, they will look after our co-operative, themselves and each other.

'Thrive,' our wellbeing programme was launched in February 2020 and focuses on raising awareness in our target areas of mind health, heart health and fatigue.

We've created a programme of initiatives in these target areas that aim to:

- Reduce risks and enable our people to stay well (e.g. tools and resources for self-help, health monitoring, flu vaccinations).
- Change mindsets and raise awareness (wellbeing and resilience training, targeted wellbeing campaigns).

- Provide help and support recovery (health and life insurance, injury management, counselling programmes and psychological first aiders). We've established a national network of Wellbeing Champions to support Thrive and an online platform with a multitude of resources designed to support our people. Thrive continues to evolve and initial feedback will drive the programme to achieve our wellbeing goals.



11.1%

Staff turnover
2018 - 19 **11.3%**
2017 - 18 **11%**

Target: <10% not achieved

660

Full Time Employees
2018 - 19 **658**
2017 - 18 **641**



Resourcing / Workforce

Our target of ≤10% turnover allows for a healthy movement of talent into and out of the organisation. This year, the turnover rate for permanent employees steadily decreased from the last year, peaking at 12.2% in June 2019, and reducing to 11.07% at financial year end. By remedying any issues identified from turnover analysis through the year, a stable experienced workforce can give confidence to stakeholders.

Overall, Full Time Employees headcount has remained static for the last financial year. Critical roles have been reviewed to

ensure business continuity as part of our risk management response. Due to the economic uncertainty created by COVID-19, the year ahead will be focused on prudent cost and resource management.

\$940k

Spent on targeted external learning and development (L&D spend)

2018 - 19 **\$1.1m**
2017 - 18 **\$0.8m**

2,968

Learning hours (internal)

2018 - 19 **2,572**

47.4%

Internal appointments

2018 - 19 **36%**
2017 - 18 **42.7%**

13

internal secondments

2018 - 19 **6**
2017 - 18 **8**



Learning and Development

Our investment in Learning and Development demonstrates the commitment Ravensdown has made to expanding the knowledge base of its people. We provide the training required for our people to be safe in their current role and to support the development of skills required for growth, future opportunities and supporting our shareholders.

Actual training spend decreased in 2019/20 and was below our forecasted spend (\$1.2m). This was the result of planned training being postponed due to COVID-19 restrictions. Safety and Wellbeing continued to be a focus for our training (\$429k vs \$370k in 2018/19), with the introduction of three programmes focused on wellbeing, on-road and off-road driver safety and risk

management among our stores and manufacturing sites. In the current environment, investment in learning and development may be challenging. We will continue to focus on safety and wellbeing in addition to the introduction of new leadership development opportunities and continuing to develop our agri managers and Customer Centre to support farmers with their productivity and environmental goals.

We have a commitment to ensuring the best person is appointed to any position. Through competitive selection processes, the number of internal appointments (including secondment opportunities) this year increased to 47.4% from 36% the year prior. This demonstrates our commitment to internal progression and is indicative of the calibre of our internal candidates.

Appointments from within grew by 11.4% showing the calibre of internal candidates.





ENABLED PEOPLE CONT.

Diversity

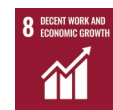
Diversity allows for an inclusive culture and innovative practices; it is important to our employer brand that those from a range of demographics want to contribute to the success of Ravensdown. Our gender diversity in management positions has increased year on year from 19% in 2018 to almost 22% in 2020. While the overall proportion of females in the business has decreased slightly this financial year to 33.75%; female representation at Board level has doubled, now at 22%. The benefits of diversity are organisation-wide, and it is our goal to embed an inclusive

culture where everyone feels a sense of belonging. We are off to a strong start with the introduction of our Diversity and Inclusion Policy in 2018 and our focus on capturing and reporting key diversity statistics across our workforce as part of the onboarding process for new hires.

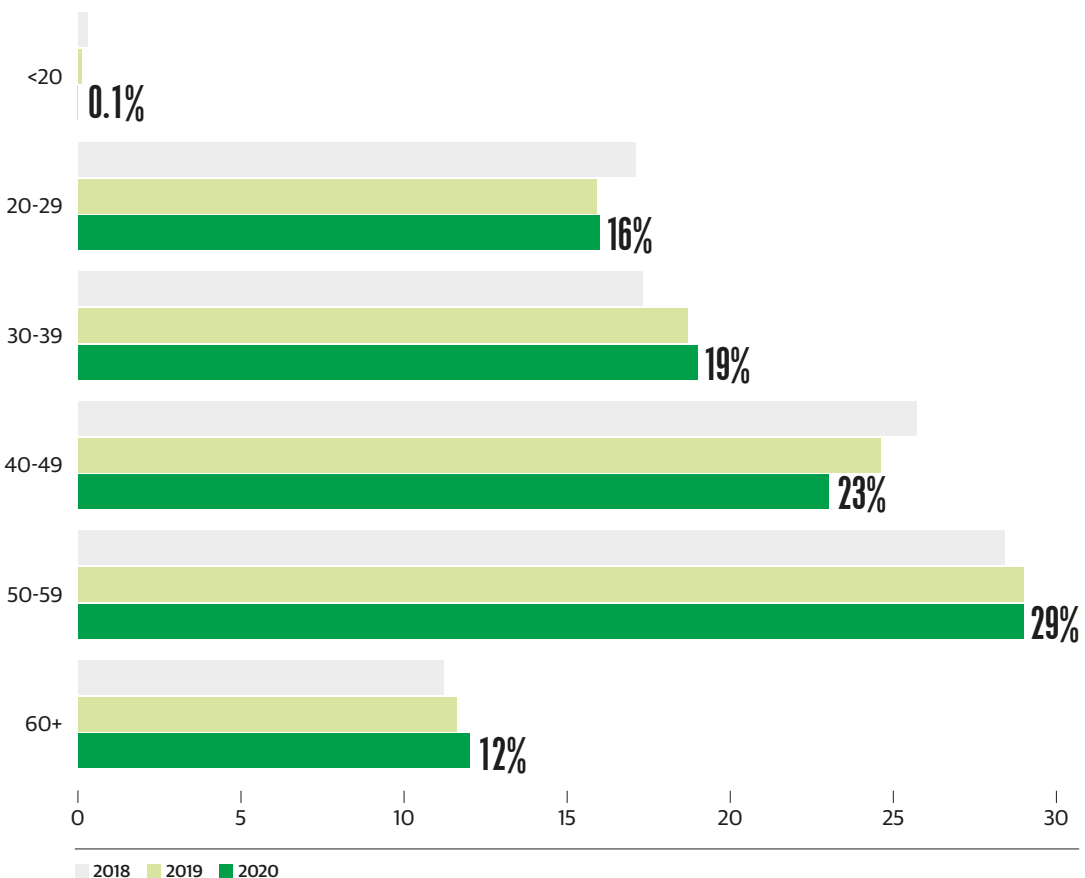
We continue to encourage our people to record how they identify in terms of ethnicity and have seen an increase of known ethnicity reported by 27% since 2017 (moving from 35% known to 62% known).

We continue to support our female staff into leadership roles and sponsor the Agri Women’s Development Trust

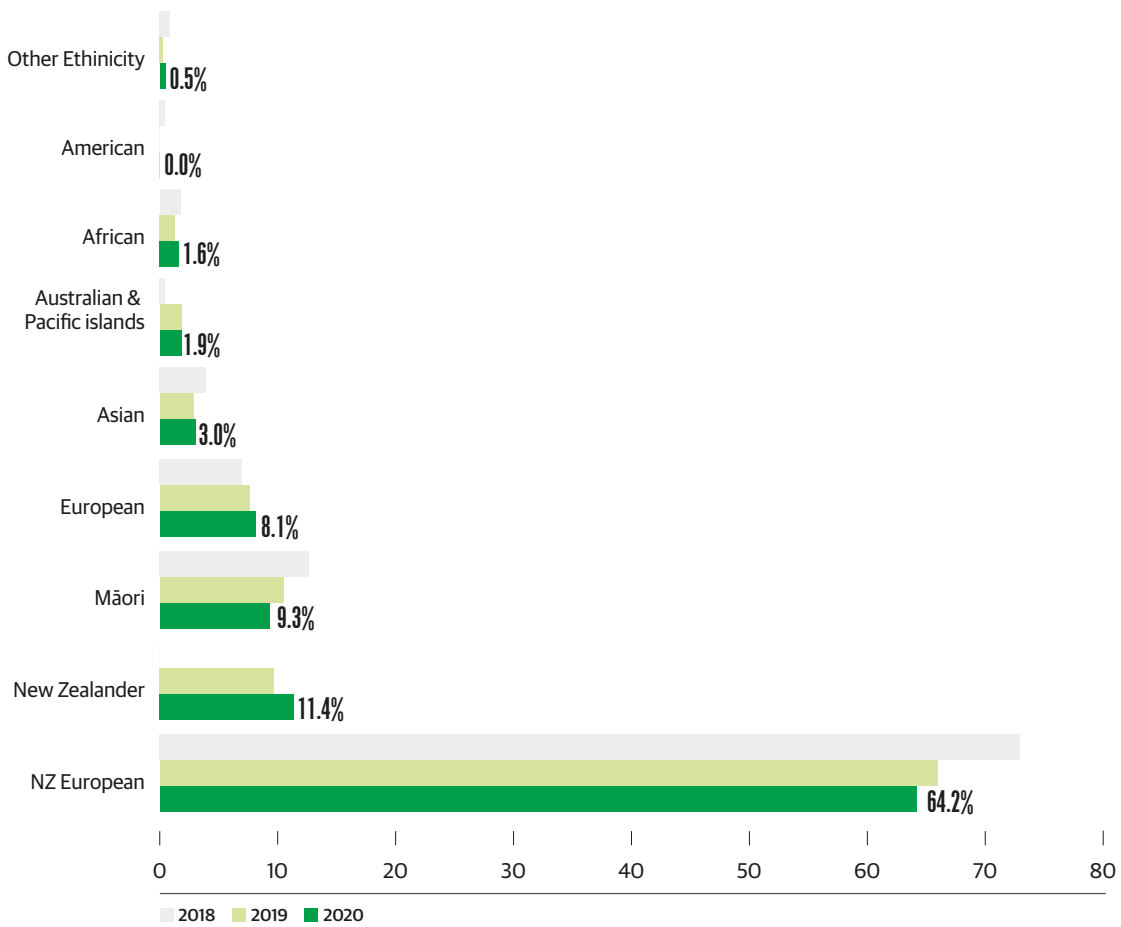
programme. Over the next 12 months we will focus on our attraction, recruitment and selection processes to ensure that decision-making processes are fair, objective and robust, enabling diversity and inclusion considerations to be top of mind when we bring new people into the co-operative.



AGE

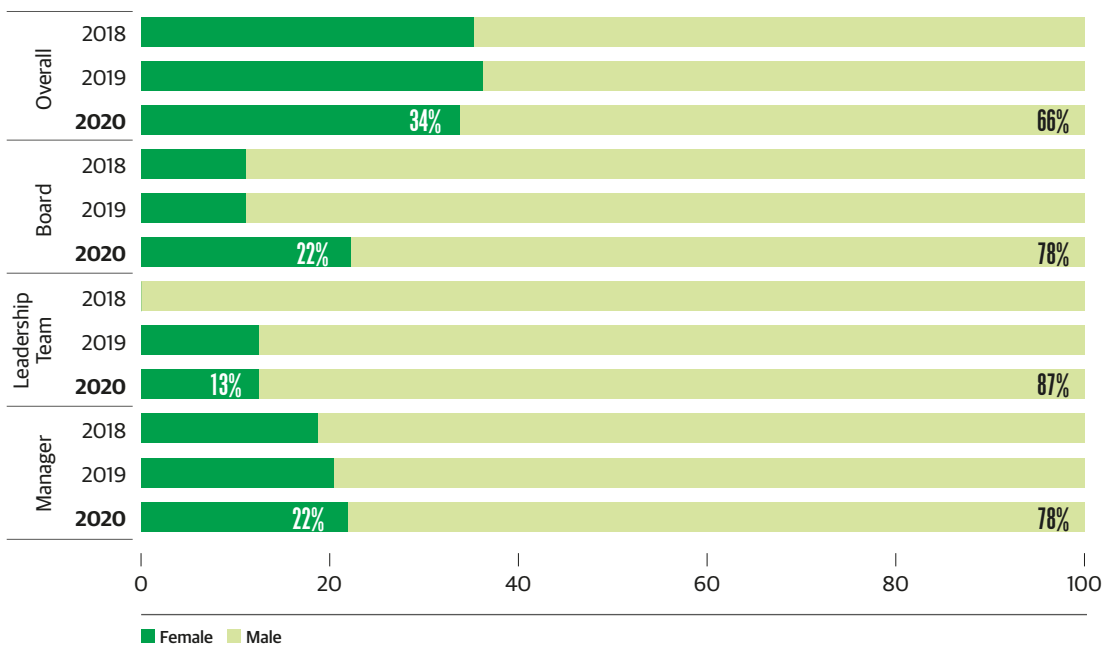


ETHNICITY*



* Numbers correspond only to the known ethnicity data

GENDER DIVERSITY





SCIENCE

Discovery + progress



Evidence and collaboration can deliver **solutions** that are having a real impact on farming practice.

5.0m

Expenditure funding Research and development (\$m)

2018 - 19 **5.2m**

2017 - 18 **4.7m**

The research and development investment has a clear focus on technologies, products and services that deliver tangible environmental and production benefits and we have the capacity to invest where the value proposition is clear and compelling.



IntelliSpread

Ravensdown's IntelliSpread® precision aerial application system enables a prescription map to be loaded into a topdressing aircraft's GPS. The GPS then communicates with a computer which controls the opening and closing of hopper doors. The doors are automatically operated with the added benefit of not distracting the pilot to enable fertiliser to be applied where it is needed and at the rate required.

The value:

Farmers can trust their fertiliser investment is applied as intended with proof of release records available. Technology-enabled aircraft allow fertiliser plans to be accurately delivered by electronic instruction.

- Improved precision to avoid non-productive/sensitive areas and associated positive environmental outcomes.
- Improved precision to target maintenance areas and low fertility areas which may require capital fertiliser applications.
- Avoiding exclusion zones or those areas that are above soil fertility optimum enables fertiliser to be redeployed for economic benefit.
- Improved pilot safety due to not having to use the hand-operated lever for hopper opening.
- Farmer has confidence that the fertiliser is being applied as agreed.
- Productivity gains for hill and high-country farmers using precision fertiliser application technology through increased nutrient use efficiency.



Ants Roberts,
Chief Science
Officer



Computer-controlled doors will give greater accuracy and ability to avoid sensitive or non-productive areas.

- Reduced environmental impacts from fertiliser use which is aurally applied.

Status:

Three planes are in operation. During the year about 10% of total applications have been completed using the differential rate application technology (prescription map) outside trial applications. The applications represent 152,765 hectares, 31,258 of which was deemed not to require fertiliser.

Effective area applied was 121,507 hectares.

Future expectation:

All Aerowork aircraft to be fitted with IntelliSpread technology by 2021/22.



SCIENCE CONT.

Aerial scan results have been tested against ground truth data with promising results. The outcome could be redeployed or reduced fertiliser use.



AirScan

Airscan® is the service resulting from the Primary Growth Partnership programme "Pioneering to Precision". The PGP programme enables the detailed nutrient requirements of hill country farms to be identified through remote sensing technology which then helps ensure that the right amount of fertiliser is applied precisely as needed for optimal pasture and stock growth.

The PGP programme is a collaboration between the Ministry for Primary Industries and Ravensdown as investment partners. The two main research contractors are Massey University and AgResearch. COVID-19 led a to six-month extension to the programme

which is now expected to be completed next year.

The value:

- Better targeting of low fertility areas that will benefit from capital fertiliser applications and reduced application rates where fertility is above the economic soil optimum.
- Positive economic benefit, either immediately from redeploying fertiliser where appropriate or over a longer timeframe from capital application.
- Allows effective areas to be accurately determined.

Status:

Seven farm fertiliser applications have been achieved using variable rate equipped aircraft based on

plans developed directly from hyperspectral data and programme software. Four additional nitrogen fertiliser applications were completed using an IntelliSpread-equipped aircraft.

Future expectation:

The expected adoption rate of 15% of hill country farmers within three years of programme finishing (2023) using precision application and 40% within 10 years still appears to be reasonable and achievable. Trends in fertiliser use on hill country and the relationship of this with precision application can also be evaluated from the time the programme finishes.

Nitrogen and phosphorus use efficiency

Ravensdown focuses on research and development to provide innovative products and services to reduce or mitigate Nitrogen (N) and phosphorus (P) losses. This includes financial loss for farmers and loss of N as nitrous oxide to the atmosphere (greenhouse gas emission) or potential P run-off.

N and P are essential plant and animal nutrients which are added mainly as fertiliser. N can be lost by leaching from animal urine patches and also as atmospheric loss. Most P is attached to fine clay particles which can be transported across the landscape in surface run-off. Direct losses from fertilisers are small if good management practices (GMP) are used by farmers. Along with effective pasture utilisation, nitrogen has shown its value in 2019-20 as a cost-effective feed source - especially for drought recovery.

The value:

As N and P loss can affect receiving water quality, new technologies to reduce N and P loss can enable our shareholders to continue their ability to farm in the face of increasing regulatory requirements around nutrient externalities.

Status:

When fertiliser nutrients are applied using GMP, direct losses of N and P from fertiliser products are generally less than 10%. GMP for fertiliser use is the right product, applied at the right time and in the right place at the right rate. Currently we continue to develop urea treated with urease inhibitor products to reduce ammonia losses and coated urea as a controlled-release N fertiliser to increase N use efficiency.

Serpentine Super has been available as a lower water solubility source of P for some time and further efficacy of new products in this area will be explored.

Climate change is a central concern to New Zealand stakeholders, so the co-operative is investing in the training and certification of its advisors, the technology they use and the products they can recommend to reduce GHG such as nitrous oxide from farms.

Future expectation:

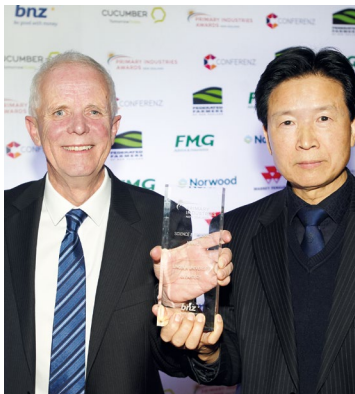
The quest for optimising nutrient efficiency will be perpetual. It will not always be possible to indicate how successful a single technology or bundle of solutions arising from this work will be in reducing nutrient loss in real farm situations because of the highly complex system of interactions which occur on farm. At best, success will be demonstrated by showing the impact of new component technologies on the farm system.



Agri Managers and other advisors are seen as part of the farmer-shareholders' team. They can advise on tools like nitrogen, pasture utilisation and the importance of good management practices to minimise losses.



SCIENCE CONT.



Professors Keith Cameron and Hong Di from Lincoln University won the inaugural Science & Research Award at Primary Industries New Zealand.

ClearTech

ClearTech® is a dairy effluent treatment system developed to help farmers reduce the environmental risks from land application of effluent and to safely recycle water to wash the dairy yard.

The value:

By reusing and recycling water, the effluent storage capacity is effectively doubled. ClearTech® also reduces the risk of a dairy farmer breaching consent conditions – particularly when wet weather is both filling the pond and preventing effluent application. The collaboration with Lincoln University on the project has progressed very well and they have installed a fully commercial unit on their demonstration farm. The latest research focuses on the ClearTech lysimeter trials and the benefits of applying clarified water and/or treated effluent versus untreated effluent. The reduction of *E.coli* in clarified water of 99.9% for washing the yard, the treated effluent, by up to 91% means a reduction in *E. coli* leaching into underground aquifers. There is also a reduction in phosphates (DRP) by up to 99% in both clarified water and treated effluent meaning reduced amounts into waterways which in turn can reduce algal growth and improve water quality.

A case study completed at Green Park Dairy showed that for a 540-cow herd, fresh water consumption was reduced by 2.9 million litres a year.

Status:

Seven commercial installations were completed with another three contracted to build. As well as dairy farms showing interest, operators involved in livestock transport are attracted by ClearTech's recycling of water for truck washing and the reduction of effluent for disposal which can be a major cost.

Future expectation:

We continue to develop this technology to best capture efficiencies and apply them to environmental requirements. Success will be shown as reduced fresh water use in dairy yards (litres) and reduced raw effluent being irrigated which in turn reduces the environmental impact with a reduction of effluent being irrigated in possible high-risk low-demand periods. In addition, a measure of success is reduced phosphate loss to waterways and reduced *E.coli* ending up on pastures. The target for 2020-21 is another ten installations.

LUCI-Ag

LUCI-Ag (Land Utilisation and Capability Indicator) is a decision support tool developed exclusively for Ravensdown by researchers at Victoria University of Wellington (VUW). The tool investigates current on-farm P & N losses and identifies nutrient hotspots on spatially detailed maps. This enables a list of mitigations specific to a farm's management and biophysical environment to be explored and ranked according to effectiveness in terms of nutrient loss, prior to taking action and the financial outlay.

The value:

LUCI-Ag enables farmers to identify and target nutrient hotspots on their farms in more spatial detail than other commonly used nutrient models. In addition, it links on-farm management and mitigations to in-stream water quality via an innovative hydrological model. This means the effects of current and future mitigation options can be explored in terms of estimated in-stream nutrient reductions.

Status:

Over the past year Ravensdown has applied LUCI-Ag to a number of farms, mostly located on the East Coast of the North Island but also in Southland. Many of these projects are ongoing, although initial feedback from farmers is generally positive and where farmers had already completed significant mitigations, LUCI-Ag validated the environmental benefits of their work.

There is particular interest in the catchment modelling

capability of LUCI-Ag both from catchment groups and regional councils. Recently an MPI-funded King Country catchment group engaged Ravensdown Environmental to carry out farm and catchment scale modelling using LUCI-Ag and this work will commence shortly. Despite the interest in catchment scale LUCI-Ag modelling, funding of catchment scale projects is a significant challenge for catchment groups.

Future expectation:

Based on the recent Action for Healthy Waterways announcement from the Government, all farmers in New Zealand will require a Farm Environmental Plan in future with a freshwater module. LUCI-Ag could help farmers show that they are targeting catchment-specific goals through the planned actions in their FEPs and quantify the effects of these practices in-stream. It is anticipated that as more applications of LUCI-Ag are completed, interest in the model will grow as farmers come to understand how it can extend their current knowledge of on-farm losses, help them better target nutrient hotspots and allow them to explore mitigations prior to any action or financial outlay.

Principal Environmental Consultants like Adrian Brocksopp and others can advise on water improvements at the catchment level.





TECHNOLOGY AND SERVICES

Insights + support



Technology is a key **driving force** behind agsector improvement. It opens up new **opportunities**; new ways to track progress, make decisions, demonstrate performance, and make **connections** with end consumers.

76

Average customer rating of agri manager advice and service

2018 - 19 **75**

2017 - 18 **74**

Advice and support

The team made up of regional managers, agri managers, agronomy technical managers, environmental consultants, animal health area managers and the Customer Centre team work closely with customers, providing the trusted advice that helps farmers grow food for

humans and livestock. An increase in on-farm training, on-farm support and the development of regionally specialised Customer Centre staff have all contributed to delivering a high level of service.

68

Number of Certified Nutrient Management Advisors

2018 - 19 **70**

2017 - 18 **57**

1,448

Training hours completed by customer-facing teams

2018 - 19 **2,789**

2017 - 18 **1,359**



Certification is part of an industry-wide programme for those who provide nutrient management advice to ensure farmers receive advice of the highest standard. Relevant qualifications and experience are essential. Once certified, advisors need to undertake continuing professional development each year. We have a total of 68 certified advisors across the agri managers, environmental team and Customer Centre with a further 11 working through the certification process.

Through our valued relationships with Massey and Lincoln universities, we are able to offer our people access to the experienced academic staff who

provide structured training combined with access to current research, thus enabling continued professional development. This gives our people and customers confidence that the advice provided is of the expected very high calibre. The drop in training hours is due to two factors. COVID-19 resulted in several courses being cancelled. Also, over the last couple of years we have been focused on getting all staff to complete the core courses and we are now approaching 100% completion. The development programme is a contributing factor in this, so some courses are now only viable to run every second year.

17,494

Number of hours Ravensdown farm environmental consultancy helping farmers

2018 - 19 **13,578**

2017 - 18 **10,115**

434

External engagement work with regulatory and non-regulatory bodies to achieve environmental outcomes (hrs)

2018 - 19 **954**

2017 - 18 **592**

Farm Environmental Consultancy

The environmental consultancy assists Ravensdown farmers with their more complex environmental needs on a fee-paying basis. The team has 19 highly qualified and experienced staff, recognised by professional bodies, primarily through the Nutrient Management Advisor Certification Programme. A team of fewer people devoted 29% more hours of project work for farmers, which

resulted in over 235,000 hectares of farmland assessed for environmental improvement.

Farmer demand for consultancy services (nutrient budgets, farm environment plans and resource consents) has been steady but is expected to increase as the central government freshwater policy is implemented. The team delivers high quality, robust work to shareholders which is also recognised by regional councils who hold the team in high regard.



The environmental consultancy team delivered 17,494 hours to farmers - an increase of 29% despite having fewer people.

236,195

Combined area (ha) of farms receiving specialist Environmental work

2018 - 19 **210,000**

2017 - 18 **128,000**





TECHNOLOGY AND SERVICES CONT.

5,876

Number of customers who have performed soil tests

2018 - 19 **6,585**
2017 - 18 **6,448**

65,653

Number of soil tests completed by ARL

2018 - 19 **79,194**
2017 - 18 **80,502**

10,877

Number of other diagnostic tests completed by ARL

2018 - 19 **11,704**
2017 - 18 **10,636**



3,936

Number of customers actively using HawkEye/ SmartMaps during the year

2018 - 19 **3,209**
2017 - 18 **2,682**



Testing to improve farm performance

The COVID-19 lockdown had a major impact on the number of completed tests through ARL, especially soil tests, as agri managers were no longer able to go on farm.

Soil tests are essential for farmers and their advisors to ensure optimal conditions for soil health, productivity and the environment. We expect the number of tests conducted at ARL to keep increasing, especially soil and water tests, as customers use more science-based evidence to plan their fertiliser applications and meet regulatory obligations.

Pre COVID-19 lockdown water testing, plant tissue testing and fertiliser testing were similar when compared with the previous year. Water testing has increased across our store network as we upgrade stormwater systems as well as routine compliance testing.

Fertiliser testing has also increased on products such as N-Protect, which reduces loss of nitrogen to the atmosphere.



Soil tests were down but are expected to bounce back as diagnostic tools become increasingly relied on.

Mapping technology

Ravensdown's mapping technology is provided to customers through HawkEye on the web or mobile app. HawkEye was developed with the philosophy that farmers own their data. Our role is to record that information in a way that is easy to access and use in meaningful ways. With changes to the National Environmental Standards pending, HawkEye is a critical tool for customers to manage their licence to operate.

Online ordering of fertiliser captured spatially in HawkEye has increased significantly with an 800% increase in tonnages

ordered online during the year and we expect this to continue as environmental regulations require accurate record keeping and controlling applications become a critical part of farm management.

This year, progress has included:

- Exclusion zones which automatically adjust order volumes and application to take into account areas on the farm where fertiliser should not be applied, for example, environmentally sensitive areas such as around waterways.
- A mobile ordering app to save customers time by



Mapping technology will help make decisions and show where fertiliser was applied.

- Customers can mark locations of farm features and hazards on the map to easily show staff and visitors where and what to look out for. Features are also useful when developing Farm Environment Plans.
- Support tools to avoid the over-application of fertiliser have improved during the year. These include checking the rate applied on the plan is not exceeded, checking the rate entered is correct and

checking for duplication for an order pending or recently applied.

During the year there has been a focus on improving the user experience by collaborating with customers through interviews and testing prototypes before software goes live. This customer-centred approach ensures HawkEye continues to meet the needs of customers, is easy to use and is providing the relevant information farmers need.

23%

of Ravensdown fertiliser tonnes captured by our proof-of-placement GPS technology

2018 - 19 **21%**



Proof of Placement

Accurate placement records enable farmers to have total traceability of nutrient applied. It should be noted that the tonnages of those farmers who self-apply, use spreading companies that are not integrated with Ravensdown technology or farmers who don't share their spreading records with their co-operative are not included in this measure.

Tonnage captured by GPS-enabled proof-of-placement technology recorded in HawkEye has increased, although customer uptake has

been less than expected. This is a long-term approach as spatial record-keeping, though acknowledged as best practice, is being adopted relatively slowly. Stricter controls over nutrient application related to emerging government legislation may cause this measure to increase at a faster rate. HawkEye enables customers to have visibility of the full planning process; from creating the order, seeing the spread plan, receiving the proof of placement, having a record of nutrient applied and managing their applications in real time.

9,501

Number of published agronomy plans

2018 - 19 **8,900**

2017 - 18 **8,362**



Use of agronomy plans for efficient use of nutrients, agrichemicals and seed

Agronomy plans enable customers to make the most efficient use of inputs such as fertiliser and agrichemicals for the health of the plant, soil, livestock, and environment. Severe drought and wet weather affected the number

of published agronomy plans with many customers needing to make unplanned changes. The increase in published agronomy plans was expected with stricter limits being imposed by regional councils. We expect the number of published agronomy plans to continue to increase.

OUTLOOK

This section looks at short, medium and long-term trends that create uncertainty around the ability of the organisation and its stakeholders to create and deliver value.

The development programme remains popular as a way to welcome new talent. Potential candidates for Ravensdown roles are expected to increase.

The efforts put in to make the business more resilient on many fronts mean the co-operative is positioned better than most and has a positive outlook. The purpose of enabling smarter farming for a better New Zealand remains important in the short and medium term during the COVID-19 recovery as well as into the longer term as the government seeks to double primary sector export earnings by 2030.

As the largest sector contributing to New Zealand's recovery, the agsector is more stable and appreciated than most. While there will always be fertiliser required to meet current and future demand for food, the co-operative is not alone in facing unparalleled uncertainty in the short and medium term.

Awareness of these uncertainties informs management decisions in an ongoing process of adjustment. However, the fundamental direction positions Ravensdown strongly when facing these trends.

Economic uncertainty

Volatility in foreign exchange, interest rates, global commodity prices and the cost of oil and shipping create uncertainty about how Ravensdown and its supplier eco-system will perform in the short and medium term. Given this volatility, closer monitoring of employment-related and operational costs will be needed. While performance incentives were paid recognising great individual contribution in 2019-20, staff have undergone a pay freeze in 2020-21. In the current year, there is also a hold on the appointment of any new headcount.

Long-term restrictions of capital investment can impact on efficiencies of assets such as manufacturing plant, customer service stores infrastructure or technological advances.

Rising unemployment in New Zealand and globally will contribute to individuals wanting to retain or obtain roles with a trusted and leading co-operative like Ravensdown. This is likely to reduce staff turnover and increase the talent pool of candidates seeking opportunities with us.

Supply disruption

A reliable, quality-focused and transparent provision of inputs to create food for humans and livestock is likely to be increasingly valuable. The means to control the flow, availability and spreading capability of macro-nutrients such as nitrogen and phosphate will be critical for the country's recovery and ability to operate through further restrictions.



Pandemic restrictions on certain source countries can impact on primary and secondary suppliers. With Morocco controlling 70% of the world's reserves of phosphate, possible disruption with the primary supplier from that country is a risk - not just to Ravensdown but the whole of New Zealand. Managing these uncertainties comes at a cost in terms of management time, increased inventory, shipments brought forward and increasing manufactured stock levels.

Our customers' customers

It remains unclear how much a prolonged recession in critical export markets will impact on demand for, and prices of, the produce created by our shareholders. A rise in protectionism, product dumping and buy-local campaigns can all impact New Zealand because 90% of food grown here is exported.

Travel restrictions mean market access and understanding of overseas consumer behaviours will be more challenging, but NZ is expected to maintain its reputation for producing safe and health-supporting food.

Seasonal and climatic factors

Drought recovery will shape farmer decisions through the spring and may include greater use of nitrogen as a cost-effective way to create feed. Longer term, as droughts and other climatic events increase, this will affect fertiliser decisions in terms of timing, type and amount.

Smarter fertilisers, such as coated urea that helps reduce

nitrous oxide emissions, will be complemented with advice that accounts for climate and environmental effects of the products chosen. Farmers and growers will depend on the co-operative model even more as windows to apply products may become ever narrower. Quality, precision application, availability and associated logistics will be of increasing importance.

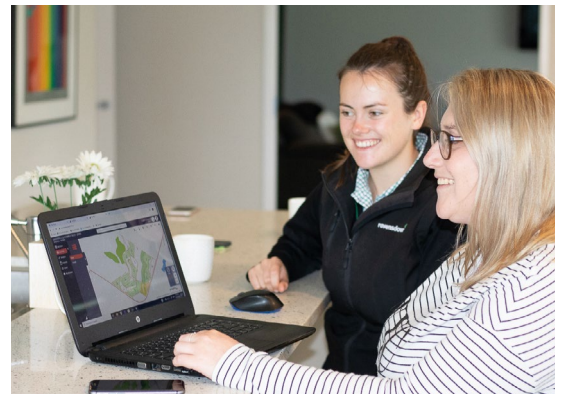
COVID-19 resurgence

Business continuity went well through lockdown and may be tested again as potential national or localised responses to repeated COVID-19 outbreaks. Any such response places a strain on critical highly trained staff and a prolonged lockdown could pose a substantial risk for their wellbeing. While provision of technology and products can occur during restrictions, services such as testing and consultancy can be more problematic.

A new set of lockdown restrictions is likely to disrupt shipping containers of essential nutrients which get mingled with non-essential ones. For shipping, declining fuel costs and rates for hire have fallen but scheduling return legs proves challenging if sectors like forestry are deemed non-essential. Pressure on road freight in certain areas of New Zealand would become intense.

Nitrogen reporting

As part of the government package on freshwater, an annual limit for dairy farmers of 190kg N/ha is set to come into force from July 2021. Farmers



Our HawkEye mapping tool can assist with a growing requirement to capture data on fertiliser application.



Atmospheric fixation makes clover an ideal candidate for pasture but it often needs help in the shoulder seasons with added nitrogen. Ravensdown sells fertilisers to support clover including potash as well as clover in its seeds portfolio.

will have to report on how much nitrogen is being used on farm. While a limit at this rate will impact some farmers, any further reductions without complementary technology and innovation will have a substantial effect on dry matter production. The government has undertaken to review the 190 N limit in 2023 and, as well as clarifying the economic trade-offs created by any further reduction, we will be helping shareholders, whatever the government of the day brings into law.

OUTLOOK CONT.

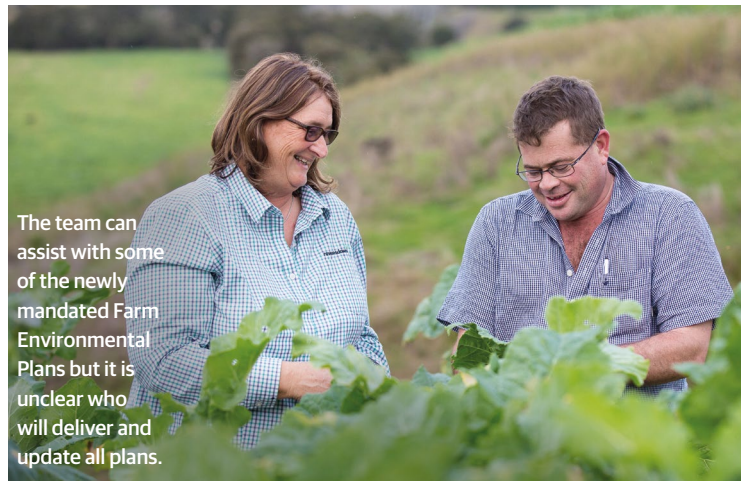
As farmers will need to demonstrate compliance, the spatial mapping and application records of the HawkEye system will be a valuable benefit. More details around the monitoring, compliance and enforcement regimes are yet to be forthcoming from the government. In late 2020, a panel of scientists advising the government may define a limit for Dissolved Inorganic Nitrogen that will also impact on farming practice in the medium to long term.

Farm nutrients and environmental expertise

Existing regional frameworks around compliance continue to be understood and acted upon. With impending government regulation mandating the requirement for a Farm Environmental Plan (FEP), the demand for our nutrient advice and environmental consultancy is set to grow. Uncertainty around the volume of work poses risks around maintaining quality of plans and advice as well as possibly overwhelming the highly skilled team.

Assessing the entire field-based teams' workload and

Horticulture shows potential and still requires soil fertility and solutions relating to smarter farming.



The team can assist with some of the newly mandated Farm Environmental Plans but it is unclear who will deliver and update all plans.

improved synchronising of skills and roles will help mitigate this challenge in the medium term, but long term it remains unclear who will deliver and quickly update all the FEPs triggered by any rule change.

Customer preferences

Price relativities with alternative sources of phosphate such as DAP can result in customers choosing imported rather than domestically made phosphate products. Access to cost-effective, plant-available phosphate and sulphur in similar proportions has been a primary driver behind the domestic manufacturing of superphosphate granules for over 100 years. Imported products do not offer these advantages, but it is Ravensdown's role to cost-effectively provide the quality products needed. Customers' preferences ultimately drive adoption.

A movement to clover - which provides N from the air and is not included in the 190kg N limit - could require less urea and more potash (K), which we also supply.

Carbon and climate

The Task Force on Climate-related Financial Disclosures (TCFD) recommendations provided important guidance for companies and investors to address climate-related risks and opportunities for business. Our enterprise risk management (ERM) process identifies and evaluates the most critical risks to our business, including transitional and physical climate change-related risks, and provides guidance to the Board and management team.

In January and March, workshops were conducted to further understand our full range of climate-related risks and opportunities: from changes to agriculture patterns, to risk to infrastructure, to emerging GHG emissions, management expectations such as carbon limits and taxes, enhanced reporting obligations, costs to transition to lower emissions technologies and increased cost of fuels, goods and services.

Limited site-specific risks exist at the local level and within our supply chain. The potential impact of physical risks is significantly mitigated

through our diverse geographical distribution and appropriate site management. Our strong financial resilience reduces transitional risk and we are taking steps to decrease our reliance on fossil fuels.

Land use

Ravensdown is diverse in the sectors it serves, with the majority of customers coming from the pasture-based sectors: primarily beef, lamb and dairy. Arable is a significant user of products and services. While horticulture is a sector that is smaller than the others, it shows great medium and long-term potential. Plant-based alternatives to meat or dairy still rely on products and expertise relating to soil fertility and smarter farming.

Cultivable land for food creation has been falling for many years due to conversion to housing. Large-scale afforestation and sale of productive land to turn into pine plantations could impact on fertiliser use as well as negatively impacting rural communities.

Access to research

The declining number of leading agri-scientists has been a long-term trend. As universities struggle with a lack of international students in the short and medium term, this could affect the funding and talent pool available to partner with commercial entities like Ravensdown. This could result in delays to initiate or complete joint research programmes that underpin innovation at an important juncture.

In the longer term, the government is accelerating its

Sustainable Food and Fibre Futures Fund and this will present opportunities as the co-operative remains well placed to encourage on-farm adoption of innovations.

Positioning and strategy

Smarter farming involves ensuring a productive agsector is managing within environmental limits for the benefit of all New Zealand as it recovers. Research based on robust science is needed into which 'regenerative agriculture' (RA) practices could be appropriate and scalable for New Zealand conditions and which may not. As policies are shaped, taxpayers money is spent and farmers decide on which practices to adopt, shareholders will need evidence that certain RA practices will



The future for shareholders such as Richard and Suz Redmayne from Coastal Lamb and for Ravensdown looks promising.

Image courtesy of Dave Allen

avoid unforeseen consequences such as higher greenhouse gas emissions, poorer quality feed and lower animal productivity.

The absence of a national food strategy remains a risk for all those New Zealand organisations involved with any aspect of the food value chain.



More research is needed into appropriate 'Regenerative Agriculture' practices that can be scalable without creating unforeseen consequences for the sector as a whole.

In summary, the future looks promising albeit with increasing and valid expectations from stakeholders. Ravensdown is up to that challenge - standing shoulder to shoulder with our shareholders, customers and partners. We are proud of our position, and do not take lightly the challenges and opportunities the future will present.

If we stay agile and open-minded on emerging trends, we are in a better position to respond actively in order to achieve our ultimate purpose - enabling smarter farming for a better New Zealand.

GOVERNANCE

Ravensdown's governance structure is set up to promote accountability and to support its ability to create value in the short, medium and long term. Ravensdown's governance provides insight on strategy implementation and direction, while supporting ethical, lawful, sustainable and responsible behaviour throughout the business.

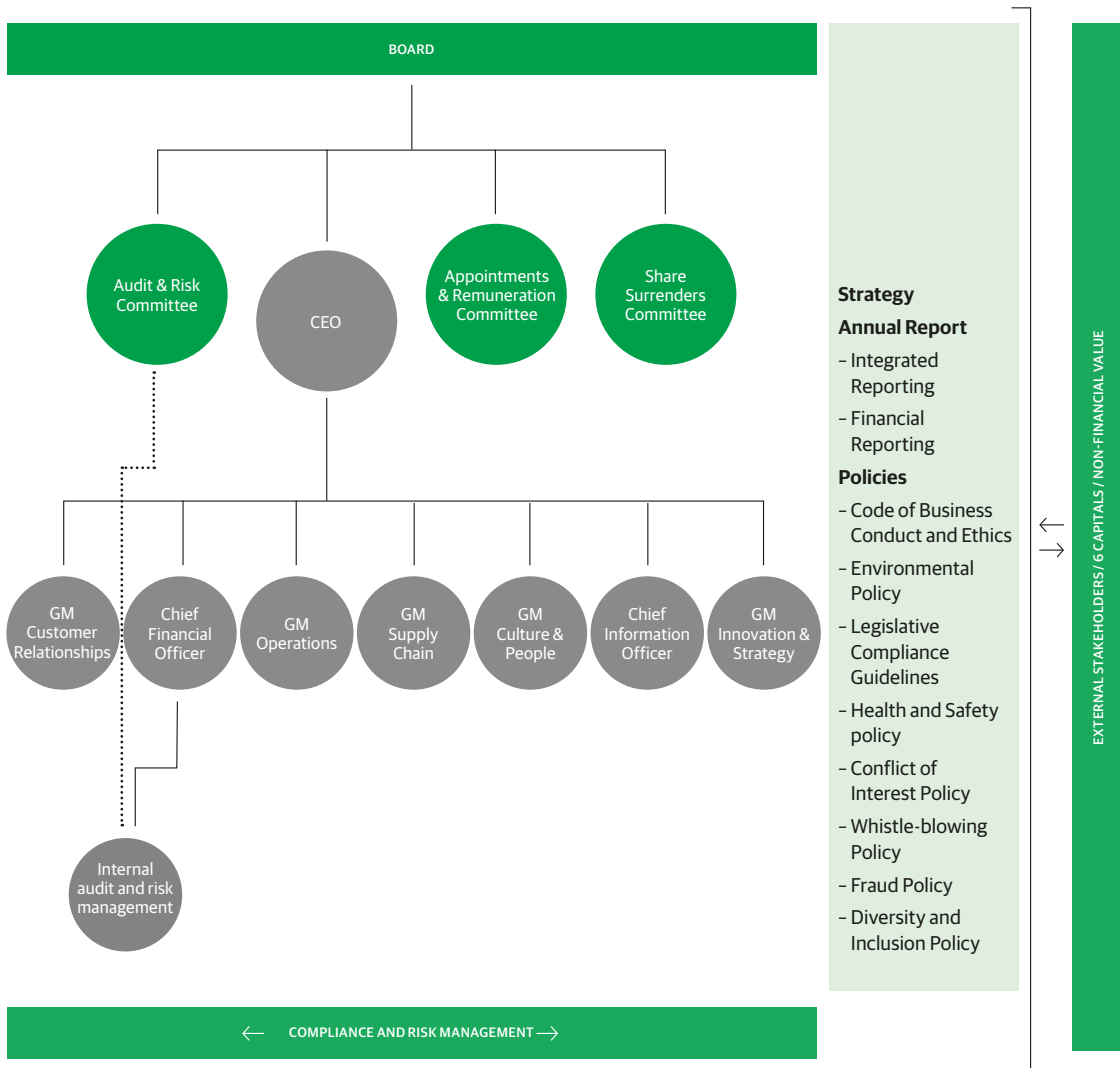
Code of Business Conduct and Ethics

The Board of Directors has developed a Code of Business Conduct and Ethics to give effect to Ravensdown's core values and to guide all employees and directors in our relationships with our stakeholders.

Company Values

The code requires that our decisions and personal behaviour will at all times be consistent with Ravensdown's core values of:

- Successful co-operative – we put the customer at the centre of everything we do.



- Empowered people – we choose the best people, keep them safe, and enable them to do their best.
- Enduring relationships – we develop long-term relationships based on integrity and trust.
- Environmental leadership – we strive to lead in the field of sustainability.
- Driving Innovation – we drive the business forward by finding better solutions.

These values mean that we will:

- Act honestly and fairly with due skill, care and diligence in the interests of all of our stakeholders.
- Demonstrate respect for key moral principles including diversity, individual rights, equality and dignity.
- Value personal and professional integrity, trustworthiness and competence.

Fraud Policy

Ravensdown has a philosophy of “zero tolerance” towards fraud, both inside and outside the company. We value the integrity of our staff and recognise that they have a key role to play in the prevention, detection and reporting of fraud. We therefore ask them to be vigilant at all times and to report any concerns they may have at the earliest opportunity. We are committed to creating and maintaining an honest, open and well-intentioned working environment where people are confident to raise their concerns without fear of reprisal on a confidential basis. All reported cases of fraud will be investigated.

Conflict of interest/ Related party transactions

Like most co-operative companies, Ravensdown has frequent transactions with its farming directors in the ordinary course of business. All transactions are conducted on commercial terms. A Conflict of Interest Policy ensures that any real or perceived conflicts related to staff members are managed at arm’s length.

Whistle-Blowing Policy

Ravensdown is committed to providing a transparent accountable organisation and staff are encouraged to have the responsibility to report any known or suspected wrongdoing within the company. Employees are encouraged to report this to their managers, or directly to the Chief Executive Officer. A 24/7 independent anonymous Ethics Hotline is also available where confidential information can be reported. Ravensdown is committed to the protection of genuine whistle-blowers against action taken in reprisal for the making of protected disclosures.

Diversity and Inclusion Policy

Ravensdown values and understands the importance of an inclusive workplace with diversity of thought, opinion and background. Our diversity commitment is about welcoming and respecting these differences and treating individuals equally, embedding this as part of our organisational culture. We aim to promote and sustain a sense of belonging; valuing and practising respect for the talents, beliefs,

backgrounds and ways of living of all employees, candidates, customers and suppliers. We are committed to ensuring all employees have access to equal opportunities at all stages of the employee experience.

Risk Identification and Management

The company has a comprehensive risk management framework to identify, assess and monitor new and existing risks. Annual risk updates are performed and risk improvement plans created and acted on. The Chief Executive Officer and the leadership team are required to report to the Board and Audit & Risk Committee on high risks affecting the business and to develop strategies to mitigate these risks. Additionally, management is responsible for ensuring an appropriate insurance programme is in place and reviewed annually.

Integrated Reporting

The Board delegated oversight and responsibility for the Integrated Reporting process to the Audit and Risk Committee. Progress is monitored at the Audit and Risk Committee meetings. An Integrated Thinking Team has been established to promote and embed integrated thinking in the business. The team is chaired by the Chief Financial Officer. Limited external assurance is obtained for the Ravensdown Greenhouse Gas Inventory. The rest of the non-financial performance measures are internally assured.

BOARD

Deep understanding and knowledge. As the board, we focus on good governance and oversight – setting the **strategic course** so the leadership team is clear on direction.



John Henderson LLB
Chair

John runs a 22,000 stock unit sheep and beef breeding and finishing operation, has been on the Board since 2004 and has been Chair since February 2014. As well as running a legal practice in Marton, John spent many years as a director of RACE Incorporated and of a number of farming and agricultural companies in NZ and overseas.



Stuart Wright B. Ag. Com
Deputy Chair

Stuart farms 330ha west of Christchurch growing arable crops, seed potatoes and finishing lambs, has been on the Board since 2006 and Deputy Chair since 2014. Stuart is a Nuffield Scholar and has had a number of governance roles in the industry-good sector as well as not-for-profit organisations.



Scott Gower
IoD Company Director's Certificate

Scott owns and runs a large hill country sheep and beef station at Ohura in the central North Island and has been on the Board since 2006. Scott is also on the Board of Beef & Lamb New Zealand, is a member of the NZ IoD and holds a certificate in company direction. He has completed a number of governance courses and continues to prioritise professional development.



Peter Moynihan

B. Ag. Sc

Peter owns a 190ha dairy farm located at Northope, has farming interests in Lochiel and Lorneville and has been on the Board since 2013. Peter is an Agribusiness Regional Manager for a prominent bank and has been through the Fonterra Governance Development Programme.



Bruce Wills

B. Ag. Com

Bruce farms in Hawke's Bay and has been on the Board since 2015. Bruce holds a wide range of governance positions, particularly in the science and environmental areas. He previously spent six years on the Federated Farmers Board and was National President from 2011 to 2014.



Nicola Hyslop

B. Ag. Sc (Hons), IoD Company Director's Certificate

Nicola farms a sheep, beef and arable operation outside of Timaru and has been on the board since 2019. She has been a registered farm management consultant for 20 years and has enjoyed governance roles with Opuha Water, Irrigation New Zealand and Beef & Lamb New Zealand.



Dr Jacqueline Rowarth

PhD, B. Ag. Sc, (Hons), IoD Company Director's Certificate

Jacqueline is part owner of a high-producing dairy farm in Waikato with associated deer and maize blocks. She has been on the board since 2019 and is also currently a director of DairyNZ. She was formerly Chief Scientist at the Environmental Protection Authority.



Jason Dale

(Appointed) B. Com FCA

Jason is CFO of NZ Steel and a Fellow of Chartered Accountants Australia and New Zealand and has been on the Board since 2014. He is currently Chairman of Crest Commercial Cleaning Limited and former Chair of the Audit Committees for Taranaki Investments Management Limited and LIC. He is the former CFO of large listed and unlisted companies such as EROAD, Auckland Airport, PGG Wrightson and Fonterra Ingredients.



David Biland

(Appointed) B. Ag. Sc, Dip Hort Sci, IoD Company Director's Certificate

David has been on the board since 2019. He has held several international management and governance roles, including with New Zealand company Argenta and animal health multinational Merial.

LEADERSHIP TEAM

Optimistic about the future. As the leadership team, we see our role as maintaining a **positive culture** at Ravensdown while ensuring the organisation remains **agile** as it faces multiple opportunities and challenges.



Greg Campbell
MBA(Dist), FNZIM, MIO
Chief Executive

Greg started with Ravensdown in 2013 and was formerly Chief Executive of Ngāi Tahu Holdings. Greg has been Managing Director of Waste Management NZ and CEO of Cleanaway Ltd Australia. He is a director of various companies and a past director of PGG Wrightson.



Sean Connolly
B. Com, C.A
Chief Financial Officer

Sean started with Ravensdown in 2004 and has been CFO since 2005.



Stephen Esposito
M. A. Sc. (Civ Eng), P. Eng.
General Manager Operations

Stephen is a professional engineer and joined Ravensdown in 2018 after 20 years of international experience in operations, risk management and strategy development.



Katrina Benedetti Forastieri

M.Sc (Hons), Dip. Ind. Org. Psyc,
Regd. Psyc

General Manager Culture
and People

Katrina joined Ravensdown in 2018 with over 20 years' experience in Human Resources and Organisation Development.



Bryan Inch

B. Ag. Sc

General Manager Customer
Relationships

Bryan started with Ravensdown in early 2014 and was previously CEO of Canterbury Building Society and held senior roles with Rabobank.



Mark McAtamney

B. Com

Chief Information
Officer

Mark started with Ravensdown in 2001 and has been CIO since 2005.



Mike Manning

B. Ag. Sc, CP Ag

General Manager Innovation
and Strategy

Mike started with Ravensdown in 1981 and has held a variety of roles in regional management, marketing, sales, supply and R&D.



Mike Whitty

B. Com. Ag, C.A

General Manager
Supply Chain

Mike started with Ravensdown in 1997 and has held a variety of roles in finance, sales, marketing, manufacturing and now the supply chain.

YEAR IN PICTURES



After 55 years with the fertiliser industry, Mike Davey retired as Regional Manager in Western North Island.



The former producer and presenter of RNZ's Country Life, Susan Murray, was the Ravensdown Agri Communicator of the Year.



Children at Ravensbourne School Pool celebrated their new roof courtesy of the Ravensdown Dunedin team.



Cancellations of field days and shows impacted on fundraisers who would have done the catering. Ravensdown donated \$7,500 across three affected schools.



Ravensdown worked with major sponsor partners like Young Farmers and New Zealand Dairy Industry Awards as they rearranged their schedule and formats.



A successful commissioning of the new aglime store in Te Kuiti was one more example of investing in resilience.

UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

At Ravensdown we recognise the **critical role** of business in helping to achieve the UN Sustainable Development Goals (SDGs). The specific **SDGs** that are important to us and that we set out to have an **impact** on are referenced throughout the Integrated Report. We have evaluated our business against the UN's SDG indicators (listed in colour below) and will continue to be **transparent** about how we are performing against these indicators.



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Water	10, 13, 17, 30, 31, 33, 53, 54, 55, 57, 58
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Enabling smarter farming throughout New Zealand

KEY

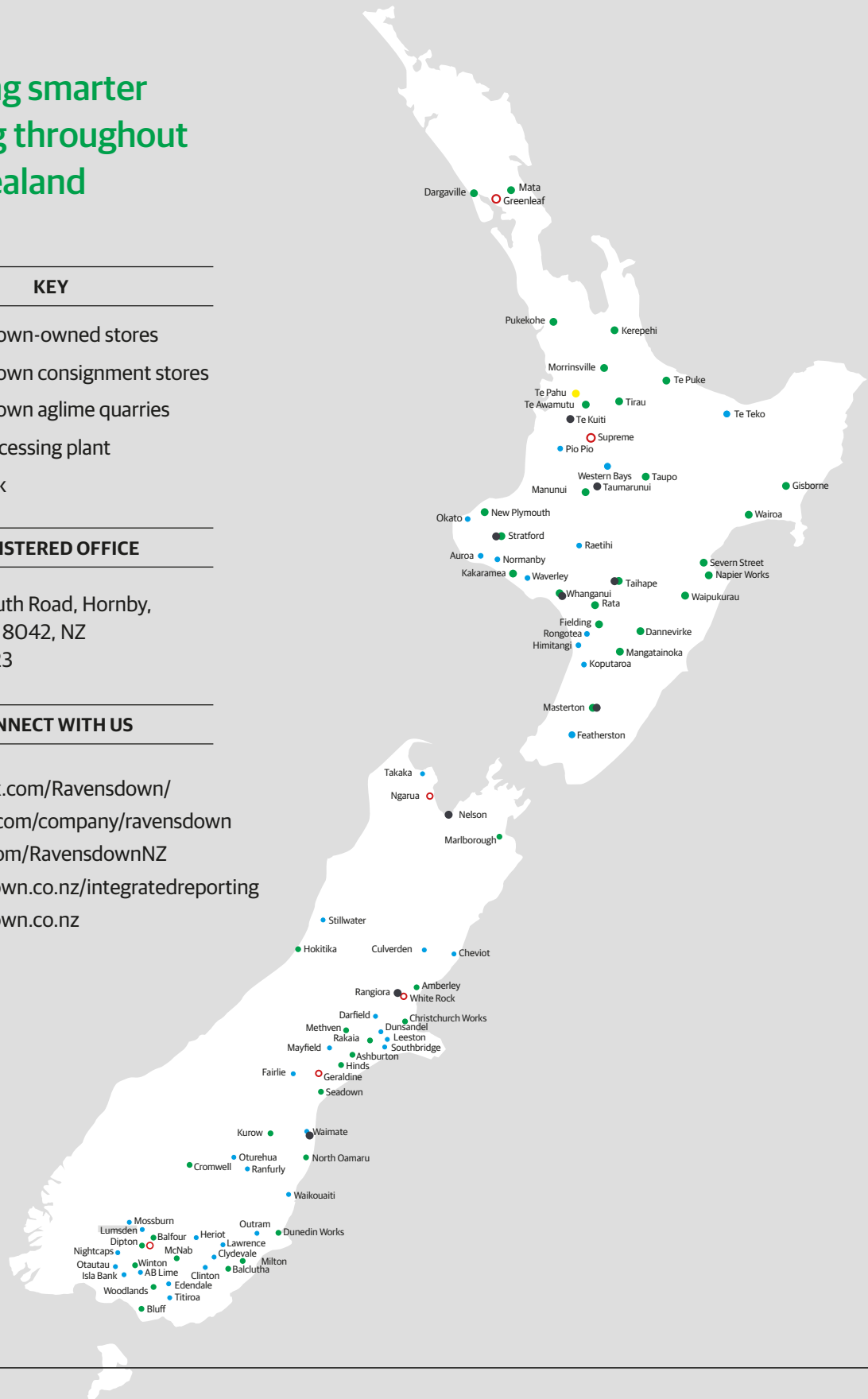
- Ravensdown-owned stores
- Ravensdown consignment stores
- Ravensdown aglime quarries
- Lime processing plant
- Aerowork

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Assurance and verification All reasonable internal verification efforts have been made in bringing this Integrated Report together in the spirit of disclosure. With the exception of the

greenhouse gas emissions inventory, for which Ernst & Young provided limited assurance, no other information in this Integrated Report was externally assured.

A full set of audited accounts is available in the annual report on Ravensdown's website.



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To enable **smarter farming** for a better New Zealand –
Ka pūkekotia a rongomātāne, ka poho kererū a Aotearoa