

ANNUAL REPORT

2017/18





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for more information



DAIRYNZ

YOUR LEVY IN ACTION

We invest dairy farmers' money into a wide range of programmes, guided by the dairy industry strategy.

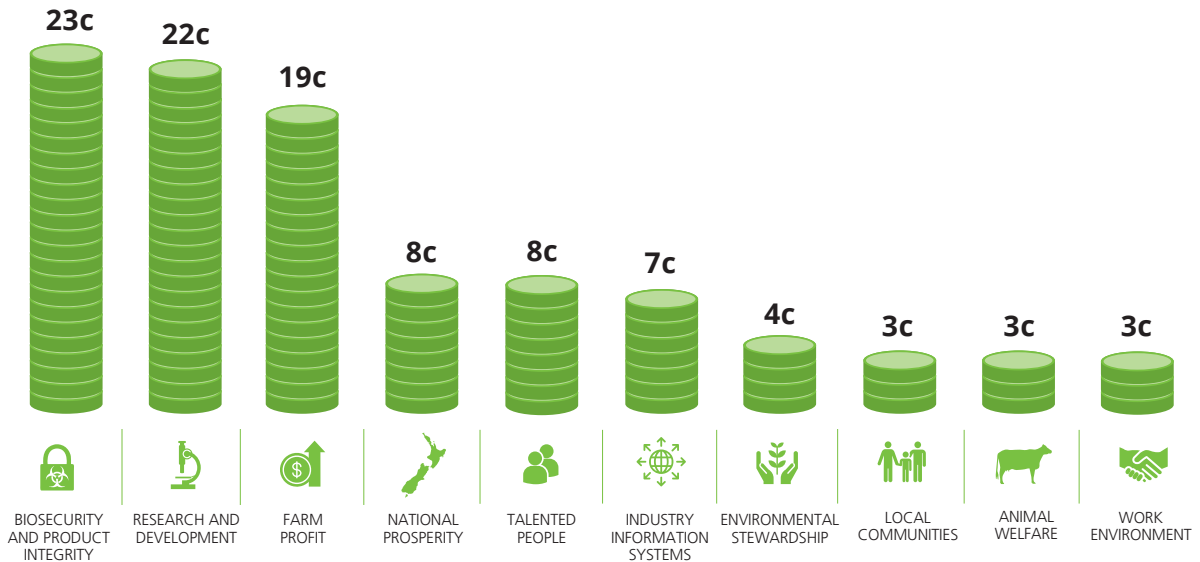
In 2017/18, \$66.2 million was collected through the milksolids levy, plus DairyNZ received government co-funding.

Our work includes research and development to create practical on-farm tools, leading on-farm adoption of good practice farming, promoting careers in dairying and advocating for farmers with central and regional government.

LEVY AND CO-FUNDING INVESTMENT BY OBJECTIVE 2017/18

2017/18 funding under the 10 objectives in the previous sector strategy, the Strategy for Sustainable Dairy Farming.

For every \$1 of DairyNZ investment:



2018/19 DAIRYNZ INVESTMENT COMMITMENTS

2018/19 funding under the six commitments in the new sector strategy, Dairy Tomorrow.

Commitment	Forecast Spend
 Competitive and resilient dairy farming businesses <i>(includes \$14.5m for TB management)</i>	\$53.7m
 Build great workplaces for NZ's talented workforce	\$7.5m
 Protect and nurture the environment	\$6.1m
 Leading in on-farm animal care	\$2.9m
 Grow vibrant and prosperous communities	\$2.4m

In your region 2017/18

NORTHLAND

A three-year study at the Northland Agricultural Research Farm, supported by DairyNZ and other sponsors, has compared bought-in feed systems with self-contained feed systems. The first two years found that when the cost of supplementary feed and cropping are considered, a grass-only system may have similar, or better, profitability to a system using palm kernel expeller (PKE). However, 2017/18 showed a significant advantage to using PKE due to a challenging winter/spring.

WAIKATO

DairyNZ's Waikato team carried out more than 750 touching base visits in 2017/18, to provide support to farmers managing seasonal issues and adverse events, and connect with those often unable to attend discussion groups. DairyNZ is also a key partner with Owl Farm at St Peter's School in Cambridge and the P3 Trust Hauraki, which both provide critical data analysis of performance, which is available to farmers.

TARANAKI

In 2017/18, Taranaki was affected by a severe drought which saw farmers face a feed shortage. The situation was compounded when Cyclone Gita hit the region in February. DairyNZ's Taranaki team worked closely with a number of organisations to coordinate support and advice for farmers. DairyNZ, in conjunction with the Rural Support Trust, held nine workshops across the region to help farmers and answer their questions. The workshops were attended by 265 farmers.

WEST COAST

Top of the South Island farmers are now able to benchmark their performance against other farms in the region for the first time. In 2017/18, 20 additional farms signed-up and entered their data in DairyNZ's DairyBase system. dairynz.co.nz/dairybase

BAY OF PLENTY

DairyNZ's Bay of Plenty team were involved in field testing and initial user acceptance of Farm Gauge, a new online tool to help farmers assess their business. The team worked closely with the project's developers and hosted a series of workshops throughout the region to both road test and gather feedback to enhance the farmer experience when using the tool.

LOWER NORTH ISLAND

Driven by the challenge to reduce nitrogen loss on farms, the lower North Island team established four partner farms in the region to monitor strategies to mitigate nitrate (N) leaching. To date, the project has involved modelling environmental and economic measures for each mitigation option and quantified any co-benefit on reducing greenhouse gas emissions. The project will demonstrate these strategies on-farm.

CANTERBURY/NORTH OTAGO

Since 2013, nine Canterbury farmers and one Rotorua farmer have participated in the Forages for Reduced Nitrate Leaching (FRNL) programme. They provide feedback on experiments and trial plantain, fodder beet and catch crops on their farms. This has helped them reduce nitrate leaching and provides real-life examples for other farmers who also need to meet nutrient limits. dairynz.co.nz/frnl

SOUTHLAND/SOUTH OTAGO

In July 2017, the Southern Dairy Hub opened and research got underway. During the 2017/18 season DairyNZ researched the impact of fodder beet and kale on cow health, reproductive performance and milk production. Four farmlets were established to address key issues related to wintering, nutrient loss reduction and fodder beet. DairyNZ and AgResearch are the principal shareholders in Southern Dairy Hub, along with local farmers and businesses through the Southern Dairy Development Trust (SDDT). southerndairyhub.co.nz

DAIRY TOMORROW TO SET SECTOR UP FOR FUTURE

Another year in the dairy sector has been and gone and 2017/18 will be remembered by many of us for the rise of climate change and the discovery of mycoplasma bovis in New Zealand. While vastly different issues, both have had profound impacts on many of you and dominated the media cycle.

Every season throws a range of challenges at us – whether it's farming under a reduced milk price, managing difficult weather conditions, working toward environmental goals or, like this year, handling a significant biosecurity issue.

DairyNZ and your levy plays an important role in delivering research, innovation, advice and projects which will set the dairy sector up for the future and help manage current issues.

DAIRY STRATEGY LAUNCH

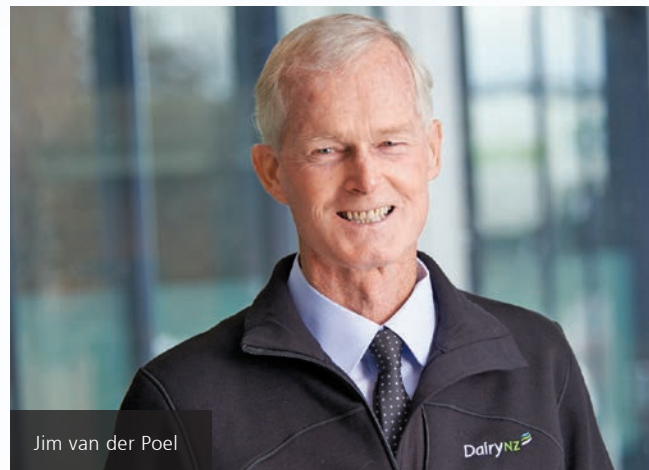
A highlight of 2017/18 was the release of the new dairy sector strategy, *Dairy Tomorrow*.

Launched in November 2017, the new strategy was driven by the need to keep pace with the changing nature of our sector. Our former chairman Michael Spaans was heavily involved in developing the new *Dairy Tomorrow* strategy and we will continue his great work as we roll it out this year.

Dairy Tomorrow is the plan which will take New Zealand dairy into the future, as a high-performing, sustainable and responsible sector. DairyNZ investments are driven by the strategy. *Dairy Tomorrow* has six commitments to achieve in the coming decade. These are:

- to protect and nurture the environment for future generations
- to build the world's most competitive and resilient dairy farm businesses
- to produce the highest quality and most valued dairy nutrition
- to be world leading in on-farm animal care
- to build great workplaces for New Zealand's most talented workforce
- to help grow vibrant, prosperous communities.

These commitments are crucial for dairy's future. Achieving them will take collaboration by everyone in the sector – from dairy farmers through to the wider primary sector, dairy leaders and government.



Jim van der Poel

The *Dairy Tomorrow* strategy continues the good work being done by dairy farmers who are busy building competitive businesses, producing quality product and leading in sustainability, animal care, employment and in the community.

LOOKING AHEAD

Finally, I want to thank you all for contributing to our fantastic industry. Dairy farming really is a great career, great lifestyle, great business and a great opportunity for farming families to make a huge contribution to New Zealand. Even though dairying can be tough at times, I hope you feel the same passion I do for this industry.

**JIM VAN DER POEL
CHAIRMAN, DAIRYNZ**

MYCOPLASMA BOVIS FUNDING

The *Mycoplasma bovis* (*M. bovis*) issue has been a big challenge for our sector this year, and we have responded with significant resourcing to support MPI and farmers. The funding of this work is complex. DairyNZ and Beef + Lamb are both contributing to support farmers impacted by *M. bovis* and the activity associated with eradication and research.

Details of this cost share are still being worked through, but the GIA (Government Industry Agreement for Biosecurity Readiness and Response Deed) is crucial to determining the funding mechanism, and a biosecurity incursion levy will likely be required to recover some of the costs incurred by *M. bovis*.

Read more about the *M. bovis* work on pg 5 and 13.

Sector at a glance



11,590
TOTAL NUMBER
OF HERDS

(down 158 herds from 2016/17 and
the lowest level since 2010/11)

COWS
.....



4.992

MILLION MILKING COWS

(up 131,000 cows from the previous season)



1.84

BILLION KG OF
MILKSOLIDS

Processed by dairy companies in 2017/18
(decrease of 0.6% on the previous season)



368
average kg
milksolids per cow

(down 13kg/cow on the
previous season)

FARMERS
.....



6940

owner-operators

(72% of herds)

3159

sharemilkers

1440

contract milkers



FARMS
.....

151ha

average
farm size
(effective ha)



431

average herd size

(up 17 cows per head)

WHAT A YEAR THAT WAS...

Dairy is a sector which is dynamic, challenging and always at the forefront of change. And each year we all balance the need to plan for the future, while acting in the here and now.

For me, 2017/18 was a big year for DairyNZ, as we represented our levy payers in everything from research, farm practice advice and environmental change, through to policy, public perception and industry events.

This year, DairyNZ has had a significant change in terms of how our investments are made. The introduction of the *Dairy Tomorrow* strategy means realigning our priorities to it, to support achieving its six commitments. This was reinforced by an internal restructure, so our teams are delivering results which align to the *Dairy Tomorrow* objectives.

This year's highlights are once again as varied as our scope of work.

I will begin with one of the year's biggest topics – *Mycoplasma bovis* (*M. Bovis*). Over the last year we've all learnt how important it is to value our biosecurity systems and to support one another through one of the biggest challenges our sector and farmers have faced in a long time.

DairyNZ has committed significant resources to the fight to eradicate *M. bovis* – including 40 DairyNZ staff who are dedicated to working on the issue, from liaison with Ministry for Primary Industries, significant farmer support and expert technical advice, through to communications with media and stakeholders. And the job isn't over – I expect *M. Bovis* to remain a significant focus for us in the next year too.

RESEARCH HIGHS

This year we have continued programmes of research which will deliver invaluable information for dairy farmers.

The Forages for Reduced Nitrate Leaching (FRNL) research is continuing to look into how feeding diverse pasture species and crops can reduce nitrate leaching. Plantain and fodder beet appear to be the best options, while catch crops following winter crops appear to use water and nitrogen (N) in the soil over winter, reducing the risk of N leaching.

Results from research like FRNL will help set our farm systems up for the future.

Another levy-funded DairyNZ project, Leap21, got underway last season and explores future dairy systems. This is cutting-edge thinking - the team involved are designing resilient dairy farm systems which make



Tim Mackle

“OVER THE LAST YEAR WE’VE ALL LEARNT HOW IMPORTANT IT IS TO VALUE OUR BIOSECURITY SYSTEMS AND TO SUPPORT ONE ANOTHER THROUGH ONE OF THE BIGGEST CHALLENGES OUR SECTOR AND FARMERS HAVE FACED IN A LONG TIME.”

the best products in the world, while enhancing the environment and leading in animal care, along with being sought-after as workplaces. It's worth checking out, visit dairynz.co.nz/leap21.

OUR PEOPLE

Of course, dairy farming is alive and well thanks to the tremendous talent working across the sector.

In 2017/18, we invested \$7.4m into supporting farm teams – this includes training and skills programmes, farmer wellness initiatives and resources to enable quality work environments.

Some of the investment also goes into getting people into dairy farming. This is vital, because it is estimated that by 2025, we will need 50,000 people in the dairy sector workforce, many of whom will need tertiary training of level 4 or above.

As we head through the 2018/19 season, it's important we remember that people are the core of our dairy businesses – and as we work through issues like *M. bovis*, variable milk prices and climate, we need to look after ourselves first and foremost.

I want to thank our staff and board for their dedication, as well as our partners, but most importantly our farmers for their engagement and support.

**TIM MACKLE
CHIEF EXECUTIVE, DAIRYNZ**

DairyNZ board of directors



JIM VAN DER POEL

DairyNZ chairman Jim van der Poel was elected onto the Fonterra board in 2002 and stepped down in 2014. Jim also served on the board of New Zealand Co-operative Dairies Ltd.

In 2000, Jim was appointed to the foundation board of DairyNZ's predecessor organisation, Dexcel, and was elected as Dexcel's chairman in 2003. Jim was a farmer-elected director on DairyNZ's first board in 2007 and stepped down in 2009. He was re-elected to the DairyNZ board in 2013.

Previously, Jim was an inaugural director on the Fonterra Shareholders Fund and has won the AC Cameron Award, 2002 Nuffield Scholarship, Sharemilker of the Year and Dairy Exporter Primary Performer Award. Jim and his wife Sue live in Ngahinapouri in the Waikato and have farming interests in Waikato, Southland, Canterbury and the United States.



HELEN ANDERSON

Helen is a director of NIWA, Antarctica NZ, Lincoln Hub Ltd, ClearPoint Ltd, chair of BRANZ and is on the National Council of the Institute of Directors and is Pro-Chancellor of Massey University.

She is a member of external advisory committees for the Department of Internal Affairs and the New Zealand Police and is involved in other advisory committees in the science, education, construction and government sectors.

She was chief executive of the Ministry of Research, Science and Technology for six years and before that was MoRST's chief scientific advisor for more than five years. Helen is a Companion of the Queen's Service Order and a Chartered Fellow of the Institute of Directors.



PETER SCHUYT

Peter is an independent director on a broad range of New Zealand businesses. He is currently chair of Dairy Investments Ltd and Tax Management NZ Ltd. He is also on the board and chairs the Audit and Risk Committees of Tatua Co-operative Dairy Company, TSB Bank Ltd, Foodstuffs North Island Ltd and the Alliance Co-operative Group.

Prior to taking on the director roles, Peter held senior executive roles, primarily in the finance and strategy areas, on the New Zealand Dairy Board, Fonterra and the NZ Post Group. He is a Chartered Fellow of the New Zealand Institute of Directors.



BARRY HARRIS

Barry is a company director with extensive governance and executive experience. Barry has held a number of chief executive roles including Environment Waikato, Greater Wellington Regional Council and Hamilton City Council. He was also a senior executive with Fonterra for five years.

Barry is currently chair of Food Innovation Waikato, Wintec, McFall Fuels and Agricultural Services Ltd. Barry is a director of WEL Networks Limited and OSPRI (former Animal Health Board).

He is also a member of the Waikato River Authority. Previous boards include CentrePort, RD1, AgResearch, International Nutritionals, Hamilton Riverside Hotels and Local Authority Shared Services. Barry has a Masters of Agricultural Science (Honours) and lives in Hamilton.



BEN ALLOMES

Ben lives and runs his farming business in Woodville with his wife Nicky and four children. He has a degree in Applied Science, Natural Resource Management from Massey University.

Ben was president of New Zealand Young Farmers for three years, has twice reached the grand final of the National Bank Young Farmer Contest and, together with Nicky, won the New Zealand Sharemilker of the Year title in 2008.

He is currently the DairyNZ representative on the Primary ITO partnership group and is Chair of the Dairy Industry Awards Trust. Ben is also a 2015 Nuffield Scholar.



ELAINE COOK

Elaine has farming interests in a 300ha family farm in Otautau, Southland. She lives in the Waikato with her three daughters. Elaine and her late husband took the traditional progression through the industry to farm ownership. Farming both in the Waikato and Southland.

Current and past governance roles have been with organisations that create value for others in agri-business, research and innovation, industry good, pastoral dairy farming and education. Elaine's corporate career has involved agri-business, local government, information management, health and safety, and human resources.



COLIN GLASS

Colin owns and operates a 650-cow dairy farm, and two further irrigated properties that rear and finish bull beef at Methven in Mid-Canterbury with his wife Paula, and their two daughters.

He is a chartered accountant and has a commerce degree in Farm Management and a post-graduate Diploma in Accountancy and Finance from Lincoln University.

Colin is chief executive of Dairy Holdings Limited which has extensive operations throughout the South Island. He is a director of a number of agri-business companies and is currently chairman of Ashburton Lyndhurst Irrigation Limited.



DairyNZ senior leadership team



TIM MACKLE CHIEF EXECUTIVE

Tim has been DairyNZ's chief executive since 2007 and chief executive of its predecessor Dexcel since 2005. He leads DairyNZ in its vision to deliver a better future for New Zealand farmers. Prior to joining DairyNZ, Tim was general manager of Fonterra subsidiary, Anchor Ethanol. He has a PhD in animal, food and nutritional sciences from Cornell University, New York, and was a nutrition and milk characteristics scientist at the Dairying Research Corporation in Hamilton. He also worked in strategy for the New Zealand Dairy Board before taking a corporate role at Fonterra supporting the first CEO.



BRUCE THORROLD STRATEGY AND INVESTMENT LEADER – NEW SYSTEMS AND COMPETITIVENESS

Bruce has been a strategy and investment leader since March 2001. The strategy and investment team is responsible for investing the farmer levy. Before joining Dexcel (now DairyNZ), Bruce spent 15 years with the Ministry of Agriculture and Fisheries and AgResearch, where he worked in soil science and catchment management, including hill country and lowland studies. At Dexcel, Bruce led the farm systems research team and was involved with the Holstein-Friesian Strain Trial and the Lake Taupo policy process, before taking on his current role.



JENNY JAGO STRATEGY AND INVESTMENT LEADER – FARM PERFORMANCE

Jenny took up the strategy and investment leader role in June 2018. She joined DairyNZ in 2000 as a scientist and spent 18 years working on the Greenfield Project, developing New Zealand's first fully automated milking farming system. In 2009 she spent a year at Moorepark, the national dairy research centre in Ireland. She holds a Doctorate of Philosophy in animal physiology, behaviour and meat science. She was a member of the Transforming the Dairy Value Chain programme steering group and is current board member of PICA (Primary Industry Capability Alliance).



DAVID BURGER STRATEGY INVESTMENT LEADER – RESPONSIBLE DAIRY

David is the strategy and investment leader for responsible dairying. David joined DairyNZ as a water quality specialist in 2013. He then became manager of the environment team in 2015, a role he held until joining the executive team in March 2018.

Prior to DairyNZ, he spent seven years working as a water quality scientist and advisor for Deltares, an independent research institute for water resources management, based in the Netherlands and later Singapore. David has a PhD in limnology and a MSc in freshwater ecology.



DAVID EVANS
GENERAL MANAGER –
CORPORATE SERVICES

David has been with DairyNZ since 2007 and is the GM corporate services and member of the strategy and investment team. The corporate services portfolio includes management and responsibility of the finance, digital ICT, office, facilities and procurement, human resources, and health and safety teams. David is also company secretary for the DairyNZ Group, secretary for the New Zealand Core Database Access Panel, and DairyNZ-appointed director of the Southern Dairy Hub. He brings a wide range of commercial experience to his current position, including previous roles with Fonterra, which included working on several post-merger financial system integration projects, and working in London for five years as a financial contractor. David joined DairyNZ as the financial controller and was chief financial officer prior to 2018. He has a Bachelor of Commerce and is a member of Chartered Accountants Australia and New Zealand.



VANESSA WINNING
GENERAL MANAGER –
FARM PERFORMANCE

Vanessa was appointed to the role of GM farm performance in March 2018. She leads a team comprising the farmer experience, farm practice adoption, marketing, product and relationships areas of DairyNZ. Vanessa joined DairyNZ as the GM marketing and communications in 2015 following an extensive career (15 years) in banking in various senior product, marketing and relationship roles, and a stint at the Heart Foundation of New Zealand, where she was head of marketing and fundraising.

The vision for the newly-created Farm Performance Team is to support farmers to achieve better outcomes for themselves and New Zealand. Vanessa has a Bachelor of Commerce in Economics and Management, as well as a postgraduate Diploma in Marketing from the University of Auckland, and is an Agri-Women's Development Trust (AWDT) Escalator Alumni.



DAVID MCCALL
GENERAL MANAGER –
NEW SYSTEMS AND
COMPETITIVENESS

David was appointed the GM new systems and competitiveness in January 2017. The vision for the new systems and competitiveness team is to develop and provide farmers with confidence in new systems and options that work on-farm. The team also aims to increase profit from productivity by \$110/ha/year, while achieving future environmental footprint targets, advancing animal husbandry and welfare, and creating more productive and attractive workplaces on-farm.

David joined Dexcel (now DairyNZ) as development and economics manager in 2007. He took on the GM development and extension role in late 2009 and the GM research and development role in 2014. He was a farm systems scientist at AgResearch until 1998 and then spent eight years in business development and managing technology company start-ups and investments for Celentis Ltd. David has a PhD in agricultural economics and management.



2017/18

HIGHLIGHT STORIES



FARMERS LEAD THE WAY IN ANIMAL CARE



CalvingSmart 2018 events were held nationwide.

DairyNZ continues to support dairy farmers to ensure stock are well-cared for, from birth to beyond the farm gate.

DairyNZ's animal care team works to raise farmer and sector understanding of good animal care practices, and build skills through events such as CalvingSmart. Investment is also made into research and the latest technologies for animal care resources.

The animal care team also monitor consumer and market expectations and has input into policy development, looking for future changes that might affect farmers. The team assists with adverse events where animal care is at risk, such as floods and droughts, and are working alongside farmers affected by *Mycoplasma bovis*.

NEW ANIMAL WELFARE REGULATIONS

With new animal welfare regulations coming into effect, DairyNZ continues to focus on helping all dairy farmers to meet and exceed animal care requirements.

DairyNZ has worked closely with the Ministry for Primary Industries (MPI) on the regulations, which cover tail management, use of pain relief for disbudding, and ensuring animals are fit for transport. This involvement ensures science underpins the regulations and are practical to implement on-farm.

FOR EXAMPLE: BOBBY CALF REGULATIONS

DairyNZ helped support farmers for the new bobby calf holding and loading/unloading regulations which came into effect in August 2017.

These regulations required about 50 percent of dairy farmers to make changes to their facilities.

To help raise awareness of the requirements and ensure farmers were ready, DairyNZ produced a range of guidelines and resources.

This work, which included all parts of the supply chain, has seen a significant drop in the mortality rate of transported calves. In 2008, the mortality rate was 68 calves per 10,000 – this is now down to six per 10,000.

FUTURE ASPIRATIONS

DairyNZ is committed to helping farmers achieve the sector's goal in the new strategy, *Dairy Tomorrow*, to move beyond minimum standards towards being world leading in animal care.

DairyNZ's strategy and investment leader for farm performance, Jenny Jago, says many dairy farmers already have high standards of animal care.

"It's vital that we get animal care right, for many reasons – personally, professionally, environmentally and economically. That's not only good for animals' wellbeing, it's also essential if we're to promote, maintain and improve dairy's reputation in New Zealand and worldwide."

dairytomorrow.co.nz

OTHER HIGHLIGHTS 2017/18:

- 500 consults with farmers across the country to identify sector trends and areas that could be improved on-farm.
- 18 CalvingSmart events across the country, reaching 1050 people.
- 'Cow senses' workshop, delivered as part of MilkSmart, to help farmers better understand how a cow views the world.
- Healthy Hoof app developed, which helps farmers easily record lameness on farm.
- 54 farms were helped out of a welfare risk by DairyNZ's Early Response Service.
- Tail shortening is down and pain relief use at disbudding is up.

dairynz.co.nz/animal

SUPPORTING FARMERS THROUGH MYCOPLASMA BOVIS

Since *Mycoplasma bovis* (*M. bovis*) was first detected in New Zealand in July 2017, DairyNZ has been actively involved in many areas of the response.

It has been – and continues to be – a significant large-scale response. Hundreds of thousands of tests took place during the first year, including the first of two rounds of bulk milk testing from every dairy farm nationwide.

After much consideration, in May 2018 DairyNZ chairman Jim van der Poel stood beside the government and announced the decision to work towards eradicating *M. bovis* from New Zealand.

At the time, the disease was on less than 1 percent of dairy farms, and the government and dairy sector opted for its only chance at eradication.

Forty DairyNZ staff are working across the country to assist with the *M. bovis* response, alongside the lead agency, Ministry for Primary Industries (MPI), and other organisations



DairyNZ has connected farmers with the latest information on *mycoplasma bovis*.

GIA FOR BIOSECURITY IN PROGRESS

With the support of dairy farmers, DairyNZ has applied to become a Signatory to the Government Industry Agreement for Biosecurity Readiness and Response Deed (the GIA).

This followed two rounds of farmer consultation in late 2017 and early 2018. The biosecurity response levy agreed to in the consultation will see no levy collected until the sector commits to a significant incursion response, when DairyNZ would contribute under a pre-agreed cap.

to support farmers both on the ground and at governance level.

Efforts have involved assisting at regional headquarters in Invercargill, Ashburton and Hamilton, helping affected farmers with feed budgets, coordinating feed and putting systems in place to farm under movement restrictions.

GOVERNANCE INVOLVEMENT

DairyNZ has been working at a governance and technical level across a range of workstreams, alongside MPI, at the national control centre for *M. bovis*. DairyNZ represents dairy farmers in discussions involving the processes for affected farmers, to help ensure solutions are practical.

Another focus for DairyNZ is ensuring all farmers have access to the right information to make informed decisions to protect their farms and animals.

DairyNZ has connected farmers nationwide with the latest information – using public meetings, discussion groups, e-newsletters, webinars, the DairyNZ website, social media and rural media.

WHERE TO FROM HERE?

DairyNZ continues to work closely with key stakeholders and farmers, as the government and the sector work towards eradicating *M. bovis*.

Along with being the dairy farmer voice at governance level and providing good practice information to farmers, DairyNZ staff are also helping affected farmers with the recovery phase as they restock their farms.

DairyNZ, in collaboration with the government and Beef + Lamb, is committed to contributing funds to support farmers impacted by *M. bovis*. At the time of publishing, the details were yet to be confirmed.

dairynz.co.nz/mbovis

dairynz.co.nz/biosecurity

PROTECT
OUR FUTURE.

The over-arching GIA aim is to protect the future of farming in New Zealand by having the right biosecurity readiness and response arrangements in place to address exotic pests and diseases that impact on production and milk quality.

By being a GIA signatory DairyNZ, on behalf of dairy farmers, will have more of a say on biosecurity decision-making and have up-front conversations with government and other industry signatories about respective cost shares.

DairyNZ is expected to become a GIA Signatory by the end of 2018.

dairynz.co.nz/gia

ENVIRONMENTAL STEWARDSHIP – IMPROVING WATER QUALITY

DairyNZ’s water quality and catchment engagement teams are supporting dairy farmers to protect waterways.

Together, farmer obligations under the National Policy Statement for Freshwater Management are being met, by translating levy-funded science into effective action.

RIPARIAN PLANNING

To support the Sustainable Dairying: Water Accord, DairyNZ and Manaaki Whenua Landcare Research developed the Riparian Planner. This online tool enables farmers and advisors to produce action plans for waterways, creating setbacks of grass or native plantings and to prioritise critical source areas.

Riparian practices improve water quality by reducing sediment, nutrient and bacteria losses. Approximately 1352 farmers and advisors are using the Riparian Planner, growing by 50 users each month.

ENVIRONMENTAL STEWARDSHIP PROGRAMME

In partnership with regional councils and science providers, DairyNZ water scientists have researched land use effects on water quality, including:

- A NIWA report for DairyNZ revealing ‘seepage’ (spring-fed) wetlands can dramatically reduce nutrient loss to waterways. Monitoring of 14 seepage wetlands demonstrated a consistent reduction of 75-98% in N-loss through denitrification and uptake by the wetland’s vegetation.
- A DairyNZ-led Sustainable Farming Fund project is quantifying how short-term detention of stormwater behind small earth bunds markedly reduces sediment and nutrient loss in runoff. Storms are critical sources of sediment and nutrients, so detainment bunds support meeting water quality limits.
- A two-year NIWA project with DairyNZ and Horizons Regional Council has improved how nuisance algae is managed in New Zealand rivers. The research demonstrated that water flow is an important regulator of algal biomass. New ‘look-up’ tables on how to set instream nutrient limits for river algae specific to river types are now available.

dairynz.co.nz/environment



TV3 news films at Auckland’s Papakura Normal School while they take part in DairyNZ’s Classified Game of Moostery which links urban and rural schools.

CHANGING PUBLIC PERCEPTION

PUBLIC PERCEPTION

DairyNZ (through an external research company) has been surveying the public’s perception of the dairy sector for several years. In the past year, the public’s favourability towards dairy farming has increased from 57 percent to 63 percent. This includes people who are ‘very favourable’ or ‘favourable’ towards the dairy sector. One in four people have a ‘very favourable’ impression of dairy farming.

MEDIA MONITORING

Media is closely monitored, with media sentiment and analytics reported on every month. Media coverage of the dairy sector has remained over 90 percent positive/neutral every month, and DairyNZ has consistently been in the top five sectors reported on in the media (measured through the Carma Index).

DairyNZ has a strategy to increase the number of positive stories in the media. Highlights include three stories being broadcast on prime-time television. Newshub (TV3) did a story on DairyNZ’s farmer wellbeing initiative Good Yarn and the Classified Game of Moostery – a school project from DairyNZ’s education programme. Seven Sharp did a story on DairyNZ’s school science learning module ‘Can it Icecream’.

EMPOWERING FARMERS

DairyNZ is working with farmers to encourage sharing positive stories and images, as the most authentic way to spread the dairy story. A story telling guide for farmers is now available and a group of farmers have been media trained as spokespeople. A presentation on story telling has been delivered to over 1000 farmers nationwide.

ENGAGING WITH THE PUBLIC

The More FM radio Cream of the Crop promotion is a highlight from DairyNZ’s public relations strategy to engage with the urban public through mainstream channels. This involved a competition for the best farmer story and photo, with the top 12 featuring in a calendar. Over 80 farmers were nominated, with several farmers’ stories shared on the radio, 2300 webpage views and over 19,000 interactions on the More FM Facebook page.

DAIRY ACTION FOR CLIMATE CHANGE

In June 2017, DairyNZ launched the Dairy Action for Climate Change (DACC), an 18-month long commitment to address the sector's biological emissions.

Nine workshops were held around the country for rural professionals in 2017 and eight more for dairy farmers in 2018.

The workshops aimed to raise awareness of climate change and the need to address biological emissions in the long-term, as well as on-farm mitigation options available to farmers right now. Attendees also heard from some of New Zealand's leading climate change experts about emerging technological solutions to reducing methane.

The partnership farm project is another commitment under the DACC. It will help dairy farmers understand what mitigations may work best on different farm systems to reduce emissions, and the impact those mitigations may have on productivity and profitability.

Of the 14 farms from around New Zealand used as case studies to model what changes could be possible, most will go on to become partnership farms later this year.

Fifteen Dairy Environment Leaders were chosen to be climate change ambassadors for the sector in May 2018 and, following a meeting with Climate Change Minister James Shaw, have been working with their local communities to help engage farmers on climate change awareness.

dairynz.co.nz/climatechange

POLICY TEAM WORKS CLOSELY WITH GOVT

DairyNZ's policy team works on behalf of farmers to ensure investment and regulatory outcomes protect and enhance New Zealand dairy farming. During 2017/18, a range of work was undertaken.

REGIONAL COUNCIL POLICY

DairyNZ has continued to work closely with councils, farmers and other regulatory authorities to ensure sound policy, based on robust science.

In 2017/18, DairyNZ actively engaged with councils in Waikato, Canterbury, Bay of Plenty, Otago, Southland, Wellington, Northland and Manawatu/Whanganui to inform and influence the water quality limit-setting process.

Science addressed gaps, models evaluated policy options and effects on water quality, evidence was developed and presented to address concerns, and caucus processes ensured best outcomes for farmers and environment.

CENTRAL GOVERNMENT PRIORITIES

Since the new government came into power in 2017, DairyNZ has engaged extensively with ministers on environmental priorities.

DairyNZ chief executive Dr Tim Mackle says the dairy sector realises the importance of working closely with the government to ensure the right policies

are implemented to address issues such as reducing agricultural emissions and improving waterways.

"Our focus is to ensure dairy continues to have a balance between being competitive and profitable, while also meeting the expectations of our consumers and communities," says Dr Mackle.

In 2017/18, DairyNZ engaged with the government on the following environmental policies:

LAND AND WATER FORUM

DairyNZ has participated in the Land and Water Forum and the processes prior to the Government's proposed reforms for freshwater management. This ensures dairy farmers have a strong voice and the impact of any changes are fair, effect-based and recognise environmental initiatives and infrastructure already undertaken by farmers in good faith.

The Land and Water Forum brings together a range of industry groups, environmental and recreational NGOs (non-government organisations), iwi, scientists and other organisations with a stake in freshwater and land management.

STOCK EXCLUSION REGULATIONS

DairyNZ has advocated on behalf of farmers regarding proposed stock exclusion regulations.

Dairy sector input has ensured advice sought by government is as fair as possible for dairy farmers and recognises the significant infrastructure investment by the dairy sector.

FARMERS OPEN THEIR BOOKS

Since 2016, around 20 dairy farmers with a low cost of production (per kg milksolids), made their farm budgets available online at dairynz.co.nz to help others benchmark and consider options during a period of low milk prices.

These budget case studies describe where the farmers are spending money and the reasons behind key management decisions. In 2017/18 five more farmers joined the project, adding diversity to the case studies and allowing more farmers access to numbers they can relate to.

New farmers from Waikato, Lower North Island and Canterbury have joined existing top performers to share their forecast budgets.

Most regions are now represented and the farms include a range of operating structures, from businesses with an owner-operator, to those with a sharemilker or contract milker. They also include varying amounts of feed inputs, with organic farms and those milking once-a-day represented.

These farms were all selected because they are top-performing farms with a focus on keeping their costs low.



Alan Davie-Martin, one of the budget case study farmers who got involved in 2017/18.
Photo credit: Elise Rutherford Photography.

The farms share many common factors and all are focused on farming for the long-term and, as part of that, they prioritise taking care of the land, people and cows.

In 2017/18 there was more than 21,000 views of the budget case study pages.

dairynz.co.nz/budgetcasestudies



DAIRYBASE-ASB PARTNERSHIP

In 2017/18 DairyNZ and ASB partnered to provide dairy farmers with much better access to benchmarking data and sector insights.

Using DairyNZ's DairyBase, ASB rural managers can now add value by analysing benchmarking data and trends for their dairy farming customers. If dairy farmers want to join DairyBase, data can also be automatically transferred from ASB into DairyBase.

DairyNZ strategy and investment leader Bruce Thorrold says the ASB partnership provides a fantastic opportunity for farmers.

"I would encourage dairy farmers with ASB to contact their bank manager – there is so much to gain from this, including better access to regionalised data, robust benchmarks and targeted analysis," says Bruce.

DairyBase is a benchmarking tool which helps farmers track their productivity and profitability, compare costs to other similar farms, and track progress towards long and short-term goals.

Other highlights for 2017/18 include:

- DairyBase registered an additional 150 farms and provided reports to 2165 farm businesses. These reports help farms understand their performance in relation to similar farms, from both a financial and physical aspect.
- DairyBase is working with several corporate farms to develop reporting and benchmarks specific to larger farm groups.
- More dairy farmers are making use of DairyBase by submitting their data. In 2017/18, 1770 businesses submitted their full financial data – up 222 on the year before.

dairynz.co.nz/dairybase

CONNECTING FARMERS WITH THE LATEST INFO

DairyNZ delivered a range of farmer events during 2017/18, which delivered information for on-farm practices and people management, through to sector direction and strategy.

FARMERS' FORUM

Around 600 dairy farmers attended the DairyNZ Farmers' Forum in the Waikato during May, where a line-up of government, business and dairy sector leaders framed up the dairy sector's future.

See the speakers' presentations: dairynz.co.nz/farmersforum

MILKSMART

Ten Milksmart events took place nationwide in February/ March. Many farmers attended and gained practical solutions from other farmers who are saving time and money through efficient milking.

See the Milksmart presentations at dairynz.co.nz/milksmart

PEOPLE EXPO

Five People Expos took place nationwide giving farmers tips, tricks and the latest information for attracting and retaining the best people. The events were designed to help farmers build a successful farm team, be excellent employers, and to attract and retain the best people.

dairynz.co.nz/people



CLIMATE CHANGE ROADSHOW

DairyNZ ran nine regional workshops for rural professionals in September 2017. These workshops were targeted at supporting rural professionals to help farmers understand greenhouse gas implications.

REGIONAL FIELD DAYS

DairyNZ also had sites at three regional agricultural field days – Northland, Central Districts, Waimumu (Southland), along with the Waikato's National Agricultural Fielddays.

FARMERS UNCOVER OPTIONS WITH FARM GAUGE



In 2017/18, DairyNZ created a tool to help dairy farmers take the first step in making their farm business more profitable, efficient and enjoyable.

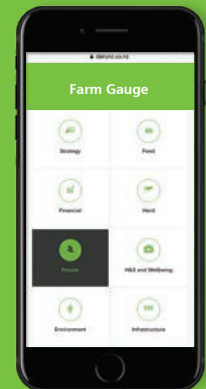
Farm Gauge allows dairy farmers to self-assess their business quickly and easily. It takes less than 30 minutes and looks at eight key areas of the farm system: strategy, feed, finance, health/safety and wellbeing, herd management, people, environment and infrastructure.

From its launch on April 1, 2018 until mid-2018 around 600 farmers had used Farm Gauge – and that number increases by the day.

In May, Reporoa sharemilkers Tom and Therese Earls shared their experience of the tool at DairyNZ's Farmers' Forum:

"The Farm Gauge tool has given us a sense of direction on what to work towards, and the colour-coding of the results helped make it really clear where to focus."

dairynz.co.nz/farmgauge



FARMERS SUPPORT SCIENTISTS' FORAGES RESEARCH

The Forages for Reduced Nitrate Leaching (FRNL) research programme is looking at how diverse pasture species and crops can reduce nitrate leaching by reducing nitrogen (N) in cows' diets and improving plant N uptake.

Plantain and fodder beet have emerged as the best options to reduce N loss from urine N, while catch crops following winter crops have been shown to use water and N in the soil over winter, reducing the risk of N leaching.

SHARING INFORMATION

A network of dairy, arable and mixed livestock farmers have influenced the direction of the research by acting as monitor farms and supplying feedback on the proposed mitigation options, and results of experiments and trialling the FRNL options on their own farm.

DairyNZ senior scientist Ina Pinxterhuis, who is leading the FRNL programme, says the input from farmers has been worth its weight in gold. "We've had some great workshops with robust discussions – for example around practicality or consequences researchers hadn't thought about. This changed the research direction in several cases," says Ina.

"The farmers also demonstrate what they are doing to reduce environmental impact and how they go about implementing the new options. The detailed data they collect is invaluable to evaluate the impact at the scale of working farms. I think we have achieved a unique collaboration between farmers and researchers."

dairynz.co.nz/frnl

ABOUT FRNL

Forages for Reduced Nitrate Leaching is a DairyNZ-led collaborative research programme. The main funder is the Ministry of Business, Innovation and Employment, with co-funding from research partners DairyNZ, AgResearch, Plant & Food Research, Lincoln University, Foundation for Arable Research and Landcare Research. DairyNZ invests \$450,000 of levy funds each year.



CULTIVAR PERFORMANCE UNDER THE FVI SPOTLIGHT

DairyNZ's Forage Value Index (FVI) helps farmers choose the best-performing ryegrasses for their region using its simple five-star rating system. Trials have now started to test the FVI system under realistic dairy farm management conditions.

The DairyNZ FVI is an independent, region-specific, profit-based index for short-term and perennial ryegrass cultivars. It categorises cultivars into five 'star rating' groups in each dairy region.

Launched in 2012, the FVI is now entering a validation phase, testing the FVI system under realistic farm management conditions.

Currently, the FVI includes seasonal dry matter yield only, but plans are in place to soon include metabolisable energy and persistence traits.

TESTING FVI SYSTEMS

Trials are taking place in Hamilton, managed by DairyNZ. Forty hectares of pasture was regrassed over the past three autumns, with equal areas sown in high- and low-ranked FVI cultivars.

All cultivars were sown with white clover (standard farm practice) and will be compared in a three-year experiment.

The aim is to determine whether dry matter yield differences of the cultivars emerge as expected and translate into profit rankings matching their relative FVI positions. Milk production and pasture production will be measured; and the operating profit calculated.

The Scott Farm trials are being supported by work at the Southern Dairy Hub, where 32ha was regrassed using high or low-ranked FVI cultivars in February 2017.

dairynz.co.nz/FVI
southerndairyhub.co.nz

LEAP21 RESEARCH LOOKS INTO FUTURE SYSTEMS

A levy-funded DairyNZ project called Leap21 aims to explore what future dairy systems could look like.

Given the diverse sustainability challenges faced, optimising and improving current farming practices will not be enough. These challenges include price volatility, the increased power of supermarkets, the availability of milk alternatives, need to reduce environmental footprint, animal welfare developments and farmer wellbeing.

These interconnected issues cannot be tackled in isolation.

A BOLD LEAP FORWARD

Leap21 aims to redesign farm production systems that account for the many challenges facing the dairy sector and various stakeholder perspectives, including farmers, the New Zealand public, consumers and the animals.

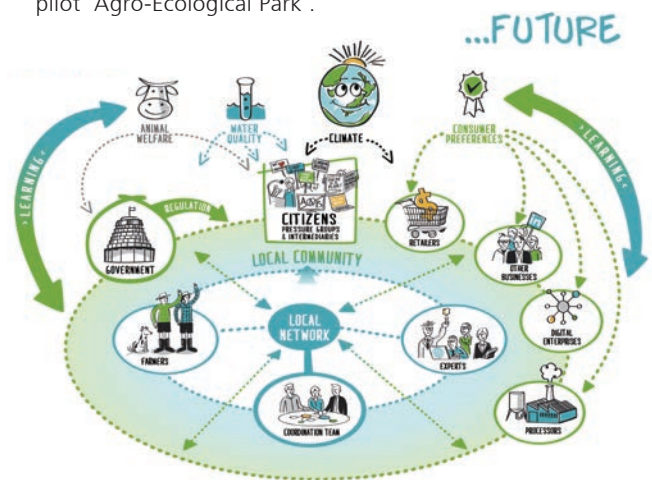
Its main goal is to design resilient dairy systems that make products the world wants and make New Zealand proud.

Working in collaboration with international experts, DairyNZ has analysed information and completed interviews and workshops with stakeholders and subject experts. Some design goals were developed.

The analysis indicated that progress could be accelerated by designing new systems that would create synergies among independent farms and other businesses in a particular area. A concept emerged, named 'The Agro-Ecological Park'.

The name was inspired by the 'Eco-Industrial Park' idea – conglomerates of businesses that cooperate and the local community, intending to increase economic gains, achieve sustainable development and improve environmental quality.

The concepts will be shared with possible partners and stakeholders, to explore the potential of developing a pilot 'Agro-Ecological Park'.



SEE THE LEAP21 CONCEPT

Check out a visual representation of the two Leap21 concepts at dairynz.co.nz/leap21

FOCUS ON FERTILITY

The *Pillars* of a new dairy system research programme is looking at genetic and management solutions to help farmers improve cow fertility and lifetime productivity.

Key highlights include determining that most pregnancy losses occur during the first week after fertilisation. This indicates improving oocyte quality/ the oviduct environment could increase conception rates. The chances of conception also increase by 18 percent with each cycle and by 13 percent with each extra week before mating, reinforcing the importance of pre-mating cycling rates.

Another key finding is that, on average, 25 percent of cows have a uterus that is not in optimal health

one month before mating start date, which reduces their fertility. However, this figure ranges from 10 to 90 percent of cows in individual herds. Improved transition cow health is being targeted to develop management solutions to address this issue, including feeding synthetic zeolite pre-calving to reduce the risk of subclinical and clinical milk fever.

The seven-year programme is funded by DairyNZ, with matched co-funding from the Ministry of Business, Innovation and Employment, and aligned core funding from AgResearch.

dairynz.co.nz/pillars



Creating relevance between dairy farming and urban New Zealanders, and integrating dairy into the school curriculum, is helping get children, teachers and parents more engaged in the dairy sector.

Outside the classroom, DairyNZ's education programme also gives children the chance to visit a dairy farm through the school farm visit service, and to have a fun and educational experience through the Rosie's World programme and website.

Thanks to farmer volunteers, 7553 children visited a dairy farm in the past year, along with their teachers and parents.

DAIRY FARMING IN SCHOOLS

DairyNZ's in-school education programme delivered three new learning modules this year, with 625 classrooms and 17,500 children actively engaging with the resources. In addition, over 16,000 lesson plans were downloaded from the Rosie's Education website.

All of DairyNZ's learning modules fit within the New Zealand school curriculum and are designed to cater to teachers' needs and engage children and teachers with dairy in a positive way.

One of the most popular modules this year was a science



lesson investigating an element's change in state by making ice cream. As part of the module, which also included a lesson plan, fact sheet and video, 350 teachers were given the opportunity to register for an ice cream making kit.

The kits were fully subscribed within 19 minutes of the registration opening. Seven Sharp did a story on the ice cream kit learning module, filming at Auckland's Hillpark School.

CREATING URBAN-RURAL RELATIONSHIPS

DairyNZ's CLASS-ified Game of Moostery connected 150 urban schools with 150 rural schools to create a better understanding of each other's lifestyles and perspectives. The 8400 children who participated completed a series of challenges, concluding with a Skype session where each class raced to identify their mystery match.

Auckland's Papakura Normal School and Canterbury's Ohoka School were filmed by Newshub as they completed their Skype challenge.

FUN WITH ROSIE

DairyNZ's Rosie the cow is a character loved by children for her quirky and entertaining nature.

A competition was held this year to find a real-life co-star for Rosie. Nate Cunis from Whangarei won the competition, which received over 100 video entries.

A new campaign called Dairy Doing Good was launched featuring Rosie and Nate exploring the dairy journey from plate back to paddock. The Rosie's World website is the campaign hub and includes videos, online ads, a quiz, competitions and content, and appearances on TVNZ's kids' programme What Now.

107,002 people visited the Rosie's World website to learn and play in a safe online environment, and 16,466 children completed Rosie's quiz competitions.

To see photos, thank you letters to farmers and work from school children, visit ourfarmvisit.co.nz

dairynz.co.nz/education

DAIRYNZ SPONSORSHIPS

DairyNZ supports a number of key industry partners, initiatives and community activities which have a clear benefit for New Zealand dairy farmers. These include:

NZ DAIRY INDUSTRY AWARDS

These awards celebrate excellence in dairy farming and DairyNZ sponsors Practical Skills Awards, Employee Engagement Awards and Human Resources Awards.

dairyindustryawards.co.nz

NZ FARM ENVIRONMENT TRUST

The annual Ballance Farm Environment Awards recognise excellence in sustainable management practice and environmental leadership. DairyNZ sponsors the Sustainability and Stewardship Award.

www.nzfeatrust.org.nz

AHUWHENUA TROPHY – MAORI EXCELLENCE IN FARMING AWARD

This trophy acknowledges and celebrates business excellence in New Zealand's pastoral sector. The competition is held annually, alternating each year between dairy and sheep and beef.

www.ahuwhenuatrophy.maori.nz

SIDE

SIDE is New Zealand's premier dairy conference in the South Island, run by farmers for farmers.

www.side.org.nz

NZ GRASSLAND ASSOCIATION

The New Zealand Grassland Association (NZGA) aims to enhance pastoral agriculture through a forum for communicating science, technology and knowledge.

www.grassland.org.nz

NZIPIIM

The New Zealand Institute of Primary Industry Management (NZIPIIM) is the industry body which builds capability of rural professionals.

www.nzipim.co.nz

NZSAP

The New Zealand Society of Animal Production (NZSAP) is a forum fostering research in production systems, nutrition, meat science, animal welfare, wool science, animal breeding and genetics.

www.nzsap.org

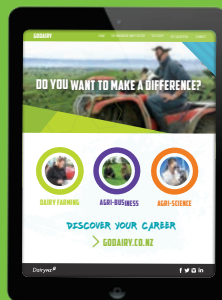
PROMOTING CAREERS IN DAIRY

DairyNZ is working with Dairy Tomorrow partners, the Government and other primary sectors to attract, grow and retain the people the dairy sector needs.

DairyNZ is a founding member of PICA (Primary Industry Capability Alliance) which works across the primary sector to attract talent.

As part of this work, DairyNZ created godairyco.nz, to support young people and career changers to find their fit in the dairy sector. The website hosts information about opportunities in dairy farming, agri-business and agri-science, and recommended study and training.

godairy.co.nz



DAIRYNZ SCHOLARSHIPS

The DairyNZ scholarship programme continues to go from strength-to-strength.

So far, over 280 students have graduated from the undergraduate scholarship programme, with more than 85 percent now contributing to the agriculture sector. In 2018, the programme was estimated to be worth more than \$1.5 million to the sector annually.

The Farm Systems Masters scholarship is a new initiative, with the first three students graduating in 2018, and another three beginning their studies in 2018.

With Dairy Trust Taranaki, DairyNZ also co-funds two post-graduate Colin Holmes Dairy Scholarships a year and provides up to six post-graduate DairyNZ Masters scholarships to University of Waikato students with projects relevant to the dairy sector.

godairy.co.nz

dairytomorrow.co.nz

2017/18 highlights

RESEARCH AND DEVELOPMENT



Home-grown feed focus in Northland research

Managing variable climates and palm kernel expeller (PKE) use has been the focus of a three-year project at Northland Agricultural Research Farm (NARF). Highlights included high performance from the pasture-only farmlet in two of three years; profit-focused decision rules gave responses of 100-130 g MS/kg DM to PKE; and on-farm cropping produced severe management issues on the wet Northland soils. Read more at nddt.nz/

Fertility genetics

The heifers in the high and low fertility breeding value herds, in the Pillars of a New Dairy System research, have been through their first lactation and mating. Much bigger differences have been seen in the submission rates, anoestrus and empty rates between the two herds than were expected from their fertility BVs. While the fertility BV is pointing in the right direction, it seems the range of performance in the national herd is being underestimated.

FRNL tightens N cycle

The Forages for Reduced Nitrogen Leaching (FRNL) Programme has shown the benefits of plantain, fodder beet and catch crops (after winter feed) for reducing nitrogen leaching. The research team is now working with farmers to test the implementation of these ideas and with Overseer Ltd to ensure the science results are reflected in the Overseer model and farmers will see it in their leaching predictions.

TALENTED PEOPLE



Scholarship programme

Fifty-six undergraduate students and 13 graduate students are involved in the DairyNZ scholarship programme which supports young people into dairying.

School agribusiness programme

Thirty-nine secondary schools around New Zealand are now teaching agribusiness (approximately 1000 students) thanks to the Centre of Excellence for Agricultural Science and Business Programme.

FARM PROFIT



Farm assessment tools

Over 950 farmers used DairyNZ farm assessment planning tools (e.g. Farm Gauge) to evaluate their farm business and provide links to tools and resources and support improvements.

Budget case studies

The 20 farmer budget case studies on the DairyNZ website received 21,000 views, providing farmers with a behind-the-scenes look into some of New Zealand's top-performing farm businesses.

Farmer events

Over 1350 farmer events were held to provide farmers access to the tools, skills and support to improve farm performance.

WORK ENVIRONMENT



MilkSmart

MilkSmart in Action worked closely with 10 farmers to improve milking efficiency and comfort, which then helped over 538 other farmers to do the same through a series of nationwide workshops.

Workplace Action Plan

The Sustainable Dairying: Workplace Action Plan continued to showcase to farmers what a good and great farming workplace looks like and provides the framework for practical ideas and solutions through regular Friends of the Workplace Action Plan communications.

ENVIRONMENTAL STEWARDSHIP



Sustainable Dairying: Water Accord

Provisional results suggest over 97.5% of all Accord waterways on dairy farms are now stock excluded and 99.7% of stock crossing points have bridges or culverts.

Managing water quality

DairyNZ has worked alongside primary sector partners, regional council and government to develop an agreed set of national good farming practice principles, to be implemented over the next five years.

Science behind policy

Research has been undertaken in partnership with NIWA and regional councils to understand drivers of water quality decline in rivers, to help underpin regional environmental policy processes.

BIOSECURITY



Mycoplasma bovis management

DairyNZ has worked alongside the Ministry for Primary Industries to support farmers impacted by *Mycoplasma bovis* and to provide guidance to manage and reduce the risks of further incursions.

Government agreements

Operating agreements with Government were developed to deal with high-risk animal diseases, plant pests and weeds.

ANIMAL WELFARE



Bobby calf management

There have been continued improvements in the management of bobby calves across the supply chain, leading to a further reduction in mortality rate from 0.12% to 0.06% in 2017.

Opportunities presented by approaches to reduce the numbers of bobby calves are being explored.

Practice change

Programmes were implemented to provide farmers with the support to make changes to management practices, such as the use of pain relief for disbudding, ahead of regulatory changes in 2018/19.

Practical workshops such as CalvingSmart, tools including the Facts and Figures app and services such as the Early Response Service were implemented to ensure farmers have the support necessary to provide high standards of animal care.

LOCAL COMMUNITIES



Find a Farmer

Thanks to the DairyNZ education programme's Find a Farmer service and the farmer volunteers involved, 7553 children visited a dairy farm in the past year, along with their teachers and parents.

School connections

TV3 News filmed two classrooms participating in DairyNZ's CLASS-ified Game of Moostery which connected 150 urban schools with 150 rural schools to learn more about each other.

NATIONAL PROSPERITY



Climate change

DairyNZ launched Dairy Action for Climate Change to build the foundation to support dairy farmers and the wider dairy industry to address on-farm methane and nitrous emissions over the longer term.

Research into mitigation options

New greenhouse gas mitigation technologies and their commercialisation have been researched through the Pastoral Greenhouse Gas Research Consortium.

Work with councils/government

DairyNZ has continued to work in partnership with regional councils and central government to ensure the National Policy Statement for Freshwater Management is implemented wisely and the concerns of dairy farmers are understood.

INDUSTRY INFORMATION SYSTEMS



DairyBase connects with ASB

Connecting data to help farmers make better decisions is part of the future. DairyBase is leading the way with its connectivity strategy and, in May 2018, launched a connection with the ASB Bank that will help DairyBase clients, who are ASB customers, get the most from their financial data. DairyNZ is working with others to expand this network.

Forage Value Index (FVI) extends scope

The FVI has now been running for six years, based on seasonal yield data. In the last year DairyNZ has been able to put a first estimate of forage quality differences alongside FVI. DairyNZ is looking to develop this further in 2018/19, with the simultaneous introduction of the first quality and persistency economic values.

LOOKING AHEAD

Delivering on dairy sector commitments in 2018/19



KEY PROJECTS FOR 2018/19



COMMITMENT 1

WE WILL PROTECT AND NURTURE THE ENVIRONMENT FOR FUTURE GENERATIONS

WATER QUALITY SCIENCE

DairyNZ will continue to ensure that regional water quality issues related to dairy farming practices are well understood and that farmers have the right knowledge and tools required to help meet water quality limits.

UNDERSTANDING OUR FOOTPRINT

A national accounting framework is being developed to help understand dairying's environmental footprint and support policy solutions at the catchment and regional scales.

GREENHOUSE GASES

Ongoing research will help identify strategies to reduce or offset greenhouse gas (GHG) emissions from dairy land. Preferred policy options to meet the industry's contributions to New Zealand's 2030 GHG target will be developed and advocated for with central government.

LOW N COWS TESTED

Research to determine the potential to breed cows that produce lower urinary nitrogen (N) and less N leaching gets underway in 2018/19. Four hundred cows on North Island farms will have urinary and milk output measured, and differences in N balance due to genetics will be looked for.

TARGETED SUPPORT FOR PRIORITY CATCHMENTS

Three case study projects will target the Tararua, Selwyn-Hines and Aparima areas to support farmers to implement farming systems and practices to meet the environmental management expectations for the catchment.



COMMITMENT 2

WE WILL BUILD THE WORLD'S MOST COMPETITIVE AND RESILIENT DAIRY FARMING BUSINESSES

DIGAD LINKS DIRECT TO CRV

The third step in DairyNZ and NZAEL taking responsibility for Animal Evaluation will involve the National Breeding Objective (which underpins genetic improvement through BW) and core data being completed in 2019 when CRV Ambreed starts directly feeding its herd records to DIGAD.

WILL NEW RYEGRASSES MEASURE UP?

DairyNZ is investing alongside many others in the sector and government to improve ryegrass breeding. In 2018/19 the field performance of ryegrass plants selected using genomic selection, bred by hybrid methods and created using GM technology will be evaluated.

FARM BUSINESS ASSESSMENT AND PLANNING

The extension teams will focus on farm business assessment and planning to support farmers during the 2018/19 season. Benchmarking will be used extensively to ensure an evidenced-based approach. Specific focus will be given to providing follow-up support to ensure action plans are implemented.

MYCOPLASMA BOVIS RESPONSE

DairyNZ will continue to provide support to farmers impacted by *M. bovis*. The development and extension team will work with others in the sector to ensure farmers have the right information when they need it to protect their farms from biosecurity incursions.

KEY PROJECTS FOR 2018/19



COMMITMENT 3

**WE WILL
PRODUCE THE
HIGHEST QUALITY
AND MOST
VALUED DAIRY
NUTRITION**

This commitment is a responsibility of the dairy supply companies involved in the *Dairy Tomorrow* strategy.

Initiatives to support this commitment will be led by the dairy companies and supported by achievements in several of the other commitments.



COMMITMENT 4

**WE WILL BE
WORLD
LEADING
IN ON-FARM
ANIMAL
CARE**

DEFINING WORLD LEADING ANIMAL CARE

Work will be undertaken to understand what it takes to be world leading. This will be used to develop the framework that will underpin the research, development and extension activities over the next three to five years.

STOCKMANSHIP

DairyNZ will continue developing practical workshops to help those caring for animals to improve their awareness of animal welfare expectations and skills to achieve these. The programme's reach will be extended through veterinarians, training networks and farmer organisations.

KEEPING COWS COMFORTABLE

Work will begin to develop a programme to support farmers to maintain cow comfort through the extremes of summer and winter.



COMMITMENT 5

WE WILL BUILD GREAT WORKPLACES FOR NEW ZEALAND'S MOST TALENTED WORKFORCE

FARM BUSINESS TRAINING

Work will continue with consulting officers and Primary ITO training advisors using a partnership approach to better serve the training needs of farm businesses. Fit for purpose learning plans will take better account of the business goals.

WORKING TOGETHER

A collaborative approach will be used to design a more coordinated capability and skills development pathway, aligned with dairy sector standardised roles, and taking into consideration formal and non-formal training for people throughout their career in dairy.

WORKPLACE ACTION PLAN

In partnership with Dairy Women's Network and Federated Farmers, the Workplace Action Plan will be refreshed to reflect the new goals in *Dairy Tomorrow*. A framework of compliance, good and great, will be used to set agreed sector expectations for the workplace. DairyNZ will work with dairy processors to support improved workplace conditions.

ATTRACTING TALENT

Programmes to increase awareness of the diverse range of careers available in dairy will continue through secondary schools and identify further opportunities to support career changers. A targeted approach will be taken to address labour supply issues in Canterbury and Southland regions.



COMMITMENT 6

WE WILL HELP GROW VIBRANT AND PROSPEROUS COMMUNITIES

TELLING OUR STORY

DairyNZ will continue work in community engagement through media activity and public events, and by supporting farmers to tell their stories.

Additional initiatives to support this commitment will be led by Federated Farmers and Dairy Women's Network.

A photograph of a man and a young child in a field. The man, on the left, is wearing a blue and white checkered shirt and dark shorts. He is looking down at the child. The child, on the right, has curly blonde hair and is wearing a grey t-shirt with a graphic of a tractor and the words 'BEYOND' and 'P' visible. The child is also wearing dark shorts and red boots. They are standing in a grassy field with several brown cows in the background. The sky is bright blue with scattered white clouds.

DAIRY TOMORROW

THE FUTURE OF NEW ZEALAND DAIRYING

be the future tomorrow

WHERE WE'VE BEEN

In 2013, the Strategy for Sustainable Dairy Farming was adopted, creating a framework of 10 objectives outlining what it means for dairy farming to be competitive and responsible.

A further 16 ambitious targets for 2020 were set to track the progress being made (see summary of progress pg 30). Fast forward to 2017 and much had changed in that short time.

Strong progress has been made against the goals of the strategy launched in 2013, however much about our global and local operating environment is changing at a rapid pace.

Over the past 15 years the dairy sector has taken significant steps towards being more sustainable. But the job is not done. The next era of the dairy industry's strategic work aims to make progress where we know more is needed.

NEW STRATEGY: DAIRY TOMORROW

The new *Dairy Tomorrow* strategy recognises the importance of the dairy sector working transparently and openly with others to play its part in working toward a shared future vision for New Zealand and its role in the world, while continuing to provide the natural, high-quality products we are known and famous for the world over.

To find out more
VISIT DAIRYTOMORROW.CO.NZ

DAIRY TOMORROW COMMITMENTS

- 1 WE WILL PROTECT AND NURTURE THE ENVIRONMENT FOR FUTURE GENERATIONS
- 2 WE WILL BUILD THE WORLD'S MOST COMPETITIVE AND RESILIENT DAIRY FARMING BUSINESSES
- 3 WE WILL PRODUCE THE HIGHEST QUALITY AND MOST VALUED DAIRY NUTRITION
- 4 WE WILL BE WORLD LEADING IN ON-FARM ANIMAL CARE
- 5 WE WILL BUILD GREAT WORKPLACES FOR NEW ZEALAND'S MOST TALENTED WORKFORCE
- 6 WE WILL HELP GROW VIBRANT AND PROSPEROUS COMMUNITIES



Achievements under the Strategy for Sustainable Dairy Farming 2013-2017

In 2013, the Strategy for Sustainable Dairy Farming set out 16 targets for competitive and responsible dairy farming. As the new Dairy Tomorrow strategy begins, the achievements to date are highlighted below.



TARGETS



INDICATORS

COMPETITIVE – GLOBAL AND LOCAL

1. Profit from productivity increase from an average of \$50/ha/year to \$65/ha/year by 2020.	On average gains in PfP (profit from productivity) have remained at \$50/ha/yr over the last decade. This equates to \$73,500 gain per average New Zealand dairy farm or \$882m across the sector over that period. High milk price volatility has masked any further gains since 2013.
2. Research delivers farm systems that increase production and profit by \$110/ha per year, while reducing the environmental footprint by 30%.	New options such as fodder plantain, fodder beet and catch crops are reducing nitrate leaching. Technologies to reduce methane production are advancing. Increased profitability has not been achieved. Improved ryegrass plants are being evaluated for their potential profitability gains.
3. By 2020, 90% of dairy farm businesses have fully competent farm teams.	74%* of farms have fully competent teams, up from 65%. Gains in experience and secondary school achievement by people entering the industry were partially offset by a decrease in the amount of training undertaken.
4. By 2020, all dairy regions have sufficient certified rural professionals.	There are now over 760 certified rural professionals trained in effluent system design and assessment, reproduction, nutrient management and body condition scoring.
5. The dairy industry and government authorities have robust biosecurity systems.	Recent incursions have highlighted the importance of biosecurity and shortcomings in the sector's detection and response capability. As a result, the sector and government are ramping up efforts to achieve this target.
6. Farm practices ensure the milk supply is free of contaminants.	Average somatic cell count has reduced by 14% (30,000 somatic cells) since 2013, reflecting positive gains in udder health management.
7. By 2018 farmers have access to an information system that supports single entry and comprehensive data storage and links this data to key farm applications.	Significant progress made with the launch of commercial services including Agrigate. Business-to-business connections have expanded through DataLinker. These connections have been supported by the data standards and codes of practice.
8. Robust industry information systems facilitate 1.5% annual gains in breeding worth (BW) of the national herd.	Estimated gains in BW have increased steadily from 1.25% in 2013 to 1.56% in 2017. Genetic gain will deliver \$11 profit/cow/year.
9. Robust industry information systems facilitate rates of genetic gain of 1.0% per annum by 2020 in the forage value of pasture plants.	Annual gains achieved of 0.49% in forage value of pasture plants. These gains in seasonal dry matter production have increased the forage value of new cultivars by \$30-\$40/ha/year.

RESPONSIBLE – TODAY AND TOMORROW

10. The dairy industry fulfills all commitments listed in the Sustainable Dairy: Water Accord.	Provisional results suggest stock exclusion is now present along 97.5% of accord waterways. 10,614 nutrient budgets were processed and nitrogen management information provided to farmers.
11. 80% of New Zealanders agree dairy farmers are good stewards of the environment, by 2020.	In 2018, 53% of New Zealanders agreed that dairy farmers were committed to protecting the environment and water quality. This has increased from 33% in 2013.
12. 100% of farmers are compliant with the good practice animal welfare guidelines and standards for dairy farming.	Based on a survey of 500 farms, 88% of farms comply with all the animal welfare codes, including 68% who operate well above the minimum standards.
13. By 2020 90% of dairy farm businesses have quality work environments.	Good progress has been made in the use of timesheets, rosters and payroll to better manage teams.
14. 90% of New Zealanders agree dairy farmers make a positive contribution to rural and urban communities.	In 2018, 82% of New Zealanders agreed that dairy farmers made a positive contribution to rural and urban communities.
15. By 2020, export earnings are increased by 55% through adding value to milk and implementation of a sustainable milk growth strategy.	In 2018, the value of dairy exports was \$13.4b, a 9% increase on the 2013 baseline of \$12.3b.
16. 75% of New Zealanders agree that dairying makes a positive contribution to their standard of living.	In 2018, 56% of New Zealanders agreed that dairying made a positive contribution to their standard of living.

* provisional data



dairy tomorrow

Our commitments:

1 WE WILL PROTECT AND NURTURE THE ENVIRONMENT FOR FUTURE GENERATIONS

- Lead efforts to improve the health of our rivers and streams and protect and enhance biodiversity, beginning in 2018 with collaboration with other rural and urban land users, central and local government and communities on strategies and actions toward achieving swimmable waterways.
- Lead efforts on agriculture's contribution to meeting New Zealand's climate change goals through identifying and implementing strategies to reduce or offset greenhouse gas emissions from dairy farming.
- With communities, government and other land users develop a blueprint for a 50-year vision of sustainable land use in New Zealand by 2025.
- By 2025, achieve all farms implementing and reporting under certified farm sustainability plans.

2 WE WILL BUILD THE WORLD'S MOST COMPETITIVE AND RESILIENT DAIRY FARMING BUSINESSES

- By 2018, develop benchmarks and targets for international competitiveness, resilience, sustainability and community expectations for our future farm systems to achieve, and report annually from 2019 on the performance of research farms and the wider sector against these benchmarks and targets.
- By 2020, join with government and industry investors to develop and implement a co-funded, sector-led 'National Science Challenge' for dairying to deliver the next generation of tested, cutting-edge science and technology solutions for future farm systems.
- By 2025, 10% of dairy farms annually will have completed a whole farm assessment to identify and capture improvements in farm performance, with annual improvements in business performance and resilience measures reported from DairyBase.
- By 2020, improve data connectivity so that farmers' needs for valid data can be met by authorised data exchange between organisations.
- Develop initiatives to reduce the risk, and impact on farm profitability and productivity, of biosecurity incursions.

To find out more
VISIT DAIRYTOMORROW.CO.NZ

Our commitments and goals set out our aspirations for what we want to achieve as a sector in order to be trusted and valued, productive and competitive. This will be done through working collaboratively with others over the next decade and more.

3 WE WILL PRODUCE THE HIGHEST QUALITY AND MOST VALUED DAIRY NUTRITION

- Maintain zero compromise on the safety or integrity of New Zealand dairy products.
- Ensure consumers have the choice of New Zealand dairy nutrition by growing New Zealand dairy exporters' access to open dairy markets to equal 30% of global consumption.
- By 2020, implement a strategy to promote the unique value proposition of New Zealand milk.

4 WE WILL BE WORLD LEADING IN ON-FARM ANIMAL CARE

- Develop and implement a Framework that ensures every animal is valued and treated with care and respect.
- By 2023, achieve all farmers implementing and reporting under the Framework.

5 WE WILL BUILD GREAT WORKPLACES FOR NEW ZEALAND'S MOST TALENTED WORKFORCE

- By 2025, ensure all farm businesses have best employment practices and quality work environments operated by vibrant and proficient farm teams.
- By 2020, implement people initiatives to inspire, attract, grow and retain dairy talent.
- Ensure everyone gets home safe and well every day.
- By 2020, implement new programmes to support and integrate new entrants into the sector and our rural communities.
- By 2020, implement programmes to build and sustain our governance and management skills-base through diversity and leadership.

6 WE WILL HELP GROW VIBRANT AND PROSPEROUS COMMUNITIES

- Help strengthen communities through growing community leadership and building stronger connections, including urban-rural relationships.
- Influence the delivery of infrastructure and services in rural areas that support regional economic and social wellbeing.
- By 2025, be a highly trusted business sector in New Zealand.



2017/18 PROJECTS

Eastern Waikato and King Country farmer Ben Watson.



**THE FOLLOWING SUMMARY LISTS DAIRYNZ'S 2017/18 PROJECTS
ACCORDING TO THE PREVIOUS SECTOR STRATEGY, THE
STRATEGY FOR SUSTAINABLE DAIRY FARMING.**



RESEARCH AND DEVELOPMENT

NEW ZEALAND DAIRY FARMING'S COMPETITIVE AND RESPONSIBLE AMBITIONS ARE UNDERPINNED BY A COMBINATION OF SCIENTIFIC, COMMERCIAL AND FARMER INNOVATION.

While striving to remain highly competitive, New Zealand dairy farming is also challenged to meet increasingly stringent environmental outcomes, which is opening up new avenues for research and innovation around farm systems.

Research and development will aim to capture new knowledge to push the boundaries of what is technically achievable on farms and make innovations accessible to dairy farmers.

A co-development approach will see farmers participating in research projects and sharing the knowledge gained through testing concepts on their farms.

IMPROVED PASTURE PERFORMANCE (PGP PASTURE PERSISTENCY)

This project aims to quantify the plant and population processes involved in the persistence of perennial ryegrass in grazed dairy pastures, as a basis for:

- identifying plant traits that are associated with improved persistence
- assisting plant breeders to identify material in their breeding populations that could have superior persistence
- supporting the implementation of the persistence trait in the Forage Value Index
- better defining the management practices farmers can adopt to improve pasture persistence.

Provider: DairyNZ Ltd

Funding: \$115,291 (ex. GST). This includes co-funding of \$162,582 by the Ministry for Primary Industries – Primary Growth Partnership.

PRUDENT USE OF ANTIMICROBIALS FOR MASTITIS – DRY COW STUDY

There is growing international pressure for the dairy sector to demonstrate careful use of antimicrobials in agriculture to help mitigate the risk of antimicrobial resistance affecting human health. As a result, use of antibiotic dry cow treatments to protect low somatic cell count (SCC) cows at dry-off is increasingly viewed as unacceptable.

In future, dry cow antibiotics will be targeted to individual animals that have sufficient diagnostic information to justify treatment. Deciding these criteria, at a herd and cow level, are important outcomes of this project. In addition, it will provide necessary knowledge and tools to support vets and farmer clients by increasing their confidence in non-antibiotic alternatives.

Provider: DairyNZ Ltd

Levy funding: \$301,320 (ex. GST)

IMPROVED COLOSTRUM MANAGEMENT PRACTICES FOR NEW ZEALAND DAIRY CALVES

Ingesting high quality colostrum within the first few hours of a calf's life is important because the newborn animal relies on the passive transfer of antibodies via colostrum to provide immunity against diseases until they develop their own immunity. However, this vital process can easily fail when a calf has not ingested colostrum within 6-12 hours of birth, is ingesting unsuitable or contaminated colostrum, or is simply not ingesting enough colostrum. This inadequate colostrum intake is known as failure of passive transfer (FPT) of immunity.

This Sustainable Farming Fund project aims to determine the regional and national prevalence of FPT on New Zealand dairy farms, identify the key management factors involved and develop improved practical guidelines on colostrum management for dissemination to farmers and veterinarians. This includes co-funding by Ministry for Primary Industries, through the Sustainable Farming Fund.

Provider: Veterinary Enterprises Group Ltd (VetEnt)

Levy funding: \$20,330 (ex. GST). This project is co-funded by the Sustainable Farming Fund.

REDUCING RELIANCE ON IMPORTED FEED

The proportion of feed imported onto dairy farms has increased over recent years. This has contributed to increasing cost of production and dairy systems that are vulnerable to imported feed supply shortages. This project will conduct farm systems research investigating how dairy farms might maintain production and profit with reduced reliance on imported feed within Northland's variable climate. Options tested will be better matching stocking rate to pasture supply and innovative forage cropping regimes. This project will provide information and demonstration to assist farmers in running less vulnerable and more profitable farm systems with a lower environmental impact.

Provider: Northland Dairy Development Trust

Levy funding: \$170,000 (ex. GST)

FORAGES FOR REDUCED NITRATE LEACHING 2016-17

Forages for Reduced Nitrate Leaching is a DairyNZ-led collaborative research programme across the primary sector delivering science for better farming and environmental outcomes. The aim is to reduce nitrate leaching through research into diverse pasture species and crops for dairy, arable and sheep and beef farms. The main funder is the Ministry of Business, Innovation and Employment, with co-funding from research partners DairyNZ, AgResearch, Plant & Food Research, Lincoln University, Foundation for Arable Research and Landcare Research.

Provider: DairyNZ Ltd

Levy funding: \$450,000 (ex. GST)

INCREASED GENETIC GAIN THROUGH IMPROVED PHENOTYPIC DATA

This project's objective is to support the delivery of improved animal genetics to the dairy industry. These selection tools support the breeding of robust cows, resulting in decreased animal health costs and increased productivity of the national herd. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Levy funding: \$67,543 (ex. GST). This includes co-funding of \$67,457 by the Ministry for Primary Industries – Primary Growth Partnership.

FARM SYSTEMS MODELLING

This project will develop and apply computer models to explore farm systems, components of farm systems, and environmental questions that are expensive and difficult to answer with traditional research methods.

Provider: DairyNZ Ltd

Levy funding: \$250,000 (excl. GST)

GENOMICS FOR PRODUCTION AND SECURITY IN A BIOLOGICAL ECONOMY

This programme has been developed in consultation with end-users and primary industries of New Zealand including dairy, mixed livestock, forage seed and biosecurity. It enables the development, enhancement and accelerated adoption of a novel, open-source and cost-effective genetic analysis platform known as Genotyping by Sequencing.

This system produces detailed genotype profiles of the full range of biological materials relevant to improving and sustaining New Zealand's economic performance. Programme elements include end-user workshops and co-development of applications for sector-specific needs and proof-of-concept, particularly related to genetic improvement of plants and animals.

Value and end-user adoption will link to scientists and organisations with interests in genetic data for biosecurity, product traceability and systems for genetic improvement of economic species.

Provider: AgResearch Ltd

Levy funding: \$100,000 (ex. GST)

INCREASED GENETIC GAIN THROUGH IMPROVED PHENOTYPIC DATA

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Provider: DairyNZ Ltd

Levy funding: \$67,543 (ex. GST). This includes co-funding of \$67,457 by the Ministry for Primary Industries – Primary Growth Partnership.

SUSTAINABLE NUTRIENT MANAGEMENT ON WAIKATO PEAT SOILS

This project's goal is to gather data from farmed peat soils to quantify the nutrients lost from these unique soils. The project will help provide accurate information on potential nutrient losses to enable farmers to effectively modify their management practices while helping reduce their environmental footprint.

Provider: AgResearch Ltd

Funding: \$50,000 (ex. GST). This project is co-funded by the Sustainable Farming Fund.

FORAGE VALUE – SUPPORTING RESEARCH

This project aims to lay the basis for a Forage Value Index (FVI) that is scientifically-based, objective, appropriately weighted for all critical traits and accurately calibrated for on-farm conditions. The FVI will explicitly define key plant traits for sustainable and competitive dairy systems.

Provider: DairyNZ Ltd

Levy funding: \$1,990,000 (ex. GST)

ADVANCED MANAGEMENT TECHNOLOGIES

This research aims to build knowledge and expertise to underpin the development and adoption of advanced tools necessary to optimise farm production (both in feed and animals), mitigate labour constraints, improve animal welfare and broaden lifestyle choices. It focuses on automated and smart technologies to reduce manual labour and information technology to increase outputs by better decision-making.

The final months will further explore opportunities for farmers to use technology to better utilise pasture. Research will focus on relating seasonal grazing management practice with information needs to link with decision support tool design. Guidelines for the development and use of pasture measurement tools will also be developed. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Funding: \$68,927 (excl. GST). This includes co-funding of \$56,123 by the Ministry for Primary Industries – Primary Growth Partnership.

SOIL NUTRIENT MANAGEMENT

This project aims to provide farmers with better information to base decisions about fertiliser use and nutrient management. Significant growth has been observed in the adoption of alternative fertiliser regimes broadly classified as 'biological soil management', believed to reduce dependence on nitrogen fertilisers, and argued to have beneficial outcomes for soil and animal health. However, the impacts on farm performance (environment, production, animal health, profitability, etc) over time have not been evaluated at farm scale. This project will generate, analyse and disseminate a full range of farm-level KPIs comparing conventional and biological performance outcomes.

Provider: AERU (Agribusiness Economics and Research Unit), Lincoln University

Levy funding: \$30,000 (ex. GST)

MBIE PARTNERSHIP – PILLARS OF A COMPETITIVE AND RESPONSIBLE DAIRY SYSTEM: IMPACT 1: LIFETIME PRODUCTIVITY

This research programme will determine the timing, incidence and reasons for premature death, involuntary culling and health-related productivity losses in New Zealand dairy cows. In addition, the project will determine animal husbandry, farm management and nutrition practices that reduce mortality, increase cow lifetime productivity and improve animal welfare.

Provider: DairyNZ Ltd

Levy funding: \$550,000 (ex. GST). This funding was matched by the Ministry for Innovation, Business and Employment.

MBIE PARTNERSHIP – PILLARS OF A COMPETITIVE AND RESPONSIBLE DAIRY SYSTEM: IMPACT 2 - ACHIEVING INDUSTRY TARGETS OF REPRODUCTIVE PERFORMANCE ON DAIRY FARMS

This project aims to improve cow genetics and physiology underpinning reproductive failure, ensuring a 13 percent improvement in the number of animals pregnant within the optimal timeframe by 2020 and thereby making a substantial contribution to the industry's goals.

Provider: DairyNZ Ltd

Funding: \$1,900,000 (ex. GST). This funding was matched by Ministry for Innovation, Business and Employment.

CO-INNOVATION FOR IMPACT IN THE DAIRY SECTOR

This project aims to demonstrate a new systems approach to technology transfer/extension, called 'co-innovation'. In this approach, participants in the New Zealand dairy industry form innovation networks to co-develop solutions to industry challenges. This project will test and evaluate the co-innovation approach through two case studies: (i) dairy heifer rearing (within the existing InCalf programme) and (ii) dairy farm nutrient management in the Canterbury region. This will allow principles and practices to be recommended that enhance those two programmes and can be incorporated into other DairyNZ existing and future programmes.

Provider: AgResearch Ltd

Levy funding: \$150,000 (ex. GST)

MAKING SENZS: RICHER DECISIONS FOR ENGAGED COMMUNITIES

New Zealand is approaching resource limits in many areas, yet pressure is intensifying to realise greater value from land. There is an increasing expectation by society for environmental decision-makers and the dairy sector to respond to complex and interconnected environmental, economic, cultural and social demands. This is causing constraints in capacity as organisations and individuals struggle to cope with greater complexity, increased expectations around engagement and rates of behaviour change to respond to these demands. To address this challenge, the Lincoln Hub and NIWA will identify success factors that decision-makers can be confident will improve outcomes in addressing environmental challenges. In short, what decision-making approaches work where, when and how?

Provider: AgResearch Ltd

Levy funding: \$100,000 (ex. GST)

INTEGRATING MORE CROPPING INTO SUSTAINABLE DAIRY FARMING SYSTEMS

This project aims to demonstrate that the dairy sector's environmental footprint can be at least maintained while meeting the industry targets of increasing farm production and profitability. This project will be carried out at the Waimate West Demonstration Farm, where 25 percent of the milking platform system will be cropped. The project will also involve three local commercial farms practicing intensive cropping on the dairy platform, as well as a wide section of the farm support industry, to ensure high rate of buy-in and update of results.

Provider: Waimate West Demonstration Farm Trust

Levy funding: \$20,000 (ex. GST)

IMPROVING FORAGE LEGUME – RHIZOBIA PERFORMANCE

Forage legumes, such as clovers, are an essential component of New Zealand's pastoral systems. They provide a valuable contribution to forage production, pasture feed quality and provide nitrogen (N) inputs through biological nitrogen fixation (BNF) carried out by rhizobia. These micro-organisms live in nodules on clover roots and form a symbiotic partnership with the plant. This research programme will investigate opportunities to increase BNF and, thereby, increase pasture production and the profitability and sustainability of the pastoral sector. By increasing BNF, farmers will be able to offset equivalent requirements for inorganic N fertiliser addition with associated cost savings.

Provider: AgResearch Ltd

Levy funding: \$100,000 (ex. GST)

GENETICS HUB

Genetic gain in dairy cattle has a proven track record in delivering higher productivity and profitability to farmers. This project focuses on ensuring that optimal rates of genetic gain are achievable. This will be achieved via technical input to enhance research and development outcomes of existing and proposed research and via preparation of new research funding proposals that aim to develop capability.

Provider: AL Rae Centre, through Massey University

Levy funding: \$100,000 (ex. GST)

SOUTHERN DAIRY HUB RESEARCH

The objective of this project is to measure the animal welfare and husbandry risks of new and existing dairy farm systems and practices and new systems being developed by researchers and/or farmers. The practice of wintering cows on crop (kale and fodder beet) has been identified as a topical issue. There is a growing concern of animal health and welfare issues when cows consume high quantities of fodder beet, a high-energy feed that is deficient in some essential minerals (namely phosphorus) and low in protein. A monitoring study is underway at the Southern Dairy Hub. Four groups of 80 cows are being studied to assess the impact of different winter feeding options, and their carry-over effects into lactation.

Provider: DairyNZ Ltd

Levy funding: \$500,000 (ex. GST)

LEAP 21

Leap21 aims to redesign farm production systems that account for the many challenges facing the dairy sector and various stakeholder perspectives, including farmers, the New Zealand public, consumers and the animals.

Provider: DairyNZ Ltd

Levy funding: \$266,000 (ex. GST)

HYBRID GRASSES

A work programme has been developed that will see the first commercial hybrid cultivars available in 2023. There is clear proof of concept for the technology and this project aims to develop the 'turn key' technology package that includes parent lines and heterosis maps that are required for other commercial players to pick the technology up. Research work includes, testing the proof of concept in New Zealand, including understanding the agronomy and physiology behind any superior performance.

Provider: Dairy Australia

Levy funding: \$771,319 (ex. GST)

QUANTIFICATION OF CONTAMINANT TRANSFER PATHWAYS

The Transfer Pathways Programme has been developed to quantify pathway-specific transfers of nitrogen and phosphorus that take lag times and attenuation potentials of the different pathways into account. By 2018, the project will have established that N and P transfer is partitioned across the pathways relevant in four case study areas (Wairau Aquifer, Ashley-Waimakariri, Hauraki, Upper Waikato). A catchment scheme will facilitate the application of transfer pathway understanding in other less well studied catchments. A modelling framework will integrate existing data, identify knowledge gaps, characterise and quantify fluxes, analyse uncertainty and ultimately derive simplified models for management purposes.

Provider: Lincoln Agritech Ltd

Levy funding: \$100,000 (ex. GST)

TARANAKI RESEARCH

In this project, we will tackle two issues of immediate relevance to farmers in Taranaki and elsewhere in NZ.

DTT Gibson: The experiment will investigate the profitability of using PKE at a high stocking rate relative to a pasture only system, but within the limitations of Fonterra's fat evaluation index, and compare this with utilising locally grown maize grain.

DTT Kavanagh: The experiment will investigate the benefits and costs of autumn calving.

There has been increased interest in autumn calving, particularly along the coastal belt of Taranaki but also in many other regions of New Zealand that experience dry summer conditions but mild winters with reasonable pasture growth.

Provider: Dairy Taranaki Trust

Levy funding: \$294,000 (ex. GST)

SYSTEMS FOR PROFIT

This project aims to discover and quantify changes to all components of farm management that will deliver increases in profit of \$1,500/ha by 2030 and ensure farm businesses are robust to climate and price-shock risks, all within the constraints of environmental footprint, labour efficiency, and animal welfare and husbandry.

To achieve this target, the dairy industry must evolve to withstand the challenges it faces during the next 12 years and beyond, while availing of all the opportunities for sustainable wealth creation.

Provider: DairyNZ Ltd

Levy funding: \$225,000 (ex. GST)

OFF PASTURE SYSTEMS

The objective of this project is to identify standoff pad surfaces that are re-usable and more affordable than those currently in use. The feasibility of using engineered approaches to develop low-cost cow standoff facilities will be explored using purpose-built facilities at Lincoln University. The experiments will evaluate the performance of the following alternative standoff pad surface materials: a round stone matrix, sand, a geotextile carpet and woodchip, all of which will be compared to 'conventional' wintering system where cows stay in the paddock for 24 hours. Animal welfare, management of the material and effluent quality will be assessed.

Provider: Lincoln University

Levy funding: \$110,000 (ex. GST)

GM FORAGES

AgResearch has developed a genetically modified ryegrass that in the glasshouse has produced both higher levels of energy (through increased lipids) and higher growth rates (increase of 40%) through more efficient photosynthesis.

To progress the development of these plants, and potentially release them in New Zealand requires further research including field trialling off-shore. Without compelling field data, there will not be a basis for a fact-based discussion on the merits and costs of a GM ryegrass release in New Zealand.

Provider: AgResearch

Levy funding: \$100,000 (ex. GST)

ENVIRONMENTAL RESEARCH FOR SOUTHERN DAIRY HUB

The study will address some key environmental concerns that have been raised by the community of interest that is attached to the Southland Dairy Hub. These can be broadly divided into two focus areas. Developing dairy production systems that have reduced emissions of nitrogen (N) to water. This activity will focus on quantifying N leaching losses from the four farmlet systems that will be implemented in winter 2018. Scoping the potential for edge-of-field managements to reduce losses of nitrogen, phosphorus, sediment and faecal bacteria to water.

Provider: AgResearch

Levy funding: \$200,000 (ex. GST)

DRY COW HYPOTHESIS

A work programme has been developed that will see the first commercial hybrid cultivars available in 2023. There is clear proof of concept for the technology and this project aims to develop the 'turnkey' technology package that includes parent lines and heterosis maps that are required for other commercial players to pick the technology up. Research work includes, testing the proof of concept in New Zealand, including understanding the agronomy and physiology behind any superior performance.

Provider: AgResearch

Levy funding: \$133,655 (ex. GST)

MBIE PARTNERSHIP – LOW N COWS

The objective of this project is to deliver transformational animal genetics that, according to previous farm systems and hydrological modelling will reduce nitrogen leaching and greenhouse gas emissions as well as improved tools for evaluating/regulating environmental impacts. Specifically, by 2026, nitrogen excretion breeding values to reduce nitrogen leaching will be available for all dairy cattle and widely marketed to and used by dairy and beef farmers through commercial breeding companies. The effects of improving herd-level nitrogen excretion by combining genetic and management mitigations will be successfully integrated into OVERSEER, allowing farmers and regional councils to understand their impacts on nitrogen leaching and develop strategies to meet environmental targets. Farmers will use these tools to transform their herds and minimise their environmental impacts.

Provider: DairyNZ Ltd

Levy funding: \$625,000 (ex. GST). This funding was matched by the Ministry for Innovation, Business and Employment.

BODY OF KNOWLEDGE NEW FARM SYSTEMS

The Body of Knowledge project has packaged an agreed set of science-based high-level principles and messages to support recommendations for mitigating nutrient loss to water and greenhouse gas emissions. The Body of Knowledge will support delivery to, and co-development with, farmers and rural professionals. Furthermore, the Body of Knowledge will provide a platform for integrating new research findings and identifying research and development gaps.

Provider: DairyNZ Ltd

Levy funding: \$264,000 (ex. GST)



TALENTED PEOPLE

TALENTED PEOPLE HAVE THE SKILLS AND MOTIVATION TO SUCCEED IN THE DAIRY INDUSTRY, WITH THE MOST PROFITABLE AND SUSTAINABLE DAIRY FARMS HAVING GOOD MANAGEMENT PRACTICES APPROPRIATE TO THE FARM SYSTEM.

Dairy farming's growth has stretched the availability of skilled people as farm systems have diversified and expanded into new regions, with farmers facing increased complexity and larger businesses. More than ever, highly skilled and motivated people are essential in on-farm roles, along with in advisory, education and science positions.

Attracting talented and motivated people from a wider talent pool, providing excellent training and development opportunities, and retaining those people in the dairy industry is a key part of this industry investment.

IMPROVING DAIRY PRODUCTION CAPABILITY

This project is a co-investment by DairyNZ with Massey University and provides joint funding for a Professor of Dairy Production Systems based at Massey University. The ongoing funding of this position will boost the research, teaching and training capability in dairy production and dairy systems, and provide stronger alignment between Massey University academics and the dairy industry.

Provider: Massey University

Levy funding: \$80,000 (ex. GST)

DEVELOPING RURAL YOUTH

Growing leadership in the dairy industry is key to ensuring a positive and secure future for the industry. This project expands the leadership talent pool, and attracting and retaining young people from the wider agricultural industry, by expanding the leadership training and opportunities available to them.

Provider: New Zealand Young Farmers

Levy funding: \$140,000 (ex. GST)

DAIRY INDUSTRY GRADUATE PROGRAMME

This project aims to address future capability requirements and develop young graduates' understanding of farm systems as they pursue careers as dairy researchers and developers. Top graduates committed to progressing in R&D, will be offered competitive scholarships and 1:1 mentoring to complete an industry-relevant farm systems Master's degree before entering specialist fields. This will ensure specialists have a strong knowledge of how individual components within a farm system interact, and how their specialist field impacts the farming operation.

Provider: DairyNZ Ltd

Levy funding: \$356,620 (ex. GST). This project is co-funded by AgResearch.

YOUTH CAREERS PROMOTION

This project promotes the dairy industry to New Zealand youth to attract them to the industry, either on-farm or in the service and support sector. It aims to assist the dairy industry to attract, develop and retain highly skilled, motivated people (farm managers, scientists, research technicians and rural professionals) by providing scholarships and other support to university students.

Provider: DairyNZ Ltd

Levy funding: \$750,000 (ex. GST)

PEOPLE AND SKILLS MEASUREMENT

This project aims to consolidate and align investments and activities associated with measuring how well the primary industry labour market is functioning. This includes monitoring processes to affect forecasting changes within the labour market. A particular focus of the project is developing a robust methodology (a 'scorecard') to measure progress towards three dairy industry strategy targets under Talented People and Work Environment.

Provider: Scarlatti Ltd

Levy funding: \$100,000 (ex. GST)

LEADERSHIP PIPELINE

This aims to enlarge the pool of talented individuals working in the sector by increasing the number of young people engaging with the industry through interactive activities and learning experiences. Initiatives such as mentoring and learning from school age through to the Rural Business Network supports the development of the individual. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: New Zealand Young Farmers

Levy funding: \$50,000 (ex. GST). This includes co-funding of \$80,745 by the Ministry for Primary Industries – Primary Growth Partnership and \$59,000 by New Zealand Young Farmers.

NEW ZEALAND DAIRY INDUSTRY AWARDS

DairyNZ, together with other sponsors, supports the Sharemilker/Equity Farmer of the Year, Farm Manager of the Year and Dairy Trainee of the Year competitions, with the aim of raising awareness and understanding of the value of New Zealand's dairy industry, along with promoting business excellence.

Provider: New Zealand Dairy Industry Awards Trust

Levy funding: \$155,000 (ex. GST)

PRIMARY INDUSTRY CAPABILITY ALLIANCE (PICA)

Continued improvements in dairy business performance are essential if New Zealand is to capitalise on changing market trends and associated emerging opportunities. Developing the people within dairying, with increased numbers and improved skill levels, is central to capturing this opportunity. PICA provides a collaborative forum to assist like-minded organisations to plan, implement and evaluate capability development in a coordinated way within the primary industries.

Provider: Primary Industry Capability Alliance Inc

Levy funding: \$150,000 (ex. GST)

PRIMARY ITO FUNDING

DairyNZ and the Primary ITO are jointly developing capable people to grow the productivity, profitability and sustainability of New Zealand's dairy sector. The Primary ITO contributes to this objective by developing qualifications and programmes, identifying dairy workers' skill gaps, and promoting, brokering and supporting training to meet the competencies required for the dairy industry standard roles.

Provider: Primary Industry Training Organisation Inc

Levy funding: \$1,702,000 (ex. GST)

LEARNING INNOVATIONS

This project will scope, develop and pilot innovative approaches to training, funding and demand generation, and foster collaboration that will increase the uptake of learning opportunities by dairy farmers from non-formal through to formal pathways. In addition, this project will actively support and contribute to the delivery of the Diploma in Agribusiness Management, led by the Primary ITO.

Provider: Scarlatti Ltd

Levy funding: \$550,000 (ex. GST)

CENTRE OF EXCELLENCE FOR AGRICULTURAL SCIENCE AND BUSINESS PROGRAMME

This project aims to deliver an education programme to secondary school students that will stimulate careers in agricultural science and business. This will meet the industry's long-term needs for highly skilled and motivated young people within the agriculture sector.

Provider: Waikato Anglican College Trust

Levy funding: \$100,000 (ex. GST)

ESTABLISHMENT OF A PROFESSIONAL LAND MANAGER NETWORK

This project aims to grow the capability of dairy farm managers, so they are applying professional skills and knowledge and meeting the standards expected by customers, consumers and communities to achieve excellence in farm management. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: Agriculture Services Ltd

Funding: \$8,333. This includes co-funding of \$8,058 by the Ministry for Primary Industries – Primary Growth Partnership and \$16,547 by Agriculture Services Ltd.

DIPLOMA IN AGRIBUSINESS MANAGEMENT

This project aims to increase the financial and resource management skills of dairy farmers, particularly the uptake of formal training by farm managers and owners. DairyNZ has identified a huge variation in profitability between New Zealand's best and worst performing dairy farms, due largely to differences in the management capability of those running the farms. Research suggests that dairy farms with better business management practices are more profitable, with potential benefits of over \$1000/ha.

Provider: Primary Industry Training Organisation Inc

Levy funding: \$400,000 (ex. GST)



WORK ENVIRONMENT

RESPONSIBLE DAIRY EMPLOYERS ENGENDER PRIDE IN THE DAIRY INDUSTRY THAT ENHANCES PUBLIC REPUTATION AND INCREASES THE CHANCES OF ATTRACTING AND RETAINING TALENTED PEOPLE.

The quality of work environment – the physical workplace, employment conditions and the employment relationship – affects productivity and a wide range of outcomes for people working there.

It is vital to the long-term sustainability of dairy farming that a commitment to high quality work environments be more widely adopted. Industry investment will help create farm work environments that are safe and use technologies and business practices that achieve continuous productivity improvements.

FARMER WELLNESS AND WELLBEING

This project addresses the health needs of the farm workforce before they limit farm performance. It does so by acting on the dairy-specific factors that contribute to work-related injury, chronic illness and burnout. The project also brokers joint objectives with other key stakeholders. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Levy funding: \$58,141 (ex. GST). This includes co-funding of \$82,059 by the Ministry for Primary Industries – Primary Growth Partnership.

HUMAN CAPABILITY POLICY

This project provides proactive and reactive policy management of issues impacting on the ‘talented people’ and ‘work environment’ strategy objectives, including the regulatory frameworks for health and safety, employment standards and tertiary education.

Provider: DairyNZ Ltd

Levy funding: \$118,000 (ex. GST)

QUALITY WORK ENVIRONMENT

This project supports employers and employees to build quality work environments on dairy farms. It incorporates working with other industry stakeholders, developing and maintaining tools and resources, monitoring and evaluation of the impact of good people management, and working with farmers. This project includes Milksmart, PeopleSmart and Safety Sorted programmes.

Provider: DairyNZ Ltd

Funding: \$1,424,550 (ex. GST)

SYSTEMS FOR PEOPLE

The Systems for People project will investigate systems and options to improve labour productivity on farm, enabling progress on all other on-farm system issues through providing a higher quality work environment, enabling farms to attract and retain talent and providing more time (and mental space) for decision-making and capability development on-farm.

The Systems for People project in 2017/18 will be primarily focused around scoping the issues and needs for people-related research in the dairy industry. Additionally, some existing pieces of work in extended milking intervals and time use on dairy farms have been incorporated into this programme.

Provider: DairyNZ Ltd

Levy funding: \$206,870 (ex. GST)

DEVELOPING A FIT FOR PURPOSE TRAINING SYSTEM

This project aims to develop a strategy for DairyNZ to guide the management and delivery of training across the informal to formal continuum so that we achieve increased efficiency, provide a better farmer or rural professional (RP) experience, and have greater impact. In this context, training is considered to be any way in which a farmer or RP might learn, for example through the DairyNZ website or through attending a university course. The development of the strategy will consider the following types of issues: improved efficiency, improved farmer experience, better marketing, greater impact with 'trainees' and funding of training.

Provider: DairyNZ Ltd

Levy funding: \$140,000 (ex. GST)



FARM PROFIT

BEING PROFITABLE AND FINANCIALLY RESILIENT TO THE VOLATILITY OF BOTH MARKETS AND CLIMATE IS FUNDAMENTAL TO SUSTAINABLE DAIRY FARMING.

Collectively, profitable dairy farming is closely aligned with the cost-competitiveness of New Zealand dairy farming internationally and drives long-term industry growth. However, increases in farm input costs and higher debt burden have eroded the profit gains from productivity and some dairy farms are exposed to significant risk.

Industry investment into farm profit aims to improve the profitability and resilience of dairy farming through efficiency gains on-farm.

BAY OF PLENTY FOCUS ON DAIRYING

This farmer-led project works with farmers in the Eastern Bay of Plenty to make their operations more profitable and sustainable. Many activities and events have been undertaken to achieve this, including monitor farm emails, yellow bristle grass prevention and management advice, DairyBase use and lucerne data collection.

Provider: BOP Focus on Dairying Charitable Trust
Levy funding: \$66,000 (ex. GST)

WEST COAST MONITOR FARM PROJECT

The West Coast Monitor Farm project is a farmer-led initiative to deliver pasture growth, soil temperature and farm system information to local farmers. After many years, the project now has a comprehensive dataset on seasonal and annual variation in pasture growth and soil temperature from Westport to Kowhitirangi.

Provider: West Coast Focus Farm Advisory Board
Levy funding: \$24,000 (ex. GST)

HAURAKI PLAINS MONITOR FARMS

This project aims to increase the wealth, value and satisfaction of dairy farmers on the Hauraki Plains. The project promotes best practise by top farmers, including weekly monitoring of grass growth rates, use of pasture management software, how to achieve condition score five cows at calving and much more across a variety of locations, soil types and operating structures.

Provider: P3 Trust
Levy funding: \$56,000 (ex. GST)

SOUTH ISLAND DAIRYING DEVELOPMENT CENTRE

Partners Networking to Advance South Island Dairying – The South Island Dairying Development Centre (SIDDC) is a partnership between seven key New Zealand organisations involved in South Island dairying.

Provider: DairyNZ Ltd
Levy funding: \$41,000 (ex. GST)

HERD REPRODUCTION MANAGEMENT

This project aims to improve the national six-week in-calf rate by building the capability of InCalf trained advisors through skills development in reproduction management, consultation and client engagement. The project will also establish farm system knowledge for dairy heifer management and create best practice standards for heifer managers, graziers and dairy farmers. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Levy funding: \$65,730 (ex. GST). This includes co-funding of \$92,770 by the Ministry for Primary Industries – Primary Growth Partnership

P3 DAIRY PUSH

P3 Dairy Push, in the Hauraki Plains, has been running since November 2013. This project aims to lift the profitability of the 36 participants by \$500/ha (on average) by the end of three years and demonstrate achievement of individual farm business goals through strategic planning and benchmarking.

Provider: Ag First Waikato

Funding: \$29,500 (ex. GST)

CRM OPERATIONS

This project aims to enhance DairyNZ's Client Relationship Management (CRM) system to develop stronger and longer-lasting relationships between DairyNZ, farmers and rural professionals, through targeted, timely and relevant messaging, tools or products.

Provider: DairyNZ Ltd

Levy funding: \$360,000 (ex. GST)

MATAMATA-PIAKO DAIRY PUSH

Based on the successful Dairy Push projects, this one aims to lift the performance of farms' triple bottom lines: people, profit and planet. For example, lifting the profitability of the participant group by \$500/ha by the end of three years and demonstrating achievement of individual farm business goals through strategic planning and benchmarking. The project will build the capability of these farmers to use strategic and tactical planning tools to create more resilient dairy farming businesses.

Provider: MP3 Trust

Levy funding: \$99,142 (ex. GST)

IMPROVING HERD PERFORMANCE

Two aims of this project are to: 1) achieve and sustain reductions in national bulk milk somatic cell counts and improved Mastitis Focus udder health star ratings, through better mastitis control and milk quality management systems, with 'prudent use' of antimicrobials. 2) achieve sustained increases in actual six-week in-calf rate (NZ Dairy Statistics), through improved reproductive performance management systems, while using minimal hormonal intervention.

Provider: DairyNZ Ltd

Levy funding: \$757,500 (ex. GST)

DIRECTLY SUPPORTING FARMERS – SMALLER HERD FARMER BUSINESSES

The goals of SMASH (Smaller Milk and Supply Herds) include the acknowledgement, appreciation and support of smaller herd farmers by the sector and the wider community; recognition that people are the mainstay of smaller herd farms; promotion of the value of smaller herd farmers in meeting industry objectives; and improved motivation and levels of morale within the smaller herds' fraternity. This was the last year of funding under the seven-year year PGP Transforming the Dairy Value Chain Programme.

Provider: Smaller Milk and Supply Herds (SMASH)

Levy funding: \$20,051 (ex. GST). This includes co-funding of \$28,299 by the Ministry for Primary Industries – Primary Growth Partnership.

WHOLE FARM ASSESSMENT AND PLANNING

This project aims to develop capability and industry standards for farm systems and people management for rural professionals (RP). This is being achieved through development of certification schemes, training, tools and processes. As a result, the dairy industry's RP network will be better equipped to identify key risks and opportunities on-farm, strategically analyse change options and provide support for implementation. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Funding: \$126,540 (ex. GST). This includes co-funding of \$178,600 by the Ministry for Primary Industries – Primary Growth Partnership.

ST PETER'S SCHOOL/LINCOLN UNIVERSITY DEMONSTRATION DAIRY FARM – OWL FARM

The goal of the St Peter's School/Lincoln University Demonstration Dairy Farm is to apply proven research, utilising good on-farm practice and scientific monitoring for the farm to become an exemplar in dairy production, economic performance and environmental footprint.

Provider: St Peter's School Trust Board

Levy funding: \$45,000 (ex. GST)

LIFTING THE FINANCIAL CAPABILITY OF OUR DAIRY BUSINESSES THROUGH NEW ZEALAND'S DAIRY WOMEN

Dairy Women's Network (DWN) focuses on increasing the financial capability of its members. This takes place through the roll-out of financial training modules on topics identified as development areas.

Provider: Dairy Women's Network

Levy funding: \$442,000 (ex. GST)

ON-FARM CHANGE THROUGH DAIRYNZ'S REGIONAL BACKBONE 2017/18

This project aims to help farmers run more profitable, sustainable and competitive farm businesses, by identifying and acting on opportunities to improve their own farms; making progress on industry priorities (which they may not currently recognise as important). The regional 'backbone' comprises nine regional teams engaging with farmers nationwide and working in close collaboration with other DairyNZ teams (development and research), regional partners and stakeholders to help create a better and more sustainable future for dairy farmers.

Provider: DairyNZ Ltd

Funding: \$8,157,700 (ex. GST)

MĀORI DAIRY ORGANISATION DEVELOPMENT

Māori-owned dairy farms contribute approximately 10 percent of national milk production to New Zealand's dairy industry and opportunities exist for significant and sustainable growth in their overall profitability. In partnership with the Federation of Māori Authorities (FOMA), DairyNZ will help realise the potential within the Māori dairy sector by improving farm productivity, governance capability and attracting young Māori to work in the industry, growing their capability and retaining their skills. Through the development and implementation of foundational strategies, DairyNZ will support Māori towards achieving their own resilient models. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Funding: \$66,562 (ex. GST). This includes co-funding of \$96,963 by the Ministry for Primary Industries – Primary Growth Partnership.

IMPROVING FINANCIAL CAPABILITY OF DAIRY FARMERS

Sustained milk price volatility highlights the need for the dairy industry to employ robust cash management practices. Building on research, DairyNZ has been implementing a new way of talking about financial management and engaging with farmers to help them to prioritise financial management practice in their businesses.

Working in a joint approach with industry partners, this project seeks to support and develop a strong business ethos and foster practice change amongst dairy farmers through the provision of collaborative support and resources.

Provider: DairyNZ Ltd

Levy funding: \$350,882 (ex. GST)

FARM ASSESSMENT & PLANNING

The Farm Assessment Planning (FAP) project's main objective is to equip farmers, either directly or through their influencers, with the motivation, tools, support, and processes to identify and close their business performance gaps aligned with individual business and personal goals. In closing the performance gap through the implementation of sustainable good management practices, we will see farm productivity move towards potential, driving increased PFP.

Provider: DairyNZ Ltd

Levy funding: \$798,445 (ex. GST)

SYSTEMS THAT WORK

The Systems that Work project aims to facilitate a co-innovation approach that provides farmers with confidence to adapt new systems and practices to meet farm business goals and obligations. The project facilitates the connection between systems R&D and farmer and rural professional engagement and capability development initiatives. There are two main work-streams proposed: New Systems Programme Facilitation; and Partner Farm Network.

Provider: DairyNZ Ltd

Levy funding: \$453,600 (ex. GST)

PLANS FOR THE REGION SUPPORT

Plans for the region are the integrating mechanism for DairyNZ to ensure that we are both listening to farmer needs and balancing those with future needs that may not yet have become apparent. Collating regional needs also helps to set priority for R&D work.

The aim of this project is to ensure that regional delivery of all DairyNZ initiatives are well informed, are prioritised in accordance with organisational strategy, and resourced appropriately to deliver the desired outcomes in a timely manner and in effective collaboration with partners.

Provider: Primary Purpose

Funding: \$96,300 (ex. GST)

IMPROVED MANAGEMENT OF HOME-GROWN FEED

The aim of this project is to engage effectively with farmers to achieve on-farm practice change to increase farmer capability in profitable pasture and feed management. Tiller Talk remains a key part of this project, offering an opportunity to evaluate farmer-to-farmer learning around pasture management.

Provider: DairyNZ Ltd

Levy funding: \$651,700 (ex. GST)



BIOSECURITY AND PRODUCT INTEGRITY



NEW ZEALAND HAS A REPUTATION FOR EXCELLENCE IN DAIRY EXPORT MARKETS, BUT THE DEPENDENCE ON INTERNATIONAL MARKETS MEANS IT IS VITAL TO MAINTAIN INTERNATIONALLY-CREDIBLE PRODUCT INTEGRITY CRITERIA.

Product integrity can include food safety, method of production and animal welfare standards, to meet the expectations of international customers. Industry investments are also made to manage existing diseases and avoid further biosecurity incursions which could cause massive financial and social harm. Vigilance and a close coordination between all industry stakeholders is essential to protect and enhance New Zealand’s reputation for excellent dairy product integrity.

TB NATIONAL PEST MANAGEMENT STRATEGY

This investment aims to control the spread of tuberculosis (TB) through disease management – detecting TB within herds through an extensive testing programme. It also completes wild animal (vector) control to eliminate TB from wildlife, particularly possums – as the main carriers and transmitters of TB to farmed cattle and deer. Lastly, this work covers movement control – minimising the risk of infection being spread between herds.

Provider: DairyNZ Ltd

Levy funding: \$14,500,000 (ex. GST)

IMPROVING DAIRY INDUSTRY BIOSECURITY

The biosecurity programme aims to ensure current and future biosecurity risks to the dairy industry are properly understood and communicated to relevant stakeholders, and appropriate readiness and response systems are in place at the farm, industry and NZ Inc. level.

Provider: DairyNZ Ltd

Levy funding: \$928,460 (ex. GST)

BIOCONTROL OF MAJOR PESTS OF DAIRY PASTURES

This project aims to improve vigour and persistence of quality dairy pastures, both now and in the future, through the successful biocontrol of major exotic pasture pest species throughout New Zealand.

Provider: AgResearch Limited

Levy funding: \$270,000 (ex. GST)

ALTERNATIVE OPTIONS TO NEONICOTINOIDS

Neonicotinoid insecticides are being linked in some studies to honey bee colony collapse disorder, and effects on other non-target organisms. They are already partially banned in Europe and there are concerns that their availability may become restricted in New Zealand also. At present these insecticides are an essential tool in forage establishment, forming the key insecticidal ingredient in seed coatings for forage crop and pasture seeds. This project will determine the cost to farmers if neonicotinoid seed treatments are lost to pastoral agriculture and investigate how farmers could establish seedlings without neonicotinoid seed coatings so that, if restrictions are imposed, possible alternatives have already been demonstrated to the industry.

Provider: AgResearch Limited

Levy funding: \$20,000 (ex. GST)



LOCAL COMMUNITIES

ENHANCING LOCAL COMMUNITIES IS ALL ABOUT DAIRY FARMERS' CONTRIBUTION AND INVOLVEMENT IN THEIR COMMUNITIES.

Strong, vibrant and resilient rural communities are good for farmers because they make dairy farming a more attractive career option, and keep skilled and motivated people living and working in rural areas.

Investment in projects which benefit local communities will help the dairy industry achieve greater reach and involvement in communities through dairy farmers being encouraged and assisted to become active community members.

FARMERS' FORUM

The Farmers' Forum is an annual event run by DairyNZ for levy-paying dairy farmers, which alternates between a large, two-day national event (held at Mystery Creek in May 2018) and a series of smaller, one-day regional events every second year. The events provide an opportunity for DairyNZ management and scientists to update farmers on how their levy money is spent, report progress on scientific research projects and demonstrate DairyNZ-developed tools and services that can assist in managing their business.

Provider: DairyNZ Ltd

Levy funding: \$245,000 (ex. GST)

COMMUNITY IMPACT SPONSORSHIPS

By sponsoring industry events and conferences, DairyNZ helps facilitate education and knowledge sharing of opportunities and issues relevant to New Zealand dairy farmers. Industry events help increase farmers' access to new knowledge, networking and opportunities for discussion, debate and information sharing. Successful sponsorships also help create future leaders for the industry and promote and encourage best practice and excellence within the farming community.

Provider: DairyNZ Ltd

Levy funding: \$407,000 (ex. GST)

CHILDREN'S EDUCATIONAL CAMPAIGN

This project aims to increase understanding of the dairy industry among school children, their families and teachers. The website www.rosieseducation.co.nz caters to teachers by providing information about the industry and its importance to the national economy. It also offers practical and creative teaching materials using dairy farming as a context for learning. The website www.rosiesworld.co.nz is where children can learn about dairy farming and the industry.

Provider: DairyNZ Ltd

Levy funding: \$1,022,000 (ex. GST)

LEADERSHIP AND GOVERNANCE DEVELOPMENT FOR DAIRY WOMEN

This project seeks to actively develop and support dairy women to reach their leadership potential. Working with Dairy Women's Network (DWN), two talented and committed women are identified who have the passion and potential to take on leadership and/or governance roles in the industry and community. These women participate in the 'Escalator' programme – a ten-month leadership, governance and business capabilities programme designed for agri-women. Another five dairy women take the first steps in developing their potential through a two-day self-development programme, to help reframe their skillset and boost their confidence.

Provider: The Agri-Women's Development Charitable Trust (AWDT)

Levy funding: \$50,000 (ex. GST)

KELLOGG RURAL LEADERSHIP PROGRAMME AND NUFFIELD SCHOLARSHIPS

The Kellogg Rural Leadership Programme and Nuffield Scholarships develop leaders for the rural and primary industry sectors, particularly to support government and industry strategies around export targets and human resources. The four-phase Kellogg programme includes leadership tools and skills development, understanding of the New Zealand primary industry sector, national and international industry issues, and network development across industry sectors. Nuffield Scholars join a global programme that involves travel to four continents to study agricultural, political and social strengths and culminates in a research project.

Provider: Lincoln University

Levy funding: \$150,000 (ex. GST)



ANIMAL WELFARE

THE WELFARE OF DAIRY CATTLE IS RECOGNISED AS HIGHLY IMPORTANT AND NEW ZEALAND DAIRY FARMERS TAKE GREAT PRIDE IN THEIR ANIMALS.

Good animal husbandry is constantly evolving in response to changes in farming systems, as well as public expectation.

Industry investment in animal welfare will ensure New Zealand dairy farmers have the tools and assistance to improve their animal husbandry skills and practices for their farm systems.

ANIMAL WELFARE AWARENESS AND CHANGE

This programme provides educational support and resources to ensure good on-farm animal welfare practices are understood and adopted by New Zealand dairy farmers. It delivers an Early Response Service that links farmers on at-risk farms with the right people and supports good on-farm practice through practical training workshops. The programme has responsibility for raising awareness of changes to the animal welfare code and regulations, and providing farmers with the information, tools and training to respond. To help target resources to areas of greatest need, the team carries out 500 on-farm animal husbandry consultations to better understand existing and emerging animal husbandry practices and provide support as needed.

Provider: DairyNZ Ltd

Levy funding: \$638,200 (ex. GST)

ON-FARM PRACTICE CHANGE

Practice change will support and motivate farmers to manage practice change requirements driven by compliance or animal care aspirational targets. Offering easy to implement practical low cost solutions will move animal care from average to good animal care which will lessen the impact of future compliance. The issues requiring attention regularly evolve. Current issues include: the environment in which the cow is living, working with cows and painful procedures.

Provider: DairyNZ Ltd

Funding: \$244,276 (ex. GST)

TRAIN THE TRAINER – ANIMAL WELFARE

This project develops capability in assessing animal husbandry and management issues on-farm to industry-agreed standards. Focus areas include increasing proficiency and consistency in body condition scoring, developing the training capability of farm advisors, development of practical training workshops in stock skills for new entrants to dairy farming, and implementation of a plan to address the incidence of lameness in the industry. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Funding: \$338,983 (ex. GST). This includes co-funding of \$40,404 by the Ministry for Primary Industries – Primary Growth Partnership.

TRAIN THE TRAINER – OFF-Paddock

With around 650 off-paddock covered housing systems in New Zealand and more under construction, these facilities must be 'fit-for-purpose' so cows are housed with due care to their welfare, effluent is well managed and staff are working in a safe environment. This programme includes development of technical resources, training opportunities, a capability-build framework and an extension programme to raise farmer and rural professionals awareness of good practice. Research is helping deepen understanding of the management considerations that ensure off-paddock dairy systems deliver good animal welfare outcomes. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Funding: \$104,712 (ex. GST). This includes co-funding of \$147,722 by the Ministry for Primary Industries – Primary Growth Partnership.

MONITORING FARM PRACTICE

Monitor and Measure will assess how the sector is performing against animal care standards. This will be achieved through the animal welfare consults which provide a baseline description of the animal care performance of 500 randomly selected farms each year. A dashboard will be developed to report current state and movement in selected animal care factors.

Provider: DairyNZ Ltd

Funding: \$310,240 (ex. GST)

MANAGING WELFARE RISK

The overall goal of this research programme is to reduce specific areas of welfare risk to New Zealand's dairy-based economy, and to provide knowledge that can be used to guide farming practices, maintain freedom to operate, improve market success and ultimately enhance animal welfare on New Zealand dairy farms

Provider: AgResearch

Funding: \$300,000 (ex. GST)

OPPORTUNITIES AND CHALLENGES OF BOBBY CALVES

This project will provide industry leaders with the information required to form a pan-sector strategy that can meaningfully reduce, or even eliminate, the slaughtering of bobby calves in New Zealand while considering the implications on productivity and environmental impact. This project will provide recommendations, including priorities, which will form the basis of a future funding proposal, to consider this change in the New Zealand food sector.

Provider: AbacusBio

Funding: \$15,000 (ex. GST)



ENVIRONMENTAL STEWARDSHIP

MOST DAIRY FARMERS WORK HARD TO LEAVE THEIR FARM IN BETTER CONDITION THAN WHEN THEY TOOK IT ON, WITH A STRONG SENSE OF PRIDE IN THEIR LAND AND THE IMPROVEMENTS THEY HAVE MADE TO ITS NATURAL CAPITAL.

Like most New Zealanders, dairy farmers are becoming increasingly aware of cumulative effects of changes in land use. The duty of individual farmers and land owners is to operate efficiently and responsibly, thereby having the optimal environmental footprint.

Industry investment in environmental stewardship will give farmers the tools, insights and knowledge to take leadership in environmental management on their farm, in their community and beyond.

WAIPĀ CATCHMENT SUSTAINABLE MILK PLANS

This project builds on existing dairy industry work programmes focused on continually improving the environmental performance of dairy farmers on a national scale. The project proposes to accelerate the rate of environmental performance gains in the Waipa catchment through the delivery of audited Sustainable Milk Plans along with one-on-one advice and supporting activities, tools and resources.

Provider: DairyNZ Ltd

Levy funding: \$37,500 (ex. GST). This project also receives co-funding from Waikato River Authority.

IMPLEMENTING THE SUSTAINABLE DAIRYING: WATER ACCORD

The purpose of the Sustainable Dairying: Water Accord is to enhance the overall performance of dairy farming as it affects freshwater, by committing to good management practices expected of all New Zealand dairy farmers. It also aims to record pledges by the dairy sector, with the support of others, to assist and encourage dairy farmers to adopt those good management practices and to monitor and report progress. This project sets out the process for accord implementation and reporting.

Provider: DairyNZ Ltd

Levy funding: \$85,000 (ex. GST)

ENVIRONMENT CAPABILITY DEVELOPMENT

DairyNZ, with industry partners, has developed comprehensive programmes to improve capability in the effluent and nutrient industries servicing dairy farms. This will lead to all dairy farms having fit-for-purpose effluent systems and effective effluent management plans. Through robust accreditation and monitoring systems, this project has increased capability of nutrient management advisors and established knowledge resources, planning tools, training programmes, and quality assurance systems. This project also provides the knowledge and tools to develop a network of certified greenhouse gas (GHG) consultants for the dairy industry and a framework for rewarding farmers for making GHG reductions. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: DairyNZ Ltd

Funding: \$225,186 (ex. GST). This includes co-funding of \$299,116 by the Ministry for Primary Industries – Primary Growth Partnership.

BUILDING DAIRY ENVIRONMENT LEADERS

This project is developing an active network of highly effective regional dairy farming leaders by supporting them to increase their skills, knowledge and understanding of issues so they are equipped to lead and engage on environmental matters within, and on behalf of, the dairy industry.

Provider: DairyNZ Ltd

Levy funding: \$411,000 (ex. GST)

CLIMATE CHANGE POLICY

This project is focused on the effects of possible climate change-related policy frameworks on dairy farmers, dairy processors and the national economy. It provides scientific modelling and economic analysis, interpretation and commentary on the industry's on-farm greenhouse gas trajectory and current and future mitigations. It also ensures the sector is well-placed to contribute to a domestic climate change policy framework.

Provider: DairyNZ Ltd

Funding: \$792,500 (ex. GST)

RURAL PROFESSIONAL TRAINING

Providing rural professional (RP) training must be considered as part of the wider DairyNZ training strategy. It is currently dispersed through the organisation, with little visibility as a whole. This workstream aims to pull RP training together so the extent of our commitment is understood. As the Fit for Purpose Training Strategy progressed, this work developed a small number of programmes that were funded for delivery in 2017/18.

Provider: DairyNZ Ltd

Funding: \$268,800 (ex. GST)



INDUSTRY INFORMATION SYSTEMS

FARMERS ARE ABLE TO MAKE BETTER DECISIONS AND OBTAIN GREATER VALUE FROM COMMERCIAL PRODUCTS AND SERVICES WHEN ACCURATE ON-FARM INFORMATION IS AVAILABLE – PROVIDING THE MOTIVATION FOR ON-FARM DATA COLLECTION. AS A RESULT, DAIRY FARMS ARE BECOMING INCREASINGLY DATA-RICH ENVIRONMENTS.

Collective industry investment will help identify and develop priorities for farmers, commercial companies and industry organisations, to create common industry information systems.

This work will involve wider collation and use of data for on-farm and industry purposes, including the potential to expand traditional information systems with new areas such as nutrient management and pasture improvement.

DAIRY STATISTICS

Dairy Statistics provides a range of statistical analyses on current, historic, and emerging trends in the New Zealand dairy sector, those statistics being largely based on the previous Dairy Statistics publications produced by LIC. It also reports on the initiatives being undertaken to eradicate disease (EBL, TB etc). It is considered an essential reference by a variety of organisations, including universities, local government, dairy companies, industry support organisations and farmers.

Provider: LIC Ltd

Levy funding: \$72,000 (ex. GST)

NZAEL OPERATIONS AND RESEARCH

Genetic gain in dairy cattle has a proven track record in delivering higher productivity and profitability to farmers. The NZAEL-owned Breeding Worth system (\$BW) provides the industry measure for genetic gain. This genetic gain is delivered to farmers by bull breeders and animal breeding companies.

Maintaining and improving the \$BW system and the underpinning phenotypic data, genetic research and delivery systems is a vital part of achieving the industry targets, especially in profitability, and is the focus for this project. The project ensures NZAEL applies robust and world-leading science to animal evaluation, thereby ensuring optimal rates of genetic gain are achievable.

Provider: New Zealand Animal Evaluation Ltd

Levy funding: \$1,800,000 (ex. GST)

FORAGE VALUE – OPERATIONAL

This project aims to develop, implement and enhance a comprehensive system for evaluating and communicating the economic value of perennial and short-term ryegrass cultivars to dairy farm businesses. As a result, farmers can confidently select cultivars that will maximise on-farm profitability.

The evaluation system also sends clear signals to plant breeders regarding the traits of importance to dairy farmers, the economic value of changes in trait values, and provides a framework for measuring and tracking the rate of genetic gain in pasture plant material. The project is conducted in collaboration with the pasture plant breeding industry in New Zealand.

Provider: DairyNZ Ltd

Funding: : \$274,350 (excl. GST)

ECONOMICS – DAIRY INDUSTRY DATA CENTRE 2016/17

This work provides economic analysis, interpretation and commentary on a broad range of issues affecting dairy farm profitability, sustainability and competitiveness.

Provider: DairyNZ Ltd

Levy funding: \$203,000 (ex. GST)

CORE DATABASE

The Core Database, which is included in the Dairy Industry Good Animal Database (DIGAD), is an essential resource for genetic evaluation and industry-good research. This project supports the on-going maintenance, development and support of the core data portion of the DIGAD to enable the genetic evaluation function to be undertaken and to maximise its use for industry-good research.

Provider: DairyNZ Ltd

Levy funding: \$532,000 (excl. GST)

DAIRYBASE

DairyBase is the New Zealand dairy sector's platform for the analysis, storage and comparison of standardised dairy farm data. This project aims to increase the uptake and adoption of DairyBase among New Zealand dairy farmers, to improve and inform the quality of the benchmarking data sets and farm business data for industry analyses and research.

On their own or with the assistance of accountants, consultants or their DairyNZ consulting officer, farmers can compare their business to New Zealand benchmarks or models, and make informed decisions on farm management. DairyBase is investigating ways to improve connectivity with third parties using Data Linker where possible to facilitate data exchange.

Provider: DairyNZ Limited

Levy funding: \$1,215,000 (ex. GST). An additional \$80,000 funding was provided by Ministry for Primary Industries – Primary Growth Partnership.

DATA LINKER

The Data Linker project aims to facilitate connections among the many disparate data collection tools, farm management systems and industry databases in the pastoral and wider agricultural sector. Data Linker aims to reduce the cost of data collection by farmers and industry organisations, to increase the quality of data and to address the current lost opportunities for farmers and industry organisations that result from data being too hard to collate. This was the last year of funding under the seven-year PGP Transforming the Dairy Value Chain Programme.

Provider: Rezare Systems Ltd

Levy funding: \$40,750 (ex. GST). This includes co-funding of \$98,175 by the Ministry for Primary Industries – Primary Growth Partnership.

FARMER INSIGHT

This project has the goal of enhancing DairyNZ and sector performance by developing and implementing a data strategy that ensures core activities and internal decision making are well informed. This project will establish the platform to support DairyNZ's credible evidence needs for the future.

Provider: DairyNZ Ltd

Levy funding: \$54,920 (excl. GST)

COMPETITIVENESS FRAMEWORK AND ASSESSMENT

This project is to provide economic analysis, interpretation and commentary on a broad range of issues affecting dairy farm profitability, sustainability and competitiveness that DairyNZ carries out annually e.g. DairyNZ Economic Survey, regional forecasting, updating Dairy Industry Datacentre and responding to requests. Building on this, a new initiative will develop a competitiveness framework for the production and processing part of the value chain to measure progress against competitors, as well as identify threats and opportunities.

Provider: DairyNZ Ltd

Levy funding: \$251,000 (excl. GST)



NATIONAL PROSPERITY

FOR MANY YEARS, DAIRY FARMING HAS BEEN A KEY DRIVER OF THE NEW ZEALAND ECONOMY, CONTRIBUTING TO MORE THAN 35 PERCENT OF EXPORT EARNINGS. THE IMPORTANCE OF DAIRYING TO THE NATIONAL ECONOMY IS WIDELY RECOGNISED BY NEW ZEALANDERS, ALTHOUGH MANY DO NOT SEE HOW THESE EXPORT EARNINGS DIRECTLY BENEFIT THEIR DAY-TO-DAY LIVES.

Considerable scope exists for dairying to contribute more to the economy through increased production, higher value milk and value-added dairy processing. The dairy industry is committed to the sustainable development of dairy farming to enhance New Zealand’s prosperity – developing the industry to meet present needs without compromising future generations.

Industry investment in national prosperity aims to produce new knowledge, skills, practices and partnerships that will help dairy farmers and the companies they supply to develop responsibly and increase dairying’s contribution to the national economy.

DAIRY INDUSTRY ENGAGEMENT IN THE SETTING AND MANAGEMENT OF WATER QUALITY LIMITS

This project continues regional environmental work plans and encompasses science, policy, economic and engagement activities related to current regional limit-setting processes across 10 regions. This ensures a targeted and co-ordinated response to environmental issues for farmers and industry stakeholders in each region and lays a platform that will integrate with Plans for the Regions.

This theme takes responsibility for setting the context and obligations for farmers in conjunction with farmers, regional councils and industry stakeholders. To achieve this, the project team will work closely with regional dairy environmental leaders. Once regional policies become operative and on-farm change is required, support with implementation will be provided through the Meeting Environmental Obligations project. Three priority regions for supporting famers in meeting their environmental obligations have been identified; Waikato, Canterbury, and Horizons.

Provider: DairyNZ Ltd

Levy funding: \$934,500 (ex. GST)

INTERNATIONAL DAIRY FEDERATION (IDF)

The New Zealand National Committee of the International Dairy Federation (IDF NZ) is the national body responsible for coordinating and managing the New Zealand dairy sector input and influence on issues relating to the IDF. IDF NZ also manages the dairy committee for International Standards Organisation (ISO) within New Zealand.

It is important that the New Zealand dairy sector’s voice is heard by the IDF because of its role in coordinating global dairy sector input into the establishment and modification of food standards, methods of analysis and various policies, guidelines and practices in a wide range of areas.

Provider: IDF New Zealand

Levy funding: \$318,000 (ex. GST)

EXTERNAL ENGAGEMENT

This project's aim is for DairyNZ to be known and trusted by external stakeholders to work collaboratively to identify issues (environmental, social and economic), pinpoint options and solve problems where dairying is contributing to them. It will seek to foster strategic relationships with a network of influential leaders and create a public programme of activities to assist in building a more positive perception of dairy farming and the dairy industry with the New Zealand public.

Provider: DairyNZ Ltd

Levy funding: \$783,000 (ex. GST)

ENVIRONMENTAL READINESS

This project relates to understanding and being prepared for future environmental regulations. This includes understanding environmental risks and drivers, dairy's environmental footprint and potential on-farm and catchment solutions, and the implications of different policy options on farm businesses and catchment-regional-national environmental, economic and social values. Additional work streams will develop and integrate the farm and catchment tools required to derive this understanding, and develop policies, strategic positions, and a vision of how the industry could operate under increasing environmental regulation over the longer-term. Collectively this framework supports future regional limit setting process and integrates and builds on the knowledge and products developed through the Systems for the Environment, Systems that Work, Designing the Future and Productive Pastures projects.

Provider: Dairy NZ Ltd

Levy funding: \$1,695,227 (ex. GST)

MEETING ENVIRONMENTAL OBLIGATIONS

This project will establish key metrics for environmental practice and a diagnostic tool to be embedded in the Farm Assessment and Planning process. This process was piloted in 2017/18 with the intention of scaling it up in subsequent years.

The project will support the implementation of Good Management Practice (GMP)(environmental) nationally through the uptake and use of the EnviroWalk tool. DairyNZ is also required to fulfil its obligations under the Sustainable Dairying: Water Accord which requires the completion of Sustainable Milk Plans (SMPs) in Canterbury, Waikato, and Hawke's Bay. These SMPs will highlight GMP and start preparing farmers for changes beyond GMP to meet future. Effluent management is one practice that gets special attention.

Provider: Dairy NZ Ltd

Levy funding: \$729,577 (ex. GST)

**“ WE’RE NOT IN COMPETITION WITH
OUR NEIGHBOURS – IT’S ALL ABOUT
KAITIAKITANGA (STEWARDSHIP) AND
LONG-TERM SUSTAINABILITY. ”**

Shane Kelly, featured in Inside Dairy July 2018





FINANCIALS



Independent auditor's report



To the members of DairyNZ Incorporated

Report on the incorporated society and group financial statements

OPINION

In our opinion, the accompanying incorporated society and group financial statements of DairyNZ Incorporated (the Incorporated Society) and its subsidiaries (the Group) on pages 69 - 92:

- i. Present fairly in all material respects the Incorporated Society's and Group's financial position as at 31 May 2018 and its financial performance and cash flows for the year ended on that date; and
- ii. Comply with Public Benefit Entity Standards (Not For Profit).

We have audited the accompanying Incorporated Society and Group financial statements which comprise:

- The Incorporated Society and Group statement of financial position as at 31 May 2018;
- The Incorporated Society and Group statements of comprehensive income, changes in equity and cash flows for the year then ended; and
- Notes, including a summary of significant accounting policies and other explanatory information.



BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (New Zealand) ('ISAs (NZ)'). We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

We are independent of the Incorporated Society and Group in accordance with Professional and Ethical Standard 1 (Revised) Code of Ethics for Assurance Practitioners issued by the New Zealand Auditing and Assurance Standards Board and the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code.

Our responsibilities under ISAs (NZ) are further described in the auditor's responsibilities for the audit of the Incorporated Society and Group financial statements section of our report.

Subject to certain restrictions, partners and employees of our firm may also deal with the Incorporated Society and Group on normal terms within the ordinary course of trading activities of the business of the Incorporated Society and Group. These matters have not impaired our independence as auditor of the Incorporated Society and Group. The firm has no other relationship with, or interest in, the Incorporated Society and Group.



OTHER INFORMATION

The Directors, on behalf of the Incorporated Society and Group, are responsible for the other information included in the entity's Annual Report. Our opinion on the Incorporated Society and Group financial statements does not cover any other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the Incorporated Society and Group financial statements our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Incorporated Society and Group financial statements or our knowledge obtained in the audit or otherwise appears materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.



USE OF THIS INDEPENDENT AUDITOR'S REPORT

This independent auditor's report is made solely to the members as a body. Our audit work has been undertaken so that we might state to the members those matters we are required to state to them in the independent auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the members as a body for our audit work, this independent auditor's report, or any of the opinions we have formed.



RESPONSIBILITIES OF THE DIRECTORS FOR THE INCORPORATED SOCIETY AND GROUP FINANCIAL STATEMENTS

The Directors, on behalf of the Incorporated Society are responsible for:

- The preparation and fair presentation of the Incorporated Society and Group financial statements in accordance with generally accepted accounting practice in New Zealand (being Public Benefit Entity Standards (Not For Profit));
- Implementing necessary internal control to enable the preparation of an Incorporated Society and Group set of financial statements that is fairly presented and free from material misstatement, whether due to fraud or error; and
- Assessing the ability to continue as a going concern. This includes disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless they either intend to liquidate or to cease operations, or have no realistic alternative but to do so.



AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE INCORPORATED SOCIETY AND GROUP FINANCIAL STATEMENTS

Our objective is:

- To obtain reasonable assurance about whether the Incorporated Society and Group financial statements as a whole are free from material misstatement, whether due to fraud or error; and
- To issue an independent auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs NZ will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error. They are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Incorporated Society and Group financial statements.

A further description of our responsibilities for the audit of these Incorporated Society and Group financial statements is located at the External Reporting Board (XRB) website at:

<http://www.xrb.govt.nz/standards-for-assurance-practitioners/auditors-responsibilities/audit-report-7/>

This description forms part of our independent auditor's report.

HAMILTON
9 AUGUST 2018

Statutory information

For the year ended 31 May 2018

The Directors present the Annual Report along with the audited accounts for DairyNZ Incorporated and Subsidiary Companies for the year ended 31 May 2018.

1. ACTIVITIES

DairyNZ's main income is provided by the Commodity Levies (Milksolids) Order 2014.

DairyNZ's main activities are investment in dairy industry-good activities, as well as undertaking dairy research, development and extension activities.

2. RESULTS

DairyNZ Group's total comprehensive loss for the year was \$3,365,632.

3. DISCLOSURES

Pursuant to Clause 24.1(c) and 24.1(d) of the Rules of DairyNZ Incorporated and/or Section 211(1) of the Companies Act 1993, we disclose the following information:

DIRECTORS	DAIRY NZ INCORPORATED	SUBSIDIARY AND OTHER DIRECTORSHIPS
B. Allomes	Director Elected	DairyNZ Ltd
H. Anderson	Director Appointed	DairyNZ Ltd and Lincoln Hub Ltd
E. Cook	Director Elected	DairyNZ Ltd
B. Harris	Director Appointed	DairyNZ Ltd, OSPRI NZ Ltd and TBFree NZ Ltd
P. Schuyt	Director Appointed	DairyNZ Ltd
J. van der Poel	Director Elected (Chairman)	DairyNZ Ltd
C. Glass	Director Elected	DairyNZ Ltd
R. Anderson		New Zealand Animal Evaluation Ltd
H. Blair		New Zealand Animal Evaluation Ltd
E. Coats		New Zealand Animal Evaluation Ltd
A. Kempthorne		New Zealand Animal Evaluation Ltd
W. Larsen		New Zealand Animal Evaluation Ltd
S. Montgomerie		New Zealand Animal Evaluation Ltd
A. Body		Insight Genomics Ltd and Pastoral Genomics Ltd
T. Mackle		DairyNZ Accreditation Ltd and New Zealand Animal Evaluation Ltd
D. Evans		DairyNZ Accreditation Ltd, Dairy Insight (PGGR Consortia) Ltd and SDH GP Ltd
D. McCall		Dairy Training Ltd
B. Thorrold		Insight Genomics Ltd, Data Linker Ltd and Farm Data Accreditation Ltd
R. Pridmore		Dairy Insight (PGGR Consortia) Ltd & Pastoral Greenhouse Gas Research Ltd
M. Julian		Dairy Training Ltd
K. Ferris		SDH GP Ltd

POSITIONS HELD IN OTHER DAIRY INDUSTRY GOOD ENTITIES

E. Cook	Officer	New Zealand Federation of Young Farmers Club Inc
T. Finch	Officer	New Zealand Insitutue of Primary Industry Management Incorporated
M. Paine	Officer	Primary Industry Capability Alliance Incorporated
B. Allomes	Trustee	New Zealand Dairy Industry Awards and New Zealand Federation of Young Farmers Club Inc
A. Body	Trustee	New Zealand Dairy Industry Awards
T. Mackle	Trustee	Kathleen Spragg Trust
A. Wilcock	Trustee	AgRecovery Foundation

CHANGES DURING THE YEAR

C. Glass appointed as Director of DairyNZ Limited on 26 October 2017.

A. Body resigned as Director of DairyNZ Limited on 25 October 2017.

M. Julian appointed as Director of Dairy Training Limited on 3 July 2017.

The passing of M. Spaans in November 2017, created a Director vacancy which will be filled by election at the October 2018 Annual General Meeting.

DIRECTORS' INTEREST

The Board have not received any notices from Directors that they have any interest in transactions, or proposed transactions with the Group during the financial year.

USE OF COMPANY INFORMATION

The Board received no notices during the year from Directors required to use Company information received in their capacity as Directors, which would not have been otherwise available to them.

SHARE DEALINGS

No Directors hold any shares in any DairyNZ entity within the Group.

DONATIONS

There were no donations made in the current year.

BOARD AND COMMITTEE ATTENDANCE

	BOARD	ARC	ARD
B. Allomes	8/8	2/2	2/2
H. Anderson	8/8	2/3	3/3
A. Body	4/4	-	3/3
E. Cook	8/8	2/2	2/2
B. Harris	8/8	-	5/5
P. Schuyt	6/8	3/3	-
M. Spaans	3/4	-	2/3
J. van der Poel	8/8	3/3	2/2
C. Glass	4/4	1/1	-
Total meetings	8	3	5

DairyNZ has two permanent Board Committees; the Audit Risk Committee (ARC) and the Appointments, Remuneration & Development (ARD) Committee. The ARC assists the Board in fulfilling its governance responsibilities in relation to the Group's management of key strategic and operational risks, policies and procedures for managing and mitigating risks, financial reporting, audit activities, treasury matters, financial risk management and internal control frameworks. The ARD assists the Board in fulfilling governance responsibilities in relation to recruitment, retention, remuneration and development of directors, executives and other employees and to promote a safe and healthy working environment.

DIRECTORS REMUNERATION

Remuneration paid during the period was as follows:

	2018
B. Allomes	55,676
H. Anderson	47,625
A. Body	28,860
E. Cook	50,940
B. Harris	54,105
P. Schuyt	48,974
M. Spaans	44,489
J. van der Poel	71,966
C. Glass	28,260
Associate Directors	2,250
Directors of DairyNZ subsidiaries	
R. Anderson	20,000
H. Blair	23,500
E. Coats	20,000
A. Kempthorne	20,000
W. Larsen	40,000
S. Montgomerie	20,000
	576,645

EMPLOYEES REMUNERATION

The following number of employees received remuneration and other benefits (including redundancies) totalling more than \$100,000 during the year:

SALARY BAND	NUMBER OF EMPLOYEES	
	2018	2017
100,000 - 110,000	22	20
110,000 - 120,000	11	9
120,000 - 130,000	18	17
130,000 - 140,000	4	7
140,000 - 150,000	7	4
150,000 - 160,000	7	5
160,000 - 170,000	6	1
170,000 - 180,000	1	2
180,000 - 190,000	2	1
190,000 - 200,000	3	2
200,000 - 210,000	3	3
220,000 - 230,000	1	3
230,000 - 240,000	2	1
240,000 - 250,000	2	-
270,000 - 280,000	2	1
280,000 - 290,000	1	1
320,000 - 330,000	-	1
560,000 - 570,000	-	1
570,000 - 580,000	1	-

AUDITORS REMUNERATION

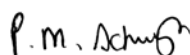
The following amounts were payable to the auditors of DairyNZ Incorporated and its subsidiaries:

	FOR AUDIT WORK	FOR OTHER SERVICES
KPMG	73,938	-



JIM VAN DER POEL, CHAIRMAN

9 August 2018



PETER SCHUYT, DIRECTOR

9 August 2018

Statement of Comprehensive Income

For the year ended 31 May 2018

<i>In thousands of New Zealand dollars</i>	NOTE	Consolidated		Parent	
		2018	2017	2018	2017
Continuing operations					
Revenue and other income	3	83,196	89,559	71,533	77,282
Operational expenses	4	(86,669)	(91,802)	(72,493)	(82,059)
Profit/(loss) before finance activities		(3,473)	(2,243)	(960)	(4,777)
Finance income		369	420	7	10
Finance expenses		-	2	-	3
Net finance income	5	369	422	7	13
Profit/(loss) before income tax		(3,104)	(1,821)	(953)	(4,764)
Tax expense	6	-	-	-	-
Profit/(loss) for the period		(3,104)	(1,821)	(953)	(4,764)
Other comprehensive income					
Net change in fair value of available for sale financial assets		(262)	49	-	-
Income tax on other comprehensive income		-	-	-	-
Other comprehensive income for the period, net of income tax		(262)	49	-	-
Total comprehensive income/(loss) for the period		(3,366)	(1,772)	(953)	(4,764)

Statement of Changes in Equity

For the year ended 31 May 2018

In thousands of New Zealand dollars

Consolidated

	CONTRIBUTION BY OWNERS	INVESTMENT FAIR VALUE RESERVE	RETAINED EARNINGS	TOTAL EQUITY
Balance as at 1 June 2016	33,783	481	14,711	48,975
Total comprehensive income for the period				
Profit/(loss) for the period	-	-	(1,821)	(1,821)
Other comprehensive income				
Net change in fair value of available for sale financial assets	-	49	-	49
Total other comprehensive income	-	49	-	49
Total comprehensive income for the period	-	49	(1,821)	(1,772)
Balance as at 31 May 2017	33,783	530	12,890	47,203
Balance as at 1 June 2017	33,783	530	12,890	47,203
Total comprehensive income for the period				
Profit/(loss) for the period	-	-	(3,104)	(3,104)
Other comprehensive income				
Net change in fair value of available for sale financial assets	-	(262)	-	(262)
Total other comprehensive income	-	(262)	-	(262)
Total comprehensive income for the period	-	(262)	(3,104)	(3,366)
Balance as at 31 May 2018	33,783	268	9,786	43,837

In thousands of New Zealand dollars

Parent

	CONTRIBUTION BY OWNERS	INVESTMENT FAIR VALUE RESERVE	RETAINED EARNINGS	TOTAL EQUITY
Balance as at 1 June 2016	33,783	-	(13,001)	20,782
Total comprehensive income for the period				
Profit/(loss) for the period	-	-	(4,764)	(4,764)
Other comprehensive income				
Total other comprehensive income	-	-	-	-
Total comprehensive income for the period	-	-	(4,764)	(4,764)
Transactions recorded directly in equity				
Subsidiary (Dexcel Holdings) wound up	-	-	(239)	(239)
Balance as at 31 May 2017	33,783	-	(18,004)	15,779
Balance as at 1 June 2017	33,783	-	(18,004)	15,779
Total comprehensive income for the period				
Profit/(loss) for the period	-	-	(953)	(953)
Other comprehensive income				
Net change in fair value of available for sale financial assets	-	-	-	-
Total other comprehensive income	-	-	-	-
Total comprehensive income for the period	-	-	(953)	(953)
Balance as at 31 May 2018	33,783	-	(18,957)	14,826

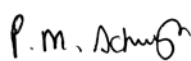
Statement of Financial Position

As at 31 May 2018

<i>In thousands of New Zealand dollars</i>		Consolidated		Parent	
	NOTE	2018	2017	2018	2017
Assets					
Property, plant and equipment	7	22,752	22,721	-	-
Intangible assets	8	5,091	4,692	-	-
Biological assets - livestock	9	1,325	1,814	-	-
Investments in subsidiaries	17	-	-	35,272	34,940
Investments in associates	18	5,042	5,047	5,029	5,038
Other investments	10	1,808	2,065	-	-
Total non-current assets		36,018	36,339	40,301	39,978
Cash and cash equivalents	12	18,966	20,715	89	765
Inventories		101	113	-	-
Trade and other exchange receivables	11	334	3,618	-	1,969
Trade and other non-exchange receivables	11	6,902	6,790	6,902	6,690
Total current assets		26,303	31,236	6,991	9,424
Total assets		62,321	67,575	47,292	49,402
Members' funds					
Contribution by owners		33,783	33,783	33,783	33,783
Investment fair value reserve		268	530	-	-
Retained earnings		9,786	12,890	(18,957)	(18,004)
Total members' funds	16	43,837	47,203	14,826	15,779
Liabilities					
Employee entitlements	14	348	501	-	-
Total non-current liabilities		348	501	-	-
Trade and other payables	15	14,871	17,136	31,759	33,051
Deferred income		796	553	707	572
Employee entitlements	14	2,469	2,182	-	-
Total current liabilities		18,136	19,871	32,466	33,623
Total liabilities		18,484	20,372	32,466	33,623
Total members' funds and liabilities		62,321	67,575	47,292	49,402



JIM VAN DER POEL, CHAIRMAN
9 August 2018



PETER SCHUYT, DIRECTOR
9 August 2018

Statement of Cash Flows

For the year ended 31 May 2018

<i>In thousands of New Zealand dollars</i>		Consolidated		Parent	
	NOTE	2018	2017	2018	2017
Net cash from/(used in) operating activities					
Cash provided from:					
Dairy industry-good levies		66,479	66,798	66,479	66,798
Other funding		20,200	18,425	8,211	10,425
Interest income received		369	420	7	10
		87,048	85,643	74,697	77,233
Cash applied to:					
Payments to suppliers and employees		86,511	88,883	73,076	70,099
		86,511	88,883	73,076	70,099
Net cash from/(used in) operating activities	23	537	(3,240)	1,621	7,134
Net cash from/(used in) investing activities					
Cash provided from:					
Proceeds from sale of biological assets		892	261	-	-
Proceeds from sale of property, plant and equipment		201	87	-	-
		1,093	348	-	-
Cash applied to:					
Investments in subsidiaries		-	-	2,302	2,393
Investments in associates		(5)	5,005	(5)	5,005
Acquisition of property, plant and equipment and intangibles		3,384	1,320	-	-
		3,379	6,325	2,297	7,398
Net cash from/(used in) investing activities		(2,286)	(5,977)	(2,297)	(7,398)
Net cash from/(used in) financing activities		-	-	-	-
Net increase/(decrease) in cash balances					
		(1,749)	(9,217)	(676)	(264)
Cash balances at beginning of period		20,715	29,932	765	1,029
Closing cash balances		18,966	20,715	89	765

Notes to the Financial Statements

For the year ended 31 May 2018

A) ACCOUNTING POLICIES

1. ACCOUNTING ENTITY

DairyNZ Incorporated ("DairyNZ") is an Incorporated Society incorporated under the Incorporated Societies Act 1908 and domiciled in New Zealand. DairyNZ's registered office is at the corner of Ruakura Road and Morrinsville Road, Hamilton. These financial statements have been prepared in accordance with the Financial Reporting Act 2013.

DairyNZ is primarily involved in the promotion and funding of industry-good activities. Accordingly, DairyNZ has designated itself as a public benefit entity for the purpose of financial reporting.

Financial statements for DairyNZ Incorporated (separate financial statements) and consolidated financial statements are presented. The consolidated financial statements of DairyNZ as at, and for the year ended 31 May 2018 comprise DairyNZ and subsidiaries (together referred to as the "Group") and the Group's interests in associates and jointly controlled entities.

2. BASIS OF PREPARATION

i) Statement of compliance

These financial statements have been prepared in accordance with New Zealand Generally Accepted Accounting Practice ("NZ GAAP"). They comply with Public Benefit Entity International Public Sector Accounting Standards ("PBE IPSAS") and other applicable Financial Reporting Standards, as appropriate for Tier 1 not-for-profit public benefit entities. The Group qualifies as a Tier 1 reporting entity as total expenses for the Group exceed \$30 million.

The financial statements were approved by the Directors on 9 August 2018.

The accounting policies set out below have been applied consistently to all periods presented in these financial statements. The accounting policies have been applied consistently to Group entities.

ii) Basis of measurement

The financial statements have been prepared on the historical cost basis except for the following:

- Biological assets are measured at fair value less point-of-sale costs
- Available for sale assets are measured at fair value

iii) Functional and presentation currency

These financial statements are presented in thousands of New Zealand dollars, which is DairyNZ's functional currency.

iv) Use of estimates and judgements

Estimates and judgements are made by management in applying the Group's accounting policies.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and in any future periods affected.

Significant areas involving high levels of estimation or judgement are:

- Note 7 - useful lives and impairment of property, plant and equipment
- Note 8 - useful lives and impairment of intangible assets
- Note 14 - employee entitlements and long term benefits
- Note 18 - measurement of associates
- Note 22 - recognition of contingent liabilities.

v) New or amended standards adopted in current year and standards issued but not yet effective

The Group has elected to adopt Disclosure Initiative (amendments to PBE IPSAS 1), that is effective for reporting periods beginning on or after 1 January 2016. The adoption only affects the presentation of the financial statements and clarifies requirements on material disclosures and order of the notes.

The Group has not early adopted the following new and revised standards, amendments or interpretations that have been issued but are not yet effective:

i) PBE IPSAS 34 'Separate financial statements', PBE IPSAS 35 'Consolidated financial statements', PBE IPSAS 36 'Investments in Associates and Joint Ventures', PBE IPSAS 37 'Joint arrangements' and PBE IPSAS 38 'Disclosure of interests in other entities'. These are effective for annual periods beginning on or after 1 January 2019. The new standards supersede the existing PBE IPSAS 6 to 8.

ii) PBE IFRS 9 'Financial instruments' which is effective for annual periods beginning on or after 1 January 2021. The standard will simplify the mixed measurement model as well as establish three primary measurement categories for financial assets: amortised cost, fair value through other comprehensive income and fair value through financial performance.

iii) PBE IPSAS 39 'Employee Benefits' which is effective for annual periods beginning on or after 1 January 2019, replaces PBE IPSAS 25. Substantive changes relate to the accounting for defined benefit plans.

iv) PBE IPSAS 48 'Service Performance Reporting' which is effective for annual periods beginning on or after 1 January 2021, introduces requirements for preparation of a Statement of Service Performance.

B) PERFORMANCE

3. REVENUE

Revenue is recognised and measured at the fair value of consideration received or receivable to the extent it is probable that the economic benefits will flow to the Group and the amount of revenue can be reliably measured.

The following specific recognition criteria in relation to the Group's revenue streams must also be met before revenue is recognised.

i) Revenue from exchange transactions

Services

Revenue from services rendered is recognised in proportion to the stage of completion of the transaction at the reporting date. The stage of completion is measured with reference to project milestones.

Other income

Other income comprises the following.

- **Dividend Income** – recognised as income on the date that the Group's right to receive payment is established.
- **Gain/(loss) on disposal of assets** – difference between the carrying value and proceeds from disposal of assets.
- **Movement in fair value of livestock** – movement in the fair value of the asset.
- **Surplus/(deficit) in associates** – recognised as share of surplus/(deficit) in associates.

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
REVENUE FROM EXCHANGE TRANSACTIONS	2018	2017	2018	2017
Farm income	2,620	1,188	-	-
Research commercial income	1,602	3,645	-	-
Dairy Training course fees	1,079	1,084	-	-
Other revenue	902	604	-	28
Total exchange revenue	6,203	6,521	-	28

ii) Revenue from non-exchange transactions

Non-exchange transactions are those where the Group receives an inflow of resources (i.e. cash and other tangible or intangible items) but provides no (or nominal) direct consideration in return.

Industry-good levy

DairyNZ has the power to raise a levy from dairy industry participants under the Commodities Levies Act 1990. Revenue from the industry good levy is recognised when the levy becomes receivable.

Government grants and funding

Inflow of resources from government grants and funding are recognised as revenue in the period for which the funding received is utilised. Funds that are not utilised as stipulated are either returned, resulting in the recognition of a non-exchange liability or recognised as income in advance to be utilised over future periods.

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
REVENUE FROM NON-EXCHANGE TRANSACTIONS	2018	2017	2018	2017
Levy income				
<i>Levy revenue is collected from farmers via the following companies</i>				
Fonterra	54,184	54,983	54,184	54,983
Open Country Dairy	4,953	4,719	4,953	4,719
Synlait	2,290	2,277	2,290	2,277
Westland	2,276	2,337	2,276	2,337
Miraka	966	899	966	899
Oceania Dairy	753	673	753	673
Tatua	529	540	529	540
Other dairy companies	279	265	279	265
Total levy income	66,230	66,693	66,230	66,693
Other funding				
MBIE research funding	8,118	8,753	2,815	3,358
Primary Growth Partnership	2,488	7,031	2,488	7,203
Sustainable Farming fund	157	561	-	-
Total other funding	10,763	16,345	5,303	10,561
Total non-exchange revenue	76,993	83,038	71,533	77,254
Total revenue	83,196	89,559	71,533	77,282

4. EXPENSES

Operational expenses by nature

Operational expenses include costs incurred by DairyNZ and its subsidiaries for undertaking research, development and extension activities. These activities are funded through levy investment and government funding.

The following items of expenditure are included in operational expenses:

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
	2018	2017	2018	2017
Amortisation	982	1,000	-	-
Auditors' remuneration audit fees	74	72	-	-
Auditors' remuneration - other services	-	22	-	-
Commodity levy collection fee	331	333	331	333
Depreciation	1,896	1,834	-	-
Directors' fees (includes Directors of subsidiaries)	577	575	-	-
Directors' and governance expenses	157	154	-	-
Impairment in investment in subsidiaries	-	24	1,975	2,226
Operating leases	584	499	-	-
Personnel expenses	27,348	26,971	-	-
Professional fees - legal	106	47	-	-
Provision for employee entitlements	110	97	-	-

Research and development

Research and development costs are included in operational expenses. Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised when incurred.

The Group's research and development costs for the period were \$53.64 million (2017; \$52.30 million).

The Parent's research and development costs for the period were \$23.90 million (2017; \$29.24 million).

Audit

No other services provided in current year (2017; Other services provided related to a review engagement of one of the subsidiaries, accounting advice, tax advice, and internal audit related procedures).

5. NET FINANCE INCOME

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
	2018	2017	2018	2017
Interest income on loans and receivables	369	420	7	10
Finance income	369	420	7	10
Interest payable on loans and payables	-	2	-	3
Finance expense	-	2	-	3
Net finance income	369	422	7	13

Finance income

Finance income comprises interest income on funds invested. Interest income is recognised as it accrues, using the effective interest rate.

6. INCOME TAX

Income derived from DairyNZ Incorporated and certain subsidiaries is exempt income under Section CW51 of the Income Tax Act 2007.

Income derived from DairyNZ Limited has been granted exemption in accordance with Section CW49 (1) of the Income Tax Act 2007.

C) NET ASSETS

7. PROPERTY, PLANT AND EQUIPMENT

Consolidated

In thousands of New Zealand dollars

	LAND	BUILDINGS	LEASEHOLD IMPROVEMENTS	FARM DEVELOPMENT	PLANT AND EQUIPMENT	VEHICLES	TOTAL
For the year ended 31 May 2017							
Cost or deemed cost							
Balance at 1 June 2016	13,196	12,356	855	1,034	8,156	3,739	39,336
Additions	-	-	-	19	534	184	737
Disposals	-	-	-	-	(17)	(369)	(386)
Balance at 31 May 2017	13,196	12,356	855	1,053	8,673	3,554	39,687
Depreciation and impairment losses							
Balance at 1 June 2016	146	5,295	816	618	6,080	2,520	15,475
Depreciation for the year	-	576	16	70	734	438	1,834
Disposals	-	-	-	-	(1)	(342)	(343)
Balance at 31 May 2017	146	5,871	832	688	6,813	2,616	16,966
Carrying Amount as at 31 May 2017	13,050	6,485	23	365	1,860	938	22,721
For the year ended 31 May 2018							
Cost or deemed cost							
Balance at 1 June 2017	13,196	12,356	855	1,053	8,673	3,554	39,687
Additions	-	-	-	227	593	1,182	2,002
Disposals	-	-	-	-	(3,035)	(1,253)	(4,288)
Balance at 31 May 2018	13,196	12,356	855	1,280	6,231	3,483	37,401
Depreciation and impairment losses							
Balance at 1 June 2017	146	5,871	832	688	6,813	2,616	16,966
Depreciation for the year	-	565	12	74	746	499	1,896
Disposals	-	-	-	-	(2,969)	(1,244)	(4,213)
Balance at 31 May 2018	146	6,436	844	762	4,590	1,871	14,649
Carrying Amount as at 31 May 2018	13,050	5,920	11	518	1,641	1,612	22,752

Parent

No property, plant and equipment are held by the Parent entity.

i) Recognition and measurement

Items of property, plant and equipment are measured at cost less accumulated depreciation and impairment losses.

ii) Depreciation

Depreciation is recognised in the statement of comprehensive income on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Land is not depreciated.

Where assets are purchased for a specific project use, they are depreciated over the life of the project where it is determined that there is no further benefit for the Group.

The estimated useful lives for the current and comparative periods are as follows:

- **Buildings** – 4-50 years
- **Leasehold improvements** – Lease period being 1 to 34 years
- **Farm development** – 5-20 years
- **Plant and equipment** – 2-12.5 years
- **Vehicles** – 2-10 years

Depreciation methods, useful lives and residual values are reassessed at each financial year-end.

iii) Leased assets

Leases in terms of which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Upon initial recognition the leased asset is measured at an amount equal to the lower of its fair value and the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to that asset.

iv) Impairment

The carrying amount of all tangible and intangible assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). The Group recognises any impairment loss in the statement of comprehensive income and the carrying amount of assets are adjusted to the recoverable amount which is the higher of fair value less costs to sell and value in use.

8. INTANGIBLE ASSETS

Consolidated

In thousands of New Zealand dollars

SOFTWARE	
For the year ended 31 May 2017	
Cost or deemed cost	
Balance at 1 June 2016	6,710
Acquisitions	583
Impairment Loss	-
Balance at 31 May 2017	7,293
Depreciation and impairment losses	
Balance at 1 June 2016	1,601
Amortisation for the year	1,000
Impairment Loss	-
Balance at 31 May 2017	2,601
Carrying Amount as at 31 May 2017	4,692
For the year ended 31 May 2018	
Cost or deemed cost	
Balance at 1 June 2017	7,293
Additions	1,381
Impairment loss	-
Balance at 31 May 2018	8,674
Depreciation and impairment losses	
Balance at 1 June 2017	2,601
Amortisation for the year	982
Impairment loss	-
Balance at 31 May 2018	3,583
Carrying Amount as at 31 May 2018	5,091

Parent

No intangible assets are held by the Parent entity.

i) Acquired software

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. Computer software assets acquired in a non-exchange transaction are measured at fair value. These costs are amortised over their estimated useful lives, being up to five years. The amortisation period and amortisation method is reviewed at each financial year-end.

ii) Developed software

Costs associated with developing or maintaining computer software programmes are recognised as an expense as incurred. Costs that are directly associated with the development of identifiable and unique software products controlled by the Group and that will probably generate economic benefits exceeding costs beyond one year, are recognised as intangible assets. Costs include the employee costs incurred as a result of developing software and an appropriate portion of relevant overheads. Computer software development costs recognised as assets are amortised over their estimated useful lives, between 5 to 7 years. The amortisation period and amortisation method is reviewed at each financial year-end.

9. BIOLOGICAL ASSETS

<i>In thousands of New Zealand dollars</i>	Consolidated	
	2018	2017
Balance at 1 June	1,814	1,435
Increase due to acquisitions	-	-
Decrease due to sales	(892)	(261)
Change in fair value less estimated point-of-sale costs	403	640
Balance at 31 May	1,325	1,814
Non-current	1,325	1,814
Current	-	-
Number of livestock at 31 May	886	1,332

Biological assets comprise of livestock held by the Group and are measured at fair value less point-of-sale costs. Point-of-sale costs include all costs that would be necessary to sell the assets. The fair value of livestock is based on the market price of livestock of similar age, breed and genetic make-up.

Risks

The Group is exposed to a number of risks related to its livestock

- **Regulatory and environmental risks**

The Group is subject to laws and regulations in New Zealand. The Group has established environmental policies and procedures aimed at compliance with local environmental and other laws.

- **Climate and other risks**

The Group's livestock are exposed to the risk of damage from climate changes, diseases and other natural forces. The Group has extensive processes in place aimed at monitoring and mitigating those risks, including regular industry pest and disease surveys.

10. INVESTMENTS

<i>In thousands of New Zealand dollars</i>	Consolidated	
	2018	2017
Available-for-sale financial assets	1,808	2,065
	1,808	2,065

The Group's investments in equity securities are classified as available-for-sale financial assets within level 1 of the fair value hierarchy as quoted prices in an active market are available. Subsequent to initial recognition, they are measured at fair value by reference to published price quotations and changes therein, other than impairment losses, are recognised directly in equity.

Gains or losses arising from changes in the fair value are recognised in other comprehensive income.

Impairment

Equity investments are deemed to be impaired whenever there is a significant or prolonged decline in fair value below the original purchase price. Any subsequent recovery of an impairment loss in respect of an investment in an equity instrument classified as available-for-sale is not reversed through the statement of comprehensive income. For this purpose prolonged is regarded as any period longer than nine months and significant as more than 20 percent of the original purchase price of the equity instrument.

11. TRADE RECEIVABLES

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
	2018	2017	2018	2017
Trade receivables due from related parties	194	3,995	-	2,825
Other trade receivables	6,168	6,009	3,765	3,966
Intercompany prepayments	14	-	3,137	1,868
Prepayments	860	404	-	-
Balance at 31 May	7,236	10,408	6,902	8,659

i) Recognition and measurement

Trade receivables are initially measured at fair value, then adjusted for any impairment. Trade receivables classified as 'loan and receivable' financial instruments are stated at amortised cost using the effective interest method, less any impairment losses.

ii) Impairment

For trade receivables which are not significant on an individual basis, collective impairment is assessed on a portfolio basis based on number of days overdue, and taking into account the historical loss experience in portfolios with a similar amount of days overdue.

The recoverable amount of the Group's loans and receivables carried at amortised cost is calculated as the present value of estimated future cash flows, discounted at the original effective interest rate.

12. CASH AND CASH EQUIVALENT

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
	2018	2017	2018	2017
Bank balances	3,466	5,215	89	765
Call deposits	15,500	15,500	-	-
Cash and cash equivalents	18,966	20,715	89	765

Cash and cash equivalents are measured at amortised cost using the effective interest method. The effective interest rate on call deposits in 2018 was 3.28 percent (2017: 3.24 percent). The deposits had an average maturity of 113 days (2017: 96 days).

13. OPERATING LEASES

Leases as lessee

Non-cancellable operating lease rentals are payable as follows:

<i>In thousands of New Zealand dollars</i>	Consolidated	
	2018	2017
Less than one year	269	348
Between one and five years	523	648
More than five years	163	273
	955	1,269

The Group leases a number of facilities under operating leases. The leases typically run for a period of 3 years, with an option to renew the lease after that date. Lease payments are increased periodically to reflect market rentals.

Lease Payments

Payments made under operating leases are recognised in the statement of comprehensive income on a straight-line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

14. EMPLOYEE ENTITLEMENTS

<i>In thousands of New Zealand dollars</i>	Consolidated	
	2018	2017
Non-current	348	501
Current	2,469	2,182
Balance at 31 May	2,817	2,683

The provision for employee entitlement relates to at-risk incentive provisions, long service leave, accrued annual leave and retirement allowances.

i) Long-term benefits

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any related assets is deducted. The discount rate is 2.75% which was the 10-year government bond rate bill rate as at 31 May 2018. The calculation is performed using the projected unit credit method. Any actuarial gains or losses are recognised in the statement of comprehensive income in the period in which they arise.

ii) Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A provision is recognised for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

iii) Defined contribution plans

Obligations for contributions to defined contribution pension plans are recognised as an expense in the statement of comprehensive income when they are due.

15. TRADE AND OTHER PAYABLES

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
	2018	2017	2018	2017
Trade payables due to related parties	1,059	4,239	26,986	28,295
Other trade payables	11,474	7,057	4,283	1,642
Non-trade payables and accrued expenses	2,338	5,840	490	3,114
Balance at 31 May	14,871	17,136	31,759	33,051

i) Recognition and measurement

Trade payables are recognised at cost when the company becomes obliged to make future payments resulting from the purchase of goods and services. Trade payables are classed as an “other amortised cost financial liability”.

ii) Provisions

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation.

Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as a finance cost within surplus or deficit.

16. MEMBERS' FUNDS AND RESERVES

DairyNZ's capital is its equity (or members' funds) which comprise retained earnings, fair value reserves and contributions by owners. Equity is represented by net assets.

DairyNZ manages its revenues, expenses, assets, liabilities, and general financing dealings prudently. DairyNZ's equity is largely managed as a by-product of managing income, expenses, assets, liabilities, and compliance with the Directors' instructions.

The objective of managing DairyNZ's equity is to ensure that DairyNZ effectively achieves its goals and objectives for which it has been established, while remaining a going concern.

Fair value reserve

The fair value reserve comprises the cumulative net change in the fair value of available-for-sale financial assets until the investment is derecognised or impaired.

The Group is not subject to any externally imposed capital requirements.

The Group's policies in respect of capital management and allocation are reviewed regularly by the Directors.

There have been no material changes in the Group's management of capital during the period.

17. SUBSIDIARIES

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. Benefits from activities may be both of a financial and non-financial nature. Benefits of a non-financial nature could be if those benefits are meeting the Group's social objectives. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

The Group has the following significant subsidiaries:

NAME	COUNTRY	CLASS OF SHARE	VOTING INTEREST HELD %		BALANCE DATE	PRINCIPAL ACTIVITY
			2018	2017		
DairyNZ Limited	NZ	Ordinary	100	100	31-May	Dairy industry research, development and extension
Dairy Training Limited	NZ	Ordinary	100	100	31-May	Dairy industry training
New Zealand Annual Evaluation Limited	NZ	Ordinary	100	100	31-May	Maintenance of a national breeding index
Dairy Insight (PGGR Consortia) Limited	NZ	Ordinary	100	100	31-May	Greenhouse gas emission research
Insight Genomics Limited	NZ	Ordinary	100	100	31-May	Pastoral genomics ryegrass research
Johnes Co Dairy Insight Limited*	NZ	Ordinary	-	100	31-May	Johnes disease research
DairyNZ Accreditation Limited	NZ	Ordinary	100	100	31-May	Accreditation of dairy industry services
Data Linker Limited	NZ	Ordinary	50	50	31-May	Industry database

* *Johnes Co Dairy Insight Limited voluntarily removed from the Companies Register on 17th October 2017.*

i) Transactions eliminated on consolidation

Intra-group balances, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

18. JOINT VENTURES AND ASSOCIATES

a) JOINT VENTURES

In thousands of New Zealand dollars

	PASTORAL GREENHOUSE GAS RESEARCH CONSORTIUM	PASTORAL GENOMICS LTD	FARM DATA ACCREDITATION LTD	TOTAL (SHARE IN JOINT VENTURE)
For the year ended 31 May 2017				
Ownership	26.20%	49.66%	14.30%	
Current assets	801	1,307	-	2,108
Non-current assets	-	-	-	-
Total assets	801	1,307	-	2,108
Current liabilities	383	563	-	946
Non-current liabilities	-	-	-	-
Total liabilities	383	563	-	946
Revenues	634	737	-	1,371
Expenses	(1,490)	(2,083)	-	(3,573)
Profit/(loss)	(856)	(1,346)	-	(2,202)
For the year ended 31 May 2018				
Ownership	27.16%	49.66%	14.30%	
Current assets	996	1,081	-	2,077
Non-current assets	-	-	-	-
Total assets	996	1,081	-	2,077
Current liabilities	226	363	-	589
Non-current liabilities	-	-	-	-
Total liabilities	226	363	-	589
Revenues	648	745	-	1,393
Expenses	(1,295)	(2,073)	-	(3,368)
Profit/(loss)	(647)	(1,328)	-	(1,975)

Joint ventures

Joint ventures are those entities over whose activities the Group has joint control, established by contractual agreement and requiring unanimous consent for strategic financial and operating decisions. Joint ventures are accounted for using the proportionate consolidation method whereby the Group's share of each of the assets, liabilities, income and expenses of a jointly controlled entity is combined line by line with similar items in the Group's financial statements. The liabilities recognised include the Group's share of those liabilities for which the Group is jointly liable.

b) ASSOCIATES

	SDH GP LTD	LINCOLN HUB LTD	TOTAL
For the year ended 31 May 2017			
Ownership	37.50%	20.00%	
Current assets	1,338	321	1,659
Non-current assets	18,622	8	18,630
Total assets	19,960	329	20,289
Current liabilities	748	286	1,034
Non-current liabilities	5,790	-	5,790
Total liabilities	6,538	286	6,824
Revenues	295	1,191	1,486
Expenses	(206)	(1,146)	(1,352)
Profit/(loss)	89	45	134
Share of profit/(loss)	33	9	42
Value of investment	5,038	9	5,047
For the year ended 31 May 2018			
Ownership	37.50%	20.00%	
Current assets	1,391	767	2,158
Non-current assets	20,609	180	20,789
Total assets	22,000	947	22,947
Current liabilities	58	881	939
Non-current liabilities	8,778	-	8,778
Total liabilities	8,836	881	9,717
Revenues	619	2,274	2,893
Expenses	(637)	(2,251)	(2,888)
Profit/(loss)	(18)	23	5
Share of profit/(loss)	(7)	4	3
Value of investment	5,029	13	5,042

Equity accounted associates

Associates are those entities in which the Group has significant influence, but not control, over the financial operating policies. Investments in associates are accounted for using the equity method and are recognised initially at cost. The cost of the investment includes transaction costs. The consolidated financial statements include the Group's share of the profit or loss and other comprehensive income of equity accounted investees.

OsPRI Limited (associate)

DairyNZ has a 45.45% shareholding in OSPRI Limited which was established on 30 May 2013. This company operates the national animal identification and tracking scheme for cattle and deer.

OSPRI Limited is an associate however it is not equity accounted as it is a charitable entity - registration number CC49247. DairyNZ will not receive any future tangible financial benefit from OSPRI Limited or be entitled to any distributions on winding up.

D) OTHER DISCLOSURES

19. FINANCIAL INSTRUMENTS

Risks

Exposure to currency, interest rate and credit risk arises in the normal course of the Group's business. Derivative financial instruments are used as a means of reducing exposure to fluctuations in foreign exchange rates and interest rates. While these financial instruments are subject to the risk of market rates changing subsequent to acquisition, such changes would generally be offset by opposite effects on the items being hedged.

i) Credit risk

Credit risk is the risk that the counterparty to a transaction with the Group will fail to discharge its obligations, causing the Group to incur a financial loss. The Group is exposed to credit risk through the normal trade credit cycle and advances to third parties. No collateral is required in respect of financial assets. Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis.

Reputable financial institutions are used for investing and cash handling purposes.

The maximum exposure to credit risk is represented by the carrying value of each financial asset in the Statement of Financial Position.

The status of trade receivables at the reporting date is as follows:

Consolidated

In thousands of New Zealand dollars

	GROSS RECEIVABLE 2018	IMPAIRMENT 2018	GROSS RECEIVABLE 2017	IMPAIRMENT 2017
Trade receivables				
Not past due	5,707	-	9,359	-
Past due 0-30 days	207	-	-	-
Past due 31-120 days	433	-	629	-
Past due 121-360 days	15	-	16	-
Past due more than 1 year	-	-	-	-
Total	6,362	-	10,004	-

In thousands of New Zealand dollars

Parent

	GROSS RECEIVABLE 2018	IMPAIRMENT 2018	GROSS RECEIVABLE 2017	IMPAIRMENT 2017
Trade receivables				
Not past due	3,691	-	6,791	-
Past due 0-30 days	74	-	-	-
Past due 31-120 days	-	-	-	-
Past due 121-360 days	-	-	-	-
Past due more than 1 year	-	-	-	-
Total	3,765	-	6,791	-

ii) Market risk

a) Foreign currency risk

Foreign currency risk is the risk that the value of the Group's assets and liabilities will fluctuate due to changes in foreign exchange rates. The Group has no current exposure to foreign currency risk.

b) Interest rate risk

Interest rate risk is the risk that the value of the Group's assets and liabilities will fluctuate due to changes in market interest rates. The Group is exposed to interest rate risk primarily through its cash balances.

Consolidated

In thousands of New Zealand dollars

	2018			2017		
	BALANCE	MATURITY DATE	EFFECTIVE INTEREST RATE	BALANCE	MATURITY DATE	EFFECTIVE INTEREST RATE
Short Term Deposit	1,000	20/06/2018	3.60%	5,500	20/06/2017	3.56%
Short Term Deposit	600	20/06/2018	3.30%	3,000	20/06/2017	3.50%
Short Term Deposit	3,000	20/06/2018	3.17%	1,000	20/06/2017	3.75%
Short Term Deposit	1,000	20/06/2018	3.72%	3,000	20/07/2017	2.70%
Short Term Deposit	1,000	20/06/2018	3.67%	3,000	20/07/2017	2.70%
Short Term Deposit	1,000	11/06/2018	3.45%			
Short Term Deposit	1,200	9/07/2018	3.15%			
Short Term Deposit	3,200	20/07/2018	3.25%			
Short Term Deposit	800	23/07/2018	3.13%			
Short Term Deposit	1,200	6/08/2018	2.53%			
Short Term Deposit	1,500	20/08/2018	3.12%			
	15,500			15,500		
Average effective interest rate			3.28%			3.24%

Sensitivity Analysis

In managing cash flows the Group aims to reduce the impact of short-term fluctuations on the Group's earnings by investing in short term deposits. Over the longer-term, however, permanent changes in interest rates will have an impact on profit. A decrease in interest rates of one percent would reduce interest income by \$115,149 (2017; \$138,508). Cash deposits made on DairyNZ's behalf are made only with New Zealand registered banks with an appropriate credit rating.

20. CAPITAL COMMITMENTS

As at 31 May 2018, DairyNZ Group has capital commitments for the development of a Dairy Trials Database (\$494,750), DIGAD (\$925,000), Dairy Base (\$503,000), and CRM (\$175,000). (2017; \$626,600).

21. COMMITTED FUNDS

The Group is contracted to provide funds to a number of projects on a multiyear basis, in exchange for services provided. However, certain conditions in the contract must be met annually before the funds are paid out. Funds committed for future projects which are subject to certain conditions being met are as follows:

In thousands of New Zealand dollars

	Consolidated	
	2018	2017
Less than one year	23,780	24,879
Between one and five years	66,999	70,016
More than five years	-	14,500
	90,779	109,395

22. CONTINGENT LIABILITIES

The Group recognises a contingent liability when they have a possible obligation that arises from past events, and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group.

The Group has agreed to co-fund a number of industry-good projects, but the providers of these projects are required to secure funding from other sources before DairyNZ will provide the agreed funding. As this ability to secure other funding is outside the control of DairyNZ, DairyNZ's committed funding is recognised as a contingent liability.

In the normal course of business DairyNZ, as an investor, agrees to co-fund industry-good projects pending the providers ability to secure funding from other sources.

<i>In thousands of New Zealand dollars</i>	Consolidated	
	2018	2017
Less than one year	1,543	1,347
Between one and five years	1,872	2,651
More than five years	-	-
	3,415	3,998

23. RECONCILIATION OF THE PROFIT FOR THE PERIOD WITH THE NET CASH FROM OPERATING ACTIVITIES

<i>In thousands of New Zealand dollars</i>	Consolidated		Parent	
	2018	2017	2018	2017
Profit/(loss) for the period	(3,104)	(1,821)	(953)	(4,764)
Adjustments for:				
Depreciation	1,896	1,834	-	-
Amortisation of intangible assets	982	1,000	-	-
Change in fair value of biological assets	(403)	(640)	-	-
Gain on sale of fixed assets	(194)	(44)	-	-
Loss on sale of fixed assets	69	-	-	-
Impairment of investment in joint ventures	-	-	1,975	2,226
Write off Dexcel Holdings loan	-	-	-	(239)
Share of associated earnings	(5)	(38)	-	(29)
	2,345	2,112	1,975	1,958
Change in inventories	12	16	-	-
Change in trade receivables	3,173	(2,289)	1,758	2,674
Change in trade and other payables	(2,186)	(790)	(1,294)	7,266
Change in provisions and employee benefits	297	(468)	135	-
	1,296	(3,531)	599	9,940
Net cash from operating activities	537	(3,240)	1,621	7,134

24. RELATED PARTIES

Parent and ultimate controlling party

The immediate parent and controlling party of the Group is DairyNZ Incorporated.

Transactions with key management personnel

Key management personnel compensation comprised:

<i>In thousands of New Zealand dollars</i>	Consolidated	
	2018	2017
Employee benefits - short term	3,015	2,837
	3,015	2,837

DairyNZ Directors also act as Directors and are Shareholders of the following various entities, with which Group transact with as part of ordinary business:

- B. Allomes** Shareholder of Fonterra Co-operative Limited, Livestock Improvement Corporation Limited, Ravensdown Fertiliser Co-operative Limited, Farmlands Trading Society and Ballance Agri-Nutrients Limited and Trustee of the New Zealand Dairy Industry Awards Trust.
- H. Anderson** Director of the National Institute of Water and Atmospheric Research (NIWA) and Member of the Massey University Council and Institute of Directors Council.
- B. Harris** Director of PrimaryITO, member and chair of the Waikato Institute of Technology.
- E. Cook** Shareholder of Farmlands and Ravensdown Fertiliser Co-operative Limited and Director of NZ Young Farmers and SDH GP Limited.
- J. van der Poel** Shareholder of Fonterra Co-operative Limited, Livestock Improvement Corporation Limited, Ravensdown Fertiliser Co-operative Limited and Ballance Agri-Nutrients Limited.
- P. Schuyt** Director of Tatua Co-operative Dairy Company Limited.
- C. Glass** Director of Pasture Conferences Limited.

Other related party transactions

DairyNZ enters into funding and investment transactions (programme expenses) with its subsidiaries, associates, and joint ventures in the ordinary course of business.

In thousands of New Zealand dollars

	TRANSACTION VALUE		BALANCE OUTSTANDING	
	2018	2017	2018	2017
DairyNZ Limited	39,343	41,460	25,087	25,822
Pastoral Genomics Limited	1,302	1,302	651	-
Insight Genomics Limited	21	-	415	-
New Zealand Animal Evaluation Limited	2,332	2,972	-	-
Pastoral Greenhouse Gas Research Consortia	1,000	1,100	-	-
Tbfree NZ Ltd (Ospri)	14,500	14,833	6	1,390
	58,498	61,667	26,159	27,212

Other related party transactions

All transactions and outstanding balances with these related parties are to be settled in cash within six months of the reporting date. None of the balances are secured.

In thousands of New Zealand dollars

	TRANSACTION VALUE		Receivables BALANCE OUTSTANDING	
	2018	2017	2018	2017
	AgResearch Limited*	-	2,157	-
Agriculture Services Ltd	-	100	-	19
Dairy Training Ltd (subsidiary)	380		39	
Fonterra Co-op Group*	-	56,152	-	2,907
Massey University	-	4	-	-
NIWA	38	33	-	43
NZ Young Farmers	-	236	-	45
Primary ITO	29	36	111	14
Southland Demonstration Farm Limited	125	-	22	-
Southern Dairy Hub (associate)	240	-	-	160
Tatua Co-op Dairy Co. Ltd	529	548	22	18
WINTEC	-	341	-	138
	1,341	59,607	194	3,995

In thousands of New Zealand dollars

	TRANSACTION VALUE		Payables BALANCE OUTSTANDING	
	2018	2017	2018	2017
	AgResearch Limited*	-	6,823	-
Agriculture Services Ltd	33	311	-	95
Dairy Training Ltd (subsidiary)	37	-	9	-
Fonterra Co-op Group*	-	447	-	172
Institute of Directors	2	3	-	-
Lincoln Hub Ltd (associate)	250		-	
Massey University	576	1,028	223	199
NIWA	295	226	103	81
NZ Dairy Awards Trust	155	-	45	45
NZ Young Farmers	566	172	47	53
Primary ITO	2,604	2,012	606	645
Southland Demonstration Farm Limited	23	3	26	6
WINTEC	2	36	-	-
	4,543	11,061	1,059	2,849

*AgResearch Limited and Fonterra Co-operative Group are no longer related parties.

25. SUBSEQUENT EVENTS

There were no subsequent events that have occurred since balance date.

Income & Expenditure Plan - 2018/19

As per the rules of DairyNZ Incorporated, DairyNZ must provide an income and expenditure plan for the next financial year.

In thousands of New Zealand dollars

	2019	2018	
	FORECAST	ACTUAL	MOVEMENT
Revenue			
Milksolids levy	66,734	66,230	504
Primary Growth Partnership	-	2,488	(2,488)
MBIE Partnership	3,650	2,815	835
Other income	-	7	(7)
	70,384	71,540	(1,156)
Levy funds invested in			
Build great workplaces for NZ's talented workforce	7,455	7,294	161
Competitive and resilient dairy farming businesses	53,667	53,676	(9)
Grow vibrant and prosperous communities	2,400	2,138	262
Leading in on-farm animal care	2,924	2,159	765
Protect and nurture the environment	6,055	2,518	3,537
Total investment expenses	72,501	67,785	4,716
DairyNZ subsidiary companies*			
Revenue			
Levy income from DairyNZ Incorporated	51,115	41,675	9,440
Other income from DairyNZ Incorporated	3,537	5,281	(1,744)
Other operating income	4,542	5,475	(933)
	59,194	52,431	6,763

In thousands of New Zealand dollars

	2019	2018	MOVEMENT
	FORECAST	ACTUAL	
Operational expenses			
Amortisation	1,120	982	138
Auditors' remuneration	95	74	21
Building costs	392	384	8
Commodity levy collection fee	332	331	1
PGP and MBIE management fee	116	401	(285)
Computing costs	1,465	1,413	52
Depreciation	2,022	1,896	126
Directors' fees	674	577	97
Directors' governance expenses	153	157	(4)
External services (Legal)	108	106	2
Office costs	1,534	1,565	(31)
Operating costs and other	5,445	5,333	112
Operating leases	596	584	12
Personnel expenses	27,327	27,458	(131)
Provider services and sub-contracts	16,021	15,835	186
Repairs and maintenance	372	275	97
Travel costs	1,719	1,919	(200)
Total operational expenses	59,490	59,290	200
Profit/(loss) before income tax	(2,413)	(3,104)	691

**“ WE SHOULD BE PROUD OF OUR
DAIRY SECTOR. WE’VE COME ACROSS
SOME REALLY GREAT PEOPLE IN THE
SECTOR AND THEY’VE INSPIRED US
TO DO WHAT WE DO NOW. ”**

Sameer Nimbalkar, featured in Inside Dairy June 2018



Publications

DairyNZ experts write for a number of publications throughout the year so that farmers and the wider dairy sector have access to our knowledge. Communication is now made through a range of online, print, event and media channels. For a complete list of published articles, visit dairynz.co.nz/annualreport.

MEDIA

137
articles



In 2017/18, DairyNZ specialists wrote 137 articles for media publications. 65% for rural publications, 21% for provincial media

Around **7%** of all dairy news coverage originates from DairyNZ, which makes DairyNZ one of the largest suppliers of dairy stories to media.

Over **850** proactive and reactive contacts with media in 2017/18.

Mycoplasma bovis coverage was dominant in the first half of 2018 – at one stage accounting for **2600** articles in one month.

Media reporting of dairy farming is consistently over **90%** positive/neutral.

SCIENCE PUBLICATIONS

Chapters for scientific books: 3

Papers for:
scientific conferences: 53

dairy industry conferences: 5

Papers published in:

science journals: 33

DairyNZ Technical Series: 14

other dairy industry publications: 1

Total 109

SOCIAL MEDIA

17,324

FACEBOOK
increase of 3293

5773

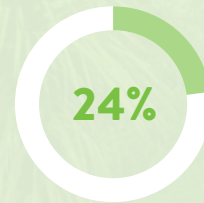
LINKEDIN
increase of 978

9167

TWITTER
increase of 1494

1022

INSTAGRAM
increase of 638



increase in followers across DairyNZ's social media channels

During 2017/18, followers across DairyNZ's social media channels increased by 24% (from 26,883 followers to 33,286). An average of 508 people are engaged with DairyNZ on social media per day. Each week, social media followers increase by an average of 120 people. An average DairyNZ post on Facebook reaches 4839 people.

WEBSITE & APPS

471,154
users



During 2017/18, DairyNZ website users increased by 27%.

47% increase in traffic

The highest monthly traffic ever recorded was in May 2018, when users increased by 47% on the previous year (85,920 vs 58,436).

11,901
downloads



During 2017/18 there were 11,901 downloads of DairyNZ apps.

DAIRYNZ'S VISION

IMPROVING LIVES WITH EVERY
DROP OF NEW ZEALAND MILK



DAIRYNZ'S PURPOSE

DELIVERING A
BETTER FUTURE
FOR FARMERS



VISIT DAIRYNZ.CO.NZ
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*Dairy***NZ** 