Dairy industry strategy refresh 2017

THE STORY SO FAR

dairy tomorrow

The future of New Zealand dairying.

Progress toward the objectives of the dairy industry strategy 2013 - 2020: making dairy work for everyone

Introduction

In 2013 the Strategy for Sustainable Dairy Farming 2013-2020 was adopted with the vision of 'Making Dairy Farming Work for Everyone'.

It is a Strategy for the whole dairy industry in New Zealand, with the Partners being DairyNZ, the Dairy Companies Association of New Zealand, the Dairy Women's Network and Federated Farmers.

In 2013 the sector was continuing to grow at a rapid pace. Global demand for milk products showed no signs of abating. Many elements of the 2013 Strategy were a response to the mounting public concern regarding the environmental impacts of growth.

The Strategy created a framework of ten goals, outlining what it means for dairy farming to be competitive and responsible. A further 16 ambitious targets were set to track the progress being made, with annual reporting against those.

The Strategy Partners decided to Refresh the Strategy in 2017, reflecting that much had changed since the Strategy was adopted, and different approaches were needed. In the past four years the sector has experienced a prolonged downturn in global dairy returns. The consequences of greater milk price volatility, increasingly stringent regulations and rising public and consumer expectations of farming practices are just some of the factors prompting this strategic refresh.

A key benefit of the Strategy and reporting against targets is transparency and focus, while being able to look across the whole of the objectives that the industry is trying to achieve and see what is happening in each of the different parts of the system. This first part of the Refresh does exactly that, and takes stock of what we have done and learned. It highlights the 'Story so Far' in terms of how we have done against each objective and targets, as well as the challenges faced and the most important work still to be done.

We want to acknowledge the efforts by farmers, the industry and other partners to achieve the progress made. An overwhelming theme of lessons learned so far is that collaboration is essential to making transformational change for industry-good, and many of the key achievements recorded here would not have been possible without people coming together to share their knowledge, skills and passion to make a positive difference.

This report also highlights the need for the Industry to have a Strategy that is dynamic and keeps focus on the shared challenges and opportunities. The partnerships and collaborative approaches on industry-good activities that have so far been developed under the Strategy will continue to play an essential role in achieving future objectives.

This part of the Refresh is based on a workshop with members of the industry most closely involved in implementing the Strategy, as well as feedback from industry groups and the Strategy partners, on each of the current ten strategy objectives designed to make the dairy industry more competitive and responsible.

Part 1 of the Refresh is to be read in conjunction with Part 2 in order to provide a comprehensive picture of the most significant developments for the dairy industry and its wider operating environment over the course of the Strategy to date.

Overview and key themes

Since the adoption of the Strategy in 2013 the global and New Zealand dairy industries have faced challenging economic times as global dairy commodity prices, and therefore farm gate milk prices, have fallen significantly.

The sector has demonstrated resilience through one of the most significant downturns New Zealand dairy has seen. Credit for this rests with farmers, but in many areas the work toward the Strategy contributed through improving systems, processes, tools and programmes. Examples include strengthening of the rural professional support network, implementation of the whole farm assessment model, a focus on farmer wellness, and structures and resources to deliver on environmental sustainability goals.

Despite the downturn, work toward the objectives continued. The Strategy demonstrated its value by maintaining focus and proactively tackling challenges, including adapting to significant regulatory changes, while building frameworks and relationships that support the sector to be more agile and resilient.

There have been major milestones achieved, including:

- The Sustainable Dairying: Water Accord goals, where 6 out of 11 targets have been fully achieved, and another 3 are on track, including nearly 100% of waterways being fenced
- The establishment of the Primary Industries Capability Alliance (PICA) and launch of 'GrowingNZ', to promote careers in the primary sector, reaching more than 60% of secondary schools and 38,000 students
- The Sustainable Dairying: Workplace Action Plan to assist dairy farming businesses to adopt good workplace management practices, setting minimum standards and aspirational goals for excellence in people management practices.
- Progress on research outcomes that are key to reducing the environmental footprint of dairy, including reducing nitrogen loss and GHG emissions.

Another less visible achievement has been the growing integration of responsibility into business-as-usual farm management, and making good management practice relating to the environment, animal welfare and people integral to the farming business. The investment in building the leadership capability in dairy is another achievement that will have long term benefits.

Implementing change always has its challenges, and there are also areas where we haven't made as much progress as anticipated or desired. This has highlighted challenges that the sector must continue to work to overcome, including:

- The need for more joined-up information systems and data, to be able to optimise the collection and use of data to support farmer decision making, create consistent baselines and to demonstrate performance, including on key issues of interest to the public and consumers.
- Staying proactive despite the day to day challenges, and thereby creating space to develop sound scientific or technical foundations for action, and to provide farmers with a clear and compelling case for change and time to adapt at a sustainable pace, using tools designed to meet their needs.
- Changing public perceptions of dairy farming and responding to what matters most to our communities and our consumers, including being able to retain the close connection New Zealand has historically enjoyed between our urban and rural communities and to ensure farming is connected to the wants and needs of our consumers so that it can respond to changing expectations.

In reviewing what has worked well and areas where there is still more to do, the following lessons are highlighted in order to contribute to the Refresh outcomes, as well as supporting other efforts in dairy and across the pastoral sector:

1 Pace of change

New Zealand dairy farmers have a global reputation for innovation, and, where the case is compelling, have shown a willingness and ability to adapt. What has changed in recent times, not just for dairy but for all business and society, is the sheer acceleration of change driven by new technology. Any proposals to support farmers with innovations to meet future challenges will need to clearly articulate the benefits and opportunities to the farming business. This task is all the more difficult when the benefits are not immediately visible. A key challenge in this process is to ensure practical solutions fit the farm system. This requires a good knowledge of the technical cows-grass interactions together with the people and economic factors determining farm performance. Management complexity increases as farm systems operate in more regulated environments. When research identifies solutions, a key task for on-farm change is to encourage farmer uptake. Finally, farmer leadership and active participation in the development of tools, systems, processes and programmes is essential to ensure that they meet the needs of the farmer as the ultimate user.

2 The importance of coordination and alignment

It's clear that where alignment and coordination is lacking, or there are not well-developed relationships or frameworks, progress is slower. There has been investment over the period of the Strategy in building stronger frameworks and relationships, and these are making it easier to move more quickly and find efficient solutions to complex issues. Many of the important challenges, such as water quality and climate change, are too complex for any one part of the value chain or community to solve on its own.

3 Targets

As indicated above, the Strategy has demonstrated the benefit of setting specific targets to mobilise resources toward an objective and maintaining focus. It has also created, in some areas for the first time, a benchmark by which to assess progress. In the absence of the Strategy there would not have been the same understanding in many of these areas of our current situation or the awareness of any critical gaps or opportunities. With the benefit of experience some of the targets and metrics might have been cast differently, but they have provided a valuable horizon to aim for.

Farm Profit: Increase on-farm profit and resilience through greater

The aim of this objective is to improve the profitability and resilience of dairy farming through efficiency gains on-farm.

The Strategy to achieve this is to focus on increasing the efficiency of individual farms, and particularly on the management and investment decisions that drive efficiency, by engaging with farmers and their professional advisers to understand the opportunity and support improved practices and decision making.

The Strategy set a target of "Profit from productivity increase from an average of $50/ha/year to $65/ha/year by 2020" with the key indicators being average profit from productivity, the average actual six-week in-calf rate and the average operating expenses of the owner-operator (sharemilker).

Efficiency

Progress so far

Farm productivity and profitability has improved even through one of the most challenging operating environments in recent decades. Support has been provided to farmers to manage through the downturn, including campaigns of focussed extension and development activities to achieve high impact at a time of extreme need and to support farmer confidence:

- Engaging over 60% of farm businesses in discussion groups and extension events
- Support to farmer led networks that deliver to the specific needs of their farming constituents
- 800 Feed Review visits to farmers

Long term progress has been made in supporting a shift in thinking from productivity to profitability by increasing awareness of efficiency and the importance of maximising the production and utilisation of pasture. A comprehensive farm system approach (the Whole Farm Assessment) supports delivery of technical solutions to ensure high performing businesses meet their environmental targets. A regional demonstration model has been implemented that supports farmer leaders to focus on addressing local issues. The value of the DairyPush model in achieving on-farm change has been demonstrated, providing evidence of economic gains with leadership from farming communities. The industry is increasingly supported by rural professionals that operate to a consistent standard through the NZIPIM certification programme. Since 2014 more than 1400 farmers have attended Dairy Women's Network financial modules.

However over the period of the Strategy so far, the rate of increase in profit from productivity (the key metric used to measure efficiency gains) has declined, and progress in raising the average actual six-week in-calf rate (another key indicator of change) has remained elusive.

Barriers to progress have included a lack of visibility for farmers of the costs and benefits of different approaches within a season, prioritisation of alternative outcomes by farmers in their decision making and being able to create a case for change that is compelling for farmers.

There is also a view that the Strategy needs to move beyond operating profit or total factor profit as the focus of measurement, and instead look more holistically at all the potential value generated by the farming business, as well as better understanding the motivations of farmers and role of profitability in enabling choice.

Future opportunities include developing information and systems to better provide farmers with objective and robust decision making tools, improving the referral process (group-based to one-on-one follow-up using the private sector), and looking more broadly at how to change behaviours and attitudes that might be barriers to farmers seeking information and advice, for example to drive improved financial literacy by making use of the renewed focus from rural banks on this issue.

There is opportunity to build off the success of the Whole Farm Assessment by making more effective use of DairyBase data and building stronger partnerships with the private sector, and for a more integrated approach in considering how objectives for profitability at the farm level can be achieved alongside social and environmental outcomes.

Environmental Stewardship: proactive environmental stewardship

The aim of this objective is to provide dairy farmers with the tools, insights and knowledge to take leadership in environmental stewardship on their farm, in their community and beyond, and to demonstrate their progress.

At the core of the Strategy is the Sustainable Dairying: Water Accord, a proactive commitment by the dairy industry to New Zealand to enhance the overall performance of dairy farming as it affects freshwater through continuous improvement and partnership. The Strategy is also to continue to invest in research and development to find solutions for reducing greenhouse gas emissions from dairy farming.

The targets in the Strategy are that the dairy industry fulfils all commitments listed in the Sustainable Dairying Water Accord and that 80% of New Zealanders agree dairy farmers are good stewards of the environment by 2020.

Wise use of natural resources

Progress so far

The main areas of progress have been toward the Accord goals (with 6 of the 11 targets fully achieved and another 3 on track) and in particular to reach almost 100% of waterways being fenced and improving effluent management compliance. Importantly there has been a shift in farmers engaging on environmental issues and seeing them as integral to the farming business. Farmer leadership on environmental issues has been further strengthened through building a strong and active national network. The Dairy Environment Leaders Programme has more than 200 leaders involved in training and leadership development programmes, and active in their communities.

Examples of progress include:

- Evidence emerging of improving water quality indicators in some regions
- Systems and processes in place to support farmers to meet environmental stewardship requirements (e.g. Land Management guides to help riparian planting and erosion control on farm, certified effluent advisors)
- Implemented certification and accreditation schemes for nutrient, effluent, codes of practice and delivered Sustainable Milk plans to more than 1000 farmers

Dairy companies have also played a key role in supporting this objective, in particular through their on-farm sustainability programmes. Examples include Synlait's 'Lead with Pride' farm assurance system, Westland's 'Farm Excellence' programme, Miraka's Te Ara Miraka initiative and Fonterra's 'Supply Fonterra' programme. Many of these programmes extend beyond environmental aspects to include animal welfare, milk quality and employee welfare.

In working toward the goal of proactive environmental stewardship and wise use of natural resources, making progress has relied on stronger and more visible leadership by farmers, working with other sectors at a catchment level to find solutions and working with those who will be affected by decisions.

It continues to be challenging to be proactive rather than reacting to issues as they arise. In addition while there has been progress in building baseline data sets needed to demonstrate environmental performance, identify problems and opportunities for improvement, there is still work to do to build alignment and consistency of recording and reporting relevant data in order to be able to optimise the value of the data to support effective change and to demonstrate to consumers and the public performance on the key areas of interest to them. This requires stronger industry collaboration and improved systems and processes for collecting and reporting data.

The desired shift in public perception sought by the Strategy is not occurring, despite efforts under the Sustainable Dairying Water Accord. The Accord has brought the industry together to work on water quality, but further industry cooperation is also needed to provide leadership in other areas such as water use efficiency, GHG emissions and biodiversity.

Research and Development: Research and develop innovative technologies and solutions to meet the future needs of dairy farms

This objective is aimed at generating or capturing new knowledge to push out the boundaries of what is technically achievable on farms, and making these innovations accessible to dairy farmers.

The Strategy to achieve this is to complement commercial innovations through industry-good investment in testing the value of new technologies within the farm system research programme, conduct pre-commercial research at the component level to deliver results to farmers and partner to develop industry-wide evaluation systems including Breeding Worth and Forage Value.

The Strategy set a target that "Research delivers farm systems that increase production and profit by $110/ha/year, while reducing the environmental footprint by 30%" with the key indicators being the environmental footprint and profit.

Progress so far

Progress has been made in many areas, underpinned by building closer collaboration and partnerships across different organisations. There has also been more focus on building connectivity of R&D to the needs of farmers.

The largest gains in the twin profit/footprint target have been made with reducing nutrient loss and methane emissions.

The main areas of progress have been:

- Pastoral21 and Forages for Reduced Nitrate Leaching research programmes have proven systems level approaches to reducing N, sediment and P loss across the four main soil-climate zones of Waikato, Lower North Island, Canterbury and Southland. This work has included wintering systems and milking platform solutions.
- Pastoral Greenhouse Gas Research Consortium has made substantial progress with vaccine and feed additive approaches to reducing methane emissions.
- Profitability targets have not been achieved at system level – but promising options for forage production are in the pipeline. Novel breeding approaches including genomic selection, hybridisation and genetic modification are all showing gains in ryegrass performance. Taking these technologies into the field before proving their impact at systems level is the next stage of work.
- The Forage Value Index (FVI) has been developed further with work on persistency, ryegrass:clover mixes and pasture quality all helping develop new traits and strengthen the science base behind FVI. Similar gains have been made in animal genetics with work on Residual Feed Intake and Fertility developing new and improved traits for the Breeding Worth Index.

The substantial challenge for the future lies in developing farm systems that deliver across the increasing complexity of profit, environment, animal welfare and people metrics. Linking farm systems development with the value chain, and engaging with farmers as yesterday's research topics are turned into today's farm practice will be necessary parts of the future of Research and Development.

R&D programmes are often not visible to farmers. Continuing to create value from R&D for dairy farmers will require increased focus on adoption and extension, including to better link extension needs and opportunities to inform research, and greater utilisation of existing infrastructure such as demonstration farms.

Other opportunities are to use social science to increase the uptake of R&D outcomes, as well as involving farmers in R&D and being better able to show the potential impact of research. It is also critical to align R&D with consumer needs to create value and grow returns to farmers.

One of the ongoing challenges is how to better support the dairy industry to achieve change more rapidly and at an industry scale. The emergence of technologies that are bringing the digital, physical and biological spheres together ('the fourth industrial revolution') have potential to drive rapid change and disrupt value chains, including for food. The extent to which the New Zealand dairy industry can benefit from these advances will be determined by its ability to innovate and adopt new technologies throughout the dairy supply chain, including at the farm level.

Animal Welfare: Farm to high standards of animal health, welfare and well-being

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The Strategy set a target that "Research delivers farm systems that increase production and profit by $110/ha/year, while reducing the environmental footprint by 30%" with the key indicators being the environmental footprint and profit.

Progress so far

A high level of compliance with the good practice animal welfare guidelines and standards for dairy farming has been maintained despite higher regulatory standards being adopted over the time of the Strategy as well as other changes in practice being pursued by the industry. The main areas of progress have been:

- Collaborative development of the Animal Welfare Action Plan
- Mainstreaming animal welfare into farm management
- Joint initiatives with farmers, training organisations and vets to support good stockmanship skills
- on farm (eg Welfare Matters, Stocksense) and where appropriate, across the supply chain (e.g. Bobby calf handling)
- Proactive leadership to eliminate inductions and improve practices for humane slaughter on farm
- Establishment of an early response service to support farmers to achieve positive outcomes for people and animals under trying circumstances
- An annual risk assessment survey to document the state of animal welfare on dairy farms

Underpinning this progress has been a research-based approach to developing new regulation and strong collaboration across the value chain, including with NAWAC, while being proactive and forward-looking and using monitoring mechanisms to identify hot spots, target resources and provide support to farmers in risk situations.

Continuing challenges relate to being able to assess and demonstrate performance at both the farm and industry level to help farmers be aware of how they are doing and support effective communication with the public and consumers regarding farming practices, as well as understanding risks and opportunities arising from potential future expectations and needs of consumers.

Talented People: Attract, develop and retain highly skilled and motivated people throughout the industry

This objective aims to attract talented and motivated people to dairy from a wider talent pool, provide excellent training and development opportunities, and retain them within the dairy industry.

The strategy to achieve this objective includes efforts to stimulate demand for a career in dairy in the school system and supply high quality eduction and training experiences, identify clear career pathways and demonstrate the greater opportunity and value of a career in the industry, and promote coordinated investment in workplace training. The clear link with creating quality work environments was also identified.

The Strategy established two targets for 2020: 90% of dairy farm businesses have fully competent farm teams (using a range of indicators relating to the training and experience of the farm staff and teamwork) ; and all dairy regions have sufficient certified rural professionals (with specific focus on certification of BCS scorers, nutrient management advisors, dairy effluent WOF assessors and designers and training of reproduction review advisors).

Progress so far

Greater primary sector collaboration, and improving the pathway from study and training to the workplace, have been essential to the progress made so far, but there is a long time before an intervention bears fruit to make a measurable difference in the numbers and quality of people in the industry.

The main areas of progress have been:

- The establishment of the Primary Industries Capability Alliance (PICA) and launch of 'Growing NZ' brand to promote careers in the primary sector, reaching more than 60% of secondary schools and 38,000 students
- Enhancing the effectiveness of university scholarship programmes to bring new talent and needed skills and expertise into the dairy sector (with 80% of scholars going on to work in the sector)
- Development of a pipeline of programmes to attract talent into the industry (includes Agrikids, TeenAg, EPIC Challenge, tertiary scholarships)
- Building the foundation for more trained and certified Rural Professionals through the establishment of certification schemes, including for farm systems, nutrient management and effluent management, that support the industry to be sustainable and meet new regulatory requirements.

While progress has been made, it remains a challenge for dairy to compete with other career opportunities for young people, particularly for young people in urban areas with little or no connection to farming. Continuing to put emphasis and focus on the Work Place Action plans will be key to aid in attracting and retaining skilled and motivated people, as well as changing the way that we talk about dairy as a career pathway to better showcase the breadth and diversity of potential development opportunities it can provide.

There are further opportunities to progress this objective by expanding efforts for certification of rural professionals to more regions and more coordinated approaches to meet capability needs, including linking up the training systems being developed under the Primary Growth Partnership.

Efforts can also be made to provide greater flexibility and individualised approaches to better support on farm training following recent poor results for completions after a significant improvement in 2015 (74% and 76% increase in Level 3 and Level 4 completions), as well as further tools such as induction packs that are fit for each of the Dairy Industry Standardised Roles and mentoring programmes.

Ensuring the nature and scale of people capability needed by the industry still relies on New Zealand maintaining its world class tertiary education and training systems, particularly for agri-business.

Work Environment: Providing a World Class Work Environment

This objective aims to create work environments on farms that are safe and that use technologies and business practices that achieve continuous productivity improvements. It aims to ensure that workplaces are supported by a strong network of advisers and suppliers, and have an appropriately trained and qualified workforce that is in turn supported by rurally aligned financial, environmental, social and health services that are fit for purpose.

The strategy to achieve this objective is to change the attitudes and beliefs of farm employers about the importance of quality work environments, including through provision of new tools, and removing barriers to coordination and effective partnering in order to build a cohesive and effective programme of activities.

The Strategy set a target that by 2020, 90% of dairy farm businesses have quality work environments, using a range of indicators relating to balanced and productive work time, fair remuneration, safe and health workplaces, team work and career development.

Progress so far

The Sustainable Dairying: Workplace Action Plan developed jointly by Federated Farmers and DairyNZ, to assist dairy farming businesses to adopt good workplace management practices, was a breakthrough for industry. It set minimum standards and aspirational goals for excellence in people management practices. This work involved extensive consultation with government agencies and farmers. The outcome was an industry-wide agreement that is a clear statement of industry leading practices and where government will intervene if standards are not met.

Other main areas of progress toward providing a world class work environment on farm have been:

- Increased awareness of the benefits of farms being quality workplaces with a particular focus on health and safety and compliance, supported by industry coordination and leadership
- Beginning to establish a culture of wellness and wellbeing in the industry, through a greater focus on mental and physical health and wellbeing for people working on farms, including improving work conditions and promoting discussion on hours of work
- Changes in practice through use of rosters and lean management systems, supported by the development of tools for farmers such as roster-builder for improved work hours (RosterBuilder, 2000+ downloads) and Gap Analysis (Good Practice HR).
- Industry leadership and focus to support the establishment of awareness and change programmes (e.g. FarmStrong, Good Yarn, Pitstops) and advocacy groups e.g. RHAANZ.

Changes in Health and Safety regulations were introduced during the term of this strategy. The new regulations initially caused some anxiety among farmers but the Workplace Action Plan has enabled a focused campaign, working with WorkSafe, to improve safety culture on farms. This work is ongoing, with a focus on the positive outcomes though this will need better KPIs/case studies with financials as part of a continuous improvement approach.

The Work Environment objective has achieved a significant improvement in the way industry works with government agencies, particularly Worksafe, the Labour Inspectorate and the Ministry for Primary Industries. Early engagement with these agencies and the use of the Voluntary – Assist-Direct-Enforce (VADE) model has provided effective in clarifying roles and responsibilities.

The current public focus on immigration is challenging. Other remaining challenges relate to achieving the scale and pace of change in the farm workplace needed to attract and retain talented and committed people to dairying as a career and to realise the other potential benefits of a world class work environment on farm, including wellbeing and health and safety outcomes for our people. Economic constraints on farming businesses has meant it has been challenging to progress as quickly as hoped.

Opportunities for further progress will come from building momentum for change, challenging our culture and mindset and growing people management skills, capability and professionalism in the dairy farming business.

Biosecurity and Product Integrity: protect the integrity and production of New Zealand's dairy products

This objective aims to to protect and enhance New Zealand's reputation for excellent dairy product integrity, while avoiding losses from biosecurity incursions.

The strategy to achieve this objective is to have close coordination between all stakeholders in the industry and work in partnership with government and other sectors to strengthen outcomes and develop appropriate tools and structures for cost-effective biosecurity. The strategy also addresses broader issues of food integrity including food safety and responding to significant consumer preferences with respect to on-farm practices.

The Strategy set a target for the dairy industry and government authorities to have robust biosecurity systems, with indicators relating to pre-border/border biosecurity systems and response capabilities to minimise the risk of incursions and their potential consequences for the dairy sector, as well as for the industry to have biosecurity programmes that maintain or enhance farm profitability. There is also a target for farm practices to ensure the milk supply is free of contaminants, using average somatic cell count as an indicator.

Progress so far

A key achievement has been the reduction in average somatic cell count of milk representing ongoing improvements in systems and processes to support food safety and quality at the farm level. On biosecurity, partnership with the government and other sectors has been progressed through cooperation in developing the Government's Biosecurity 2025 policy initiative, and agreement on mandating principles for the Government Industry Agreement (GIA) on Biosecurity.

Key achievements include:

- Coordination and cooperation across government and industry including responding to threats such as the 1080 incident in 2014 and mitigation of several biosecurity risks (e.g. Theileria and Velvet Leaf).
- Alignment of common Coordinated Incident Management Systems across industry organisations improving the co-ordination and management of responses to biosecurity and food integrity issues.
- A risk assessment model developed and accepted by MPI to better assess risk to the dairy sector.
- Expectations of an earlier than anticipated eradication of TB in New Zealand due to the industry programme under OSPRI.
- Agreement between livestock industry organisations and MPI of a framework to guide cost-share determination for specific unwanted organisms under the GIA framework.
- New Zealand continuing to have one of the lowest rates of anti-microbial use for dairy globally.

New Zealand must rise to the challenge of changing biosecurity pressures by developing a strong New Zealand wide biosecurity culture. For the dairy industry this means maintaining high levels of response preparedness, including through guidance and advice to farmers. It is in the dairy industry's interest to contribute to a high level of connectivity and proactivity across the wider biosecurity system, to ensure that changes in risk profiles result in timely action.

Local Communities: enhancing the communities we live in

This objective aims to enhance and raise awareness of dairy farmers' contribution and involvement in their communities (the catchment they farm in, the communities and regions they reside in and the national community of which they are a part).

The strategy to achieve this objective is based on partnering with existing organisations including farmer groups and dairy companies to achieve greater reach and involvement in communities, such as equipping farmers to take on roles in their communities through education, training and support that is delivered and co-ordinated through national farmer organisations, and dairy companies contributing through their corporate social responsibility programmes.

The Strategy established a target that 90% of New Zealanders agree dairy farmers make a positive contribution to rural and urban communities.

Progress so far

This objective relied on actions across the industry without an integrated approach. It is also impacted by the extent to which other objectives are achieved, including in particular enhancing National Prosperity, Environmental Stewardship and creating a world class Work Environment on farm.

Initiatives taken to enhance involvement and contribution of dairy farmers to local communities have included:

- DairyNZ's 'Rosie the Cow' Education program, now taught in one third of NZ's primary schools and one quarter of NZ's secondary schools. DairyNZ has facilitated 12,600 children visiting farms, while 98,000 children visited Rosie's World website.
- Support and connection with local schools and children's development and learning by the dairy companies, including Fonterra's Milk for Schools programme, available to Schools of all deciles for Years 1 - 6 (currently in 70% of New Zealand primary schools), and contribution to the KickStart Breakfast programme; Oceania Dairy sponsoring the Duffy books in homes programme locally, and Tatua's programme of hosting students and support for a graduate scholarship.
- Community connections and sponsorship by dairy companies, including Westland's support for Ronald McDonald House South Island and the Canterbury West Coast Air Rescue Trust, Synlyait's support for the local fire brigade and sports clubs, Oceania Dairy's sponsorship of the Aorangi Gymnastics Team and Fonterra's 'Grass Roots' community sponsorship programme.
- Support to dairy leader development programmes (such as Nuffield, Kellogs, AWDT).
- The Dairy Women's Network has developed a network of more than 80 volunteer leaders to run events that upskill and support dairy communities, including by providing them with 'Leadership by doing' opportunities such as running conferences, modules and as trainers.
- Leadership has been recognised through awards, including Dairy Women of the Year and Dairy Community Leadership Awards
- The Dairy Strategy partners make substantial contributions to the success of local and national Fieldays
- Catchment Groups have been set up in a number of regions across the country

The percentage of public opinion has at times exceeded the target or fallen below it, but the overall percentage of New Zealander's who agree farmers make a positive contribution to rural and urban communities has remained high.

There are further opportunities to promote this objective through successfully achieving many of the other objectives, as well as a more regionalised focus, greater visibility of farmer leaders and organisations in the community and building awareness of farming in the urban communities.

Industry Information Systems: create and maintain industry-wide systems and structures to serve the needs of all dairy farmers

This objective aims to expand traditional industry information systems and promote comprehensive industry data collection to support the ability of farmers to make better decisions and benefit from farms being increasingly 'data rich' environments.

The Strategy is to develop mutual imperatives for farmers, commercial companies and industry organisations in creating common industry information systems, meaning standardised approaches and collective industry investment where there is a clear case for achieving a greater good than would occur in its absence.

The Strategy established a range of targets that address milestones in the improvement of information systems (farmers have access to an information system that supports single entry and comprehensive data storage and links this data to key farm applications by 2018), and relating to gains to be facilitated by improvements (1.5% annual gains in breeding worth (BW) of the national herd and genetic gain of 1.0% per annum by 2020 in the forage value of pasture plants).

Progress so far

Substantial progress has been made with this Objective, but significant challenges remain in increasing data connectivity across the industry.

Responsibility for the Breeding Worth Index, Core Data and Animal Evaluation have all transitioned from Livestock Improvement to DairyNZ. Breeding Worth calculations have been improved as a result of the AE transition, and improvements to the traits of Body Condition Score and Fertility.

Since its launch in 2012 the Forage Value Index has progressed, with all major cultivars now included in the index as yield data for recent releases became available. New FVI traits of pasture quality and persistency have been developed and are in the pipeline for inclusion into the index when sufficient performance data is available.

DairyBase has grown to around 2,500-3000 individual users. DairyBase has supported industry advocacy and policy in the regions and nationally. DairyBase is now seen as the authoritative source of industry financial data. The value of DairyBase to individual farmers has been increased by improving user interfaces and more support for report interpretation.

Information sharing and data connectivity have been supported by the development of a Code of Practice for organisations managing farm data (Farm Data Code of Practice), a set of data standards that provide a common language and DataLinker which provides a means to facilitate data sharing and manage farmer permissions. While all the components of the infrastructure required to achieve a more connected sector now exists, implementation remains a challenge due to the range of legacy systems in place and cultural change around data ownership and commercial value.

Further progress will be made by bringing different data sources together through better linking existing systems, as currently the industry is characterised by 'data islands'. DairyBase will play a key role in this linking.

Other opportunities include creating a national genomic evaluation system for forage and animals, expansion of existing systems to capture and record data on new traits and ongoing efforts to improve data accuracy and accessibility for animal and forage improvement.

National Prosperity: enhance dairying's contribution to the social, economic and environmental aspirations of New Zealanders

This objective aims to produce new knowledge, skills, practices and partnerships that will help dairy farmers, and the companies they supply, develop responsibly and increase the industry's contribution to the nation's economy and general well-being.

The strategy is to support the sustainable development of the dairy industry through partnerships to find creative solutions for optimising dairying's contribution to the nation's well-being, developing methods and capability for assessing community social, economic and environmental aspirations and the economic impacts of catchment and regional development scenarios, and identifying opportunities for producing higher value milk.

The Strategy established targets that by 2020, New Zealand dairy export earnings are increased by 55% through adding value to milk and implementation of a sustainable milk growth strategy, and for 75% of New Zealanders to agree that dairying makes a positive contribution to their standard of living.

Progress so far

Despite the growth in value of New Zealand's dairy exports, the percentage of New Zealanders agreeing that dairying makes a positive contribution to their standard of living still requires improvement to meet the target.

It has been a significant achievement for the New Zealand dairy industry to remain resilient during the recent downturn in global prices and continue to grow the value of New Zealand dairy exports, while being a source of significant regional capital investment in New Zealand and a key driver of rural employment and household income.

Significant change has occurred to be able to farm within regulatory limits, and the industry has invested in scientific research in order to inform environmental limit setting in all the major dairy regions (for example contributing to the development of the economic model of the Waikato which is used to assess different policy options in the limit setting process for the Waikato River catchment). The Farming with Limits programme also includes working at the catchment level and policy representation.

The lessons learned in seeking to achieve this objective have included the importance of having a broad conversation about the role of dairying, beyond its economic contribution, and the need to address the impact of a growing disconnect between urban and rural communities. There is an opportunity to work more closely with all communities to better understand our shared vision for national prosperity and dairy's role, including with Māori and Iwi.

dairy tomorrow

The future of New Zealand dairying.