



**Australian Dairy
Sustainability
Framework**

CELEBRATING



2021 SUSTAINABILITY REPORT



Australian Dairy Products
Federation Inc.



Australian Dairy Industry Council Inc.



Contents

Dairy sustainability in a changing world	2	Brave, diverse voices	62
Our sustainability journey	4	An inclusive, engaged community of the willing	64
The changing landscape	6	Our industry, our impacts	66
Our Dairy Promise	10	Impact along the value chain	68
A healthier world. For everybody. Every day.	13	The Australian Dairy Industry	70
Commitment 1	14	Appendices	71
Enhancing economic viability and livelihoods		1 Governance	71
Commitment 2	28	2 Material topics	72
Improving wellbeing of people		3 Framework Principles	75
Commitment 3	36	4 Stakeholder engagement	76
Providing best care for animals		5 UN SDGs alignment	78
Commitment 4	44	6 GRI contents table	79
Reducing our environmental impact		7 References, data sources, abbreviations, glossary	85
		8 2021 Scorecard Report	87
		9 About this report	92

Message from the Chairs

A decade on, it's time for taking stock.

For 10 years the Australian dairy industry has been at the forefront of sustainable food production. Globally.

Now, we are taking stock of our progress, not to rest on our laurels – but to recognise our achievements and look forward to where we want and need to be in 2030, and beyond.

The Australian Dairy Sustainability Framework was developed 10 years ago, in 2012. At the time, retailers, customers, governments and consumers were attempting to define sustainability for the dairy industry from their own perspective. The calls for the industry to demonstrate, improve and report performance on sustainable development were getting louder. If anything, these expectations are higher today than they were a decade ago.

Something else that is different today is the urgency of managing material sustainability risks such as climate change. It is increasing. So too is the pace of change in our operating environment.

As a result, the framework, including the ambition in our goals and targets, continues to evolve. It is, after all, a living, framework that responds to changes in needs and events. It is aligned with the global Dairy Sustainability Framework and the United Nations Sustainable Development Goals (UN SDGs).

During the past decade the Australian dairy industry has made progress of which we are proud. We have adopted the National Farmers Federation's policy of net zero carbon across the Australian economy by 2050. We have ended the practice of routine calving induction in our cows. We have maintained our position as a core food group in the Australian Dietary Guidelines. We have embedded sustainability in the Australian Dairy Plan.

These are among the many achievements and milestones that are shared in this report.

We wish to acknowledge the contribution to our sustainability journey of the inaugural Chair of the Dairy Sustainability Steering Committee (SSC), Chris Griffin, who stepped down in 2021. Also, we pay tribute to the workers on our dairy farms, at our manufacturing sites and across our supply chain. It is their commitment to innovation, people, animals and nature that sustains our development.

On behalf of dairy farmers and dairy companies, the framework is owned and led by the Australian Dairy Industry Council. It is developed and implemented by the SSC and supported by Dairy Australia. The stewardship of the framework is a responsibility we accept with pride.

The dairy industry's vision of sustainable development is as clear today as it was in 2012. We remain at the forefront of sustainable food production. We intend to be there 10 years from now – and beyond.



A handwritten signature in black ink, appearing to read 'Graeme Nicoll'.

Graeme Nicoll
Chair – Dairy Sustainability Steering Committee



A handwritten signature in black ink, appearing to read 'Rick Gladigau'.

Rick Gladigau
Chair – Australian Dairy Industry Council

Acknowledgement of Country

The Australian dairy industry acknowledges the Traditional Owners of Country where we work throughout Australia and recognises their continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures; and to Elders past, present and emerging.

Dairy sustainability in a changing world

Key achievements from our journey



Key achievements over 10 years



Enhancing livelihoods

- Dairy companies generate A\$15.7 billion in sales and support more than 70,000 FTE jobs



Improving wellbeing of people

- 88% of general practitioners feel confident to recommend dairy as part of a balanced diet
- Dairy reduces fractures in aged care residents by 33%



Best care for our animals

- Most dairy farmers go well beyond compliance with animal welfare standards



Reducing environmental impact

- Dairy farmers are implementing measures to reduce emissions on farm
- 25.5% reduction in dairy manufacturers emissions intensity since 2010/11

... and we support national and global commitments to net zero emissions.

It has been 10 years since the Australian dairy industry developed the Australian Dairy Sustainability Framework (ADSF). Created in 2012, the framework was the first of its kind in the world.

A year later the global Dairy Sustainability Framework, (DSF) was developed. The frameworks have been in alignment ever since, defining sustainable dairy production in a changing world.

The Australian dairy industry's sustainability promise is to provide nutritious food for a healthier world. It is underpinned by four key commitments: enhancing livelihoods, improving wellbeing, providing best care for animals and reducing our environmental impact.

On climate action, the dairy industry has adopted the NFF's climate change policy that calls for an economy-wide target of net zero emissions by 2050 (with conditions). Almost all farms have already implemented measures to reduce emissions, and processors have already reduced greenhouse gas emissions intensity by 25.5 per cent since 2010/11.

We have enhanced the livelihoods of our people, Australian dairy farmers and processors, with dairy companies generating A\$15.7 billion in sales and providing employment to the equivalent of more than 70,000 full-time jobs – most in regional communities.

We are helping to improve the wellbeing of all people by providing education on the nutritious benefits of dairy products. Dairy, considered a core food group in the Australian Dietary Guidelines, has been shown to **reduce fractures** in aged care residents by 33 per cent. Overwhelmingly, general practitioners feel confident recommending dairy as part of a balanced diet.

Our commitment doesn't stop at improving quality of life for people. It extends to our animals, too, with 100 per cent of dairy farmers supporting compliance with animal welfare standards. In fact, most go over and above the standards to take care of their livestock. As an industry, the husbandry practice of routine calving induction has been phased out.

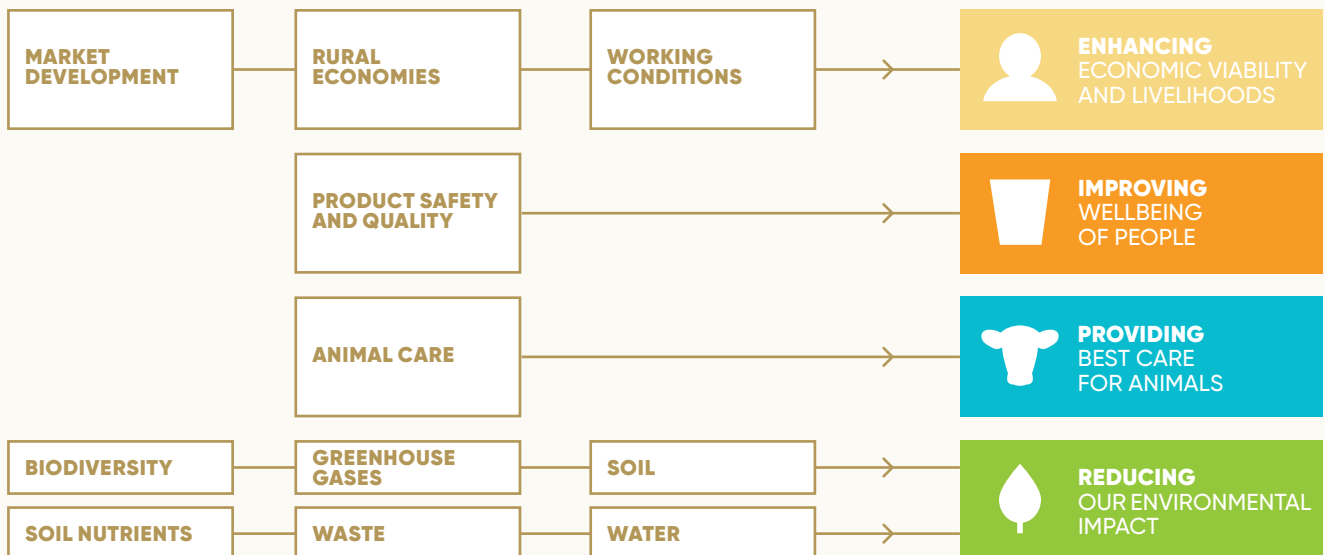
Sustainability is a strategic pillar in the Australian Dairy Plan. For 10 years the framework has evolved to keep pace with a changing global and national sustainability context. For this achievement the Australian Dairy Industry Council has been recognised with awards for sustainability leadership.

Our vision for a sustainable, emissions-free dairy sector is being realised. We support changes not just in our own backyard, but around the country and the world. We look forward to seeing more commitments – and actions – towards sustainable development globally and for dairy to be seen as part of the solution and not the problem.

Alignment between the ADSF and global DSF

Global Dairy Sustainability Framework key issues

Australian Dairy Sustainability Framework commitments



Our sustainability journey

Taking local action in a global context

In the first decade of the sustainability framework the Australian dairy industry has anticipated and responded to major changes in the operating environment for sustainable food production.

Australian Dairy Sustainability Framework begins



Ausdairy meets Unilever Sustainable Sourcing Code

Targets and metrics for framework agreed

Sustainability Steering Committee and Consultative Forum established

ADIC wins Banksia Food for Thought Sustainability Award



Refresh of materiality assessment of framework topics

ADIC wins UN World Environment Day Award for framework

THE CHANGING LANDSCAPE

2012

Rio+20 Earth Summit debates global economic and environment goals

2013

A global dairy sustainability framework is launched

IPCC releases work on a global carbon budget

UN members reaffirm commitment to 2015 summit, new global goals

2014

New York Declaration on Forests to end deforestation by 2020

2015

United Nations Summit on Sustainable Development, New York

UN Sustainable Development Goals (SDGs) announced

Paris climate deal struck to limit global warming (COP21)

2016

UN, IDF sign Dairy Declaration of Rotterdam

Australia State of the Environment report

Goals and targets in framework reset, aligned to 2030 SDGs

Framework recognised in global Sustainable Dairy Partnership

Sustainability is a strategic pillar in Australian Dairy Plan

Dairy framework has input to Australian Agriculture Sustainability Framework

New targets on AMR, human rights and food waste agreed

Materiality assessment of framework topics undertaken



Review of Commitments, Goals and Targets begins

2017

TCFD issues guidance to companies for disclosures to investors for pricing climate risk

2018

NFF launches ausag Roadmap for \$100b by 2030

Modern Slavery Act in Australia established

FutureEye report: Australia's shifting mindset on farm animal welfare

2019

WHO issues global warning on use of antibiotics

UNEP report warns of extinction threat to one million species

2020

COVID-19 pandemic disrupts supply chains

Top five global risks are environmental – World Economic Forum

2021

Work on Australian Agriculture Sustainability Framework starts

UN Food Systems Summit calls for systems transformation

Glasgow Climate Pact (COP27) signed by world leaders

New UN Global Biodiversity Framework for protecting nature



The changing landscape

Taking local action in a global context

The world is running out of time to develop systems of food production and consumption that meet the nutritional needs of humanity without wrecking the environment.

It is within this context that the dairy industry in Australia is producing food. Further, as a source of animal-based protein dairy is sometimes seen as part of the problem – not the solution – due to livestock's contribution globally to 14.5 per cent of climate-warming greenhouse gases.

There is undeniable evidence that the world needs nutritious food options such as dairy. Increasingly, research is revealing that milk, yoghurt and cheese belong in a sustainable diet.

It is clear from key events in the operating environment over the past decade that the pace of global change is accelerating and the urgency for sustainable food production is rising.

The opportunity for dairy farmers and dairy companies is to rise to this challenge and, in doing so, meet the expectations of stakeholders and the wants of consumers. It's also the right thing to do.

THE PAST 2012–2020

A period of progress and renewal

The launch of the United Nations Sustainable Development Goals (SDGs) and an **agreement** by world leaders in Paris (COP21) to limit global warming were major events in the past decade. Both happened in 2015. They drew a horizon for sustainable development: 2030.

A year later, the contribution of the dairy industry globally to the SDGs was recognised in the **Dairy Declaration of Rotterdam**, signed by the United Nations and the International Dairy Federation (IDF).

In 2018, the National Farmers' Federation (NFF), on behalf of Australian agriculture, released a **roadmap** to A\$100 billion of production by 2030. Trending towards carbon neutrality and halving food waste are among the sustainability targets. In the same year, the Australian Government introduced the **Modern Slavery Act**, putting large companies on notice that they are responsible for keeping people in their supply chains out of slavery.

A global warning from the World Health Organisation (WHO) in 2019 about the risks to human health from the use of antibiotics raised the urgency of antimicrobial stewardship and the COVID-19 pandemic in 2020 tested the resilience of supply chains, threatening food security.

In response to these changes in operating context, the Australian dairy industry has been reviewing, adapting and evolving the Australian Dairy Sustainability Framework.

Goals and targets in the framework, once set for 2020, have been reset for 2030 and aligned with the SDGs.

The framework is tangible evidence of Australia's commitment to the Dairy Declaration of Rotterdam. It is recognised as a key program in support of the Sustainable Agriculture Initiative (SAI)'s Sustainable Dairy Partnership, a business-to-business model that international food companies use to source responsibly produced dairy foods and ingredients. Unilever has also assessed all Australian milk production as meeting its Sustainable Sourcing Code for dairy – very much influenced by the framework.

The framework has been recognised with a Banksia National Sustainability Award in 2014. In 2016, the Australian Dairy Industry Council (ADIC), received a World Environment Day Award from the United Nations Association of Australia, for its organisational leadership and foresight in developing the framework. The framework was established in 2012 – a year before the global dairy industry released the **Dairy Sustainability Framework**, which is aligned with the Australian framework.

In 2020, the Australian Dairy Plan, a blueprint for delivering change in the dairy industry, recognised the value of the framework and made sustainability a strategic priority.



THE PRESENT 2021

Taking stock of where we are

In 2021, the urgency of the change required to create sustainable food systems was increased by three United Nations-led developments – a summit, a pact and a framework.

These initiatives confirmed 2030 as the deadline for global goals on food production, climate action and biodiversity protection. They concluded that progress in the next decade is needed to avoid the collapse of ecosystems which are essential for sustaining food production and life on the planet.

The first [UN Food Systems Summit](#) underscored the link between climate and food. The [Glasgow Climate Pact \(COP27\)](#) aimed to kick-start a decade of climate action and support. The [UN Global Biodiversity Framework](#) set guidelines to preserve and protect nature and its services to people.

In response, the Dairy Sustainability Steering Committee (SSC) launched a review of the ambition of the goals and targets and the credibility of the indicators and metrics in the Australian Dairy Sustainability Framework. One finding of the review of Commitment 4 – Reducing Environmental Impact, was that the target for biodiversity needs to be highlighted more and that a narrative for the positive impacts of dairy's environmental stewardship is needed.

On climate action, the dairy industry has adopted the NFF's [climate change policy](#) that calls for an economy-wide target of net zero emissions by 2050 (with conditions) and joined the global dairy industry's [Pathways to Dairy Net Zero](#) movement.

For the UN Food Summit, the SSC hosted an independent dialogue, attended by members of the dairy chain and stakeholders from outside the industry, submitting a formal report to the summit. At the time, the ADIC [reaffirmed its commitments](#) to climate action, system change and the SDGs.

THE FUTURE 2022 and beyond

Where we want to be in 2030

The world knows where it wants to be in 2030 on climate action and the SDGs. As a signatory to these global agreements, so does Australia.

On climate, the Australian Government has a commitment to net zero emissions by 2050. For packaging, Australia has targets for 2025 and a goal to halve food waste by 2030. The Australian dairy industry will play its role in supporting the nation to achieve these goals and targets.

In 2020, the Australian dairy industry asked stakeholders, what does nutritious food for a healthier world look like in 2030? Stakeholders foresaw a world where climatic events had a high impact on food production and there was a big change in community attitudes to food.

Dubbed the grassroots scenario, this future story described the return of political capital from big business to people and communities who are prepared to achieve their desired outcomes through social and consumer activism. It imagined more frequent, extreme weather events, water scarcity, floods and fires, and, as a result, frequent disruptions to food production.

The Australian dairy industry is looking towards 2030 and beyond, anticipating what actions it must take to ensure it remains a sustainable source of nutrition for the world.

In preparation, a review of the goals and targets in the framework will be completed in 2022/23, following which we intend to make our workplaces more rewarding, identify and address human rights risks in our supply chains, keep dairy as a core food group in Australian diets, find a sustainable solution for managing surplus dairy calves, and raise our ambition for climate action.

Thereafter, producers and dairy companies will work together to foster the necessary practice changes, and we will engage with external stakeholders to hear what they see on the horizon and seek their views on how we are responding to a changing world.

Whatever the future holds, we know we need to move faster. We must do more to keep dairy foods accepted as part of sustainable diets and a valued source of nutrition for a healthier world.

Our Dairy Promise

'To provide nutritious food for a healthier world'



ENHANCING ECONOMIC VIABILITY AND LIVELIHOODS

Creating a vibrant industry that rewards dairy workers and their families, communities, business and investors



1 Increasing competitiveness and profitability



2 Increasing community resilience and prosperity



3 Ensuring a safe work environment for all dairy workers



4 Providing a productive and rewarding workplace



IMPROVING WELLBEING OF PEOPLE

Providing nutritious, safe, quality dairy food



5 Ensuring safe dairy products



6 Contributing to improved health outcomes





PROVIDING BEST CARE FOR ANIMALS

Striving for health, welfare
and best care for our animals
throughout their lives



- 7** Providing best care for animals for whole-of-life
- Full compliance with animal welfare standards
 - Recommended practices adopted by all industry
 - Antimicrobial Stewardship – the dairy industry uses antibiotics responsibly



REDUCING OUR ENVIRONMENTAL IMPACT

Meeting the challenges of climate
change and providing good
stewardship of our natural resources



- 8** Improving land management



- 9** Increasing water use efficiency



- 10** Reducing GHG emissions intensity



- 11** Reducing waste



See page 78 for full list of UN SDG icons



At the heart of sustainable development in the Australian dairy industry is a promise: to provide nutritious food for a healthier world.

The Dairy Promise is underpinned by commitments the industry has made to:

- Enhancing economic viability and livelihoods – creating a vibrant industry that rewards dairy workers and their families, communities, businesses and investors.
- Improving wellbeing of people – providing nutritious, safe, quality dairy food.
- Providing best care for animals – striving for health, welfare and best care for all our animals throughout their lives.
- Reducing our environmental impact – meeting the challenges of climate change and providing good stewardship of our natural resources.

These commitments inform the development and implementation of the Australian Dairy Sustainability Framework – the first agricultural framework of its kind and an evolving definition for sustainable dairy production in Australia to 2030 and beyond.

For each commitment there are goals aligned to the United Nations Sustainable Development Goals (SDGs), targets that set our sights for continuous improvement and indicators and metrics for measuring and reporting our progress. An overview of our progress and planning against these commitments is provided in the following pages.

In one way or another the dairy industry enriches the lives of most of us.

It rewards dairy workers and their families, regional communities, businesses and investors. It contributes to people's wellbeing worldwide with nutritious, safe and quality dairy foods.

It inspires Australian dairy farmers to provide best care for all farm animals throughout their lives, take climate action and look after the environment for coming generations.

Our Dairy Promise is the reason why we do what we do, for each other and everybody else. Every day. Striving to meet these commitments enables us to keep our promise to the world. In doing so, we are contributing to global efforts to address the world's sustainability issues.

**A healthier world.
For everybody. Every day.**



COMMITMENT 1
ENHANCING ECONOMIC
VIABILITY AND LIVELIHOODS

**Creating a vibrant
industry that rewards
dairy workers and their
families, communities,
business and investors**

People are at the heart of every thing we do

Dairy is Australia's **third largest** agricultural sector. Dairy workers, their families, regional communities, business and investors hold a stake in the industry's sustainability.

Dairy companies support the equivalent of more than 70,000 full-time jobs across the national economy – 56 per cent of them in direct employment in regional areas, according to [Deloitte Access Economics](#).

Enhancing the economic viability of the dairy industry enables it to keep earning export income for the nation (32 per cent of milk production is exported) and contributing to rural and regional economies.

Dairy companies contribute to businesses in regional communities by investing more than A\$6 billion in existing and planned capital works, as of 2020/21, as well as a further A\$36 million in research and development between 2017/18 and 2019/20 and paying A\$4.7 billion to farmers for milk in 2020/21.

Sustainability is a key pillar in the [Australian Dairy Plan](#), a strategy blueprint for industry prosperity. Together with

productivity, it forms a cornerstone of farming policy and advocacy.

The disruptions of COVID-19 have reminded businesses that resilient supply chains and emotionally strong and healthy workers are critical to keep food available and affordable.

Despite these disruptions and increases to the costs across the dairy chain, including fertiliser, gas, water and feed, and a shortage of skilled workers, the market fundamentals are positive.

In 2021, strong customer demand and weak supply continued to drive commodity values higher. Additionally, increasing retail prices for some dairy products continued to support value creation opportunities through the domestic supply chain.

Key achievements in 2021

- Dairy is the **third largest** Australian rural industry by value of production.
- Australian dairy companies generate A\$15.7 billion in sales and support more than 70,000 FTE jobs across the nation.
- A target for the profitability of farm businesses set by the Australian Dairy Plan (see details next page) was adopted by the Australian Dairy Sustainability Framework.
- Almost 90 per cent of respondents to the National Dairy Farmer Survey reported an operating profit in 2020/21.
- The value of dairy exports, representing 32 per cent of dairy production, was \$3.3 billion in 2020/21.

2030 Goals



1 Increasing competitiveness and profitability



2 Increasing community resilience and prosperity



3 Ensuring a safe work environment for all dairy workers



4 Providing a productive and rewarding workplace



What we're doing to create a vibrant industry

Goal 1 Increasing competitiveness and profitability

Volatile markets, industry restructure and changes in the operating environment are a constant threat to the competitiveness and profitability of the Australian dairy industry.

Droughts, fires, floods, low farmgate milk prices, high stock inventories in export markets, cheap milk in supermarkets and high, variable costs of inputs have made production less profitable at times.

The number of dairy farmers in Australia fell to 4,618 in 2021 – down from 7,511 in 2010.

In 2021 the Australian dairy industry dodged most curve balls thrown at it by COVID-19 and conditions on-farm remained relatively favourable in most regions. Comparatively strong farmgate milk prices and subdued input costs buoyed farmers' profitability – 88 per cent of respondents to the 2022 National Dairy Farmer Survey reported an operating profit in 2020/21.

One of the hurdles for reporting progress towards a target for the profitability of dairy farmers in past years had been finding an indicator that works for different production systems.

In 2020, a target set by the Australian Dairy Plan – more than 50 per cent of farm businesses achieving at least A\$1.50 in earnings per kilogram of milk solids before interest and taxes (EBIT), averaged over five years – was adopted by the Australian Dairy Sustainability Framework.

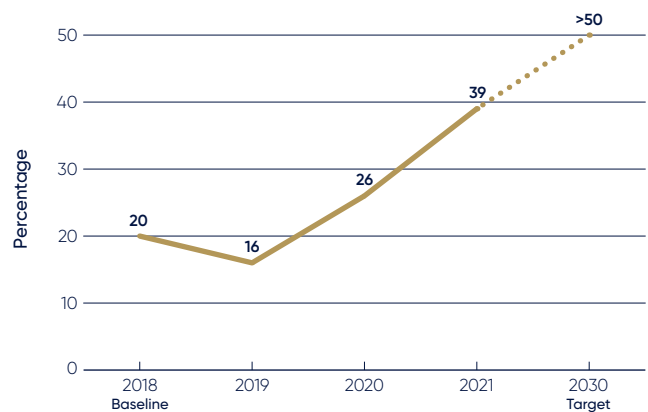
Dairy is the third largest Australian rural industry and a key sector of the agricultural economy. Dairy accounts for about seven per cent of agricultural exports from Australia, making Australia the world's fourth largest dairy exporter. Australia's share of global dairy trade – an indicator for the industry's competitiveness globally – eased to four per cent in 2021, against a target of 10 per cent in 2030.

Four targets for 2030 have been set for this goal.

KEY TARGETS

Here's how we're tracking against our targets for this goal

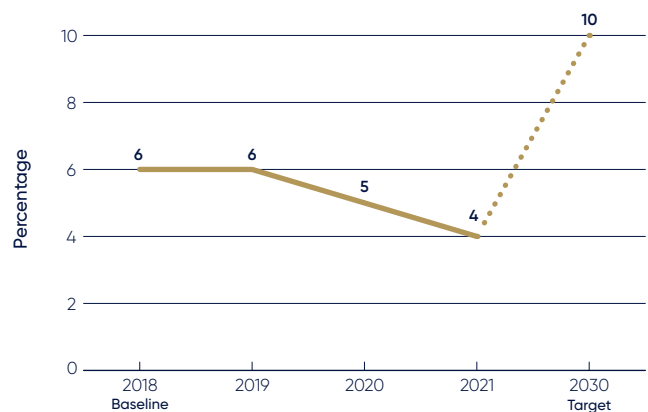
Target 1.1 Profitability of Australian dairy farmers



Explainer

The profitability of farm businesses over a five-year period is a key indicator of economic viability. A return of at least A\$1.50 EBIT/kg milk solids for more than 50 per cent of farmers by 2030 is a key target.

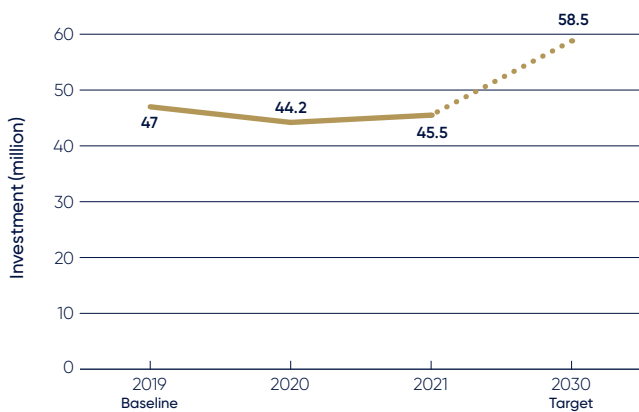
Target 1.2 Australian dairy's share of global trade



Explainer

Australia is the fourth largest exporter – exporting 32 per cent of milk production valued at A\$3.3 billion. It seeks to increase its share of global dairy trade to 10 per cent by volume by 2030. This target is under review.

Target 1.3 Expenditure on dairy RD&E



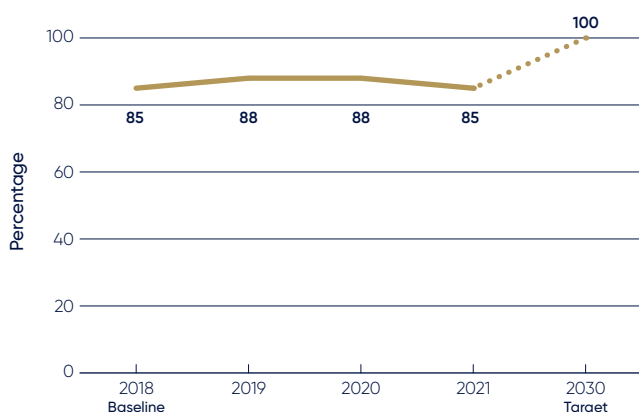
Explainer

Investment in research, development and extension (RD&E) is a strategy for increasing competitiveness and profitability. The target is to increase expenditure in RD&E by two per cent per annum.

Three more indicators are used to measure progress towards Target 1.3:

- percentage of dairy farmers constantly looking for new information to improve farm business (increased from 76 per cent in 2020 to 91 per cent in 2021)
- percentage of dairy farmers reporting new farming ideas were very important to them (increased from 72 per cent in 2020 to 90 per cent in 2021)
- percentage of dairy farmers reporting they were amongst the first in their area to try new ideas and products (up from 45 per cent in 2020 to 52 per cent in 2021).

Target 1.4 Consumer choice and access to dairy products



Explainer

Providing consumers with greater choice and access to a variety of dairy products and/or ingredients to meet their specific nutritional needs support industry competitiveness and profitability

ACTIVITIES

Here’s what we’re doing to increase our competitiveness and profitability

New tool helps farmers build their game plan

Our Farm, Our Plan is a learning program that helps farmers to develop their business skills and identify long-term goals, improve business performance and manage volatility.

DairyFeedbase targets paddock productivity

DairyFeedbase is developing management tools, technologies and systems that enable smarter allocation of feed at a herd and cow level and to raise productivity in the paddock.

R&D program drives profitability, sustainability

A five-year A\$6.5 million program focusing on feedbase research is helping dairy farmers maintain efficient, profitable and sustainable pasture-based dairy systems in the future.

DairyBase a boon for managing farm financials

DairyBase is an online tool that enables dairy farmers and their advisors to measure and compare farm business performance over time and forward-budget for the next season. It also provides carbon footprints for dairy farms.

Dairy farm monitor captures data for decisions

The Dairy Farm Monitor Project provides a detailed physical and financial analysis of 250 dairy farms, representing different farm sizes and systems, as well as all dairy regions. It informs decisions and priorities for Dairy Australia and stakeholders.

Industry Insights and analysis

The Situation and Outlook report from Dairy Australia analyses current dairy market conditions and the outlook for key drivers that impact the Australian dairy industry.



Our Farm, Our Plan inspires family to stay on the land

Two years ago, Craig and Sophie Bennett were planning to leave the dairy industry. Now, they have reversed that decision, thanks to upskilling and support provided by Our Farm, Our Plan.

Our Farm, Our Plan is an initiative developed by Dairy Australia, with support from the Gardiner Dairy Foundation and DairyNZ. The digital program helps dairy farmers clarify goals, manage uncertainty, mitigate risks and capture opportunities.

After moving quickly from working on the farm to purchasing the property from Sophie's parents before they hit 30, the couple had begun to feel adrift. With no clear direction or goals, they started to question staying on the land.

Our Farm, Our Plan supported the family to articulate their goals, not only for the business but also for their family and lifestyle. Their vision is printed and hangs in their office, reminding them very day of where small changes and decisions are ultimately taking them.

[Simpson dairy farmers do U-turn on dairy exit plan](#)

*Dairy farmers the Bennett family has reversed a decision to exit the dairy industry
Image: Tash Thompson Photography*

Goal 2 Increasing the resilience and prosperity of dairy communities

The resilience of dairy regions is a highly material topic for the Australian dairy industry.

The dairy sector contributes to the resilience and economic viability of farmers and rural communities, including regional job creation, ensuring the industry remains competitive and profitable.

Increasing or maintaining the resilience of dairy regions relies on a number of factors within the industry's control i.e. improving business management capability, but also multiple factors that lie outside it – climate change impacts such as drought and water scarcity.

In 2021, the contribution of dairy companies to the Australian economy was recognised when Deloitte Access Economics estimated the sector generated **A\$15.7 billion** in revenues in 2020/21.

The Australian dairy industry is a major source of employment in the eight regional dairy areas nationwide. It is estimated that approximately 37,400 people were directly employed by the dairy industry in dairy regions in 2020/21, flowing on to twice that number of jobs in other parts of the Australian economy. There are more than 140 dairy processors in Australia, with many located in regional communities.

Dairy farmers contribute significant community benefits that are more difficult to quantify, such as undertaking weed and vermin control, managing water courses and catchments, protecting biodiversity and endangered species. In this way they make a contribution to public environmental objectives and tourism in regional and coastal areas.

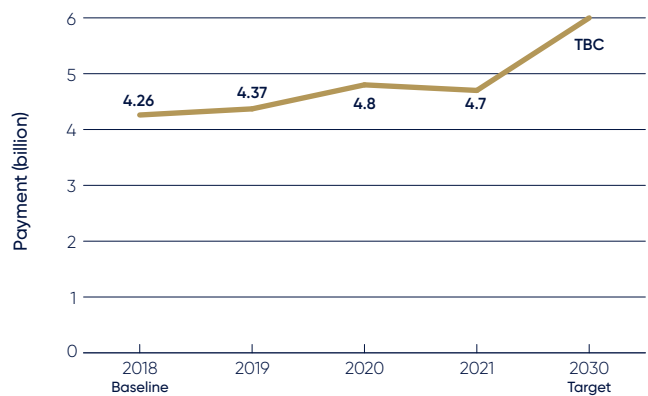
Three targets for 2030 have been set for this goal.

KEY TARGETS

Here's how we're tracking against our targets for this goal

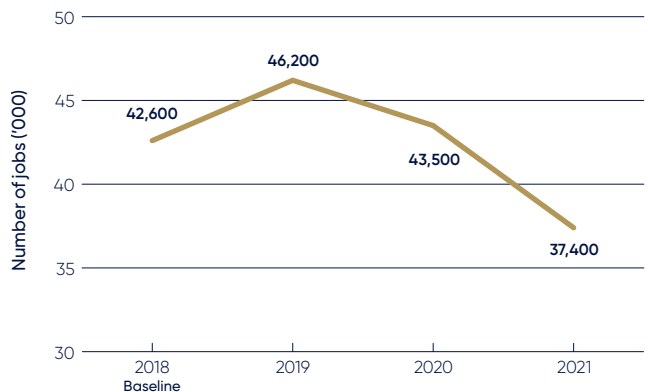
Target 2.1 Increase the contribution the dairy industry makes to supporting the economy of dairy regions

Indicator Total value of payments made to dairy farmers



Explainer

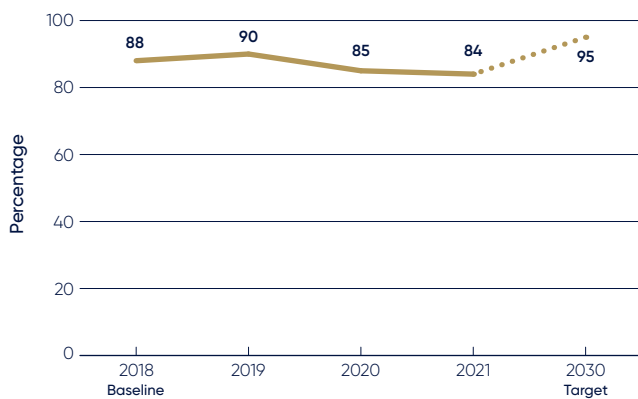
The total value of payments made to dairy farmers by dairy companies is used as an indicator for increasing the resilience and prosperity of dairy communities. A high proportion of these funds are invested back into the community and help maintain community viability.



Indicator Number of people directly employed by the dairy industry in dairy regions (Source: In Focus 2021).



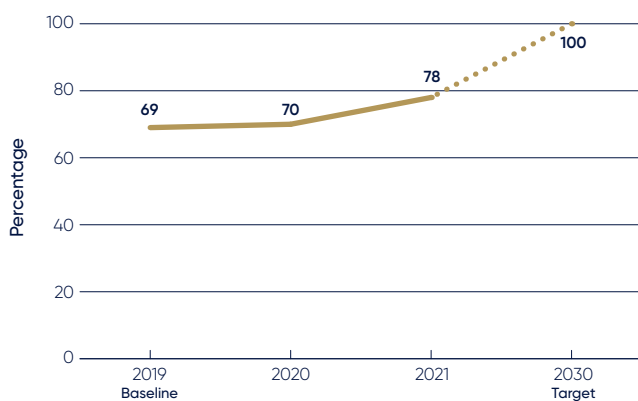
Target 2.2 People in regional areas who think dairy is an essential part of their community



Explainer

The per cent of people in regional areas who think dairy is an essential part of their community is used as an indicator for increasing the recognition of the dairy industry's benefit to regional communities.

Target 2.3 Dairy farmers who say they/their employees actively participate in local community initiatives



Explainer

The participation of dairy farmers and workers in community activities is an example of how dairy people increase the resilience of dairy communities; 100 per cent participation is the target for 2030.

ACTIVITIES

Here's what we're doing to increase the resilience and prosperity of dairy regions

Dairy companies fight food hunger, food insecurity

Several of Australia's biggest dairy companies are working with food rescue charity Foodbank to fight hunger. It is a long-standing partnership of which the industry is proud.

Dairy transition project supports farm innovation

The Dairy Transition project supports dairy farmers to adopt practices and technologies and help improve the resilience, sustainability and efficiency of their businesses with ease.

Ambassadors champion dairy in local communities

The Dairy Matters Support Aussie campaign urges Australians to buy, support and enjoy Australian dairy for its health benefits as well as the livelihood of local dairy communities.



Fleurieu continues to rise, despite COVID-19 challenges

Fleurieu Milk Company, a collective of three dairy families, not only maintained its output during COVID-19, but increased its suppliers and is now employing more local farmers.

Three dairy farming families are the driving force behind the Fleurieu Milk Company

The foothills of the Fleurieu Peninsula, South Australia, has long been home to dairy farms. In the early 2000s, as farmers faced rising expenses and reducing returns, many from the region left the industry. But three farming families saw instead an opportunity to combine operations and undertake processing themselves. Fleurieu Milk hit the shelves in 2004.

From 2020, a major challenge for the company was that many of its customers were restaurants and cafes – most of which had to close their doors for a period as COVID-19 restrictions hit. With 50 employees, Fleurieu Milk Company felt a responsibility to maintain operations.

It pivoted to extend its supply to supermarkets and retailers. As COVID-19 restrictions lifted, this strategy paid off. Woolworths now stocks the local brand, enabling Fleurieu Milk Company to increase its output – supporting more local dairy farmers and their communities along the way.

Fleurieu milk company, thriving despite COVID



Goal 3 Provide a safe work environment for all dairy workers

A shortage of labour caused by the COVID-19 pandemic has highlighted the need for a sharper focus on the importance of the physical, mental and emotional safety of dairy people, as well as the role of technological innovation in filling gaps in labour across the supply chain.

In 2021, the development of a safety culture and a better understanding of human rights risks in the supply chain emerged as priorities for the Australian Dairy Sustainability Framework work plan.

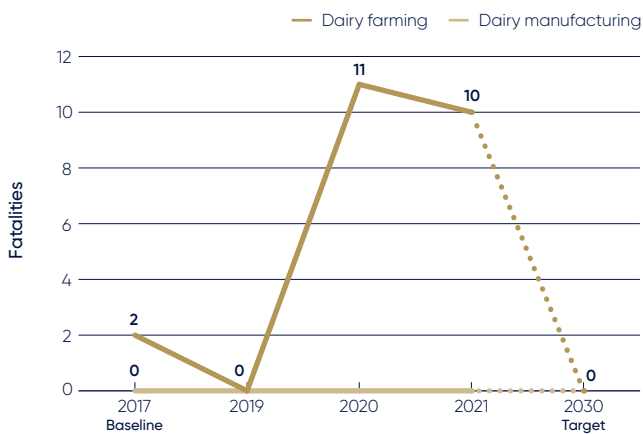
Looking ahead, ensuring that every dairy worker gets home safely every day will be the aim of a renewed effort to build upon the strong safety culture in dairy workplaces (84 per cent of dairy workers implementing good safety practices; the target for 2030 is 100 per cent).

Four targets for 2030 have been set for this goal.

KEY TARGETS

Here's how we're tracking against our targets for this goal

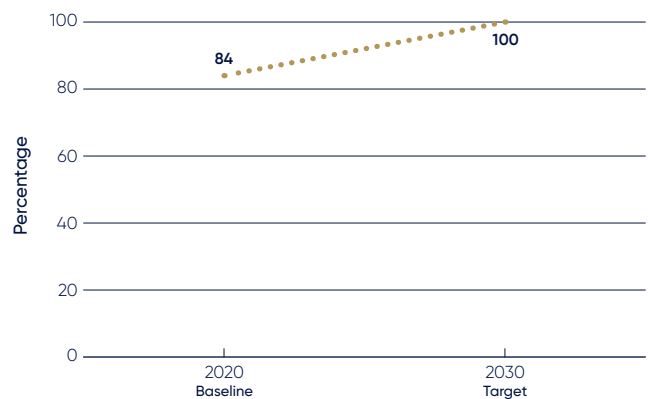
Target 3.1 Zero workplace fatalities on farm and in manufacturing



Explainer

The frequency of workplace fatalities on farm and in manufacturing is a guide to the level of safety for dairy workers. Zero fatalities in farm and manufacturing workplaces every year until 2030 is a target for the dairy industry.

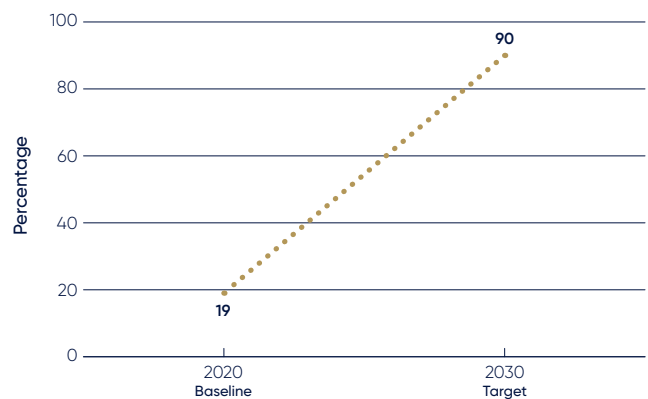
Target 3.2 100% of dairy workers to be implementing good safety practices



Explainer

The uptake of good safety practices is an indicator of safety in dairy workplaces. 100 per cent of dairy workers implementing good safety practices by 2030 is a target for the dairy industry. These figures are for dairy farm workers – and data is only collected every three years. For manufacturing, the figure is 100 per cent now.

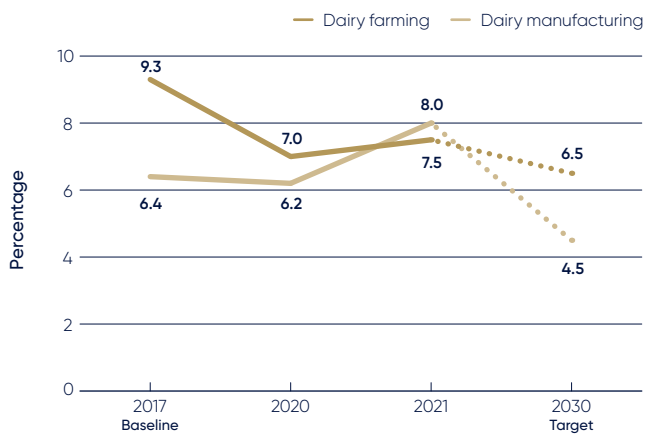
Target 3.3 More than 90% of dairy workers working less than 50 hours per week



Explainer

The number of dairy workers working less than 50 hours per week is an indicator of providing a safe work environment. More than 90 per cent of workers working less than 50 hours in dairy workplaces by 2030 is a target for the dairy industry. Data is collected every three years.

Target 3.4 Lost time injury frequency rate



Explainer

The frequency of time lost due to injuries (LTIFR) is a guide to the level of safety in a workplace. A 30 per cent reduction in this rate (off a 2017 baseline) in dairy workplaces by 2030 is a key target.

ACTIVITIES

Here's how we're providing a safe working environment for all dairy workers

Dairy Australia has joined discussions with other Research and Development Corporations to look for lead indicators – especially around workplace safety culture. Farm safety resources for farmers can be found at [Farm Safety Home](#) | [The People in Dairy](#).





Farmers share expertise to maintain farm safety

With workplace safety policies constantly shifting, because of COVID-19, technology is helping farmers stay on top of risk assessments, to ensure farm safety.

Subtropical Dairy, representing farmers from Australia's northern dairy hub, facilitated a series of webinars that worked through Dairy Australia's Farm Safety Manual – covering chemical use, water, effluent and water safety and working at heights and in confined spaces.

The monthly sessions are an opportunity to build connection and exchange expertise. With farm safety such an extensive area, it can be overwhelming for farmers. Subtropical Dairy provided dairy-specific resources and examples, making extensive safety processes simpler for farmers.

Safety advice at the click of a button.

Dairy farmers are staying on top of risk assessments to keep their workplaces safe for workers

Goal 4 Providing a productive and rewarding workplace

Dairy companies support the equivalent of more than 70,000 full-time jobs across the national economy – 56 per cent of them in direct employment in regional areas, according to Deloitte Access Economics.

In the short term, a better grasp of the human rights risks in the value chain will enable farmers and dairy companies to remedy these risks and publish accurate modern slavery reports.

In 2030 and beyond, farm managers and workers will be digital natives, people who want answers and solutions at their fingertips. Due to the workforce shortage, the dairy industry will work hard to win the war for talent and seek innovative ways to fill any gaps in workers' skills.

Six targets for 2030 have been set for this goal.

KEY TARGETS

Here's how we're tracking against our 2030 targets for this goal

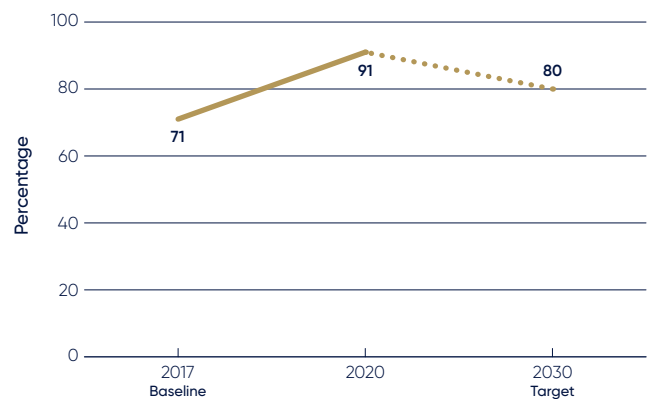
Target 4.1 Less than 25% of dairy workers report low levels of life satisfaction

Workers reporting low levels of life satisfaction provides insight on how productive and rewarding their work environment is. Data collection on this target has not yet commenced.

Target 4.2 Rates of dairy remuneration are similar to or higher than for other regional industries

Financial remuneration levels provide insight into how productive and rewarding work is for dairy employees. Data collection on this target has not yet commenced.

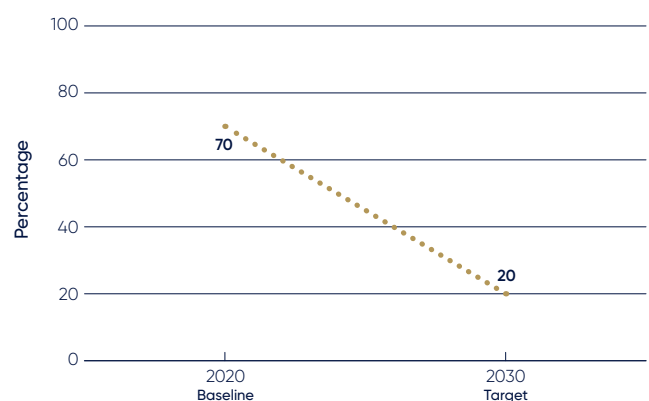
Target 4.3 80% of dairy employees are retained within the industry year-on-year



Explainer

Staff retention is helpful in determining how productive and rewarding workers find their work environment. The industry has a goal of retaining 80 per cent of its workforce year on year. This was exceeded on farms in 2020. New data will be available in 2023.

Target 4.4 Less than 20% of dairy employers report difficulty in sourcing suitable applicants

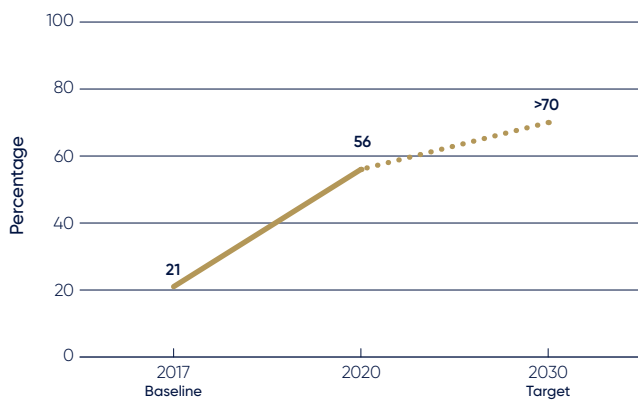


Explainer

Sourcing job applicants indicates whether dairy environments are considered productive and rewarding by the wider employee pool. A target of less than 20 per cent of employees experiencing difficulty has been set by the industry for 2030. While reported difficulty levels were high in 2020, only seven per cent of employees required more than three months to find a new employee.



Target 4.5 More than 70% of dairy farm owners have a farm transition/succession plan by 2030



Explainer

Having a farm transition or succession plan in place shows that the dairy industry is setting up for the next generation. A target of over 70 per cent of farm owners having a plan has been set by the industry for 2030.

Target 4.6 Human rights in the dairy supply chain

A target for human rights is yet to be set. Currently, the dairy industry is conducting a risk assessment for human rights across the supply chain. This will inform an action plan and a target.

ACTIVITIES

Here’s how we’re providing a productive and rewarding workplace

People in dairy puts people in dairy first

The People in Dairy program is helping to support dairy farmers to swiftly upskill new workers, support the induction of new employees, and make training more accessible.

For the range of resources provided to help dairy farmers be employers of choice visit thepeopleindairy.org.au.

Dairy Australia provides information for dairy manufacturers on **upskilling**.

New visa, immigration settings positive for dairy workers

The dairy industry’s policy and advocacy efforts to address the workforce shortage in the sector were rewarded with a new agricultural visa and new immigration settings for overseas workers during 2021.

The dairy sector contributed to development of the Australian Government’s National Agriculture Workforce Strategy and is a strong advocate for implementation of the strategy.



Dairy supports future leaders

Dairy farmers and companies are using professional development programs to upskill for the future – supported by Dairy Australia.

Capacity development programs create more rewarding work environments by adequately preparing those new to the industry and creating avenues for experienced farmers and processors to 'level up' their work practices.

Andy Gray completed a double degree in agriculture and business, joining the Aurora Dairies graduate program. Andy attributes feeling confident in his new role to the wealth of learning experiences made available to him.

Over the course of his formal studies Andy was able to travel internationally, learning about farming practices in other countries. He also undertook placements with leading dairy businesses across Australia.

Many opportunities are available to the dairy workforce. Find out more [here](#).

Dairy farmers and processors are using professional development programs to create more rewarding work environments and upskill for the future



COMMITMENT 2
IMPROVING
WELLBEING OF PEOPLE

**Providing nutritious,
safe, quality dairy food**

What the world needs is better nutrition

Unhealthy diets are not sustainable yet people are not eating well, the world's leading assessment of global nutrition, (the [Global Nutrition Report](#)), concluded in 2021.

In Australia, 88 per cent of general practitioners feel confident to recommend dairy as part of a balanced diet. The role of dairy foods in a healthy diet is recognised by the inclusion of milk, cheese and yoghurt as one of the [five food groups](#) in the [Australian Dietary Guidelines](#).

Most Australians [do not consume](#) the recommended minimum daily intake of any of the five core groups. Instead, over consumption of energy dense, nutrient poor discretionary, junk foods dominate Australian diets.

Encouraging people to eat nutritious food to improve their health and wellbeing is a challenge for responsible producers, companies, policymakers and health professionals.

Regardless of whether food is made from animals, plants, or in a laboratory, sustainably produced nutritious food will have positive impacts on the wellbeing of people and the planet.

Due to rigorous food safety standards, the safety of dairy products and ingredients is almost taken for granted, however, the security of supply has been tested by COVID-19 disruptions.

Despite disruptions, the dairy supply chain has stood firm. The resilience of this supply chain ensured that safe, nutritious dairy foods made in Australia were affordable and available.

Australian dairy is committed to producing nutritious, safe, healthy and affordable food. Our sustainability promise is to provide nutritious food for a healthier world.

Key achievements in 2021

- No cases of non-compliant chemical residues in dairy (Source: Australian Milk Residue Analysis Survey).
- Almost 90 per cent of GPs feel confident to recommend dairy as part of a balanced diet. (Source: Australian Doctor Group Survey 2021)
- Research shows that increasing dairy food intake from two to 3.5 serves per day, [reduces fractures](#) by 33 per cent.

2030 Goals



5 Ensuring safe dairy products



6 Contributing to improved health outcomes

What we're doing to create a vibrant industry

Goal 5 Ensuring safe dairy products

Product safety and quality is a highly material topic for the Australian dairy industry.

This topic is about maintaining the safety and quality of dairy products across the supply chain in a transparent manner. This ensures all dairy products and ingredients sold are safe.

Australian dairy farmers and processors have a high degree of operational control over management and production practices that impact food safety. Every Australian dairy manufacturer and every dairy farmer must be licensed and have a documented Food Safety Program.

Food Standards Australia New Zealand (FSANZ) sets the requirement. State Regulatory Authorities, including Dairy Food Safety Victoria, NSW Food Authority, SafeFood Production Queensland, Dairysafe SA, Tasmanian Dairy Industry Authority and WA Health, licence the businesses/ premises and processors are subject to at least two regulatory audits per year.

The State Food Regulators also undertake export audit requirements for the Department of Agriculture, Water and Environment (DAWE). If a manufacture isn't performing, they are issued with a Corrective Action Requirement (CAR) and must remedy the issues within a certain time frame. The ultimate sanction is removal of their export licence and potentially, removal of their domestic/state licence. Audits are conducted by regulators.

For farms, the regulator approves the processors' farm quality assurance program that encompasses the food safety requirements. Farms are audited at least once every two years – in some states audited every year – by an auditor approved by the state regulator, if not the regulator themselves. The dairy food safety system is accepted by overseas countries as a robust and credible system. It is also subject to audit by the European Union and other importing countries.

In 2021, there were no cases of non-compliant chemical residues in dairy foods and five product-recalls due to food contamination – evidence of the high standards of safety for Australian made dairy foods.

A strong food safety culture is embedded across the dairy supply chain. Relevant and credible indicators and metrics to demonstrate this capability are under development.

Four targets for 2030 have been set for this goal.

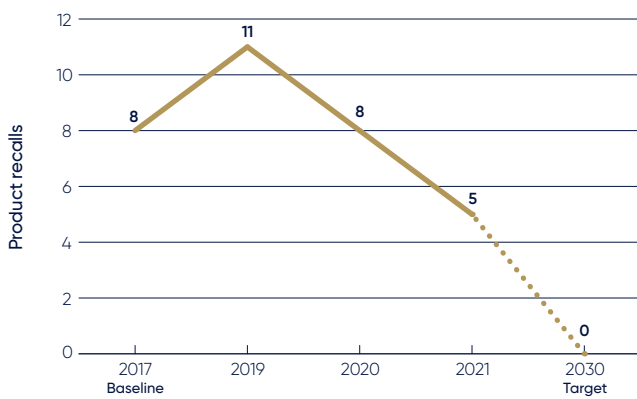
KEY TARGETS

Here's how we're tracking against our 2030 targets for this goal

Target 5.1 Zero non-compliant chemical residues found during the Australian Milk Residue Analysis (AMRA) Survey.

Tracking non-compliant residues helps to indicate that dairy products and ingredients sold are safe. The AMRA Survey is a national independent monitoring program that samples milk from milk tankers and analyses the samples for a variety of chemical, environmental and antibiotic residues. An annual target of zero non-compliant residues found in the annual residue survey has been set. The AMRA Survey is under the auspices of DAWE, with Dairy Food Safety Victoria being responsible for conducting the Survey and analysis on behalf of DAWE. Further details and a copy of the AMRA Survey results can be found [here](#).

Target 5.2 Zero product recalls due to food contamination

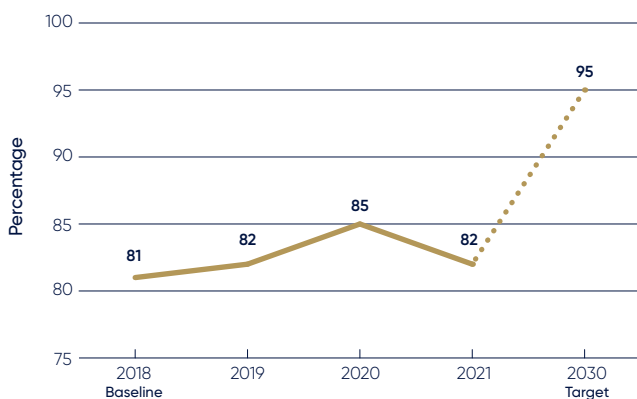


Source: Product Safety Recalls Australia

Explainer

Product recalls, are an indicator of a robust food safety system being in place to protect consumers health and safety. Dairy processors are required to alert the regulators and customers if they detect issues that may warrant a food recall. Alternatively, if problems are detected in foods, processors may be required to undertake a food recall. An annual target of zero recalls has been set by the industry for every year to 2030.

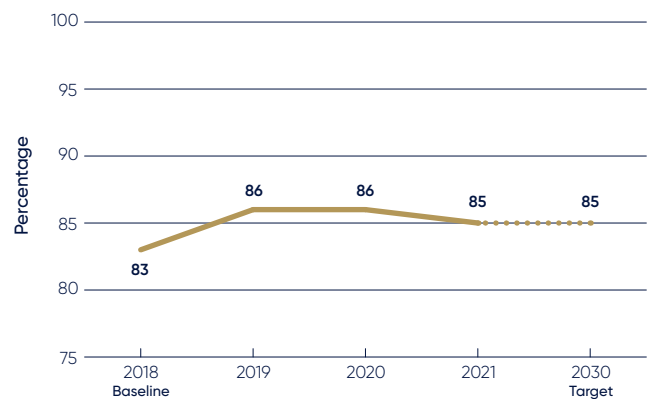
Target 5.3 Consumers who agree Australia produces safe dairy products



Explainer

The percentage of consumers who agree Australia produces safe dairy products is an indicator of food safety. The target for 2030 is 95 per cent of consumers.

Target 5.3 Consumers who agree Australia produces high-quality dairy products



Explainer

The percentage of consumers who agree the dairy industry produces high-quality products is an indicator of food safety. The target for 2030 is 95 per cent.

Target 5.4 Food safety culture embedded into the dairy food business

A new approach to food safety is being developed by the Victorian State Regulator, Dairy Food Safety Victoria. This program looks to embed a food safety culture into the dairy business, recognising that a strong food safety culture results in better food safety outcomes. The project is still being developed and other State Regulators and DAWE are considering adopting the principles. See more at [Dairy RegTech](#).

A target is currently under review for this indicator.

ACTIVITIES

Here's what we're doing to ensure dairy products are safe

Saluting the highest quality milk in Australia

The Australian Milk Quality Awards recognise dairy farms across Australia with the highest quality milk. High quality milk has a low bulk milk cell count (BMCC) – with the top farms producing milk with BMCCs <100,000. Many programs support low BMCCs with better milking procedures (Cups on Cups off) and mastitis prevention.



Dairy regulator develops new approach to food safety

An initiative from Victoria's dairy regulator is enabling close collaboration with industry to provide greater food safety assurance to consumers.

RegTech uses real-time data to identify where interventions are needed and where they can be reduced in supply chains. Since the initiative launched in 2021, 10 dairy manufacturing sites – responsible for producing around 10 per cent of Victoria's milk – have adopted the program.

Suppliers and manufacturers benefit from tailored approaches to auditing as well as collaborative problem solving and sharing with others from the industry – creating a culture around food safety rather than a 'checklist' approach. Success to date has led to trials for both meat and seafood suppliers.

RegTech delivering greater confidence in food

RegTech uses real-time data to identify where interventions for improved food safety are needed

Goal 6 Contributing to improved health outcomes

A review of the National Health and Medical Research Council's Australian Dietary Guidelines began in 2021.

Maintaining the recognition of milk, cheese and yoghurt as a core food group in the guidelines is a target in the Australian Dairy Sustainability Framework.

The review coincided with calls from health professionals for the environmental impacts of food production to be considered in dietary recommendations, together with efforts to make food systems sustainable.

In 2020, research revealed dairy foods can be consumed in low greenhouse gas (GHG) diets and the health benefits of eating whole dairy foods (Dairy Matrix) were shared with health professionals.

A scientific paper from the CSIRO proposed that water scarcity be used as a guide to the environmental impacts of food production. Another paper concluded that too much booze and pizza means Australians are eating their way through more than their share of seven square metres of cropland per day.

In 2021, global research led by the University of Melbourne and Austin Health showed that higher daily intakes of milk, cheese and yoghurt reduce fractures and falls in aged care residents. Research in the United States found that eating yoghurt can help older adults who have high blood pressure. While it is critical that the dairy industry continues to produce food in an environmentally responsible manner, the dairy matrix/nutritional benefits of dairy are also important for improving the wellbeing of people.

Early findings from a 2021 review of this goal and its targets conclude that a bolder narrative about the role of dairy foods in a safe, healthy, affordable and sustainable diet is required.

For dairy foods to contribute to improving the wellbeing of more people, a higher recognition of their positive benefits – nutritious, affordable, culturally-relevant and accessible – is necessary. Raising awareness of these benefits over the next decade is a priority by expanding people's understanding of sustainable food, beyond environment and greenhouse gas emissions.

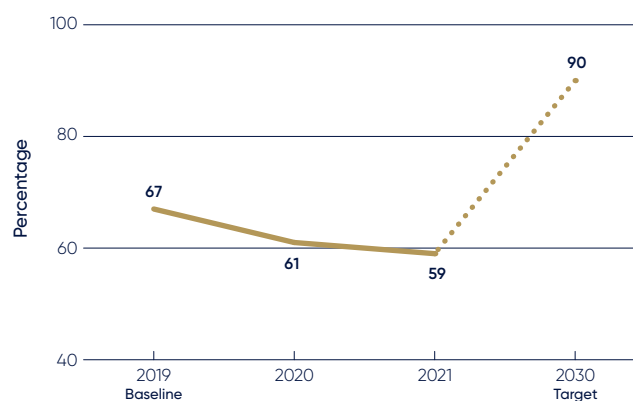
Plant-based beverages continue to grow as a competitor to dairy foods as people seek out more sustainable food choices. However, recent research by CSIRO demonstrates these foods are not substitutes from a nutrition or cost perspective. The dairy industry will continue to support a review of labelling and marketing laws of plant-based alternatives to dairy products to accurately describe the product in a way that is truthful and does not mislead consumers.

Four targets for 2030 have been set for this goal.

KEY TARGETS

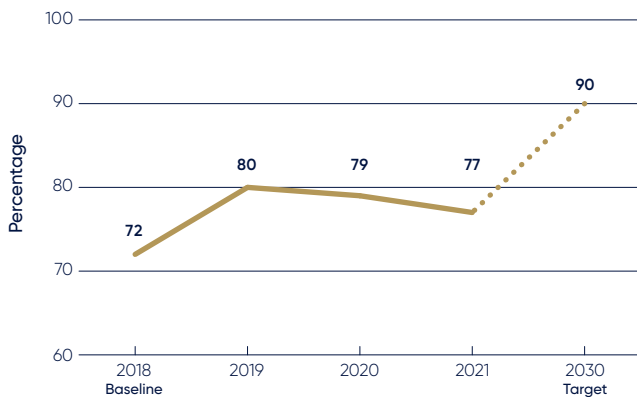
Here's how we're tracking against our 2030 targets for this goal

Target 6.1 Improve consumers' perception of the health and nutrition benefits of dairy foods



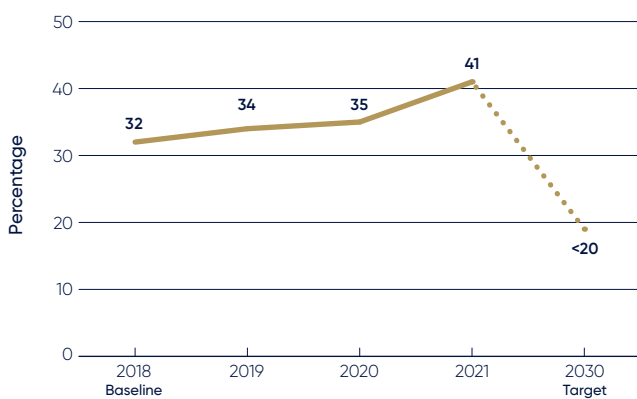
Explainer

The percentage of consumers who believe milk, cheese and yoghurt play an important role in a healthy well-balanced diet is an indicator for improving health outcomes for all Australians.



Explainer

The percentage of individuals who agree 'Dairy foods are essential for good health and wellbeing' is an indicator for improving health outcomes for all Australians.



Explainer

The percentage of individuals who agree 'I'm concerned consuming dairy foods will increase my weight' is an indicator for improving health outcomes for all Australians.

Target 6.2 The National Health and Medical Research Council Australian Dietary Guidelines continue to recommend milk, cheese and yoghurt as part of a healthy diet

Explainer

Including dairy products in Australia's dietary guidelines contributes to better health outcomes for all Australians and enables dairy to be recognised as a nutritious, healthy food. The dairy industry has a goal of continuing to be recognised in the guidelines – especially in light of the current review of the Dietary Guidelines that is now underway.

Target 6.3 Australians meet recommended daily serves for dairy

Most Australians **do not consume** the recommended minimum daily intake of any of the five core food groups. Instead, over-consumption of energy-dense, nutrient-poor discretionary junk foods dominate Australian diets.

Australians meeting their recommended daily serves for dairy would provide improved health outcomes for Australians. The dairy industry has set a target for all Australians to be meeting recommended serves of dairy by 2030. Data collection for this target has not commenced and relies on the National Dietary Survey.

Target 6.4 All dairy companies adopt a stated position on responsible consumption by 2020 and publicly report on progress by 2030

Publicly sharing positions on responsible consumption helps consumers make better food choices, improving health outcomes. Dairy has a target for all companies to adopt a stated position by 2020, and report progress by 2030. Data collection for this target has not yet commenced.

ACTIVITIES

Here's what we're doing to contribute to improved health outcomes

Dairy gives voice to world-first nutrition study

Following the outcomes of a detailed scientific study, a campaign has been run by Dairy Australia to raise awareness in the community that an increase in the consumption of dairy foods from two to 3.5 serves per day can reduce fractures by 33 per cent and falls by 11 per cent in aged care residents.

Review of national dietary guidelines kicks off

Australian dairy is participating in a review of the Australian Dietary Guidelines 2013 to ensure dairy foods continue to be recommended as part of a healthy, sustainable diet.

A report on dairy's role in a sustainable diet

An evidence-based report entitled, Dairy's role in a healthy, sustainable diet, has been published specifically for nutritionists and dietitians by the Australian dairy industry.

Students discover dairy in school classroom

All the tools and curriculum-linked resources teachers need to bring the dairy industry into the classroom and encourage healthy eating habits at school have been developed.

The whole is greater than sum of the parts

A program of communications aimed at reinforcing the unique health benefits of whole dairy foods (the Dairy Matrix) in a healthy, nutritious diet.



New tool helps educate on food nutrition

A first of its kind tool, the Nutrient Rich Food Index enables consumers to compare the nutritional value, affordability and environmental impact of different foods – including milk and plant-based beverages.

The tool not only considers the nutrient density of foods, but also whether the nutrients contained in different foods are over or under consumed by Australian adults. This means the final score for foods is specific to Australian consumption patterns.

Nutrients assessed by the index include protein, vitamins B1, B2, B3, B6, B12, folate, A and C; calcium, phosphorus, zinc, iron, magnesium, iodine, selenium and molybdenum.

Milk scored higher than plant-based beverages for providing nutrients that Australian adults are under consuming – and was found to be the most affordable way to address these gaps.



COMMITMENT 3
PROVIDING BEST
CARE FOR ANIMALS

**Striving for health,
welfare and best
care for our animals
throughout their lives**

Meeting expectations for animal care, always

The health and wellbeing of farm animals throughout their lives is vital to the success of every dairy farming business. It is a moral responsibility and an expectation of customers and stakeholders.

Animal welfare is a top business priority for market leaders among the world's 150 biggest food companies, the Business Benchmark on Farm Animal Welfare (BBFAW) reported in 2021.

The entire Australian dairy industry strives to improve the health, welfare and handling of all animals and report openly on how we are progressing and where we need to do better.

Preventative healthcare, biosecurity, care of calves and antimicrobial stewardship are all priorities. Compliance with legislated animal welfare standards is a sustainability requirement.

Research published in the International Journal of Animal Biosciences concludes that animals can be a source of sustainable, ethical food. The Australian dairy industry is committed to striving for best care of all our animals



2030 Goals



7

Providing best care for animals for whole-of-life

- Full compliance with animal welfare standards
- Recommended practices adopted by all industry
- Antimicrobial Stewardship – the dairy industry uses antibiotics responsibly



throughout their lives. Our progress since 2012 is evidence of that commitment.

Two animal husbandry practices deemed not to be best care for our cows have been phased out: tail docking and the routine use of calving induction (as of 1 January 2022).

More than three-quarters of dairy farmers have a copy of the Australian Animal Welfare Standards and Guidelines. These guidelines outline practical ways for improving welfare outcomes.

Industry policies and actions recognise changing community expectations and market demand for animal health and welfare. Animal care is of paramount importance to dairy farmers themselves.

In 2021, a review of the targets for ongoing compliance with legislated animal welfare standards and use of recommended industry practices for animal care got underway.

Stakeholders tell us that our future priorities for providing best care for our animals are:

- Managing community perceptions of, and responses to, livestock husbandry practices on-farm (e.g. management of surplus calves and cow-calf separation).
- Finding animal health and welfare solutions which accelerate the use of best practice livestock husbandry.

In the Australian Dairy Plan one of the objectives is to build stronger trust and acceptance of the industry's commitment to animal care by 2025. The industry accepts that compliance with legislated animal welfare standards is the bare minimum and will not be seen as best practice in the future.

More ambitious targets are being considered, including:

- An increase in the uptake of polled genetics (to reduce disbudding).
- The use of pain relief for a wider range of husbandry practices.

In 2022, the dairy industry is exploring a whole-of-industry animal care assessment program that incorporates relevant standards and guidelines, as well as industry policies and agreed practices, covering animal health, welfare, responsible use of antibiotics and biosecurity.

Key achievements in 2021

- 100 per cent of dairy farmers support compliance with animal welfare standards.
- The practice of routine calving induction has been phased out (1 January 2022).
- A decision was made to develop a whole-of-industry policy for managing surplus dairy calves.
- A review of the targets for compliance with legislated animal welfare standards and the use of recommended industry practices for animal care got underway.
- 76 per cent of consumers believe dairy farmers do a good job caring for their animals.





What we're doing to create a vibrant industry

Goal 7 Providing best care for animals for whole-of-life

There are four highly material topics associated with this goal

Animal care and husbandry practices

The welfare of cows is important to the Australian dairy industry, as they must be in peak condition to deliver safe, quality dairy products, and ensure the future sustainability of the industry.

It is therefore important that producers move to end husbandry practices that may cause unacceptable levels of pain, distress or deleterious health consequences. The industry has many welfare practices/targets in place to manage the welfare of livestock, including for example, no calving induction, no tail docking, providing pain relief for disbudding horns, and promoting positive stock handling practices.

In 2015, the industry developed a policy to phase out routine calving induction by 2022. Dairy vets were encouraged to support the phase-out. This objective was achieved on 1 January 2022.

Dairy animals are treated with care based on the five freedoms that describe society's expectations for the conditions animals will experience when under human control, namely:

- Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour.
- Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area.
- Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment.
- Freedom to express (most) normal behaviour by providing sufficient space, proper facilities and company of the animal's own kind.
- Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering.

Dairy farm owners, managers, and workers directly impact the quality of care their animals receive. It is a farmer's responsibility to establish the farm's policies for animal care and work with veterinarians to ensure proper health and nutrition.

Antimicrobial stewardship

Antibiotics are used by dairy farmers to protect the health and welfare of dairy animals.

There is increasing concern about the use of antibiotics in livestock production due to the potential impacts on public health. When overused or used incorrectly in livestock production antibiotics that are of critical importance to humans may promote the development of antibiotic-resistant strains of bacteria. This occurs when infections caused by bacteria develop the ability to resist the effects of antibiotics.

The Australian dairy industry had a target for antimicrobial stewardship before the World Health Organisation (WHO) issued a **warning** in 2019 about the risks of antibiotic-resistant diseases to human health. In October 2021, the WHO published a second **warning**. This time it expressed concern that rising levels of antimicrobial resistance in humans would **thwart progress** towards many of the UN SDGs. In anticipation of this emerging risk, the dairy industry introduced an indicator for antimicrobial stewardship that measured the use of antibiotics of high importance to human antimicrobial resistance. The industry policy states that antibiotics critical for human health are only to be used to treat dairy livestock in exceptional circumstances under veterinary direction where no other alternative exists.

Dairy farmers have a high degree of operational control over animal health management practices that impact antibiotic use. The industry actively promotes the responsible use of antibiotics by farmers i.e. as little as possible, as much as necessary – for effective animal health treatments.

The Australian dairy industry has a very low use of antibiotics compared to other countries. By using antibiotics sparingly and correctly (this is called 'antimicrobial stewardship'), the risk of antibiotic resistance is minimised, and our international reputation protected.

For more details about how the industry manages antimicrobial stewardship, click [here](#).

Calves (including surplus dairy calves), animal husbandry

For cows to produce milk, they have to give birth to a calf. 'Bobby calves' are newborn calves that are less than 30 days old and not kept with their mothers and sold for veal or reared for dairy-beef.

The number of these surplus dairy calves sold for veal varies each year and from region to region. They provide a valuable protein resource. Care of these calves is a high priority for the dairy industry, and therefore it is important that calves are managed appropriately.

The welfare and management of surplus dairy calves – both male calves and non-replacement heifers – was a focus in 2021. A webinar on the topic of dairy beef drew more than 500 registrations. It was followed by an industry decision to form a taskforce to develop a whole-of-industry policy for managing surplus dairy calves. This taskforce, comprising representatives from the dairy value chain, will develop an industry policy in 2022.

To this end the dairy industry is investing in research, development and extension to improve the welfare of calves which will not enter the dairy herd as adults, no matter their fate. The sustainable integration of non-replacement dairy calves into the beef chain is being prioritised. A taskforce has been formed to recommend a policy for the management of surplus dairy calves.

Changes to the management of surplus calves may result in an uptake of sexed semen for breeding replacement heifers and an increase in the use of beef genetics for non-replacement calves.

For more details about management of dairy calves and animal husbandry, click [here](#) and [here](#).

Farm biosecurity

Farm biosecurity is a highly material risk for the Australian dairy industry. Biosecurity is vital for protecting individual farms, the dairy industry and Australian agriculture, against the spread of animal pests, pest plants and diseases, on and between farms, and from overseas.

If not managed correctly, there are serious economic and social consequences. The industry works to manage this risk directly, as it is the responsibility of every farmer to have an active biosecurity plan and communicate any requirements to staff and visitors coming onto their farms.

Farmers have a high degree of control over the management of biosecurity at a site level. The industry is protected by strong biosecurity measures at Australia's borders, yet industry and government must be vigilant and ensure the entire biosecurity system can resist new and emerging threats.

For more details about how the industry manages farm biosecurity, click [here](#).

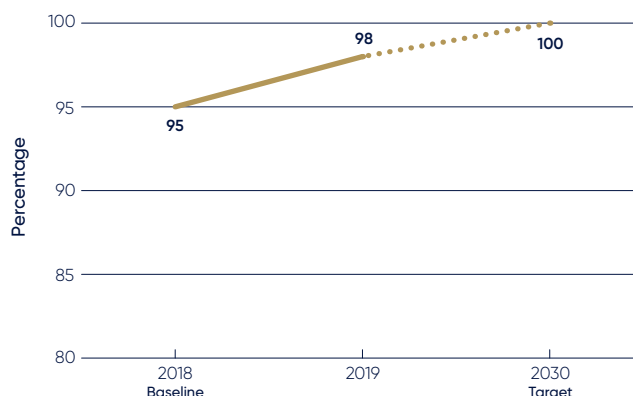
Four targets for 2030 have been set for this goal.

KEY TARGETS

Here's how we're tracking against our 2030 targets for this goal

Data is collected on a three yearly cycle – with the next collection period set for mid 2022.

Target 7.1 100% ongoing compliance with legislated animal welfare standards



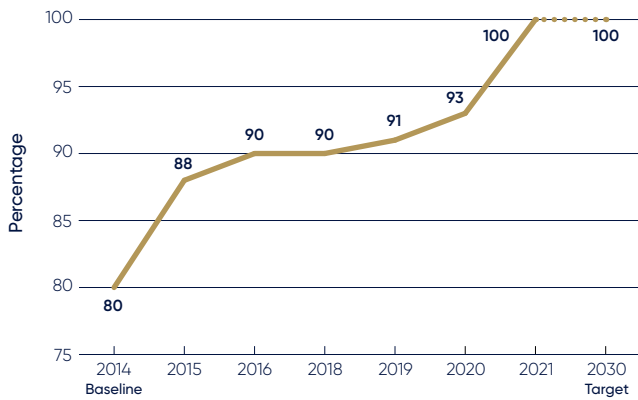
Explainer

98 per cent of farmers agree that complying with animal welfare standards is an important sustainability requirement. The industry has set a target of 100 per cent of farmers agreeing with this statement by 2030.



Target 7.2 All of industry adopting relevant recommended industry practices for animal care

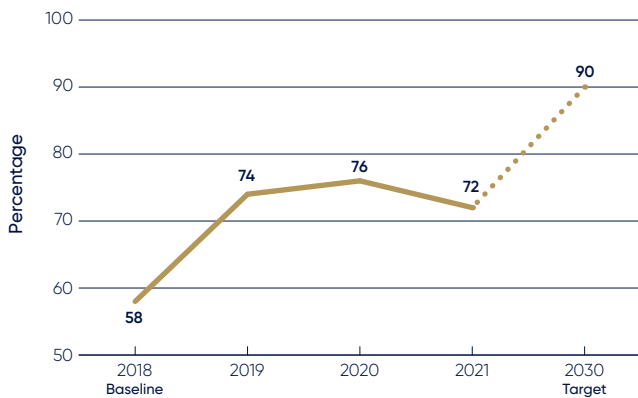
Indicator percentage of farmers not using routine calving induction



Explainer

The phase-out of routine calving induction – a practice of administering a drug to dairy cows to stimulate calving before full-term – demonstrates continuous improvement in providing best care for animals. It is one of several indicators for Target 7.2. These include indicators for disbudding calves, lameness strategies, keeping cows cool and farm biosecurity. Where data is available for these indicators, it is reported in the progress scorecard (See Appendix 8).

Target 7.3 90% of consumers believe dairy farmers do a good job caring for animals



Explainer

Consumer impressions of farmer care for animals indicates how the dairy sector is perceived in terms of its commitment to best care. The sector has a target of 90 per cent of consumers believing farmers do a good job of caring for their animals, by 2030.

Target 7.4 The dairy industry uses antibiotics responsibly

Explainer

Dairy farmers accessing antibiotics from a registered vet is a way of ensuring effective antimicrobial stewardship and providing best care for animals. The dairy industry aims to have all farmers accessing antibiotics from a registered vet every year to 2030. This target has been met every year data has been collected.

ACTIVITIES

Here’s what we’re doing to provide best care for our animals throughout their lives

Breeding for cow welfare, genetic gain

DataGene develops modern tools and resources to drive genetic gain and herd improvement, including an Australian Breeding Value for breeding heat-tolerant cows.

Getting the basics right with livestock handling

Online courses such as the Working with Livestock module helps dairy farm workers understand their role in safely ensuring the wellbeing of all animals and people on-farm.

National animal welfare standards, guidelines

The Australian Animal Welfare Standards and Guidelines underpins a practical approach to improving welfare outcomes for dairy animals and providing best care throughout their lives.



Innovation on dairy farm steps up animal wellbeing

Lisa and Eddie Dwyer, farmers from Punrim, Victoria, have invested in herd-monitoring collars that detect early signs of illness and heat – improving animal welfare.

The collars are an example of how technology can help to drive high-value agricultural production, with well-cared for animals leading to a better-quality product.

The technology also provides valuable data for farmers to use when making breeding decisions. These benefits have led to an increase in production and reduction in costs.

Integrating new technology can help farmers build resilience and prosper, despite seasonal challenges. The money for the collars came from the Woolworths Dairy Innovation Fund, which commenced in 2021. It awards up to A\$100,000 in grants for farmers in their supply chain to support projects that can deliver innovation, efficiency or seasonal resilience.

[Woolworths to offer A\\$5 million in dairy innovation grants](#)

Lisa and Eddie Dwyer have invested in herd-monitoring collars to improve animal welfare



COMMITMENT 4
REDUCING OUR
ENVIRONMENTAL IMPACT

**Meeting the challenges
of climate change and
providing good stewardship
of our natural resources**

Being a good environmental steward has always made sense

Adapting to and mitigating against issues linked to climate change, including extreme weather and biodiversity loss, manages the biggest risk to the global economy: climate inaction.

Central banks, regulators and global investors are responding to climate change as a threat to the economy. Customers in the food value chain are increasingly setting reduction targets for emissions, with increasing expectations for their suppliers to do the same.

Farmers are the first to feel the effects of climate change, but they are also on the front line in the fight to reduce GHG emissions. As well as mitigating physical climate risk, they have been adapting production to the changing climate and building climate resilience in their businesses.

Increasingly, farmers have turned their minds to better management of biodiversity and deforestation and recognised the importance of soil health as an indicator of ecosystem health.

In 2021, the Australia dairy industry signed up to Pathways to Dairy Net Zero – a global dairy initiative to accelerate climate action – and adopted the NFF’s policy for net zero emissions across the national economy by 2050. Dairy Australia released its [new Climate Change Strategy](#) in March 2021 to support farmers on their climate action journey.

Australian dairy companies work together pre-competitively on projects to reduce their environmental impact through the Dairy Manufacturers Sustainability Council (DMSC).

These DMSC member companies process 84 per cent of Australia’s dairy milk supply. They measure and submit environmental data for reporting and benchmarking.

The Australian dairy industry supports international agreements on climate change and sustainable development signed by the Australian Commonwealth Government and has adopted national targets and goals for reducing waste, packaging and food waste.

In a world rocketing towards carbon neutrality and agriculture a central focus, dairy farmers are grappling with how to reduce their emissions and work better with nature in a cost-effective way. Although more work needs to be done on farms to measure GHG emissions, the Australian dairy industry plans to be home to the world’s first carbon neutral dairy farm in 2026.

2030 Goals



8

Improving land management



9

Increasing water use efficiency



10

Reducing GHG emissions intensity



11

Reducing waste



A new narrative for the environment in sustainable development is emerging – terms such as restorative, nature positive and regenerative are being used more widely. So, the name of this commitment and the language for the goals and targets are under review in 2022.

Also, under review is the availability and frequency of data collection to measure progress and the relevance and credibility of indicators for measuring progress on biodiversity and climate change. The review is being conducted by an expert working group with consideration of the global narrative on nature and how our goals contribute to the UN SDGs.

The goals in this commitment aim to better manage natural resources and impacts. They are responsive to the key drivers of climate action and the global agenda for climate and nature.

Key achievements in 2021

- Dairy companies have cut GHG emissions by 25.5 per cent between 2010/11 and 2020/21.
- Australian dairy industry adopts the NFF's policy of net zero carbon across the Australian economy by 2050 (with conditions).
- Dairy companies reduced solid waste sent to landfill by 6.5 per cent per ML of raw milk processed (compared to 2019/2000) and this is a 41 per cent reduction since 2010/11.
- Australian dairy commits to 100 per cent of packaging to be recyclable, compostable or reusable by 2025 (if not before).

What we're doing to create a vibrant industry

Goal 8 Improving land management

The top land management challenges for Australian dairy farmers include pest animals, noxious weeds and soil health. Insect pests, biodiversity and waterways management are also of concern.

The rise of regenerative agriculture, encompassing biodiversity, soils and carbon capture has shifted the narrative for environmental stewardship and sharpened producers' focus on preserving ecosystems.

An online program EnviroTracker with learning modules for best environmental practices and how to adopt them is being developed. It will provide data to track progress against key targets.

Dairy Australia has partnered with the Environment Protection Authority to deliver training to dairy companies, ensuring the industry plays their role in protecting Australia's unique natural environment. The aim of the training program is to improve understanding of changes to the Environment Protection Act (20017) that came into effect in 2021.

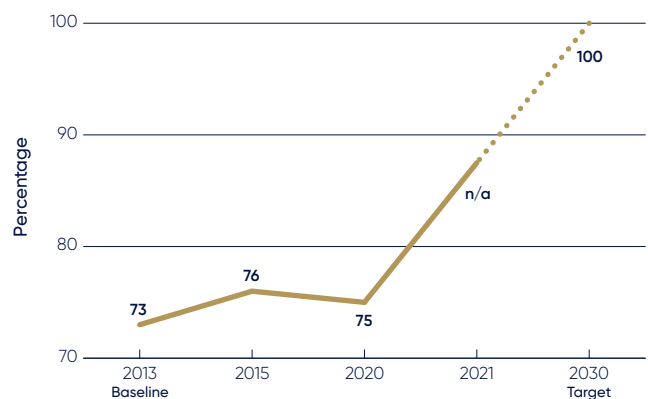
Five targets for 2030 have been set for this goal.

KEY TARGETS

Here's how we're tracking against our 2030 targets for this goal

Data collection is on a three yearly cycle – with the last information collected late 2020 – and the next cycle will be in 2023.

Target 8.1 Excluding 100% stock from waterways by 2030



Explainer

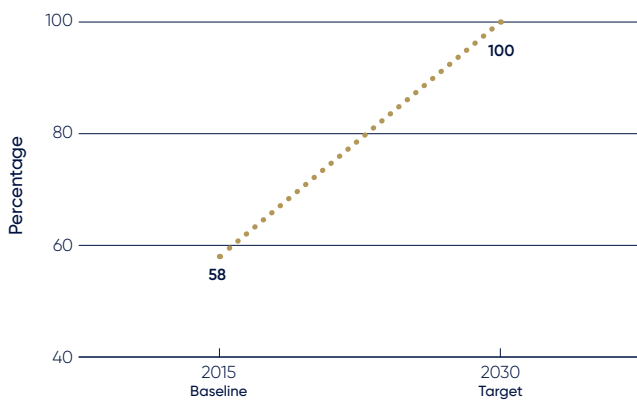
Preventing stock from fouling waterways is a practice dairy farmers use to improve land management and water quality. Fencing off waterways is a direct measure to demonstrate excluding stock from waterways.

Target 8.2 100% of riparian zones actively managed and maintained

Ensuring riparian zones are actively managed and maintained helps reduce the environmental impact of the dairy industry. A target of having 100 per cent of zones actively managed and maintained has been set for 2030. Data collection has not yet commenced for this target. Catchment Management Authorities are a key partner in managing riparian zones.



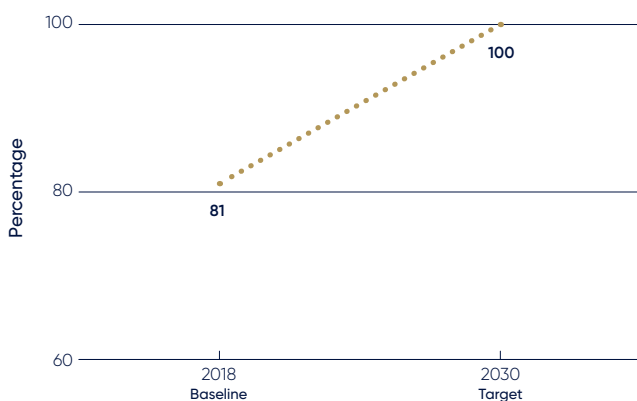
Target 8.3 100% of farmers complete and implement a soil and nutrient management plan.



Explainer

Farmers implementing soil and nutrient management plans helps to reduce the environmental impact of the dairy industry. The industry has set a target for 100 per cent of farmers to have completed and implemented a management plan by 2030.

Target 8.4 100% of farmers have and implement a documented biodiversity action plan



Explainer

Biodiversity action plans help to reduce the environmental impact of dairy farms. The industry has set a target for 100 per cent of farmers to have a documented biodiversity plan by 2030. This is a material issue – and one that needs to be more highly prioritised by the dairy industry.

Target 8.5 Zero net deforestation by 2030

Removing deforestation from dairy operations is an important target for reducing the sector’s environmental impact. Data collection for this target has not yet commenced. There is a growing focus on deforestation throughout the supply chain – especially in relation to imported stock feed such as soy and palm kernel extract. These must be sourced from responsibly grown sources.

ACTIVITIES

Here’s what we’re doing to improve land management

Smarter fertiliser plans reduce NO₂ emissions

Nitrous oxide from fertilisers is a greenhouse gas. The Fert\$mart program assists dairy farmers to develop plans for managing their use of nitrogen-based fertilisers and soils.

DairySat defines environmental issues for farmers

The Sustainable Dairy Products project (a revamp of DairySat) defines best practice in environmental stewardship and sets pathways for environmental standards in the dairy supply chain.

New trial explores rewarding farmers for biodiversity

Dairy farmers are part of a farm biodiversity certification scheme trial, which aims to see land managers paid for public benefits they generate from environmental stewardship.

Effluent code of practice softens dairy’s impact

A revised code of practice for managing dairy farm effluent guides Western Australian dairy farmers as they act to reduce the impact of their operations on the environment.



Regenerative practices spark major changes for Doolan Farms

For the Doolan brothers of Doolan Farms, Victoria, joining a local land care network resulted in a major overhaul of how the farm uses energy and water.

Chosen at random to test a range of farm-level innovations, a state government scheme matched investments made by the brothers, enabling farm upgrades to improve energy consumption.

Changes included the planting of 1000 native trees to create shelter for cattle, installation of solar panels and a 200-megalitre catchment dam helped to drought-proof the property.

Regenerative practices included sowing multi-species crops, introducing native shelter belts and a monitoring system phone app and switching to reusable covers, gravel bags and water pipes for silage stacks (instead of single-use plastic).

This approach has reduced operating costs – energy consumption is down 50 per cent – while protecting the natural environment and ecosystems for future generations of the family.

Ecklin South dairy embraces regenerative change

A regenerative approach to farming by the Doolan brothers has reduced operating costs and energy consumption



Goal 9 Increasing water use efficiency

Water is a critical resource for all farming systems in the Australian dairy industry, from pasture based, to irrigated systems and housed animal systems, as well as for manufacturing.

Most water used in the dairy industry is on farms. For the manufacturing sector, the single largest use of water is for cleaning processes, to ensure the high standards required for food safety are met. Those factors that can influence water use at manufacturing sites include:

- Product mix – factories produce a wide range of dairy products, which require varying amounts of water as an input and for cleaning processes. For example, in the production of milk powder, water that is extracted from the product itself can be captured and re-used for other purposes, while other products may need water when reconstituting dry ingredients.
- Milk supply – Some dairy regions in Australia have a declining milk supply. This means processors can't always run at full capacity, which reduces how efficiently resources, such as water, can be used.
- Customer expectations – As dairy offerings expand in response to consumer desire for additional diversity, more frequent changeovers and associated cleaning processes are required for both the factory environment and equipment.

The Australian dairy industry aims to increase water use efficiency by improving water productivity, actively monitoring water consumption, using recycled water and developing water security management plans. Water management is becoming increasingly important, as the ever-increasing challenges and physical impacts of climate change on Australian agriculture is linked to more water scarcity and drought conditions. The efficient use of water across the supply chain will help to increase resilience of the industry and maintain productivity.

Member companies of the Dairy Manufacturers Sustainability Council (DMSC), processing 84 per cent of Australia's dairy milk supply, measure and submit water consumption and wastewater data for reporting and benchmarking. An examination of the industry's management of water and effluents did not proceed as planned during 2021/22 so data for management of water discharge-related impacts and water withdrawal is not available in this reporting cycle.

See more about dairy's actions on water availability and efficiency [here](#)

Five targets for 2030 have been set for this goal.

KEY TARGETS

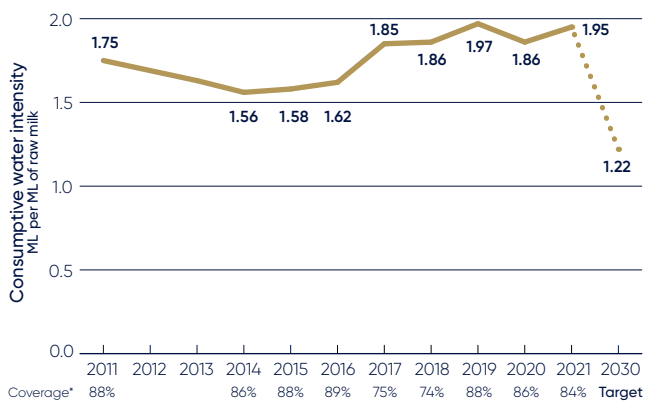
Here's how we're tracking against our 2030 targets for this goal

Target 9.1 Reducing consumptive water intensity of dairy companies by 30% on 2010/11 levels

In 2021, water intensity for DMSC members increased marginally, from 1.86 ML per megalitre (ML) of raw milk processed to 1.95 ML per ML of raw milk processed.

The increase in water intensity may be due to the shrinking milk supply the Australian dairy industry has been experiencing. This results in manufacturing plants operating at sub-optimal efficiencies. Cleaning regimes, for example, are both water and energy intensive and are linked to food safety standards rather than the volume of milk processed. These processes must remain consistent in application, regardless of the quantity of product moving through a plant.

Indicator Consumptive water



Coverage is the proportion of milk produced by reporting manufacturers vs industry

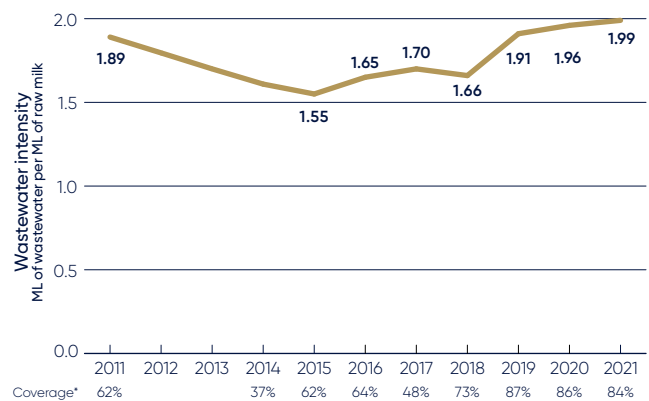
Explainer

In 2021, water intensity for DMSC members increased marginally, from 1.86 ML per ML of raw milk processed to 1.95 ML per ML of raw milk processed. This represents an increase of 4.6 per cent on 2019/20 and an increase of more than 11 per cent since 2010/11. Related to this, wastewater intensity also increased from 1.96 ML per ML of raw milk processed to 1.99 ML per ML of raw milk processed in 2020/21.

The increase in water intensity may be due to the shrinking milk supply the Australian dairy industry has been experiencing. This results in manufacturing plants operating at sub-optimal efficiencies.

A 30 per cent reduction in consumptive water intensity (on 2010/11 levels) to 1.22 ML of water per ML of raw milk processed is the 2030 target for dairy companies in Australia.

Indicator Wastewater



Coverage is the proportion of milk produced by reporting manufacturers vs industry

Explainer

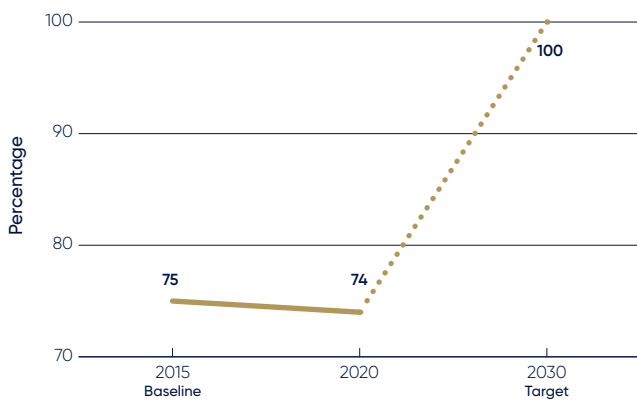
In 2020/21 DMSC members generated on average, an estimated 1.99 ML of wastewater per ML of raw milk. This is a two per cent increase on 2019/20 figures

Target 9.2 Improve water use and water productivity to utilise 2.0 tonnes of dry matter per ML used

Improving water productivity helps to increase water use efficiency. The industry has set a target to utilise 2.0 tonnes of dry matter per ML water used by 2030. Data collection for this target is yet to begin.



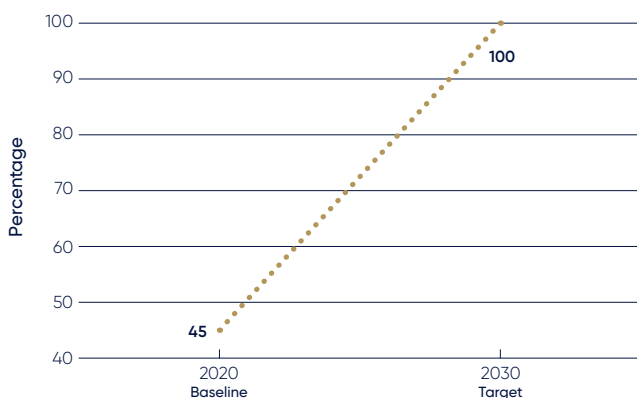
Target 9.3 100% of farmers recycling water from dairy sheds



Explainer

Recycling water from dairy sheds is a way for farmers to increase their water use efficiency. A target has been set by the industry for 100 per cent of farmers to be recycling this water by 2030.

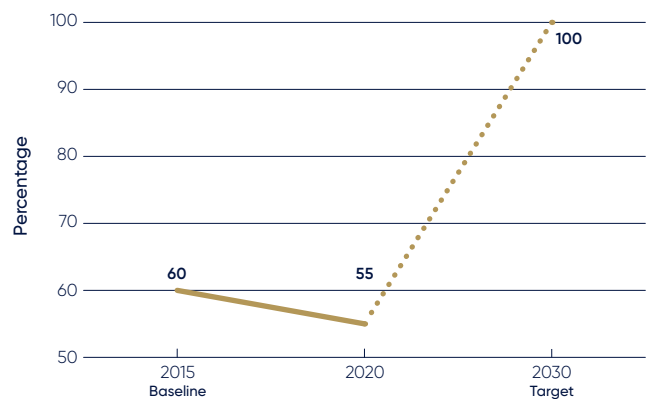
Target 9.4 100% of farmers monitoring water consumption



Explainer

Monitoring water consumption helps farmers to better understand where they are using water and how much is used. This leads to better management decisions on water use and increased water use efficiency. A target has been set for 100 per cent of farmers to be monitoring water consumption by 2030.

Target 9.5 100% of farmers have a water security risk management plan by 2020 and are implementing it by 2030



Explainer

Water security is a huge risk for farmers and the wider population. Security risk management plans help farmers guard against water source challenges. The dairy industry has set a target for 100 per cent of farmers to have a management plan in place by 2020, implementing it by 2030.

ACTIVITIES

Here's what we're doing to contribute to increase water use efficiency

Study measures foods' water scarcity footprint

A study of the amount of water used to produce a food, and whether water was scarce or abundant at the location, reveals that dairy foods have a modest water scarcity footprint.

Smarter irrigation raises productivity and profit

The Smarter Irrigation for Profit (SIP) is a national collaborative research, development and adoption project that aims to enable irrigators to raise their productivity and profit, while using water more efficiently.

Science hub fosters innovation in manufacturing

The Dairy Innovation Hub tackles technical challenges for dairy companies when improving their environmental sustainability, including increasing water use efficiency.



New research into reducing water usage in manufacturing and waste water on farms

As part of the Monash Industry Team Initiative Dairy Program that is supported by the Gardiner Foundation, a chemical engineering student has presented new ideas for improving water efficiency and dairy wastewater quality.

Tom Stevenson partnered with dairy company Burra Foods to create a water resources strategy. On-site research demonstrated what areas of production were using more water and identified applications where recycled water could be used. The process led to an improved understanding of how water was being used and what systems are most water intensive. Coupled with on-site ultrafiltration and reverse osmosis, the strategy is helping Burra Foods reduce its water usage overall.

Tom also worked with Agriculture Victoria's Ellinbank SmartFarm where new technology is tested. Here, the focus was on improving the quality of dairy shed washdown water before it's released into the environment. Testing showed turbidity, or cloudiness, could be reduced 95 per cent by adding poly ferric sulfate.

Burra Foods separate water and biomass in their wastewater

New ideas for improving water efficiency and dairy wastewater quality are constantly being tested by the Australian dairy industry



Goal 10 Reduce GHG emissions intensity by 30 per cent across whole industry on 2015/16 levels

The Australian dairy industry has set a target to reduce greenhouse gas (GHG) emissions intensity by 30 per cent by 2030 across the whole industry. While progress towards the target can be measured in absolute terms, emissions intensity is a measure that allows for industry growth – which is envisioned in the [Australian Dairy Plan](#) and recognises the key role of dairy in human nutrition.

The industry is investing in pathways to achieve the target, including the [Australian Dairy Carbon Calculator](#), animal genetics and animal treatments that result in lower emissions.

However, there are limits on achievable enteric methane reductions pending scientific and technical research and economic feasibility outcomes for feed supplements or other treatments. Significant uncertainty surrounds these opportunities from both a technical and adoption point of view.

There is also ongoing scholarly effort both here in Australia and globally on developing robust measurement frameworks for dairy carbon foot printing and this is work in progress.

Modelling suggests investment beyond industry levies will be needed to deploy and scale new innovations to the levels required to achieve ambitious emissions reduction scenarios. When Governments set emissions targets in the public interest, public investment, in partnership with emitting sectors, is not only critical but also strongly justified.

While measurement of GHG emissions at the dairy farm-level (carbon foot printing) is low (~11 per cent), there are emissions intensity reductions happening in common and widely applied farm practices (on 94 per cent of Australian dairy farms).

Dairy companies measure their emissions by the tonnes of carbon dioxide equivalent (tCO₂-e) per ML of milk processed. Scope 1 GHG emissions are generated by activities such as gas consumption at manufacturing sites and Scope 2 GHG emissions are mainly generated by purchased energy such as electricity at manufacturing sites.

Several manufacturers and global customers have committed to not only reducing their emissions but are active participants in global programs such as the Science Based Targets Initiative (SBTi). Many members of the DMSC are also subject to Australia's national legislation that requires public reporting of scope 1 and scope 2 emissions which form the basis of performance reporting for this target.

In 2020/21, DMSC members generated on average, an estimated 133.1 tCO₂-e per ML of raw milk processed. This represents 84 per cent of the milk volume processed in Australia and includes scope 1 (direct) and scope 2 (indirect) GHG emissions. While this represents a slight decrease in emissions intensity of 2.7 per cent from the previous year, it also represents a 25.5 per cent decrease since the original baseline of 2010/11 and a 12.7 per cent decrease on the revised baseline of 2015 toward our target of a 30 per cent reduction by 2030.

In 2020/2021, DMSC members consumed on average, an estimated 1.27 terajoules of energy per ML of raw milk processed. This is a small increase of 2.5 per cent on the energy consumed in the previous year after three years of declining energy consumption. This small rise has not translated to an increase in greenhouse gas emissions from the sector, likely due to the uptake of renewable energy projects by processing companies.

Two highly material sustainability topics for Australian dairy farmers and dairy companies are associated with this goal – physical climate risk and greenhouse gas emissions.

Physical climate risk

Science links climate change with GHG emissions and the Australian dairy industry has a responsibility to cut its emissions in the farm and manufacturing sectors.

Modelling suggests that climate change will increase the frequency of extreme weather events and change climate zones across dairy regions. The impacts of climate change, including water scarcity, will affect milk supply and the viability of the industry in some regions.

As limited rainfall continues to place pressure on water supplies across the country, farmers in Victoria's north and the Riverina region of NSW are being directly impacted. In addition, climate change related temperature increase can result in additional heat stress for animals. This can have a significant impact on animal welfare, and can affect feed intake and therefore milk production, milk composition and fertility. Other extreme weather events such as heavy frosts can impact dairy farmers, due to stalled pasture growth. Recent flooding in northern Australia has also impacted both farm and processing capabilities.

Dairy businesses are acting on climate change. The infographic (page 56) illustrates what dairy farmers are doing on their farm now to adapt to and mitigate climate change.

See more about dairy's response to physical climate risk [here](#).

Greenhouse gas emissions

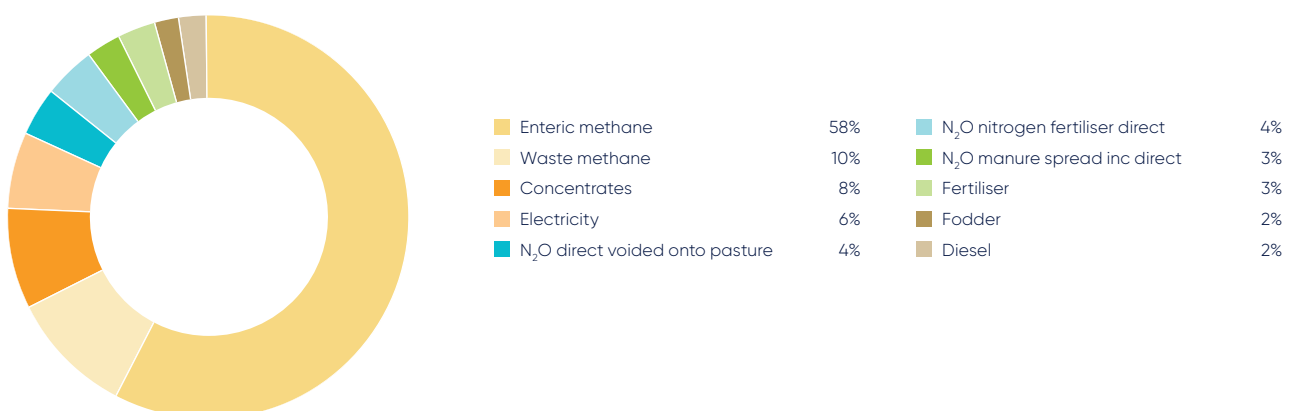
GHG emissions across the full dairy value chain need to be quantified and reduced through all economically viable mechanisms.

The predominant source of GHG emissions across the dairy supply chain is generated by farms, with the largest source of emissions coming from methane from livestock enteric (rumen) fermentation (on average 58 per cent of on-farm emissions and also known as biogenic methane). This is followed by methane and nitrous oxide from urine and dung (approximately 18 per cent). Nitrogen fertilisers cause emissions, via nitrous oxide, (approximately six per cent) through both their production and application in dairy farm systems.

Dairy farms also emit significant amounts of carbon dioxide through the on-farm use of fossil fuels and electricity (eight per cent combined), purchased feeds and concentrates (eight per cent) and purchased fertilisers (three per cent). There is a range of pre- and post-farm gate activities that generate their own greenhouse gas emissions, which contribute to the dairy industry's total carbon footprint.

There has been increasing consumer pressure to reduce emissions from food and beverage products, as the sector is both a significant driver of global climate change, and among those most adversely impacted by climate change. This is hurting companies' bottom lines – and more importantly, hurting small-scale farmers and communities at the other end of the value chain, who bear the brunt of the physical impacts associated with extremes in weather.

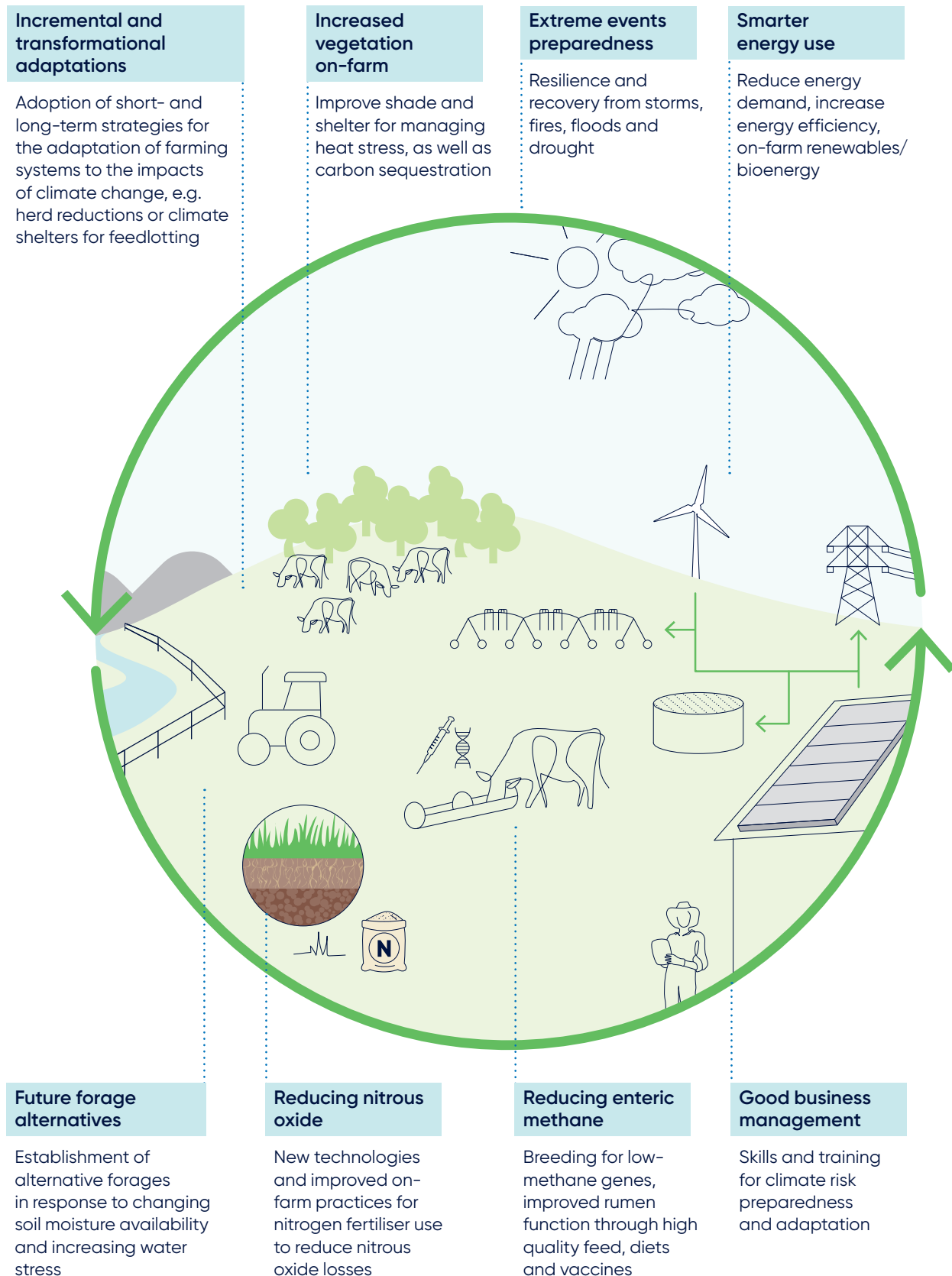
Figure 1 Analysis of dairy farm GHG emissions data from DairyBase



Source: Christie 2020



Figure 2 What dairy farmers are doing on their farm now to adapt to and mitigate climate change



On farms, reductions in GHG emissions can be achieved through various measures, including increasing milk yield per cow, whereas at factories, processors have operational control over energy consuming equipment and processes. More work needs to be done at farm level to measure GHG emissions and address water security risk.

A review of the Australian Dairy Carbon Calculator is underway to ensure it aligns with global changes to the dairy methodology being developed by the International Dairy Federation (IDF), so dairy farms can calculate their carbon footprint and determine how to reduce their GHG emissions.

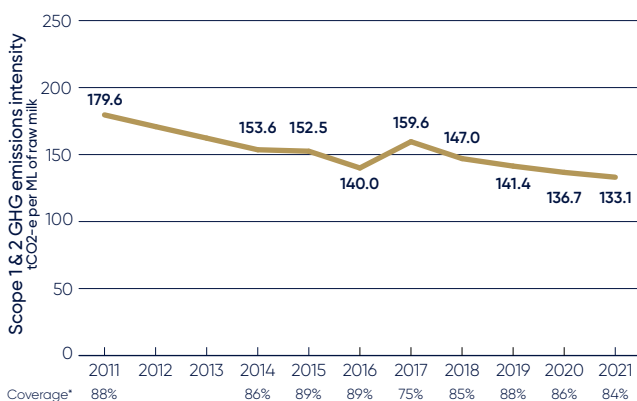
A 2015/16 baseline for GHG emissions from dairy farms of 1.03kg CO₂-e/kg FPMC (fat and protein corrected milk – i.e. a standard composition for milk that enables global comparisons) – was established for dairy farmers in 2020. Data for further years has been obtained through the Dairy Farm Monitor Program. Little change has occurred and the level stays at 1.03 – however, globally, Australian dairy farms are in the top ten countries with the lowest farm emissions.

One target for 2030 has been set for this goal for the whole industry, however, approximately 90–95 per cent of GHG emissions are from the farm sector.

KEY TARGETS

Here’s how we’re tracking against our 2030 target for this goal

Target 10.1 Reducing GHG emissions intensity by 30%
Indicator Greenhouse gas emissions



Explainer

A 30 per cent reduction in GHG emissions intensity (from a baseline of 2015/16) is a target across the whole industry. This graph shows the progress of dairy companies (tonnes CO₂-e/ML milk processed). In 2020/21, DMSC members consumed on average, an estimated 133.1 tCO₂-e per ML of raw milk.

ACTIVITIES

Here’s what we’re doing to reduce our greenhouse gas emissions intensity

A\$55m DairyBio project to breed low-GHG cows

Scientists have A\$55 million to chart the environmental footprint of the Australian dairy cow and to breed more productive cows that produce fewer greenhouse gas emissions.

Dairy manufacturer trials seaweed in stockfeed

In the laboratory, Asparagopsis seaweed can reduce emissions from cows by more than 80 per cent when used as a feed supplement. It is now being trialled on a commercial dairy farm.

Ellinbank smart farm targets carbon neutrality

Ellinbank SmartFarm is showing farmers how to reduce methane emissions, improve fertiliser and manure management, and generate electricity from solar, wind, hydro and bio-digestion. It aims to be the first carbon neutral dairy farm.

Study finds 14 ways farmers can reduce GHGs

The 2019 Marginal Abatement Cost Curve with 14 options to reduce GHG emissions at farm level – and the cost/benefit of doing these activities – will be updated during 2022.



Dairy set to reduce GHGs towards 2030

Greenhouse emissions are set to fall from the dairy sector, with the industry setting a goal of reducing emissions intensity by 30 per cent by 2030.

Dairy companies have reduced their GHG emissions 25.5 per cent between 2010/11 and 2020/21. Ninety-four per cent of dairy farmers have implemented practices to reduce or offset their GHG emissions.

Climate change is a key sustainability risk for dairy. Modelling suggests that climate change will increase the frequency of extreme weather events and change climate zones across dairy regions. Impacts including water scarcity will affect milk supply and the viability of the industry in some regions.

The 30 per cent target set by the industry aligns with Goal 13 in the UN SDGs.

Learn more about climate change and how dairy is driving down emissions [here](#).

Dairy companies reduced their GHG emissions 25.5 per cent between 2010/11 and 2020/21

Goal 11 Reducing waste

In 2021, the Australian dairy industry's focus on reducing waste expanded to cover packaging, plastics and food waste.

As a whole, the Australian dairy industry has embraced Australia's [National Packaging Targets](#) which commit 100 per cent of Australian packaging to be recyclable, compostable or reusable by 2025 (if not before). An industry working group is driving progress towards these targets, launching the Australian [Dairy Sustainable Packaging Roadmap](#) in 2021. The roadmap was developed in partnership with the Australian Packaging Covenant Organisation (APCO), Dairy Australia and the Australian Dairy Products Federation. It aims for:

- Implementation of collection and recycling systems for all dairy packaging by 2025.
- 80 per cent of supermarket products to be labelled with the Australasian Recycling Label by December 2023.
- 50 per cent average post-consumer recycled content across all dairy packaging by 2025.

Most waste from dairy companies is generated by four streams:

- Packaging – such as cardboards, paper, cartons and plastic.
- Organics – such as sludge and rejected product.
- Single-use personal protective equipment – such as hair nets and face coverings.
- Office and operational equipment.

These streams can vary significantly between manufacturers and processing sites. Some are facing location-specific challenges – such as regional areas without access to recycling services – while others are already diverting 100 per cent of their waste from landfill.

In 2020/21, DMSC members generated on average an estimated 1.58 tonnes of solid waste to landfill per ML of raw milk processed, a decrease of 6.5 per cent on the previous year.

Consistent data collection and monitoring remains a challenge for dairy companies. While reporting a decrease in waste generation, DMSC members also reported a decrease in the group diversion rate from 93 per cent in 2019/20 to 87 per cent in 2020/21. At least some of this drop is due to inconsistent data collection over successive years which can disproportionately impact the data and overall trend.

A stewardship program targeting the recycling of silage plastics on dairy farms is under development. Dairy Australia is facilitating the program, funded by a grant from the Commonwealth Government. The Australian dairy industry aims for all silage wrap to be recycled by 2030 – with the aim to be a closed loop with recycled silage wrap being used to generate new silage wrap and not just resin for recycled products.

With the support of the [Circular Economy Business Innovation Centre](#), Dairy Australia is partnering with [Stop Food Waste Australia](#) and the [Australian Dairy Products Federation](#), along with input from DMSC members and other dairy companies to develop a Dairy Sector Food Waste Action Plan. The action plan will support the Australian dairy industry's commitment to halve food waste by 2030. The plan will include practical and commercially realistic solutions, increase transparency along the dairy supply chain and promote cross collaboration amongst the industry.

Five targets for 2030 have been set for this goal.

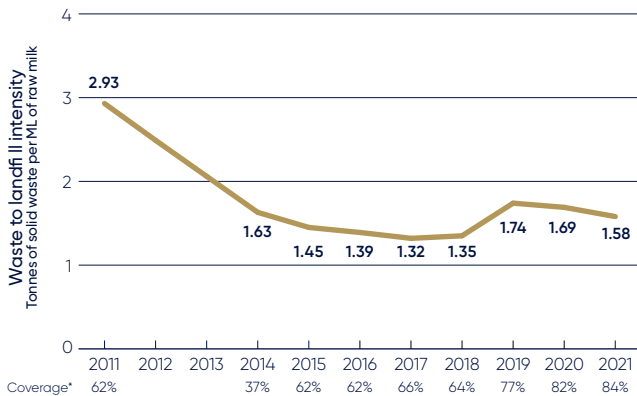


KEY TARGETS

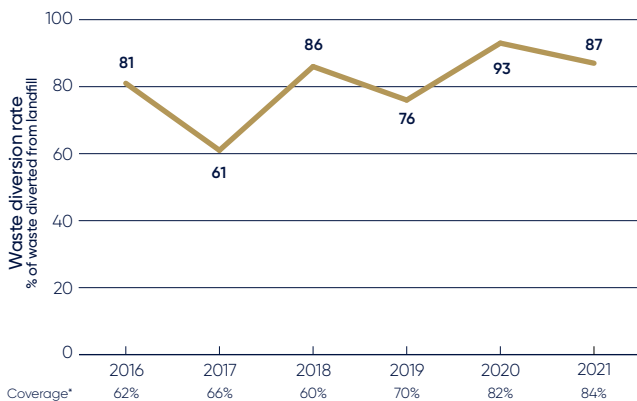
Here's how we're tracking against our 2030 targets for this goal

Target 11.1 Diverting 100% of waste from landfill by 2030

Indicator Waste to landfill



Indicator Waste diversion



Explainer

A 100 per cent diversion rate from landfill by 2030 is a target for dairy companies (tonnes of waste per megalitre milk processed) in the Australian Dairy Sustainability Framework. In 2020/21, DMSC members generated on average, an estimated 1.58 tonnes of solid waste per ML of raw milk. This represents an 87 per cent diversion rate for 2020/21.

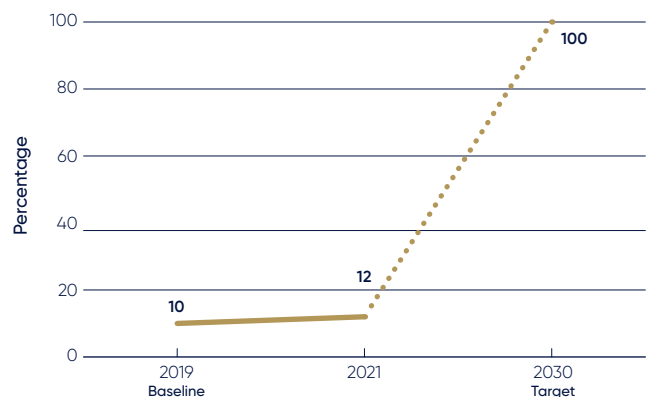
Target 11.2 100% of silage wrap recycled (farm)

Explainer

Recycling silage wrap reduces waste generated on farms. The dairy industry has set a target for all silage wrap to be recycled by 2030. The availability of recycling and collection facilities for silage wrap is a barrier to achieving this target – but the silage wrap stewardship program aims to remedy this. The facilities will also enable other industries using silage wrap to recycle their waste too.

Results from the 2020 Land, Water Carbon Survey of Australian dairy farmers indicated 88 per cent of farms use silage wrap (77 per cent in 2015); and of those, 30 per cent recycle: and 49 per cent recycle where recycle facilities are available. Many areas have no facilities. The silage wrap project underway aims to provide better information on the current status and viable long-term recyclable options.

Target 11.3 All dairy companies participate in the Australian Packaging Covenant or equivalent scheme



Explainer

The Australian Packaging Covenant and equivalent schemes help industry to take sustainable steps by sharing knowledge and lessons learnt. The dairy industry has set a target for all dairy companies to be participating in a scheme by 2030. In 2020/21, 12 dairy companies were members – representing approximately 90 per cent of all milk processed.

Target 11.4 100% of Australian dairy packaging to be recyclable, compostable or reusable by 2025 or earlier

Dairy has an opportunity to reduce waste at the source: its packaging. The dairy industry has set a target for 100 per cent of packaging to be recyclable, compostable or reusable by 2030, or earlier. Data collection for this target has not yet commenced, but a packaging Roadmap to 2025 for the dairy industry has been developed with actions to achieve the targets by 2025 underway.

Target 11.5 Halve food waste by 2030

Food waste is an area where dairy can make changes, to reduce its waste generation overall. The dairy industry has set a target to halve food waste by 2030. Work is currently underway to map waste streams and identify how waste product can be reduced or utilised.

ACTIVITIES

Here's what we're doing to reduce waste

Dairy companies' sustainable dairy packaging roadmap

The Australian Dairy Sustainable Packaging Roadmap to 2025 project provides a vision and a framework for how to improve the sustainability of the packaging of dairy products.

Dairy companies have a plan to tackle food waste

A Dairy Sector Food Waste Action Plan will identify, assess, and recommend commercial and practical food waste solutions for halving food waste in the dairy value chain by 2030.

Researchers explore sticky problem of product labels

Australian dairy companies are backing a project with the University of Technology Sydney and PEGRAS Technologies to remove adhesive labels from dairy food products.

Recycling used silage wrap cuts on-farm waste

A A\$965,400 grant from the Commonwealth Government is enabling the collection and recycling of farm plastics, including waste silage wrap, across Australian dairy regions.



Closing the loop on dairy packaging

While recycling is important in reducing our environmental footprint, most climate impacts of packaging are generated before products hit the shelves.

The entire life cycle of a product needs to be considered – that includes where materials are sourced, the manufacturing process and how they are transported.

Innovation in product packaging by Brownes, one of Australia's oldest dairy companies, means consumers can now enjoy milk from a carton with 16 per cent lower carbon footprint than traditional options.

Milk cartons made from plant-based polyethylene also reduce reliance on fossil-fuel generated products.

The packaging is a further upgrade from Brownes, which embraced plant-based cartons in 2019. Tetrapak, which make the cartons, is also collaborating with the NSW Government and Closed Loop to turn household waste – such as milk cartons – into building products.

The most environmentally friendly cartons in Australia



Brave, diverse voices

A shared vision for a healthy, sustainable future

Stakeholder inclusivity is a principle of the Australian Dairy Sustainability Framework.

In 2021, again, the cornerstone of stakeholder consultation for the framework was the Dairy Sustainability Consultative Forum – a whole of value chain stakeholder reference group.

In May 2021, a hybrid event for the consultative forum was held for the first time. The event, entitled Dairy as part of a sustainable food system, attracted a record 122 participants and was registered as an independent dialogue for the 2021 UN Food Systems Summit.

Stakeholders at this event suggested that the following outcomes from the framework would be necessary for the Australian dairy industry to be part of a sustainable food system in 2030:

- A sustainable and capable workforce; strong farm business management; and profitability across the industry driven by increases in productivity, wealth and confidence.

- Dairy recognised as part of a 'really sustainable' diet; consumers trusting the nutritional and health benefits of dairy for people and the sustainability of dairy for the planet.
- Caring for the most vulnerable animals in an appropriate way; moving away from minimum standards (compliance) as a measure of progress; positive welfare targets.
- A shift in emphasis from 'reducing impact' to 'enhancing' the environment; carbon neutrality by 2030; alternatives to plastics; and nature positive payments to farmers.

In October 2021, due to travel restrictions caused by COVID-19, a virtual-only event entitled The future of healthy, sustainable dairy food was held with forum members to seek feedback on early findings from a review of the framework's goals, targets, indicators and metrics.

Key topics and concerns raised by stakeholders at these events included:

- A shortage of skilled workers and fewer overseas workers, due to COVID-19 travel restrictions, which raised concerns about the standard of practices on dairy farms
- Concern that consumers who want a sustainable diet are not aware that many dairy substitutes are ultra-processed and are less nutritious than dairy foods.
- Compliance with animal welfare standards is no longer considered a measure for best care of farm animals – a higher level of care is needed for people to trust dairy
- Soil health, biodiversity and greenhouse gas emissions, encompassing the global narrative around regenerative business and a trend to nature positive outcomes.

Emerging trends in areas of interest for stakeholders around key topics included:

Stakeholders	Topics	Interests, trends
Investors, lenders	Physical climate risk, water scarcity, greenhouse gas emissions, animal care, husbandry	Assurance for reporting about carbon, animal welfare, water, biodiversity, soil health (and human rights in emerging markets)
Nutritionists, dietitians	Greenhouse gas emissions, food safety and quality	Provenance – strong evidence of where, how food is produced, carbon footprints
NGOs, special interest groups	Animal care, husbandry; greenhouse gas emissions	Pathways to a low-emissions future Cow-calf separation, use of pain relief, antibiotic use, technology/automation Assurance for animal welfare outcomes
Dairy farmers, manufacturers	Physical climate risk, resilience of dairy regions	The shortage of a skilled dairy workforce Extreme climate-related weather conditions, water scarcity/footprint Feed additives/vaccines for methane reduction Soil health, regenerative agriculture, biodiversity
Scientists, academics	Greenhouse gas emissions, physical climate risk, food safety and quality	Food security, affordability and equity Nutrient quality, discretionary/junk foods Climate resilience, adaptation, for dairy communities, businesses and people

After considering the feedback from the consultative forum in 2021, as well as insights from stakeholder webinars in 2020, the Dairy Sustainability Steering Committee (SSC) observed:

- The industry’s narrative about the environment needed to be more positive.
- More ambition for adapting to and mitigating climate change was needed.
- Higher levels of assurance for farm animal health and welfare were desired.
- The role of dairy nutrition in a sustainable diet was at risk of being overlooked.

In response, working groups are developing proposals for changes to the goals, targets, indicators and metrics for review by the SSC during 2022/23. Any proposed changes accepted by the SSC will be tested with stakeholders before the SSC makes a recommendation to the Australian Dairy Industry Council.

The membership of the consultative forum comprises dairy farmers, dairy companies, dairy organisations, customers, investors, financial institutions, retailers, buyers, suppliers, government representatives, non-government groups, special interest groups, agricultural industry groups, and others.

Together, with stakeholder interviews, online surveys and a monthly e-newsletter, as well as consultation for materiality assessments, the consultative forum brokers engagement with stakeholders about current and emerging material topics that are of significance to:

- the industry’s economic, environmental and social impacts; and
- the influence on stakeholders’ assessments and decisions.

Throughout 2021, the monthly Dairy Sustainability eNews featured updates about dairy’s progress, and links to relevant articles and events. Subscriptions grew 20 per cent and the open rate rose to 43.3 per cent, compared to the average of 34.5 per cent for the agriculture and food service sector.

Openness and transparency were principles supporting industry communications and engagement with the community about dairy sustainability and nutrition. The web portal, [You ask. We answer.](#) is an example, so, too, are knowledge hubs for [schoolteachers](#) and [health professionals](#).

An inclusive, engaged community of the willing

At first, the framework was seen as a way for the dairy industry to present its sustainability credentials and have a strong, coordinated and unified voice on sustainable development.

However, after 10 years the framework provides a key connection between people and individuals from industry and outside of it who want the industry to prosper.

A spirit of collaboration, a mutual respect for different perspectives and a forum for identifying emerging issues have been developed by a community of stakeholders with shared interests and common goals. More than 500 stakeholders have been active in this network.

In 2021, the AA1000 Stakeholder Engagement Standard was the basis for a review of stakeholders with whom to engage and the approach to stakeholder engagement was based on the International Association of Public Participation (IAP2) spectrum, as it has been since 2012.

For stakeholder engagement, we target groups or individuals who are impacted by the Australian dairy industry as well as those with the ability to impact the industry. The topics covered in our engagement activities were informed by the materiality assessment done in 2019 (see table).

When the Dairy Sustainability Steering Committee (SSC) met in December 2021, it agreed to reimagine stakeholder engagement. As well as being an essential part of sustainability reporting, the aim of stakeholder engagement has been to consult about the industry's progress with sustainable development and broker two-way dialogue about current and emerging issues.

As the consultative forum has grown, the proportion of members from industry attending events has increased and participation from external stakeholders is higher among newer members.

In the future, the SSC wants to re-engage a higher number of the long-standing external members of the consultative forum, drive greater participation from consumers, retailers, and grassroots producers, and deepen the engagement with all parties – both industry and external.

In reimagining stakeholder engagement, the SSC is seeking greater collaboration and innovation across the entire value chain, based on shared interests and common goals.

Stakeholders		Interests
Industry	Producers, dairy companies, dairy industry organisations	The profitability of the dairy sector
Customers	Major Australian retailers/multinational companies	Consumer and community perceptions
Suppliers	Financial institutions	Animal health and welfare
Government	Federal departments, state departments	Managing people Provenance
NGOs and special interest groups	Community development groups, environmental NGOs, Animal welfare groups	Modernisation Health and nutrition
Other primary industry	Beef	Climate change and water
Other	Sustainability practitioners, researchers	Food waste Ethical investment/responsible sourcing



“

Our vision for sustainability is to enhance livelihoods, improve wellbeing and reduce our environmental impact so that Australia's dairy industry is recognised worldwide as a responsible, responsive and prosperous producer of healthy food.

The original vision for the Australian Dairy Sustainability Framework (2012)

A thriving ecosystem, built on brave voices

The Australian Dairy Sustainability Framework started with a discussion between a dairy company representative and Dairy Australia. The company representative wanted to know what the dairy industry could do to show stakeholders it was making progress on sustainability.

The enquiry sought to address the issues across the whole industry, rather than having individual dairy companies all doing similar but different things and duplicating their effort.

At the time, requests from retailers, customers, government and consumers for food producers to demonstrate, improve and report progress on sustainable development were increasing in frequency – with sustainability being mostly defined as environmental sustainability.

Initially, a working draft of the framework was developed in line with international standards, following an extensive materiality study. Stakeholder input on this working draft was sought from 50 organisations representing dairy farmers, dairy companies and stakeholders such as customers, retailers, community, NGOs, investors and government groups.

In 2012, a vision for the sustainable development of the Australian dairy industry was endorsed by the Australian Dairy Industry Council, the peak advocacy body for the industry.

This vision is as real today for dairy farmers and dairy companies as it was in 2012.

In 2021, the framework continues to show a diverse range of stakeholders where the industry is meeting or exceeding their expectations and where it needs to address gaps.

Our industry, our impacts

Managing our impact on people, planet worldwide



The sustainability impacts of dairy foods produced in Australia extend across a global value chain because Australia is the world's fourth largest dairy exporter.

Dairy is the third largest Australian rural industry and a key sector of the agricultural economy. Dairy accounts for about seven per cent of agricultural exports from Australia.

In 2020/21, 63 per cent of national dairy exports (by value) were derived from Victorian dairy farms (71 per cent by volume). Dairy farms in Victoria made up 63.8 per cent of national milk production in 2020/21.

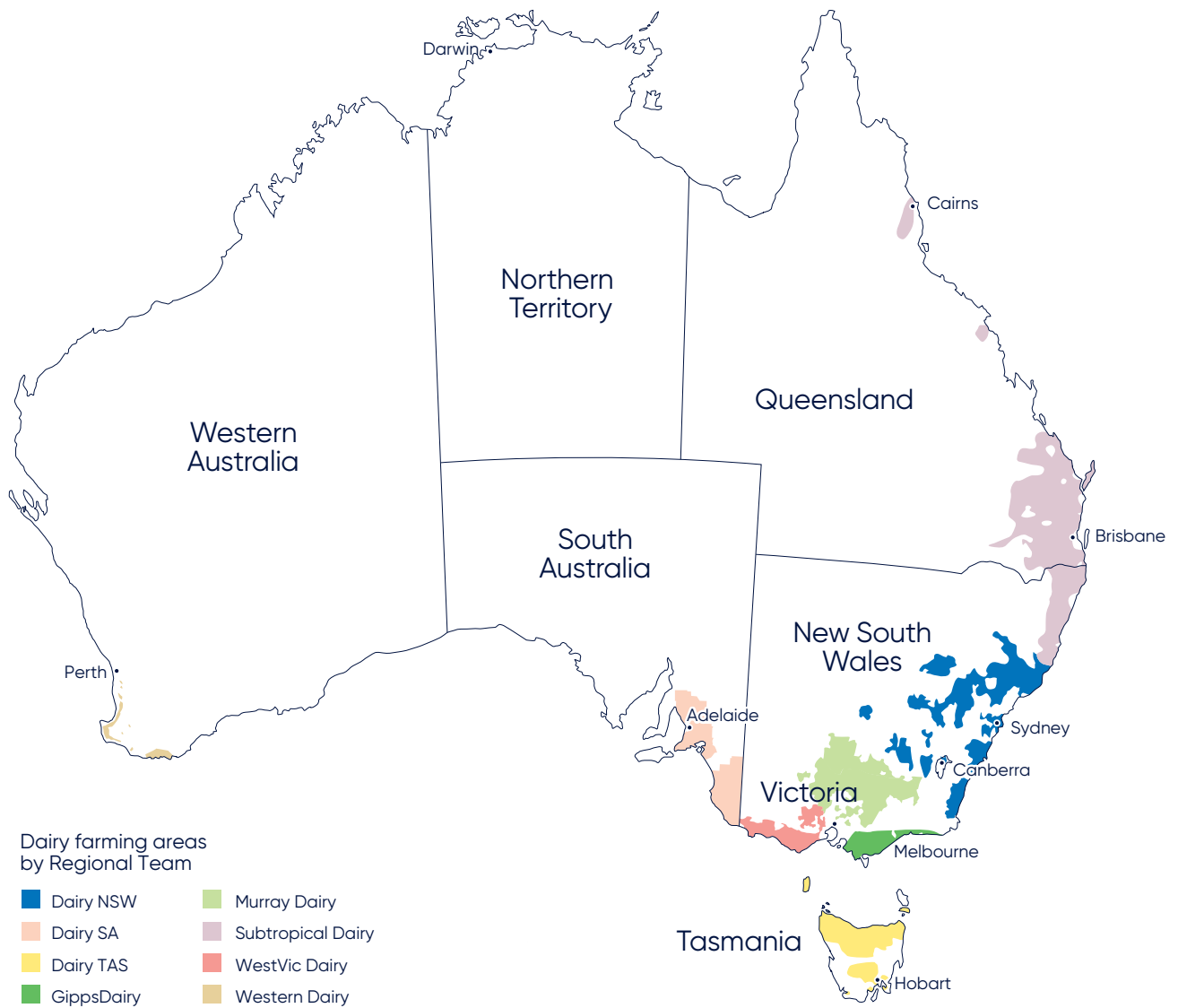
In 2021, the contribution of dairy companies to the Australian economy was recognised when [Deloitte Access Economics](#) estimated the sector generated A\$15.7 billion in revenues in 2020/21.

Dairy companies support the equivalent of more than 70,000 full-time jobs across the national economy – 56 per cent of them employed directly in regional areas, according to [Deloitte Access Economics](#).

Dairy companies contribute to businesses in regional communities by investing more than A\$6 billion in existing and planned capital works, as of 2020/21, as well as a further A\$36 million in research and development between 2017/18 and 2019/20 and paying A\$4.7 billion to farmers for milk in 2020/21.

The Australian dairy industry acts as a major source of employment in eight regional areas nationwide. It is estimated that approximately 37,400 people were directly employed on dairy farms and by dairy companies in 2020/21, flowing on to twice that number of jobs in other parts of the Australian economy. There are 56 milk processing factories located in regional communities.

Dairy farmers contribute significant community benefits that are more difficult to quantify, such as undertaking weed and vermin control, managing water courses and catchments, protecting biodiversity and endangered species and, in this way, they make a contribution to public environmental objectives and to tourism in regional and coastal areas. Ninety-four per cent of dairy farmers believe it is important for them/their employees to support their local community initiatives and 78 per cent say they do actively engage in community initiatives.



The original scope of the Australian Dairy Sustainability Framework was on those areas the industry could directly influence, namely its farming and manufacturing sectors.

However, expectations have changed since the framework was first developed in 2012.

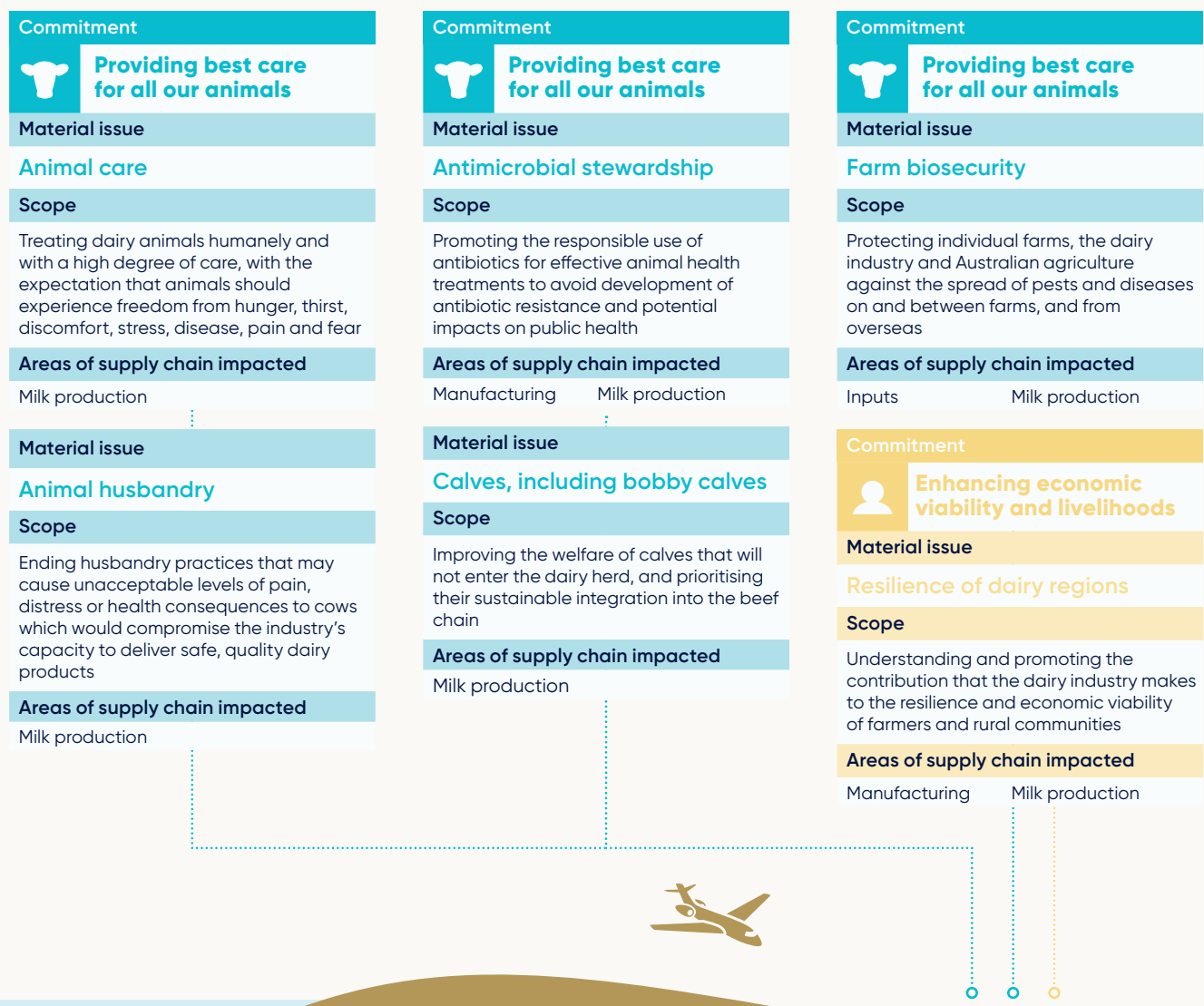
Industries are now expected to consider sustainability along the whole value chain, from issues such as the

labour and materials used to create inputs, through agricultural production and manufacturing, and including consumer food waste and packaging disposal.

In response, the framework has expanded its scope for some issues. In general, it covers all aspects of the Australian dairy sector with a specific focus on farm and manufacturing activities.

Impact along the value chain

The diagram shows the extended dairy value chain, the material and emerging issues, and where these issues impact



Commitment

 **Improved wellbeing of people**

Material issue

Product safety and quality


Scope

Maintaining the safety and quality of dairy products throughout the supply chain in a transparent manner

Areas of supply chain impacted

Consumer	Marketing and distribution
Exports	Milk production
Manufacturing	Retail and food service

Commitment

 **Reducing environmental impact**

Material issue

Greenhouse gas emissions

Scope

Quantifying and reducing GHG emissions across the value chain through all economically viable mechanisms

Areas of supply chain impacted

Consumer	Milk production
Manufacturing	

Material issue

Physical climate risk

Scope

Adapting wherever possible to avoid impacts of climate change such as water scarcity, temperature increase and extreme weather events, which can affect animal welfare, milk supply and the viability of the industry in some regions

Areas of supply chain impacted

Manufacturing	Milk production
---------------	-----------------

Commitment

 **Reducing environmental impact**

Material issue

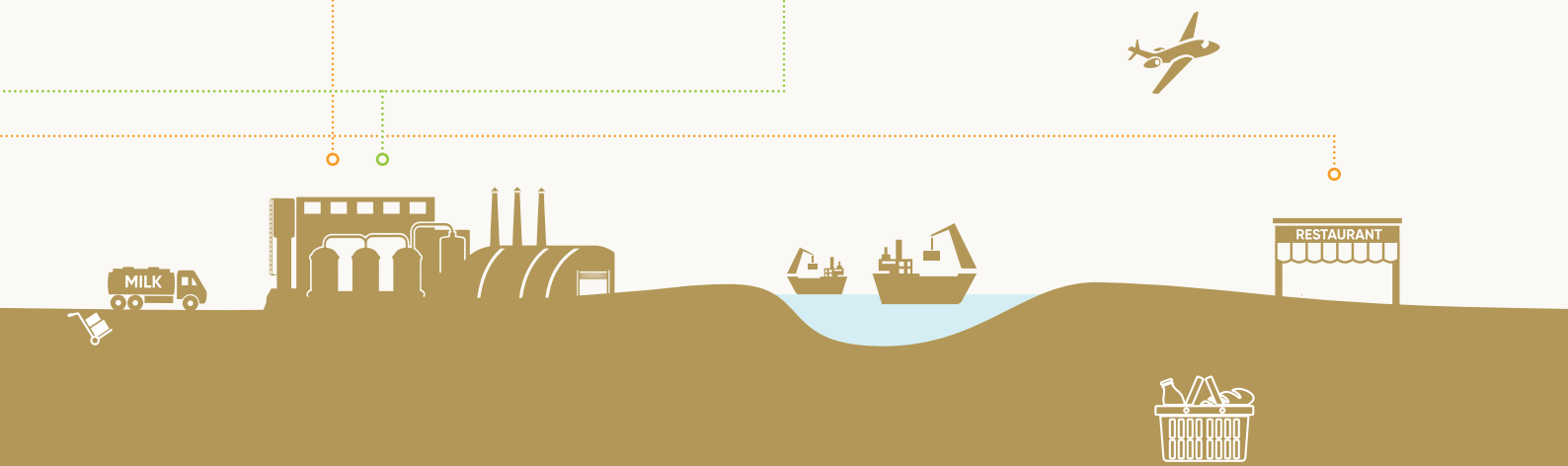
Water availability and efficiency

Scope

Efficient and responsible use and management of water across the dairy supply chain, helping to increase resilience of the industry and maintain productivity in the face of the challenges of climate change

Areas of supply chain impacted

Manufacturing	Milk production
---------------	-----------------



THE AUSTRALIAN DAIRY INDUSTRY



32%
of milk production
is exported



MAJOR EXPORT MARKETS tonnes

318,507 t Greater China	70,717 t Singapore
69,188 t Japan	67,979 t Malaysia
	52,323 t Indonesia

ANNUAL PRODUCTION OF MAIN COMMODITIES

366,201 t
Cheese

206,199 t
Milk powders

81,704 t
Butter



AVERAGE ANNUAL MILK PRODUCTION PER COW

6,380
litres

8,858
million litres



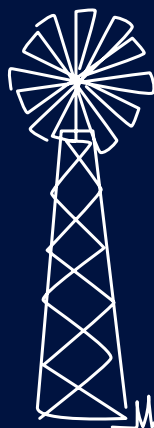
VALUE OF PRODUCTION AT FARMGATE

\$4.7
billion



AUSTRALIAN MILK UTILISATION

39% Cheese	4% Whole milk powder
29% Drinking milk	6% Other
22% Skim milk powder or butter	



4,618
Dairy farms

3rd
Dairy is Australia's
third-largest
rural industry

AVERAGE HERD SIZE



300
cows



AUSTRALIAN DAIRY HERD

1.38 million
cows

ANNUAL PER CAPITA CONSUMPTION

94.4 litres
milk

13.4 kg
cheese



Appendices

Governance

The Australian Dairy Industry Council has overall responsibility for the [Australian Dairy Sustainability Framework](#). It sets the framework goals, targets and performance measures, and reports progress against them.

The ADIC is comprised of the dairy industry's two peak policy bodies, Australian Dairy Farmers, representing farmers, and Australian Dairy Products Federation, representing dairy companies.

Policy Advisory Groups have played a key role in setting the ADF's advocacy objectives and driving policy formulation which feeds into the framework.

Dairy Australia, the industry-owned national service body, facilitates and supports the ADIC in developing and implementing the framework.

The Dairy Sustainability Steering Committee (SSC) was established in 2013 to drive the development and implementation of the framework. The SSC meets at least quarterly and comprises dairy farmers, representatives from farmer organisations and dairy companies as well as representatives of Dairy Australia. The SSC is accountable to the ADIC and seeks its endorsement on major recommendations. The members of the SSC and their representation are listed in Appendix 4.

The Dairy Sustainability Consultative Forum was established in 2013. It is a stakeholder reference group, comprising industry and non-industry stakeholders. The consultative forum provides feedback on our progress and discusses emerging issues both nationally and internationally. In general, the consultative forum meets twice a year. Those groups and organisations which are members of the consultative forum are listed in Appendix 4.

The Board members of the governing bodies serve on multiple bodies. For a full list see the following websites:

- Australian Dairy Industry Council (ADIC)
- Australian Dairy Farmers (ADF)
- Australian Dairy Products Federation (ADPF)

ADF is a member of the National Farmers Federation, the national advocacy organisation for Australian agriculture. Members of ADF are also members of [State Dairy Farmer Organisations](#) – all advocacy groups. ADPF is a member of advocacy group Australian Food and Grocery Council.

Those organisations responsible for the governance of the framework are also members of national and international non-advocacy groups, including the Dairy Export Industry Consultative Committee, SAI Australia Platform, FSANZ Reference Groups, Global Dairy Platform (GDP), SAI Global Platform, International Dairy Federation and the Dairy Sustainability Framework.



Material topics

The Australian Dairy Sustainability Framework is informed by independent assessments of material issues for the Australian dairy industry. An initial Materiality Assessment was undertaken in 2012, refreshed in 2016 and a full Materiality Assessment undertaken in 2019/20.

The 2019/20 assessment defined materiality according to two dimensions:

- Significance of the industry’s economic, environmental and social impacts
- Significance to and influence on stakeholder assessments and decisions.

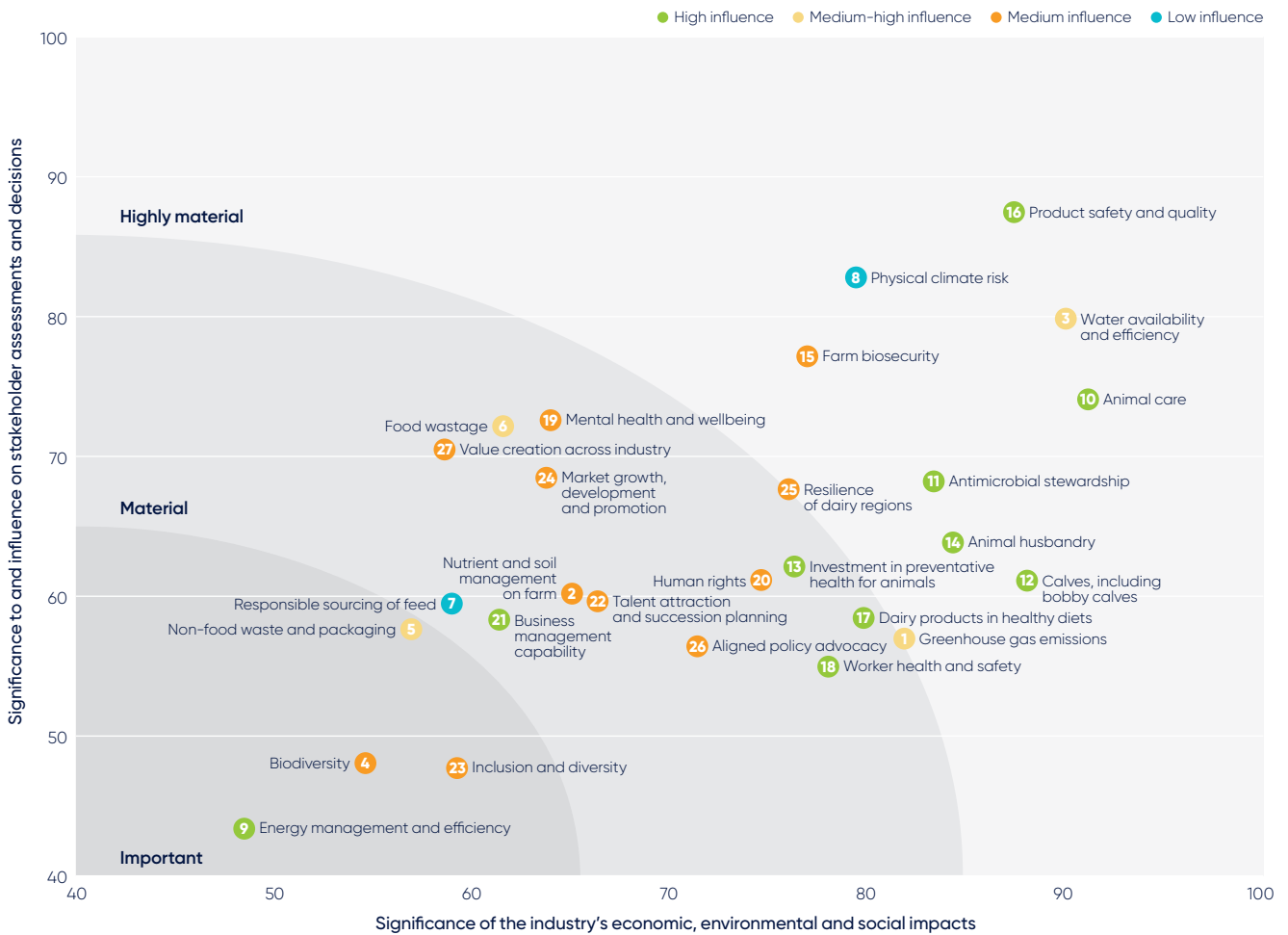
The material sustainability topics identified were assessed and prioritised according to these two dimensions with the results used to develop a materiality matrix (see below).

The methodology reflects best practice in materiality and keeps the industry in-step with the relevant and evolving global and industry materiality standards, particularly the GRI Standards 2016. The methodology for the materiality assessment was independently assured during 2021.

Topics were rated as ‘important’, ‘material’ and ‘highly material’. The most material topics were identified as animal care, animal husbandry, antimicrobial stewardship, calves (including bobby calves), farm biosecurity, resilience of dairy regions, product safety and quality, greenhouse gas (GHG) emissions, physical climate risk, and water availability and efficiency.

Download a copy of the Materiality Assessment [here](#) and the assurance report [here](#).

Figure A1 Australian dairy industry materiality matrix



The table below outlines the topics, the level of influence the industry has in managing these material topics and major industry programs designed to address these topics.

The assessment of influence was based on our consultant's knowledge of the industry, feedback gathered through the Consultative Forum workshop in October 2019 and an online stakeholder survey,

combined with an analysis of how the US dairy industry has assessed this aspect in their Materiality Review. The rationale for the assigned level of influence, together with a full description of each topic's scope can be found in the Australian Dairy Industry Materiality Assessment Report 2019 which can be downloaded from [here](#).

Table A1 Material topics, level of influence and major industry programs

No.	Topic	Relevant ADSF commitments	Influence of industry	Major industry programs
1	Greenhouse gas emissions	Reducing environmental impact	Medium-high	DA Climate Change Support
2	Nutrient and soil management on farm	Reducing environmental impact	Medium	DA On Farm Soil and Nutrient Management
3	Water availability and efficiency	Reducing environmental impact	Medium-high	DA Smarter Irrigation for Profit
4	Biodiversity	Reducing environmental impact	Medium-high	DA On Farm Soil and Nutrient Management
5	Non-food waste and packaging	Reducing environmental impact	Medium-high	Dairy Manufacturers Sustainability Council
6	Food wastage	Reducing environmental impact	Medium-high	DA Supporting Manufacturing Innovation and Sustainability
7	Responsible sourcing of feed	Reducing environmental impact	Low	DA Integrated Feedbase RD&E DA Advanced Management Technologies DA Animal Nutrition and Feed Systems DA DairyFeedbase
8	Physical climate risk	Reducing environmental impact	Low	DA Climate Change Support
9	Energy management and efficiency	Reducing environmental impact	High	DA Climate Change Support
10	Animal care	Providing best care for all our animals	High	DA Managing Milk Quality DA Improving Reproductive Performance DA Animal Health and Welfare – On-farm DA Genetics and Herd Improvement DA Dairy Bioscience – Animal Improvement DA Herd Improvement
11	Antimicrobial stewardship	Providing best care for all our animals	High	DA Animal Health and Welfare – On-farm DA Policy Support for Improving Animal Health and Welfare
12	Calves, including bobby calves	Providing best care for all our animals	High	DA Animal Health and Welfare – On-farm DA Policy Support for Improving Animal Health and Welfare
13	Investment in preventative health for animals	Providing best care for all our animals	High	DA Animal Health and Welfare – On-farm DA Policy Support for Improving Animal Health and Welfare
14	Animal husbandry	Providing best care for all our animals	High	DA Animal Health and Welfare – On-farm DA Policy Support for Improving Animal Health and Welfare

No.	Topic	Relevant ADSF commitments	Influence of industry	Major industry programs
15	Farm biosecurity	Providing best care for all our animals	Medium	DA Animal Health and Welfare – On-farm
16	Product safety and quality	Improving well-being of people	High	DA Managing Supply Chain, Food Safety and Integrity Issues
17	Dairy products in healthy diets	Improving well-being of people	High	DA Human Health and Wellness Partnerships and Engagement DA Influencer Engagement – Health DA Primary Schools Engagement
18	Worker health and safety	Enhancing economic wellbeing and livelihoods (Part A – Industry)	High	DA Farm Safety
19	Mental health and wellbeing	Enhancing economic wellbeing and livelihoods (Part A – Industry)	Medium	DA Farm Safety
20	Human rights	Enhancing economic wellbeing and livelihoods (Part A – Industry)	Medium	DA Workforce Strategy, Planning and Action
21	Business management capability	Enhancing economic wellbeing and livelihoods (Part A – Industry)	High	DA Farm Business Information
22	Talent attraction and succession planning	Enhancing economic wellbeing and livelihoods (Part A – Industry)	Medium	DA Attracting and Retaining People
23	Inclusion and diversity	Enhancing economic wellbeing and livelihoods (Part A – Industry)	Medium	DA Workforce Strategy, Planning and Action
24	Market growth, development and promotion	Enhancing economic wellbeing and livelihoods (Part B – Viability and innovation)	Medium	DA International Market Support (China, Japan, SE Asia, other markets)
25	Resilience of dairy regions	Enhancing economic wellbeing and livelihoods (Part B – Viability and innovation)	Medium	DA Regional Development and Extension Programs
26	Aligned policy advocacy	Enhancing economic wellbeing and livelihoods (Part B – Viability and innovation)	Medium	DA Technical Policy Support
27	Value creation and profitability across industry	Enhancing economic wellbeing and livelihoods (Part B – Viability and innovation)	Medium	DA Dairy Bioscience – Animal Improvement DA Supporting Practice Change DA Supporting Manufacturing Innovation and Sustainability

Framework Principles

In 2012, a set of principles was agreed by the Australian Dairy Industry Council to help identify and prioritise sustainability issues and guide actions and decisions about them.

These principles value stakeholder interests and ensure people from across the dairy value chain are involved in the implementation of the [Australian Dairy Sustainability Framework](#).

These principles are:

- Ethical behaviour
- Transparency and accountability
- Appreciation of stakeholder interest
- Competitive neutrality 'not providing competitive advantage'
- Collective action that delivers mutual benefit
- Inclusivity.

The Framework is informed by:

- The global [Dairy Sustainability Framework](#), of which [Dairy Australia](#) is a Governor and Aggregating Member, and the [Australian Dairy Products Federation](#) is an affiliate member.
- Dairy Australia's membership of the Sustainable Agriculture Initiative (SAI) Platform's [Dairy Working Group](#).
- The [United Nations Sustainable Development Goals \(UN SDGs; See Appendix 5\)](#).
- The [2016 Dairy Declaration of Rotterdam](#), a joint-statement of support for the UN SDGs from the [Food and Agriculture Organisation of the United Nations](#) and the [International Dairy Federation](#).



Stakeholder engagement

Steering Committee

The Dairy Sustainability Steering Committee (SSC) met six times in 2021. As well as discussing emerging issues for the Australian dairy industry, the SSC concentrated on ongoing engagement with the Dairy Sustainability Consultative Forum and discussion of the Materiality Assessment, particularly the different responses from different stakeholder groups (see Appendix 2).

A sub-group of the SSC has reviewed the 2021 Dairy Industry Sustainability Report.

A list of members of the SSC, as at May 2022, is shown below.

Table A2 Steering Committee members in 2020

Name	Organisation
Carolina Arango	Bega Cheese
Melissa Balas	Bega Cheese
Jeremy Bayard	ACE Farms
Amber Beaumont	Dairy Australia
Jacqui Biddulph	Farmer
Patten Bridge	Bridge Logic
Mark Callow	Norco
Allan Cameron	GippsDairy/Gardiner Foundation
Melissa Cameron	Dairy Australia
Bruce Donnison	Dairy Farmer
Helen Dornom	Dairy Australia
Peter Fort	Burra Foods
Chris Griffin (Chair until March 2021)	Dairy Farmer
Megan Hill	Dairy Australia
Daryl Hoey	Dairy Farmer
Jack Holden	(Deputy Chair) Fonterra
David Inall/Craig Hough	Australian Dairy Farmers/Australian Dairy Industry Council
Ben James	Aurora Dairies
Simone Jolliffe	Dairy Farmer
Michelle Lawrence	Dairy Farmer

Name	Organisation
Cath Lescun	Dairy Australia
Ross McInnes	Dairy Farmer
Ian Morris	Dairy Farmer
Graeme Nicoll (Chair)	Australian Dairy Industry Council
Ian Olmstead	Dairy Australia
Stephen Rae	Bega Cheese
Neil Rosier	Saputo Dairy Australia
Maree Sarkis	Saputo Dairy Australia
Louise Sundermann	Dairy Australia
Antonietta Timms	Bega Cheese
Susannah Tymms	Dairy Australia
Janine Waller	Australian Dairy Products Federation
Observers	
Allan Cameron	Gardiner Foundation
Richard Lange	M2M
Craig McRae	Saputo
Support	
Robyn Leeson	STR Consulting
Mark Paterson	Currie Communications
John Steer	Dairy Australia

Consultative Forum

The Dairy Sustainability Consultative Forum is a stakeholder reference group for the [Australian Dairy Sustainability Framework](#).

The membership of the Forum comprises dairy farmers, manufacturers, dairy organisations, customers, investors,

financial institutions, retailers, buyers, suppliers, government representatives, non-government groups, special interest groups, primary industry groups, and others. It has had input into the development and management of the Framework since 2013.

Table 4 Consultative Forum attendees (companies represented)

Customers	Australian Food and Grocery Council	Industry – Manufacturers continued	Nestlé Australia	
	Coles		Norco Co-operative Limited	
	David Jones		Saputo Dairy Australia Pty Ltd	
	Ferrero		Warrnambool Cheese & Butter	
	McDonalds		Interest groups	Dietitians Australia
	Nestlé			Ethics Centre
	PZ Cussons			Farmers for Climate Action
	Woolworths Limited			Food and Nutrition Australia
Government	Agriculture Victoria	NRM Regions Australia		
	Animal Health Australia	National Heart Foundation of Australia		
	Animal Medicines Australia	Nutrition Australia		
	Dairy Food Safety Victoria	RSPCA Australia		
	Dairy Safe SA	World Animal Protection		
	Department of Agriculture, Water and the Environment	WWF Australia		
	Department of Economic Development, Jobs, Transport and Resources	Investors	Commonwealth Bank of Australia	
	Department of Environment and Energy		NAB	
	Murray Darling Basin Authority		Rabobank Australia Limited	
	PrimeSafe	Responsible Investment Association Australasia	Other agricultural industry	Australian Beef Sustainability Framework
Sustainability Victoria	Australian Eggs			
Industry – Farm sector	Alltech E-CO ₂	Australian Lot Feeders Association		
	Aurora Dairies	Australian Pork Limited		
	Australian Dairy Farmers	Basalt to Bay Landcare		
	Barambah Organics	Birkenwood International		
	Dairy NSW – Regional Development Program (RDP)	Cattle Council of Australia		
	DairyNZ	Cotton Australia		
	DairyTas – RDP	Debenham Australia		
	DataGene	FoodBytes		
	GippsDairy – RDP	Global Dairy Sustainability Framework		
	Murray Dairy – RDP	Global Meat Alliance		
Subtropical Dairy – RDP	Meat & Livestock Australia			
The Australian Dairyfarmer	Milk2Market			
United Dairyfarmers of Victoria	National Farmers Federation			
WA Farmers	NSW Farmers Association			
WestVic Dairy – RDP	Red Meat Advisory Council			
Industry – Manufacturers	A2Milk Company	Ridley AgriProducts Pty Ltd		
	Australian Dairy Products Federation	Rural Financial Counselling Service		
	Australian Specialist Cheesemakers' Association	Sugar Research Australia		
	Bega Cheese	The Milk Road		
	Brownes Dairy	Researchers	Centre for Advanced Food Engineering, Sydney University	
	Bulla Dairy Foods		CSIRO	
	Burra Foods		Fight Food Waste CRC	
	Chobani Pty Ltd		Food Innovation Australia Ltd	
	Danone		Advisors	Bridge Logic Consulting
	Fonterra	Corporate & Community Sustainability International		
	Freedom Foods Group Limited	Currie Communications		
	Lactalis Australia	Dairy Australia		
	Lion Dairy & Drinks	STR Consulting		
	Mondelez International			

UN SDGs alignment

The 17 United Nations Sustainable Development Goals (UN SDGs) underpin the United Nations 2030 Agenda which aims to set the world on a more sustainable path.

They are guiding a global effort to meet sustainability challenges, including climate change, population growth, water scarcity, responsible consumption and rewarding work.

The goals cover areas including poverty reduction, food security and energy and will directly influence national policy settings. They challenge businesses, governments and civil society to do their part towards ensuring our planet is prosperous, healthy and peaceful.

Global dairy's contribution to the UN SDGs is recognised in the 2016 Dairy Declaration of Rotterdam, a joint declaration of the Food and Agriculture Organisation and the International Dairy Federation (IDF). The European Dairy Association has also demonstrated how it contributes to the UN SDGs as has the global Dairy Sustainability Framework.

The Australian dairy industry is also contributing to the UN SDGs. The Framework's 11 goals were mapped to the UN SDGs using a robust methodology which examined each of the UN SDGs and their targets. This alignment is being considered as part of the review of goals and targets.

	1 No Poverty	2 Zero Hunger	3 Good Health and Well-being	4 Quality Education	5 Gender Equality	6 Clean Water and Sanitation	7 Affordable and Clean Energy	8 Decent Work and Economic Growth	9 Industry, Innovation and Infrastructure	10 Reduced Inequality	11 Sustainable Cities and Communities	12 Responsible Consumption and Production	13 Climate Action	14 Life Below Water	15 Life on Land	16 Peace and Justice Strong Institutions	17 Partnerships to achieve the Goal
1	Increase the competitiveness and profitability of the Australian dairy industry	●						●									
2	Increase the resilience and prosperity of dairy communities							●									
3	Provide a safe work environment for all dairy workers		●					●									
4	Provide a productive and rewarding work environment for all dairy workers							●									
5	All dairy products and ingredients sold are safe	●	●														
6	Dairy contributes to improved health outcomes for all Australians	●	●														
7	Provide best care for all animals for whole-of-life	●	●					●									
8	Improve land management	●						●							●		
9	Increase water use efficiency	●				●			●								
10	Reduce greenhouse gas emissions intensity	●							●				●				
11	Reduce waste	●				●			●			●					

GRI contents table

The Australian Dairy Industry Sustainability Report 2020 has been prepared in accordance with the GRI Standards: Core option. Additional guidance from GRI's G4 Food Processing Sector Disclosures has been used for material topics, where relevant.

GRI Standard Disclosure ¹	Location	Omissions/notes
GRI 101: Foundation 2016		
GRI 102 General Disclosures 2016		
102-1 Name of the organisation	94	
102-2 A description of the organisation's activities	66–70	
102-3 Location of the organisation's headquarters	92	
102-4 Number of countries where the organisation operates, and the names of countries where it has significant operations and/or that are relevant to the topics covered in the report	66 and 70	
102-5 Nature of ownership and legal form	71	
102-6 Markets served, including: geographic locations where products and services are offered; sectors served; types of customers and beneficiaries	70	
102-7 Scale of the organisation, including: total number of employees; total number of operations; net sales; total capitalisation broken down in terms of debt and equity; quantity of products or services provided	16–17, 25, 66–70	Total capitalisation not available sector-wide
102-8 Total number of employees by employment contract (permanent and temporary), by gender	25 and 66	Information by contract type, gender, region and tenure is not available sector-wide
102-9 A description of the organisation's supply chain, including its main elements as they relate to the organisation's activities, primary brands, products, and services	68–69	Information broken down by brands is not available sector-wide but remains with individual companies
102-10 Significant changes to the organisation's size, structure, ownership, or supply chain	1, 6–9	
102-11 Whether and how the organisation applies the Precautionary Principle or approach	18, 22, 24–26, 40–41, 45, 52, 54–55	Refer to Dairy Australia's Audit and Risk Committee Charter
102-12 A list of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes, or which it endorses	75	
102-13 A list of the main memberships of industry or other associations, and national or international advocacy organisations	75	
102-14 A statement from the most senior decision-maker of the organisation about the relevance of sustainability to the organisation and its strategy for addressing sustainability	1	
102-15 A description of key impacts, risks, and opportunities	68–69	
102-16 A description of the organisation's values, principles, standards, and norms of behaviour	75	
102-18 Governance structure of the organisation	71	

¹ Disclosure descriptions have been summarised. For detailed descriptions refer to the GRI Standards globalreporting.org/standards

GRI Standard Disclosure ¹ <i>continued</i>	Location	Omissions/notes
GRI 102 General Disclosures 2016		
102-40 A list of stakeholder groups engaged by the organisation	76-77	
102-41 Percentage of total employees covered by collective bargaining agreements		Information unavailable sector-wide
102-42 The basis for identifying and selecting stakeholders with whom to engage	62-64	
102-43 The organisation's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	62-64	See also Materiality Assessment Report 2019
102-44 Key topics and concerns that have been raised through stakeholder engagement	64	See also Materiality Assessment Report 2019
102-45 A list of all entities included in the organisation's consolidated financial statements or equivalent documents	72-74	Not applicable to a sector-wide report
102-46 An explanation of the process for defining the report content and the topic Boundaries. An explanation of how the organisation has implemented the Reporting Principles for defining report content	72	See also Materiality Assessment Report 2019
102-47 A list of the material topics identified in the process for defining report content	73-74	See also Materiality Assessment Report 2019
102-48 The effect of any restatements of information given in previous reports, and the reasons for such restatements.		Re-statements are noted in the text
102-49 Significant changes from previous reporting periods in the list of material topics and topic boundaries	73-74	
102-50 Reporting period for the information provided	92	
102-51 If applicable, the date of the most recent previous report	92	
102-52 Reporting cycle	92	
102-53 The contact point for questions regarding the report or its contents	92	
102-54 The claim made by the organisation, if it has prepared a report in accordance with the GRI Standards	92	
102-55 The GRI content index, which specifies each of the GRI Standards used and lists all disclosures included in the report	79-84	
102-56 A description of the organisation's policy and current practice with regard to seeking external assurance for the report	92	

¹ Disclosure descriptions have been summarised. For detailed descriptions refer to the GRI Standards globalreporting.org/standards

GRI Standard Disclosure ¹ <i>continued</i>	Location	Omissions/notes
Material topic: Product Safety and Quality		
GRI 416: Customer Health and Safety 2016		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	29	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	30-31	
103-3 Explanation of how the organisation evaluates the management approach	30-31	
GRI 416-2		
Incidents of non-compliance concerning the health and safety impacts of products and services	31	
FP5		
Percentage of production volume manufactured in sites certified by an independent third party according to internationally recognised food safety management systems standards		Not available industry-wide. Embedding a food safety culture in dairy food businesses is under development
Material topic: Greenhouse Gas Emissions		
GRI 305: Emissions 2016		
GRI 103 Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	45-46, 54-55	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	57	
103-3 Explanation of how the organisation evaluates the management approach	57	
GRI 305-4		
GHG emissions intensity	55, 57	Emissions intensity of manufacturing (scope 1 and 2) is reported separately to farm emissions (scope 3). Both use different denominators to reflect intensity

¹ Disclosure descriptions have been summarised. For detailed descriptions refer to the GRI Standards globalreporting.org/standards

GRI Standard Disclosure ¹ <i>continued</i>	Location	Omissions/notes
Material topic: Water Availability and Efficiency		
GRI 303: Water and Effluents 2018		
103-1 Explanation of why the topic is material and the Boundary for the material topic	45–46, 50	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	50	
103-3 Explanation of how the organisation evaluates the management approach	50	
GRI 303-1		Information unavailable.
Interactions with water as a shared resource		The review of the Framework in 2021 will examine the requirements of GRI 303: Water and Effluents 2018 for disclosure in the next reporting cycle
GRI 303-2		
Management of water discharge-related impacts		
GRI 303-3		
Water withdrawal		
GRI 303-4		
Water discharge	51	
GRI 303-5		
Water consumption	51	
Material topic: Physical Climate Risk		
GRI 201: Economic Performance 2016		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	55–56	See also Materiality Assessment Report 2019 ; Dairy Australia Climate Change Strategy
103-2 Explanation of how the organisation manages the topic	55–56	See also Dairy Australia Climate Change Strategy
103-3 Explanation of how the organisation evaluates the management approach	55–56	See also Dairy Australia Climate Change Strategy
GRI 201-2		
Financial implications and other risks and opportunities due to climate change	55–56	See also Dairy Australia Climate Change Strategy

¹ Disclosure descriptions have been summarised. For detailed descriptions refer to the GRI Standards globalreporting.org/standards

GRI Standard Disclosure ¹ <i>continued</i>	Location	Omissions/notes
Material topic: Animal Care		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	37-40	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	37-40	
103-3 Explanation of how the organisation evaluates the management approach	37-40	
All of industry adopting relevant recommended industry practices for animal care		Data not collected in 2021
Material topic: Calves, including bobby calves		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	41	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	41	
103-3 Explanation of how the organisation evaluates the management approach	41	
All calves managed appropriately		Data not collected in 2021
All calves disbudded		Data not collected in 2021
Material topic: Animal husbandry		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	37-38	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	38	
103-3 Explanation of how the organisation evaluates the management approach	38	
Compliance with legislated animal welfare standards	41	
FP10		
Policies and practices, by species and breed type, related to physical alterations and the use of anaesthetic		Information not available by breed type
Material topic: Farm Biosecurity		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	41	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	41	See Dairy Biosecurity Healthy Farms
103-3 Explanation of how the organisation evaluates the management approach	41	See Dairy Biosecurity Healthy Farms
Farmers have a documented biosecurity plan		Data not collected in 2021

¹ Disclosure descriptions have been summarised. For detailed descriptions refer to the GRI Standards globalreporting.org/standards

GRI Standard Disclosure ¹ <i>continued</i>	Location	Omissions/notes
Material topic: Antimicrobial Stewardship		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	40	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	40	See also dairyaustralia.com.au/animal-management-and-milk-quality/antimicrobial-stewardship
103-3 Explanation of how the organisation evaluates the management approach	40	See also dairyaustralia.com.au/animal-management-and-milk-quality/antimicrobial-stewardship
FP12		
Policies and practices on antibiotic, anti-inflammatory, hormone, and/or growth promotion treatments, by species and breed type		Information not available by breed type
Dairy farmers access antibiotics from a registered vet		
Dairy farmers use antibiotics responsibly under veterinary direction		
Material topic: Resilience of Dairy Regions		
GRI 103: Management Approach 2016		
103-1 Explanation of why the topic is material and the Boundary for the material topic	15	See also Materiality Assessment Report 2019
103-2 Explanation of how the organisation manages the topic	19-20	
103-3 Explanation of how the organisation evaluates the management approach	19-20	
Contribution the dairy industry makes to supporting the economy of dairy regions	19	
Recognition of the dairy industry's benefit to regional communities	20	
Contribution people in dairy make to social capital (community initiatives) in their community	20	

¹ Disclosure descriptions have been summarised. For detailed descriptions refer to the GRI Standards globalreporting.org/standards

References, data sources, abbreviations, glossary

Internal references and surveys

DairyBase A web-based tool developed by Dairy Australia that allows dairy farmers and their advisors to assess farm business performance using a consistent industry agreed methodology. DairyBase contains additional verified and validated datasets from farm business consultants and service providers. It also contains information from the Dairy Farm Monitor Project that gathers financial and production data from 250 dairy farms across Australia (see reference below).

Dairy Manufacturers Sustainability Council (DMSC)

DMSC is a nationally-recognised community of practice comprised primarily of environmental and sustainability group managers from Australian dairy manufacturing companies. Established in 1995, the DMSC has an industry-wide focus that assists company members to improve environmental compliance and the sustainability of their operations. The DMSC produces an **Environmental Sustainability Scorecard** each year, reporting on manufacturers' progress against the environmental sustainability goals and targets in the Australia Dairy Sustainability Framework.

Dairy Trust Tracker This national survey of approximately 1300 members of the public is undertaken by Dairy Australia and conducted annually online. The data generated enables Dairy Australia to monitor levels of trust, identify emerging issues, and track the public's perceptions of dairy foods and the industry in general.

Dairy Situation and Outlook This regular **report** from Dairy Australia is undertaken three times per year to update and appraise farmers and industry stakeholders about the current situation affecting the outlook for the Australian dairy industry.

Genetics and Animal Husbandry Survey Conducted every two years from 2008 to 2016. It is now undertaken every three years with the most recent survey undertaken in November 2019. It is a national **survey** of Australian dairy farmers designed to monitor performance in key priority areas. While self-reported, survey results are validated through independent mechanisms (e.g. focus groups). Funded by Dairy Australia, in 2019 over 500 dairy farmers were interviewed nationally.

In Focus An annual **publication** highlighting key statistics from across the supply chain, acting as a reference document with easily accessible information used by stakeholders inside and outside the dairy industry. The report provides one source of truth in relation to the dairy industry's key characteristics and has been produced by Dairy Australia for more than two decades. In Focus 2021 is based on statistics for the 2020/21 year.

Dairy Workforce Survey (previously the Power of People on Australian Dairy Farms POP survey) This independent **survey** of around 400 dairy farmers was conducted in 2014, 2017, and 2020. Commissioned by Dairy Australia, it is used to identify the need for support, training and development and seeks to understand farmer attitudes, behaviours and needs on topics such as farm safety, employee capabilities and employee attraction, retention and transition. In 2020, the survey was expanded to include questions on modern slavery and other data required to support reporting against the Framework

Land, Water, Carbon Survey Since 2000, various Dairy Australia (DA) **surveys** have collected data providing insights into attitudes, behaviour and practices relating to land, soil, effluent, energy and water management on-farm. The current survey was conducted in May 2020, with the previous one undertaken in 2015. Data included in the 2020 Land, Water, Carbon Survey report is based on responses from 500 dairy farmers selected randomly from the DA levy payer database who participated in a Computer Assisted Telephone Interview, providing an estimated sampling margin for error of $\pm 3.8\%$ (at the 95% confidence level). Quotas were set by NRM sub region and data was weighted at computer stage to ensure the national result was not disproportionately affected by regions with smaller numbers of dairy farmers.

The 2020 Survey Report focussed on the following areas:

- Land management issues such as soil, noxious weed and pest management
- Irrigation water use efficiencies
- Fertiliser use management
- Farm effluent management
- Managing land for conservation and biodiversity
- Using renewable energy
- Recycling and re-use activities

National Dairy Farmer Survey A biannual survey conducted with dairy farmers nationally (in 2019, n=800 for main survey and n=200 for supplementary survey) to understand their current views of the industry, the challenges they are facing and the impact of these on their businesses. It also provides information on production, herd sizes and future intentions. The main survey is conducted in February each year and a smaller supplementary survey takes place in August each year amongst a portion of respondents interviewed in the main survey. The survey is funded by Dairy Australia but conducted by an independent organisation.

External references and surveys

Australian Animal Welfare Standards and Guidelines for Cattle Developed under the Australian Animal Welfare Strategy and endorsed by state and territory governments in 2016. Overall, the **Standards and Guidelines** aim to harmonise and streamline livestock welfare legislation in Australia, ensuring that it results in improved welfare outcomes and is practical for industry. These underpin access to domestic and overseas markets and reinforce Australia's commitment to advancing meaningful and effective animal welfare outcomes.

Australian Dietary Guidelines Developed by the National Health and Medical Research Council. The **guidelines** use the best available scientific evidence to provide information on the types and amounts of foods, food groups and dietary patterns that aim to promote health and wellbeing, reduce the risk of diet-related conditions, and reduce the risk of chronic disease. The guidelines are for use by health professionals, policy makers, educators, food manufacturers, food retailers and researchers.

Australian Milk Residue Analysis Survey The AMRA **survey** provides a national, independent chemical residue monitoring program of Australian bovine milk. The AMRA Survey has a key role in promoting the dairy industry's reputation and facilitating ongoing market access by monitoring on-farm chemical use.

Around 1,000 samples of raw milk are collected throughout the year from farms across all dairying regions of Australia. These samples are used to conduct around 13,000 analyses for nearly 70 different compounds covering antimicrobials, animal parasite control chemicals, feed contaminants and environmental contaminants.

Australian Packaging Covenant Organisation **APCO** is a co-regulatory, not-for-profit organisation that partners with government and industry to reduce the harmful impact of packaging on the Australian environment.

Dairy Sustainability Framework The global **DSF** provides a holistic approach to global dairy sustainability activity, generating a common sustainability commitment. The Dairy Sustainability Framework has been developed to provide overarching goals and align the sector's actions globally on the path to sustainability. The DSF enables the dairy sector to take a holistic approach to sustainability through a common language, alignment of international sustainability activity and through this generate a common sustainability commitment that can be expressed at a global level, but also regional, national and organisational levels.

Deloitte Access Economics Report A report by Deloitte Access Economics on the Economic and Broader Contribution of the Australian Dairy Processing Industry highlights the significant contribution dairy processors make to the Australian economy and regional communities. The report provides the first, singularly focused comprehensive positioning of the dairy processing industry and its economic contribution and value more broadly across Australia – including employment, environment and sustainability, exports, transport and regional development.

Product Safety Recalls Australia The Australian Competition and Consumer Commission manages a national internet database, the Recalls Australia **website**, for all product safety recalls directed at consumers.

Queensland Dairy Accounting Scheme (QDAS) A service of the Queensland Department of Agriculture, Fisheries and Forestry. It was established to improve the understanding of business principles among advisors and dairy farmers by providing farm management accounting and analysis. **QDAS** has evolved to now examine the business traits of profitability, solvency and efficiency and continues to help dairy farmers make informed decisions based on business information. QDAS reports provide a summary of physical and financial data from various dairy production systems in Queensland. Farmer participation in QDAS is voluntary and free. Information from the QDAS is incorporated into DairyBase.

Dairy Farm Monitor Project Provides a comprehensive physical and financial analysis for 250 farms across Australia. **Reports** are used by industry and government to inform policy and service delivery to generate economic growth. Farmers can compare their performance and identify areas for improvement. The data collected through the Dairy Farm Monitor Project is now stored in DairyBase.

Regional Wellbeing Survey (RWS) The University of Canberra RWS is an annual **survey** of residents living in Australia's rural and regional areas. First conducted in 2013, it examines the wellbeing of people in rural and regional communities, and how this wellbeing is influenced by the many social, economic and environmental changes occurring in these communities. The results of the RWS enable the provision of insights that support the development of strategies to build wellbeing, resilience and adaptive capacity in rural and regional Australia.

Safe Work Australia is an independent statutory **agency** responsible for improving occupational health and safety and workers' compensation arrangements across Australia.

2021 Scorecard Report

		Baseline	2019	2020	2021	2030 Target	Progress
Enhancing economic viability and livelihoods							
1 Increase the competitiveness and profitability of the Australian dairy industry							
1.1	More than 50% of farm businesses achieve at least \$1.50 EBIT/kg MS over a five year average ⁱ	20% (2018)	16%	26%	39% ⁱⁱ	>50%	●
1.2	Increase the Australian dairy industry's share of global dairy trade to 10% by volume ^{iv} <i>Under review</i>	6% (2018)	6%	5%	4% ^{iv}	10%	●
1.3	Increase RD&E expenditure in the dairy sector by 2% per annum	\$47m (2019)	\$47m	\$44.2m	\$45.5m	\$58.5m	●
	% dairy farmers constantly looking for new information to improve farm business ^v	79% (2018)	83%	76%	91%	–	●
	% dairy farmers reporting new farming ideas were very important to them ^v	74% (2018)	78%	72%	90%	–	●
	% dairy farmers reporting they were amongst the first in their area to try new ideas and products ^v	46% (2018)	48%	45%	52%	–	●
1.4	Provide consumers with greater choice and access to a variety of dairy products and/or ingredients to meet their specific nutritional needs ^{vi}	85% (2018)	88%	88%	85%	100%	●
2 Increase the resilience and prosperity of dairy communities							
2.1 Increase the contribution the dairy industry makes to supporting the economy of dairy regions							
	• The total value of payments made to dairy farmers on a region-by-region basis ⁱⁱⁱ	\$4.3b (2018)	\$4.4b	\$4.8b	\$4.8b (2020/21)	TBC	●
	• The number of jobs supported by dairy economic activity in each dairy region – indicated by number of people directly employed in the dairy industry ⁱⁱⁱ	42,600 (2018)	46,200	43,500	37,400 (2020/21)	TBC	●
2.2 Increase the recognition of the dairy industry's benefit to regional communities							
	• The community sees the dairy industry as vital to the Australian economy ^v	44% (2018)	51%	n/a		75%	
	• % of people in regional areas who think dairy is an essential part of their community ^{vi}	88% (2018)	90%	85%	84%	95%	●
	• % of farmers who agree 'people in my region appreciate the role that dairy farmers like myself play in our community' ^v	67% (2018)	68%	70%	76%	90%	●
2.3 Increase the contribution people in dairy make to social capital (community initiatives) in their community							
	• % of farmers who say they/their employees actively participate in their local community initiatives ^v	69% (2019)	69%	70%	78%	100%	●
	• % of farmers who believe it's important for them/their employees to support their local community initiatives ^v	87% (2019)	87%	88%	94%	100%	●
	• % of dairy companies investing funds and participating in local community initiatives	n/a		<i>Under review</i>		100%	
	• % of dairy people who feel their community has effective dairy leaders and strong social networks – scale of 1 (strongly disagree) to 7 (strongly agree) ^{vii}	4.6 (2018)	4.6	n/a		TBC	

ⁱ DairyBase, Dairy Farm Monitor Project data

ⁱⁱ Please note the target of 50% of farmers achieving at least \$1.50 EBIT/kg MS over a 5 year average is currently 39%. 2015/16 – 2019/20, 26.1%; 2016/17 – 2020/21, 38.7%

ⁱⁱⁱ In Focus 2020

^{iv} Fourth largest exporter behind NZ, EU/UK and US – exporting 32% of milk production, worth A\$3.3 billion

^v National Dairy Farmer Survey 2020

^{vi} Dairy Trust Tracker Survey 2020

^{vii} University of Canberra Regional Wellbeing Survey

	Baseline	2019	2020	2021	2030 Target	Progress
Enhancing economic viability and livelihoods						
3 Provide a safe work environment for all dairy workers						
3.1 Zero workplace fatalities on farm and in manufacturing^{viii}						
• Dairy farming	2 (2017)	0	11 (2014–19)	10 ^{ix} (2016–20)	0	●
• Dairy companies	0 (2017)	0	0 (2014–19)	0 ^{ix} (2018–19)	0	●
3.2 100% of dairy workers to be implementing good safety practices	n/a	n/a	84%		100%	●
3.3 More than 90% of dairy workers working less than 50 hours per week	n/a	n/a	19%		90%	●
3.4 30% reduction in Lost Time Injury Frequency Rate for farm and manufacturing workplaces on figures reported in 2017^{viii}						
• Dairy farming	9.3 (2017)	n/a	7 ^{ix} (2017/18)	7.5 ^x (2018–19)	6.5	●
• Dairy companies	6.4 (2017)	n/a	6.2 ^{ix} (2017/18)	8 ^x (2018–19)	4.5	●
4 Provide a productive and rewarding work environment for all dairy workers						
4.1 Less than 25% of dairy workers report low levels of life satisfaction	n/a	n/a	n/a		<25%	n/a
4.2 Rates of dairy remuneration are similar to or higher than for other regional industries	n/a	n/a	n/a		Yes	n/a
4.3 80% of dairy employees are retained within the industry year-on-year^{xi}	71% (2017)	n/a	91%		80%	●
4.4 Less than 20% of dairy employers report difficulty in sourcing suitable applicants	n/a	n/a	70%		<20%	●
4.5 More than 70% of dairy farm owners have an agreed farm transition/succession plan^{xi}	21% (2017)	n/a	56%		>70%	●
4.6 Human rights – dairy industry has a national human rights position. Indicators to be developed in 2020	n/a	<i>Under development</i>				

viii Safe Work Australia
ix Final figure for 2017/18

x Most recent figures available
xi Power of People in Dairy Survey 2020

	Baseline	2019	2020	2021	2030 Target	Progress	
Improving wellbeing of people							
5 All dairy products and ingredients sold are safe							
5.1	Zero non-compliant chemical residues found during the Australian Milk Residue Analysis Survey ^{vi}	0	0	0	0	●	
5.2	Zero product recalls due to food contamination (as reported by Product Safety Recalls Australia)	8	11	8	5*	●	
5.3	95% of consumers agree Australia produces safe and high-quality dairy products ^{vii}						
	• The dairy industry produces safe products	81% (2018)	82%	85%	82%	95%	●
	• The dairy industry produces high quality products	83% (2018)	86%	86%	85%	95%	●
5.4	Food Safety Culture embedded into the dairy food business	<i>Under development</i>					
6 Improve consumers' perception of the health and nutrition benefits of dairy foods							
6.1	Improve consumers' perception of the health and nutrition benefits of dairy foods ^{vi}						
	• 90% of consumers believe dairy foods such as milk, cheese and yoghurt play an important role in a healthy well-balanced diet	67% (2019)	67%	61%	59%	90%	●
	• 90% of individuals agree 'Dairy foods are essential for good health and wellbeing'	72% (2018)	80%	79%	77%	90%	●
	• <20% of individuals agree 'I'm concerned consuming dairy foods will increase my weight' ^{iv}	32% (2018)	34%	35%	41%	<20%	●
6.2	The National Health and Medical Research Council Australian Dietary Guidelines continue to recommend milk, cheese and yoghurt as part of a healthy diet	<i>Recognised</i>					●
6.3	Australians meet recommended daily serves for dairy	TBC	TBC	n/a	n/a	n/a	
6.4	All dairy companies adopt a stated position on responsible consumption by 2020 and publicly report on progress by 2030	<i>Under review</i>					

* Two due to undeclared allergens, two due to microbial contamination, one due to rubber contamination
 vi Dairy Trust Tracker Survey 2020
 xii During the period of 1 July 2020 – 30 June 2021, 1,030 milk samples were collected and 14,500 analyses were conducted. Of the samples tested, 100% complied with Australian residue standards. For the full DAVE AMRA Report, see [here](#)

	Baseline	2019	2020	2021	2030 Target	Progress
Providing best care for all our animals						
7 Provide best care for all animals for whole-of-life						
7.1	100% ongoing compliance with legislated animal welfare standards					
	• % of farmers who have a copy of the <i>AHW Standards and Guidelines</i>	47%	77%	n/a	100%	n/a
	• % of farmers who agree complying with animal welfare standards is an important sustainability requirements ^v	95%	98%	n/a	100%	n/a
7.2	All of industry adopting relevant recommended industry practices for animal care^{xiii}					
	• No tail docking	91%	96%	Not collected in 2020	100%	n/a
	• No routine use of calving induction ^{xiv}	90%	91%	93%*	100%**	●
	• All calves managed appropriately					n/a
	– sale calves sold at a minimum of 5 days old	78%	91%	Not collected in 2020	100%	
	– sale calves fed within 6 hours of transport	96%	99%		100%	
	• All calves disbudded			Not collected in 2020		n/a
	– prior to two months of age	63	72%		100%	
	– with pain relief (for calves <2 months)	n/a	76%		100%	
	• All farmers implementing a lameness strategy	95%	96%	Not collected in 2020	100%	n/a
	• All farmers where relevant have infrastructure to keep cows cool	92%	96%	Not collected in 2020	100%	n/a
	• All farmers have a documented biosecurity plan	58% (2019)	58%	Not collected in 2020	100%	n/a
7.3	90% of consumers believe dairy farmers do a good job caring for animals^{vi}	58% (2018)	74%	76%	72%	●
7.4	Antimicrobial Stewardship (AMS) – the dairy industry uses antibiotics responsibly – as little as possible, as much as necessary – to protect the health and welfare of our animals					
	• All dairy farmers access antibiotics from a registered vet ^{xiii}	100%	100%	Not collected in 2020	100%	n/a
	• All dairy farmers use antibiotics responsibly under veterinary direction ^{xiii}	90%	90%	Not collected in 2020	100%	n/a
	• Antibiotics of high importance to human Antimicrobial Resistance (AMR) in Australia are only used to treat dairy livestock in exceptional circumstances where no other alternative exists	<i>Under development</i>				

v National Dairy Farmer Survey

vi Dairy Trust Tracker Survey

* Of the 7% who do induce: only do so to an average of 6% of cows in their herd

** No routine calving induction as of 1 January 2022

xiii Genetics and Animal Husbandry Survey 2019, not undertaken in 2020

xiv Veterinary Survey – in-house

		Baseline	2019	2020	2021	2030 Target	Progress
Reducing environmental impact							
8 Improve land management							
8.1	100% of stock excluded from waterways ^{xv}	76% (2015)	n/a	75% ^{xvi}		100%	●
8.2	100% of riparian zones actively managed and maintained		Under development			100%	n/a
8.3	100% of farmers complete and implement a soil and nutrient management plan ^{xvii}	58% (2015)	n/a			100%	n/a
8.4	100% of farmers have and implement a documented biodiversity action plan ^{xv, xvii, xix}	81% (2018)	n/a			100%	n/a
8.5	Zero net deforestation by 2020 ^{xx}		Under development			100%	n/a
9 Increase water use efficiency							
9.1	Reduce the consumptive water intensity of dairy companies by 30% by 2030 (on 2010/11 levels) (ML water consumed per ML of milk processed) ^{xviii}	1.75	1.97	1.86	1.95	1.22	●
9.2	Improve water use and water productivity to utilise 2.0 tonnes of dry matter per ML used ^{xvi}	n/a	n/a	n/a		2.0 t	n/a
9.3	100% of farmers recycling water from dairy sheds ^x	75% (2015)	n/a	74%		100%	●
9.4	100% of farmers monitoring water consumption	n/a	n/a	45%		100%	n/a
9.5	100% of farmers have a water security risk management plan by 2020 and are implementing it by 2030	60% (2015)	n/a	55%		100%	●
10 Reduce greenhouse gas emissions intensity							
10.1	Reduce greenhouse gas emissions intensity by 30% across whole industry on 2015 levels						
	Manufacturers (tonnes CO ₂ ~e/ML milk processed) ^{xviii}	140	141.4	136.7	133.1	98	●
	Farmers (kg CO ₂ ~e/kg FPCM) ^{xv, xxi}	1	n/a			0.72	
11 Reduce waste							
11.1	100% diversion rate from landfill (for dairy companies) (tonnes of waste per ML milk processed) ^{xviii, xxi}	2.69 (2011)	1.74	1.69	1.58 ^{xxiii}	0	●
11.2	100% of silage wrap recycled (farm) ^{xv, xxiv}	28% (2015)	n/a	30% of farmers		100%	●
11.3	All dairy companies participate in the Australian Packaging Covenant or equivalent scheme	9	10			All dairy companies	
11.4	100% of Australian dairy packaging to be recyclable, compostable or reusable by 2025 or earlier		Under development			100%	
11.5	Halve food waste by 2030 (placeholder – tonnes of dairy products per ML of milk processed)	630,000 (2017)	n/a	Work underway ^{xxii}		TBC	

xv Natural Resource Management Survey

xvi 75% of dairy farmers do some fencing – with 44% fencing all waterways – up from 35% in 2015

xvii Question changed in 2020 so unable to compare with 2018

xviii Dairy Manufacturers Sustainability Council 2019/20

xix The proportion with a formal documented biodiversity plan has dropped – but 43% of farms use a map to highlight areas of environmental management, 54% fence native vegetation, 68% fence shelter belts, 26% provide buffer zones and 30% have areas specifically managed or conservation

xx Dairy farmers are ensuring native vegetation or shelter belts are included of their farms and only 1% appear to be reducing significant amounts of native vegetation

xxi 94% of farms have implemented practices to reduce GHG emissions 71% of farms use some renewable energy

xxii DMSC have several projects to map waste streams and look for ways to reduce or utilise waste product better

xxiii 87% diversion rate for 2020/21

xxiv 88% of farms use silage wrap (was 77% in 2015), and of them, 30% recycle – but it is 49% of these using silage wrap when there is no option to recycle. The silage wrap project underway aims to provide viable long-term recyclable options for silage wrap

About this report

Unless stated otherwise, the Australian Dairy Industry Sustainability Report 2021 reports progress against the Australian Dairy Sustainability Framework during the 2021 calendar year. As an example, it is stated throughout the report that all data reported by dairy companies covers the performance of the manufacturing sector for the 2020/21 financial year.

The reporting focus is on performance against 2030 goals and targets. This report reflects the framework's scope which covers farm and manufacturing activities in the Australian dairy industry.

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option (see Appendix 7 GRI Content Index). Limited assurance has been provided on the application of the principles of materiality and inclusivity. The materiality assessment and independent assurance statement can be found on the website [here](#). A policy on external assurance for the framework and associated performance reporting is yet to be developed. Some data provided by third party agencies may have also been assured for other purposes.

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