



Securing recovery by making people and the planet healthier

2022 Federal Election Policy Statement
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Courtesy of Dairy Australia

Foreword



Over the past few years, we have delivered many projects and activities with the objective of rebuilding trust and improving the profitability of the dairy industry. This has been evident via the release of the *Australian Dairy Plan* and in our responses to various government inquiries. It is now time we bring this work together with our decade long *Australian Dairy Sustainability Framework* to resolve two key challenges confronting humankind – becoming resilient to COVID-19 and the next pandemic; and reversing the negative impact we are having on our environment. Our organisation has represented dairy farmers across Australia for almost 80 years. We are one of the oldest farming organisations in the country. Now more than ever is the time for us to lead our industry through these global challenges.

There is a relatively small window of opportunity to keep the average global temperature below 1.5 degrees Celcius. To do this we must accelerate technology adoption that reduces or offsets greenhouse gas emissions. As the temperature increases, we also need to adopt measures that ensure we maintain productivity. Continuing to co-invest in RD&E with government is critical to making these things happen.

COVID-19 has identified many weaknesses in our population and economy. While the vaccine rollout has protected us and reopened our economy, we need to help build resilience against this and other health ailments by addressing our nutritional deficits. Providing better education, for example ensuring consumers receive accurate product labelling and, where appropriate,

mandating nutritional standards, will help build a healthy society. The sudden movement of people from our cities to the regions has created deficits in infrastructure and services. Limited availability of rental accommodation alongside border closures has created significant labour shortages across our industry. A regionalisation agenda is required to attract investment and support a growing regional economy.

The national political federation has served us well for a variety of reasons. However, during the COVID-19 pandemic it has created division due to the application of different laws and regulations. Now that the country has exceeded the 80 per cent double vaccination target it is appropriate to ensure these regulations are applied consistently across the country.

This statement has been developed to explain these challenges and outline solutions for all political parties to adopt ahead of the 47th Parliament of Australia. By supporting these Australian Dairy Farmers' initiatives, our political leaders will be endorsing a policy of securing economic recovery by making our population and planet healthier. Australian Dairy Farmers looks forward to working with the incoming Government, Members and Senators as we strive to deliver strong and meaningful initiatives.

Rick Gladigau
ADF President



Executive summary

The Australian dairy industry is in a period of economic recovery. Higher prices, good seasonal conditions and strong demand for dairy products and rural land over recent years has seen profitability and equity growth across the industry. This is helping farmers service debt after years of drought, price step downs and other adverse events, and reinvest back into the business to improve productivity and sustainability. Such momentum positions the sector to play a key role in supporting the Australian Government's COVID-19 recovery, regionalisation and Ag2030 agendas and achievement of sustainability targets such as net zero emissions by 2050. Listed below is a series of objectives, strategies and initiatives proposed by Australian Dairy Farmers, the peak body representing dairy farmers nationally, for the purpose of making people and the planet healthier in the future.

1. Improve nutritional health in Australia and abroad

Dairy foods are recognised and valued across the globe. They are rich in many essential vitamins and minerals, in particular calcium. When consumed as part of a balanced diet they provide people with strong bones and reduced risk of osteoporosis, blood pressure, heart disease, stroke and some cancers. Yet despite these advantages there are significant deficits in dairy consumption across the world. For example, a study by Singh et al. (2015) found that the global average calcium consumption is far below the level recommended for adults by the U.S. National Institutes of Health (NIH). The NIH recommendation of 1,000 to 1,300 mg per day far exceeds the global average daily calcium consumption of 629 mg. Misleading product labelling and marketing, trade barriers and supply chain constraints need to be addressed in order to bridge the gap between optimal and actual nutritional health as prescribed by the *Australian Dietary Guidelines*.

- 1.1 **Resolve malnutrition in residential aged care**
 - 1.1.1 Disseminate fractures research
 - 1.1.2 Prescribe minimum nutritional standards for food in aged care
- 1.2 **Restore truth in labelling for nutritional benefit**
 - 1.2.1 Develop a voluntary guideline for plant-based product labelling
 - 1.2.2 Ensure alignment with *Codex General Standard on Use of Dairy Terms*
 - 1.2.3 Remove clause 1.1.1-13 (4) in the *Food Standards Code*
 - 1.2.4 Provide an evidence-based Health Star Rating (HSR) system
- 1.3 **Increase international trade and market access**
 - 1.3.1 No Geographical Indications in the EU FTA
 - 1.3.2 Finalise an FTA with India
 - 1.3.3 Review the Japan and Korea FTAs
- 1.4 **Maintain the live export trade**
 - 1.4.1 Co-fund with industry an in-market live export training program
- 1.5 **Make supply chains fair, transparent and competitive**
 - 1.5.1 Provide an economy-wide prohibition on unfair trading practices
 - 1.5.2 Make the *Food and Grocery Code* mandatory with *Dairy Code* alignment
 - 1.5.3 Support implementation of the *Dairy Traceability Guideline*
 - 1.5.4 Launch dairy's forward hedging market

2. Grow jobs and liveability in the regions with planning and investment

During the COVID-19 pandemic dairy has continued to operate due to its essential food status. Good nutrition places consumers in a better position to fight infection and many health ailments. However, maintaining supply has been challenged by a shortage of workers, housing, fertilizer, investment and regional services. Many of these issues are long standing but have been exacerbated by the pandemic. There is now a strong need to build capability and grow jobs in the regions to secure essential farm production supplies and reduce disadvantage in the future.

2.1 Resolve dairy's workforce shortage and capability deficits

- 2.1.1 Provide \$300m for the *National Agriculture Workforce Strategy*
- 2.1.2 Provide the National Farmers' Federation with leadership responsibility for evaluating the Agriculture Visa pilot and finalising design

2.2 Provide a more consistent approach to workplace COVID-19 restrictions

- 2.2.1 Ensure restrictions are evidence based and linked to virus infection risk
- 2.2.2 Update the *Agriculture Workers' Code* to streamline cross border requirements

2.3 Reduce the urban–rural divide

- 2.3.1 Review the Australian Energy Regulator's investment methodology
- 2.3.2 Produce a regional development strategy
- 2.3.3 Finalise regional deals in internationally competitive dairy regions
- 2.3.4 Prioritise fertiliser production consistent with the *Modern Manufacturing Strategy*

3. Increase sustainability and productivity through innovation and markets

The world confronts many sustainability challenges. Climate change, natural disasters, native flora and fauna decline, and emerging pests and diseases require various mitigation and adaptation measures to be deployed on farms. The *Australian Dairy Industry Sustainability Framework* has been in place for almost a decade. It adopts a whole of supply chain approach to these challenges in the context of Australia's international obligations while continuing to improve farm productivity and profitability. The recent COP26 conference in Glasgow has cemented the importance of this initiative as a basis for co-investing with government in RD&E, technology and other pathways to improve the health of our environment through a dairy farming lens.

3.1 Strengthen the agriculture RDC system

- 3.1.1 Ensure Australia's agriculture R&D investment is equal or greater than the OECD average

3.2 Build resilience and responsiveness to climate change

- 3.2.1 Invest in recommendations of the Dairy Industry Adaptation Pathways and North East Dairy Climate Futures projects
- 3.2.2 Implement recommendations of the Productivity Commission's *Murray-Darling Basin Plan: Five-year assessment* and the ACCC's *Water Markets Review*
- 3.2.3 Adopt flexible pathways to deliver projects to meet the *Murray-Darling Basin Plan* targets
- 3.2.4 Provide a 2nd round of the Energy Efficient Communities Program – Dairy Farming Grants
- 3.2.5 Co-fund emission and waste reduction initiatives

3.3 Support natural capital markets and environmental stewardship

- 3.3.1 Build a natural capital policy framework
- 3.3.2 Develop a farm biodiversity certification scheme
- 3.3.3 Improve measurement of biodiversity in *State of Environment* reporting
- 3.3.4 Establish a \$1 billion Environmental Stewardship Fund

3.4 Maintain strong border controls and program funding for biosecurity

- 3.4.1 Achieve the Craik review funding target for the *National Biosecurity Roadmap*

3.5 Drive adoption of digital technologies on farm

- 3.5.1 Address farmer privacy and security concerns and data sharing limits
- 3.5.2 Deliver digital education programs
- 3.5.3 Provide adoption grants to overcome capital and scale constraints

3.6 Improve measurement of dairy farm performance

- 3.6.1 Provide farmers with a R&D tax incentive for submitting data
- 3.6.2 Co-invest with Dairy Australia and ABARES to build data capacity



Economic context and outlook

Australian farmers are looking at another record-breaking year, with the sector forecast to achieve \$73 billion production value for 2021-22 (ABARES 2021). This is being driven by good seasonal conditions, prices and growth in consumer demand for food and fibre domestically and abroad. If the upward trajectory continues, the sector's target of \$100 billion by 2030 looks achievable commensurate with appropriate support and policy setting from government.

The dairy industry is playing its part. Australian raw milk production is forecast to reach \$4.754 billion in 2021-22 (ABARES 2021). This is an increase from \$4.688 billion in 2020-21 (Dairy Australia 2021). These numbers demonstrate that Australia's third largest rural sector is contributing to the nation's economic recovery.

This result is testament to the resilience of the 37,400 people employed in the dairy industry (Dairy Australia 2021). Over recent years people in dairy have experienced a range of different business pressures. These include but are not limited to milk price step downs, water recovery from the *Murray-Darling Basin Plan*, extreme events such as drought and floods, increased competition from subsidised dairy imports, industry reform and COVID-19 restrictions. Despite these constraints the industry has continued to produce safe and nutritious dairy products for consumers all over the world.

Prospects for the medium term appear favourable. The global economy is projected to grow 6 per cent in 2021 slowing to 4.9 per cent in 2022 (International Monetary Fund 2021). Australia is following a similar path, with GDP forecast to grow at 4 per cent over 2022, and 2.5 per cent over 2023 (Reserve Bank of Australia 2021). The stronger demand has helped drive the Australian average farmgate milk price to increase by 7 per cent to 53 cents per litre in 2021-22.

While price rises are expected to slow towards the end of 2021, they will remain higher on average in 2021-22 than 2020-21. The major driver has been China's record high dairy imports, which exceeded 4 million tonnes in 2020-21.

At this stage it appears that access to the COVID-19 vaccine is key to growth and recovery across the globe. Most advanced economies are expected to resume some sense of normal activity by the end of 2021 due to high vaccination rates in addition to well-established COVID safe practices. It is a different situation to those countries with low vaccination rates, who will continue to face resurgent COVID infections and hospitalisations and reduced business continuity. This context means that as long as the COVID-19 virus (including various strains) circulates, countries will grow at different rates.

Maintaining Australian dairy's recovery and growth will require industry and government to address various challenges. Malnutrition and chronic diseases from poor diet and exercise continue to rise. Extended freight delays, rising export costs and ships bypassing scheduled ports altogether are barriers to international trade. Worker shortages are limiting production capacity and driving some farm exits. Ongoing issues surrounding tariffs and non-tariff measures, supply chain transparency, productivity, climate variability, biosecurity and social licence to operate continue to limit industry potential. While dairy has continued to operate throughout the COVID-19 pandemic, government restrictions have in many cases exacerbated the issues further. Going forward, these drivers need to be tackled by government and industry together.

Objective 1

Improve nutritional health in Australia and abroad

Dairy foods (milk, yoghurt and cheese) are rich in essential nutrients and provide a range of health benefits, such as reducing the risk of heart disease, type 2 diabetes, hypertension, stroke, osteoporosis and obesity (National Health and Medical Research Council 2013). This is why the *Australian Dietary Guidelines* recommends consumption of milk, cheese and yoghurt across all life stages. For adults aged 19-50 at least 2.5 serves a day of milk, cheese, yoghurt and/or alternatives are recommended. Unfortunately, most Australians do not consume anywhere near the required amount. This costs the country over \$2 billion per annum in healthcare costs (Doidge 2012). Compounding this issue is consumer concern around dairy's essentiality in the diet, saturated fat and sugar content (Lewers 2021). Left unabated these people may reduce their dairy consumption further exacerbating the nutritional deficit.

In science circles, there is growing recognition that dietary guidance should be based on evaluation of the health impact of the whole food, rather than just the individual nutrients they contain. This is especially true of dairy foods. Despite containing sodium or saturated fat, milk, cheese and yoghurt are associated with numerous health benefits due to the unique combination of nutrients and bioactive factors, and how they interact within the food structure (also known as the Dairy Matrix).

Since the last review of the *Australian Dietary Guidelines*, research supporting the inclusion of regular fat milk, cheese and yoghurt in the diet has grown substantially. For example, despite concerns around the saturated fat content of dairy, no evidence currently supports a detrimental effect of regular fat dairy products compared with reduced fat dairy on a range of cardiometabolic disease risk factors including stroke, type 2 diabetes, cardio-vascular disease (Drouin-Chartier et al. 2016) and obesity (Arbagouei et al. 2012). When included in a balanced diet, cheese contains saturated fat and sodium, yet consumption is not associated with heart disease (Drouin-Chartier et al. 2016) and flavoured milk may contain added sugar, yet consumption is not associated with weight gain (Fayet-Moore 2019).





1.1 Resolve malnutrition in residential aged care

Around 7 per cent of older adults live in residential aged care (AIHW 2019). This is projected to grow in line with Australia's ageing population. Unfortunately, 68 per cent of these residents are malnourished or at risk of malnutrition (Luliano et al. 2017). This leads to numerous health implications including an increased risk of falls and fractures.

A new study published by researchers at the University of Melbourne explored how the food served at aged care facilities impacts the health of residents (Luliano et al. 2021). It specifically investigated how increasing intake of milk, cheese and yoghurt impacted on a variety of health outcomes including fractures and falls. This world first randomised controlled trial found that increasing dairy intake from 2 to 3.5 serves per day improved calcium and protein intakes and significantly reduced the risk of falls, all fractures and hip fractures (by 11, 33 and 46 per cent respectively). There has never been such a large, well-designed trial specifically investigating dairy intake and fracture rates. It is important **this research is disseminated and understood by the residential aged care sector and translated into practice.**

Food provision (amount and type) in residential aged-care is unregulated, indiscriminate and at the discretion of aged-care providers. As a result, the food is often inadequate in terms of nutrition and fails to meet *Australian Dietary Guidelines* for older adults or state specific guidelines e.g., the *Nutrition Standards for Menu Items in Victorian Hospitals and Residential Aged Care Facilities*.

Food and nutrition have been identified by the Royal Commission into Aged Care Safety and Quality (March 2021) as in need of immediate attention. While an additional \$7 per resident per day (a total of \$17 per day) was identified as a way to improve the health of residents, without policy change nutritionally inadequate food provision is likely to continue. Australian Dairy Farmers is therefore calling on the Australian Government to **develop national mandatory minimal nutritional standards for food provision in residential aged care.**

This commitment supports and should be integrated with the following recommendations by the Royal Commission:

1. the food standard should be mentioned at a high level in the new Act that is set to replace the *Aged Care Act 1997* (recommendation 1)
2. the food standard should be detailed in the amended *Aged Care Quality Standards* (recommendation 20) and measured via the amended quality indicators (recommendation 22)
3. the food standard would be audited by the new independent Aged Care Safety and Quality Authority which is set to replace the Aged Care Quality and Safety Commission (recommendation 10).

This proposal delivers on many of the key principles prescribed by the Royal Commission (recommendation 3), in particular that reforms are for:

1. ensuring the safety, health and wellbeing of people receiving aged care
2. putting older people first so that their preferences and needs drive the delivery of care.

1.2 Restore truth in labelling for nutritional benefit

Since the release of the *Australian Dietary Guidelines* in 2013 there has been significant growth in the types of plant-based products available to consumers – i.e., almond, rice and pea beverages, and plant-based ‘cheese’ and ‘yoghurts’ – which may not be fortified and claim to be suitable alternatives to dairy foods. Whilst recognising the need for plant-based products for consumers with true medical conditions, the concern lies with plant-based products being termed ‘dairy alternatives’, which have varied nutritional profiles and do not have the same established health benefits as dairy foods (as outlined in the evidence statements in the *Australian Dietary Guidelines*) but are typically labelled and advertised as suitable substitutes for milk, cheese and yoghurt.

Consumers in every country have an expectation that products labelled with dairy terms implies dairy nutrition and dairy health benefits. There is significant evidence that this expectation is not being met due to misleading and false labelling and marketing by plant-based product manufacturers. These include:

1. In September 2018 a statement from Food and Drug Administration (FDA) Commissioner Scott Gottlieb said, ‘the FDA has concerns that the labelling of some plant-based products may lead consumers to believe that those products have the same key nutritional attributes as dairy products, even though these products can vary widely in their nutritional content.’
2. A USA IPSOS poll in August 2018 found 73 per cent of consumers believed almond ‘milk’ has as much or more protein per serving than cow’s milk and 68 per cent strongly or somewhat agreed that plant-based ‘milk’ beverages have the same nutrition as dairy milk.
3. Dairy Management Inc. and National Dairy Council 2018 Consumer Perceptions Survey found the top reason consumers believe plant-based beverages are labelled as ‘milk’ is because the products are comparable on a nutrition front.
4. In 2021 Lewers Research conducted an Australian nationally representative survey (n=1326). Among those who buy alternatives plant-based beverages (n=535), 49 per cent did so because they perceived them to be healthier than dairy milk.
5. On 23 January 2019 the American Academy of Paediatrics wrote to the FDA to say that the use of the term ‘milk’ in the labelling of dairy free alternatives has caused parental confusion leading to purchasing decisions that create harmful nutritional deficiencies in children.

Australian food standards are governed by the *Australia New Zealand Food Standards Code*, which are legislative instruments under the *Legislation Act 2003*. The key issue with the code is it does not align with *Codex General Standard for Use of Dairy Terms* (CXS 206-1999) (GSUDT). Consequently, it does not deliver product labelling that is accurate or science-based and does not provide transparent nutrition information to enable consumers to make informed, balanced and mindful product choices that support positive public health outcomes. For example, Clause 1.1.1-13(4) states that ‘if a food name is used in connection with the sale of a food (for example in the labelling), the sale is taken to be a sale of the food as the named food unless the context makes it clear that this is not the intention’. The clause uses ‘milk’ as an example by saying ‘the context within which foods such as soy milk or soy ice cream are sold is indicated by use of the name soy; indicating that the product is not a dairy product to which a dairy standard applies.’ This is inconsistent with Codex and a key driver why consumers are being misled.

It is on this basis that Australian Dairy Farmers recommends **improving labelling and marketing of plant-based alternatives to dairy products**. They should accurately describe their product, be truthful and not mislead the consumer over what the product contains (including its nutrition content and health benefits). This can be achieved by the **development of a voluntary guideline** that provides clear direction on the above and includes a governance system that ensures compliance, enforcement and review process.

Should a voluntary guideline not be successful, it is recommended that:

1. Government attains **closer alignment with the principles outlined in Codex General Standard on Use of Dairy Terms** whereby:
 - a) Dairy terms are generally restricted for use with dairy products and ingredients only.
 - b) The only exemption is for the use of dairy terms on non-dairy products whose nature is clear from traditional usage or to describe a characteristic quality, e.g., coconut milk, peanut butter, cocoa butter.

2. The ***Australian New Zealand Food Standards Code*** is reviewed to remove clause 1.1.1-13 (4) – Foods sold with a specified name or representation:

- a) Standard 1.1.1-13(4) allows for products to use a term, provided the context makes clear of the intention. The provision specifically uses the example where ‘soy milk’ is permitted with ‘soy’ as the qualifier that sets the context and intention, which permits the use of the word ‘milk’.

3. Government commitment to enforce labelling and marketing requirements.

The dairy industry would like the Australian Government to **implement an evidence-based Health Star Rating (HSR) system**. The HSR system must deliver an equitable outcome for all five-food group (FFG) foods and beverages (as per the *Australian Dietary Guideline* recommendations). The current system is not equitable for certain cheeses and further analysis is required to achieve an improved outcome with a greater percentage achieving a minimum of 3 stars. For far too long this system has not been underpinned by the latest scientific evidence to maintain credibility and enable consumers to make an informed choice. For example, the dairy categories (1D, 2D and 3D) were developed to ensure that five-food group dairy foods were fairly recognised by the HSR system, accounting for their complex nutrient matrix and both the inherent lactose and saturated fat content.



Both the HSR Report to the five-year review and the Ministerial Forum recommended rescaling and reclassification of Category 3D FFG cheeses to improve the HSR and achieve better alignment with the *Australian Dietary Guideline*. Unfortunately, the five-year HSR review where category 3D dairy foods (cheese) were redefined and rescaled did not deliver an improved result:

- a) Prior to the five-year review, 50 per cent FFG cheeses score < 3 stars (dairy industry data)
- b) Following the recommendations from the five-year review, 47 per cent FFG cheeses receive < 3 stars (dairy industry data).

Dairy fat has the most complex profile of all fats, containing more than 400 different fatty acids each with different physiological properties (Månsson 2008). Components of the membrane which encloses the fat droplets in milk (known as the milk fat globule membrane) also have several functional effects. Just as not all types of carbohydrate have the same impact on health, not all types of saturated fat are associated with the same health effects. Today, there is substantial evidence to show that saturated fats have differential effects on blood lipids and relationships with cardiovascular disease and that regular-fat fermented foods like cheese are associated with a reduced risk of coronary heart disease, stroke (de Goede et al., 2016 and Alexander 2012) and the metabolic syndrome (Kim & Je 2016).

The HSR system must deliver an equitable outcome for all FFG foods and beverages. It is imperative that Category 3D FFG cheeses undergo additional modelling to improve the HSR and achieve no more than 10 per cent scoring less than 3 stars.

1.3 Increase international trade and market access

Approximately 30 per cent of milk produced in Australia is exported to over 100 countries around the world. In 2020-21 this was valued at \$3.2 billion. China is by far the most dominant export destination with over 318k tonnes (38 per cent of total export volume) or \$1.3 billion (40 per cent of total export value) received per annum. By way of comparison, Japan, the second largest export market, purchases over 69k tonnes or \$362 million per annum (Dairy Australia 2021).

The key issue for Australian dairy over many years has been the decline in its export market share. In the late 1990s, Australian dairy supplied around 16 per cent of measured world exports of dairy products. By 2018 this had fallen to around 6 per cent. This has occurred in the context of solid increases in global export trade volumes. Between 2012 to 2018 alone, global dairy export trade volumes increased by more than 2.5 million tonnes (21 per cent). Despite this, Australian dairy exports only increased by 22,364 tonnes or 3 per cent over the same period.

International trade barriers and protectionism is a driver of Australian dairy's export market decline. Most competitors provide their farmers with market price supports by way of import tariffs, tariff rate quotas and domestic price subsidies and direct payments (government budget transfers) for various production requirements. It is estimated that the annual cost of these policies is \$977 million to net Australian dairy farm income and \$2.1 billion to Australian dairy exports (Anderson & Valenzuela 2020). The EU, Japan, China and Korea account for almost three-quarters of these adverse effects.

Significant progress has been made by the Australian Government on resolving trade barriers in recent years. Of Australia's 15 free trade agreements, 10 have come into force from 2010. These agreements have benefited the Australian dairy industry because:

1. tariffs are eliminated or significantly reduced on most dairy products
2. there are processes for resolving non-tariff measures in some of the agreements
3. the agreements cover most of Australia's major export destinations
4. as one of the least protected industries in the world, there is little by way of adjustment or productivity improvement required to maintain competitiveness.

It is important that the Australian Government continues to pursue free trade agreements that help the Australian dairy industry diversify and compete in export markets. Australia's core value is open and free trade and compliance with international trading rules. This should override any trade and geopolitical tension with any other country.

Australian Dairy Farmers welcomes Australia's progress on a free trade agreement with the European Union (EU). This will provide significant benefits to Australian agriculture and other sectors of the economy. However, the blanket adoption of the EU's request for the Geographical Indication (GI) protection of 56 cheese products would impact a considerable proportion of Australian cheese production and exports, with costly implications for local sales, marketing and employment. Put simply, it undermines many of the product recipes, brands and businesses that have long been established by hard-working Australian families of mostly European descent. The Australian Government should **resist efforts from the EU to restrict the Australian dairy industry's use of common GI cheese names.**

In June 2020 the Australian Government announced that an Agreement in Principle had been achieved with the United Kingdom on a free trade agreement. The announcement included staged removal of dairy tariffs over five years, with duty free quota volumes for Australian cheese, butter and other dairy products on entry into force. Australian dairy looks forward to the successful completion of negotiations and early entry into force of the agreement.

In its *India Economic Strategy*, the Australian Government set a goal of \$45 billion in annual exports to India by 2035. India is the world's largest dairy producer with domestic production generally servicing domestic demand (Aradhey 2020). Dairy imports are typically limited to milk powder and butter when domestic production is insufficient or to help control inflation. If **a free trade agreement with India** is finalised by the Australian Government, it must provide preferential access to India, ensuring Australian dairy will be well positioned to compete in the market. This would demonstrate Australia's credentials to Indian consumers providing opportunity for future growth.

Australia's free trade agreement with Japan was the first the Japanese had completed with a major dairy supply partner. Since then, Japan has completed bilateral agreements with the EU and USA, as well as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) agreement which includes New Zealand. These agreements with Australia's major dairy competitors have more favourable trading terms than the Australian agreement. To achieve equivalent or improved market access for Australian dairy into the Japanese market the Australian Government needs to **enact the general review clause in the Japan free trade agreement.**



Priority areas for update are:

1. natural cheese for processing
2. cream cheese with a fat content of 45 per cent or more
3. other fresh cheese
4. recognition of cheese definitions as specified under Codex Alimentarius.

Australian dairy has similar issues with the South Korean free trade agreement (KAFTA). In 2014 Australian dairy exports to South Korea was 15,000 tonnes at a value of US\$68 million. Following implementation of the free trade agreement that value grew to a peak of US\$75 million by 2017 before falling year on year to just US\$56 million in 2020. The key factor in this decline is the competitive disadvantage that Australian dairy products face compared to key competitors – the USA, EU and New Zealand. All of these countries negotiated superior market access for their dairy products under their respective trade agreements with South Korea. For example, under KAFTA there is no quota allowance and no tariff reduction for Australian milk powder which faces an import tariff of 176 per cent. All the other major suppliers gained quota volume access of varying tonnages, with 0 per cent tariff within quota. For products such as cheddar cheese, butter, food whey and others Australia's competitors enjoy larger quota volumes and/or faster tariff reduction schedules for non-quota products. This situation significantly limits the opportunity for Australian dairy exports into South Korea. To resolve this competitive disadvantage the **Australian Government needs to pursue improved market access for Australian dairy products through either review of the existing KAFTA or by requiring enhanced market access for Australian dairy as part of Korea's accession to the CPTPP.**

To support the free trade agreements and improve market access the dairy industry is working with state and federal governments to reduce non-tariff barriers. Concerns are being raised directly with offending countries and prosecuted via the World Trade Organization. The Department of Foreign Affairs and Trade have established a Trade Barriers Gateway website, which enables Australian exporters to report their trade barriers. Dairy Australia has been awarded a \$310,000 grant from the Australian Government to reduce technical barriers (product testing, shelf life and food labelling) to trade across six markets in Southeast Asia. Australia and New Zealand have agreed to work together with the Cairns Group via the World Trade Organization to secure a global agreement to cut global farm subsidies by at least half by 2030. Dairy Australia received a \$2 million Victorian Government grant to build the capability of Victorian exporters to increase the competitiveness of the Australian dairy industry internationally by growing markets in Southeast Asia, China and Japan. These are important initiatives given that by 2040 Asia is likely to generate more than 50 per cent of world GDP and could account for nearly 40 per cent of global consumption (McKinsey Global Institute 2019).

1.4 Maintain the live export trade

Export of Australian dairy heifers is an important market for Australia's dairy farmers. In 2020-21 over 90,000 were exported to various Asian countries, in particular China (Dairy Australia 2021). This plays a critical role in building and maintaining their dairy production capacity. A key criterion for success with the dairy live export trade is ensuring sound animal husbandry in market. There have been experiences in some export markets over recent years that highlights the need to ensure importers of Australian livestock are well supported. The dairy industry believes this important trade can be developed to improve animal welfare and grow Australia's dairy heifer exports. In seeking further support, recognition of the following fundamentals is important:

1. The export of breeding cattle assists developing countries striving for self-sufficiency and food security.
2. Food security plays an important diplomatic role with Australia's trading partners.
3. The trade provides competition in the livestock market, which delivers a positive outcome for dairy producers.
4. By extending services in market, we can build long-term strategic relationships.

Additional support from the Australian Government can be provided by joining with Australian industry funded programs to **support the further development of breeder cattle exports coupled with co-funding with industry an in-market animal husbandry and dairying training program**. Core subjects should include animal health care, animal anatomy and physiology, animal feed and nutrition, animal health and milking. This could be based on the Certificate in Animal Husbandry offered in Australia's TAFE system.

1.5 Make supply chains fair, transparent and competitive

Over recent years there have been four inquiries into the trading of dairy products throughout the supply chain. The Australian Competition and Consumer Commission (ACCC) completed a dairy inquiry in April 2018 and a perishable goods inquiry in December 2020. The Senate's Regional and Rural Affairs and Transport Committee completed an inquiry into the performance of the dairy industry in March 2021. This followed a similar inquiry back in August 2017. These found that bargaining power imbalances and market failure exist in the markets of perishable agricultural goods, in particular the dairy industry.

The *Competition and Consumer (Industry Codes—Dairy) Regulations 2019* (the code), including its review, and many of the initiatives in the Australian Government's \$22 million Dairy Support Package (2019 election policy) are addressing most of the issues identified in the inquiries.

Some of the outcomes experienced to date include:

1. synchronisation and stimulation of competition in pricing and market offerings
2. development of negotiation capability and greater equalisation of bargaining power between market participants
3. establishment of the foundations for improved farm and financial planning
4. increase in the professionalisation of contract management
5. enhanced accountability for misconduct.

There are still a number of competition policy changes required from the inquiries. **The *Competition and Consumer Act 2010* needs to include an economy-wide prohibition on unfair trading practices and the *Food and Grocery Code* has to be made mandatory with greater alignment to the dairy code.** These legislative changes to competition policy will help resolve bargaining power imbalances between dairy processors and retailers.

In September 2021 Australian Dairy Farmers released a guideline to enhance supply chain traceability and simplify trade systems. There is a role for the Australian Government to **assist in implementation of the traceability guideline by supporting field trials, extension activities like development of a technology catalogue and integration with reform initiatives such as the digitalisation of food regulation systems.** This could be delivered under an extended traceability grant program (from the \$7 million provided from 2019-20 through to the end of 2022-23).

The launch of the dairy industry's forward hedging market in 2022 will require some implementation support. This market was designed with an Australian Government grant in 2019. To progress this work **seed funding is required for the forward hedging market's governance and operating model.** This can be delivered under the Australian Government's \$5.4 million over four years from 2021-22 for projects in collaboration with the perishable agriculture goods industry.

As part of the Australian Government's congestion busting agenda Dairy Australia has been provided with \$8.3 million over three and a half years to deliver the Dairy Export Assurance Program. This partnership with the Department of Agriculture and Water Resources seeks to modernise dairy's export assurance process.

Three outputs will be delivered under the program:

1. Identify the regulatory hurdles domestic dairy manufacturers face to become exporters and build knowledge and capability of industry to become export registered. Currently almost 100 per cent of domestic manufacturers fail in their first attempt to become exporters or withdraw during the process altogether. The traceability guideline is a key input to this project because it identifies all the data requirements at each point in the supply chain.
2. Work with industry to align food safety in regulatory and commercial assurance programs to reduce the level of audit burden that results from potential duplication of audit processes. Some businesses can be audited up to 14 times per annum.
3. Implement technology and other processes to reduce direct regulatory intervention.

Dairy needs to have a modern assurance process based on risk and best practice that eases regulatory burden from farm through to the point product is packed and stored ready for shipping. A system that is transparent and easy to understand, whilst still driving the highest level of dairy food safety, will increase export capacity and create stronger demand for milk, benefiting all elements of the dairy supply chain.



Objective 2

Grow jobs and liveability in the regions with planning and investment



For many years dairy has suffered from a worker shortage. Age demographics, geographic location, industry culture, infrastructure, housing and attractiveness of other jobs and lifestyle in urban areas have contributed to the problem. This issue has been exacerbated since COVID-19 restrictions were put in place in early 2020. The closure of international borders has reduced availability of overseas labour, which the sector has traditionally relied upon. Revenue and job losses in the hospitality, arts, aviation and tourism sectors were expected to offset this as those displaced seek a new career in dairy on a permanent basis or at least until their sector gets 'back to normal'. However, stimulus programs such as JobKeeper have prevented the employment shift, keeping people employed in their pre-pandemic sectors regardless of the number of hours worked. With Australia's unemployment rate expected to continue at around 4 per cent through to the end of 2023 (Reserve Bank of Australia 2021), the lowest rate in decades, dairy's struggles to attract and retain staff will continue unless some significant initiatives are delivered.

2.1 Resolve dairy's workforce shortage and capability deficits

In December 2020 the Australian Government released its *National Agriculture Workforce Strategy*. This was welcomed by Australian Dairy Farmers as it contains 37 recommendations to modernise agriculture's image, attract and retain workers, embrace innovation, build people's skills and treat workers ethically. The 2021 *Federal Budget* provided \$30 million over the forward estimates to commence work on several initiatives to implement a number of recommendations. While this is a good start, significantly more investment is required to execute the recommendations in the report.

Australian Dairy Farmers would like to see a **\$300 million commitment to implement the *National Agriculture Workforce Strategy***. Priority should be allocated to the following initiatives:

1. Establishment of a Workforce Data Unit to aggregate and predict workforce gaps and trends.
2. Establishment of an Agriculture Passport to capture and retain staff competencies and experience across the sector.
3. Ensuring the education sector partners more strongly with industry to create learning experiences that meet industry development needs. This includes providing agriculture education from primary to tertiary level via STEAM (Science, Technology, Engineering, Arts, and Mathematics).
4. Expanding the Skilling Australians Fund to benefit the whole AgriFood workforce.
5. Improving administration of the visa system to recognise the critical skills shortage in dairying and be resourced to improve efficiencies and lower costs to farmers and rural communities.
6. Delivering an agriculture reputation and recognition campaign (including Employer of Choice Award) to promote best practice, create a positive culture and attract new workers to the industry.
7. Establishment of a Leading Change Fund to implement strategically aligned workforce leadership and career development programs.

On 23 August 2021, the Australian Government announced it will introduce an Agriculture Visa to resolve critical worker shortages. The conditions of the visa have been developed in consultation with industry with leadership being provided by the National Farmers' Federation. A trial is scheduled from December 2021 to March 2022 with around 700 people from Southeast Asia expected to arrive in different states in a staggered form. Labour hire companies are being used, as they are already established, to work in partnership with peak bodies and farm businesses to ensure appropriate deployment of labour on farm. It is critical that an **evaluation of the pilot is led by the National Farmers' Federation to finalise the structure and operation of the Agriculture Visa**. This will ensure that dairy and other commodity assessments and needs are appropriately reflected to inform the final program design.



Courtesy of Dairy Australia

2.2 Provide a more consistent approach to workplace COVID-19 restrictions

National Cabinet has agreed to a very clear national plan that at 70 per cent and 80 per cent double vaccination various freedoms and 'opening up' of the economy will take place. The concern is application of these targets differ between states, just like the COVID-19 restrictions have been applied since the pandemic began. To avoid disruptions to supply chains and provide consistency and clarity for farm businesses, a uniform national approach on COVID-19 restrictions is required.

Over time the COVID-19 virus will dissipate due to high vaccination rates and herd immunity. As this occurs requirements on business owners, for example COVID-19 Safe Plans, should be removed to ease the administrative burden. It is acknowledged that when infections occur or if the virus mutates restrictions may need to be reapplied to protect workers and community. For example, future lockdowns being contained to the site and local government area that has the infection (as opposed to state-wide). Going forward restrictions should only be imposed where peer reviewed evidence validates the **restriction significantly limits or avoids virus transmission risk.**

In September 2020 National Cabinet accepted and agreed to the principles and application of the *Agricultural Workers' Code*. The purpose of this statement was to provide consistency in cross-border movement of agriculture workers while continuing to minimise the risk of COVID-19 transmission. As states reach their 80 per cent double vaccination target a number of requirements in the code are no longer required given the lower risk of infection and hospitalisation. For example, there should be no need to produce a valid border permit. The **Agricultural Workers' Code needs to be updated to reflect a lower risk/lower restriction post 80 per cent vaccination environment.**



2.3 Reduce the urban–rural divide

Australian Dairy Farmers has had a long-standing concern about the distance decay effect or geographical discrimination. This is a trend where investments and benefits (volume and per capita metrics) decline the further away someone lives from a major city, despite being subjected to the same rate of taxation. Some examples are:

- The 2019-20 *Federal Budget* increased the Australian Government's previous \$75 billion infrastructure investment commitment to a record \$100 billion. However, most of this investment is allocated to urban areas in the form of congestion busting projects, road safety, and road and rail upgrades. By way of comparison, regional Australia received a further \$200 million for a fourth round of the Building Better Regions Fund, a new \$220 million investment in improved internet and mobile services through the Stronger Regional Connectivity Package and \$100 million in Regional Airport infrastructure upgrades.
- As part of their research into reducing psychological distress and obesity in Australian farmers by promoting physical activity (published in *BMC Public Health* in 2011), Susan Brumby, Director of the National Centre for Farmer Health and others reported that 'rural Australians face a high mental health burden due to social isolation, socio-economic constraints, poor diet, increased alcohol intake, suboptimal sleep, lack of exercise, high rates of obesity and diabetes. As a sub-population of rural Australia, it has become evident that farmers experience inferior physical and mental health than their rural counterparts. This is also due to the distance decay effect where the further people are from a service, the longer they wait to access that service. The differences between rural and farmer mental health is highlighted by the increased incidence of suicide in farming communities.'
- The Department of Health's *Annual Medicare Statistics* report on healthcare services and expenses by geographical location reveals that for people living in the city the number of healthcare services per capita is 6.3 with an average out of pocket expense of \$38.37. This compares to people living in remote areas (i.e., farmers) at 3.6 healthcare services per capita with an average out of pocket expense of \$40.59.

This urban–rural divide is not only a barrier to employment, liveability and prosperity in the regions, it is unfair and discriminatory.

The Australian Energy Regulator's (AER) methodology is an example of the urban–rural divide in practice. Its regulatory basis uses population density and minimal cost per customer as the determinants of value. Under this approach regional and rural energy infrastructure upgrade proposals cannot compete against metropolitan proposals. Regional Australia, in particular farmers, want to continue to support deployment of renewable energy generation systems, scale up their operations and support growth in their region. To support these priorities **the AER investment methodology has to be reviewed for the purpose of changing to a more robust and fair assessment process.** Reducing this barrier will stimulate regional investment and infrastructure upgrades such as moving from a single wire earth return line to three phase electric power in key dairy regions.

In June 2021 Regional Development Australia held a national forum in Canberra titled Growing Stronger Regions together. This was a comprehensive agenda identifying the opportunities for economic growth, infrastructure and funding, and attracting businesses and population to regional Australia. The issue with the forum is that the opportunities, challenges and solutions proposed have not been converted into a **regional development strategy** for the country. This is required given the COVID-19 push towards regionalisation.

The Australian Government has a Regional Deals program where all levels of government come together to develop an action plan around a clear set of objectives. This is a 'place-based approach' where community-identified priorities are at the centre of development and investment. Place based approaches were advocated for at the national forum. The issue to date is the limited uptake of the program with only three deals done in the areas of Barkly, Hinkler and Albury/Wodonga. In the National Farmers Federation *2030 Roadmap* and regionalisation agenda a target of 20 deals have been set. Australian Dairy Farmers would like four of these **regional deals to be completed in the dairy regions of Gippsland, Southwest Victoria, North Central Victoria/ southern NSW and Tasmania**. These dairy regions have competitive advantage on an international scale but have workforce shortages and other capacity constraints.

The regional development strategy and regional deals need to:

1. resolve housing (and rental) shortages by streamlining building and planning red tape, reprioritising grants such as the Regional Jobs and Infrastructure Fund and providing tax concessions like stamp duty discounts.
2. improve services (in particular healthcare, mental health and education), infrastructure and telecommunications to meet expected capacity increases and reduce the urban–rural divide. This can be achieved via direct investment, public-private partnerships, designated land use planning provisions and leveraging opportunities identified in regional strategic plans.

The regional development strategy and regional deals will enhance amenity and liveability in Australia's dairy regions. These are barriers to people seeking employment in the industry that the *National Agriculture Workforce Strategy* does not adequately address.

Phosphate rock is mined and processed to produce phosphorous, one of the three main nutrients used in fertilisers (nitrogen and potassium are the other two). According to the US Geological Survey's (USGS) mineral commodities report, during the COVID-19 pandemic phosphate production decreased despite consumption of phosphate fertilizers projected to increase slightly from 47 million metric tons (MT) in 2020 to 49 million MT in 2024. As a consequence, Australian farmers have experienced a product shortage (reducing crop and grass growing capacity) and significant increases in price (reducing farm profitability). The decrease in production was largely due to a downturn in gas production in China, the largest manufacturer in the world (around 90 MT mine production p/a compared to the second largest producer Morocco and Western Sahara at 37 MT p/a), and COVID-19 restrictions on production and supply chain capacity.

In Australia the Georgina Basin in Queensland and Northern Territory – including areas such as Wonarah, Mount Isa in Queensland, Mount Weld in Western Australia and Christmas Island – contain phosphate rock deposits. These are mined at variable scales generally for export. The Australian Government's *Modern Manufacturing Strategy* includes resources and food and beverage sectors as investment priorities. A focus on the **further exploration and development of fertilizer production in Australia** would improve security of supply for farmers and grow jobs in the regions.



Objective 3

Increase sustainability and productivity through innovation and markets

In 2012 the Australian dairy industry released a *Sustainability Framework* to address the sustainability challenges confronting the industry. Informed by international guidelines and standards, including the United Nations Global Compact and the Global Reporting Initiative (GRI), the framework includes policies and targets consistent with the United Nations Sustainable Development Goals. Each year the industry produces reports measuring performance against the targets. Progress is being made against most metrics, but it is slow. Without government support in key areas of climate change and natural resource management, it will be difficult for dairy to meet Australia's international obligations.

The Australian Government's *National Agricultural Innovation Agenda* provides most of the architecture to meet this challenge. Three of the four national agricultural innovation priorities – climate resilience, biosecurity and digital agriculture – can be bundled together to drive sustainability while improving or maintaining productivity in the industry. Pursuing strategic partnerships with best practice agencies throughout the world would accelerate the innovation agenda and advance Australian agriculture's competitive advantage.

Many of these partnerships will be pursued via the Research & Development Corporation (RDC) system. It is these agencies that play a lead role in advancing the productivity, competitiveness and sustainability of Australian agriculture. Using mandatory levies from farmers, matched funds for research and development (R&D) by government and other funding sources, they achieve these outcomes by delivering core services defined in Section 11 of the *Primary Industries Research and Development Act 1989*. Compulsory levies must continue to exist in the agricultural sector as they address market failures. They ensure the cost of delivering industry-wide services are equally shared by those who benefit – the producers. This ensures there are no 'free riders' in the system, and information and value is shared equally (Productivity Commission 2007).

3.1 Strengthen the agriculture RDC system

Over the past 20 years, Australia has been investing between 1.8 to 2.2 per cent of its Gross Domestic Product (GDP) in R&D. This is below the OECD average of 2.3 per cent and less than many of Australia's major competitor countries (OECD 2018). Assuming equal research quality across countries, this level of investment reduces Australia's competitive advantage. This has contributed to the slowing of dairy productivity growth over the past decade (ABARES 2018) and decline in export market volume and share to traditional competitors, the United States of America, Canada and New Zealand (US Dairy Export Council 2018). Attracting new participants depends on demonstration of competitiveness improvement and return on investment. **To strengthen execution of the RDC system and enhance Australia's agriculture competitiveness, the Australian Government needs to ensure Australia's agriculture R&D investment is equal or greater than the OECD average.**



3.2 Build resilience and responsiveness to climate change

Dairy farmers are at the frontline of dealing with the impact of climate change. Dairy Australia modelling indicates there has been a loss of dairy farm business productivity in the order of 0.6–0.9 per cent per year since 2000 as a direct result of climate change. ABARES' latest modelling (Hughes, Lu et al. 2021) estimates that changes in seasonal conditions over the period 2001 to 2020 (relative to 1950 to 2000) have reduced annual average farm profits by 23 per cent, or around \$29,200 per farm. These impacts have been most pronounced in prominent dairy regions of south-western and south-eastern Australia. Many are adapting their farm system, but the effectiveness of these changes is reducing as climate variability increases. Changing pasture growth patterns, reduced rainfall, heat impacts on milk production and an increase in extreme events like fire, flood and drought are becoming more regular and severe.

In an internal report commissioned by the Commonwealth Bank (CBA), modelling has suggested that in a worst case scenario, with no action taken by dairy farmers (e.g. investment in on-farm adaptation) and no government policy response, the profitability of dairy operations could fall by up to 40 per cent by 2060.

The North East Dairy Climate Futures project (June 2021) recommended appropriate strategies for building climate resilience are:

1. optimising changing climate conditions with appropriate fodder species and feed management
2. building soil organic matter and improving productive performance
3. determining the best and most cost-effective way to create more tree cover to shade dairy herds

4. developing a guide for building shade management infrastructure on dairy farms
5. developing a water map that includes predicted runoff declines, mapping of groundwater, springs and unregulated streams and trading rules
6. improving irrigation water management
7. farm risk management decision making – investing in drought preparedness
8. extreme weather preparedness
9. improving health/mental health services support at a local level
10. understanding community resilience among farming communities.

Dairy Australia recently commissioned an Australian Dairy Industry Adaptation Pathways project with Energetics to identify and assess the cost effectiveness of adaptation options that minimise climate change risks on dairy farms. This work will build on the CBA modelling and the North East Dairy Climate Futures project recommendations and should be available early 2022.

It is recommended that **the Australian Government direct its investment in the climate resilience pillar of its *National Agricultural Innovation Agenda* to support the delivery of the recommendations of the Dairy Industry Adaptation Pathways and North East Dairy Climate Futures projects in partnership with Agricultural Innovation Australia, Dairy Australia and other relevant RDCs.** This validates the importance of the RDC system.

The Murray-Darling Basin is a critical resource for the dairy industry with 20 per cent of the national milk pool produced and processed in the irrigated areas of northern Victoria, southern New South Wales, Toowoomba and Warwick in Queensland and Murray Bridge in South Australia (ABARES 2015).



Courtesy of Dairy Australia

This makes dairy businesses – both farms and processing – the backbone of the economy and community in the region. Managing access to water is a significant component of dairy farming in the Basin, so the successful implementation of the *Murray-Darling Basin Plan* on time and on budget is critical as the 2024 deadline approaches.

Australian Dairy Farmers has a long-standing policy of bipartisanship in the full implementation of the *Murray-Darling Basin Plan*. However, this should be delivered to ensure there are no unmanaged and unmitigated third-party impacts from the use of environmental water and negative impacts on regional communities are mitigated as far as possible.

Dairy has done much of the heavy lifting in achieving water recovery to date. As we move forward it is critical that the **recommendations of the Productivity Commission's *Murray-Darling Basin Plan: Five-year assessment* and the ACCC's *Murray-Darling Water Markets Review* are implemented**. This will help provide certainty and confidence to Basin communities. In terms of water recovery, the Australian Government needs to ensure there are **flexible pathways to deliver projects to meet the *Murray-Darling Basin Plan* targets. This may involve extending timelines in particular circumstances**.

Back in 2010 the dairy industry supply chain set a target of 30 per cent reduction in greenhouse gas emission intensity by 2030. The *Australian Dairy Industry Sustainability Report 2020* demonstrated that since 2010 there has been a 23.5 per cent decrease against the target and a decrease of 27 per cent in total emissions (Dairy Australia 2021). This shift has mainly been driven by a move away from natural gas to renewable energy predominantly in the dairy processing sector.

The Australian Government's \$10 million Energy Efficient Communities Program – Dairy Farming Business Grants in 2020-21 was a big success.

Dairy farm businesses were provided with grants of up to \$20,000 to improve their energy efficiency. There was 100 per cent take up with many applicants missing out. Deployment and replacement of appliances will occur in 2021-22 and emission reductions will be accounted for in future sustainability reporting. Further emission reduction cuts can be made by **providing another round of Energy Efficient Communities Program – Dairy Farming Business Grants**.

The Australian dairy industry accounts for 10 per cent of agriculture's greenhouse gas emission. This equates to approximately 2 per cent of Australia's total emissions. On-farm is the predominant source of emissions across the dairy supply chain, with the largest source of emissions coming from methane from enteric fermentation (57 per cent of on-farm emissions).

There are a number of initiatives underway to continue to drive down emissions, in particular methane. Some of these are:

1. The Australian Government's Methane Emissions Reduction in Livestock (MERiL) program offers grants from \$500,000 to \$1.5 million to incentivise farmers to reduce their emissions.
2. A \$13 million program known as the FutureFeed initiative is now trialling the technology to determine commercial viability. This is based on research that has found that just 2 per cent of seaweed in cattle feed could reduce methane (the major emission source) emissions by 99 per cent.

3. The Low Emissions Supplements to Grazing Animals at Scale program is an investment of \$22.9 million from 2021 to 2026. This is designed to support the development of technologies for delivering low-emissions feed supplements to grazing animals (around 95 per cent of the national herd) without imposing additional costs.
4. In Nowra NSW dairy farmers in the district are involved in a partnership with commercial providers and the local government to capture manure and other waste products in the district to fuel a biogas plant that converts those inputs to electricity for the region. The \$5 million project is part of a \$50 million Australian Government initiative (Regional and Remote Communities Reliability Fund/ Regional Australia Microgrid Pilots Program) to support the deployment of microgrids and renewable energy across regional Australia.
5. A broader suite of initiatives is committed to in Dairy Australia's *Climate Change Strategy 2020-2025*.

It is important that the Australian Government **continues to co-fund these emission and waste reduction initiatives** to help achieve Australia's international obligations. This recommendation is consistent with the Grattan Institute's *Towards net zero: Practical policies to reduce agricultural emissions* (2021).

3.3 Support natural capital markets and environmental stewardship

Natural capital is the world's stock of natural resources. It includes geology, soils, air, water and all living organisms. Many of these assets provide people with goods and services that are not always accounted for in trade and commerce and can be consumed for free. As a consequence, the world is now trending towards a market-based system for valuing natural capital. This is on the back of initiatives such as Payments for Ecosystem Services

(PES) programs, the introduction of natural capital accounting standards and the aggregated United Nations System for Environmental-Economic Accounting (UN SEEA). These provide a robust foundation to **build a natural capital policy framework for the Australian landscape**.

The Australian Government is seeking to establish a method to certify or verify farm biodiversity as part of the national Agriculture Stewardship Package. A certification scheme trial, which aims to see land managers, including dairy farmers, paid for the public benefits they generate from environmental stewardship, is underway. Dairy Australia is part of the trial which commenced in 2021. Despite the trial only recently commencing it is clear the government needs to **make the farm biodiversity certification scheme an ongoing program**.

Australia's *State of the Environment* report measures the extent and quality of Australia's natural capital. It has found that Australia's biodiversity is under increased threat and has, overall, continued to decline over time. Various causes, in particular habitat clearing and fragmentation, invasive species, fire, natural disasters and climate change, are identified. Dairy farming is not identified as a major cause and impacts of the industry's conservation management initiatives are not adequately measured. The Australian Government needs to **increase investment in the measurement of biodiversity to ensure dairy's impact is appropriately reflected**. Establishment of an Environmental Stewardship Fund with an **initial investment of \$1 billion** would rectify the reporting deficiency as well as provide delivery capacity for revegetation, reforestation and other conservation management practices.

3.4 Maintain strong border controls and program funding for biosecurity

In May 2021 the Australian Government released a roadmap for Australian biosecurity. This followed a 2021 *Federal Budget* biosecurity investment of over \$400 million, which was in addition to record spending on biosecurity and export services in 2020-21. These are welcome developments for the agriculture sector after biosecurity capability and front-line services were neglected by state and federal governments over many years. State and territory governments now need to follow the Australian Government by announcing biosecurity funding at or above 2016-17 levels in real terms, as recommended by the 2017 Craik review. The Australian Government, through the National Biosecurity Committee and Agriculture Ministers Forum, should ensure the Craik review funding target is met to effectively deliver the *National Biosecurity Roadmap*.

3.5 Drive adoption of digital technologies on farm

In 2017 we heard from reputable sources that the next frontier of productivity and economic uplift for the Australian economy, including dairy, was digitalisation. McKinsey's *Digital Australia: Seizing the opportunity from the fourth industrial revolution* estimated potential contribution of \$140-\$250 billion to Australia's GDP by 2025, based on currently available technology alone. For dairy, the Precision to Decision Agriculture Project estimated an additional \$497 million or 15 per cent to the sector's Gross Value of Production. Several years after these foundational research pieces the economy is now seeing these commitments materialise.

Digital is not just about information technology (IT) infrastructure, nor is it focused narrowly on online/mobile presence. It is an integrated set of opportunities leveraging technologies ranging from automation, Internet of Things (IoT) and advanced analytics, through to agile methodologies and customer-centric product and experience design.

The dairy industry is quite advanced in its application of IT and collection of data. This is the result of decades of productivity improvement and farm consolidation to increase economies of scale. However, over the recent decade productivity improvement in dairy has stalled. Deployment of modern and integrated technologies such as IoT has been slow due to low profitability and other underlying factors such as drought.





Increasing adoption of digital technology to increase productivity and sustainability in the dairy industry requires the following initiatives:

1. **Address farmer privacy and security concerns and data sharing limits.** Some farmers do not trust sharing data with service providers and agencies.
2. **Deliver digital education programs to enhance farmer capability.** Some farmers need to understand the digital landscape and the suite of digital applications available to transform and uplift their farm and supply chain performance.
3. **Provide adoption grants to overcome capital and scale constraints.** Many dairy farms have been in survival mode which hinders procurement of digital products and services. Providing investment will stimulate adoption and jobs in deployment.

Some of the priorities for deployment on a dairy farm are:

- On-farm connectivity – Broadband and low power wide area networks (LPWANs) or low earth orbit (LEO) satellite technology are required to enable digital technologies like IoT. Significant numbers of connected devices and sensors can only be supported if communications are efficient and power cost low. According to Statista, the number of LPWAN connections used in land agriculture worldwide alone will rise more than 117 million by 2024 – up from just 160,000 connections in 2015.
- Development of a robot that puts the cups on the cows – In a rotary milking parlour this would be deployed just after the cow enters. It complements the automatic cup removers that are currently available. Developing this for a Herringbone or other milking system may be more difficult but should still be investigated via R&D.

- Automated spray sensors – These can be fitted throughout the parlour to make water use more efficient and targeted.
- Virtual fencing – This is an animal-friendly fencing system that enables livestock to be confined or moved without using fixed fences. It requires wireless technologies and sensors to control the location of livestock. The CSIRO and Melbourne based ag-tech start-up Agersens has been leading RD&E of this across the dairy, beef and sheep industries.
- Livestock biometrics (heat stress, heart rate, illness/injury detection, milk volumes/quality, plus others) – These are generally not used or well understood. There are companies that have the technology and connectivity options with a positive Return on Investment.
- Sensors, applications, and automation – These are well advanced and easily adoptable for irrigation, storage (e.g., grain and pasture growth).
- Livestock traceability – Safemeat and National Biosecurity Committee have agreed to fully digitalise and integrate the national livestock traceability system across governments, businesses and service providers. This will see national consistency in the National Livestock Identification System (NLIS), compliance and enforcement of livestock identification and movement recording and data collection and entry. Farmers will need to adapt with forms such as National Vendor Declarations and other processes becoming electronic. This initiative provides an opportunity for the Australian Government to strengthen its leadership in animal health and welfare policy.

So, the fourth industrial revolution is underway for the dairy industry. There is clear shift happening from feasibility and concept to farm and supply chain adoption. The challenge for industry as it seeks a competitive advantage over international rivals is the speed and integration of uptake. Basically, the faster and more coordinated it is, the greater the benefit.

3.6 Improve measurement of dairy farm performance

A key issue with measuring productivity and other metrics is low sample size. Dairy Australia uses the Dairy Farm Monitor Project (DFMP) as the primary source of industry insights about dairy farm profitability, equity and financial performance. Data collected by the DFMP provides for comparison at the farm and regional level. This provides a basis for identifying areas for improvement in farming and policy and programs delivered by industry bodies, governments and service providers. Despite these advantages' participation in the DFMP is limited to 250 of the 4,618 dairy farms across the country. ABARES also conducts surveys of dairy farmers to measure financial and other farm performance (e.g., productivity). This data is available to the public via the AgSurf website or in ABARES publications (e.g., financial performance of dairy farms, 2017-18 to 2019-20 released in September 2020). Like DFMP this data is used for research and analysis but suffers from a low participation rate. The Senate's Dairy Performance inquiry recognised this problem by recommending the Australian Government expand the representative sample of statistical information but did not describe how this should be done.

Australian Dairy Farmers believes that increasing participation in DFMP and ABARES surveys provides stakeholders with a more accurate measure of industry performance and trends. This translates to better R&D and policy for industry and government. To motivate dairy and other farmers the Australian Government should:

1. **make farmers eligible for the R&D tax incentive for provision of farm data to an RDC or government body such as ABARES.** This will mean a farm business will be able to claim an R&D tax offset under the R&D tax incentive following provision of their farm data. Currently only R&D entities can claim a R&D tax offset.
2. **co-invest with Dairy Australia and ABARES to build data management capacity.** Consistent with discussions and agreements made by Dairy Australia and ABARES this should include:
 - ensuring there are adequate resources to process the increase in sample size
 - delivery of training that enhances the business skills of dairy farmers. This will not only secure data integrity it will satisfy commitment four in the Australian Dairy Plan to intensify the focus on farm business skills to improve profitability and better manage risk.
 - streamline and integrate data collection surveys and systems to improve efficiency and reduce reporting burden.





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