



Australian Dairy Industry

Represented by Australian Dairy Farmers
and Dairy Australia

DRAFT Response to National Agricultural Workforce Strategy

Contacts

July 2020

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THE AUSTRALIAN DAIRY INDUSTRY



35%
of milk
production
is exported



MAJOR EXPORT MARKETS tonnes

244,828 t Greater China	70,119 t Singapore
98,816 t Japan	61,184 t Malaysia
	56,647 t Indonesia

ANNUAL PRODUCTION OF MAIN COMMODITIES

381,111 t
Cheese

224,107 t
Milk powders

73,322 t
Butter



AVERAGE ANNUAL MILK PRODUCTION PER COW

6,169
litres

8,795
million litres



VALUE OF FARMGATE PRODUCTION

\$4.4
billion



AUSTRALIAN MILK UTILISATION

38% Cheese

4% Whole milk powder

28% Drinking milk

9% Other

21% Skim milk powder
or butter



ANNUAL PER CAPITA CONSUMPTION

98.6 litres
milk

13.5 kg
cheese



4th

Dairy is Australia's
fourth largest
rural industry

AVERAGE HERD SIZE

276
COWS



AUSTRALIAN DAIRY FARMS

5,213

AUSTRALIAN DAIRY HERD

1.44 million
COWS

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Executive Summary

This is a joint submission from the Australian Dairy Farmers (ADF) and Dairy Australia.

The Australian Dairy Farmers Limited (ADF) is the national peak body representing the interests of dairy farmers across Australia. ADF is a member of the National Farmers Federation.

Dairy Australia is the dairy industry-owned service company, limited by guarantee, whose members are dairy farmers and the industry bodies, ADF and the Australian Dairy Products Federation, representing milk processors.

The consultation *Discussion Paper* poses far-reaching questions aimed at developing a national agricultural workforce strategy that can achieve real workforce goals. As such, instead of responding to each question, our submission primarily focuses on our top priority (called for in **Q20** but also responding to **Q12-17**), namely addressing the capability needs of people we employ, and specifically how to generate better career pathways, lifelong learning and therefore an engaging workplace/career in dairy farming over many decades. This submission focuses on a strategic long-term solution, which is the focus of dairy workforce planning in the next five years, rather than detailing the problems that have been described exhaustively by others. Our submission asks the National Agriculture Labour Advisory Committee to consider the role of government in expanding the significant industry investment in the DairyLearn system and the role of government in partnering with us to deliver an education and training system addressing our industry's needs.

The nature of dairy production is changing. Farms are becoming larger, more farmers are employing staff and farming systems are increasingly more complex, requiring an elevated level of capability, including managerial and technological.

As overviewed in Section 2, dairy is Australia's fourth largest rural industry. Nearly 8.8 billion litres of milk produced from 1.44 million cows on 5213 farms resulted in farmgate production valued at \$4.4 billion in 2018/19.

While the number of people employed on Australian dairy farms has not changed overly in the past decade there has been ongoing consolidation of dairy farming businesses, in response to a range of well-documented business pressures. While there are fewer farms, herd size is trending upwards (from 93 in 1985 to 276 in 2018/19) and there is an emerging trend of large farm operations with more than 1,000 dairy cattle. The industry norm is that one full time employee is required to manage 100 cows. Clearly, business expansion hinges in large part on whether there is a capable workforce at hand. Traditionally owner-managers, partners and family members have provided most of the labour on family farms, however 86% now employ staff, an increase of 33% since 2007.

A capable workforce is identified as key to future dairy industry productivity and growth in the Australian Dairy Plan. The challenges in workforce attraction and retention observed over the last two decades do not appear to be easing. Indeed, the complexity of workforce needs only appears to be growing with the evolution of increasingly complex dairy farming systems, the increasing need for managerial capabilities and uptake of technology (**Q1, 8 & 12**). Agriculture is ranked as the riskiest sector in our economy. Resilience has arguably never been so important. In the face of challenges associated with climate change, drought, fire, perceptions around sustainability, emissions, animal welfare and emergencies like COVID19, adaptability and health & well-being are also central to a capable agricultural workforce (Q3 & 4).

We contend that the dairy workforce crisis is not just about shortages in employee availability, but in capability. Capable people are a long-term dairy workforce attraction and retention goal. We are shifting away from a static 'skills' frame of reference towards recognising that workforce capability requirements need to go far beyond a narrow list of documented 'skills'. Capabilities comprise not only the technical skills and knowledge people have, but also their attributes, attitudes and behaviours. Equally, capable people need to feel engaged, energised and their learning objectives fulfilled, within the context of their professional position. This means access to rich, accessible learning and capability development opportunities. Equally, capable people are resilient people, adapting to the changing and inherently risky world they operate and live in.

In the short-term however, the ongoing importance of 'skilled' rural migration cannot be overstated. **Section 3** in this submission responds to **Q18** in the Discussion Paper specifically. With recent key policy reforms associated with permanent residency advocated for and welcomed by the sector, the administration of the visa system and the strategic disconnect between Australia's rural workforce needs and national migration policies must be addressed to make this system work better for dairying in its eight remote Australian regions.

Addressing dairy workforce needs: migration (Q18)

Recommendation 1: While the dairy industry is taking steps to address the critical labour shortage, strategic migration policy should link migrants with regional employment needs as part of the solution to future agriculture workforce availability. [The dairy sector supports the NFF proposal for an Ag Visa as a mechanism for achieving this.](#)

Recommendation 2: Permanent residency pathways are a critical component of securing skilled migrant workers to bolster a capable dairy workforce and must remain available.

Recommendation 3: Administration of the visa system should recognise the critical skills shortage in dairying and be resourced to improve efficiencies and lower costs to farmers and rural communities.

The submission then focuses on **Q13-17**. Considering the long-standing nature of the workforce shortages and ever-increasing dynamics of the dairy industry, novel solutions that go beyond offering recruitment incentives are needed. A key barrier is the lack of widespread recognition of the range of career pathways throughout the supply chain. More can be done to professionalise careers in the dairy industry, promote clear career pathways and support career progression. **Section 4** describes current industry investment in programs aimed at addressing labour shortage, employment, training and workforce development.

Successful as these initiatives are, the submission provides (in **Section 5**) an outline of the way ahead—a new era in workforce planning—through the new Dairy Australia *Learning and Capability Development Strategic Plan 2020-2022* (provided in full).

In summary, development of capabilities, defined above, requires interconnected learning experiences, that each build on the one previous, to provide a holistic learning journey. Initiatives need to recognise that farmers find it difficult to leave the farm for learning and need small 'bite-sizes' of learning, delivered innovatively and formally recognised over the decades of a farm career. This is where the government, through the education sector, can partner more deeply with industry to co-design, co-create, co-deliver and/or co-credential learning experiences. Our submission illustrates the new dairy approach through an overview of the project development of a pipeline for Dairy Farm Managers (section 5.1). We also point particularly to the potential for recognition of prior learning and short-form credentialing, known as 'micro-credentialing', the need for the VET sector to achieve greater collaboration at the national level and the pressing need for agriculture-relevant leadership and managerial capability development (section 5.2).

Addressing dairy workforce needs: future of dairy capability development (Q13-17)

Recommendation 4: Education sector funding should be targeted such that Australian formal education institution providers are incentivised to partner with the dairy industry and international providers for co-designed, co-created, co-delivered and/or co-credential learning experiences for farmers, the people they employ and those preparing to enter the industry.

Recommendation 5: Government should support new pathways of learning that foster recognition of prior learning and shorter-form credentials ('micro-credentialing'), to reward capability and motivate a well-articulated career pathway for the agricultural workforce.

Recommendation 6: Government should foster national collaboration between state-based Vocational Education and Training providers through strategic funding that drives better co-operation between institutions and across state borders for more accessible high quality agricultural education nationally.

Recommendation 7: Government should partner with industry to implement mechanisms that drive improved leadership and workforce management capability across the agriculture sector to ensure employers can easily access agriculturally contextualised credentials in HR/WHS and/or a pool of workforce consultants.

1 The Australian dairy industry¹

Dairy is the fourth largest Australian rural industry and a key sector of the agricultural economy, operating in eight rural regions (**Figure 1**). Nearly 8.8 billion litres of milk produced from 1.44 million cows on 5213 farms resulted in farmgate production valued at \$4.4 billion in 2018/19.

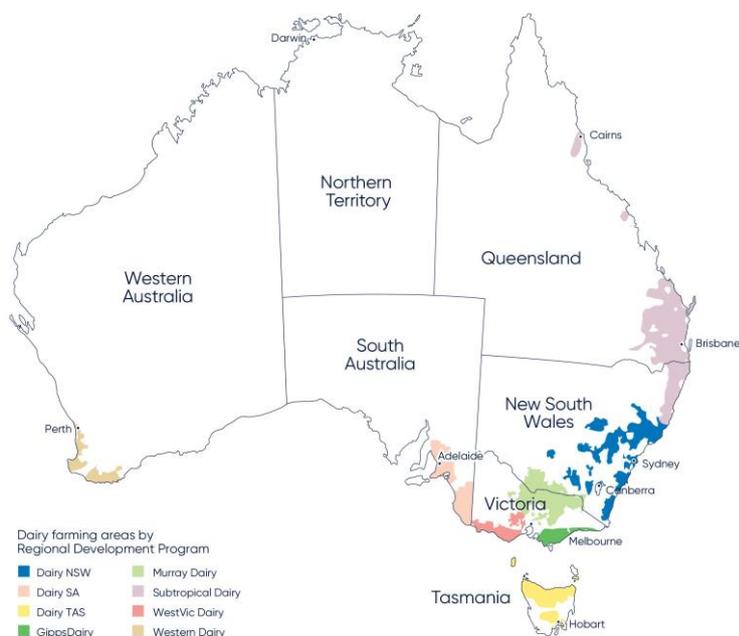


Figure 1. Dairying regions.²

The dairy industry acts as a major source of employment across these regional areas. It is estimated that approximately 46,200 people were directly employed on dairy farms and by dairy companies in 2018/19. Associated transport, distribution, farm services and research and development activities represent further employment associated with the industry (around 100,000 people).

Australia is a significant exporter of dairy products with 35% of milk production exported in 2018/19. Australia ranks fourth in world dairy trade. Total export value was \$3.2 billion in 2018/19.

Agriculture is ranked as the riskiest sector in our economy and one of the riskiest of agriculture sectors among developed economies.³ Not only are our farmers managing global risks such as falling commodity prices, trade barriers, changing consumer tastes and perceptions and a warming and drying climate, but also domestic risks such as contractual problems, regulatory burden and rural workforce shortage. The toll that managing this constant bombardment of challenges takes on farmer physical and mental health is better understood this decade than those past, but it has long been the case that resilience is an essential attribute of the Australian primary producer.

¹ Dairy Australia 2019. *Australian Dairy Industry in Focus 2019*. Melbourne, 52pp.

Dairy Australia, Australian Dairy Farmers, Gardiner Foundation & Australian Dairy Products Federation 2019. *Australian Dairy Plan: draft for comment*. Melbourne, 40pp. Accessed 9 June 2020: <https://www.dairyplan.com.au/key-documents>

² Dairy Australia 2019. *Australian Dairy Industry in Focus 2019*. Melbourne, 52pp. See Appendix 1 p. 33.

³ <https://www.afr.com/policy/economy/drought-fire-and-farm-wars-20200217-p541h4#:~:text=Australian%20agriculture%20is%20ranked%20as,sectors%20among%20all%20developed%20countries.&text=The%20US%2DChina%20%22phase%20one,must%20import%20from%20the%20US.>

Throughout the 1990s the dairy industry experienced strong growth, but this has stalled since deregulation. This period coincided with the latter half of the severe and prolonged 'Millennium drought'. Increased levels of market and margin volatility have undermined confidence in the outlook for many farmers, who are seeking reliable returns on which to build a longer-term future. As a result, there has been ongoing consolidation within both dairy farming and dairy processing. The number of dairy farms has continued to fall, down 8.5% in 2018–19 compared to the year prior.

While the number of farms across Australia has decreased, the average herd size is growing. In 1985 the average herd size was 93 cows and in 2018–19 it had grown to 276. There is also an emerging trend of large farm operations with more than 1,000 dairy cattle. Despite the increase in average herd sizes over the longer term, one of the variables placing a limit on total milk production in recent years has been a fairly static national herd size.

In recent years, rising input costs, combined with unprecedented market and climate volatility, have undermined profitability. But demand for dairy products remains strong. Domestic demand continues to grow and the outlook for exports is also very positive, as is the investment climate for agriculture.

A significant challenge for the dairy industry is to meet this growth in demand for dairy products through a proportionate increase in the industry's capacity to supply – specifically, this means attracting, developing and retaining a steady pipeline of new people and investment. 18% of dairy farming businesses currently report intentions to expand.⁴

The workforce – attracting, supporting, retaining, investing in building industry capacity, improving industry culture – has been identified by the dairy industry as a key priority in transforming the industry for the future, identified in the current Australian Dairy Plan process.

There is a well-documented shortage of access to skilled labour at all levels in the dairy supply chain from entry level roles to managers on farms and in processing plants.⁵ Specific challenges include an ageing workforce, high levels of attrition, and the fact that competition for dairy skills (particularly middle and managerial skills) is international and also comes from other sectors and industries (e.g. banking and finance). A key barrier is the lack of widespread recognition of the range of career pathways throughout the supply chain. More can be done to professionalise careers in the dairy industry, promote clear career pathways and support career progression.

The Australian Dairy Plan also discusses access to capital as a barrier to entry. Dairy farms are expensive to buy and many new entrants struggle to access the necessary finance unless they have inherited land. This is exacerbated by a banking sector that is tightening its appetite for risk. Securing government support for reducing the costs of doing business, working with the finance sector to reduce the costs of accessing finance and promoting new forms of enterprise ownership such as equity partnerships are examples of ways to ensure a steady pipeline of new people and investment.

⁴ Dairy Australia 2020. *National Dairy Farmer Survey 2019*.

⁵ [Dairy Australia surveys, submissions and workforce modelling](#).

2 Dairy workforce

According to CSIRO (2019), dairy makes up 9% of the Australian agricultural workforce.⁶ The average age of the dairy workforce (in 2016) was 45 years; reported as the youngest workforce across the agricultural sector.

Dairy farming is a highly skilled occupation, not comparable with other agricultural industries. The working hours and skills required for each agricultural commodity vary widely, due to very different production patterns and technical requirements. For example, dairy is an intensive livestock industry, and has little in common with broadacre grazing industries such as beef and sheep and even less in common with horticulture.

2.1 Dairy farm workforce numbers, roles and forecasts

24,400 people worked on dairy farms in 2018/19 (full time and part time)⁷; split on the basis of milk production between states as follows:⁸

- 15,600 in Victoria
- 3,500 in NSW
- 1,900 in Western Australia
- 1,800 in Tasmania
- 1,100 in Queensland
- 500 in South Australia

The average size of a dairy farm business workforce is 4.0 FTE, of which at least 2.0 FTE are family and the remaining are in the vast majority employed locally.

Traditionally owner-managers, partners and family members have provided most of the labour on family farms.⁹ However by 2017, survey data showed that 86% of dairy farms now employ staff—a 33% increase since 2007.¹⁰ 12% of dairy farms have more than 7 employees and this is projected to increase to 20% by 2025.¹¹

66% of staff working for the dairy farm business are full time, 12% work part time, 12% work casually and 10% work unpaid.¹² ABARES 2018 farm survey results reported that larger farms generally employed a higher proportion of casual and contract workers than smaller farms.¹³ Only a very small proportion of dairy farms use overseas workers (2% hiring skilled migrants and 6% hiring backpackers, equating to 2% of all dairy farm employees in Australia).¹⁴ The role of migration is discussed further in section 3.

Role distribution across all dairy farm staff is shown in **Figure 2**. Average hours worked and education levels are summarised in **Table 1**. Full details about these factors can be found in Dairy Australia's report: [The Power of People on Australian Dairy Farms 2017](#).

Pay rates and Pastoral Award 2010 classifications are given at **Appendix 1** (note award rates will increase 1.75% from 1 November 2020: <https://thepeopleindairy.org.au/announcements/national-wage-review2020>.) Salaries for award-free managers are often calculated on the basis of herd size and Dairy Australia has

⁶ Wu W, Dawson D, Fleming-Muñoz D, Schleiger E and Horton J. 2019. *The future of Australia's agricultural workforce*. CSIRO Data61: Canberra, Australia, 80pp.

⁷ There were 24,750 in 2011/12, indicating little job decline in dairy sector (People Factfinder 2013, p9)

⁸ Dairy Australia 2019. *Australian Dairy Industry in Focus 2019*. Melbourne, 52pp.

⁹ ABARES 2019. *Demand for farm workers: ABARES farm survey results 2018*. Research Report 19.10, Canberra, 46pp.

¹⁰ Dairy Australia 2007. *National Dairy Farmer Survey 2007*.

¹¹ Dairy Australia surveys and workforce modelling.

¹² Dairy Australia 2017. *The Power of People on Australian Dairy Farms 2017*. Melbourne, 46pp.

¹³ ABARES 2019. *Demand for farm workers: ABARES farm survey results 2018*. Research Report 19.10, Canberra, 46pp.

¹⁴ Dairy Australia 2017. *The Power of People on Australian Dairy Farms 2017*. Melbourne, 46pp.

developed a Salary Calculator for this purpose https://thepeopleindairy.org.au/wp-content/uploads/2019/08/Flat_pay_rate-calculator-July-Nov2020.xls

Details on labour efficiency and labour costs within dairy farming businesses (both imputed and employed labour costs), can be found in the [Dairy Farm Monitor Project](#) reports. This Victorian data shows an increase in the average dairy wage since 2007, suggesting a commitment by employers to pay staff well – anecdotally many are paying above the award (but there is wide variability). Also anecdotally, employers are more aware of their responsibilities and roles, which while driven by IR laws, also suggests a steady shift in culture towards valuing being an ‘employer of choice’. The industry Employment Starter Kit Initiative is detailed in section 4.1.5.

The ‘skills framework’ used by the dairy industry and Vocational Education and Training sector to date is given at **Appendix 2**, mapping skills against dairy farm roles (note this does not encompass all capabilities and is focussed on competency for tasks on-farm in contrast to capabilities of employees). Dairy farmers need more than 170 separate skills in 11 specialist areas of dairy farming practice.¹⁵

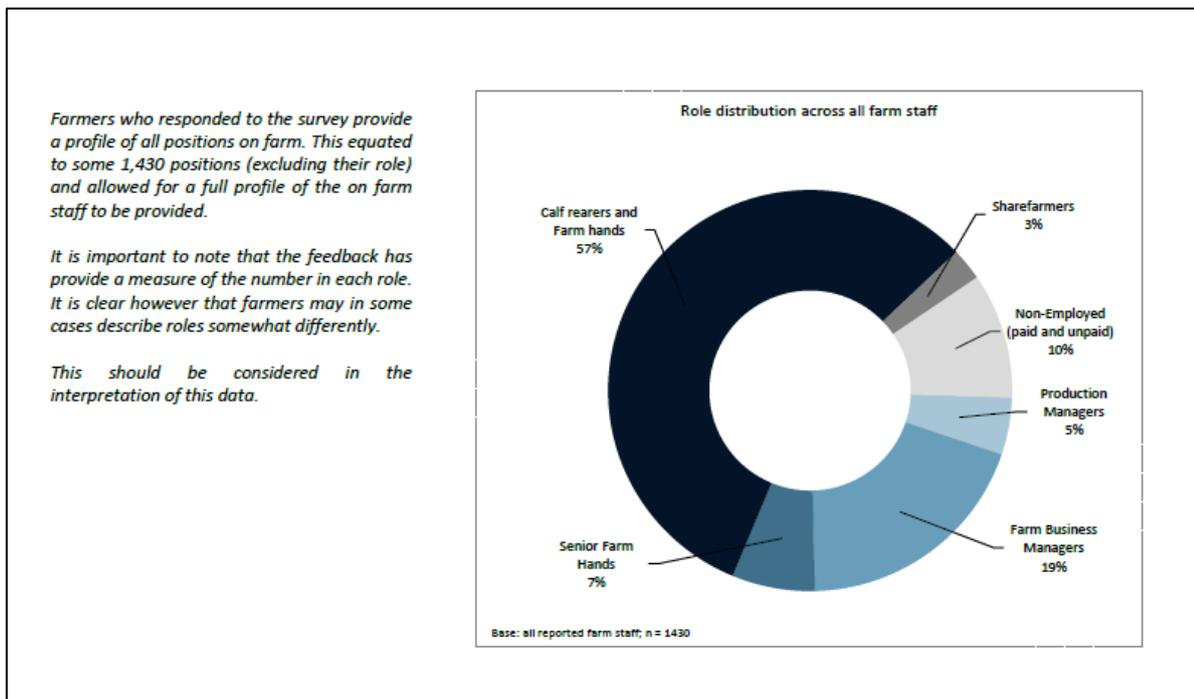


Figure 2. Role distribution of dairy farm staff as reported in 2017.¹⁶

¹⁵ A new capability framework is under development that will fundamentally transform the career and training picture for Australian dairy, so this appendix is provided for information only as it will shortly become historical. The new framework recognises that dairy farmers and employees need comprehensively more capabilities than just these ‘skills’.

¹⁶ Ibid.

Table 1. Hours worked and education profile of Australian dairy farm staff.¹⁷

Average hours worked per week	Farm staff (n=1430)
Less than 10	6%
10-19	7%
20-29	8%
30-39	16%
More than 40	63%
Highest level of education	
Secondary school	50%
Certificate	15%
Diploma	7%
Undergraduate	6%
Other	23%

The *2020 National Dairy Farmer Survey* states that favourable conditions in some regions over the past year have resulted in a significantly higher proportion of farms expanding than in 2019 (18%, up from 11%), including a substantial number of xx-large businesses (47%) and fewer farms are now in a temporary holding or contracting pattern. Conversely however, the proportion of farms winding down continues to trend upwards (12%, up from 9% in 2017).¹⁸

Among this latter group, 58% (or 7% of all respondents) plan to leave the industry over the next 2 years, but this result is significantly more widespread among farms with less than 150 cows (19%) than those with greater than 500 milkers (2%). As a result, farms planning to exit the industry represent an estimated 4% of national production.

While ABARES (2018) reported that dairy farmers generally expected declines in the number of workers required, this finding is too simplistic to take alone and overlooks the complex picture of an industry in transition. Labour needs are changing. Farms are growing (smaller farms are aggregating into larger operations), they are more complex (advances in automation and technology) and require a commensurate higher level of skills, with many farms employing managers. The *2020 National Dairy Farmer Survey* shows herd sizes are trending upwards and there were production increases on a higher proportion of farms than in 2019 (48% compared with 29%). 52% of respondents in the survey expect their production will increase over the next three years (n=801).¹⁹

Indeed, the Australian Dairy Plan anticipates realistic industry growth scenarios:

In the medium growth scenario, milk production in 2024-25 (FY25) is forecast to 9.3 billion litres higher than the projected levels of production on current settings. This additional production will

¹⁷ Ibid.

¹⁸ Dairy Australia 2020. *National Dairy Farmer Survey 2020*.

¹⁹ Ibid.

generate more than \$600 million annually in extra value at the farm gate and stimulate the growth of at least 1,000 direct new jobs, mostly in rural and regional areas. (Exec Sum)²⁰

Noting that the industry staffing norm is 1.0 FTE per 100 cows (although there are some economies of scale in larger herds)²¹, the ongoing need for a stable and appropriately capable workforce is clear and conversely is a significant limitation to business expansion and industry growth.

2.2 Recruitment is difficult and widespread rural labour shortage is well documented

Thirty-eight per cent of dairy farm survey respondents reported recruitment activities in 2017. While one in two farms reported using incentives to retain employees (flexible working hours and bonuses), 29% reported staff resignations over the same period. Of the staff that resigned, 58% left the dairy industry altogether.

There is more turnover at the farmhand level than for higher skilled positions.²² Turnover costs are significant. Each time there is a turnover of employees in an organisation, there are the direct costs of hiring, and other costs of decreased productivity for other employees as they take on extra work, the cost of orientation and development, workforce morale and business reputation.²³ Research published in 2011—still relevant in 2020—has shown that turnover in dairy farming is lower in positions of greater responsibility on farm reflecting the mutual desire of employers for stability and experience on their farm and employees for work security and gaining experience. That research reported turnover direct costs ranged from 50%-150% of an employee's annual salary depending on the role and a conservative estimate of direct cost to the industry was \$60-\$200M annually.²⁴

16% of survey respondents indicated an intention to recruit in the next twelve months (most recent data from 2017), representing over one in every six dairy farm businesses.²⁵ Informal networks and word-of-mouth continue to be the more widely used source for attracting new staff (61%). 24% of staff were recruited following online job advertisements, 13 % by local newspaper advertisements and 8 % by an employment agency.

The 2018 ABARES survey reported 48% of dairy farmers had problems recruiting. The predominant reason given was that applicants did not meet the job requirements, lacking experience and specialised skills for the job. Dairy farms seek employees with higher skill levels than the horticulture industry, reflecting the complex capabilities required in dairy farming systems. Projections indicate that in the next 2-3 years, there is a substantial increase in the need for senior dairy farm hands and for production and business managers (i.e. with qualifications and experience).²⁶

ABARES (2018) reported that farms further from large population centres had more difficulty recruiting.²⁷ None of Australia's key dairying regions are near large population centres. The Regional Australia Institute May 2018 policy paper '*The Missing Workers*' indicates that in Australia's eight dairying regions there are not

²⁰ Dairy Australia, Australian Dairy Farmers, Gardiner Foundation & Australian Dairy Products Federation 2019. *Australian Dairy Plan: draft for comment, Appendix A Growth Scenarios Paper*. Melbourne, 40pp. Accessed 9 June 2020: <https://www.dairyplan.com.au/key-documents>

²¹ Labour efficiency can also be reported as kg of Milk Solids/FTE. Dairy Australia and Agriculture Victoria 2019. *Dairy Farm Monitor Project, Annual Report 2018-19*. Melbourne, 101pp.

²² Ibid.

²³ National Rural Advisory Council 2013. *Report on the workforce planning capabilities of agricultural employers*.

²⁴ Nettle R, Semmelroth A, Ford R, Zheng C, Ullah A. 2011. *Retention of people in dairy farming-what is working and why*. Melbourne, Australia: University Of Melbourne, Deakin University.

²⁵ Dairy Australia 2017. *The Power of People on Australian Dairy Farms 2017*. Melbourne, 46pp.

²⁶ Report on the key themes from stakeholder engagements (Australian Dairy Plan 24 July 2019).

²⁷ ABARES 2019. *Demand for farm workers: ABARES farm survey results 2018*. Research Report 19.10, Canberra, 46pp.

enough local workers to fulfil employment needs. Local labour pools are small and continue to shrink as rural population loss continues (unemployment approaches zero).²⁸

CSIRO (2019) reports that agricultural employment dropped by approximately 20% over the past decade and is expected to decline further over the next five years. Although this decline is not borne out in dairy workforce numbers, CSIRO adds that the next generation of farmers is shrinking and the agricultural workforce is ageing. Detailed analysis can be found in that paper and these general findings apply equally to dairy as to other agriculture industries.²⁹

The challenges in workforce attraction and retention observed over the last two decades do not appear to be easing. Indeed, the complexity of the workforce needs only appears to be growing with the evolution of dairy farming systems and uptake of technology. Considering the long-standing nature of the workforce shortages and ever-increasing dynamics of the dairy industry, novel solutions that go beyond offering recruitment incentives are needed. This submission next discusses the importance of ongoing migration to fill the immediate to medium term shortages (section 3), and then describes current industry investment (section 4). Section 5 provides a detailed overview of the next era-solution for attracting and retaining a capable pipeline of employees for dairy employers of choice, including the role of government in realising this future.

3 Addressing dairy workforce needs: migration

The crisis in agricultural workforce availability was forecast almost ten years ago.³⁰ In 2011, AgriFood Skills Australia reported this was due to the ageing of its people, skilled workers exiting to the resource sectors, and poor attraction and retention rates over an extended period which have left an insufficient pool of young workers in regional Australia. The report stated that much would depend on Australia's strategic response to skilled and semi-skilled labour demand.

While the dairy industry is taking steps to address the critical skills shortage (see section 4), skilled migration is a critical component of future dairy industry growth and rural prosperity in Australia's eight dairying regions. Skilled migrant settlement in rural areas, on both a temporary and permanent basis, provides an important pool of labour for dairying at all skill levels, but notably at the managerial levels. Temporary arrangements allow both employee and employer to assess mutual compatibility and suitability, while a pathway to progress to permanency where appropriate allows for continuity. In fact, permanent residency is a key reason why skilled migrants report choosing Australian dairy farms over other nations as their preferred workplace.

Competition for dairy skills, particularly middle and managerial skills, is international. With dairy deregulation in the EU, many dairy farms across Europe are expanding through leasing land and other growth strategies. Added to this is the growth in dairy exporting countries such as New Zealand and the increased importance of skills and experience in dairy supply-managed countries like Canada. This means the dairy sector and governments need to put in place attraction, retention and training initiatives with international competition in mind.³¹

²⁸ The Regional Australia Institute 2018. *The missing workers: Locally-led migration strategies to better meet rural labour needs*. Canberra, The Regional Australia Institute, Figure 1, p. 5.

²⁹ Wu W, Dawson D, Fleming-Muñoz D, Schleiger E and Horton J. 2019. *The future of Australia's agricultural workforce*. CSIRO Data61: Canberra, Australia.

³⁰ Agrifood Skills Australia 2011. *Australia's Region: Australia's Futures*. Agrifood Skills Australia Ltd, Canberra.

³¹ Nettle, R. (2018) *International trends in farm labour demand and availability (and what it means for farmers, advisers, industry and government)*. International agricultural workforce conference, Teagasc Moorepark Dairy research levy update (Series 36), July 10, Radisson Blu Hotel, Cork, Ireland.

As the case study below illustrates, migrant employment can enable workforce planning and certainty when local labour cannot be sourced.

Case Study 2018

A dairy farmer in northern Victoria who has a 750 cow operation has said that she and her husband are considering exiting the industry because of the “enormous difficulty of finding skilled labour”.

The dairy farmer had to resort to employing a 457 visa holder (now a TSS) because they could not source suitable local staff. After one of their employees fell ill and could not return to work, the farmer advertised for a dairy Farmhand with development opportunities to become a Farm Manager. They received two applications from Australians and the remaining 50 were backpackers or people looking to be sponsored. They interviewed both the Australians and employed them with a three- month probation. Both employees left of their own accord after failing to turn up for work regularly.

The farmer then advertised for a Farm Manager and all four applications were from overseas. This is when they felt their only option was to employ a 457 visa holder and did not make the decision lightly “because the paperwork is so onerous and time consuming”.

The paperwork for the 457 visa holder cost \$2,730 and they used a migration agent to assist with the nomination process, plus accountant’s fees and weeks of the farmers of time. The farmer explained that one of the benefits of the 457 visa was that they would have a skilled employee for four years. “This meant that we could invest in training and development of the employee and expect to reap the rewards from this in our business for several years”.

In August 2018, Dairy Australia commissioned in-depth interviews with 13 Dairy Industry Labour Agreement holders to investigate skilled migrant recruitment at the higher skill level and views on permanent residency.

The following are some of the responses to two of the questions:

“Would you say difficulty recruiting managerial level employees affected the performance and culture of the farm business?”

Is permanent residency something you would like to support for your overseas workers at the end of their current term?”

- *It definitely affects our financial performance if there is not the staff to do the work; then we cannot increase the number of cows we milk and expand as we want to and do pasture renovation and other jobs that require labour. (Respondent MH7)*
- *Sometimes we just have to use people who are not ideal as there is no-one else. If you have people who are not ideally suited to the industry you do not encourage a positive work environment and there are often mistakes which can be costly in time and money. (Respondent LH5)*
- *Inability to get and keep labour is the main reason we are looking at selling. (Respondent MH8)*
- *There is a definite skills shortage at the senior level. We can get FLH1 (Pastoral Award entry level) but the higher skill set is near impossible to get from the local community. They are highly sought after and get positions immediately they seek them. (Respondent LH5)*
- *It seriously affects our lifestyle and in particular our ability to get off farm. We pick up the slack and work long hours and this has a significant impact on our family life. (Respondent MH5)*
- *We are wanting to expand but without people we are being held back. This puts a lot of pressure on us. We put a lot of time and effort into training people even if they come with training and experience and we need continuity. It is vital that they can see a pathway to settle permanently in the community with their families. (Respondent MH4)*
- *We invest a lot of time in training people up to what our needs are on the farm whether they come with qualifications or not. The longer they are here, the more valuable they are to us. It always costs us money if we have to recruit. If we are going to lose them after 4 years then this is all wasted. (Respondent MH3)*

In recognition of these issues, the Australian Government has recently implemented permanent residency pathways for skilled migrant dairy farm employees in three important ways, strongly supported by the dairy industry:

- In 2019, a permanent residency pathway was included within the Dairy Industry Labour Agreement (DILA) template, enabling dairy farm businesses to attract and retain skilled workers (FLH 5-7 of the Pastoral Award) and making the Australian dairy industry more attractive to skilled international labour.
- In 2019, a Designated Area Migration Agreement (DAMA) was implemented in the South West of Victoria, enabling dairy businesses in the region to address specific labour shortages through a DAMA Labour Agreement (FLH 3-5 of the Pastoral Award).
- In 2018, the ANZSCO occupation Dairy Cattle Farmer was moved from the Short-term Skills Occupation List (STSOL) to the Medium and Long-term Strategic Skills List (MLTSSL), enabling a visa pathway to permanent residency for skilled occupations Dairy Farm Owner Operator, Dairy Farm Business Manager, Dairy Farm Herd Manager, Dairy Farm Production Manager and other farm managers (usually Award-free).

3.1 Administration of the visa system nonetheless now needs improvement

Though applauded by the dairy industry, the above policy changes require commensurate administrative changes to make the system work more efficiently for dairy businesses.

Farm businesses currently employing skilled overseas labour report that the biggest impediment to pursuing the skilled migration pathway to fill labour shortages is uncertainty—more specifically, the turnover of staff within government departments and the expense and time taken to apply for and arrange visas with no guaranteed outcome.

Recent experiences with making variations to DILAs to enable employees to apply for permanent residency also indicate the process is inefficient and stressful, particularly when a temporary visa close out date approaches, a farmer risks losing a critical employee and a regional community risks losing a whole family.

For example, the prospect of losing a critical skilled employee, who has been in the business for a number of years, due to a visa renewal being denied (for example due to failing the IELTS test, despite being able to meet all the complex demands of the role) can cause significant workplace stress and mental health decline for a farm owner suddenly faced with either having to cull cows (1 FTE/100 cows) or increase his/her workload beyond what is sustainable. This anecdote has played out time and again on Australian dairy farms in remote locations where there is no local labour pool to recruit from. The economic and health impacts (mental illness³² in particular) can be significant yet should be easy to avoid if the administration of the visa system was efficient and reflected the realities of agricultural community needs. The government needs to work towards efficient processes that minimise the burden of sourcing workforce to prevent unnecessary stressors in dairy farming.

3.2 Migration policy does not reflect dairy community needs in rural Australia

Australia's skilled migration program does not appear to be flexible or coherent enough to meet rural-specific workforce challenges. Separating the development of skilled migration occupation lists (the current purview of the Minister for Jobs) from visa pathway settings (the Minister for Home Affairs)—and reviewing the settings on a 6-monthly rolling basis, causing ongoing uncertainty—does not reflect the real agricultural experience. Rural migrant settlement should be tightly linked to rural community needs, yet current arrangements are

³² Although outside the scope of our submission, the economic implications of mental health are the subject of a current Productivity Commission inquiry, which also notes the different needs and outcomes of different population groups, including regional and remote Australians. See: <https://www.pc.gov.au/inquiries/completed/mental-health/report>

such that there is a gap between government-mandated decisions on occupation lists and visas and labour shortages in regional Australia.

As described in the recent Regional Australia Institute analysis, the visa system needs to better reflect local labour needs. That report calls for a clear and consistent policy for migrant settlement in Australia 'to recognise and meet local labour needs in rural areas' (p.10).³³ A result where the ambitions of skilled migrants are well matched to dairy farm skills requirements will yield the most productive outcome for all parties.

Strategic migration policy that properly links migrants with regional employment needs is not being achieved through the current siloed process and there is an urgent need for further government and agriculture industry collaborative policy development going forward—including in the new COVID19 environment.

Addressing dairy workforce needs: migration

Recommendation 1: While the dairy industry is taking steps to address the critical labour shortage, strategic migration policy should link migrants with regional employment needs as part of the solution to future agriculture workforce availability. [The dairy sector supports the NFF proposal for an Ag Visa as a mechanism for achieving this.](#)

Recommendation 2: Permanent residency pathways are a critical component of securing skilled migrant workers to bolster a capable dairy workforce and must remain available.

Recommendation 3: Administration of the visa system should recognise the critical skills shortage in dairying and be resourced to improve efficiencies and lower costs to farmers and rural communities.

4 Addressing dairy workforce needs: current training programs

For dairy, accessing workers with appropriate skills, capabilities and experience in the future is a more commonly reported concern than issues around accessing unskilled workers (ABARES 2018). This highlights the need to attract, develop and retain talent.³⁴

Labour needs are changing. The workload on Australian dairy farms has increased over the last decade. As discussed earlier, the concentration of farm ownership with fewer but larger farms, and a consequent increased reliance on paid employees has highlighted the need for a robust training and development system that can provide effective training for new employees.

It has also highlighted the need for development programs for employers to assist them with managing and developing their staff, as these are skills they have not had to utilise previously. As **Table 1** highlights, the proportion of people in the dairy industry who have experienced formal education beyond high school is only 28%. Many employers have not historically engaged in formal learning experiences themselves in order to advocate for higher levels of education beyond high school—based on their own reflections of the value-add education can provide in career development and improved farming practice. This period of transition from family farms utilising family labour to large farms employing staff has been a significant cultural shift for the industry.

The dairy industry has responded to these challenges in a number of ways. Developing skills and capability has been identified as one of three strategic priorities for Dairy Australia. As an RDC, extension and education

³³ The Regional Australia Institute 2018. *The missing workers: Locally-led migration strategies to better meet rural labour needs*. Canberra, 20pp.

³⁴ ABARES 2019. *Demand for farm workers: ABARES farm survey results 2018*. Research Report 19.10, Canberra, 46pp.

for development of dairy farmers and the people they employ is core to Dairy Australia's business operations and strategic investment.

4.1 Snapshot of programs currently funded by Dairy Australia

The dairy industry has long recognised that people are the fundamental driver of farm business success, and that being able to attract the right people, manage them effectively and provide sustained career and wealth creation opportunities is essential for the long term viability of the industry.

Dairy Australia's *Farm Profit and Capability* team provides strategic and operational support for the development and implementation of workforce development strategies and actions across the dairy industry supply chain.

Dairy Australia manages the governance framework on behalf of industry, through supporting the Dairy Industry People Development Council, regional Extension Advisory Committees and other networks. It provides resources to improvement projects, research, networking, conferences and other national activities.

The Farm team also works extensively with regions and farmers to improve the attraction and retention of staff on dairy farms. Over a number of years, Dairy Australia's operating plan for Strategic Priority 2 – Capable People has allocated \$15M to this important area.

These funds are specifically allocated to development and delivery of Extension and partnered educational sector programs, developing farmer and employee capability and ensuring development and career pathways are available and supported across the industry.

The investment in developing skills and capability is largely funded through the annual levy that dairy farmers pay to Dairy Australia. Additional funding is obtained through matching R&D funds and targeted state and/or federal granting opportunities.

4.1.1 DairyLearn Education Partnerships

The National Centre for Dairy Education Australia (NCDE) was established in January 2006. The NCDE provided a framework that supported structured skills development and promoted career paths in both dairy farming and processing. Significant changes within the education sector placed pressure on the NCDE model.

Dairy Australia viewed this as an opportunity to review, broaden and strengthen the industry's education and development footprint by introducing a new DairyLearn Partnerships model working closely with all levels of education sector.

DairyLearn Partnerships have been developed to give more dairy workers access to high quality dairy education and consistent, up to date resources developed by Dairy Australia and delivered by qualified educators through an expanded network of providers, including Registered Training Organisations (RTOs), in all dairy regions. Partner RTOs have the opportunity to leverage the learning resources and expertise developed on behalf the industry and jointly funded by Dairy Australia and other industry organisations.

Since the implementation of DairyLearn Partnerships, education partners have increased and enabled broader access to dairy industry programs, resources and expertise for both farm owners and employees in the dairy industry.

Through partnering with the education sector, the industry has directly invested in:

- Developing and delivering dairy specific training across Australia including the support of e-learning delivery;
- Developing and supporting effective DairyLearn Partnerships governance;
- Supporting the development of, and access to, dairy specific learning resources for the VET sector
- Providing partner RTOs with access to dairy industry regional education and extension committees, and quality industry credible trainers;
- Developing a national network of RTO providers for ongoing dairy contextualised professional development for credible trainers;

- Enhancing strategic relationships between industry and the educator sector for work ready graduates at all levels of higher education.

The DairyLearn Partnerships model has assisted RTOs in building stronger relationships with the dairy industry both at a strategic and local or operational level. DairyLearn has also provided a clear direction for farmers wishing to access industry-relevant training for their employees. The current situation provides an excellent framework for enhancing dairy capability development in the education sector.

4.1.2 Dairy Passport: everything in one place

Dairy Passport, currently in development and recently supported further by the Victorian Government as part of the Covid-19 response, will provide a valuable online solution to enable dairy farmers to onboard new staff, manage their farm team across multiple farm properties, linked to key tasks that need to be undertaken whilst encouraging goal setting, career planning and capability development.

Dairy farmers, as busy business owners, struggle with the complexities of workforce planning and development, in addition to meeting the requirements of work health and safety (WHS) and employment compliance. WHS systems and approaches on dairy farms are often static – policies and procedures are not updated, not relevant in terms of applicability to individual farming systems or approaches, and not easily accessible to employees or contractors. Farmers may be reactive in relation to WHS record keeping and employee management as it can be viewed as a burden to establish “from scratch”, given the time required and the complexity of being across changing state and federal legislation.

The Dairy Passport online platform is a holistic system to attract, retain and develop capability in the dairy industry workforce through creating desirable, safe and sustainable workplaces.

Launched in 2020 with further functional releases planned for the end of the year, the online tool will support dairy farmers to create safe and compliant farms, and be leaders as employers of choice who adopt a continuous development mindset reinforced by practical, customisable templates and information available in one place (compliance, development, career planning, goal setting) aligned to legislation.

It will:

- Provide tailored content that can be adapted to individual farm businesses, systems and circumstances
- Enable farmers to store and access compliance documentation and reports to meet audit requirements in one accessible location
- Enable workforce engagement and development through sharing and signing policies and procedures
- Enable farmers to meet compliance requirements with contractors
- Provide articulated career pathways and training suggestions for farmers, the people they employ and those preparing to enter the industry
- Provide a platform that can connect with training partners (TAFE/RTOs) to provide seamless student, employee and employer experiences

4.1.3 Accredited training programs offered within the dairy industry

Full Qualifications

- Each year a full suite of qualifications are offered through DairyLearn Education Partners ranging from school based apprenticeships, traineeships and VET in schools to Certificate II in Agriculture through to Advanced Diplomas in Agriculture and Agribusiness.

The dairy industry has developed a complete career path structure which links these qualifications with positions on farm, and this structure articulates the skills and knowledge required to competently manage and operate a dairy farm.

These qualifications are offered throughout Australia, and the higher-level qualifications are offered by distance learning utilising supported webinars and teleconferencing.

In addition to supporting delivery of programs by the education sector, Dairy Australia co-delivers the Diploma of Human Resource Management (BSB50618) with Gippsland TAFE. This 12-month program is fully funded by Dairy Australia.

Accredited Industry Short Courses

- In addition to full qualifications, DairyLearn Partnership providers also offer a number of specific short courses that are co-developed and/or co-delivered between RTOs and Dairy Australia through the Regional Development Programs that target industry priority areas. These include: Emerging Dairy Leaders, Developing Dairy Leaders, Cups On Cups Off, Euthanase Livestock, Milk Tanker Operator and Milk Machine Technician.

4.1.4 Regional Program Delivery

Dairy Australia provides funding to deliver extension services for capability development and career progression for dairy farmers and the people they employ in the regions through a mix of:

- Regional Development Programs (RDPs)
- Regional staff (extension coordinators, workplace officers)
- National programs (e.g. NRM; Animal Health & Performance; Workforce Development; Large Herds; Careers; Young Dairy Network, Farm Business Management) generally coordinated by the RDPs and delivered regionally through consultants, government agencies and RDP staff
- Co-funding of government dairy extension services, where appropriate

Regional Development Programs

- There are eight dairying regions in Australia, each with their own conditions and requirements. Dairy Australia set up Regional Development Programs (RDPs) in the 1990s to cater for these varying requirements. While RDPs receive core funding and support from Dairy Australia, they are independent entities who act on what is best for their region. The RDPs are constantly running training days to upskill farmers and workers in animal husbandry, farm business management etc. More information is available at <https://www.dairyaustralia.com.au/about-dairy-australia/dairy-regions>

Field Training Days

- These are face-to-face gatherings in location (often a farm or demonstration site) with specified expert presenters and topics.

An example program is the Feeding Pastures For Profit (FPFP). This is a well-known and respected program which has increased profitability on many dairy farms and makes paddock and feed allocation simple and easy to use. It is aimed at farmers, share farmers and workers who make the daily decisions about pasture and supplementary allocations.

Focus Farms

- This program focuses on a farm business and aims to improve operating surplus through improved understanding of operational costs and by maximising home-grown feed and reducing fixed costs. This is achieved by close monitoring of farm activities and expenditure.

The Focus Farm receives support from an experienced farm consultant, who acts as a group facilitator, and a support group made up of farmers and local service providers. Focus Farms are

funded and supported through Dairy Australia and coordinated through the Regional Development Programs. The program duration is on average 12 months to provide a continuum of capability development and track progress of the farm business.

Dairy Discussion Groups

- Discussion groups are held in all dairy regions across Australia. The group may have either a specific focus (e.g. mastitis, farm safety) or may wish to cover a number of topics throughout the year. Groups can be established to solve a particular problem within a short time frame (called a Learning Group) or can be ongoing.

Many discussion groups are supported by farmer levy through Dairy Australia and coordinated through the Regional Development Programs.

Most recently, in response to Covid-19, discussion groups have been held virtually. This has allowed continuation of bringing groups together for support and also allowed reach of access for those farms where geographic disperse limits the ability to connect in person face to face.

4.1.5 The People in Dairy Program

The success of today's dairy farm business depends on how people are deployed, managed and developed. The People in Dairy program is fully funded by farmer levies through Dairy Australia and has developed a suite of tools and development programs to assist farmers to be better people managers.

This well-regarded program has successfully reframed thinking around the diverse ways in which people function within the whole-farm system as farmers, managers, farm workers, new entrants or advisers, of both individual farm businesses and the wider industry context.

The People in Dairy program also maintains a website www.thepeopleindairy.com.au, where tools, templates, guidelines and case studies are maintained. This site has become a valuable resource for the industry with over 65,000 downloads annually.

Employment Starter Kit Initiative (ESKi)

- Dairy Australia has released an [Employment Starter Kit initiative \(ESKi\)](#) that explains in plain language, all the things that farmers need to know to successfully employ new staff. This quick reference guide ensures that farmers are not only compliant with the legal aspects of employment, but can also implement good employment practices to recruit, induct and develop their staff.

Since its launch, more than 2,500 dairy farmers have requested the Employment Starter Kit guide in addition to accessing the latest information online. Farmers also receive updates to relating to employment, workforce planning and farm safety via People Matters e-newsletter. Feedback from farmers and has prompted increased interest in further human resource development training opportunities.

Careers Support

Dairy Australia supports Regional Workforce Extension Officers who advise students on potential opportunities and connects employers with trainees, Australian Apprenticeship Centres and training through the DairyLearn network.

Stepping Stones – Career planning

- Dairy Australia has also developed a Stepping Stones – career planning resource which outlines the different ways that a young person can enter the industry and gives advice on the training available, the typical pathways that a person can follow in their career. This is supported by actual case studies of people who have entered and progressed through the industry. Regional versions are available: www.thepeopleindairy.org.au/steppingstones

Young Dairy Network Australia

- The Young Dairy Network Australia (YDNA) is a network of young dairy farmer groups across Australia. These YDNA groups run training and development activities in their regions that are specifically targeted at younger farmers and employees and cover a range of areas from technical farming topics through farm business management and leadership. The network is supported by Dairy Australia and each area also gathers support and funding from local and national sponsors.

Leadership On-farm

- Building on the work done by Dairy Australia for the Diploma of Human Resource Management, a short course supporting farmers and supervisors to develop their on-farm leadership capability is currently being piloted in NSW. This fully online six-week program, funded by Dairy Australia and the NSW Department of Primary Industries, aims to support people in on-farm leadership roles to explore their leadership style, and develop their capabilities in communication, conflict resolution and supporting employees to navigate a career in dairy. The program of work looks to address on farm level leadership and culture, with the purpose of enhancing staff engagement and retention, and further fostering an awareness and desire to pursue advanced leadership opportunities across the NSW dairy supply chain. [Through confident self-aware on-farm leaders, with the capabilities to lead their team of people, the stress of managing a business small or large will be minimised and resilience to adapt to change enhanced through good leadership.](#)

4.1.6 RDC Collaborative People and Capability Projects

Dairy Australia leads the People in Agriculture project, partnered with APL, CRDC, GRDC, MLA and Australian Eggs to produce the leading go-to website for guidance and inspiration on employment in Australian Agriculture. The independent, collaborative digital platform aims to attract and retain skilled people in Agriculture, enable and improve employer compliance to increase profitability and productivity whilst improving the perception of Agriculture as a workplace and a career option.³⁵

The Rural Safety and Health Alliance facilitates cross-sectoral RD&E to minimise the negative impacts associated with death, injury and illness, and maximise the benefits of a productive, healthy and safe rural workforce. Dairy Australia is one of 9 RDCs involved in this collaborative project committed to health and safety improvement across all primary production sectors.

In 2019, eleven RDCs including Dairy Australia jointly funded an agricultural workforce digital capability framework. KPMG and Skills Impact reported that digital capability is essential across the current and future agricultural workforce:³⁶

Since 2016, the Australian Rural Research and Development Corporation's (RDC's) have been working together to support digital innovation in the Australian agricultural sector, focusing on data. There have been two phases. [Accelerating precision agriculture to decision agriculture \(P2D\)](#) analysed the risks and rewards of digital agriculture and made thirteen recommendations for Australian producers to capture the value at the farm gate. [A digital future for Australian agriculture](#) developed three tools and frameworks to guide a coherent and consistent national approach to support the digitisation of this sector.³⁷

*The agricultural workforce is likely to be influenced by technologies and digital solutions in the future that will augment and automate the way people operate. In order to adapt to this new environment, the workforce will need to develop and up-skill their digital capabilities. A national framework has been created to map the digital capabilities of the agricultural workforce that will be required in enabling individuals to adapt to a rapidly changing technological environment. The digital capability framework identified a set of six digital capabilities and five enabling capabilities that will be required for the agricultural workforce to work and thrive in a digital environment (**Figure 3**). The project has*

³⁵ See: <https://www.peopleinag.com.au>

³⁶ KPMG and Skills Impact 2019. *Agricultural Workforce: digital capability framework*, 92pp.

³⁷ *Growing a digital future for Australian agriculture: A summary (RDC collaborative project) and tool at <http://digital-maturity-assessment.it.csiro.au/>*

developed a self-assessment tool to help individuals to assess their future capability needs and a training and curricula handbook for education and training providers has been developed.



Figure 3. Agricultural workforce digital capability framework (Source: KPMG and Skills Impact 2019)

5 Addressing dairy workforce needs: the next era—connected capability development

Building on the considerable investment the dairy industry has made in workforce development to date, outlined in section 4, in June 2020, Dairy Australia published its *Learning and Capability Development Strategic Plan 2020-2022* (provided in full at **Appendix 3**).

This signals a shift and transformation in the way workforce attraction, development and retention are conceived.

It recognises that learning and capability development encompasses a wide range of activities designed to improve the capabilities of people. Capabilities comprise not only the technical skills and knowledge people have, but also their attributes, attitudes and behaviours. Building the people of dairy’s capabilities will lead to a confident and resilient workforce enabled to adapt to a changing world and minimise risk and volatility in their farm business. Through minimisation of stressors and improved farm practices of capable people, greater reward and productivity will occur, leading to increased job satisfaction and ultimately workforce retention being enhanced.

Development of capabilities ~~also~~ requires interconnected learning experiences, that each build on the one previous, to provide a holistic learning journey. The vision is that the dairy industry will have a world-renowned learning system that develops the capability of the people of the dairy industry for continuous evolution of practice, enabling a confident, profitable and sustainable industry.

This will be achieved through learning experiences that are rich and engaging, enabling the people of the Australian dairy industry to perform their jobs capably, leading to a growing workforce that is actively retained, and the Australian dairy industry progressing in a sustainable and prosperous way.

The new strategic approach is borne out of recognition that:

- Industry needs to more proactively respond to situational change. People living and working on farms are subject to economic, climatic and social pressures.³⁸ Resilience has arguably never been so

³⁸ <https://www.agriculture.gov.au/ag-farm-food/drought/assistance/social-community-support-services>

important in a dairy farming business and rural community. Future orientated farming practice requires continual review of current and needed skills, changing work practices and changing cultures. There needs to be more emphasis on producing a resilient, flexible and adaptable workforce underpinned by a re-emphasis on sound management skills.

- The attitudes of today's workforce are shifting, requiring a new response by farms. Employers need to provide continual learning and capability development in order to attract and retain staff and to be an employer of choice. Today's worker is no longer satisfied with status quo but is continually looking for new opportunities for job satisfaction.
- The changing size, nature, career intentions and patterns of new entrants and increased lateral engagement of more diverse backgrounds and older people, require a more structured and strategic approach to learning and capability development. The Australian dairy industry also faces significant increased competition for new entrants into the labour market and pressures on the retention of people within the industry.

The principles and objectives of the new strategy are detailed in **Appendix 3**. The core outputs will include the following:

1. An industry capability framework

To support the capability development of the future Australian dairy industry workforce, a capability framework will guide farmers, the people they employ and those preparing to enter the industry to navigate their career pathway. Through alignment of learning and capability development offerings to career goals and capability development pathways through the framework, Dairy Australia plans to strategically target resources to support their learning journey.

Building on the work from the Stepping Stones and Our Farm Our Plan initiatives, attributes and capabilities for the people of the dairy industry will be clearly articulated and mapped to learning and capability development opportunities provided by Dairy Australia and the broader education sector including agricultural RDCs and international providers. The capability framework will be owned by the industry, and update of the framework will be in consultation with all aspects of the industry.

Through Dairy Passport (see section 4.1.2), people of the dairy industry will be guided to identify their personal and professional goals, and then easily connected with learning experiences that support them to achieve these goals. The framework will also support identification of educational offerings that address future workforce capability gaps and human capital shortages.

2. A dairy learning and capability development system

Dairy Australia seeks to provide Australian dairy farmers, the people they employ (including service providers) and those preparing to enter the industry with a connected suite of learning and capability development opportunities that are easily accessible, sustainable, and meet the individuals' and industry's workforce capability development needs.

To achieve this objective the concept of DairyLearn has been created (**Figure 4**). DairyLearn consists of learning and capability development opportunities across the breadth of Dairy Australia extension, high school, TAFE, University, private education Colleges, international experiences, other RDC extension, and learning experiences from service providers and consultants such as veterinarians. The DairyLearn Education Partnerships have been discussed in section 4.1.1.

Through this system of learning, farmers, the people they employ and those preparing to enter the industry will have a clear understanding of the opportunities available to learn. Tools such as Dairy Passport will support people of the dairy industry to navigate the variety of learning and capability development opportunities and chose the most appropriate experience for them at that stage of their career and/or the direction of their farm business.

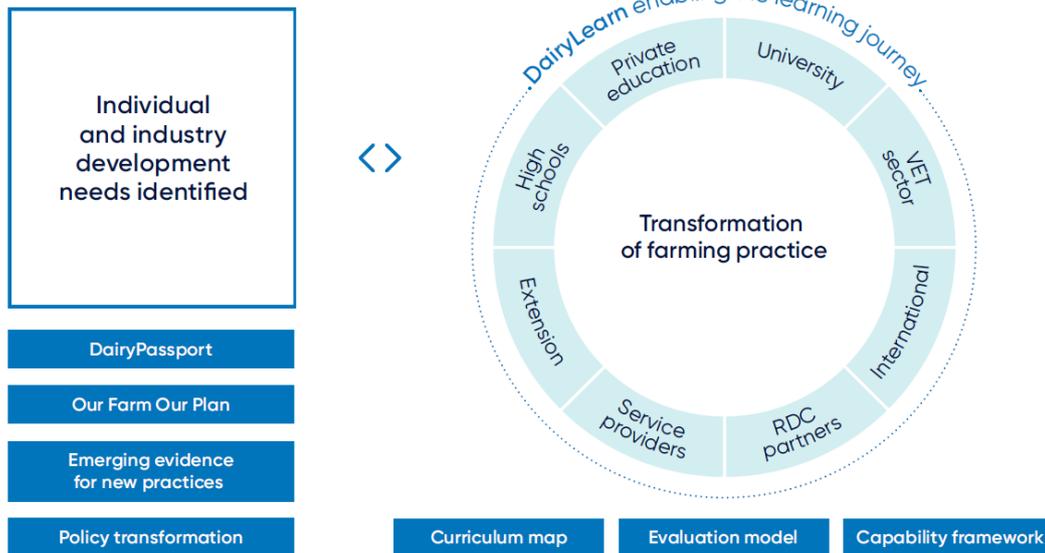


Figure 4. Supporting transformation of farming practice through Dairy Australia L&CD initiatives

3. Rich, accessible learning and development capability opportunities

Learners need to succeed in their self-development and improve practices. All experiences specifically designed and delivered by Dairy Australia will be created on a foundation of learner-centred facilitation, where technology enhances learning as appropriate.

How we facilitate learning and extension will be evidence-based, industry-guided, and connected across the opportunities that the DairyLearn system offers farmers.

For example, an extension capability framework will provide guidance on the knowledge, skills and attributes required for extension facilitation, and give direction for individuals' professional development for excellence in extension facilitation. Technology will be used to enhance learning and capability development offerings. Technology will only be embedded in learning and capability development offerings where the addition of technology enhances learning. Learning may be enhanced through experience, such as applications and smart devices for reflecting on learning and applying learning to on-farm practice after the extension activity is completed or through access, for example, the use of online video links to connect people remotely and improve accessibility, overcoming geographical barriers for engagement.

An engagement plan for consumers of the offerings available in the DairyLearn system will ensure all farmers, the people they employ and those preparing to enter the industry are aware of the opportunities available to them. Targeted communications that detail the benefit of investing time in learning will seek to support people to make informed decisions on which learning opportunities are most appropriate to them at that point in time. The engagement plan aims to appeal and resonate with many audiences, including culturally and linguistically diverse communities, new entrants and those considering dairy who are currently employed in other sectors and industries.

A governance framework for the *Learning and Capability Development Strategic Plan 2020-2022*, will ensure all Dairy Australia-administered learning and capability development opportunities are appropriately evaluated for learner experience, learning outcome, and overall impact through uptake of farming practice evolution (financial, ethical, and personnel well-being). The governance process will also examine financial viability of Dairy Australia learning and capability development offerings for sustainability.

Key metrics for measuring impact will be developed and include: targets for the learning experience, targets for engagement in learning and partnership development goals that support learning.

Partnerships are a core element of the strategy (see *Dairy Australia Learning and Capability Development Partnerships Plan 2020-2022*; **Appendix 4**).

The *Partnerships Plan* sets out the intention to establish learning experiences that co-designed, co-created, co-delivered and/or co-credentialled between Dairy Australia and one or more partner providers of learning. The outcomes of a partnership are mutually beneficial and leverage the resourcing and technical strengths of each organisation, for providing a learning experience that is superior in quality to that provided by Dairy Australia or the partner alone. In this way, partnerships are viewed as a key mechanism for enabling impactful learning opportunities that support the capability development of farmers, their employees and those preparing to enter the dairy industry workforce.

Partner organisations are strategically identified for the most efficient, targeted and rich learning experience that can be offered to farmers, the people they employ and those preparing to enter the industry. Partnerships aim to elicit the best quality learning experience in an innovative and sustainable manner for both parties and address market failure in building the capability of the workforce.

Governance and an implementation plan for the next twelve months are detailed in the *Partnerships Plan*. Dairy Australia aims to achieving national and international recognition for this newly conceived, fully-integrated model of agriculture sector workforce development.

Through meaningful partnerships between industry and education, and between industry sectors, more connected learning experiences that are supporting people to be work ready will be achieved.

5.1 The future of dairy capability development - establishing a pipeline of Dairy Farm Managers

An in-depth description of the Dairy Farm Manager program to address this workforce shortage is provided to illustrate the new Dairy Australia approach going forward.

The gap between supply and demand of highly capable dairy farm manager employees has continued to grow, becoming more exaggerated in the last decade. Industry forecasts suggest that between 50-80 new dairy farm managers will be required annually to meet workforce demand requirements.

This project proposes a partnership framework between industry and education to support sustainable, exponential growth in the pool of capable dairy farm managers in meeting this workforce need.

Review of the Australian Qualifications Framework indicates, that to possess the capabilities required to successfully manage a large dairy farm business (turnover of between \$5-90M), an individual is required to operate at a level of cognitive function of minimum AQF 7 (undergraduate Bachelor degree).³⁹

Indicative of the current state of the workforce, research by the Tasmanian Institute of Agriculture found that whilst 57% of the Tasmanian dairy industry workforce identified as holding a manager role, 47% identified their highest level of educational attainment as Year 10 or equivalent and only 5% had completed education to Bachelor level qualification. Whilst it should be acknowledged that a formal education qualification is not a necessity to effectively manage a large dairy farm business, the ability to cognitively function at the level of AQF 7 or higher must be evident.

Currently in the Australian dairy industry, individuals aligning to these criteria are of an older age group and have developed their capability over decades of work and life experience. Relying solely on this approach of 'learn on the job' has seen the industry arrive in its current state of lacking a sustainable pipeline of managers

³⁹ See: www.aqf.edu.au

to meet the workforce demand. This trend will not change without proactive action given the ageing workforce challenges faced by agriculture.

There are currently no dairy specific programs offered in Australia at the level of AQF 7 or higher which meet the specialist capability development requirements for dairy farm managers. Further, it is unviable for the Australian market, to sustainably develop a complete undergraduate degree program dedicated to dairy given the market demand and return on investment. However, there is opportunity for innovative models and frameworks to be developed which leverage existing and new education opportunities in the market, to tailor a package of learning experiences or curriculum, that meets the capability development needs of future dairy farm managers.

The dairy farm manager program comprises a contemporary and sustainable partnership pedagogy curriculum framework consisting of four complementary education initiatives. These initiatives aim to develop dairy farm manager capability through partnerships between Dairy Australia, dairy businesses that employ managers and selected tertiary education providers. The initiatives bring together dairy farm businesses to provide work integrated learning experiences and professional networking, three tertiary education providers (two Universities and one Agricultural College), an RDC who increases reach and national connectivity across multiple agricultural sectors, and Dairy Australia who lead the initiative and provide learning experiences and further professional networking for students through extension events.

The targets cohorts for this are current employees in 2iC management roles and future workforce personnel studying an undergraduate qualification.

The four initiatives are outlined as follows: .

1. **Graduate Diploma of Agribusiness (Dairy)** – The Graduate Diploma of Agribusiness (Dairy) will be developed and delivered over the five-year duration of this project in partnership with the University of Tasmania and businesses that employ dairy farm managers. The curriculum design is structured as a blended model encompassing the majority of learning through online platforms with 2-3 face to face engagements held in various locations across key dairying regions of Australia throughout the course. This design enables the Graduate Diploma to be nationally accessible. This is the only known dairy farm manager specific qualification currently available in the Australian market at the level of Australian Qualifications Framework (AQF) 8 or higher. The AQF is the policy regulating formal educational qualifications that are developed and delivered in Australia and all education providers align learning experiences to the level of learning of the course.
2. **Dairy Learning Plan (DLP)** – The DLP is a curriculum of learning and development activities created using the educational design theory of Work Integrated Learning (WiL)⁴⁰ to develop foundational dairy farm manager capability in undergraduate Bachelor students (AQF7). The curriculum leverages existing dairy learning experiences which the industry invests in including Dairy Australia extension activities, industry conferences, networking events and on farm work experience placements. By applying work integrated learning principles to weave these experiences into undergraduate curriculum, the DLP is able to further leverage learning opportunities presented to students as part of their formal education. This includes embedding real world dairy contexts into learning activities such as field projects and case studies.

⁴⁰ Work Integrated Learning (WiL) has existed as a valid pedagogy for many years and more recently has risen in prominence across the higher education sector as a preferred mode of delivering authentic, real world learning experiences which promote higher order thinking and deep and meaningful learning. The dairy industry provides an enticing prospect for education institutions interested in embedding WiL in their curriculum, offering a plethora of authentic learning environments through on farm & industry work placements and real-world challenges, which require students to apply formal learning to address industry issues. The provision of such high-quality learning experiences ensures students more meaningfully understand their classroom learning, how to apply it and most importantly, develop the industry networks and competencies needed to be work ready upon graduation. The Dairy Australia *Learning & Capability Development Strategy* provides impetus for the dairy industry to actively partner with farmers and education institutions for the provision of work integrated learning experiences to students.

3. **Enabling Scholarships** – financial support aligned to the DLP curriculum to enable student participation in the identified dairy learning experiences.
4. **Tuition Scholarships** – a small number of financial contributions allocated to support tuition costs for undergraduate students studying at selected partner institutions. Scholarships to support tuition costs for students are an important enabler of the learning experience.

This model represents an innovative approach to addressing dairy workforce development needs and evidences the opportunity for partnerships to provide more sustainable and engaged learning experiences with the financial enablement of key industry and education partners.

5.2 Enabling the future people of dairy

The vision, frameworks, expertise and motivation are all in place for dairy to transform how we enable the workforce for success through capability. Through the explicit strategic impetus to attract and retain capable people in dairy, as outlined in commitment 2 of the Australian Dairy Plan, the new *Dairy Australia Learning and Capability Development Strategy (2020-2022)*, and the commencement of new partnerships for capability development for the people in dairy, the dairy industry is well positioned to lead and address, with the right support from government, the challenges of workforce in new ways for 2020 and beyond.

[Through enhancing opportunity for capability development of the workforce, we will go to the core of many of challenges the industry will face in the coming decades. An adaptable and resilient workforce will be needed to proactively face the challenges of managing ~~global risks such as falling commodity prices, trade barriers, changing consumer tastes and perceptions, and a warming and drying climate, as well as domestic risks such as contractual problems, regulatory burden and recruitment and retention in a rural workforce shortage~~the risks inherent in agriculture, outlined in section 1. Without investment in building a capable workforce, we risk the rapidly changing world being overwhelming for our farmers. Low confidence, declining resilience and excessive stress in managing a farm business will lead to mental health challenges in addition to workforce attrition. There is a critical impetus to prevent this downward spiral; “prevention is better than cure”.](#)

However, limitations that cannot be overcome without Federal and State government support are evident in key areas of the DairyLearn system.

Most specifically, there is opportunity for enhancing dairy education through schools, Vocational Education and Training and University education.

5.2.1 Targeted bonus funding for education providers who work with industry

The education sector plays a critical role in attracting, developing and retaining people of the dairy industry, and more broadly the entire agricultural workforce. Yet strategic funding of the education sector for supporting Australians to forge a career in dairy and/or agriculture is limited.

Without additional strategic funding that supports the education sector to co-design, co-create, co-deliver and/or co-credential learning experiences with Dairy Australia, achieving the vision of DairyLearn and a capable dairy workforce will be at risk. Dairy Australia is committed to funding capability development, and in partnership with the education sector could have far greater reach and impact for Australians’ employment prospects, dairy industry workforce attraction and retention, and the entire agricultural workforce more broadly, with further support from the education sector.

The education sector is challenged to shape and transform curriculum and learning experiences to ensure up-to-date capability development for the ever-changing modern dairy farming systems and workplaces. Funding is very limited for curriculum renewals, and there is little financial impetus for higher education and VET to work with industry to ensure up-to-date learning for work ready graduates.

Targeted bonus funding for education providers that explicitly partner with the agricultural industry to ensure learning opportunities align with industry capability development needs would allow the education sector to

invest in new models that meet learner and industry needs. This would inspire education to work closely with industry to create the pipeline of a capable workforce today and into the future.

5.2.2 Leveraging global learning opportunities

Opportunity is also present for the Australian agriculture industry and education sector to be supported to further enhance capability development outcomes of the workforce through strategic partnerships with suitable overseas providers of learning opportunities.

The Federal Government New Colombo Plan, presents an evidenced blueprint for how international partnerships for education can be successfully implemented to strengthen learning outcomes and create a truly globally minded workforce with the capabilities to navigate the global agricultural landscape for the benefit of Australian industry.

Creation of models for global learning opportunities for dairy farmers, the people they employ and those preparing to enter the industry could increase intellectual stimulation and a modern industry that functions locally, nationally and globally to achieve gross domestic product targets of \$100billion.

5.2.3 Achieving national VET sector collaboration

Further, the VET sector has predominately State based funding, which creates significant challenges for a national workforce strategy.

While Dairy Australia has attempted to bring VET partners together through the DairyLearn Partnerships Advisory Group (section 4.1.1), the varied funding models and state-based enrolment criteria create significant barriers for a national approach to dairy education.

While the VET sector is likely to remain as a state based funding model to ensure that state based capability development needs are met, again targeted strategic funding that supports RTOs to work together on a national level for key outcomes in dairy workforce capability development would extend reach and enhance the work that is currently being done. At present, extremely limited funding is being cross subsidised by industry in creation of resources. In some instances (locations), markets are thin, which prevents some service providers from engaging, for example, with dairy. A national level approach to investment may overcome this problem.

In developing these partnerships, one of the key opportunities for new models of learning are 'micro-credentialling'.

5.2.4 Micro-credentialling

People of the dairy industry are focussed on farming practice. Finding time for learning can be a challenge. To address this, the industry has many learning experiences that are brief in nature. For example, Dairy Australia offers 6-week short programs online for Farm Business Fundamentals. On completion of this program, learning outcomes can be mapped to the AQF level 4 or 5, and could be used for recognition of prior learning to build a portfolio of demonstrated competency and capability through 'micro-credentialling'.⁴¹

Dairy Australia has attempted to create accredited learning experiences in partnership with the VET Sector (section 4.1.3). However, many barriers related to governance and funding of these programs have limited scope in offering these experiences.

In addition, Dairy Australia fully funds these learning experiences, with an additional contribution from the participant. To realise the potential of micro-credentialling, as recommended by the most recent AQF review, significant review is needed to enable the education sector to work with industry.

⁴¹ "A micro-credential is a certification of assessed learning that is additional, alternative, complementary to or a component part of a formal qualification," quoted from page 56 of the Sep 2019 Review of the Australian Qualifications Framework. Source accessed 16 July 2020: www.education.gov.au/australian-qualifications-framework-review-0

Dairy Australia is willing to map experiences and provide evidence of AQF level to ensure quality learning and confirm capability of participants. The current governance and funding model for the VET sector does not easily allow this micro-learning to be formally recognised with a credential. This new model of learning would provide career learning opportunities that can “fit in” around the hands-on workplace demands farmers and the people they employ face every day.

5.2.6 Dairy HR/WHS/Leadership qualifications and service provider advisory capability are scalable
Shifts in industry culture towards becoming ‘employers of choice’ and leaders on-farm, could be assisted by scaling current investments in qualifications (such as the currently fully industry funded Diploma of Human Resources Management or similar) across the agriculture sector. Both farmers and services providers who support the workforce, need to be supported to access this capability development with expanded reach of available programs and courses.

Many other RDCs note the challenge in engaging farm capability advisors (HR/WHS) in regional locations to support farm businesses to achieve positive, safe and sustainable workplaces. Having a shared, capable pool available to support agriculture broadly would be of significant value to the sector. These initiatives that expand the pool of capable workforce advisors would also provide a viable business option for small dairy farm business operators to establish HR/WHS processes, practices and behaviours.

There is a market failure in the provision of agricultural workforce management training that could be addressed by government in partnership with industry. Having more capable workforce managers will attract, but more importantly, improve retention of the agriculture workforce in Australia.

Addressing dairy workforce needs: future of dairy capability development

Recommendation 4: Education sector funding should be targeted such that Australian formal education institution providers are incentivised to partner with the dairy industry and international providers for co-designed, co-created, co-delivered and/or co-credential learning experiences for farmers, the people they employ and those preparing to enter the industry.

Recommendation 5: Government should support new pathways of learning that foster recognition of prior learning and shorter-form credentials (‘micro-credentialing’), to reward capability and motivate a well-articulated career pathway for the agricultural workforce.

Recommendation 6: Government should foster national collaboration between state-based Vocational Education and Training providers through strategic funding that drives better co-operation between institutions and across state borders for more accessible high quality agricultural education nationally.

Recommendation 7: Government should partner with industry to implement mechanisms that drive improved leadership and workforce management capability across the agriculture sector to ensure employers can easily access agriculturally contextualised credentials in HR/WHS and/or a pool of workforce consultants.