

**Inquiry into the delivery of vocational education and training in regional, rural, and remote Queensland**

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**Submitted by:** Rural Jobs and Skills Alliance

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Submission

Committee Secretary  
Education, Employment and Training Committee  
Parliament House  
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To Whom It May Concern

**Re: Inquiry into the Delivery of VET in Regional, Rural and Remote Queensland**

The Rural Jobs and Skills Alliance (RJSA)'s purpose is to address mutual goals for our member organisations that focus on the attraction, development and retention of new entrants and existing workers to underpin the prosperity of Queensland's agricultural sector now and into the future. Our mission is to identify agricultural workforce needs and seek effective solutions to ensure a sustainable agricultural workforce for Queensland.

Industry members of the Alliance are (in alphabetical order):

- AgForce
- Australian Prawn Farmers' Association
- CANEGROWERS
- Cotton Australia
- EastAUSMilk
- Growcom (representing fruit and vegetable industries)
- Nursery & Garden Industry Queensland (NGIQ)
- Irrigation Australia
- Queensland Chicken Growers' Association
- Queensland Farmers' Federation (lead organisation)
- Timber and Building Materials Association

*Supported by the Queensland Department of Agriculture and Fisheries.*

RJSA also acts as the advisory role to two positions that support the industry in workforce development:

- The newly appointed Industry Workforce Advisor role, which aims to provide support for agriculture businesses - with a particular focus on small to medium employers - by helping them address workforce challenges, diversify their workforces, and support workforce growth. The Agriculture Workforce Advisor has an active role in assisting employers in connecting to available education, skilling, employment, and economic



growth initiatives helping to strengthen their capacity to fill employment gaps and needs.

- The Industry Skills Advisor (ISA), who engages with employers, small businesses, and industry stakeholders to provide high-quality, evidence-based industry advice and intelligence about current and emerging industry direction, regional skills needs and training solutions, jobs growth and employment opportunities. These advisors are key in ensuring that the investment in training is targeted to achieve the best outcomes for the industry.

The Rural Jobs and Skills Alliance (RJSA) welcomes the opportunity to provide comments to the Inquiry into the Delivery of VET in Regional, Rural and Remote Queensland. We provide this submission without prejudice to any additional submission from our members or individual farmers.

## Background

Agriculture is the backbone of the Queensland economy and the lifeblood of regional communities. The world population is increasing the global demand for food, fibre, and foliage; according to the United Nations Food and Agriculture Organisation, the world must increase agricultural output by 70% over the next 20 years to meet this demand.

This demand presents new opportunities for Queensland agriculture to expand production to feed a growing and more urbanised global population. The levels and types of skills needed by agribusinesses and the workforce are changing with the evolution of the industry. The industry needs to ensure that its workforce is appropriately skilled and supported by flexible training and education pathways that are industry led and responsive to industry trends.

The industry reports significant skills shortages at all levels. Agribusinesses anticipate providing both entry-level and ongoing training for their workforce. Industry stakeholders report that the current training offering needs development and tailoring to enhance industry and regional relevance and strengthen soft and technical skills. Access to training and education is not equitable across Queensland's regions, with VET facilities not located in some local government areas. School-based training, traineeships and apprenticeships, and alignment of agriculture education with STEM are highly regarded. A range of extension initiatives and diverse learning opportunities can support training and employment outcomes for graduates.

## Responses to the inquiry

### 1. The role of public providers in VET delivery in rural, remote, and regional Queensland.

The variety of food and fibre that Queensland produces and how it is produced has changed greatly in the last 50 years. This change brings with it the need for new skills and new training models. Agriculture is and will remain a key employer, particularly in Queensland's regional communities, so it is critical that the awareness, education, and employment pathways for the agriculture sector are effective.

Following the Queensland Government's decision to close operations of the Queensland Agricultural Training Colleges (QATC), the sector is facing a significant gap in pathway responses. These programs must be replaced by more responsive and flexible structures in the future. The closure of QATC opens an opportunity for TAFE to develop this new model and skill the ag workforce for tomorrow.

TAFE may not be able to meet all the sector's skilling needs, but they can collaborate with industry to identify where it can add value and where they are best placed to fill current gaps.

One current example where TAFE has been collaborating with industry to fill the gaps is through the Agriculture and Aquaculture Tech Skills Hub project in North Queensland, which is looking at ways to bring Food and Fibre training into the 21st century. This project brings together industry, government, and education providers to deliver career pathways and skilling solutions that will equip Queensland's Agriculture and Aquaculture sector workforce with the skills and capabilities needed to support economic growth.

The project is jointly funded by the Australian Government under the Regional Recovery Partnerships, Greater Whitsunday Alliance (GW3) and Regional Development Australia, and is being delivered in partnership with the Queensland Government, TAFE Queensland, and Central Queensland University Australia to support existing plans and priorities within the region. This initiative includes working groups looking not only at courses and course content but also career pathways, technical skills and, very importantly, innovation in course delivery.

With the development of TAFE-based centres of excellence in multiple locations across Queensland there is an opportunity to ensure that these centres address local needs. However, it is key that across all locations, a model of industry engagement to ensure the facilities deliver benefits to the local industry is key. The model can be based on effective frameworks already available such as the TOCAL model in NSW, and could also include the learnings from the Agriculture and Aquaculture Tech Skills Hub project in North Queensland. The key is to get the industry involved from the start in the design of the solutions that could be offered in the centres of excellence.

TAFE will need to be funded to ensure these facilities are resourced to be able to deliver training and learning in their local catchments and to have the technology to deliver the learning to rural, remote, and regional Queensland.

## 2. Major barriers to the provision of localised and place-based VET, and priority areas and cohorts in Queensland

Over the years, RJSA has been interacting with VET providers through various forums, including an annual VET in agriculture event. These events have allowed us to gather intelligence about the barriers and opportunities. These are some of the key barriers mentioned:

- There is a decline in language, literacy, and numeracy skills, and there is no allowance to improve these prior to training commencement.
- Uptake of technology and new knowledge in training packages needs to be significantly improved.
- Industries lack understanding of what qualifications there are and what they mean, the processes involved, delivery options, or career paths and terminology used.
- Connectivity -access to reliable internet in both quality and volume (distance education).
- Distance to courses and cost of travel.
- Lack of quality trainers: there are skills shortages in the VET sector and a need to continuously upskill. Contract arrangements are complex, and this needs to change to attract better quality trainers. The cost and time it takes to gain a TAFE qualification is seen as onerous and difficult to undertake for those without experience or practice in the delivery of training.
- Lack of flexibility in training and delivery.
- Thin market and cost of training delivery (RTOs): to service the market, there needs to be a viable return on investment to be able to develop the resources necessary and to then deliver the training (often in rural and remote areas).
- Incentives for RTOs to deliver in schools and in remote locations.
- Stronger links between VET pathways and tertiary education pathways would allow people more flexible approaches to career development.
- Retention of students; there are instances where the training commencements may increase, but the issue is trying to get students to complete. The question is why. Do people want only what they need? Do they want short and relevant training that addresses their needs?
- The VET system needs to be easier to navigate for the employer and the employee. The complexity of the system gets in the way for people to participate. Information needs to be simple and digestible.
- Training needs to be targeting the business' needs, and training providers need to think about the impact on businesses. Training needs to be cost-effective for business and relevant to both employees and employers.
- Responding to future demands. We should concentrate on the areas where skill demands are to grow and change. For example, in horticulture, how can we provide training that is relevant to support a growing industry.



- Ensure that there are transferable skills across sectors.
- Be able to use innovation in delivery. Digital methods can be effective, but the cost is too high.
- The way that RTOs get paid through subsidies by the completion of subjects.
- Training service providers (RTOs) and their trainers will be required to upskill to remain current and able to deliver up-to-date training that is relevant to the industry.

Further consultations that took place to develop the recently published Queensland agriculture Industry Workforce Plan also provided intelligence about issues as follows:

- Participants reported in consultations that they are confused about the training system, and they questioned the relevance of current vocational and academic educational offers. They reported that school leavers, university graduates and Vocational Education and Training (VET) graduates were not job ready. Other pathways to agriculture employment, such as employment programs, short courses, and traineeships, were not well regarded as they did not necessarily result in developing motivation or ‘the right attitude’.
- Consultation participants repeatedly commented on a need to address a gap in agriculture education. The need for greater accountability of industry was noted, and many stakeholders indicated that training should be industry-led. While a commitment to continuous learning was expressed by participants, concerns about affordability, relevance and good practice were raised.
- There is a challenge in raising industry’s confidence in the capability of graduates and the quality of course offerings. This requires greater flexibility and adaptability in both the industry and the training sector, including Registered Training Organisations (RTOs). This can be addressed partly by the cultural change in agribusinesses and by ensuring training pathways meet industry needs. Through greater engagement between the training sector and the agriculture industry, continuous learning can be valued, rewarded, and built into career progression and/or opportunities.
- Some larger agriculture corporations report that they are influencing cultural change to value, integrate and promote training. The training sector can demonstrate greater flexibility, industry engagement, credible and relevant teaching and learning methods, expert trainers, and demonstrable outcomes.
- Industry requires different models and delivery modes of training. This would enable flexible participation and diverse pathways for learners, including mentoring, micro-credentials, extension, and intensive study blocks that enable concurrent earning and learning. This flexibility could smooth the transition from study to work. This was particularly relevant for university graduates whose academic activities take precedence over practical farm skills such as operating machinery.
- Another issue experienced by employers is the lack of awareness among students, trainees, and staff of regional geographic and climatic conditions. It was noted that

course offerings relevant to agriculture in the wet and dry tropics, for example, were not available in those regions.

- Some regions have limited access to education and training. This was noted as a significant shortcoming in the provision of socio-economic infrastructure that was not well addressed by the online learning offerings or short courses offered by RTO's. Accessible education is an integral element of regional development and plays a role in workforce attraction and retention. The training landscape was regarded as uneven and inconsistent, with funded programs prioritised over regional industry relevance and currency.
- Schools are critical for engaging prospective agriculture workforce entrants. Participants in consultations stressed the need to reinvigorate agriculture education across a range of initiatives, including curriculum development, immersion programs, VET in Schools, traineeships, work placements, work experience and industry engagement.
- Education and training industry benefits from industry-current, qualified trainers and teachers who can teach up-to-date agriculture programs and content to students. The attraction and continuing development of agriculture trainers and teachers is a concern consistently raised by industry. Increased collaboration between industry and education providers may assist in the attraction of STEM teachers into agriculture teaching and alignment of subject areas, together with the attraction of additional industry experts who will support industry-endorsed education outcomes.
- In anticipating future skills and a more diverse workforce, consultation participants expressed an expectation that contemporary and innovative practices are reflected in course material. Participants from the VET sector and agribusinesses commented that AgTech was not integrated into course offerings, was outdated or not available in their region. This indicates a need for currency and new approaches to training in this field. Regional disparities were expressed, including the inability to address modern challenges in course offerings that recognised that agriculture is in transition and facing disruptive conditions.

### **3. Existing programs that might assist in reducing barriers or supporting priority cohorts in accessing localised and place-based VET.**

The agriculture industry has been proactive in engaging with the VET sector to create placed-based solutions. Examples of existing programs include:

**SmartAg Queensland** is based on AgSkilled which is a proven model of delivering industry-led training to the agriculture industry in New South Wales. AgSkilled has been running in partnership with the New South Wales Government since 2017 and has delivered industry-relevant training to over 9,000 people in agriculture with a completion rate of 85% during this time. Training will be delivered against four key pillars: business, safety, production, and technology.

As a thin, and geographically dispersed market, agriculture is not an attractive market for training organisations. Industry-specific funding for a predetermined period presents training providers with an incentive to engage in service provision and assurances to invest in new course development to meet industry needs. An industry-led model would facilitate connections between industry and training providers to ensure training leverages the latest R&D knowledge and is contextualised to meet genuine industry needs.

**LEADag** is a new agricultural education program, operating out of Emerald in Central Queensland, and is aimed at high school students and young adults.

- The program provides young people with an opportunity to gain practical, hands-on training and skills in preparation for the workforce,
- Training led by industry mentors, utilising their knowledge and expertise,
- Builds confidence and capacity to choose a career in ag.
- Connects young people to peers and industry leaders.

#### **4. Opportunities for the Department of Employment, Small Business and Training to facilitate improvements in these areas.**

Solutions that have been identified include:

- Greater involvement of farmers in collaboration with RTOs and technical experts to design content requirements (their skills & knowledge, currency of practices), and to provide, where possible (especially in remote areas) their locations and equipment to assist training options and alternatives.
- Nominated farmers to become mentors and promoters of training. Establishing industry leaders (as content experts) would ensure increased industry acceptance and garner support for training through their personal endorsement, helping to build trust and better relationships with training providers.
- Enhancements to the funding model that would provide employer incentives, not just incentives for training providers.
- Provide incentives for people from industry or recently retired to become trainers
- Assist to provide mentors for Ag teachers to increase the uptake of VET in schools. This could be based on the South Australia model. Related article: <https://www.abc.net.au/news/2022-05-02/lead-agriculture-teacher-south-australia-high-school-food-fibre/101031090>.
- Better resource schools or better access to ag training through training facilities or centres of excellence where schools can provide relevant ag training. For Example, Wilsonton HS ag centre.
- Assist the industry to build a network of businesses/ employers ready and able to offer work placements, trainees, and apprentices.
- Encourage and fund skill sets that will have the greatest impact on the Ag Industry.



- Embed agricultural studies into the school curriculum and aligned to be able to be part of potential VET studies.
- Provide a higher level of funding to industry-endorsed qualifications and skill sets.

In addition to these suggestions, the RJSA has been collaborating with Government and Agribusinesses to find solutions to help the sector get through the short-term crisis and longer term, to put in place a plan that will build a secure workforce for the future. The resulting Queensland Agriculture Industry Workforce Plan 2022-2027 identifies strategies to respond to skills needs and shortages affecting the growth, profitability, and productivity of Queensland's agribusinesses over the next five years.

This plan was developed by the Queensland Farmers' Federation in partnership with Jobs Queensland and in collaboration with the Rural Jobs and Skills Alliance (RJSA). RJSA has played a critical role in guiding the development of the plan on behalf of the sector. The delivery of this industry-led workforce plan will ensure a modern and skilled workforce ready to meet the growth and opportunities in the agriculture industry.

A copy of the publication is attached to be considered as material that can inform the inquiry into the Delivery of VET in Regional, Rural and Remote Queensland

If you have any queries about this inquiry and the attached plan, please do not hesitate to contact Dr Diana Saunders, Project Manager – Rural Jobs and Skills Alliance at [REDACTED] or [REDACTED].

Yours sincerely,

[REDACTED]

**Ian Atkinson**

**Chair Rural Jobs and Skills Alliance**

[REDACTED]

[REDACTED]

# QUEENSLAND AGRICULTURE INDUSTRY WORKFORCE PLAN 2022 - 2027

Queensland Farmers' Federation and Jobs Queensland  
in collaboration with the Rural Jobs and Skills Alliance



QUEENSLAND  
FARMERS'  
FEDERATION



Growing a sustainable agriculture workforce in Queensland





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**This report was produced by the Queensland Farmers' Federation and Jobs Queensland in conjunction with the Rural Jobs and Skills Alliance.**

#### **ENQUIRIES**

For enquiries or further information about this report, please contact Queensland Farmers' Federation:

**P (07) 3837 4720**





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# INTRODUCTION FROM QUEENSLAND FARMERS' FEDERATION

Queensland's agriculture industry is known globally for its high production and quality standards. By incorporating standards attributed to biosecurity, food safety and supply chains, we deliver a high level of vast and diverse agricultural products into the domestic and international markets.

As a vital contributor to the Queensland economy, the agriculture industry exported 58 per cent of the State's agricultural output, or more than AU\$8.54 billion worth of agriculture and food products in 2020-21.

The Queensland agricultural industry is resilient. In recent years, we have weathered major drought impacts, floods, increased production costs, diminished access to labour, and the supply chain disruptions associated with the COVID-19 pandemic.

In Queensland, the State Government identified agriculture as a priority industry to create knowledge-based jobs of the future. Data from the Australian Bureau of Statistics shows Agriculture, Forestry and Fishing directly employs almost 73,000 Queenslanders or 2.8 per cent of the state's total workforce.

The agriculture industry continues to adapt to changing global and national markets and conditions. At the same time, national forecasts project that there will be changes in the composition of the agricultural workforce in the future.

The Queensland Farmers' Federation (QFF) and Jobs Queensland, in collaboration with the Rural Jobs and Skills Alliance (RJSA), have identified the current and emerging trends and critical issues impacting the Queensland agriculture industry's workforce.

The resulting *Queensland Agriculture Industry Workforce Plan 2022-2027* (the Plan) identifies strategies to respond to skills needs and shortages affecting the growth, profitability and productivity of Queensland's agribusinesses over the next five years.

Four focus areas: adaptability and business capability, workforce attraction and diversity, retention, and skilling, have been identified as critical to inform the Plan. Through a focus on these areas, the intelligence gathered can inform policy direction, industry programs, business, and strategic recommendations to benefit the future Queensland agricultural labour market.

A strong, resilient and flexible workforce provides the agriculture industry with stability, positive economic outcomes, and long-term sustainability. Importantly, this strategy is based on a collaborative process between key stakeholders, industry and government.

**Jo Sheppard**

CHIEF EXECUTIVE OFFICER,  
QUEENSLAND FARMERS' FEDERATION



*Photo Supplied by Canegrowers :  
Cane fields in Innisfail. Paul Gregory and  
John Porta BMP Cairns Region by Brian Cassey*

As a vital contributor to the Queensland economy, the agriculture industry exported 58 per cent of the State's agricultural output, or more than AU\$8.54 billion worth of agriculture and food products in 2020-21.



# INTRODUCTION FROM THE RURAL JOBS AND SKILLS ALLIANCE CHAIR

The Rural Jobs and Skills Alliance (RJSA) has a purpose and mission of building a sustainable agricultural workforce for Queensland. We also identify workforce needs and find solutions to help deliver a secure future for Queensland agricultural industries.

The Queensland Government has identified economic development as a key priority throughout the state, with Queensland's primary industries – agriculture, fisheries, forestry and food – playing a central role in the success of the state's economy, regions and communities.

We can only achieve these positive economic outcomes through investment to identify issues and limitations faced by the agricultural workforce, and further investment in its development and skilling. Future growth and market opportunities for Queensland agriculture rely on a highly trained and skilled workforce.

Through consultation, on-ground evidence and analysis of industry data and intelligence, we have found that agricultural business operators need workers who have experience, relevant skills and demonstrated capabilities, rather than qualifications alone.

Addressing agricultural workforce skills and needs is a shared priority for all levels of government, working in partnership with industry. The actions set out in the *Queensland Agriculture Industry Workforce Plan 2022-2027* will require strategic collaboration, investment and strong partnerships involving industry members of the RJSA to develop a suitably skilled workforce. Without it, industry and economic growth will not be achieved.

The Plan provides a solid understanding of the current agricultural workforce and provides guidance in how best to prepare it for the future.

**Ian Atkinson**

RJSA CHAIR



*Photo supplied by Department of Agriculture and Fisheries*

Through consultation, on-ground evidence and analysis of industry data and intelligence, we have found that agricultural business operators need workers who have experience, relevant skills and demonstrated capabilities, rather than qualifications alone.

## ACKNOWLEDGEMENT OF TRADITIONAL OWNERS

The Queensland Farmers' Federation, the Rural Jobs and Skills Alliance and Jobs Queensland acknowledge the Traditional Owners of the land and pay respects to their Elders past, present and emerging. We also acknowledge the diverse Aboriginal peoples and Torres Strait Islander peoples of Queensland and thank them for their ongoing custodianship of the lands, seas, waterways, stories, laws and customs. Aboriginal peoples and Torres Strait Islander peoples are acknowledged as the first farmers, foresters and fishers in this country having lived in harmony with the land, cultivated the landscape and fisheries, and harvested food, timber and fibre for millennia.





# EXECUTIVE SUMMARY

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The *Queensland Agriculture Industry Workforce Plan 2022-2027* is the culmination of a partnership between the Queensland Farmers' Federation (QFF) and Jobs Queensland (JQ) in collaboration with the Rural Jobs and Skills Alliance (RJSA). This document provides an overview of the research and stakeholder consultation processes that underpin the planning. It also draws these findings into recommendations and actions to create the five-year Plan. This timeframe is important because it provides time and scope to prioritise industry workforce issues in the short term while building a foundation for longer term action. The actions will assist the agriculture industry to be productive, innovative and profitable by investing in workforce development.

Following extensive industry consultation across Queensland, stakeholders acknowledged the Plan and its actions must be industry-led, regionally responsive and supported by collaboration with all levels of government. The Plan emphasises a range of collaborations and partnerships that reflect these priorities. It also provides scope for flexible connected approaches to achieving the Plan's goals.

The agriculture workforce is present in every region in Queensland including metropolitan, rural and remote regions, and is represented by a broad range of seasonal, technical and professional roles. The industry is underpinned by diverse food, fibre and foliage producers who provide domestic and export markets with a range of commodities.

To guide the workforce planning, four priority agriculture groups, based on gross value of production (GVP) and employment were defined as the focus of the Plan: grazing (beef cattle and grains), horticulture (fruit and nuts, vegetables, and nurseries), crops (sugar and cotton) and aquaculture. While specific actions for each group were not developed, there is flexibility in the actions to respond to individual sectoral needs over the next five years.

Four action areas were also identified:

- **Adaptability and business capability** – developing entrepreneurship and business capability for innovation and adaptation to change
- **Workforce attraction and diversity** – developing a diverse and inclusive future agriculture workforce
- **Workforce retention** – developing agriculture careers and opportunities and becoming employers of choice
- **Workforce skilling** – developing future workforce skills in agriculture

## This Report

This report is comprised of four sections:

- Section 1** Provides an overview of the state's agriculture industry and the current context, including the industry's contribution to the state economy. It presents available data about workforce. This section also introduces the four priority agricultural groups which are the focus of the Plan.
- Section 2** Presents the results of research and consultations across the four action areas. This section summarises the evidence that informs the recommendations presented in the next section.
- Section 3** The goals and recommendations for each priority area, based on the information in the previous section, are presented.
- Section 4** The five-year action Plan is presented and is comprised of a mix of initiatives that are industry-led, regionally engaged and collaboratively developed.





Wine grapes on the Granite Belt. Supplied by Queensland Farmers' Federation

## The Plan

An overview and synopsis of the key themes, findings, goals and actionable recommendations are provided below:

Goal	Aims	Actions
Queensland agribusinesses and their workforce are leaders in adopting contemporary technologies, management practices and innovations	<ul style="list-style-type: none"> <li>• Strengthen innovation</li> <li>• Build management and leadership capability</li> <li>• Enhance resilience and readiness</li> </ul>	<b>Actions include:</b> Knowledge brokering; building capability through resourcing, support and training; leadership development; access to business advice; learning from disruption
A diverse and capable workforce is attracted to careers and employment in agriculture throughout their working lives	<ul style="list-style-type: none"> <li>• Raise the profile of agriculture and agriculture careers</li> <li>• Diversify the workforce</li> <li>• Promote regional approaches</li> <li>• Improve recruitment and job readiness</li> </ul>	<b>Actions include:</b> A state-wide awareness raising campaign profiling agriculture; raising awareness of careers, education and salaries in agriculture; enhancing regional and business level workforce planning; undertaking research; strengthening connections between industry and schools; and improving job readiness for industry entrants.
The agriculture workforce has access to flexible pathways to pursue rewarding careers and employment opportunities	<ul style="list-style-type: none"> <li>• Develop flexible career and employment pathways</li> <li>• Support regional development</li> </ul>	<b>Actions include:</b> Partnering to clarify career pathways; enhancing regional networks and responses to retention issues; building regional leadership
Queensland's agriculture workforce is appropriately skilled and supported by flexible training and education pathways that are industry-led and responsive to industry trends	<ul style="list-style-type: none"> <li>• Prioritise agriculture in schools</li> <li>• Address knowledge, skills and training gaps</li> <li>• Provide flexible education and training pathways into employment</li> <li>• Leverage regional resources and innovative partnerships</li> </ul>	<b>Actions include:</b> Reinvigorating agriculture education in schools; advocacy for industry-led approaches to training; integration of digital capabilities and agtech in training and traineeships; raising awareness and access to education and training; collaborative data collection about skills; review core skills required for agriculture education; innovative partnerships to promote industry learning; enhanced extension and bridging programs; traineeships and apprenticeships; continued resourcing for industry-based workforce and skills initiatives

The success of the Plan relies on a continuing commitment to engaging a broad range of stakeholders while remaining flexible and open to opportunities.



# PART 1 OVERVIEW





# PART 1: OVERVIEW

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Agriculture is a priority industry in Queensland that contributes significant value to the state's economy, though workforce challenges remain one of the agriculture industry's most pressing concerns. The *Queensland Agriculture Industry Workforce Plan 2022-2027* (the Plan) guides a pathway to address workforce issues over five years. It supports the vision of the *Queensland Agriculture and Food Research, Development and Extension: A 10-year Roadmap and Action Plan* that 'Queensland's internationally recognised agriculture and food RD&E underpins a productive, profitable and sustainable sector'.

A skilled and reliable workforce is critical to achieving this vision and this Plan provides direction for workforce development into the future.

All levels of government identify agriculture as a policy priority and acknowledge that agriculture is facing structural adjustment, disruption and a range of other pressures. Nationally, Ag2030 sets out a government-backed and industry-led plan to grow the Australian agriculture industry to a \$100 billion industry by 2030.<sup>1</sup> Human capital is a focus for action in Ag2030 to enable people and their communities across the agriculture supply chain to access the support, infrastructure, and skills to do their jobs.

In March 2021, the Australian Government released the National Agricultural Labour Advisory Committee's report National Agriculture Workforce Strategy together with a Roadmap to attract, retain, upskill, and modernise the agricultural workforce. The national strategy aims to ensure farmers have access to a fit-for-purpose workforce into the future. This Plan translates the national strategy for Queensland specific conditions and actions.

This Plan is informed by research undertaken by QFF and RJSA in 2021 for the Queensland Agriculture Environmental Scan: Labour and skills supply and demand profile. It is also based on state-wide consultation with agribusinesses, government agencies, registered training organisations, industry bodies, local authorities, and other stakeholder groups across Queensland (see Appendix 1). The contribution of staff from the Department of Agriculture and Fisheries (DAF), the Queensland Agriculture Workforce Network (QAWN), and the Department of Employment, Small Business and Training (DESBT) is particularly acknowledged. Representatives from these groups and programs maintain a strong connection with QFF and RJSA and share a commitment to support the Queensland Agriculture industry achieve best practice and continuous growth.

## Purpose of the plan

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The Plan provides a five-year framework for Queensland's agriculture industry to work with government and communities to influence change and seize opportunities to maintain the industry as a vital contributor to the state's economy and regions. The goals and actions in the Plan address skills and workforce needs and shortages which impact the growth, profitability and sustainability of Queensland's agribusinesses.

The Plan stresses a combined focus on people, skills and careers. It is attentive to the factors affecting workforce attraction and retention and the opportunities for building a more diverse workforce.

## Why we need a plan

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The National Agriculture Workforce Strategy highlights that the industry cannot adopt a business-as-usual approach to workforce strategy. The *Queensland Agriculture Industry Workforce Plan 2022 – 2027* can provide direction and strategy for Queensland's regions and communities, meeting the requirements of primary producers while also supporting regions to leverage employment and economic development opportunities across the state.

Historically, agriculture relied on seasonal, local and migrant workers with on-farm training, as well as unpaid family members including women. National forecasts indicate shifts in workforce composition as the number of owners and operators decrease and demand for technicians, paraprofessionals and professionals increases. The growth in highly skilled roles to support the changing nature of modern farming businesses requires adaptability as well as improving the skills of the current and future workforce.

The growth in highly skilled roles to support the changing nature of modern farming businesses requires adaptability as well as improving the skills of the current and future workforce.

## Data and limitations

Workforce data has been predominately sourced from the Australian Bureau of Statistics (ABS) 2016 Census of Population and Housing<sup>2</sup> and Labour Force Survey publications. It is important to note that, due to the limitations in data sources, a comprehensive picture of the agriculture industry in Queensland is difficult to construct. This is due to the inability to determine a precise number of workers delivering services due to unpaid arrangements and because some seasonal and temporary workers are not included in relevant ABS surveys.

Where more granular data is unavailable, the document uses national data or that for the Industry Division of Agriculture, Forestry and Fishing (AFF) and its associated subdivisions and groups.<sup>3</sup> However, the Plan principally focuses on Queensland's main agricultural industry groups according to their Gross Value of Production (GVP). The ANZSIC codes for these are:

### 01 Agriculture

011	nursery and floriculture
012	mushroom and vegetable growing
013	fruit and tree nut growing
014	sheep, beef cattle and grain farming
015	other crop growing (particularly classes 0151 sugar cane and 0152 cotton growing)
016	dairy cattle farming
017	poultry farming
019	other livestock farming (particularly class 0192 pig farming)

### 02 Aquaculture

020	aquaculture
-----	-------------

### 05 Agriculture, Forestry and Fishing Support Services

050	agriculture and fishing support services nfd
052	agriculture and fishing support services

These are collectively referred to as **selected agricultural groups** throughout the document.



## The agriculture industry



**72,900**

Employs 72,900 people or 2.8 per cent of the state's workforce<sup>4</sup>



**365,000**

More than 365,000 jobs across the supply chain<sup>5</sup>



**\$23.54 billion**

Total value of Queensland's primary industries – agriculture, fisheries, forestry and food – estimated at \$23.54 billion in 2020-21<sup>6</sup>



**\$18.41 billion**

The estimated total value \$23.54 billion are made up of: \$18.41 billion gross value of production (GVP) and \$5.13 billion value-added production<sup>7</sup>



**84% of Qld**

84 per cent of Queensland's land currently used for agriculture<sup>8</sup>



**69% of farms**

Beef cattle farming accounts for 69 per cent (16,690 farms) of all farms in Queensland<sup>9</sup>



**460,682**

460,682 businesses in Queensland as at June 2021, with AFF making up 8.9%<sup>10</sup>



**1%**

Between June 2019 and June 2021, the number of registered AFF businesses increased by 69, or less than 1%<sup>11</sup>



**4th highest**

AFF has the fourth highest proportion of Queensland businesses following Construction; Professional, Scientific and Technical Services; and Rental, Hiring and Real Estate Services<sup>12</sup>



## Exports<sup>18</sup>

Queensland exports 58 per cent of all agricultural output, including more than:



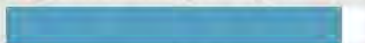
50%  
of meat products



83%  
of sugar



93%  
of grains and grain products



47%  
of seafood products



74%  
of cotton



## The agriculture workforce



Total number of people employed in Queensland AFF grew by 26.2% in the five years from 2017, compared with 9.1 per cent for the state's overall employment. Both full-time and part-time employment grew during this time.<sup>14</sup>



As of June 2019, **Queensland employed more than a third** (15,540) of all overseas and casual and contract workers in agriculture in Australia.<sup>15</sup>



Department of Agriculture and Fisheries (DAF) modelling shows a **peak in casual workforce** across the **winter months** in Queensland that coincides with **winter vegetable** production.<sup>16</sup>

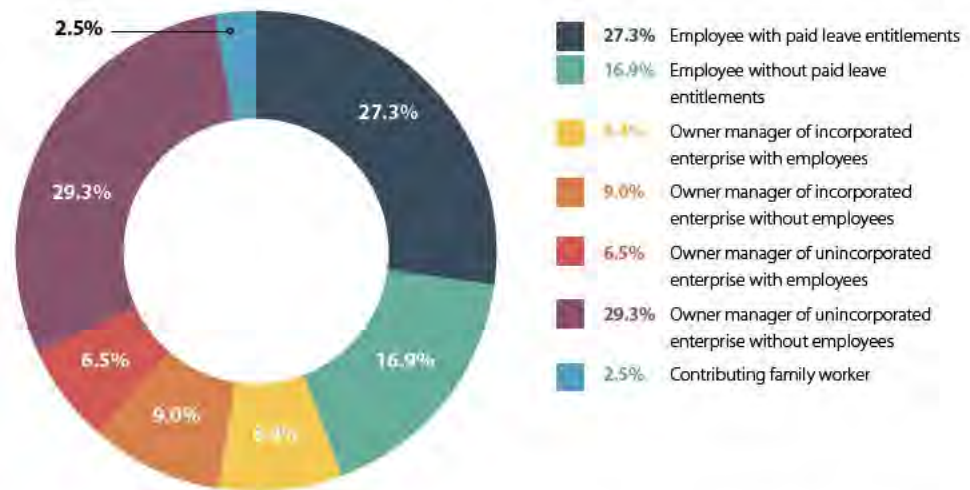


of AFF businesses have no employees outside the family business owners



of AFF businesses have less than 20 employees<sup>17</sup>

**Figure 1: National AFF employment status, November 2021<sup>19</sup>**



First, there is a group of owner managers who do not have employees (38.3% of the national AFF workforce) and owner managers (14.9% of the national workforce) who do employ workers.

Of those owner managers who have employees, some may employ an ongoing or permanent core workforce comprised of managers and highly skilled workers. Large employers who have diversified their risk may also employ some permanent workers at different skill levels.

Besides permanent workers, employees may also be part of a contingent workforce of general and skilled labour or be engaged on a seasonal basis.

## Occupations

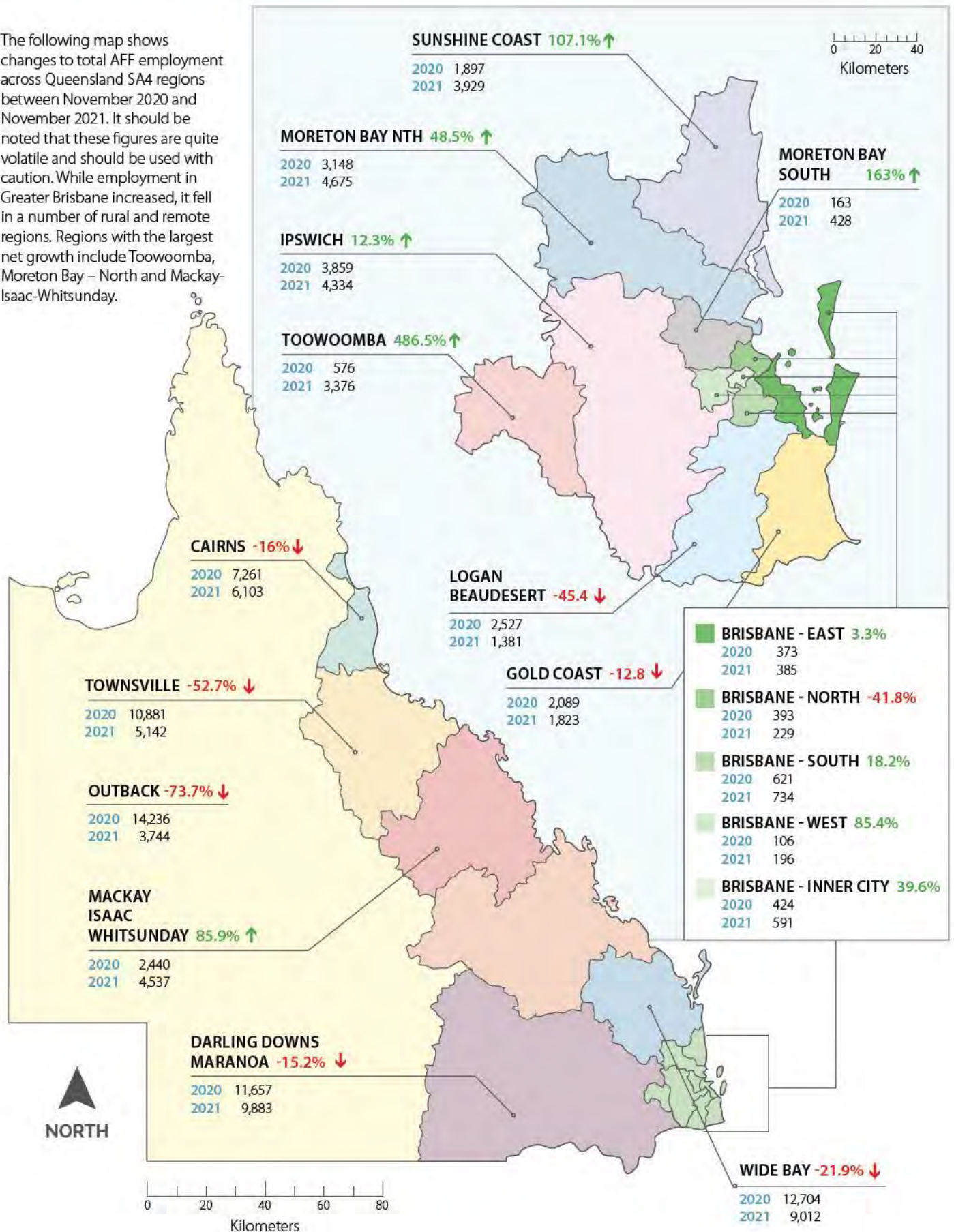
Top 10 ANZSCO20 occupations for selected agricultural groups, Queensland, 2020-2021<sup>21</sup>

	Number of employed
	<b>21,847</b> Livestock farmers
	<b>9,855</b> Crop farmers
	<b>7,741</b> Mixed crop and livestock farmers
	<b>7,170</b> Livestock farm workers
	<b>6,558</b> Crop farm workers
	<b>2,576</b> Agricultural, forestry and horticultural plant operators
	<b>1,251</b> Mixed crop and livestock farm workers
	<b>1,162</b> Packers
	<b>987</b> Garden and nursery labourers
	<b>871</b> Truck drivers



## Regional employment in AFF<sup>22</sup>

The following map shows changes to total AFF employment across Queensland SA4 regions between November 2020 and November 2021. It should be noted that these figures are quite volatile and should be used with caution. While employment in Greater Brisbane increased, it fell in a number of rural and remote regions. Regions with the largest net growth include Toowoomba, Moreton Bay – North and Mackay-Isaac-Whitsunday.





## Priority agriculture groups

Queensland's top four agricultural commodities as measured by GVP are meat products, horticulture, sugar cane and cotton.<sup>29</sup> Other commodities of significance to agriculture in Queensland are cereals, pigs, dairy and poultry and the emerging industry group of aquaculture. Based on GVP and anticipated employment growth, four priority agricultural groups were selected:



**Grazing**  
beef cattle and grains



**Horticulture**  
fruit and nuts, vegetables,  
and nurseries



**Crops**  
sugar cane and cotton



**Aquaculture**

### Grazing: Beef Cattle and Grains

Beef cattle are produced across most regions of the state by around 17,000 specialist businesses.<sup>24</sup> AgForce reports high turnover and non-returning workforce during the Northern beef season when cattle mustering and sorting occurs during the dry weather. A lack of training options is also reported as resulting in higher Workplace Health and Safety (WHS) incidents and injuries. This is considered by the sector to be contributing to a tension between getting people work ready and getting them employed.

The value of Queensland cereal grains was \$1.48bn in 2020-21.<sup>25</sup> The grain sector is a professional environment with significant corporate investment. The sector's main workforce challenges are access to labour with competencies in monitoring complex and expensive machinery, creating opportunities for employment growth in technology-based servicing and variable production due to climatic conditions and availability of irrigation water.

### Horticulture: Fruit and Nuts, Vegetables and Nurseries

Horticulture relies on a combination of skilled and low skilled (or inexperienced) workers. Production horticulture is reliant on overseas workers on visas. Most low skilled, seasonal work in production horticulture is undertaken by Working Holidays Makers (WHM). From April 2022, these schemes were consolidated, reformed, and replaced by the Pacific Australia Labour Mobility (PALM) scheme. Other horticulture sectors and roles, including turf growing, flower growing and nurseries, primarily employ from the domestic labour pool. In Queensland production horticulture the average monthly demand for casual and contract labour is estimated to be between 14,926 and 18,092 full time equivalents.<sup>26</sup> The fruit, nut and vegetable harvest workforce can be highly mobile and move across the country following harvest seasons.

Growcom advises that the fruit, nut, and vegetable sectors' heavy reliance on casual employment has a negative impact on workforce efficiency due to the high costs of training and administration from high staff turnover. Growers often rely on labour hire which provides limited ability for new entrants to gain training. The inability to attract workers can result in unharvested crops or produce.

The fruit, nut and vegetable sectors have experienced significant workforce shortages resulting from COVID-19 restrictions which inhibited workforce mobility among backpackers and grey nomad demographics.

The workforce in the nursery, flower and turf sectors is predominantly Australians who live locally. Nursery and Garden Industry Queensland advises that a large part of the workforce is casual rather than seasonal and that skilled staff are in high demand.

### Crops: Sugar cane and cotton

Sugar mills are located along the east coast from Grafton in New South Wales to Mossman in Far North Queensland, with 95 per cent of Australia's raw sugar produced in Queensland's 20 sugar mills.<sup>27</sup> Australia is currently the fourth largest exporter of raw sugar onto the world market.<sup>28</sup> Sector groups and peak bodies advise that it struggles to attract haul out drivers every year and there is a need for more technical advisors. The sugar cane sector also has an older workforce, and succession planning is an issue. Anecdotal reports indicate that retired workers are regularly called on to fill seasonal vacancies.

Australian cotton is in high demand and can attract a price premium due to its high-quality characteristics, reliability, water efficiency, and proven track record in meeting manufacturer and consumer needs. There are up to 1,500 cotton farms nationally, with Queensland producing around 33 per cent of Australia's crop.<sup>29</sup> Anecdotal reports indicate that while the cotton industry experienced workforce drain to mining, some workers are returning with higher level skills including machinery operation, safety management and management skills.

Crop industries are well suited to mechanisation and automation resulting in rationalisation of labour. However, there is high labour peak at harvest which is often filled by family and longstanding worker and contractors. As these industries also use skilled consultants, there is a need for highly skilled service providers and professional services.<sup>30</sup>

### Emerging: Aquaculture

Aquaculture is an emerging industry in Queensland. Between 2014-15 and 2020-21 there was a 44 per cent increase in production across the prawn, red claw and freshwater fish sectors.<sup>31</sup> In Queensland, the prawn farming sector is the largest employer with 65.4 per cent of the industry's total labour force.<sup>32</sup> As a rapidly growing and emerging industry in Queensland, aquaculture is experiencing workforce and skills shortages. The aquaculture workforce is projected to increase by 18.4 per cent between 2020-21 and 2024-25.<sup>33</sup>



## Key issues

Workforce development is required for commercial reasons and is also vital in the response to major trends and issues that are impacting agriculture. Farm businesses are adapting to a changing environment, including legislation, new technology and work practices, that require farmers and their workforce to juggle a combination of managerial, technological and environmental skills in an industry that is experiencing structural change.



### Technology and Data

- The adoption of technology advances is challenging industry roles, education and training requirements
- Innovations in biotechnology, robotics and automation, drones, smart farms and blockchain bring new approaches to farm management, data collection and work practices
- Agricultural technology (agtech) and digital agriculture are developing areas of innovation, start-ups, research and application
- Technology presents adoption challenges as well as efficiencies and gains to agribusinesses



### Climate Change

- Implications for seasonal conditions, natural resources, supply chain disruption and production schedules
- A sustainable workforce needed for building resilience, maintaining productivity and growth
- Planning for and responding to workforce needs must consider resilience, adaptation and transition
- Need for different skill needs of large and small operations to manage and adapt to the impacts of climate change



### Farm size and consolidation

- Overall reduction in farm numbers and increase in farm sizes
- Driven by economies of scale, increased productivity due to technology, and competition for labour with other Agriculture sectors, and corporatisation
- Can result in more reliance on labour from outside the family unit
- Increased demand for qualifications, on the job training, and higher skilled jobs such as leading farm hands, supervisors and orchard managers<sup>34</sup>



### Environmental factors

- Regulations relating to water, pollution, soil, conservation, animal welfare, waste and other environmental factors
- Requires specialist skills, technological capabilities and professional service providers
- Increased and changing record-keeping and compliance requirements
- Shifts in industrial processes requires a skilled workforce



### Biosecurity

- Biosecurity risks and impacts evident, including COVID-19
- High exposure to tropical diseases and pests is high in Queensland's North
- Enhanced biosecurity capability across the agriculture industry is needed
- Requires skills to effectively manage biosecurity risks and adhere to regulations



### Legal and regulatory requirements

- Evolving regulations place compliance pressures on producers
- Requires education and training to understand and satisfy these requirements to maintain and improve competitiveness as clean, green and safe



### Social licence

- The acceptance granted to a company or organisation by the community based on its social relationships and responsibility<sup>35</sup>
- Social licence credentials, such as Fair Farms and Sedex, improve the reputation of agribusinesses and the industry
- Can be attractive to workers who seek social purpose and fair conditions in their employment



### Markets and Trade

- Changing consumer tastes and increased interest in environmental and animal issues, food origin and traceability, production methods; and increased demand for new and different products
- Require a high level of adaptability and entrepreneurship from agriculture businesses.
- Growing demand for food and agricultural exports in Asia is a source of opportunity and risk for Queensland's agriculture and food industries
- Queensland farmers need skills and knowledge of doing business overseas



### Diversification

- Agribusinesses are diversifying business activity and production processes to enhance profitability and resilience.
- Requires workforce planning to cultivate and attract a flexible and capable workforce with business and high-level skills that can be applied in complex business operations
- Refers to diversification of commodities, operational and production methods and business activities, such as agritourism



### Workplace Health and Safety

- High exposure to WHS issues compounded by isolation and often limited access to medical services
- Highest fatality rate of any Australian industry (13.1 fatalities per 100,000 workers in 2020)<sup>36</sup>
- Hazards include plant, chemicals, noise, dust, sun exposure, working with animals as well as the fact many in the industry work alone or in remote locations
- Decreasing fatalities nationally. Needs continued improvement of skills and capability in WHS in the industry.<sup>37</sup>

**PART 2**

# **FINDINGS: ACTION AREAS**





# PART 2: FINDINGS: ACTION AREAS

## Adaptability and business capability

An innovative, contemporary and productive agriculture industry in Queensland is underpinned by sound business and workforce practices. However, the size and type of an agribusiness can impact its capabilities. New skills will be required for agribusinesses and service providers in the future, particularly as many of them manage larger and more complex operations. These businesses need to be supported to embrace technology and innovation.

### CASE STUDY

#### Forward pricing in a new era for Queensland sugar marketing

Enhanced financial capability is a demonstrated need in the agricultural industry, and the changes in the sugar marketing landscape have highlighted the importance of educational programs. CANEGROWERS created The Pricing Essentials for Cane Growers Workshop as a two-day program developed in collaboration with TAFE Queensland and supported by the Rural Jobs and Skills Alliance.

The workshop was held across 10 regions in Queensland between February and May of 2021. More than 140 growers attended the workshops, which covered two units: Small Business Management and Risk Management. Growers who engaged in external training have reported enhanced financial stability, primarily through securing better returns using forward pricing.

"If you understand your cost of production and the market cycle, you can get a lot of leverage and make sure you don't go broke."

**Neil Maitland,**  
CANE GROWER

### Business Practices

New skills, methods and technology offer the opportunity for agribusinesses to modernise. The National Agriculture Workforce Strategy stresses the need for agribusinesses to modernise. Relying on 'business as usual' in an increasingly competitive marketplace and complex environment leaves businesses exposed to falling behind. A range of strategies and tools can assist primary producers. These include accessing accurate data, learning by doing and engaging external service providers and consultants.

Primary producers reported that they are operating in an uncertain environment where planning can be difficult. This is due to factors such as a volatile climate, COVID-19 and its disruption to supply chains and international markets, and water security. It is anticipated that the agriculture profiles of some regions may change in response to water availability, climate change impacts, and other market forces. Some agribusinesses advised that increased monitoring and reporting for compliance and management requires technical and professional skills. Adaptive management is also required to respond to natural disaster and climate change issues.

In the 2021 Queensland Agriculture Industry Workforce Plan (QAIWP) Survey<sup>38</sup>, 33.3 per cent of respondents indicated they anticipated

that regulation and compliance would be extremely disruptive to agribusinesses in the next five years. It was noted that, as owners, partners and workforce, women had an important role to play in response to climate and transition challenges. Building women's knowledge and capabilities in carbon accounting, resilience and transition would benefit many family-operated agribusinesses.

Recruitment can cost time and money while not always yielding a suitable result, with many roles remaining vacant for unacceptably long periods. This indicates a need for different approaches to human resources and recruitment. In the QAIWP Survey, about 70 per cent of respondents indicated that competition for skilled workers is either extremely challenging (26.1 per cent) or very challenging (43.5 per cent). It was reported in consultations that agribusinesses have lost workers to higher paying industries, such as mining and construction. Some consultation participants proposed clarifying the nature of roles and the salaries and benefits attached to them.

Larger corporate agribusinesses, particularly in horticulture, reported the development of diverse human resource practices and opportunities to support career development and professional development. This included training delivery via diverse platforms such as mobile technologies. Employers also highlighted strategies such as flexible conditions and incentives for their workforce.

Participants also noted the need for more contemporary management practices and cultural change, particularly in relation to human resource management, workforce planning, and understanding the value of training. There is a need to ensure that the safety of workforce is respected and that the risk of gender-based and racial discrimination is eliminated. Workplace health and safety was affirmed in consultations as a priority.

### Technology and Innovation

Businesses owners can find it difficult to identify the best fit innovation, technology and data solutions for their needs. They reported interest in soil-less production (in some industries), regenerative agriculture, protected agriculture, automation and robotics, and precision agriculture. However, for some, the cost of machinery and technology is prohibitive. There are also concerns about finance and the ability to source a suitably skilled workforce to operate and maintain new technology. In the QAIWP Survey, 57.9 per cent of respondents indicated that they are extremely likely to adopt major technologies in the next five years to change or improve their practices, with an additional 10.5 per cent indicating they are very likely to adopt technologies. In consultations, some growers, particularly in horticulture, reported that they aimed to be fully automated within five years. Together with the survey results, this indicates that agribusinesses are accelerating their adoption of technology and innovation, which indicates that digital capabilities will be a requirement in both agribusiness management and workforce. The digital capabilities required in agriculture<sup>39</sup> have been

summarised as:

- Digital Literacy
- Technology Operation
- Data Management
- Data Monitoring, Analysis and Interpretation
- Digital Communication
- Incident Management

Additionally, 84.2 per cent of QAIWP Survey respondents indicated that they anticipated that demand for independent contractors will grow over the next five years. Bringing these skills into the business can occur via a range of ways, including professional and technical contractors and via labour hire arrangements. They anecdotally reported that agronomists and technology specialists are already in demand. This demand is anticipated to increase. The growth of regional and agriculture innovation is also changing the relationship between agribusinesses and contract service providers. These shifting relationships have implications for workforce and agribusiness management which are not yet understood by stakeholders.

The ongoing development of regional and agriculture innovation ecosystems and networks can play a role in ensuring access to current research and knowledge. The QAIWP Survey, found that:

- 44.4 per cent of respondents indicated that they are well equipped to adopt to technological change and
- 16.5 per cent indicated they are neither well equipped nor poorly equipped adapt to technological change

By comparison

- 11.1 per cent indicated agribusinesses are poorly equipped to adapt to technological change and
- 5.6 per cent indicated agribusinesses are extremely poorly equipped to adapt to technological change

While the capabilities and appetite for technology and innovation adoption across the industry vary, there is strong interest in new technologies, processes and practices. In regional consultations, participants reported problems with internet access and speeds which hampered their ability to incorporate digital technology into their business. Agribusinesses also need access to appropriate skills to use these technologies and innovations which might require a changing composition of on-farm workforce and external expert consultants.

### Small to medium agribusiness capability

Despite its disruption, COVID-19 provided opportunities for agribusinesses and industry to learn and adapt in the face of difficult decisions such as ploughing in a crop when pickers were not available. Other primary producers have used it as a catalyst to automate, change commodity or adopt less labour-intensive processes. COVID-19 has reinforced industry's need for readiness and resilience. This extends to value adding and supply chain with reports in early 2022 that crops cannot be transported due to workforce issues in the supply chain.

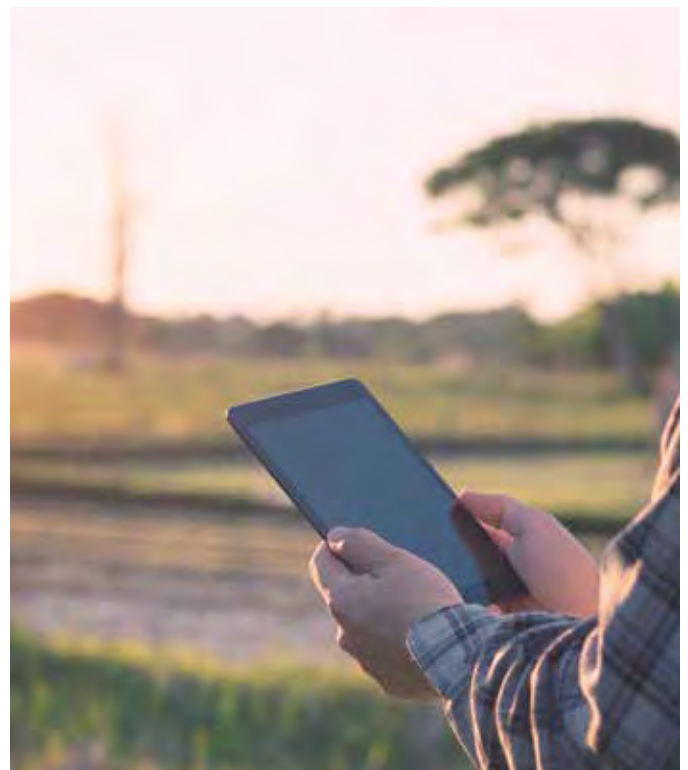
The shift in mindset from 'farmer' to 'agribusiness' is ongoing and requires continued affirmation and support. Several agribusiness owners report working "in the business" rather than "on the business", meaning that more strategic aspects of business operations do not always receive appropriate attention. The next generation of farmers is seeking to innovate with technology and management, including business planning and workforce planning. Small to medium agribusinesses may require more integrated and innovative approaches to business modelling, planning and decision making.

Workshop participants were concerned about the viability of small and family farms due to rising production costs and the demands placed on agribusinesses by downstream value-chains. Increasing corporatisation occurring across regions and commodities can exacerbate competition for workforce as larger corporate agribusinesses can provide comparatively better employment conditions and opportunities for their workforce. Some small and family business owners report significant stresses particularly in relation to regulation, compliance and recruitment.

Agribusiness complexity can increase when the business diversifies and adopts new technologies and innovations, necessitating expanded business capabilities. Financial institutions, for example, require increased levels of monitoring data pertaining to business risks and opportunities and risk management plans when seeking finance, with many farmers needing new skills to meet these requirements. Future primary production businesses will increasingly require knowledge of:

- Technology
- Regulation
- Markets and the ability to lead and manage staff
- Risk management
- Sustainable business strategy
- Management of contractors and external experts providing specialist services

Primary producers understand the reputational issues associated with environmental and employment practices. Workshop participants indicated their willingness to participate in quality assurance, monitoring and reporting activities, including Sedex, Freshcare and Fair Farms, which were perceived as time consuming and complicated. Industry Best Management Practice Programs, such as the cotton industry's myBMP, Hort 360, SmartCane BMP, also support farmers in decision making and improved business outcomes while providing transparency and accountability. These activities affirmed corporate responsibility credentials across agribusiness operations.





## Workforce attraction and diversity

Workforce shortages in agriculture are experienced across all types of roles – professional, technical and seasonal. The workforce is presently male-dominated and ageing.<sup>40</sup> However, women, Aboriginal peoples and Torres Strait Islander peoples, young people and people from culturally and linguistically diverse backgrounds all work in the industry. Attracting a more diverse and inclusive workforce can address issues of succession in the industry while also contributing to regional community vibrancy. Existing regional networks, such as QAWN, play a role in encouraging, placing, and keeping Queenslanders in agricultural work.

### CASE STUDY

#### Workforce planning enables business growth and employee success

Tassal is a leading Australian aquaculture business specialising in salmon and prawns with operations in Tasmania, New South Wales, and Queensland. Since forming in 1986, it has expanded to over 1,712 employees nationally.<sup>41</sup> Workforce planning supports the company's 2030 production targets. It includes a focus on local skilled labour (as the pandemic highlighted the industry's reliance on international seasonal labour). For Tassal, examining new workforce strategies has allowed them to minimise the impacts of labour shortages.

"Essentially, we're looking at current high school and primary school students. We want to let young people know that they can plan on a career in their regional hometowns rather than moving."

**Danielle Purdon**

TASSAL PRAWN – PEOPLE & CULTURE MANAGER

### Perceptions of agriculture careers

Two key messages emerged from the consultations in relation to the perceptions of agriculture and agricultural careers:

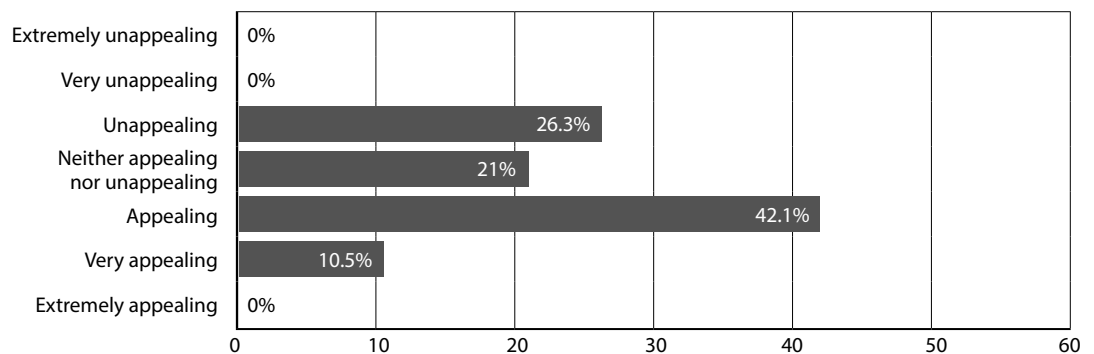
- The need to "tell the story" and raise awareness of agricultural careers and opportunities among a broad range of skilled workers including professionals and technicians; and to improve perceptions of the industry in the broader community
- The need to ensure that school students and their parents or carers are aware of careers, educational opportunities and pathways in agriculture and to facilitate entry into agriculture careers through work placements and work experience

In all consultations, participants were concerned that the mainstream perception of farming was outdated and did not reflect the scale and scope of agricultural opportunities and operations. They noted a need to challenge and change these perceptions, highlighting that the industry is highly engaged with science and technology and has deep connections with communities and regions. Highlighting these opportunities offers significant potential to improve workforce participation.

Industry respondents to the QAIWP Survey were asked to indicate the appeal of careers or jobs to skilled workers and the level of professional reward in agricultural careers and jobs on a 7-point scale. Skilled workers are broadly understood as having completed training, education and/or experience which can be applied to perform specialised tasks. This includes professional, technical and labouring workforce. The results are presented in the following diagrams (Figures 2 and 3).

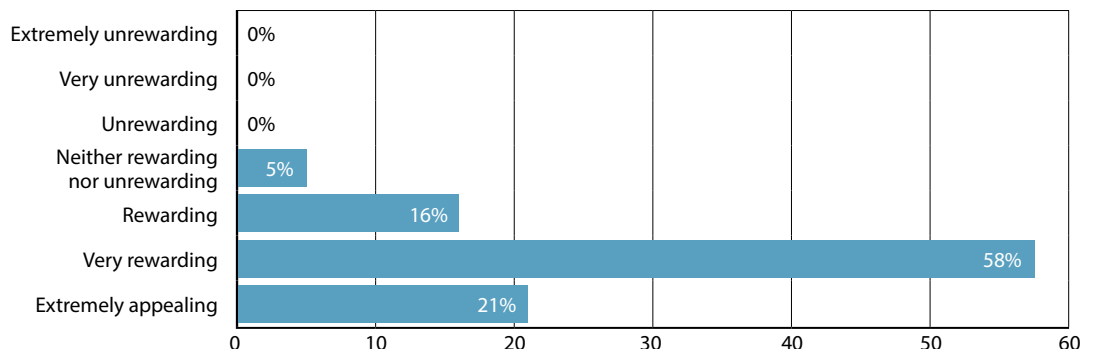
**Figure 2: Appeal of agriculture careers or jobs to skilled workers**

Source: QAIWP Survey



**Figure 3: Level of professional reward in agriculture careers or jobs**

Source: QAIWP Survey



The survey results indicate the appeal of agriculture jobs or careers as broadly positive with 53 per cent indicating jobs or careers in the industry are appealing. A further 47 per cent of respondents indicated that jobs or careers in the industry are neither appealing nor unappealing. By contrast, 95 per cent of respondents indicate that jobs and careers in agriculture are either rewarding, very rewarding or extremely rewarding. The survey results indicate a difference between perception and experience, highlight the value in communicating with students, graduates and other potential industry entrants the rewards associated with a career in agriculture.

### Workforce Demand

Due to ongoing demand for skilled labour and the changing composition of workforce, the industry needs to invest in retention of its existing workforce and encourage returning seasonal workers. There are major shortages among horticultural workers, as well as farm supervisors, technical roles and agronomists.

The National Skills Commission's 2021 Skills Priority List identifies occupational shortages at a 6-digit ANZSCO level and future demand in agriculture at the national level. As at June 2021, these include:



**Occupations in shortage with strong future demand**

agriculture consultant, agriculture scientist, veterinarian, and agricultural and horticultural mobile plant operator



**Occupations in shortage with moderate future demand**

agriculture technician, farrier, and nurseryperson



**Occupations in shortage with soft future demand**

mixed crop farmer, pig farmer, grape grower, and poultry farmer



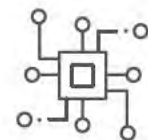
**Occupations not in shortage with moderate future demand**

land economist, environmental consultant, fisheries officer, and blacksmith



**Occupations not in shortage with soft future demand**

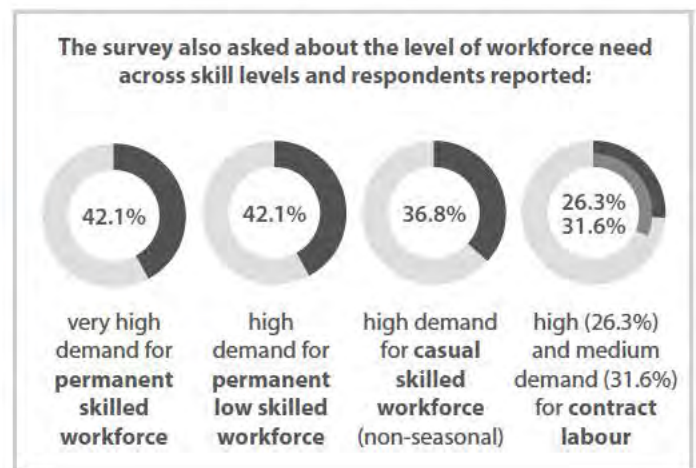
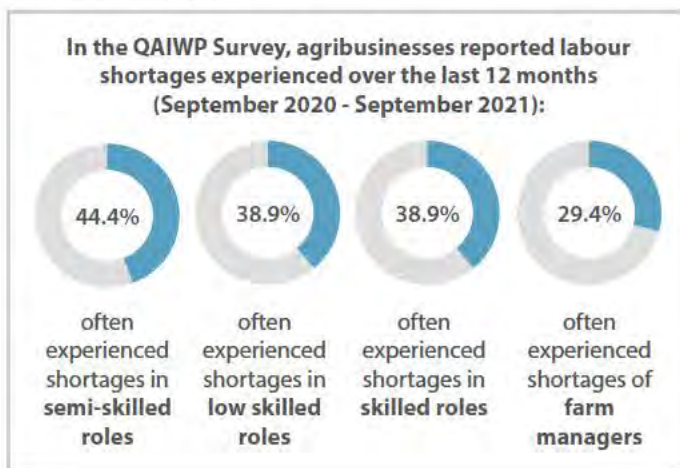
aquaculture farmer, cotton grower, flower grower, fruit or nut grower, grain, oilseed or pasture grower, turf grower, vegetable grower, apiarist, beef cattle farmer, dairy cattle farmer, deer farmer, goat farmer, horse breeder, mixed livestock farmer, sheep farmer, and mixed crop and livestock farmer



**Other occupations identified in the 2021 Skills Priority List include**

technical and service providers to agriculture such as software developers, engineers and trades.

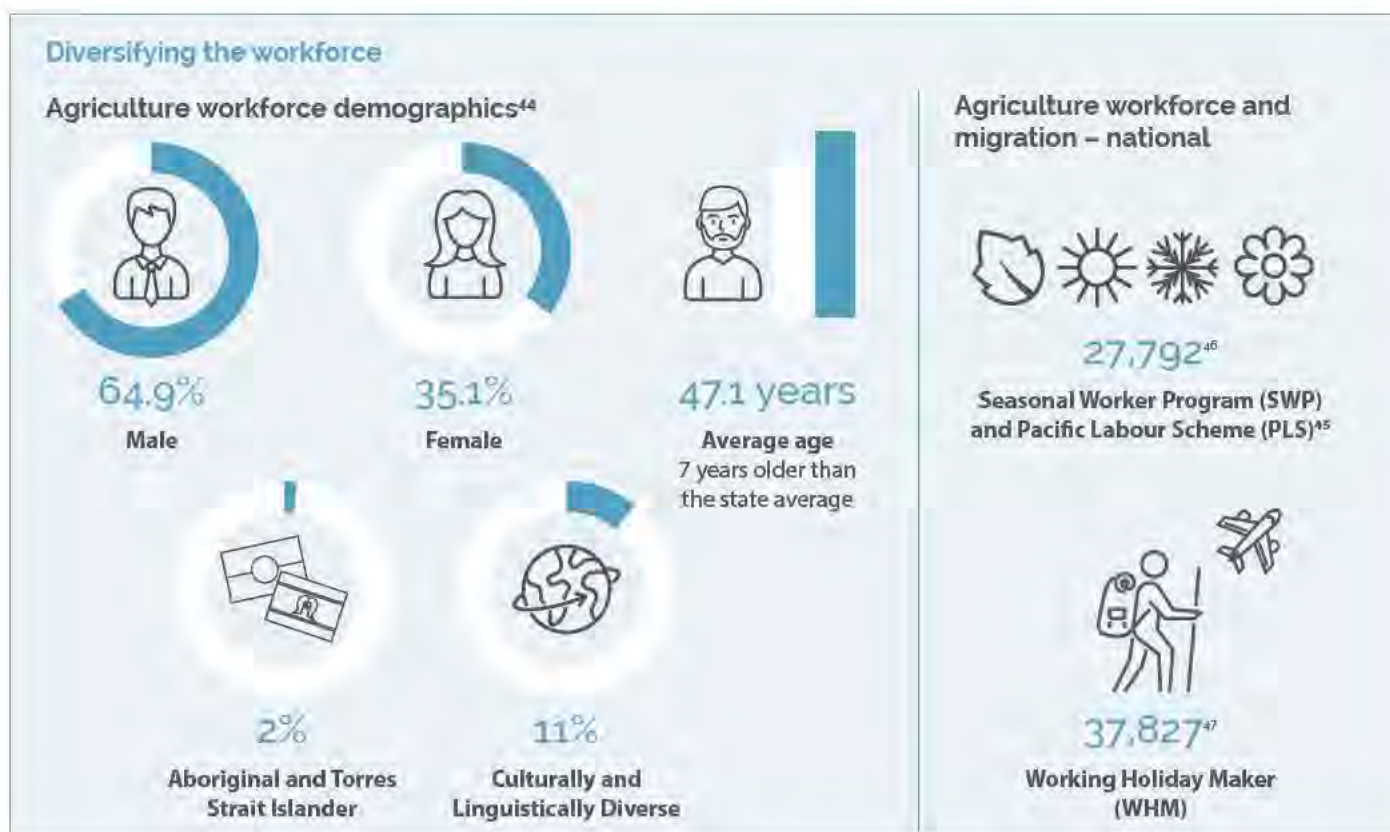
In both consultations and the QAIWP Survey, all priority sectors experienced workforce challenges and reported these were chronic. Some of the occupations identified as difficult to recruit in Queensland included: farm managers, agronomists, machinery operators and technicians, veterinarians, lab technicians, IT professionals, labourers, harvest workers, tradespeople, HR professionals, scientists, engineers, horticulturalists and animal husbandry. In consultations, aquaculture industry representatives indicated that the shortage of "aquaculture farmer" and "aquaculture technician" is forecast to rise significantly. Given the growth in the sector, workforce demand is anticipated to be higher than indicated in the National Skill Priority List.





This data reveals that demand for labour is varied across skill levels, with indications that a higher skilled workforce is more difficult to source. Also, 42.1 per cent agree and 36.8 per cent strongly agree with the statement that “a shortage of qualified/skilled workers is having a major negative impact on the industry.” For some agribusinesses, the shift to automation and the use of agricultural technology (agtech) may reduce the demand for low skilled workforce. However, the use of more complex technology will increase the need for highly skilled professionals and technicians either on farm or as contractors, which could lead to higher gross costs.

Projected employment growth in the selected agricultural groups is positive, with employment projected to increase by 11.3 per cent between 2020-21 and 2024-25, compared with 11.1 per cent for the AFF industry. The industry group projected to experience the greatest net growth is Sheep, Beef Cattle and Grain Farming (+ 5,113).<sup>42</sup> Regions with higher proportions of expanding agricultural industry groups will experience significant employment growth. For example, employment in the selected agricultural groups in the Ipswich SA4 is projected to increase by 15.6 per cent between 2020-21 and 2024-25, with extremely strong growth in poultry and beef cattle farming.<sup>43</sup>



The industry can replace workers leaving AFF by attracting a more diverse and appropriately trained workforce. The industry and educational institutions can work together to promote careers in agriculture and pathways that build the required skills and experience.

Agribusinesses reported recruiting based on attitude and aptitude and then provided on the job training and other incentives to retain people. Consultations revealed that the labour shortage can be advantageous to groups who have traditionally been underutilised, such as women. Individuals from these groups have been able to secure employment in the industry. In consultations, some agribusinesses also indicated a willingness to engage diverse cohorts including Aboriginal peoples and Torres Strait Islander peoples, migrants, refugees, women, people living with disability and long term unemployed.

Specific equity and workforce participation issues were identified for different groups. For example, access to childcare was not always guaranteed. Depending on the locational availability of childcare services, working parents may find it difficult to return to work after having children. Migrants and refugees could be attracted to agriculture careers and non-metropolitan areas with a mix of incentives. However, among groups who are experiencing significant disadvantage, it can be difficult to retain these workers.

Aboriginal peoples and Torres Strait Islander peoples have had a long relationship with agricultural production and Queensland's agricultural industries. They continue to be at the forefront of initiatives in bush-tucker, agritourism, land management and grazing. There are programs and support available to assist:

- DESBT Future Skills Fund<sup>48</sup> includes support for Aboriginal peoples and Torres Strait Islander peoples and their communities to develop skills relevant to local needs and to be able to compete for jobs in the future economy
- DAF also implement and contribute to programs to support Indigenous agribusiness and commercialisation of traditional knowledge in areas such as traditional foods and fishing. For example, the Indigenous Native Food Program (INFP) is a partnership between Advance Queensland and DAF to explore commercial opportunities for scalable Indigenous native food businesses.<sup>49</sup>

Indigenous owned and operated agribusinesses and land management offer important pathways for training, employment and economic development for Aboriginal peoples and Torres Strait Islander peoples and communities.



## Seasonal and overseas workforce

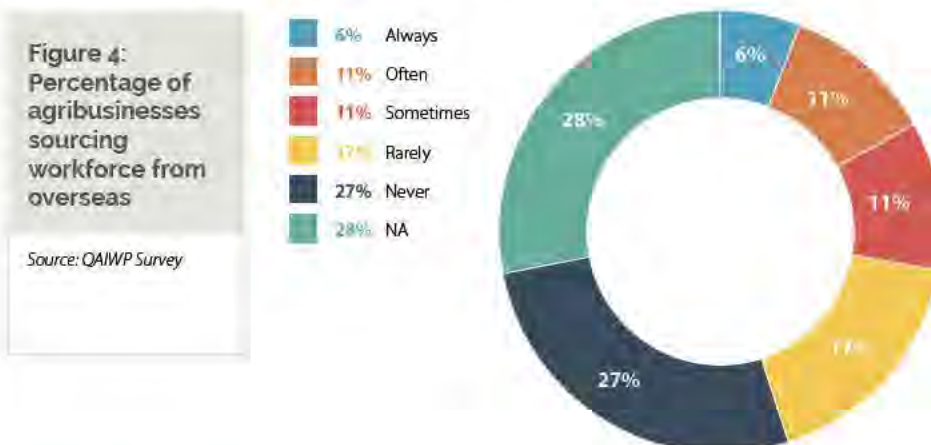
Despite the challenges and the impacts of COVID-19, some pathways exist for overseas workers to enter the agricultural workforce. Consultations indicated a need to continuously improve the process of accessing an overseas workforce and ensuring that this workforce has the right skills for employment upon arriving in Australia. This change requires ongoing advocacy to the Federal Government, including clarification of funding arrangements for and access to any training. In some regions, backpacker hostels play a role in brokering seasonal work for international and domestic visitors. While this is reported to be working well generally, ongoing monitoring is necessary to support those employed under a labour hire capacity who are bound by the regulatory protections that exist in Queensland.

Some aspects of seasonal labour supply have been addressed by the Federal Government through overseas workforce and visa specifications. While the Australian Agriculture Visa is being introduced by the Federal Government, Queensland agribusiness requirements need to be communicated to all levels of government. Many agribusinesses affirm the importance of overseas workers, noting the difficulties of recruiting Australians into seasonal and other agriculture roles. The experience of COVID-19 has also revealed resilience issues resulting from reliance on an overseas workforce. State Government modelling indicates that SWP and PLS (reformed as PALM) labour can address a significant proportion of anticipated

labour shortfalls in the short term. However, seeking longer term solutions that build a domestic labour supply is also recommended although more difficult to implement.

Consultation participants also indicate that the employment of overseas workers results in greater costs and responsibilities without the confidence that overseas workers will remain in their employment for the duration of a season. Individual businesses may be better able to mitigate these concerns through strengthening relationships, human resource practices and employment conditions, while also targeting diverse cohorts. This may be a more sustainable approach than the application of regulatory restrictions on overseas workers (such as setting a minimum work-requirement).

The QAIWP Survey asked where agribusinesses source their workforce. Respondents indicated that workforce is sourced mostly locally (42.1 per cent indicated always) or from other areas of the state (36.8 per cent indicated often). When combined with the findings that 27.8 per cent of respondents have never sourced their workforce from overseas (see Figure 4), this supports industry data<sup>50</sup> that indicates that the agriculture is reliant on domestic labour markets. Survey results and anecdotal reports indicate that vacancies are difficult to fill.



The survey results suggest that attracting and developing a reliable domestic workforce may reduce business risk resulting from future external impacts such as those experienced during COVID-19 border restrictions. Programs such as Harvest Trail and Pick Queensland play an important role in connecting workers to seasonal work opportunities, with some regions pursuing strategies that promote Queensland seasonal opportunities interstate. Stakeholder feedback indicated gaps in connecting these services to a diverse range of potential workers.

## Attraction to regions

### Regional variations in workforce attraction are generally attributed to:

- Proximity to an urban centre
- Remoteness or connectedness
- Regional competition for workforce
  - implications on salaries and conditions and
- Regional liveability, including housing availability and affordability

### Staff place value on the region in which they live and work. As evidence of this, the QAIWP Survey found the following:

- 47.4 per cent of respondents rated housing as extremely important
- 42.1 per cent rated internet access and reliability as extremely important
- 42.1 per cent rated opportunities for family members as very important
- 36.8 per cent rated the cost of living and transport as very important
- 36.8 per cent rated schools and child services as important
- 42.1 per cent rated access to services as important
- 42.1 per cent rated social and recreational opportunities as important

During consultations, participants in non-metropolitan regions reported significant housing issues including long waiting lists for rental housing, lack of suitable housing, and a lack of seasonal/temporary housing. In some regions, larger agricultural corporations were able to buy or build caravan parks and other accommodation to house their workforce. Some Local Government representatives reported their willingness to expedite innovative planning proposals to address worker accommodation barriers. Regions across the state are also competing for workforce to maintain and develop local industries. Some local authorities are promoting their regional opportunities interstate to attract a skilled workforce to their regions.

Consultation participants emphasised the need to respond regionally and/or locally and to empower local stakeholders. It was stressed that the Plan should provide a framework for regional or local responses by ensuring that resources, benefits and opportunities were available and relevant to the state's diverse regions.



## Workforce retention

Workforce retention refers to the continued employment of appropriately qualified and experienced people in agribusinesses, industry and regions. The Australian workforce is mobile with limited expectations of a job for life, particularly when workers are aiming for career progression. In the year to February 2021, almost four per cent of workers in AFF had been in their job for less than one year and of those, less than 40 per cent had been previously employed in AFF.<sup>51</sup> Employment on a job may not be sufficient to retain skilled and experienced workers, and while some workers may be prepared to relocate for work, retention can be challenging. The workforce needs ongoing skilling, upskilling and reskilling to maintain currency in the changing agriculture industry. Clarifying career paths that encourage and enable people to progress to higher level roles may contribute to attracting and retaining people in the industry and regions.



### CASE STUDY

#### Cross training in workforce strategy at Greensill Farming

Greensill Farming is a leading Australian agribusiness with large-scale farming operations in Bundaberg. With over 100 full-time employees and a further 60 to 120 employed seasonally, Greensill Farming's workforce is comprised of a wide range of teams including farming operations, fabrication, machinery, and civil construction.

Cross training has emerged as a key solution for Greensill Farming to maintain a dynamic workforce across a broad range of teams, products and services. By training adaptable and productive employees, Greensill Farming is able to provide staff with year-round work. This means they are retained in the business and are less likely to look for seasonal jobs elsewhere. Workforce retention through continuous employment benefits both Greensill Farming and its employees.

"We're constantly thinking about how we can make sure that our people are cross trained across our various functions, so we can easily deal with unexpected peaks in production and team member absences."

**Joel Keune**  
HEAD OF HUMAN RESOURCES,  
GREENSILL FARMING

### Retention challenges

Agribusinesses can experience a high turnover of workforce in part due to the seasonal nature of the work, recruitment practices and in part due to other regional and industry workforce dynamics, including competition for workforce. In the QAIWP Survey, when asked to rate workforce retention challenges, workforce retention and return were highlighted as pressure points:

- 31.8 per cent of respondents indicated that return of seasonal or casual staff was very challenging
- 36.4 per cent of respondents indicated that retention of permanent staff was very challenging
- 45.5 per cent of respondents indicated that workforce succession was challenging

In the survey, 36.8 per cent strongly agreed that it is difficult to retain qualified/skilled workers and that this is having a major negative impact on the industry. In consultations, it was reported that growers compete with their supply chains for workforce, which can offer more secure employment. For example, the sugar cane industry experiences seasonal shortages for haul out drivers, who can find more stable employment in transport and logistics.

Larger organisations have greater capacity to implement practices that value and retain a diverse workforce. Family and small businesses can also be attractive places to work, even if significant career advancement opportunities are not always available. It is not unheard of for family farms to retain workers for all their working lives.

Women often face challenges in remaining in the workforce due to issues such as access to childcare, healthcare and flexible work options. This can mean they opt out of the agriculture workforce and seek employment in other industries. In situations where families are accommodated on farm, issues of isolation can impact family members and result in workers seeking less isolated appointments. Remoteness significantly influences work/life balance and women's ability to engage in and remain engaged in employment, business and community opportunities.

## Incentives and flexibility

Employers, particularly those in larger companies, noted that retention of workforce starts in recruitment and involves creating pathways for staff. This includes opportunities to experience diverse activities in the business and to make informed decisions about professional development and direction. It was acknowledged in consultations that on-the-job training, beyond induction, is common and necessary for staff engagement. Additionally, succession and replacement of the aging workforce can be difficult due to workforce instability.

Stakeholders indicate they provide a range of benefits including housing, utilities and a vehicle in addition to competitive salaries, flexible arrangements and bonuses for returning seasonal workers in addition to above-award wages to attract and retain staff. However, the value of such packages is not always taken into consideration when comparing salaries and benefits with other industries. Retention strategies differed for those who sought to build careers and those who did not, but the fundamental aspects of people management and engagement are common. A consultation participant reported that their workforce is retained through diversified product lines and a pathway to work across picking and packing. This is supported by appropriate salary and conditions as well as other opportunities. Some Local Governments, such as the Sunshine Coast Regional Council, are prioritising industry development through first stage processing and value adding which also provides additional scope for workforce retention.

Smaller or family agribusinesses can find it difficult to retain workers without offering incentives as they may not be able to compete against other industries and agribusinesses. Retention was strongly related to pathways that incorporated engagement, flexibility, performance, rewards, professional development and training. Consultation participants also noted the need to foster the regional mobility of some skill sets such as musterers, shearers etc who are essential to a seasonal workforce and provide benefits for employers due to their skills and experience which leads to efficiency, productivity and relationships.

## WORKFORCE SKILLING

The breadth of skills and occupation gaps in the agriculture industry are acknowledged as ranging from entry level on small farms to strategic management in large corporations; from 'on the ground all-rounders' to specialised scientists in laboratories. Workforce skilling supports the need to attract from a range of cohorts; acknowledge transferrable skills or occupational standards in workforce from other industries; and enable greater agility in skills development and training. This requires significant responsiveness and promotion of opportunities on the part of training providers, workforce and agribusinesses.

The need for relevant and diverse skilling pathways has been identified as a national priority. Federal and State Governments are undertaking Skills Reform with a new National Skills Agreement.<sup>52</sup> It is anticipated that this will have implications for agriculture training and education. As the profile of the agriculture workforce is anticipated to change, it is important to continue to monitor the industry's skills requirements to match training with workforce requirements. Government, industry, education and training sectors should work together to minimise the risks of occupation shortages.

**Top 5 generic skills for agriculture<sup>53</sup>**

				
Learning agility, information literacy, intellectual autonomy, and self-management (adaptability)	Managerial and leadership	Financial	Technology	Science, technology, engineering, and mathematics (STEM) skills

## A regional approach

Regional liveability impacts the decisions of a workforce to remain in a locality for work. As personal circumstances change in an individual's working life, the available workforce has a reasonable expectation that they will be able to meet their needs and those of their family in their location. The need for equitable access to services was stressed by consultation participants, particularly for women whose lack of access to services can be a deciding factor in their workforce participation in rural and remote areas. Regional networks, State Government and local authorities play an important role in both attracting and retaining a workforce through a range of policy, land use, infrastructural, educational and industry relations initiatives.

Some consultation participants expressed interest in retaining seasonal and casual workforce by enabling greater flexibility for consistent or full-time equivalent employment across different industries, supply chain, seasons and employers. For example, this already occurs with some agribusinesses developing specialist irrigation teams which provide paid services to other farms. For employees, barriers were also foreseen in managing multiple employers and the taxation implications of holding multiple jobs. In terms of seasonal employment, it is important to note that seasons are not fixed and subject to weather fluctuations. The proposition that an employee can remain in a locality to work across the seasonal peaks of different commodities can be impractical. When workers have access to skilling and advancement opportunities as well as longer term security, they more be willing to consider flexible arrangements. The consultations acknowledge that regional collaboration could support workforce retention. QAWN is active in this area and provides a range of supports for agribusinesses and their workforce.



## CASE STUDY

### Connecting regional agricultural extension employers with committed graduates

The Agricultural Extension Work Placement Program (AEWPP), led by the QFF and the RJSA, connects suitable graduates with host organisations in Queensland.

As of 2021, the program supported 32 graduates to develop work-ready skills and networks. All participants gained employment in agricultural extension and farm advisory services across the grazing, sugar cane, and horticulture sectors in catchments adjacent to the Great Barrier Reef.

Graduates are employed for 15 months to assist the delivery of extension services through their host organisations. They are supported through mentoring from experienced advisors and a tailored training program. Graduates can also build professional and local networks with their fellow graduates, industry advisors, previous graduates as well as in their local communities.

Farmacist is a privately owned independent agronomy company. Since joining the program in 2019, Farmacist has mentored five graduates. A benefit of the program is that graduates are exposed to a wide range of training opportunities across varied disciplines. This allows them time to understand the growers and their concerns more.

“What we’re looking for is young people to come into rural areas that are driven, passionate, care about the land, and care about the growers.”

**Jayson Dowie**  
FARMACIST DIRECTOR AND AEWPP MENTOR



## Qualifications

In the QAIWP Survey, participants were asked about the relevance of types of training and education for addressing workforce training and skills development in agriculture:

- 79 per cent of respondents regarded on-the-job training extremely relevant.
- School-based training was rated as very relevant by 41.1 per cent of respondents
- 47.4 per cent rated it as neither relevant nor irrelevant
- Other types of training – accredited vocational training, non-accredited vocational training, apprenticeship or traineeship, and tertiary education – were regarded as very relevant by most respondents

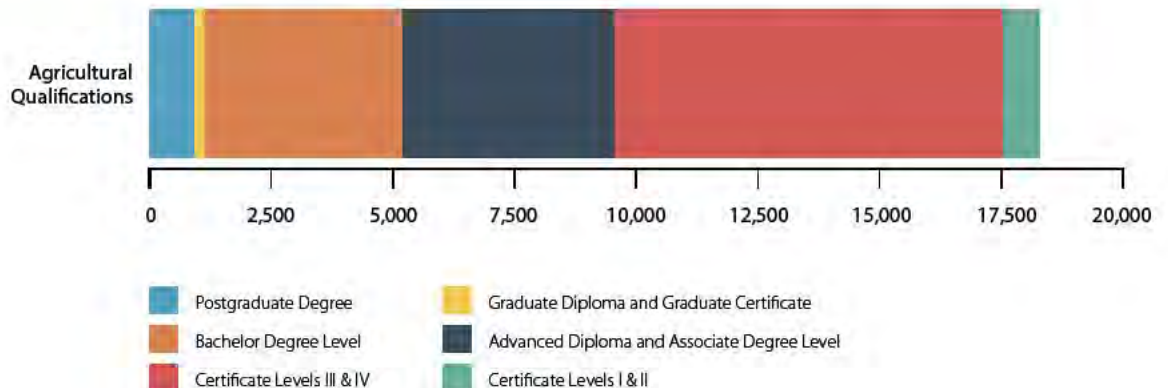
These results are counter to some commentary in consultations which indicated that employers generally do not value training or its contribution to their productivity and profitability. The results also do not reflect the priority that participants placed on school-based agriculture education. Consultation participants reported that non-accredited training was also sought by business owners. In these cases, business owners were not seeking qualifications but upskilling, although cost could be viewed as a barrier. Considerations in decisions to pursue a qualification included cost, value for money, relevance and time commitment.

The consultations indicated that agriculture apprenticeships and traineeships that are workplace based are highly desirable. Some consultation participants indicated that the current approach to traineeships did not sufficiently support the employer or the student. Some employers reported barriers in their relationships with registered training organisations in undertaking traineeships.

Almost 45 per cent of Queensland workers with a qualification in an agricultural field have a Certificate III or IV level qualification, while one in four have qualifications at the Advanced Diploma and Associate Degree level (Figure 5).<sup>54</sup> Prior to 2021, national university enrolments in agriculture studies were declining but with the reduction of tuition fees, enrolments increased significantly. The University of Queensland reported that enrolments more than doubled, increasing from 22 in 2019 to 50 in 2021.<sup>55</sup> Those students can be engaged in industry prior to graduation to develop practical experience and ease transition into employment.

**Figure 5:**  
Agricultural qualifications in Queensland workers by qualification levels, 2020-21

Source: Jobs Queensland 2022, Anticipating Future Skills





### Food Innovation Australia projections<sup>56</sup>



2025



Decline in managers and farm labour to 2025



Increased demand for workforce with technical, managerial, and numeracy skills

2025



Stronger technical skills needed by 2025 (+21 per cent)

### Jobs Queensland Anticipating Future Skills (AFS)<sup>57</sup> data



24.8%



Workers with Certificate I or II levels will decrease by 24.8 per cent



Increase in all other qualification levels



The highest increase is expected for tertiary level qualifications – Post Graduate Degree (17 per cent) and Bachelor Degree (11.2 per cent)

### Industry-led training

The levels and types of skills needed by agribusinesses and workforce are changing with the evolution of the industry. Participants reported in consultations that they are confused about the training system and they questioned the relevance of current vocational and academic educational offers. They reported that school leavers, university graduates and Vocational Education and Training (VET) graduates were not job ready. Other pathways to agriculture employment, such as employment programs, short courses and traineeships, were also not well regarded as they did not necessarily result in developing motivation or 'the right attitude'.

Consultation participants repeatedly commented on a need to address a gap in agriculture education. The need for greater accountability of industry was noted and many stakeholders indicated that training should be industry-led. While a commitment to continuous learning was expressed by participants, concerns about affordability, relevance and good practice were raised. Concern was also expressed that increased skilling and qualifications which exceeded the needs of some agriculture roles could have impacts on salary expectations.

There is a challenge in raising industry's confidence in the capability of graduates and the quality of course offerings. This requires greater flexibility and adaptability in both the industry and the training sector, including Registered Training Organisations (RTOs). This can be addressed partly by cultural change in agribusinesses and partly by ensuring training pathways meet industry needs. Through greater engagement between the training sector and agriculture industry, continuous learning can be valued, rewarded and built into

career progression and/or opportunities. Some larger agriculture corporations report that they are influencing cultural change to value, integrate and promote training. The training sector can demonstrate greater flexibility, industry engagement, credible and relevant teaching and learning methods, expert trainers, and demonstrable outcomes.

Industry requires different models and delivery modes of training. This would enable flexible participation and diverse pathways for learners including mentoring, micro-credentials, extension, and intensive study blocks that enable concurrent earning and learning. This flexibility could smooth the transition from study to work. This was particularly relevant for university graduates whose academic activities take precedence over practical farm skills such as operating machinery.

Another issue experienced by employers is the lack of awareness among students, trainees and staff of regional geographic and climatic conditions. It was noted that course offerings relevant to agriculture in the wet and dry tropics, for example, were not available in those regions.

Some regions have limited access to education and training. This was noted as a significant shortcoming in the provision of socio-economic infrastructure that was not well addressed by the online learning offerings or short courses offered by RTOs. Accessible education is an integral element of regional development and plays a role in workforce attraction and retention. The training landscape was regarded as uneven and inconsistent with funded programs prioritised over regional industry relevance and currency.



## Agriculture in schools



Schools are critical for engaging prospective agriculture workforce entrants. Participants in consultations stressed the need to reinvigorate agriculture education across a range of initiatives including curriculum development, immersion programs, VET in Schools, traineeships, work placements, work experience and industry engagement. This includes expanding Gateway Schools in agriculture and agribusiness and ensuring their programs are grounded in the practices and priorities of the industry.

Despite school-based training being primarily regarded as neither relevant nor irrelevant in the survey, consultations indicated that schools had an important role to play in preparing students for work and further study in agriculture. Without a sound grounding in agriculture in secondary school, starting in year 7, students, teachers and parents/carers are not able to make informed decisions about further education and career choices in agriculture. Participants in consultations noted the need to develop more awareness and engagement with agriculture through secondary education.

The education and training industry benefits from industry current, qualified trainers and teachers who can teach up-to-date agriculture programs and content to students. The attraction and continuing development of agriculture trainers and teachers is a concern consistently raised by industry. Increased collaboration between industry and education providers may assist in the attraction of STEM teachers into agriculture teaching and alignment of subject areas, together with attraction of additional industry experts who will support industry endorsed education outcomes.

### Skill needs and gaps

With projections that the industry is trending towards higher skilled roles, concerns were expressed about any loss of practical skills. Agribusiness owners noted that 'generalists' with a mix of hands-on skills are still needed on farms and are difficult to recruit or retain. This correlates with research that found that, together with new skills and capabilities, many traditional skills are also likely to remain in demand in the future.<sup>58</sup>

Consultation participants reported skills and occupation shortages across the breadth of workforce. At the professional level, it was difficult to attract and retain agronomists, scientists, managers, veterinarians, human resource managers and IT specialists. In technical roles, it was difficult to attract and retain machinery operators, lab technicians, and trade qualified workforce. Seasonal workforce was an ongoing problem with significant reliance on backpackers as well as anticipation of new visa arrangements.

In response to findings that new workers lack basic jobs skills, pre-employment credentials, such as Farm Ready Card, can address these

gaps prior to employment to reduce the level of on-the-job induction and training provided by employers.

Despite the projected demand for technology and data capabilities, it has been noted that training provision is not maintaining pace with agtech and innovation trends.<sup>59</sup> To diversify and upgrade the skills of existing and new workforce, the accessibility, relevance and affordability of training and skills development programs needs to be addressed. This is particularly important for underutilised cohorts, such as farming women, who experience barriers in both accessing subsidised training courses and having their transferrable skills acknowledged.

In anticipating future skills and a more diverse workforce, consultation participants expressed an expectation that contemporary and innovative practices are reflected in course material. Participants from the VET sector and agribusinesses commented that agtech was not integrated into course offerings, was outdated or not available in their region. This indicates a need for currency and new approaches to training in this field. Regional disparities were expressed including inability to address modern challenges in course offerings that recognised that agriculture is in transition and facing disruptive conditions.

In consultations, some participants proposed that agriculture can benefit from sustainable transitions within the industry and in other industries. As sectors such as energy and mining undergo transition, this could result in more people being attracted to and/or returning to agriculture. They further proposed that strengthening training in agriculture sustainability could be attractive to younger people.

### QAIWP Survey respondents indicated that disruptive conditions would create a demand for higher skills in the following areas:



Most survey respondents indicated that the same level of skills that are currently required would be required to manage disruptions resulting from unexpected events (61.1 per cent) and agribusiness diversification (47.1 per cent). The disruption from these trends is expected to be high to extremely high. Agribusinesses are concerned about the cost of a higher skilled workforce. Industry requires a clearer understanding of the impact of this transition in terms of labour costs, capital investment and increased productivity.



**PART 3**

# **GOALS AND RECOMMENDATIONS**





# PART 3: GOALS AND RECOMMENDATIONS

The agriculture industry is experiencing constraints by workforce shortages, which were exacerbated during COVID-19 restrictions and lockdowns. Growth within the agriculture industry is being limited by competition for workforce and the challenges of attracting new workers while embracing new practices, processes and products. Through industry consultations to inform the development of this five-year Plan, the industry expressed aspirations for regional approaches, industry development and a greater level of certainty to take on risk and expansion.

*In the next five years, Queensland's agribusinesses aspire to be leaders in workforce planning and development. The state's sustainable, productive and fair agriculture employers and training providers will engage and develop a diverse and skilled workforce in Queensland's regions.*

The goals and recommendations for each action area are presented in this section. In the following section, the action plan is presented and comprised of actions derived from the recommendations. While the state-wide scope of the Plan was welcomed, the consultations also revealed the need for regional approaches to workforce planning and the promotion of regional lifestyles to attract and retain workforce and promote regional prosperity.

## ACTION AREA

### Adaptability and capability in agribusiness

#### Goal 1

**Queensland agribusinesses and their workforce are leaders in adopting contemporary technologies, management practices and innovations**

#### Key Issues

Agribusinesses are experiencing significant challenges and opportunities that are impacting business practices and processes including innovation, technology and data. Developing agribusiness capability and adaptability in the face of uncertainty and volatile conditions will assist with succession, business transitions, reputation and workforce management. Industry stakeholders anticipate that COVID-19 will continue to impact workforce supply. The lack of reliable and current data impacts business operations and decision making.

#### Recommendations

##### Strengthen innovation

- Strengthen regional agriculture innovation systems for agribusiness decision support through research translation, knowledge brokering, technology uptake and capacity building
- Identify open innovation and digital transformation opportunities for Queensland agribusiness development to enhance data gathering, regulatory compliance and reporting, and farm management

##### Build business and leadership capability

- Provide relevant, accessible online resources and tools to small and medium agribusinesses. These tools and resources must address contemporary business planning and management practices and decision support for workforce planning, outsourcing/contracting and human resource management

- Identify funding and training targeting women, Aboriginal peoples and Torres Strait Islander peoples, people from culturally and linguistically diverse backgrounds and young people to participate in leadership, agribusiness management and other development initiatives
- Improve the reputation of industry and agribusiness through the adoption and promotion of quality assurance, corporate responsibility certification and best management practices certification among agribusinesses
- Identify and develop innovative partnerships to support and resource Aboriginal peoples and Torres Strait Islander peoples agribusiness in providing business development, training and workforce participation opportunities
- Ensure that agribusinesses have access to skilled business, extension and other relevant advisors at the regional and local level

##### Enhance resilience and readiness

- Acknowledge the continuing impacts of COVID-19 on workforce supply in some agricultural industry groups and enhance planning capability for future disruptions by:
  - o drawing on lessons from 2020-2022 disruptions and
  - o addressing supply chain workforce disruptions and planning



## ACTION AREA

# Workforce attraction and diversity

### Goal 2

**A diverse and capable workforce is attracted to careers and employment in agriculture throughout their working lives**

### Key Issues

The industry experiences chronic workforce and skills shortages at all levels and has expressed a need to attract a diverse workforce as older workers retire and as other regional industries compete for workforce. Recruitment is particularly challenging for agribusinesses who do not receive suitable applicants for vacancies. They report the tendency to recruit for aptitude and attitude and then provide induction and training. Overseas workers on visas are seen as an important and necessary part of the workforce. Schools are also regarded as central in promoting agriculture careers and linkage to industry. Ongoing industry engagement is necessary for VET and higher education students and graduates to support their transition into work placement and employment.

### Recommendations

#### Raise the profile of agriculture and aquaculture careers

- Implement a state-wide awareness raising campaign, supported by regional campaigns, using multiple media channels and targeting diverse audiences to profile the variety, significance and evolution of agriculture in Queensland economy and regions
- Raise awareness of careers, comparable salaries and conditions, and opportunities for job seekers in the agriculture industry at the state and regional levels, targeting school students and underrepresented groups including Aboriginal peoples and Torres Strait Islander peoples, women, and people from culturally and linguistically diverse backgrounds
- Leverage and develop existing programs, such as School to Industry Partnership Program, Gateway Schools and gap year initiatives, to develop and implement immersion, work experience and engagement opportunities for school students in agriculture industry

#### Diversify the workforce

- Seek opportunities to appropriately and respectfully engage with Aboriginal peoples and Torres Strait Islander peoples agriculture stakeholders to enhance employment and economic benefits for Aboriginal peoples and Torres Strait Islander peoples and communities
- Target and attract a workforce from culturally and linguistically diverse backgrounds cohorts and create pathways to employment
- Investigate potential to recruit or exchange agriculture graduates from Pacific universities with skills in high demand such as tropical agriculture

#### Promote regional approaches

- Enable collaboration between industry and government to develop regional and local capability in workforce planning
- Partner with research institutions and local authorities to seek funding for a major collaborative research project to better understand the role of regional amenity and liveability in attracting and retaining workforce and equip local authorities and other agencies in developing appropriate responses to regional liveability

#### Improve recruitment and job readiness

- Ensure Queensland agriculture interests are represented in advocacy to the Federal Government about overseas workforce and visas
- Promote and expand pre-employment and work-readiness initiatives, such as Farm Ready Card, to better link workforce entrants with employment opportunities
- Ensure that updated information about seasonal work opportunities in Queensland is available to target audiences via online, printed and referral services
- Develop cooperative competition within regions to attract workforce from other industries with transferrable skills, particularly those industries with high attrition rates
- Promote flexible pathways and entry points for workers to join the agriculture industry at any age, and improve transferability of skills



## ACTION AREA

# Workforce Retention

### Goal 3

**The agriculture workforce has access to flexible pathways to pursue rewarding careers and employment opportunities**

#### Key Issues

Agribusinesses can experience a high turnover of staff for a variety of reasons. Improved human resource practices and ongoing training for managers and staff can support staff retention. Returning seasonal labour creates benefits for workers and agribusinesses. To retain the workforce in the industry and in agribusinesses, enhanced people management capabilities and raised awareness of career paths are needed. At the regional level, appropriately serviced, affordable and vibrant communities, together with regional workforce solutions can also enhance workforce retention.

#### Recommendations

##### Develop flexible career and employment paths

- Clarify and promote regional career paths and opportunities to learners, agriculture workforce and employers
- Develop initiatives that attract and retain workforce from culturally and linguistically diverse backgrounds including new Australians
- Identify regional opportunities for providing continuous agriculture employment in seasonal roles across commodities

##### Support regional development

- Promote regional approaches to workforce needs and development to enable a range of retention strategies such as remote work, flexible conditions, mentoring, professional development and secondments
- Support Local Government leadership in addressing workforce issues at the local and regional level including leveraging existing planning frameworks for housing, transport, education and social outcomes that support an agriculture workforce
- Create a multi-stakeholder group to identify and address regional liveability and housing issues including housing supply and affordability in regional towns

## ACTION AREA

# Workforce Skilling

### Goal 4

**Queensland's agriculture workforce is appropriately skilled and supported by flexible training and education pathways that are industry-led and responsive to industry trends**

### Key Issues

The industry reports significant skills shortages at all levels. Agribusinesses anticipate providing both entry level and ongoing training for their workforce. Industry stakeholders report that the current training offering needs development and tailoring to enhance industry and regional relevance and strengthen soft skills. Access to training and education is not equitable across Queensland's regions, with VET facilities not located in some local government areas. School-based training, traineeships and apprenticeships, and alignment of agriculture education with STEM are highly regarded. A range of extension initiatives and diverse learning opportunities can support training and employment outcomes for graduates.

### Recommendations

#### Prioritise agriculture in schools

- Further investment in and expansion of Gateway Schools program for regional relevance and geographic reach
- Expand existing industry-led schools engagement programs such as Agriculture Schools Engagement Program (Agforce)
- Develop and implement a strategy to attract, train and retain quality agriculture trainers and teachers

#### Develop capability in digital agriculture and agtech

- Attract and retain agtech and digital agriculture experts as trainers in vocational education and training
- Ensure agtech and digital capabilities are integrated into agriculture education and training and aligned to industry priorities
- Identify opportunities emerging from the *Federal Government's Digital Foundations for Agriculture Strategy*<sup>60</sup> and other Federal and State government policy and programs

#### Address knowledge, skills and training gaps

- Strengthen relationships between training organisations and industry to ensure responsiveness to industry and regional needs and to ensure that training is industry-led
- Ensure ongoing resourcing for industry-based initiatives in agriculture workforce planning and skills development
- Reassess core skills requirements in agriculture to incorporate current and potential future skill gaps such as human skills, stronger alignment to STEM, and training in agtech and digital agriculture

#### Provide flexible education and training pathways into employment

- Reinvigorate agriculture education and training across schools, VET and higher education through innovative curriculum resources and stronger alignment to STEM to develop and enhance training and career pathways across a range of specialisations and professions
- Develop and diversify education and training offers to include stackable micro-credentials and diverse forms of delivery that are linked to upskilling, career progression, traineeships and apprenticeships
- Ensure students and graduates have access to guidance and mentors at critical transition points in their working and learning lives to ease transitions and facilitate placement and employment in agriculture
- Provide and fund bridging opportunities and pathways for school leavers, VET completers and university graduates, including international students, into work and work experience and further training to address reported occupation shortages

#### Leverage regional resources and innovative partnerships

- Identify opportunities for innovative partnerships across industries to address and train for niche skill needs such as spatial data collection in precision agriculture
- Leverage and strengthen existing place-based and collective impact networks, such as Regional Collaboration Networks, to ensure that agriculture education, training and employment is prioritised, promoted and supported
- Engage industry in data collection on workforce and identified data gaps including reporting on key issues



# PART 4 ACTION PLAN



# PART 4: ACTION PLAN

The five-year action Plan is comprised of a mix of initiatives that are industry-led and regionally responsive.

## ACTION AREA

### Adaptability and capability in agribusiness

#### Goal

**Queensland agribusinesses and their workforce are leaders in adopting contemporary technologies, management practices and innovations**

#### Actions

##### 1.1 Strengthen innovation

- 1.1.1 Develop knowledge brokering opportunities for agribusinesses to access, assess and adopt current technology and innovation updates and their workforce impacts
- 1.1.2 Initiate innovative partnerships between agriculture industry, training sector and other industries to ensure up-to-date skilling, training and knowledge brokering in priority niche areas such as digital agriculture
- 1.1.3 Develop innovative partnerships to host a hackathon to facilitate open innovation in response to issues experienced by agribusinesses such as compliance, reporting, data collection and farm management systems

##### 1.2 Build business and leadership capability

- 1.2.1 Develop an innovative self-paced Massive Open Online Course (MOOC) and toolkit to build agribusiness decision support and capacity in contemporary management issues
- 1.2.2 Resource and support agribusinesses owned by Aboriginal peoples and Torres Strait Islander peoples to enhance their chosen employment and training pathways and outcomes
- 1.2.3 Promote quality assurance and corporate responsibility to agribusinesses regionally and encourage publication of results/achievements

1.2.4 Develop leadership capabilities of farmers and agribusiness operators to improve business and industry leadership capability through promotion of available opportunities, mentoring, and peer-to-peer support

1.2.5 Promote targeted business and industry leadership initiatives for women, Aboriginal peoples and Torres Strait Islander peoples and people from culturally and linguistically diverse backgrounds

1.2.6 Expand access to qualified regional extension and relevant advisors to provide business and management advice to agribusinesses via diverse platforms including online and drop-in sessions.

##### 1.3 Enhance resilience and readiness

- 1.3.1 Provide readiness, resilience and learning updates at the state and regional levels for agribusinesses to prepare for and respond to further COVID-19 or similar disruptions
- 1.3.2 Undertake workforce planning across the agriculture supply chain



## ACTION AREA

# Workforce attraction and diversity

### Goal 2:

**A diverse and capable workforce is attracted to careers and employment in agriculture throughout their working lives**

### Actions

#### 2.1 Raise the profile of agriculture and agriculture careers

- 2.1.1 Implement a state-wide awareness raising campaign using diverse media and targeting diverse audiences to profile the significance of agriculture in Queensland's economy and regions
- 2.1.2 Implement an engagement strategy that raises awareness of careers, education and training, comparable salaries and conditions, and job opportunities for young people in the agriculture industry to address misconceptions and misinformation. Focus areas to include:
- Jobs of the future including agtech and digital agriculture
  - Integrated training and career paths
  - Entrepreneurship and leadership in agriculture
- 2.1.3 Strengthen connections between industry engagement programs and schools to expand immersion and engagement opportunities for school students in agriculture

#### 2.2 Diversify the workforce

- 2.2.1 Investigate the interest among Aboriginal peoples and Torres Strait Islander peoples agriculture stakeholders to establish an Indigenous Agriculture Advisory Group to improve employment pathways for Aboriginal peoples and Torres Strait Islander peoples
- 2.2.2 Respond to the recommendations of the Leadership and Diversity working group to address agriculture employment and career pathways for people from culturally and linguistically diverse backgrounds
- 2.2.3 Collaborate with key stakeholders to investigate employment and exchange opportunities for agriculture graduates from Pacific universities with skills in high demand

#### 2.3 Promote regional approaches

- 2.3.1 Undertake a major collaborative research project addressing the relationship between regional liveability and attraction and retention of the changing agriculture workforce
- 2.3.2 Build regional capacity and advisory services in regional agriculture industry workforce planning
- 2.3.3 Develop regional cooperative competition strategies for agriculture industries and groups to enhance workforce attraction

#### 2.4 Improve recruitment and job readiness

- 2.4.1 Link young people and industry entrants with employment opportunities by formalising the adoption of a pre-employment credential, such as Farm Ready Card, that meets industry needs and standards
- 2.4.2 Undertake and evaluate a pilot partnership with industry to fund scholarships for women, who have occupational/transferrable skills and taken career breaks, to upgrade qualifications/skills to re-enter the workforce in agriculture
- 2.4.3 Coordinate a Queensland response to the proposed independent review of the Australian Agriculture Visa at the two-year review point:
- Examine and implement pathways for international students
- 2.4.4 Identify strategies in supporting workers of any age or background to enter the industry at multiple points. Strategies should consider improvements in mapping of skills, recognition of prior skills, and the use of skill sets or micro-credentials to support transition.
- 2.4.5 Ensure ongoing promotion of seasonal work in Queensland agriculture via a range of media
- Ensure recruitment and job placement providers understand the needs of industry
  - Linked to industry needs for pre-employment qualification credentials

## ACTION AREA

# Workforce Retention

### Goal 3:

**Agriculture workforce have access to flexible pathways to pursue rewarding careers and employment opportunities**

### Actions

#### 3.1.1 Develop flexible career and employment paths

- 3.1.1 Partner with industry and education providers to clarify and promote regional career paths for industry groups to target audiences
- Create appropriate resources to provide information on career paths
- 3.1.2 Collaborate with seasonal work services to promote production profiles of different regions that enables continuous employment/workforce retention in regions or individual agribusinesses throughout the seasons
- 3.1.3 Improve rates of returning seasonal workforce through good practices, incentives, promotion and engagement of seasonal work opportunities
- 3.1.4 Implement the recommendations of the Financial Security of Farm Businesswomen in Australia report

#### 3.2 Support regional development

- 3.2.1 Initiate a collaborative government, stakeholder and industry taskforce to address regional liveability including housing affordability and supply in non-metropolitan areas
- Build local government leadership and capacity for innovative service solutions
  - Leverage existing state, regional and local planning processes to improve housing, transport, education and social outcomes for the agriculture workforce
- 3.2.2 Address housing issues by agriculture workers through advocacy of their role as key workers who play a pivotal role in food security
- 3.2.3 Develop regional networks to support regional workforce retention. Create innovative regional strategies that use spare workforce capacity through secondments, remote work, mentoring, work continuity, shared workforce and flexible conditions



## ACTION AREA

# Workforce Skilling

### Goal 4:

**Queensland's agriculture workforce is appropriately skilled and supported by flexible training and education pathways that are industry-led and responsive to industry trends**

### Actions

#### 4.1 Prioritise agriculture in schools

- 4.1.1 Increase the number of schools engaged in the Gateway Schools program and encourage tailoring of Gateway Schools initiatives to regional conditions and requirements
- 4.1.2 Initiate a strategy to attract, train, engage and retain quality agriculture trainers and teachers across all levels of education
  - Provide pathways for industry experts to become VET and school trainers
  - Establish 'in residence' opportunities for industry experts in education and training contexts

#### 4.2 Develop workforce skills in agtech and digital agriculture

- 4.2.1 Initiate a strategy to attract and retain agtech and digital agriculture experts as trainers in Vocational Education and Training sector
- 4.2.2 Develop strategies for skilling and professional development of extension officers and agribusiness advisors to improve adoption of technologies and innovation
- 4.2.3 Improve integration of agtech and digital agriculture training in agriculture training and traineeship programs
  - Develop learning pathways in agtech and digital agriculture including micro-credentials
  - Ensure digital capabilities are reflected in training
- 4.2.4 Respond and contribute to Federal and State Government strategies progressing the digital and technological advancement of agriculture to support Queensland agtech development and acceleration of uptake

#### 4.3 Address knowledge, skills and training gaps

- 4.3.1 Advocate and build commitment for industry-led and industry resourced approaches to education and training at the regional and state levels
- 4.3.2 Improve awareness of and access to agribusiness support programs to enhance engagement with training, apprenticeships and traineeships, employment and other initiatives
- 4.3.3 Engage agriculture industry and education and training sector to review core skills for agriculture, regional specialisations and professional skills including:
  - Alignment of agriculture education and STEM
  - Human and interpersonal skills
  - Regional geographic and climatic conditions such as tropical agriculture
  - Integration and development of digital skills
  - Development of innovative curriculum resources
- 4.3.4 Review and update the Workforce Skilling actions in the

*Queensland Agriculture Industry Workforce Plan* (this Plan) in response to the Skills Reform and National Skills Agreement

#### 4.4 Provide flexible education and training pathways into employment

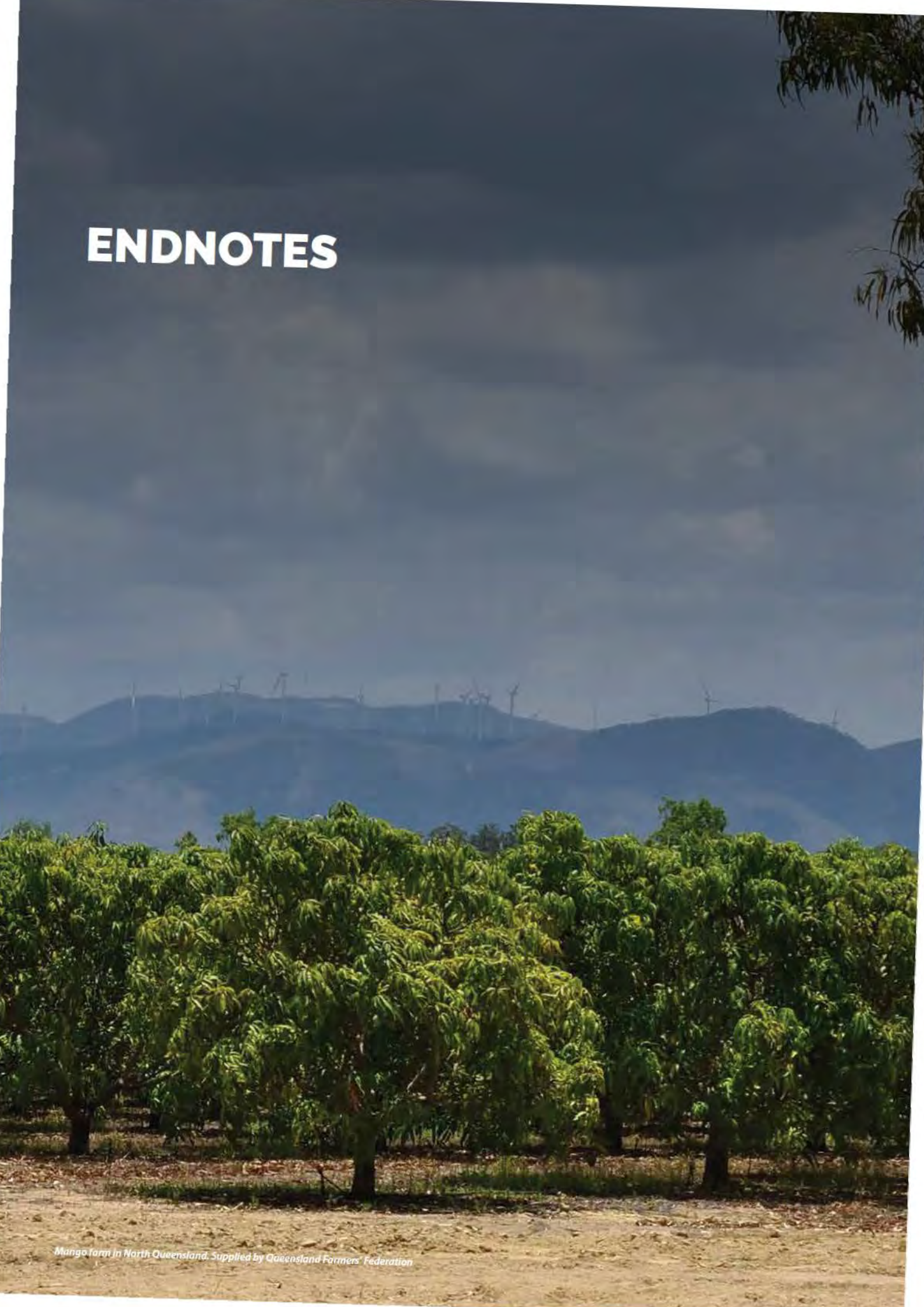
- 4.4.1 Identify strategies for enhancing transition of existing workforce in meeting new occupational standards, and to support workers with transferable skills from other industries and occupations into agriculture
- 4.4.2 Develop bridging opportunities, extension and pathways for school leavers and VET and university graduates into work experience including:
  - Evaluation and co-design of a sustainable workplace-based agriculture traineeship that is attractive to entrants and employers
  - Provide graduates with access to guidance and mentors to support transitions from study to employment
  - Progression of agriculture apprenticeship/s
- 4.4.3 Expansion of graduate placement programs that include work experience, mentoring, training and extension opportunities for graduates
- 4.4.4 Establish a partnership between agriculture industry and the education and training sector to develop and diversify innovative and flexible industry-relevant training that:
  - can be integrated with graduate programs, traineeships and apprenticeships
  - are free or subsidised for higher education graduates in reported occupation shortages in agriculture

#### 4.5 Leverage regional resources and innovative partnerships

- 4.5.1 Industry Skills Advisor to investigate new opportunities to enhance data collection with a focus on known workforce and training data gaps. Coordinate reporting to government on key areas, such as skills shortages
- 4.5.2 Leverage existing regional networks, such as Regional Collaboration Networks and QAWN, to identify opportunities for innovative approaches and partnerships to prioritise, promote and support agriculture education and training
- 4.5.3 Investigate the feasibility of a pilot initiative in the Scenic Rim to link development initiatives, such as Agriculture Industrial Precinct, with training and employment opportunities and facilities
- 4.5.4 Continue to resource and expand industry-based workforce and skills initiatives, including RJSA and Industry Skills Advisor (AISA)
  - Position and rebrand RJSA as a coordination body of peak bodies addressing agriculture workforce priorities



# ENDNOTES



*Mango farm in North Queensland. Supplied by Queensland Farmers' Federation*



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