

The Future of Agriculture Training Review

Recommendations on how Victoria can meet the education and training needs of the agriculture sector now and into the future

Contents

Contents	2
Chair’s Foreword	3
Executive Summary	4
Background	6
Central Line of Inquiry	6
Introduction	7
Methodology	9
Theme 1: Develop and deliver comprehensive skilling solutions and job outcomes through existing partnerships and new collaborations	11
Recommendation 1: Review and co-design fit-for-purpose education and training options to deliver on local needs and priorities	13
Recommendation 2: Harness resources across industry, employers and government programs for cohesive delivery of training to the agriculture industry	15
Recommendation 3: Enhance current and develop new capabilities to support the delivery of training options, including TAFE teaching workforce professional development	17
Theme 2: Raise the status and improve the recognition of training and skills delivered by TAFE and other vocational education and training providers	18
Recommendation 4: Market and promote the benefits of accredited training options provided by vocational education and training institutes to industry and workers	19
Theme 3: Raise awareness of career pathways and skilling opportunities in agriculture, especially for non-traditional cohorts	20
Recommendation 5: Leverage partnerships between industry, employers and education providers to promote training and career development opportunities in agriculture for students	23
Recommendation 6: Provide non-traditional cohorts with adequate resources and ongoing support to succeed	25
Acknowledgements	28
Appendix 1: Glossary of abbreviations and terms	29
Appendix 2: Government subsidised agriculture and meat courses offered through TAFE Network	34
Appendix 3: Free TAFE course breakdown for AHC and AMP courses	35
Appendix 4: References	36

Note: The term Koorie is used throughout this document which is inclusive of Aboriginal and /or Torres Strait Islander peoples.

© State of Victoria (Department of Education and Training) 2022



The Future of Agriculture Training Review is provided under a Creative Commons Attribution 4.0 International licence. You are free to re-use the work under that licence, on the condition that you credit the State of Victoria (Department of Education and Training), indicate if changes were made and comply with the other licence terms, see: [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/)

The licence does not apply to: any images, photographs, trademarks or branding, including the Victorian Government logo and the DET logo; and content supplied by third parties.

Copyright queries may be directed to copyright@education.vic.gov.au



Education
and Training

Chair's Foreword

Dear Minister

Throughout several months of consultations, I was struck by the dedication and commitment of the TAFE representatives, teachers and trainers, support staff and other training organisations. I offer my thanks for their time and insights. I would also like to acknowledge the time and insights provided by the agriculture sector to this review. The consultations with industry bodies, agricultural business owners and workers highlighted the innovation and hard work of this critical sector. Agriculture is an evolving industry with technology changing the face of the way we farm, grow and produce. The diversity of the sector will need to be reflected in the diversity of training offered by TAFEs to grow student enrolments in agriculture; from embracing farming technology, through to farm business management. And it will be with the close partnership between industry and the training sector that the solutions will come.

The consultations highlighted that both industry and the training sector face a range of challenges. For industry, labour force attraction and retention featured and for the training sector the challenges of distance, course attraction and delivering on the evolving skill requirements of industry. Working together these challenges can be met and overcome.

The recommendations in this report require a strong collaborative approach; between industry and training providers; between education and training sectors; and, between regional and metropolitan TAFEs. TAFE can and should be the preferred provider for agricultural training, meeting the expectations of employers and providing skills and qualifications for the future workforce of a thriving agricultural sector.

I extend my thanks to all those who gave their valuable time during the consultations; their insights were critical in the development of these recommendations. I also extend my thanks to those from the Department of Education and Training for their tireless support in this review.

Michaela Settle, MP

Executive Summary

The Victorian agriculture sector produces over \$17.8 billion worth of agricultural products and supports a \$38.5 billion food processing industry.¹ Training people to meet the needs of Victoria's world-class agriculture sector is vital to ensuring that it continues to grow, boosting the Victorian economy and creating jobs across the state.

The Future of Agriculture Training Review (the Review) was commissioned to understand how to grow TAFE enrolments in agriculture courses and examine how the delivery of training in the agriculture sector in Victoria can better meet the needs of agriculture students and employers now and into the future. It is important to note that in order to realise the recommendations proposed through the Review, further funding needs should be considered and assessed.

The core finding of the Review is that the education and training sector cannot tackle the suggested activities and recommendations alone. Progress and success across all three themes depend on strong input and collaboration from all parts of the agriculture industry:

- **Theme 1: Develop and deliver comprehensive skilling solutions and job outcomes through existing partnerships and new collaborations**
- **Theme 2: Raise the status and improve the recognition of training and skills delivered by TAFE and other vocational education and training providers**
- **Theme 3: Raise awareness of career pathways and skilling opportunities in agriculture, especially for non-traditional cohorts**

Corresponding recommendations against these key themes are detailed below:

Theme 1: Develop and deliver comprehensive skilling solutions and job outcomes through existing partnerships and new collaborations

- **Recommendation 1:** Review and co-design fit-for-purpose education and training options to deliver on local needs and priorities.
- **Recommendation 2:** Harness resources across industry, employers and government programs for cohesive delivery of training to the agriculture industry
- **Recommendation 3:** Enhance current and develop new capabilities to support the delivery of training options, including TAFE teaching workforce professional development

Theme 2: Raise the status and improve the recognition of training and skills delivered by TAFE and other vocational education and training providers

- **Recommendation 4:** Market and promote the benefits of accredited training options provided by vocational education and training institutes to industry and workers

Theme 3: Raise awareness of career pathways and skilling opportunities in agriculture, especially for non-traditional cohorts

- **Recommendation 5:** Leverage partnerships between industry, employers and education providers to promote training and career development opportunities in agriculture for students
- **Recommendation 6:** Provide non-traditional cohorts with adequate resources and ongoing support to succeed

¹ Agriculture Victoria (2021), Victorian Agriculture Industry Overview June 2021 and Agriculture Victoria RISE model 2021



Background

On Thursday 17 June 2021, the Minister for Training and Skills, Gayle Tierney, and the Minister for Agriculture, Mary-Anne Thomas, announced the Future of Agriculture Training Review in Victoria. The objective of the Review was to understand how the delivery of training in the agriculture sector in Victoria can better meet the needs of agriculture students and employers now and into the future, and to ensure TAFE training continues to attract and prepare students for the demands of the evolving industry. The Review was led by State member for Buninyong, Michaela Settle, who has extensive first-hand experience in the agriculture sector having owned and operated her family's sheep farm in Ararat for over a decade.

Review consultations spanned a period of three months, commencing in August 2021 and concluding in November 2021. It included stakeholder engagement with agriculture sector employers, industry associations, training providers and others. Consultations helped inform the future actions required to strengthen training and increase enrolments in agriculture courses. The Review captured a range of views that have formed key recommendations for Minister Tierney's considerations, with a focus on vocational education and training in agriculture. Managing the reputation of the agriculture sector, including issues associated with worker welfare, pay, conditions and opportunities for advancement is the responsibility of Industry. While these issues influence perceptions of careers in agriculture, they are not the focus of the review given they are best led by Industry. Also, funding sources and arrangements will need to be considered once the key recommendations are considered by the Minister.

Central Line of Inquiry

The Review adopted a set of questions to form a central line of inquiry for clarity on the practical, day-to-day experience of agriculture vocational education and training in Victoria and what needed to be improved. The central line of inquiry was also used to frame the development of tailored sets of questions for specific stakeholder groups participating in the Review, both through consultations and the written submissions lodged through the Engage Victoria website².

1. Whether rural and regional communities in Victoria can access training that meets their local needs
2. The type of training agriculture employers required and the preferred delivery model, content/curricula, and duration
3. Understand industry and employer views on the current training, and curriculum offered by TAFE and any shifts required in the short and longer term
4. How prospective students identify, seek and access training currently
5. How TAFEs respond to agriculture industry training requests/needs and if their response meets needs of industry stakeholders
6. The preferred training alternatives to TAFE and reasons why
7. How to build/improve capability of TAFEs in delivering agricultural qualifications
8. Whether there is a difference in TAFE enrolments, perceived relevance of course curriculum or graduate numbers across different geographic regions of Victoria and/or agricultural sectors. If there is, indicate the attributing factors and what learnings or actions can be taken from these insights to boost overall TAFE engagement and success
9. If there is capacity for TAFEs to attract and support specific cohorts not traditionally engaged in some agricultural courses including female, CALD, Aboriginal and remote students

² Department of Education and Training (2021) The Future of Agriculture Training Review, <https://engage.vic.gov.au/future-agriculture-training-review>

Introduction

The agriculture sector is a vital part of Victoria's economy, producing over \$17.8 billion worth of high-quality products that contribute to a \$38.8 billion food processing industry recognised nationally and internationally.³ They together employ 145,000 people directly and support many more indirect jobs in areas such as logistics, transport and advisory services.⁴ Looking to 2030, the Victorian Government has an ambitious growth agenda, that includes 'capitalising on technological advancement and new ways of doing things' and becoming 'home to diverse and innovative careers, attracting the best and brightest to our farms and regions.'⁵

Thus, the Review is timely. Not only has it been ten years since the Victorian Parliamentary Inquiry into *Agricultural Education and Training in Victoria* (2012), but during this time Victoria's agriculture industry has endured a prolonged drought, supply chain challenges, competition in food and grocery industries and a global pandemic. Over the decade, greater use of technology in a range of crop, land and animal management practices, environmental considerations and meeting demands of expanding local and export markets have signalled a change in the way agriculture businesses acquire, select and develop workforce skills.

This Review aligns with Victoria's Strategy for Agriculture⁶ that sets the path for the coming decade to help the agriculture sector remain strong, innovative and sustainable. Investment in a skilled labour force is a key part of modernising the sector and achieving a 2030 vision that Victoria be home to diverse and innovative careers, attracting the best and brightest to our farms and regions. The sector needs modern training products, equipment, expertise and partnerships to support its growth potential. Supporting current and new workforces to meet the needs of Victoria's world-class agriculture sector is vital to ensuring that the sector increases its competitiveness and productivity and maintain and support thriving regional and rural communities.

It is important to note the Review took place against a backdrop of reform in Victoria's education and training sector. It considered initiatives introduced and implemented between 2016 and 2019, including the Regional and Specialist Training Fund and the Free TAFE initiative. Its findings have informed directions of the TAFE and Training stream under the Future Agriculture Skills Capacity Fund (FASCF), announced in 2020 by Agriculture Victoria. Furthermore, the Review was conducted contemporaneously with the implementation of changes to Victoria's skills and training architecture that were recommended by the *Skills for Victoria's Growing Economy* (Macklin Review).

Since 2019, the government's Free TAFE initiative has given a greater number of Victorians fee-free access to a range of vocational qualifications. Courses on this list are considered a priority, and lead to strong job outcomes. Since its inception, a number of agriculture courses (**Appendix 2**) were included on the Free TAFE course list to help grow a pipeline of skilled workers. While the enrolment data from Metropolitan Melbourne and the five Victorian regions demonstrated an overall decline in enrolments between 2016 and 2020, Free TAFE has driven a positive upward trend in enrolments across these courses in 2021, in both metropolitan Melbourne and regional Victoria (**Appendix 3**).

³ Agriculture Victoria (2021), Victorian Agriculture Industry Overview June 2021 and Agriculture Victoria RISE model 2021

⁴ Agriculture Victoria (2020) Invest in Victorian Agriculture, <https://agriculture.vic.gov.au/about/agriculture-in-victoria/invest-in-victorian-agriculture>

⁵ Agriculture Victoria (2020) Strong, Innovative, Sustainable: A new Strategy for Agriculture in Victoria, https://agriculture.vic.gov.au/_data/assets/pdf_file/0005/612941/Strong-Innovative-Sustainable-a-new-strategy-for-Agriculture-in-Victoria.pdf

⁶ Agriculture Victoria (2021) What is the agriculture strategy? <https://agriculture.vic.gov.au/about/agriculture-strategy/what-is-the-agriculture-strategy>

This indicates that building awareness about the value of training to business and highlighting the diverse career opportunities in the sector is a critical need that requires a joint effort and participation by both industry and educators across secondary and tertiary sectors.

The findings from the Future of Agriculture Training Review also align with a key recommendation from the *Review into Vocational and Applied Learning Pathways in Senior Secondary Schooling* (Firth Review). The Firth Review recommends that VET Delivered to Secondary Students (VDSS) should be more closely aligned with Victoria's growth sectors. The benefit here is that vocational pathways that start at schools give students the skills they need to move successfully into training or jobs post school that meet local industry needs.

The Review findings confirm the criticality of government's implementation of recommendations from its review into Victoria's post-secondary education and training system, *Skills for Victoria's Growing Economy* (Macklin Review). The Macklin Review underscores the need to collaborate and enable the education sector in Victoria to maintain its competitive advantage and remain one of the best in the world. Additionally, the establishment of the Victorian Skills Authority (VSA) will gather and build evidence about training and employment needs, and share findings that will support improved planning and decision making, setting out Victoria's skills needs for the year ahead and beyond.

The Macklin Review also identifies that TAFEs have a unique and crucial role within the broader VET system, ensuring quality vocational education and training is accessible to all Victorians. To support TAFEs to deliver on this central role, the Office of TAFE Coordination and Delivery (OTCD) was established in 2021 to provide leadership and stewardship for the TAFE network to ensure TAFEs deliver the right, high-quality courses, students are job-ready, and employers get the contemporary skills they need. The OTCD is introducing a new way of working between TAFEs and Government with a shift in focus from an individual TAFE to a cohesive network mindset, while maintaining the local focus for which they are known. This new way of working strengthens TAFE by coordinating collective TAFE service delivery, sharing expertise and resources and exploring whole-of-network strategies for meeting opportunities and challenges. For example, shared approaches across course provision in critical industries such as agriculture can maximise the expertise and technology within the network and drive scale, innovation and quality.

Through a team of VET experts, strengthened on-the-ground support will be available to local learners and businesses from 2022 to enable connection, while support for specialised skills labs will focus on emerging industries and industry skills specialisations.

These commitments together provide a foundation architecture under which improved agriculture course quality and delivery in TAFEs can be achieved, based on closer collaboration, technological innovation, broader resource sharing and continuous improvement.

Methodology

The Future of Agriculture Training Review (the Review) was built on nine key questions forming a central line of inquiry to ensure local TAFE training continues to attract and prepare students for the demands of the evolving agriculture industry. The central line of inquiry upon which the Review progressed, was approved by the Minister for Skills and Training.

Michaela Settle MP, was appointed as the Chair of the Review by the Minister for Skills and Training.

To assist the Chair undertaking the Review, a Review Reference Group (RRG) was formed with representatives from:

- Victorian Skills Authority (VSA)
- Office of TAFE Coordination and Delivery (OTCD), Department of Education and Training (DET)
- Higher Education and Skills (DET)
- Senior Secondary Pathways Reform Taskforce (DET)
- Koorie Outcomes Division (DET)
- Agriculture Victoria (AgVic) based within the Department of Jobs, Precincts and Regions

Defined by this scope and with a focus on TAFE, the Review gathered inputs from regional TAFEs as well as some metro TAFEs. It engaged broadly with universities, schools, Learn Locals, Local Learning and Employment Networks and private RTOs. The Review also met with industry associations, employers, regional food and fibre groups, industry stakeholders and 'influencers'.

Given the COVID-19 pandemic and associated lockdowns, students were presented with the opportunity to participate via written submission. In total, 37 consultations with 307 stakeholders were conducted in-person and via MS Teams digital meeting platform, and 43 written submissions were received through a dedicated Engage Victoria web portal. A number of key themes emerged which have informed recommendations in the final report.

Defining Training for Purposes of the Review

Given the very broad nature of the agriculture industry and its related sectors (including processing, warehousing, distribution to name a few), a clear definition of 'agriculture training' was

required for the purposes of the Review. As a key objective of the Review is to help inform how Victoria's TAFE system can increase the quality and delivery of agriculture qualifications to support the sector, qualifications under the nationally endorsed Agriculture, Horticulture and Conservation (AHC) training package formed the definition of agriculture training, together with courses from the Australian Meat Processing (AMP) training package.

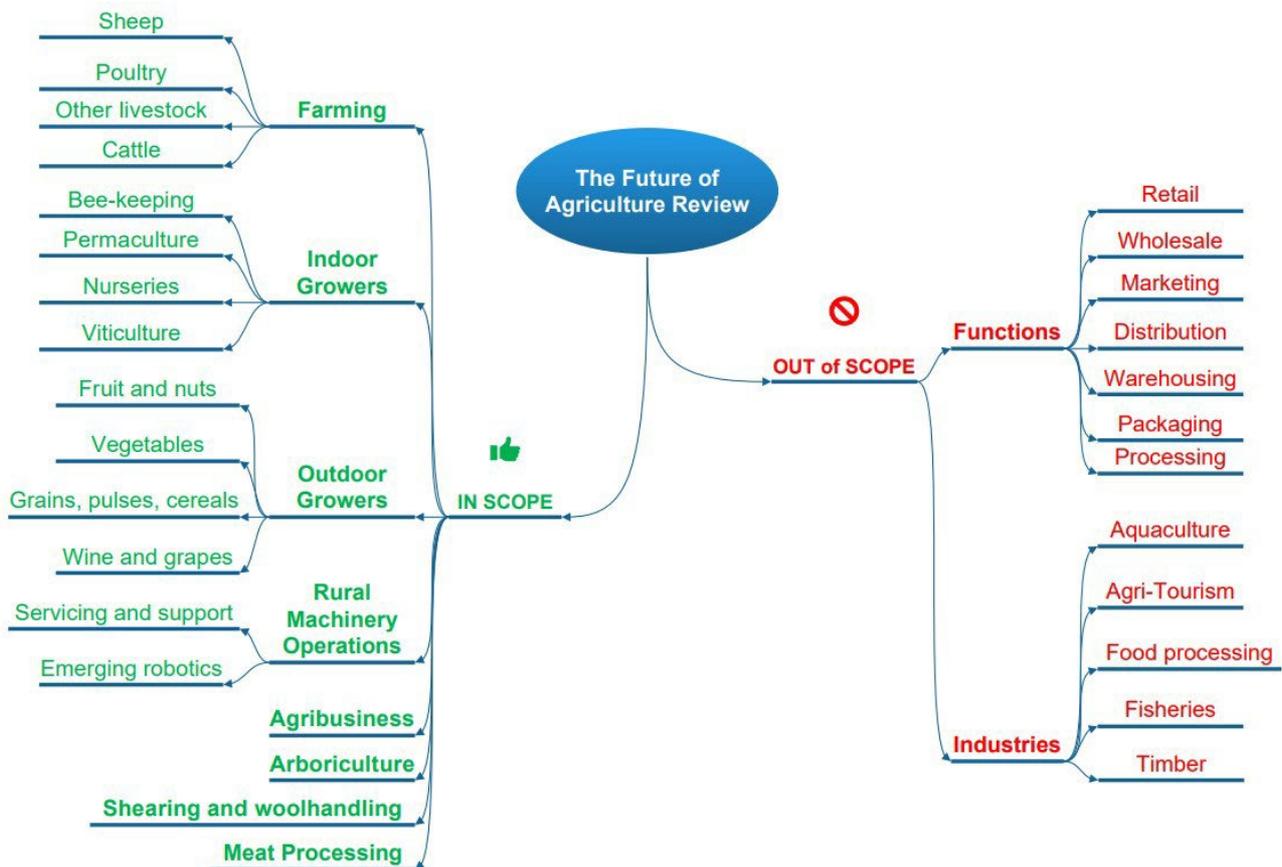
In Victoria, courses under these training packages are eligible to receive government subsidies, as long as there is sufficient demand for them, and if registered training providers contracted by the Victorian government have the qualifications on their scope of registration. Some are also included on the Free TAFE course list initiative, introduced by the government in 2019 to remove the cost barriers to students enrolling in courses in skill shortage areas and with strong employment outcomes. The courses eligible for subsidies in Victoria (with the prefix AHC and AMP) are published on Victoria's Funded Courses List:

<https://www.education.vic.gov.au/training/providers/funding/Pages/fundedcourses.aspx>

Defining Agriculture for the Purposes of the Review

The term agriculture was used throughout the Review and this report, noting it is inclusive of horticulture and its many and varied permutations. In some arenas, agriculture is referred to as 'primary industries', and in others, 'food and fibre'. Sometimes these classifications can include aquaculture and timber and forestry. With a lens on training, the consultations for the Review focused on stakeholders with agriculture practice that is primarily supported by the AHC training package, and the AMP training package (to include meat industry training). Therefore, there are some primary industries that are not included within the scope of this Review. Figure 1 indicates the scope of 'agriculture' for the purposes of the Review.

Figure 1: Scope of the Future of Agriculture Training Review



Theme 1: Develop and deliver comprehensive skilling solutions and job outcomes through existing partnerships and new collaborations

Agriculture is a fast moving, technologically advanced sector that offers a broad range of job opportunities. Victoria has one of the most modern and productive agricultural systems with compact geography, diverse industries and climate zones, and a growing number of digitally mature farmers. In addition, government strategies set out a way forward over the coming decade to help drive Victoria's recovery from the coronavirus pandemic and to ensure the Victorian Agriculture sector remains strong, innovative and sustainable, now and into the future.

Farm management and operations are becoming more complex which require advanced agri-tech capability and a more sophisticated level of knowledge in a range of crop, land and animal management practices. Further, the agricultural sector will need to develop capabilities and capacity to address a raft of environmental issues such as climate change and to meet increasing demands of both domestic and international markets. Modernising is not only about research, innovation and technology. The agriculture workforce of the future will look different and will need to be underpinned by new and diverse skills.

The Review asked stakeholders to share their thoughts on the future skills required by the agriculture sector. The responses were diverse and included: a workforce to support the maintenance and repair of advanced precision machinery; automation knowledge; advanced farm management; collaboration and teamwork; digital capability at all levels; systems application knowledge' and basic communication and employability skills. For example, the stakeholders highlighted the need for farm management expertise in both near- and long-term modern agriculture, which includes the development of capabilities and the supply of workforce, especially new work-ready Farm Managers.

Industry also advised on a range of skill sets/micro credentials that would add value to the Victorian agriculture training, which includes, but is not limited to:

- Organic and regenerative agriculture practices
- Carbon neutral farming practices
- Biosecurity
- Leadership and problem solving
- Business management
- Marketing and distribution
- Supply chain management
- Environmental management systems
- Human resource management skills for farm owners/managers
- Digitalisation, digital skills and data management
- Advanced agronomy
- Irrigation, automation, packing

Additionally, there are practices and occupations that fall outside the definition of 'agriculture' within this Review, but are relevant at the training system level, and would be an advantage to workforces of some agriculture sectors. For instance, horticulture packaging, cool storage and distribution are considered core business for some horticulture businesses. Processing can also be closely linked to production for some businesses; for example, drying fruit on the vine or seeding pomegranates on the farm. Horticulture students with additional skills and knowledge in these areas would be looked upon favourably. Likewise, marketing, distribution, quality assurance and traceability are viewed as important areas for farm businesses to consider for their long-term viability and supports diversification and market access.



A more joined-up approach

It's important to acknowledge the three sectors within the wider post-secondary system: Adult Community Education (Learn Local), TAFE and Training and University. All three offer Victorians the opportunity to gain education and skills for work, further study and for life. All three play complementary roles, focusing on different aspects of further and higher education. Learners may engage in each sector at different points in their journey of lifelong learning, and not necessarily sequentially. They may also engage in more than one sector at once, such as with the Learn Local sector to support their successful attainment in TAFE and Training.

Learn Local providers deliver a wide range of government subsidised pre-accredited training courses with a focus on pathways into further education and/or employment. The Learn Local sector supports adult Victorians who are seeking to develop core skills including literacy, numeracy, digital skills, English language and employability skills.

While stakeholders acknowledge there is a range of higher education, pre-accredited, and accredited training providers that cater to agriculture training needs, consultations revealed confusion about the relationships and interconnectedness of learning opportunities available in a local region. Thus, there is a perception that the training and education offerings operate in silos and without regard to the bigger picture of sector needs. Respondents advised that many providers do not design agriculture programmes to complement or articulate to/from other locally available courses.

Current training opportunities and regional offerings continue to be carefully assessed and reviewed, incorporating feedback and requirements provided by industry, employers and students who bring a place-based perspective. Through the development of the Victorian Skills Plan and through its data insights work, training and higher education providers will be well placed to leverage this information to guide the delivery of their training offerings to meet local and state- wide needs.

Continued adoption and embedding of technology

The fast-paced adoption of technology in agriculture represents a long-term opportunity to invest in an Agricultural Technology Skills Lab (ATSL). The ATSL represents a formalised platform for collaborative testing of new models and innovative solutions in agricultural education and training, and in particular, complex skilling re-design and integrated technology use. Key stakeholder groups include the Victorian TAFE network, Tech Schools, universities, agricultural colleges and training providers, industry and industry associations. Informed by industry needs and technologies, new approaches will be designed to adopt and embed agricultural technological skills development. Furthermore, the ATSL will promote an end-to-end partnership with industry to ensure graduates have genuine employment options, enabled by training that is future focused and fit for purpose.

Recommendation 1: Review and co-design fit-for-purpose education and training options to deliver on local needs and priorities

Based on feedback provided by stakeholders, it is understood that different agricultural expertise and workforces are required across regions in Victoria. Therefore, we cannot expect all training and education providers to serve the industry using the same methodologies, curricula and options. Instead of striving towards 'standardisation', training and education design should be 'fit for purpose'. A more participatory process, involving all the key stakeholders, including local agriculture industry and farming communities, will help training and education institutes respond flexibly.

Consultations suggested that strengthened service delivery should coordinate and understand localised training requirements to uncover gaps and ensure that training delivery is expanded and targeted rather than duplicated without context. Training options and training materials should be co-designed with inputs from various sources, such as employer requirements by region, using a mix of formal and informal learning to close specific skills gaps, both locally and state-wide.

Curriculum development should be viewed as an ongoing process, with regular evaluation and feedback from ex-trainees and other stakeholders, as well as periodic reviews. Also, transferable skills, such as marketing and supply chain management should be included in curriculum to enable learners to broaden career choices and adaptability to move between sectors.

Geographically relevant, fit-for-purpose training options will ensure students and learners are fully equipped to provide local industries with the right workforce, while also setting them up for success in their agriculture careers.

Actions to facilitate co-design of fit-for-purpose training and education include:

- Develop a Regional Skills Demand profile through the implementation of Regional Skills Taskforces via VSA. The skills need of the agriculture sector will be a priority for each of these Taskforces. VSA will share evidence-based information and communicate regional priorities with the TAFE network and industry, providing clarity on regional priorities for agriculture education. This will assist with co-ordinating, planning and delivery of training by all training providers (TAFE and universities) to contribute to the workforce skills required in local areas as well as identify future opportunities
- Design curricula that reflect industry practice, employer preference and/or targeted cohort needs. This enhanced approach to agriculture qualification development will recognise the unique needs of sector – its diversity, seasonality, workforce challenges and dispersion.

- Work with the industry to identify and respond to local needs for shorter and sharper accredited training, tailored to regional needs or commodity focused, as a complement to full qualification offerings
- Maintain and expand feedback loops via the VSA and Industry Advisory Groups (IAGs), recognising the diverse makeup of the industry, and building understanding of industry and employers' needs and students' expectations over time

SuniTAFE and Industry Partnership model

A stakeholder led approach is being used in efforts to ensure SuniTAFE's SMART farm has a proud reputation of leading training, innovation and horticultural practices. A Horticulture Innovation Advisory Group (HIAG) has been formed to advise and guide the Institute's plans, through conception, implementation and monitoring for the re-development. Comprising of successful local horticulturists; horticulture peak bodies; corporate farming; tech and start-up representatives; SuniTAFE representatives; Government representatives; and student representatives. Using sector intelligence has been instrumental in the in-field re-development (new plantings and crop varieties) and selection of appropriate technology for the region to gather essential decision making data on that most important to the sector (irrigation, weather and disease monitoring). This combined effort has generated expanded interest in horticulture from the secondary school STEM programs. Access to such technology, is a clear drawcard to promoting the myriad of careers the horticulture sector offers.

The HIAG members communicate with their own industry contacts and then inform SuniTAFE about current and emerging trends and skills needs. This valuable information helps define and shape SuniTAFE's SMART Farm offerings, to ensure their timely and relevant response to meet regional skills needs. It also helps to shape SuniTAFE's capacity and capability to produce graduates that have contemporary offerings so that students are retained locally.

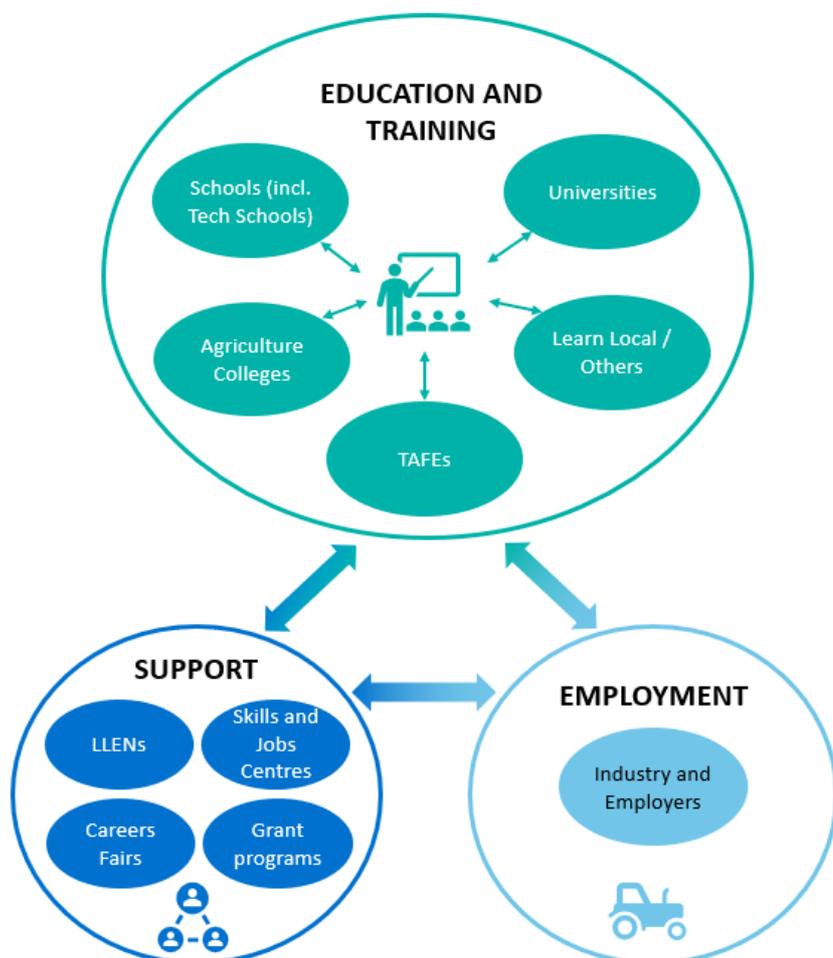
The HIAG reinforces the positive influence direct industry input to training needs provides not only to students, but to local industry who benefit from a locally grown workforce ready to tackle contemporary and future focused challenges. Together, industry and SuniTAFE are strengthening the region's thriving agriculture industry.

Recommendation 2: Harness resources across industry, employers and government programs for cohesive delivery of training to the agriculture industry

Throughout the Review, stakeholders called for a joined-up approach between training providers, employers, and government support and existing grant programs (Figure 2):

- **Education and training** focuses on equipping learners with relevant skills and knowledge, career advice and work opportunities. TAFE network, schools, colleges, universities, Learn Locals and other providers need to work together to develop products and deliver meaningful education and training for students at every stage of their learning journey
- **Support** refers to the readily available resources and advice provided through TAFE, e.g. Skills and Job Centres, or the information channels of Careers Fairs (with strong involvement from industry), Open Days and information and insights provided by Industry Associations. This is an important catalyst of the success of both regional and agricultural skills development
 - **Grant programs** refers to targeted interventions, such as Regional and Specialist Training Fund, the Workforce Training Innovation Fund, the Workforce Skillset Fund, Secondary School Agriculture Fund, the Future Agriculture Skills Capacity Fund and the TAFE Modernisation Fund
- Strong relationships with the education sector mean that industry is in the driver's seat to shape the skills needed in agricultural workforces now and into the future. This leads to positive **employment** outcomes for students and a strengthened workforce pipeline for employers

Figure 2. A joined-up approach to manage training in agriculture



In particular, there is an appetite for TAFEs to foster closer relationships with relevant Local Learning and Employment Networks (LLENs) in their respective geographic regions. The State's 31 LLENs play a proactive role for all secondary school students, by developing partnerships which result in an increase in the number and range of school-employer engagement activities. Where there is a rich source of information about engagement activities with a focus on agriculture partnerships, LLEN data, both qualitative and quantitative could be shared with Learn Locals and the TAFE Network to ensure that continuity of opportunity can be provided to students for those showing an interest in agriculture.

The TAFE based Skills and Job Centre function could actively target school leavers and career changers with relevant jobs and training information about local agricultural industries. The benefit to the agriculture industry would mean that those enrolling in training understand how to access the appropriate training pathway for them to achieve the job and career outcomes they desire.

Actions to foster a systems approach to collaborative training delivery include:

- Utilise the TAFE network to develop a networked approach to supporting excellence in agriculture in the TAFE sector. With sharing facilitated by the OTCD, the network of excellence will embed industry connections via partnerships for course delivery and access to state-of-the-art equipment, techniques, technology and real-life scenarios and experiences, showcasing best practice across the TAFE network. It could start with piloting a specialisation model of agriculture training innovation and delivery, which covers considerations including:
 - Key priority specialisation areas would be identified in areas of emerging industry need
 - A co-operative model will be piloted. This would involve a number of TAFEs with a nominated lead TAFE who manages industry engagement, development of best practice and cutting-edge course and learning materials, working on behalf of the broader network of TAFEs that provide agricultural skills
 - The co-operative will focus on creating industry partnerships for course delivery with access to state-of-the-art equipment, techniques, technology and real-life scenarios and experiences, with materials and resources to be made available to the network of excellence
 - The pilot will be evaluated, with a view to refining and expanding the model to other key agricultural skill specialisation areas
- Bring together TAFEs and universities to create a whole-of-system approach to credit transfer and articulation arrangements between VET and Higher Education providers with regard to agriculture courses

Yarra Ranges Tech School

Yarra Ranges Tech School is one of 10 Tech Schools established by the Victorian Government under the Education State plan. Tech Schools work with partner secondary schools, industry, community groups (including local government) and their tertiary hosts to develop programs for Year 7 to Year 12 students focused on leading edge technology and real-world problems. The programs tie to the curriculum and provide career and education pathway information for students in addition to fundamental 21st Century Skills.

Yarra Ranges Tech School is hosted by Box Hill Institute at its Lilydale campus and offers a range of programs, including one in agriculture and horticulture. The key feature of the agriculture and horticulture program is a three-day immersive Smart Farming Program and an Urban Simulation Farming Program. These introduce, among other things, Internet of Things and automation in farming, soilless farming practices (hydroponics, aeroponics and aquaponics), sustainability and business skills. As part of the programs, students visit working orchards, the Biosecurity Centre of Excellence and Box Hill Institute's Horticulture and Lands Sciences areas and are challenged to design their sustainable farm of the future. To date more than 2,000 students have undertaken these programs since their release in late 2019, and they have found the programs engaging and curiosity provoking.

Recommendation 3: Enhance current and develop new capabilities to support the delivery of training options, including TAFE teaching workforce professional development

The rapid evolution of skill requirements in modern agriculture sector, the variety of collaborative learning options, and the imperative of a joined-up approach requires significant uplift in the technological and teaching capabilities of the training and education system. Institutional and government support and resources, such as staff from Skills and Jobs Centres embedded at TAFEs, also play a key role in influencing students' aspirations and are vital to the successful delivery of agricultural training and education.

These need to be accompanied by capacity building, joint research and partnerships, so that existing and newly trained staff can operate in a supportive and forward-thinking environment. The joined-up approach between industry, government and educational institutes will create innovative professionals equipped with problem-solving skills and independent thinking to meet the spectrum of needs in the rural community.

Actions to enhance human and technological capabilities in the training system are:

- Skill up trainers and educators with cutting-edge agriculture knowledge and insights, and further develop supporting staff, such as those in Skills and Jobs Centres, in line with the TAFE network approach
- Utilise available platforms, including the VET Development Centre, to roll out professional development opportunities for TAFE teachers in areas of specialisation, and potentially support existing trainer networks, such as the Victorian Agriculture, Horticulture and Conservation and Land Management Trainers Network (VAHCTN) to implement a targeted professional development program to improve trainer knowledge of biosecurity, farm management and the application of agri-tech in a variety of Victorian farm settings based on emerging skills needs
- Create tailored support to attract a new generation of agriculture TAFE teachers from industry to undertake the Certificate IV in Teaching and Assessment and bolster TAFE teaching numbers.
- Support TAFEs to seek opportunities as a network to access, maintain and share modern equipment, systems and facilities to deliver improved industry-standard training, e.g. through the DET's TAFE VET Shared Learning Resources platform.
- Coordinate the establishment of a forum of knowledge and experience sharing between school and TAFE teachers and university lecturers who deliver agriculture courses. This will enrich and strengthen the relationship among agriculture teaching staff at all levels in turn, benefiting students

Theme 2: Raise the status and improve the recognition of training and skills delivered by TAFE and other vocational education and training providers

Consultations revealed that industry accesses a range of training through industry associations, commodity and peer-based farming networks, Learn Locals and through private RTOs – especially when industry requires training onsite and delivered to smaller groups. This is despite the fact that TAFE also deliver training onsite, and some even provide training flexibly through mobile classrooms. Additionally, stakeholders articulated that industry values relationships with training providers which are built over time so that the provider understands the nature and requirements of the farming business. However, some employers consulted during the Review advised that while aware of the TAFE running courses, that TAFE was not always ‘visible’ to them and that the contact with the TAFE was, in many cases, ‘off and on’.

Consultations also revealed that the vocational education and training pathway is considered a second-class tertiary pathway in comparison to university. Those within the VET sector understand that this is an old fashioned and outdated view, but one that Review stakeholders conveyed as commonly held, whether by teachers, parents or employers. There are opportunities for TAFE to improve its reputation as a tertiary education provider that delivers high quality and flexible training that produces skilled graduates, ready for work. Learn Locals should also be better recognised for the important role they play in creating training pathways and employability skills, ranging from pre- accredited training to integrated pathways into accredited certificate and diploma programs.

The Review found that there is a need to create positive messaging around the benefits of training, whether it be through TAFE or through Learn Locals. For instance, training helps employers to increase productivity, boost staff morale and job satisfaction, reduce occupational safety and health incidents, and retain talented staff. Additionally, formal qualifications improve individuals’ employment opportunities and career progression within the sector and stakeholder interviews showed that education and training can provide people with enhanced career options in regional and rural communities.

Also, there is an opportunity for industry to play a role in championing the benefits of accredited training, helping farm owners appreciate its value to industry and employers. A strong and collective industry commitment to formal education and training is required to increase participation in TAFE and other higher education programs.

The value proposition of these important vocational pathways cannot be improved overnight but will grow when TAFEs are more ‘visible’ to employers, and when TAFE can develop consistent and collaborative relationships with industry and build trust with employers.

Recommendation 4: Market and promote the benefits of accredited training options provided by vocational education and training institutes to industry and workers

The Review identified that accredited agricultural education and training have a number of benefits for the agriculture sector, employers and individual workers. As noted above, a collective approach that includes industry's clear articulation of the value of this training to employers and potential participants will create a better skilled and more professionalised workforce.

At the industry level, accredited training and education can support the increasing demands and deployment of agricultural technology for modern agriculture sector in Victoria. Integrating those technologies into on-farm operations would demand a workforce with the skills to deploy, develop, monitor and optimise those technologies. The sector's ability to harness new agricultural technology and improve productivity will highly depend on its capability to efficiently develop, transition and expand its workforce to meet the changing skills demands. This could be achieved through greater investment in formal workforce training and skills development.

Actions to promote and position TAFEs as a first-choice study destination for developing current, relevant, work ready practical skills include:

- Run campaigns to highlight and demonstrate how employers can benefit from skilled workers with accredited training, targeting employers and businesses. These should be driven by individual TAFEs together with Victorian TAFE Association and the Office of TAFE Co-ordination and Delivery, with Agriculture Victoria further assisting with the distribution of these information through its channels and networks.
- Develop tailored promotional and taster programs featuring practical experiences through TAFE network with industry and local employers, based on area-specific skills needs as identified by the VSA, targeting school students and career changers in each region. 'GET VET' resources for secondary schools should be incorporated in the programs to provide practical information about VET pathways, apprenticeships and traineeships. Further, TAFEs should prioritise consistent approaches and staff allocation with local employers in the engagement, which will build up the TAFE's understanding of local employer needs and add continuity to industry's relationship with the local TAFE



Theme 3: Raise awareness of career pathways and skilling opportunities in agriculture, especially for non-traditional cohorts

The agriculture industry in Victoria represents a diversified range of opportunities in food, fibre, supply chains and agribusiness. However, consultations revealed that agriculture is not perceived as a rewarding and fulfilling career choice, with negative attitudes towards the sector: from the job roles within it to impressions about the type of people who work in agriculture. The Primary Industries Education Foundation Australia (PIEFA) student survey 2020 reported that only 25% of surveyed students would consider food and fibre related study and 21% of them would consider an agriculture-related career. Key barriers include lack of awareness, motivation, and engagement.

Students do not know enough about the jobs to be interested and had little motivation to 'find out more'. "Jobs are assumed to be boring, low paid, and in rural locations. In some cases, preferred careers (e.g. mechanic) are simply not considered in relation to food and fibre industries."⁷

Agriculture – a positive and rewarding sector⁸

Farming is what Mark Merrett knows best. He is only 24 years old but already an experienced farmer who lives and works on his farm near the border of South Australia. Every week he posts a video on his YouTube channel showing people what he does to run a mixed sheep and cropping operation. You only have to watch a couple of these videos to understand Mark's passion for his job in agriculture and how he describes the work he does. His enthusiasm is infectious, and this is reflected by the number views his "Farm Vlogs" receive. However, if you have never lived or worked on a farm like the Merretts have, chances are you won't know what his job involves. And this is why the Farm Vlogs are so important.

"In 2016, I started making some short farm videos for my nephews and niece in Melbourne to keep them up-to-date with what we were doing on the farm," Mark says.

"Being kids, they weren't quite as passionate as I was about the videos. But in 2020, after seeing supermarket shelf after supermarket shelf wiped clear during COVID panic-buying, I was once again inspired to make them ... because I realised there was a big disconnect between the people growing our food and the majority of the people eating the food. I wanted to provide a space where people could find out where and how their food is grown," he says simply.

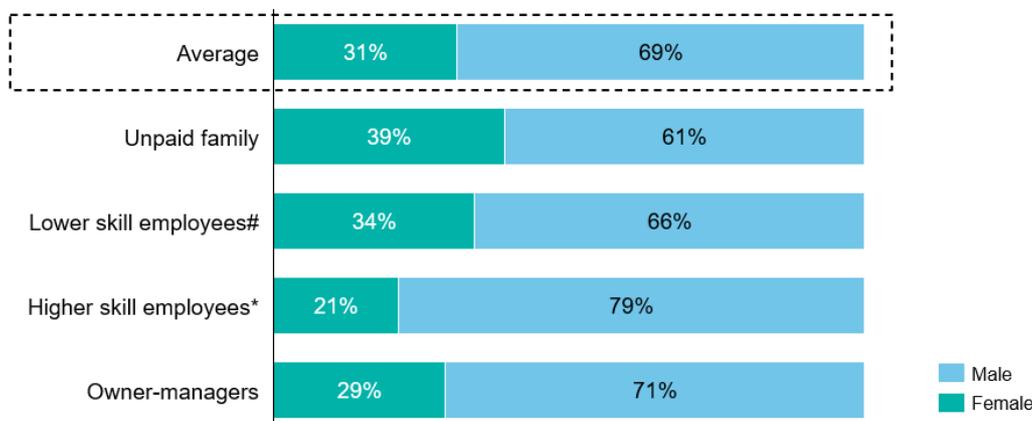
Traditionally, farms are remote and far away from major city centres and most people, even many living in regional areas don't know what happens on the big properties they drive past everyday. In this way, new communication mediums like YouTube videos and other social media channels is opening up the window on what happens on farms and what the jobs look like. In the videos, Mark runs through the tasks they're doing on the farm, shows the sort of machinery he is driving and explains the decisions he is making. Videos like Mark's Farm Vlogs are a really great example of resources we can use to teach people about where their food and fibre comes from and that agriculture is a positive and rewarding sector.

⁷Primary Industries Education Foundation Australia (2020) Food, Fibre and Our Future 2020, https://www.piefa.edu.au/uploads/9/8/9/8/98986708/piefa_summary_student_survey_reportfood_fibre_and_our_future_2020.pdf

⁸Yasmin Jeffery ABC News (2021) Mark wants you to watch what happens on his farm even if you have nothing to do with agriculture, <https://www.abc.net.au/news/2021-05-16/mark-merrett-farming-heywire-trailblazers-farmvlogs/100016770>

In particular, one of the key perceptions is that agriculture is for men and not for women, nor those from non-traditional cohorts. Agriculture has traditionally been perceived as a male domain, with women playing crucial yet less visible roles in farm businesses. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) analysis of gender balance across the sector shows that agriculture has one of the lowest levels of employment for women in Australia, who make up 31% of the workforce (Figure 3)⁹ Given the fact that women make up about half of the labour force in rural and regional Australia, embracing the benefits of diversity in the agricultural sector is essential for its economic sustainability.

Figure 3. Percentage of male and female workers in the agricultural workforce in 2016



#Lower skill employees include labourers and drivers.

*Higher skill employees include managers, professionals and trades.

Furthermore, consultations revealed a lack of awareness by those who influence student training and career choice about modern day agriculture techniques, many of which are underpinned by precision engineering, digital skills capability, technology and automation in farm management.

From an industry perspective, agriculture stakeholders understand the strong competition between industries for skills and workforce. While the industry articulates that it wants the profile of its sector raised, it acknowledges that it has not always had the time or support to undertake marketing initiatives to effectively promote itself.

Those challenges – apathy towards the agriculture sector and workforce impacts – represent an opportunity to attract a diverse and skilled workforce by changing public perceptions and increasing awareness of career pathways and opportunities. The future viability and sustainability of the workforce in the Victorian agriculture sector will depend on its ability to attract the next generation of skilled workers and employees into careers that are both rewarding and attractive.

There is an opportunity to attract more people to the sector by changing perceptions about the people who work in the sector and the jobs they do, as it's no longer just about 'gumboots and mud'. Elevating visibility of the many people whose passion for the sector and the rewarding careers they enjoy would help combat the outdated and negative perceptions that prevail.

Increasing awareness of the modern agriculture industry is a necessary precursor to achieving a high-quality education and training system in agriculture.

⁹ The Commonwealth Scientific and Industrial Research Organisation (2019) The Future of Australia's Agricultural Workforce, https://data61.csiro.au/~media/D61/Files/19-00351_DATA61_REPORT_AgricultureWorkforce_WEB_191031.pdf?la=en&hash=3427E88C09FA139934AC03E6B74D74835D7EC3BB

VEG Schools Program – a positive impact when industry takes the lead

Velisha Farms is a leading Australian family-owned fresh vegetable producer based in Werribee, Victoria, in operation for over 70 years. Velisha Education Group (VEG) was established under the passionate stewardship of Catherine Velisha to inspire a new generation of smarter, safer workers

both in horticulture and the wider food and fibre sector industries. One of the flagship programs developed by VEG Education and launched in 2021 was the VEG Schools Program. The program is dedicated to reaching the next generation and educating students as young as primary school age about the horticulture industry and careers on offer.

As part of the program, students visit Velisha Farms where they play educational games to learn about core horticultural processes such as planting, growing, harvesting, picking, packaging, and distributing fresh produce. Sustainability is an emerging cornerstone value at many schools, so students not only learn about the how and why of farm operation, but also to consider questions such as “Are there more sustainable practices farms and supermarkets alike could be investing in?” This is an important aspect of the program.

In its first year, over 250 students participated in the program. The program feedback has been positive with 100% of respondents indicating the program’s high level of impact and engagement. Furthermore, schools expressed their interest to be involved in the program again.

“The students were so interested in all the new knowledge you taught them and are still talking about it”.

“We had an awesome time! The kids loved it. Definitely keen for next year!”

VEG Education will continue to motivate and educate kids about careers in horticulture in 2022 and beyond. In this way, Velisha Farms is demonstrating its leadership in delivering careers awareness activities that create a positive impact and perception about the horticulture industry.

In response to the Firth Review, a ‘core offering’ of pathways for VET Delivered to Secondary Students (VDSS) is being developed for greater alignment with industry demand for skills. The proposed core offering includes an Agriculture and Environment Pathway with multiple VET certificates that schools can choose from. Thus, industry has the opportunity to partner with the education and training sector to promote agriculture as a career of choice to school students across all academic levels and make an impact. Attracting more people to the sector will help meet the challenges posed by increasing demand for food and fibre and help meet the sector’s workforce demands.

It is important to note that school students are not the only ones who should be targeted. Different marketing and attraction approaches should be considered from the perspectives of three distinct cohorts, as identified through the consultations:

- **Self-motivated individuals** who are driven to seek out and prepare for a career in agriculture
- **Current agriculture sector employees self-identifying or identified by their employer as requiring upskilling:** existing workforce who need to upskill to improve efficiency in their current field and gain further agricultural knowledge, who can learn from industry experts in formal and non-formal training and education
- **People who want to move from one occupation to another:** this includes farmers who have identified a need to diversify activity, as well as people who want to move from one agriculture occupation to another

Recommendation 5: Leverage partnerships between industry, employers and education providers to promote training and career development opportunities in agriculture for students

A concerted effort by industry in partnership with the education sector will help change perceptions about agriculture that are held by students, parents and other influencers. Who better to help build the profile of the sector and highlight the rewarding, interesting and successful careers available in agriculture than industry itself? This includes increasing awareness of agricultural careers, articulating career pathways and providing comprehensive and easy access to careers resources.

Actions to drive a partnership approach to improve information about career awareness and agriculture training include:

- Build the understanding of agriculture from a young age and throughout the primary school years to learn where food comes from and how it is grown and produced by showing the interesting elements of agriculture. This could be led by industry and school partnerships at regional level through school activities and campaigns
- Exemplify and demonstrate the spectrum of the agriculture industry with its interconnected social, economic, technological and environmental trends, through tailored promotional and taster programs that are aligned with the F-10 curriculum, e.g. utilise hands-on STEM learning offered by Tech Schools so secondary students are introduced to the high-tech future of agriculture. In addition, deploy Victorian Skills Gateway as a tool to provide information and advice on agriculture careers and skilling options. Together, they would stimulate interest in agriculture careers from an early age and improve the potential take-up of further agricultural study
- Develop initiatives that challenge the notion of race and gender stereotypes in agriculture sector and position it as an industry that has a reputation of inclusive culture and supporting workers. This can be achieved through existing and new initiatives such as VET campaigns,¹⁰ maximising the use of practical placements. Non-traditional cohorts need to see themselves in agriculture through exposure to industry stakeholders who are from a range of diverse backgrounds and cultures: 'you can't be it, if you can't see it.'
- Provision and delivery of informed advice and information to distribute to 'influencers', including teachers, industry, careers advisors about the range of job roles and career possibilities in the agriculture industry. In particular, TAFE-based Skills and Jobs Centre staff should be collectively skilled up with contemporary knowledge about opportunities in the sector. As well, given the family's strong influence over careers decisions, it will be advantageous for industry representatives to develop a strategy to educate parents about Victoria's thriving modern day agriculture industry

Noting the need for agriculture industry associations and commodity groups to lead on promoting the sector to new entrants, consider funding an industry-led position to co-ordinate development and implementation of promotion and awareness activities, complementing the activities above. The position would work with employers/commodity group associations to:

- Develop promotional materials aligned with TAFE and training offerings, including marketing and communication strategies and initiatives to attract new cohorts to industry
- Connect industry and school-based careers advisors and teachers on raising the breadth of opportunities to consider in the agriculture industry
- Form connections and develop partnerships with the TAFE and adult education network (e.g. Skills and Jobs Centres, Learn Locals) that will assist industry association members to tap into the pipeline of future workers with promotional and experiential activities

¹⁰ Victorian Government (2022) VET Champions, www.vic.gov.au/vet-champions



Pathways for People in Dairy

Dairy Australia is the Australian national body for the dairy industry, and a research and development corporation. Dairy Australia recognises that attracting people to industry does not just lie with TAFE, but that they recognise their role in promoting training and getting people interested in it. Dairy Australia can demonstrate the linkages between competencies and the roles available in the dairy industry, which helps students envisage a career pathway. They also support their members by connecting them to skills and training opportunities, thus, encouraging business and workforce growth and productivity.

In 2020, Dairy Australia developed and delivered the 'Pathways for People in Dairy' industry-led project. The project was co-funded by the Victorian Government and aimed to develop rapid, high-quality supported careers awareness, recruitment and onboarding for new industry entrants, supporting successful transition to a position on an Australian dairy farm.

A digital marketing campaign was implemented to raise awareness of the opportunities that a job and career in dairy provided. This campaign was supported by a suite of online learning modules showcasing dairy as a career, regional life and provided tangible directions on how to secure a position in dairy through stories from people currently employed in the dairy industry (<https://thepeopleindairy.org.au/get-employed/>).

For those who were inspired to pursue a career in the industry, a series of training modules and a 90-day onboarding journey was developed to upskill the individual for the fundamental roles on-farm including safety and animal handling. As part of the 90-day journey, dairy farmers who employed these new entrants were supported with coaching resources and mentoring by consultants to successfully onboard their new staff.

Finally, a COVID-19 Workplace Framework was created, specific for dairy farming practice, to create safe and inclusive workplaces considering the potential for COVID outbreaks.

Over the 3-month period from Oct-Dec 2020, visits to the online 'Get Employed' modules more than tripled, with a peak of 3,000 visitors in December at the culmination of the digital marketing campaign. Of these visitors, a further 458 people went on to enrol in the flagship training module 'Milking and Mastitis Management' as part of the 90-day onboarding journey. Throughout the life of the project, 300 farm businesses engaged with the digital platform that housed the 90-day onboarding journey and participated in the mentoring sessions.

The outputs of the project continue to be embedded in core workforce attraction and retention initiatives for the dairy industry.

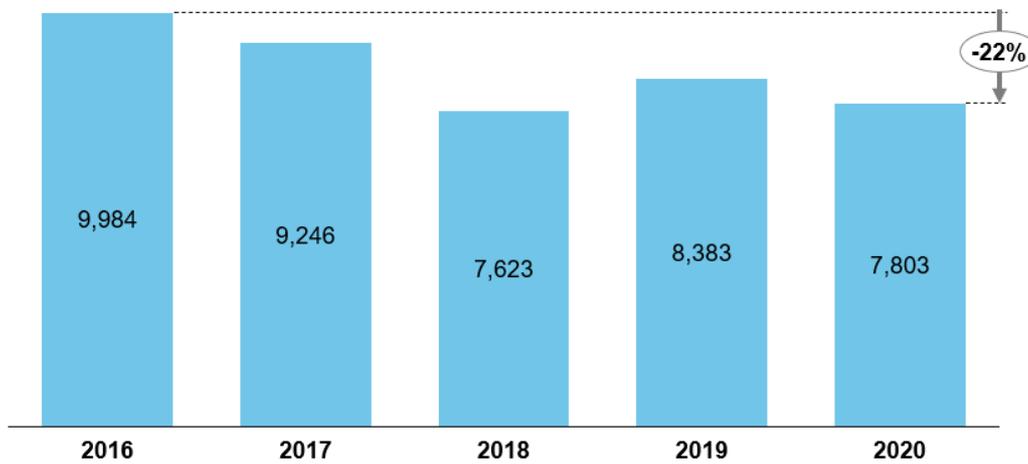
Recommendation 6: Provide non-traditional cohorts with adequate resources and ongoing support to succeed

In order to compete for skilled workers, the sector needs to attract more diverse cohorts to participate, including female, Koorie and Culturally and Linguistically Diverse students. Many organisations in agriculture reported that the sector was already in need of more workers trained in using digital technologies and that this need would only grow in the future. Australian Bureau of Agricultural and Resource Economics (ABARES) noted that higher skilled roles were difficult to fill and highlighted the need for access to agricultural training and competitive wages to ‘attract and retain skilled workers.’¹¹

Skills Impact described the vocational education sector as providing a ‘robust framework of work skills tailored to the agricultural sector’.¹²

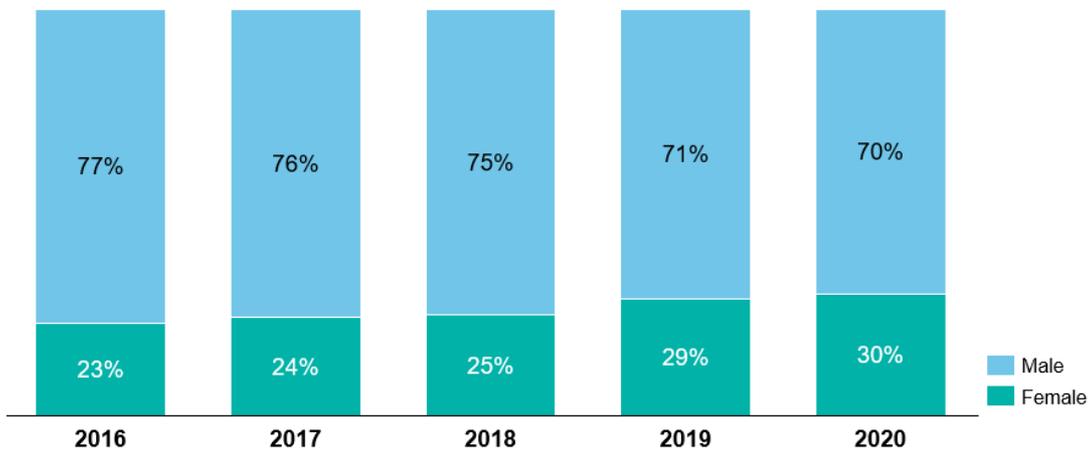
Our analysis shows that TAFE students’ enrolment into agriculture declined by 22% from 2016 to 2022, which aligns to a growing concern about the availability of workforce supplied to the industry (Figure 4).

Figure 4. Students enrolled into agriculture TAFE training 2016 – 2020



The analysis also shows that female students account for only 30% of the total enrolments in 2020, a slight improvement from 23% in 2016 (Figure 5).

Figure 5. Students’ enrolment in agriculture courses at TAFE by gender 2016 - 2020

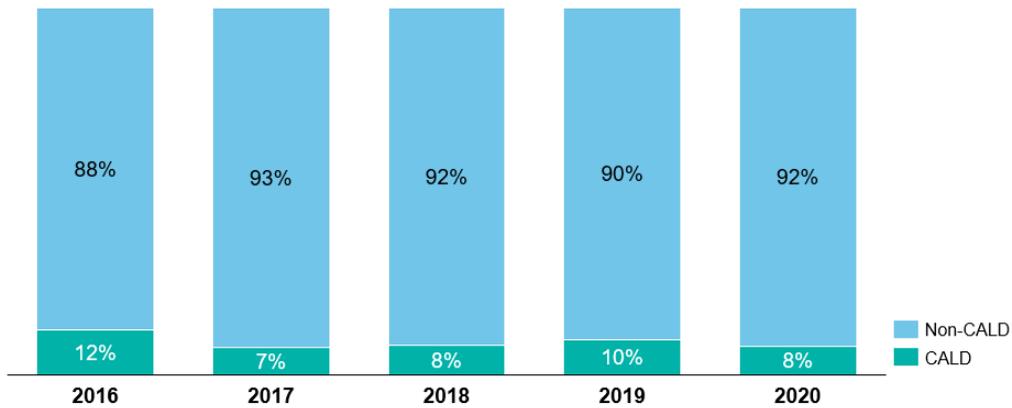


¹¹ Australian Bureau of Agricultural and Resource Economics (2018) Demand for Farm Workers 2018, <https://www.awe.gov.au/abares/research-topics/labour/labour-survey-2018>

¹² Commonwealth of Australia (2020) Growing Australia, https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024453/toc_pdf/GrowingAustralia.pdf;fileType=application%2Fpdf

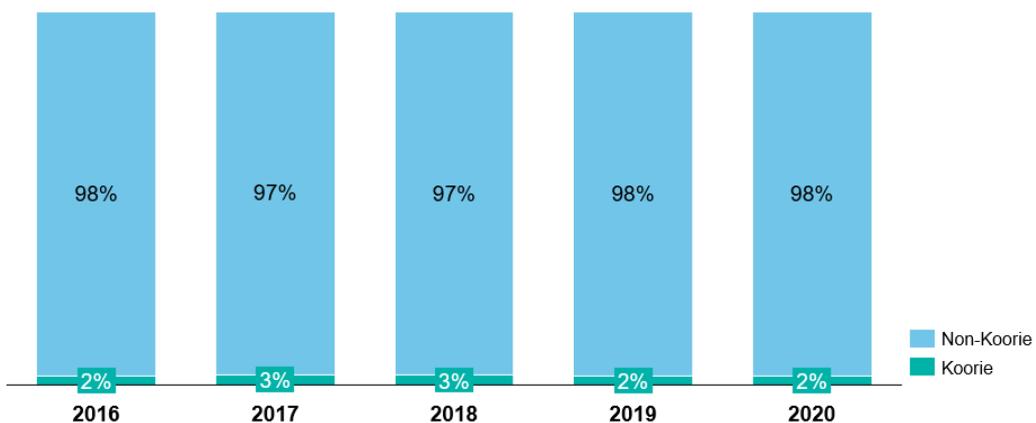
Culturally and Linguistically Diverse (CALD) students represent only 8% of the total enrolments in 2020, decreasing from 12% in 2016 (Figure 6).

Figure 6. Students' enrolment in agriculture courses at TAFE by Culturally and Linguistically Diverse (CALD) 2016 - 2020



Furthermore, the analysis indicates that Koorie learners consistently represent only 2%-3% of the total enrolments (Figure 7).

Figure 7. Percentage of Koorie student's enrolment in agriculture courses at TAFE 2016 - 2020



Embracing the benefits of diversity and inclusivity in the agricultural sector is essential for its economic and social sustainability. This aspiration is in alignment with the 2030 Roadmap: Australian Agriculture's Plan for a \$100 Billion Industry, namely that a career in agriculture should be an 'accessible aspiration for all' and 'includes a target for the agricultural workforce to achieve gender parity...'. The Roadmap also outlines the importance of increasing the number of Aboriginal and Torres Strait Islander people in industry leadership and to undertake initiatives to increase participation by 'underrepresented communities in the agriculture industry.'¹³



Increasing the participation of women, CALD, and Koorie groups in formal education and training would be one of the key levers to improve their representation in the agriculture workforce.

Actions to promote inclusivity and attract learners from non-traditional groups include:

- Form a working group that include agriculture trainers, TAFE network representatives (e.g., marketing), Skills and Jobs Centres, Learn Locals, industry and stakeholders from those non-traditional cohorts to embed inclusive marketing messaging, consider course contextualisation, development of inclusive and supported experiential programs and mentoring support for work placements, leveraging the TAFE network and OTCD systems
- Training and education providers to showcase non-traditional cohorts achieving and succeeding with an accredited agriculture qualification. Promotion of case studies and sharing learnings across the network is highly encouraged
- Strengthen the pathways to and from relevant Learn Locals to provide foundation training such as literacy, numeracy, and employability skills, improving the likelihood of learners articulating to further training or achieving ongoing employment. Learn Locals could play a valuable role in preparing CALD learners to accredited training pathways
- The TAFE Network to consider specific needs and supports for students from non-traditional backgrounds to increase appeal and attractiveness of the agriculture sector, which could include mentoring, advice and learning supports, as well as culturally safe learning environments and materials, as part of the network approach to improving engagement, support and outcomes for learners who face barriers to education

¹³ Commonwealth of Australia (2020) *Growing Australia*. https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024453/toc_pdf/GrowingAustralia.pdf;fileType=application%2Fpdf

Acknowledgements

The Chair of the Review is grateful to all stakeholders who provided their insights, comments and advice during the consultation process and thanks them for generously dedicating their time during an especially stressful year that was marked by the impacts of the COVID-19 pandemic. For teaching staff who took time from their busy teaching schedule to participate, to farmers finding time to attend consultations in between seasonal farming tasks to the organisations, influencers, associations, educators, principals, industry representatives, regional networks and individuals – your input was invaluable.

The Review benefitted from advice and guidance provided by the Review Reference Group, the Secretariat, Agriculture Victoria, Higher Education and Skills and many along the way who provided insightful feedback.

The Chair expresses her gratitude to the Secretariat of the Review from HES – for their vital role in supporting the Review, including the development of issue papers, preparation of the consultation briefing documents and writing of the final report.

Appendix 1: Glossary of abbreviations and terms

Abbreviations and Terms	Definition
Accredited VET course	A course accredited by the national VET regulator or by a delegated body of the national VET regulator; a structured sequence of training developed to meet training needs that are not addressed by existing training packages; and a course that has been assessed by ASQA as compliant with the Standards for VET Accredited Courses 2021 and AQF.
Agriculture	A key industry in the economy that involves grain, sheep and cattle farming; dairy; poultry farming; vegetable and mushroom growing; fruit and tree nut growing; other crop growing.
Agricultural College Modernisation Program	Refers to \$50 million program announced as part of the Victorian Budget 2020/21 to help more Victorians to pursue careers in agriculture. Three agriculture colleges will share in \$20 million in funding for upgrade to student accommodation and teaching facilities and \$30 million will create the Future Agriculture Skills Capacity Fund.
Agri-tech	Agricultural technology or agrotechnology is the use of technology in agriculture, horticulture and aquaculture with the aim of improving yield, efficiency and profitability.
AHC	Agriculture, Horticulture and Conservation and Land Management
Apprenticeship	An entry pathway into an industry sector which combines paid employment with off-the-job training or workplace-based training organised through a registered training organisation. An apprenticeship provides training in a skilled trade.
AQF	Australian Qualifications Framework – the national policy for regulated education and training qualifications in Australia.
ASQA	Australian Skills Quality Authority – the national regulator for Australia’s vocational education and training (VET) sector.
CALD	Culturally and Linguistically Diverse – a term often used to describe people living in Australia who were born overseas, or people living in Australia who have parents/grandparents born overseas and are predominantly from non-English speaking backgrounds or non-western countries.
Centre of Excellence	A precinct/centre that brings together customised, hands-on, best practice training, research and development which is often established with close links to industry.
Clean economy	Sectors with the capacity to take action to address climate change, reduce waste and improve use and re-use of materials and resources such as energy, land use, transport, food and agriculture.

DET	Department of Education and Training - a government department in Victoria, Australia.
Dual sector university	Universities that have legislative mandates and obligations to meet community and industry needs across both Higher Education and Vocational Education sectors.
Foundation skills courses/training	A combination of language, literacy, numeracy skills and employability skills that are included in VET courses and units of competency. Includes both accredited and pre-accredited training.
Free TAFE	The Victorian Government program that covers tuition fees for priority courses for students who are eligible for government- subsidised training.
Funded course list	The list that outlines all vocational education and training courses that are subsidised for Victorian students.
Future Agriculture Skills Capacity Fund (FASCF)	Refers to \$30 million fund created as part of the \$50 million Agricultural College Modernisation Program. FASCF will support TAFEs and other agricultural education and training providers to develop students' skills and promote pathways into the industry.
GTO	Group Training Organisation – hires apprentices and trainees and places them with host employers.
Higher Education	Refers to public and private universities, Australian branches of overseas universities and other higher education providers that offer qualifications ranging from undergraduate to postgraduate awards.
Industry	The bodies that have a stake in the training, assessment and client services provided by vocational education providers.
Industry associations/organisations	An organisation representing an industry, including peak business and employer organisations and industry advisory bodies, such as industry skills councils.
Jobactive	The Commonwealth Government's employment services program for job seekers and employers.
JobTrainer	The Commonwealth Government's COVID-related economic response fund to deliver access to free, or low cost, training places in areas of identified skills needs, in partnership with the states and territories. The wider JobTrainer package also includes the Supporting Apprentices and Trainees wage subsidy.
KLO	Koorie Liaison Officer – staff employed by TAFEs and dual sector institutions and responsible for providing advice and support to Aboriginal and/or Torres Strait Islander students during their study.
Koorie	The term Koorie is used throughout this document which is inclusive of Aboriginal and /or Torres Strait Islander peoples.

Koorie Liaison Units	Entities within TAFE and dual sector institutions that aim to provide support to Aboriginal and/or Torres Strait Islander students.
LLEN	Local Learning and Employment Network. The main aim of LLEN is to improve education, training and employment options for young people residing within its geographic area.
LLN	Language, Literacy and Numeracy
Micro-credentials	Non-accredited short courses based around very specific skills; used as an option to upskill and gain specific knowledge in the area.
National training package	A set of nationally endorsed standards and qualifications for recognising and assessing skills in the VET sector.
Non-accredited/ Unaccredited training	Refers to training that does not lead to the attainment of a formal qualification or award.
OTCD	Office of TAFE Coordination and Delivery – located within the Department of Education and Training, primarily responsible for driving change in the way in which the TAFE network engages with government, operates and serves Victorian students and communities.
PRA	Principal Regional Advisor – a role within the Victorian Skills Authority focused on working with TAFE, employers, industry and regional stakeholders to identify and facilitate opportunities for regional markets as well as solutions to regional or industry- specific issues.
Pre-accredited training	Provides opportunities for adult learners in Victoria to gain the educational capacity and core skills they need for study, work and life.
Professional learning	Activities that develop and/or maintain VET teacher's skills, knowledge, expertise and industry currency. Also known as professional development (PD), continuing professional development (CPD) and ongoing professional development (OPD)
Qualification	Formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs.
RPL	Recognition of Prior Learning – the formal recognition of the skills and knowledge that a person has obtained through their previous study, work and life experience. RPL can be used for full or partial recognition of a VET qualification.
RSTF	Regional and Specialist Training Fund (the Victoria Government Department of Education and Training) - a targeted Skills First funding stream designed to assist rural and regional communities to access training that meets their local industry needs, addressing thin markets and providing a greater alignment between workforce requirements and training needs across the state.

RTO	Registered training organisation – an organisation which is registered by a registering body, such as Victorian Registration Qualifications Authority, that issues nationally recognised VET qualifications.
SBAT	School-based Apprenticeships and Traineeships – pathways that enable school students to work towards a nationally recognised VET qualification. Students participate in structured workplace learning while completing the VCE VET program or another VET qualification.
Skill set	The grouping of units of competency into a related set to give the skills and knowledge to perform the task. It is below the level of full qualification but allows to use the units completed in the skill set as credits towards the course.
Skill shortage	Refers to when employers cannot fill vacancies in an occupation or in a specialisation of that occupation.
Skills and Job Centre	One stop shop that liaises directly with local employers and provide services for transitioning workers and other customers. It is the Victorian Government initiative.
Skills First	A set of reforms for the training and TAFE sector in Victoria, introduced in 2017.
Skills First providers	Registered Training Organisations (including TAFEs and dual sector universities) contracted by the Victorian Government to deliver government-subsidised training.
Skills gap	Refers to when employer's current workforce skill set does not align with the skills they need to do their jobs.
TAE	Certificate IV in Training and Assessment – the qualification required as a minimum, to teach and/or assess accredited programs under the standards for RTOs.
TAFE	Technical and Further Education. TAFEs are Australia's largest providers of vocational education and training.
Teachers/VET teachers	Qualified educators who engage in the delivery of training and assessment in VET, either in an education or training institution, or at the workplace.
Thin market	A training market where the actual and potential number of students may be too small to attract training providers. Thin markers may occur in a specific industry, occupation or geographic area.
Third party	Any party that provides services on behalf of the RTO but does not include a contract of employment between an RTO and its employee.
Traineeship	A combination of on-the-job training with formal learning. A traineeship provides training in a vocational area.
Training brokers	People who act as intermediaries between industry and training providers by identifying training needs and working with providers to ensure that training suits industry needs.

Training package	Defines the skills and knowledge needed by learners to perform a job. They contain three components: units of competency, a qualifications framework and assessment guidelines.
Units of competency	Define the skills and knowledge needed and how to apply them in a workplace context.
VDSS	VET Delivered to Secondary Students which enables secondary school students to get workplace skills through nationally recognised training while still at school.
VET	Vocational Education and Training - education and training that focuses on developing practical work skills.
VET accredited training	Addresses skills requirements for industry, enterprise, education, legislative or community needs.
VRQA	Victorian Registration and Qualifications Authority, the VET regulator in Victoria.
VSA	Victorian Skills Authority – an Administrative Office of the Department of Education and Training portfolio. Its function is to generate data insights, develop place-based solutions for local problems, promote quality improvement and identify skills development to achieve job outcomes that strengthen the Victorian economy.
WSSF	Workforce Skill Set Fund (the Victoria Government Department of Education and Training) - a targeted funding program that will invest in short course training to meet emerging industry needs, as well as specialist and regional needs, tied to pre- identified skills gaps/job outcomes.
WTIF	Workforce Training Innovation Fund (the Victoria Government Department of Education and Training) – a targeted Skills First funding stream which creates opportunities for the joint RTO- industry exploration of new ideas and solutions to enhance workplace productivity.

Appendix 2: Government subsidised agriculture and meat courses offered through TAFE Network

Course Name
Certificate II in Agriculture *
Certificate II in Horticulture *
Certificate II in Landscaping
Certificate III in Agriculture *
Certificate III in Agriculture (Dairy Production) *
Certificate III in Pork Production
Certificate III in Horticulture *
Certificate III in Arboriculture
Certificate III in Landscape Construction
Certificate III in Parks and Gardens
Certificate III in Production Nursery
Certificate III in Retail Nursery
Certificate III in Sports Turf Management
Certificate III in Conservation and Ecosystem Management
Certificate III in Rural Operations
Certificate IV in Agriculture *
Certificate IV in Horticulture
Certificate IV in Agribusiness
Certificate IV in Wool Classing
Diploma of Agriculture
Diploma of Production Horticulture
Diploma of Horticulture
Diploma of Landscape Design
Diploma of Sports Turf Management
Diploma of Conservation and Ecosystem Management
Diploma of Viticulture
Agricultural Chemical Skill Set **
Certificate II in Meat Processing (Food Services) *
Certificate III in Meat Processing (Food Services)
Certificate III in Meat Processing (Retail Butcher)
Certificate III in Meat Processing (Smallgoods - General)
Certificate IV in Meat Processing (Meat Safety)

* Free TAFE courses / ** Funded Victorian skill sets

Appendix 3: Free TAFE course breakdown for AHC and AMP courses

Course Name	2019	2020	YTD Nov 2021
Certificate II in Agriculture	199	162	141
Certificate II in Horticulture	487	462	552
Certificate II in Meat Processing (Food Services)	184	188	193
Certificate III in Agriculture	760	716	756
Certificate III in Agriculture (Dairy Production)	96	85	97
Certificate III in Horticulture	1,312	1,317	1,530
Certificate IV in Agriculture	349	340	339
Grand Total	3,219	3,092	3,608

Appendix 4: References

1. Agriculture Victoria (2021), Victorian Agriculture Industry Overview June 2021 and Agriculture Victoria RISE model 2021
2. Department of Education and Training (2021) The Future of Agriculture Training Review, <https://engage.vic.gov.au/future-agriculture-training-review>
3. Agriculture Victoria (2021), Victorian Agriculture Industry Overview June 2021 and Agriculture Victoria RISE model 2021
4. Agriculture Victoria (2020) Invest in Victorian Agriculture, <https://agriculture.vic.gov.au/about/agriculture-in-victoria/invest-in-victorian-agriculture>
5. Agriculture Victoria (2020) Strong, Innovative, Sustainable: A new Strategy for Agriculture in Victoria, https://agriculture.vic.gov.au/_____data/assets/pdf_file/0005/612941/Strong-Innovative-Sustainable-a-new-strategy-for-Agriculture-in-Victoria.pdf
6. Agriculture Victoria (2021) What is the agriculture strategy? <https://agriculture.vic.gov.au/about/agriculture-strategy/what-is-the-agriculture-strategy>
7. (Department of Education and Training (2019) The Future of Adult Community Education in Victoria 2020–25 Ministerial Statement
8. Primary Industries Education Foundation Australia (2020) Food, Fibre and Our Future 2020, https://www.piefa.edu.au/uploads/9/8/9/8/98986708/piefa_summary_student_survey_report_____food_fibre_and_our_future_2020.pdf
9. Yasmin Jeffery ABC News (2021) Mark wants you to watch what happens on his farm even if you have nothing to do with agriculture, <https://www.abc.net.au/news/2021-05-16/mark-merrett-farming-heywire-trailblazers-farmvlogs/100016770>
10. The Commonwealth Scientific and Industrial Research Organisation (2019) The Future of Australia's Agricultural Workforce, https://data61.csiro.au/~media/D61/Files/19-00351_DATA61_REPORT_AgricultureWorkforce_WEB_191031.pdf?la=en&hash=3427E88C09FA139934AC03E6B74D74835D7EC3BB
11. Victorian Government (2022) VET Champions, www.vic.gov.au/vet-champions
12. Australian Bureau of Agricultural and Resource Economics (2018) Demand for Farm Workers 2018, <https://www.awe.gov.au/abares/research-topics/labour/labour-survey-2018>
13. Commonwealth of Australia (2020) Growing Australia, https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024453/toc_pdf/GrowingAustralia.pdf;fileType=application%2Fpdf
14. Commonwealth of Australia (2020) Growing Australia, https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024453/toc_pdf/GrowingAustralia.pdf;fileType=application%2Fpdf

