



# Agriculture, Horticulture, Conservation and Land Management

**The agriculture, horticulture, conservation and land management industries are at the forefront of supporting Australia's future through the responsible utilisation and cultivation of our ecosystem.**

A key aspect is the responsibility for food production for local and international consumers, through livestock and crop growth. They are also responsible for managing and maintaining the majority of Australian land and waters, which includes farmed land as well as our national and state parks, public gardens, sporting grounds and open spaces.

2019 and 2020 brought many challenges for this industry, through drought, fire, floods, and the 2020 COVID-19 pandemic, but it also highlighted the necessity of agricultural and horticultural skills and knowledge to maintain Australia's food security and support the economy.

COVID-19 has meant people are spending more time at home and exercising outdoors in parks and public spaces. Technical skills and knowledge are required to facilitate the integration of green spaces into different environments in ways that are safe, effective and sustainable. Knowledge of the impacts of human activities on the environment and the skills to conserve Australia's vast and varied nature reserves, waters and bushland are essential.

The sectors in this industry continue to show their resilience, adapting to the challenges presented by local and international agreements and markets, natural events and changes in cultural attitudes, government policies, and the environment. New skills needs and job roles have emerged – some of these were addressed as part of 2019-20 projects and others have been identified in the Annual Update to the Skills Forecast and proposed for development in 2020-21.

The national skills standards and qualifications for these sectors are overseen by the Agriculture and Production Horticulture Industry Reference Committee (IRC) and the Amenity Horticulture, Landscaping, Conservation and Land Management IRC.

**Employs over**  
**452,000 people**

**More than**  
**180,000 businesses**

**Contributes over**  
**\$126 billion**  
**to Gross Domestic Product**

**Revenue of over**  
**\$140 billion**

**Export value is almost**  
**\$16 billion**

(Source: IBISWorld Industry Wizard, 2020)

Australian agriculture accounts for 58% of Australian land use (385 million hectares).

Due to agricultural production, Australia is one of the most food secure countries in the world: we produce more food than we consume, exporting around **70% of farm products.**

(Source: ABARES, 2020, Insights: Australian food security and the COVID-19 pandemic)

# Skills Forecast

## Annual update and proposed projects for 2020-2021

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This year's Annual Update to the IRC Skills Forecast and Proposed Schedule of Work (Skills Forecast) proposed five key projects for 2020 – 2021 and identified specific changes to the industry environment.

Both IRCs have been overseeing a major review of the AHC Agriculture, Horticulture and Conservation and Land Management Training Package, which is the largest training package in the VET system, through a new unit sector approach. The first major changes under this approach will be submitted to the AISC later in 2020, as part of the project work carried out in 2019-20. Projects for 2020-21 will look at skills standards in landscaping, including parks and gardens; broad acre and seed production; and dairy and milk harvesting. Additional projects for 2020-21 will include animal reproduction and the rehabilitation of mined land.

Digital skills continue to grow in importance so that industry can keep abreast of new technologies, interpret data, and identify links along the supply chain to make better-informed business decisions. Industry is also developing further skills in new and emerging food sources, sustainability, farm management and compliance to tackle challenges and pursue new opportunities.

Consumers' desire to eat healthier, ethically produced food, and reduce environmental impacts is driving demand for alternative proteins. With animal farming under heightened levels of scrutiny, agricultural producers are responding to emerging market opportunities. According to Australian Native Food and Botanicals (ANFAB), demand for native foods is also increasing. Aboriginal communities have long known the nutritional benefits of bush foods, such as ribberries, finger limes, bunya nuts and lemon aspen. However, according to ANFAB deputy chair, Russell Glover, there are skills shortages in working with the strict food safety regulations in order to commercialise bush food products.

**“Alternative proteins will have a key role in the food of the future. But so will meat. With the number of mouths to feed growing by on average 1.8 times the size of Australia’s population per annum for the next 32 years, there will be an increased need for protein sources. Plant-based proteins are expected to make up 33 per cent of the protein market by 2054 up from a current market share of less than five per cent by value (600 per cent increase). Both meat and alternative plant or algae-based proteins will clearly have a critical role to play in filling the dietary needs of two billion extra people, but our farming systems also need to dramatically evolve to produce more food using less land and resources.”**

KPMG, 2018, p.34, Talking 2030: Growing agriculture into a \$100 billion industry, National Farmers' Federation

There are unique business development and leadership skill needs for agricultural businesses. Agriculture is a business environment with legislative and regulatory requirements that mean farms must develop robust planning frameworks in order to achieve the desired balance of economic, environmental and social outcomes. For many businesses in industries across Australia, budgeting is a relatively predictable process, with inputs and outputs not deviating too far from what is generally expected. Agriculture is uniquely defined by unpredictability and instability.

Addressing the ongoing education and training needs of regional, rural and remote communities is of vital importance for Australian agriculture. The National Farmers' Federation has argued that labour shortages are far more pronounced in horticulture than in the dairy and broadacre sectors. Their CEO Tony Mahar is quoted as saying, “agriculture’s workforce deficit is one of the largest constraints to our sector’s productivity growth and we need solutions”. In December 2019, the Federal Government established the National Agricultural Labour Advisory Committee to develop a National Agriculture Workforce Strategy. Skills Impact made a submission to this inquiry and developed a discussion paper for industry input.



Environmental stewardship (responsibly using and protecting the land, waters and ecosystem through sustainable practices and conservation) has also received increased attention. Following calls from the National Farmers' Federation, the Australian Government has launched the Environmental Stewardship Program, under the National Landcare Program, to provide support for stewardship activities. This contains the four-year, \$34 million Agriculture Stewardship Package, with objectives of improving agriculture's social license through the development of a national biodiversity policy and incentivising the adoption of ecosystem boosting practices. There is likely to be strong interest in training and education in regenerative agriculture, especially to build on school-level learning, and bridge the gap to science-focused university curricula through the delivery of applied skills training.

**“Farmers have always been frontline stewards of Australia’s environment, managing 51% of our continent’s landmass. Unfortunately, efforts to incentivise and reward environmental practices historically have been short-term, or based on ad-hoc grants and programs. They have also been interfered with through complex and poorly understood regulatory requirements. We need a comprehensive approach that delivers the right incentives, and the right outcomes for farmers and the environment.”**

NFF President, Fiona Simson



## Projects for 2020-21

The following projects have been approved by the Australian Industry and Skills Committee (AISC) for 2020-21:

### Review of Unit Sectors

Given the size and complexity of the AHC Training Package, this work involves a continuation of the unit sector approach for Year 2 of the strategy, as outlined in the current 2019 – 2022 Skills Forecast. Skills standards for the following sectors will be reviewed:

- Cluster 1: Landscaping, including Parks and Gardens
- Cluster 2: Broad Acre and Seed Production
- Cluster 3: Dairy and Milk Harvesting

### Animal Reproduction

Continued consumer demand for animal-based proteins will place increasing pressure on farmers to use improved genetics in their breeding programs. New processes and technologies in the livestock industry are helping farmers to maintain a sustainable production system, improve profitability and competitiveness. The aim of this project is to review livestock units relating to animal reproductive practices, including impregnation techniques, pregnancy testing and birthing, so they include skills for current processes and technologies.

### Skills for Land Rehabilitation (Mined Land)

Recent mine closures, especially across Northern Australia, have highlighted a skills gap in current conservation and land management qualifications for work to rehabilitate closed mines. Large mining companies recruit Environmental and Rehabilitation Specialists and Advisors to help meet contract obligations. These roles may be supervised by university educated Environmental Engineers, however the field workers that perform the rehabilitation tasks are most suited to VET qualified employees. The responsibility for this work is often being left with Indigenous groups (including Indigenous Rangers), either by agreement or by default.

**The following project is still under consideration:**

### Indigenous Consultation for Annual Updates and Future Projects

A research and development project is proposed to improve long-term skills outcomes for Indigenous participants in the Australian workforce and the vocational education and training (VET) system. The aim is to uncover future projects that could expand productivity, employment and economic development opportunities, open new and emerging markets, improve training and job outcomes and upgrade industry skills in negotiations and partnerships with Indigenous business and community organisations. It is proposed that this will be a joint project, overseen by both the Aquaculture and Wild Catch IRC and the Amenity Horticulture, Landscaping, and Conservation and Land Management IRC. Both IRCs acknowledge the importance of Aboriginal and Torres Strait Islander involvement in the development of all aspects of their industries.

# Vocational Qualification Leads to Mid-life Career Change

**At 55 years old and after 30 years in the printing industry, Phil started to seriously think about what to do next. Over the past few years, Phil had experienced retrenchments, stints of casual work and periods of unemployment. The printing industry had changed and shrunk its workforce and with another retrenchment looming, Phil knew that he needed to change directions and find something that was going to keep him in work for the next ten years.**

Phil said he has always loved gardening, but he knew it would be a challenge to find someone willing to employ an older worker without experience. He thought vocational education and training could be the answer to growing a career in the horticultural industry.

**“I’ve loved gardening for years and am passionate about native plants and I realised this was what I really wanted to do for the rest of my working life. I took a risk and decided to study horticulture,”**

**said Phil.**

Phil enrolled in the Certificate III in Horticulture with Melbourne Polytechnic. By December 2019 he had completed all of his course work and had sent his resume to at least fifteen different companies.

“I knew my chances weren’t great. I was 56 by then, passionate and knowledgeable, fit and ready to work, but had no horticulture work experience.

“I got a job one day after finishing my course work. I couldn’t believe it. Although it was a low-skilled casual job I knew that this was the break I needed. So, I took it.

“I am now in a full time, ongoing position in property maintenance. I’m loving being outdoors, learning new skills and using what I learnt on my course. I’m so thankful to be employed during the COVID-19 crisis. If I hadn’t done that course it’s likely I’d be either unemployed or working casually in printing factories, wishing I was out in the sunshine,” said Phil.



Phil Ward, Maintenance Horticulturalist,  
Maintaining Melbourne Pty Ltd

Michael Hartman, CEO of Skills Impact, said Phil’s story is illustrative of the exciting career pathways a vocational qualification can offer somebody, at any age or stage of their career.

**“Many people associate vocational education and training with young people starting a career. It certainly is a great way for our younger generation to start a career, but there are people in our society of various ages and different points in their life who want to change their career and vocational education and training is an excellent way of doing this,” said Michael.**

Ray Redford, Lead Teacher at Melbourne Polytechnic Parks and Gardens, said they get a lot of students looking for a career change, including many students who already have university qualifications.

“Many students go on to find work in the industry or further study within TAFE. We engage with employers regularly to ensure our training materials are up to date and to organise worksite experience for groups of our students, so they can gain genuine practice working alongside horticulturists on worksites. An example of this is a local cemetery where we help with pruning,” said Ray.

Horticulture has been identified as a field where skilled workers are constantly needed, and it’s an industry that is expanding as innovations and technology in the field create new opportunities.

As with other vocational training programs, graduates of horticulture courses learn from people with real industry experience, obtaining practical skills and knowledge that relate to real work situations.

# Projects

## Project work between 2019-20

Outlined over the following pages is a summary of projects Skills Impact managed between July 2019 and June 2020.

The Agriculture and Production Horticulture Industry Reference Committee (IRC) and the Amenity Horticulture, Landscaping, Conservation and Land Management IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications updated as part of the following projects are expected to be endorsed by the AISC and State and Territory Ministers by the end of 2020.

## Ag Biosecurity and Emergency Response Project

Australia has a reputation for producing high-quality and safe agricultural produce, thanks largely to strict biosecurity controls and regulations. The commitment of industry and regulators in minimising risk and controlling outbreaks means we are one of the few countries to remain almost free from many of the world's most severe pests, weeds and diseases.

The outbreaks that have occurred in Australia show how devastating the impact can be for an entire industry. For instance, the 2013 discovery of banana freckle in Cavendish bananas in the Northern Territory and the 2015 discovery of Panama Disease TR4 in Queensland, which have cost an estimated \$26 million to eradicate, with the national response still ongoing<sup>2</sup>.

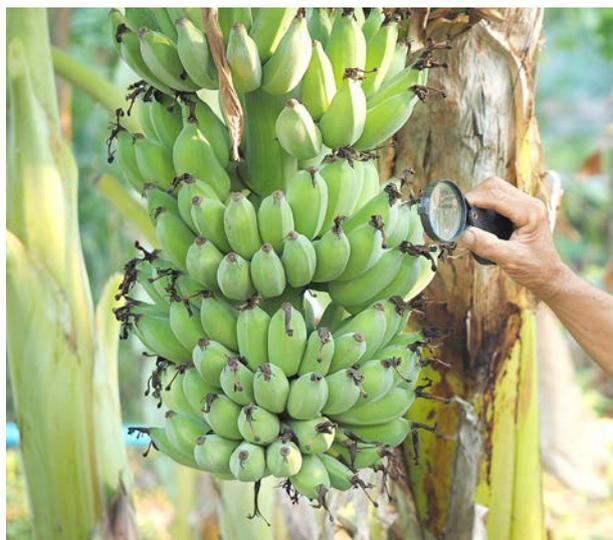
The skills for upholding biosecurity controls and measures are required at every stage of production, from purchasing through to growing, transport and sales. While different sectors face specific challenges, there is overlap in the ways in which these outbreaks can be prevented.

Industry has driven this project to define the skills and knowledge required to perform a wide range of processes for preventing a biosecurity outbreak, as well as the skills for managing an outbreak and emergency response. As a result, four new skills sets have been developed and 13 existing units reviewed. They capture skills required at every stage of the value chain, from purchasing through to growing, transport and sales. They also include skills for using new technologies, which are increasingly used to detect, analyse, monitor and respond to biosecurity risks.

Ross Brown of Sunpork Ltd is one member of industry who has expressed a positive reaction to outcome of the project.

**“Sunpork gives full support in the AHCBIO and AHCBER revised units... The changes reflect the industry requirements and also improves the student outcomes. They have been well designed for the Industry and will stand us in good stead if the unthinkable happens.”**

**Ross Brown of Sunpork Ltd**



### Key Outcomes

- Four skill sets developed to capture the skills needed for basic biosecurity, basic chainsaw operation, firearms and site management.
- Thirteen units of competency updated, including revisions to eight biosecurity emergency response (BER) to align with actual emergency response scenarios and five biosecurity (BIO) units to incorporate all agricultural and natural area needs.
- Biosecurity Incident Management System (BIMS) standards included across all units, as well a description in the Implementation Guide to support training delivery.
- Terminology updated across all units to align with current industry use.

<sup>2</sup> The University of Melbourne website, viewed August 2020, <https://pursuit.unimelb.edu.au/articles/from-racehorses-to-bananas-the-importance-of-biosecurity>

## Agronomy Project

Farmers and horticulturalists need the ability to adapt to weather and climate conditions, especially in a country like Australia, where drought is a recurring factor. Workers with practical skills in agronomy can help put research into practice to achieve this, assisting farmers to get the best long-term results from the land. The science of agronomy looks at how environmental influences can impact the growth and use of plants and animals for food, fibre, fuel and land reclamation. Agronomists consider factors across the entire farming system, such as the environment, soil, nutrition, weather and cultivation techniques, and how these can affect crops and/or pastures. Australia is one of the most food secure nations on earth and the science of agronomy plays a key role in this. This project came about due to a need for more workers with practical skills in agronomy and the lack of national skills standards to address the technical expertise required to apply agronomy practices.

Thanks to the efforts of those who contributed to this project, a national Diploma of Applied Agronomy has been developed, along with a skill set in digital agronomy. Two units in agricultural data and nutrition have also been developed and six units revised.

Consultation focused on the practical and hands-on expertise required to put the research of agronomy into practice, such as the skills and knowledge to address emerging changes in technology, as well as to plan, capture and interpret data and to preserve natural resources.

**“Having a qualification that reflects the professional standards of agronomists working in the field will be of significant benefit to the industry in ensuring advice is well informed and communicated. I highly recommend this qualification to agricultural industry players who want to have staff that have a solid grounding in the principles of a career in applied agronomy.”**

Mark Stanley, Director Regional Connections Pty Ltd

### Key Outcomes

- One qualification developed to capture the complex skills required to put knowledge of agronomy into practice, including skills for working with agricultural data.
- One skill set developed to support the digital expertise required for work in agronomy, including knowledge of system types and how to use them.
- Two units of competency developed to support skills in the interpretation and implementation of agricultural data and to support the skills and knowledge required to review, test and analyse site characteristics, determine plant nutrient requirements, design a nutrient management plan, and monitor and evaluate a crop or pasture nutrition program and nutrient management plan.
- Six units of competency reviewed so that they are applicable to the context of agronomy, as well as other industry sectors.

## Conservation and Land Management Project

Conservation and ecosystem management is a large and complex sector responsible for caring for Australia's unique flora and fauna, many of which are not found anywhere else in the world. While the skills needed for this work span a number of sub-sectors – including lands, parks and wildlife; natural area restoration; conservation earthworks; and pest management – common foundational skills are needed across job roles. It is important that those employed in the sector are equipped with the skills and knowledge applicable to all of the varied environments of this expansive country, some of which are extremely remote and home to unique ecosystems. Technological advancements, changing markets, and shifting climactic conditions are currently impacting the sector as a whole, presenting a need for updated skills standards.

Industry stakeholders from across Australia have been consulted as part of this project to review units, skill sets and qualifications relating to the sub-sectors of conservation and ecosystem management, addressing skills needs and promoting flexible work pathways. Skills in ecology have been incorporated where applicable, so that graduates in any conservation and land management related sector finish their training with an understanding of how their work can impact the environment, and the skills and knowledge required to make this a positive impact. These changes will support future industry workers and leaders to have the skills and knowledge required to thrive within the sector.

Consultation with industry experts and with the Consultation with the Amenity Horticulture, Landscaping, Conservation and Land Management IRC has also identified a more suitable description of this sector to be Conservation and Ecosystem Management. As such, qualifications have been renamed to Conservation and Ecosystem Management.

**“I’m grateful for the amount of consultation completed during this project and by the extension of the feedback periods. The updated and new units, skill sets and qualifications have been substantially improved and will play a pivotal role in the future of conservation and land management nationally.”**

Tein McDonald, conservation and land management expert and member of the Australian Association of Bush Regenerators

### Key Outcomes

- Four existing Certificate III level qualifications have been amalgamated into a single new Certificate III in Conservation and Ecosystem Management, with streams of study for each sub-sector, while maintaining the possibility of a generalist qualification.
- The Diploma and Certificates I, II, III, IV in Conservation and Land Management have been renamed to Conservation and Ecosystem Management.

- The unit AHCNAR201 Carry out natural area restoration works has been proposed for deletion, as industry feedback indicated it does not accurately describe current job roles. It is proposed to be replaced with the new unit AHCECR203 Perform basic ecological restoration works, which includes the technical detail needed to support skills in ecology, including understanding of environments, how they function and how to conserve them.
- Nineteen units of competency were developed, including:
  - Six marine units, to address the need for skills to perform conservation and land management activities in a marine environment
  - Six new units in Natural Area Restoration (or Ecological Restoration), which address the need for fieldwork skills, particularly digital skills, site inspections, and skills in restoration, regeneration and reconstruction
  - Four units to address skills for using new technology and processes developed in the area of Lands, Parks and Wildlife, including skills in data, biodiversity monitoring, using a GPS and operating a remotely piloted system
  - The unit described above (AHCECR203 Perform basic ecological restoration works), which will replace AHCNAR201 Carry out natural area restoration works
  - New units for identifying flora and fauna, conducting ecological burning, and recognising landforms and soil types.
- Two new skill sets to provide access to skills standards relating to the job task of seed processing and the basics of ranger work.

## Green Walls and Rooftop Gardens Project

Green infrastructure is a relatively new industry in Australia, and has seen expansion in recent times as city councils, architects and developers recognise the many benefits of roof gardens, vertical gardens and green facades.

Australian city dwellers will be all too familiar with the fierce heat that can be experienced on a summer's day, when surrounded by closely constructed buildings, concrete and other solid surfaces. With limited space for traditional parks, this kind of infrastructure can offer respite from these 'urban heat islands', while also improving air quality, helping to manage storm water, and creating a sense of privacy and enclosure while still being aesthetically pleasing. For these reasons, Australian city councils have developed plans and policies to increase the number of roof and vertical gardens in high density areas. This support, combined with better access to technology, is making green infrastructure even more popular and opening up job opportunities.

Consultation with industry has indicated that while job roles in this area draw on skills and knowledge relating to horticulture and landscaping, specialist skills and knowledge are required for the unique work of designing,



constructing and maintaining green infrastructure.

This work requires consideration of a range of factors, including how much weight a structure can bear, safety working at heights, access points, nutrient requirements, installation of waterproof barriers, drainage and filtration systems, environmental factors and microclimates, and local government legislation.

Thanks to the contributions of those who participated in this project, the unique skills required for work with green infrastructure have been captured in five units of competency and three skill sets. These new skills standards will support future skills development and assist training delivery.

**“The skills sets and units of competency have all been carefully considered and reflect what I, and the industry, consider to be key in training those entering the industry. I currently employ staff who work in this field and ultimately would like to have staff formally trained in these skills standards prior to commencing employment, in addition to the practical/ onsite training that currently occurs.”**

**Michael Casey, Director Evergreen Infrastructure**

### Key Outcomes

- Three skill sets developed to cover the knowledge and skills required to:
  - Design roof gardens, vertical gardens and green facades for commercial and or residential projects, in consultation with building, landscape and horticultural professionals.
  - Safely construct roof gardens, vertical gardens and green facades for commercial and or residential projects.
  - Maintain green infrastructure specific to commercial and or residential roof gardens, vertical gardens and green facades.

- Five units developed to capture the skills and knowledge required to:
  - Design roof gardens
  - Design vertical gardens and green facades
  - Construct roof gardens
  - Construct vertical gardens and green facades
  - Maintain roof gardens, vertical gardens and green facades.

## Horticulture and Nursery Project

Whether it be the vegetables on your dinner plate or the potted plant decorating your house, every plant grown for human use follows a horticultural journey. This journey involves the work of a series of industry sub sectors, each comprised of different practices and job roles, but all intrinsically connected with horticultural practices. Making up part of the same supply chain, the sectors of production horticulture, nursery production, and retail nursery share many transferable skills and face many of the same opportunities and challenges.

Robotics are increasingly used for watering and picking crops; drones are emerging as a way to identify disease; and forecasting crop yield potential is coming along in leaps and bounds as collecting and processing a wide range of data becomes easier. Such developments require higher levels of digital skills to enable workers and managers to engage with equipment, software and data.

These sectors are essential in providing plants for use as food, fibre, and decoration, so it is important that national qualifications and skills standards are up to date and meet the needs of industry every step of the way. Thanks to the input of industry, skills standards for these sectors have been updated and streamlined to reflect current technology, terminology and work practices.

**“These changes will support the ongoing training necessary to see participants who complete programs are skilled to a level that supports our industry. Streamlining the programs will now be in line with industry specific needs. This has been much needed in the industry for some time.”**

Shane Hickey, Chief Human Resources Officer, The Flower Power Group / Arborglen Pty Ltd

### Key Outcomes

- Ten qualifications have been merged into five qualifications to provide greater clarity and simplicity for industry regarding the qualifications available for their workforce.
- Three qualifications, five skill sets and 67 units of competency revised to include work functions that reflect current job roles in the industry and incorporate the latest technologies, equipment and advances.
- The Diploma of Retail Nursery Management is proposed for deletion by the Subject Matter Expert Groups, due to low current usage. These skills are now accessible through the Diploma of Nursery

Management, which a person working specifically in retail management can undertake with units specific to their job role.

- A new unit has been developed for AHCPM509 Apply knowledge of plant physiology to horticultural practices.
- The unit for AHCPT305 Regulate crops has been proposed to be replaced with the revised unit for AHCPT312 Implement a crop regulation program.

## Medicinal Crops Project

The production and use of medical cannabis is a rapidly expanding sector in Australia, offering new therapeutic options for a range of conditions including chemotherapy-induced nausea and vomiting, epilepsy, multiple sclerosis, chronic pain and palliative care. This is presenting new job opportunities in the horticulture sector as more licenses and permits for its cultivation and manufacture are issued.

Unique skills are required to operate within the strict regulatory framework and security requirements of the medicinal crops sector. Organisations producing medical cannabis require a license and permit granted by the Commonwealth Office of Drugs Control (ODC) and are regularly audited to ensure compliance to regulations. The high value of medicinal crops as pharmaceutical agents, means strong security measures also need to be maintained, including weighing and checking all inputs. It is essential that licensed sites have access to staff with the skills to meet these regulatory and security needs, as well as expertise in propagation, plant care, maintenance, harvest and pre-processing.

**“The medicinal cannabis sector has some unique features due to the regulatory environment in which it operates. This the employee pool, the required skills and knowledge of employees and the nature of production. Work needs to comply with regulatory and security requirements, combined with elements of agriculture, horticulture, protected crops and pharmaceutical systems.”**

**Rosemary Richards, Executive Manager, Medicinal Cannabis Industry Australia (MCIA).**

Industry has been consulted throughout this project to address the need for skills standards for the medicinal crops sector. This has resulted in the development of two new qualifications, four new skills sets, and 13 new units of competency. The qualifications have been developed to reflect the roles of individuals who work in licensed medicinal cannabis facilities as cultivation technicians and in supervisory roles.

Consideration was given to capturing the skills needed by individuals entering the workforce at an assistant level. However, further input suggested that entrants into this sector at this level should be provided with the



opportunity to develop a broad range of horticultural skills in both broadacre and protected cropping systems. Therefore, three units of competency have been developed for assistant roles in propagation, growth, and harvesting of medicinal cannabis plants and will be available for inclusion in existing qualifications as elective choices, rather than within a specialist qualification.

### Key Outcomes

- Certificate III in Medicinal Cannabis Cultivation and Production developed to provide the appropriate skills for those who work as cultivation supervisors and technical experts.
- Certificate IV in Medicinal Cannabis Cultivation and Production developed to support skills appropriate for head growers or facility managers.
- Four skill sets developed to support categories of knowledge, skills and experience necessary for working in the medicinal cannabis industry, covering induction activities, cultivation, production and management roles.
- Thirteen units of competency developed to capture the skills required to grow medical cannabis, including skills and knowledge in regulatory requirements, security measures, propagation, plant care, maintenance, harvest and pre-processing. Three of these units will be included in elective groupings of AHC20320 Certificate II in Production Horticulture (Elective Group C) and AHC21819 Certificate II in Protected Horticulture (Group E General electives).

## Rural Merchandising and Sales Project

Australian farmers and horticulturalists spend billions of dollars every year on products and services to keep their businesses efficient and economically viable. Rural merchandising workers are usually the first point of contact for farmers looking to invest in machinery and technology. Providing advice on merchandise, inventory control, order processing and warehousing duties, these employees have

an important role to play in making sure farmers get the right product for the job. They are often in customer-facing service and sales roles, requiring specific skills and product knowledge, including for services associated with livestock, auctioneers, stock and station agents, real estate agents to business managers and agronomists.

It is vital that skills standards for rural merchandising are regularly reviewed so that they are up to date with continuously evolving products and markets. Input from industry experts has informed the review of 11 units and one qualification in rural merchandising and the proposed deletion of one unit as it duplicates an existing and more relevant unit in another training package.

**“As an industry skills expert engaged from the beginning of the project, I have appreciated being able to consult both as an industry person and an assessor. Along with the Skills Impact team and other industry experts, it has been a process of information gathering, sorting, collating and reviewing, to ensure the qualification developed will meet industry needs... Though the uptake for this Qualification will be tested in our current climate, I am confident that, going forward, we have created a very applicable, useable and versatile qualification for our rural merchandising workers. I look forward to seeing the finished product available and for the opportunity to see the efforts pay off.”**

Lisa Wallace of Central Regional TAFE Western Australia

Consultation focused on the practical and hands-on expertise required to put the merchandising and sales into practice, such as the skills and knowledge to research changes in farm machinery technology. The skills standards have been updated to better describe current job functions and tasks of rural merchandisers and rural sales assistants and to make them appropriate for use in current retail settings.

**“There are many talented people living outside Australia’s main cities, but sadly, all too often they migrate to capital cities seeking career opportunities and recognised training. The Rural Merchandising and Sales qualification offers businesses such as Irrigear’s member stores a chance to give their talented staff, opportunities to upskill and follow a career path that’s tailored to living outside the cities. Additionally, I feel the qualification uniquely provides generalist training for people that do not want to follow a specialised, technical path but for whom no alternative was previously available. I’m confident that many of Irrigear’s 70+ member stores will encourage their staff to pursue the qualification when it becomes available.”**

Simon Treptow, General Manager at Irrigear

### Key Outcomes

- The Certificate III in Rural Merchandising has been updated to include new core and elective units of competency, adjusting for the fact that two core units in the current qualification have been deleted on training.gov.au: BSBSLS402A Identify sales prospects (deleted 25 March 2015) and SIRXSLS303 Build relationships with customers (deleted 18 April 2016). The qualification’s packaging rules have been adjusted to include six core units and six electives units, to provide greater flexibility for register training organisations and employers.
- Merchandising units of competency have been re-coded to reflect the specific industry sector, i.e.: AHCBC (Broad Acre Cropping), AHCCHM (Chemicals), AHCIRG (Irrigation), AHCLSK (Livestock), AHCMOM (Machinery Operation and Maintenance) and AHCSOL (Soils and Media sector).
- The unit AHCMER301 Process customer complaints is proposed for deletion as it has been identified as a duplicate of BSBCMM301 Process customer complaints.

## Completed Projects

The following projects were endorsed by the Australian Industry and Skills Committee (AISC). The revised qualifications, skill sets and units of competency, that were developed as part of these projects, are published on training.gov.au and available for delivery by registered training organisations (RTOs).

Visit [www.skillsimpact.com.au/completed-projects](http://www.skillsimpact.com.au/completed-projects) for further details.

### Arboriculture Project

Qualifications and skills standards were reviewed to improve accessibility (including the removal of unnecessary prerequisites and changing entry requirements), to better reflect job roles and industry standards, and to strengthen pathways from entry level tree workers through to strategic tree management roles.

### Carbon and Agribusiness Management Project

Skill standards were developed to support a range of carbon farming methods including vegetation, agricultural, soil-based and savanna burning. Qualifications and skills standards were developed and revised to encompass the skills required to run a commercial farming enterprise.

### Horticulture Technology Project

The expanding field of protected horticulture has been supported by the development of qualifications and revised skill standards. Skills to support the quality and sustainability of crops were also incorporated in updated irrigation qualifications.

### Sports Turf Management Project

Sports turf management qualifications have been strengthened to reflect skills needed at all levels – including volunteers, apprentices, tradespeople, managers and consultants.

### Viticulture Project

The Diploma of Viticulture has been revised to meet the needs of all table and wine grape producers in Australia, and to support the planning and implementation of biosecurity measures through skills in leadership and management.

