

AGRICULTURE, FORESTRY & FISHING



Government of South Australia

Training and Skills Commission

www.tasc.sa.gov.au

Foreword



The Commission is pleased to present this report on South Australia's Industry Priority Qualifications (IPQs). This unique report details the extensive industry collaboration and consultation process undertaken by the Commission over the last 12 months, culminating in the identification of industry's priorities across the State economy and within 18 industry sectors; the first time this has been achieved. The level of engagement with industry stakeholders exceeded the Commission's expectations, and we acknowledge the hundreds of contributions made by industry. The scope and depth of the results achieved through this collaborative approach means this work will remain important and relevant for years to come.

These Priority Qualifications Lists are a direct reflection of industry feedback and will play an important role as one of a range of inputs used by Government to determine which Vocational Education and Training qualifications will receive publicly funded support.

South Australia needs a workforce that is innovative and adaptable but most importantly, in possession of the skills required to meet the ever-changing needs of industry and the South Australian economy. This report is a valuable tool to assist in meeting this challenge.

The detailed findings contained in this report are valuable across several domains; valuable to Government in guiding public investment in skills development, and valuable to industry to better understand and compare qualification priorities across sectors. These findings are also valuable to the Commission as they provide a platform for further exploration and policy deliberations which in turn will inform future recommendations to Government as part of our State Workforce Development Plan Skills for Future Jobs 2020 to be released at the end of 2016.

While it is acknowledged that the priorities of Government and public investment may differ from those of industry, we are encouraged by the fact that this is the first time Government will have a comprehensive understanding, informed directly by industry, of the needs of industry within the context of qualification and skills priorities.

On behalf of the Commission, we extend a sincere thank you to all contributors and respondents who participated in our consultations. It is clear that the challenges facing skills development for industry are significant, but so is the appetite from Government, industry and the community to actively pursue mutually beneficial solutions.

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Anthony Kittel
CHAIR

A handwritten signature in white ink, appearing to read 'Melinda OLeary'.

Melinda OLeary
DEPUTY CHAIR

Our Members



Mr Anthony Kittel (Chair)
Chief Executive Officer, REDARC Electronics



Ms Melinda OLeary (Deputy Chair)
Nova Systems



Mr Adrian Smith
Managing Director, Rheinmetall Defence



Ms Adrienne Nieuwenhuis
Director, Office of Strategic Programs, Chancellery,
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SA Branch Secretary, Maritime Union of Australia



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Professional



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Former Member of Parliament, School Principal
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Professor John Buchanan
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Network

The Training and Skills Commission

The Commission, established in 2003 and later reformed in 2008, is comprised of industry, academic and community leaders with responsibility for advising the Minister for Higher Education and Skills on skills and workforce development priorities for South Australia and regulation of our Apprenticeship and Traineeship system.

The Commission also provides independent, strategic advice on how South Australia can invest in a sustainable, highly skilled workforce particularly in key growth sectors. This advice is crucial to meeting South Australia's economic and social needs, now and into the future.

Our Responsibilities

The Commission's responsibilities include:

- promoting and encouraging investment, equity and participation in, and access to vocational education and training (VET);
- monitoring, reporting and making recommendations to the Minister on the state of VET and workforce development in South Australia, including the expenditure of public money in these areas; and
- promoting pathways between the secondary school, VET, adult community education, and higher education sectors.

Executive Summary

This report represents the significant findings of the Commission's Industry Priority Qualifications Survey. With 1,138 Qualifications, Skill Sets and Accredited Courses (QSCs) identified by industry as a priority, this report provides a unique opportunity for the State Government to strategically align its investment in skills development with the qualification priorities of industry.

The 'Whole of Economy' List of Priority Qualifications was informed by 850 responses to an industry designed survey, 20 half-day consultation sessions, discussion with peak employer and employee bodies and now a final revision after being available for feedback since the launch of the Interim Report on 8 December 2015. This document represents over 800 hours of consultation activity, and is arguably the most comprehensive exploration of industry demand conducted in any jurisdiction across Australia.

Across the breadth of our State's economy there are 106 QSCs identified as Highest Priority (Tier 1), 169 identified as a High Priority (Tier 2), 225 identified as a Priority (Tier 3), 639 identified as a Low Priority (Tier 4) and 2,961 were not selected (Tier 5).

As diverse as enterprises are within our State, the results of the Commission's stakeholder consultations indicate the wide application of generic and transferable qualifications across most industry sectors. Of the 106 qualifications identified as a Tier 1 priority, approximately 50 percent are highly transferable and non-industry specific. Leadership and management, general business related qualifications as well as work, health and safety qualifications were routinely identified as a high priority across most industry sectors.

These results are complemented by qualitative insights gathered from extensive conversations with our industry Partners, which in turn has enabled the identification of key trends and workforce development challenges in South Australia.

These include:

- The increasing complexity of the Vocational Education and Training (VET) sector is proving difficult to understand and navigate;

- Formal training is not always the answer to the workforce development needs of industry;
- Enterprises highly value skills that increase the internal mobility and capabilities of employees;
- The Australian Qualifications Framework (AQF) and Training Packages are inconsistent and often misunderstood by many engaged in the VET system;
- Continual changes to the level of public subsidy for VET qualifications at both a State and Commonwealth level diminishes business planning capability;
- The capacity of industry to invest in skills development varies widely between sectors and sub-sectors, as well as between small and large employers;
- As diverse and unique as our State's economy is in the national context, so too are the unique needs of our regions when compared to the broader South Australian economy; and
- High growth employers have demonstrated differing needs than those employers experiencing subdued conditions.

Throughout the process of consultation the Commission has remained committed to its principles of transparency with its approach and methodology.

The final consultation phase and work of the Commission has reaffirmed the strength of this engagement, with some (though not extensive) changes in priorities that reflect additional stakeholder feedback and analysis.

The Commission is confident that the 'Whole of Economy' Priority Qualifications List now represents the best platform South Australia has ever had to guide Government investment in VET towards industry need. These qualifications have been self-identified by industry and have been considered in the context of the wider economy. Discussions with our industry Partners and stakeholders were extensive to the point of being able to consider individual qualifications and their place in our diverse VET sector.

It is not always the case that VET qualifications are undertaken for the purposes of employment or improving business productivity. It is therefore important to understand the role that VET plays in our society in the broader context. The Commission has long provided support and analysis on the importance of the VET sector in social inclusion, and recognises the integral part that Adult Community Education (ACE) plays in providing pathways that encourage participation in work and community.

In this report, the Commission has provided suggestions on how the South Australian Government should treat the findings as well as identifying opportunities for future policy work.

That said, this report is a platform for industry as much as a blueprint for Government; one which provides better information on market demand and activity, as well as providing a tool to promote closer alignment of Government support to industry need.

As perhaps the only report of its kind – industry, government, training providers, employers and various other stakeholders now have yet another piece of the strategic puzzle, one which can respond to the question of ‘what training and skills should the Government support’?

This report, although not the complete answer, is a significant step forward and one that will provide insight into the skills needs of industry well into the future.

This report should be read in conjunction with the full Report on South Australia's Industry Priority Qualifications available at: www.tasc.sa.gov.au



Respondents

850 respondents completed the IPQ Survey representing employers, individuals, unions, registered training organisations and industry groups.



Employer Size

58% of employers surveyed identified as **micro or small businesses** with less than 20 employees.



Qualifications

Over 1,100 Qualifications, Skills Sets and Accredited Courses (QSCs) were identified by industry as a priority. This is just over 25% of all available QSCs (4,103) embedded within the IPQ Survey.



Priorities

106 qualifications were identified as a **top priority** for industry over the next five years, while 169 were identified as a high priority and 225 identified as a priority. The remaining 639 were identified as lower priority.



Top Qualifications

Generic (business-related) qualifications were consistently identified as high priorities for industry and the SA economy. These qualifications were often considered applicable to multiple occupations and transferable across industry sectors.



Skills Clusters

Managerial and Leadership, Sales and Customer Service and Information and Technology skills were ranked most highly across industry sectors by survey respondents as the skills required in the next five years.



Key Challenges

Reskilling will be a priority to meet the skills and workforce needs of the future as structural change presents ongoing challenges for the South Australian economy.



Projected Employment Growth

TaSC Interim Modelling projects employment growth of **1.1 % per annum (43,000 new jobs)** over the next five-year period.



Regional Needs

The **Industry Priority Qualifications of State Government Regions** are very diverse and need to be better understood.



High Growth & Small Employer Needs

Both High Growth and Small Employers have ranked **Marketing & Customer Engagement qualifications** as high priority.

Key Insights



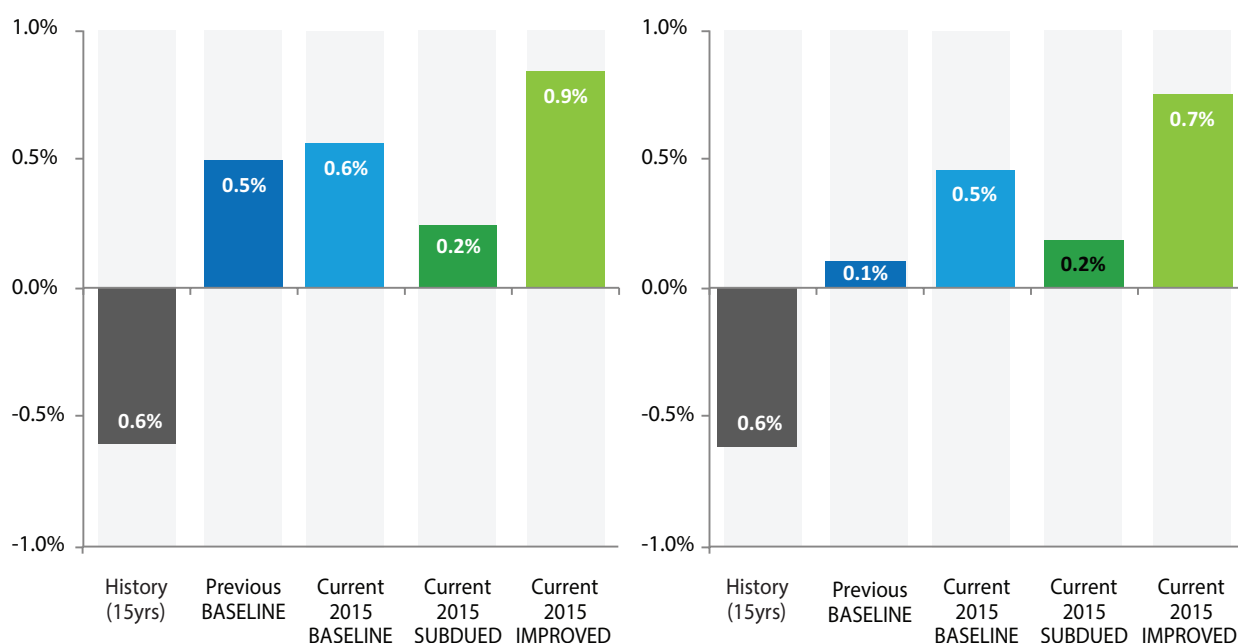
Agriculture, Forestry & Fishing

Employment Outlook

According to the Commission's interim modelling, employment in the Agriculture, Forestry and Fishing industry is projected to increase 0.6 percent a year over the next five (5) years under the baseline scenario. This compares with a rate of growth over the past 15 years of -0.6 percent per annum.

Over the long-term (2014-15 to 2024-25), the industry is expected to record continued employment growth below the State average. As a result, its share of the State's employment is projected to decline from 5.4 percent to 5.1 percent.

**Figure 1 - Agriculture, Forestry & Fishing, Average Annual Employment Change
2014-15 to 2019-20 and 2014-15 to 2024-25**



Source: Interim TaSC Economic Modelling, 2015

Industry Outlook

Agricultural exports are one of the Australian Government's five pillars for a diversified, world class economy. Greater investment, both domestic and international, is flowing into Agriculture supply chains as policy settings, growing demand and a shifting global economy converge.

At the macro level, Agriculture is impacted by:

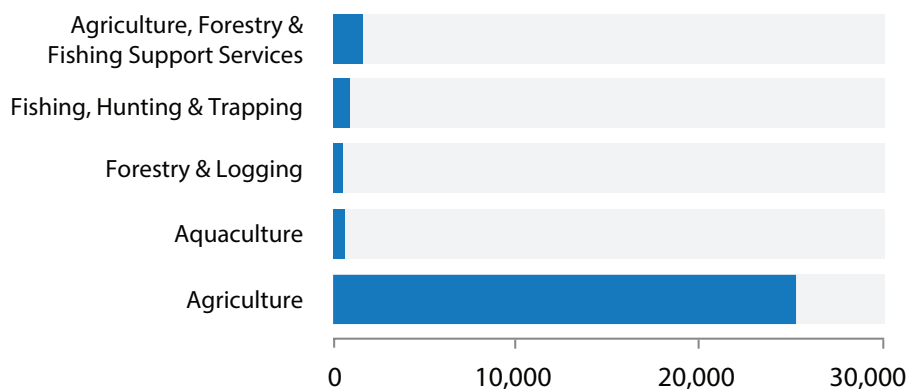
- global demography, which indicates that the Asia Pacific will account for 66 percent of the world's middle class by 2030. This is expected to manifest in increased demand for meat, dairy, fruit, vegetables and pulses and an ageing workforce which may drive alternative job design;
- environmental impacts on all aspects of agrifood with global warming impacting on where crops, livestock and aquatic species will survive;
- the global and national economy, with Australia now regarded as the most expensive country to manufacture - meaning there is a need for greater investment in technology, new plant and equipment and skills development to improve our competitiveness;

- a digitally connected world with opportunities for business through Big Data and internet use; and
- disruptive technologies leading to productivity increases.¹

The Agriculture sector is changing and is impacted by a range of factors including:

- Fewer and bigger farms
- Small and Medium Enterprises (SMEs), which comprise 98 percent of the 22,000 food and beverage businesses in Australia lack the agility, scale and management expertise to operate competitively
- Diversification into eco-tourism and agri-tourism - leading to increased income streams and reduced risk
- Fresh food retail concentration in Woolworths and Coles supermarkets
- Heightened animal welfare awareness and the associated implications for producers and processors; and
- Biosecurity concerns that currently provide Australia with a competitive advantage.²

Figure 3 - Agriculture, Forestry & Fishing, Employment by Sub-Sector



Source: Australian Bureau of Statistics, Census of Population and Housing, 2011

1 - http://cymcdn.com/sites/www.agrifoodskills.net.au/resource/resmgr/Publications/ESCAN_2015.pdf
2 - *ibid*

The South Australian Gross Food and Wine Revenue (GF&WR) continued to grow in 2013-14 by \$834 million (or 5 percent) to reach a record \$17.1 billion. The majority of this growth was generated through processed and commodity overseas exports and interstate processed sales. Jobs increased by 7,700 (up 5 percent) to 151,300 for the year ending in May 2014. This is significantly larger than the average annual increase of 1 percent experienced during the previous 12 years. (Note that many jobs in the Food and Wine sector fall into the Manufacturing industry)

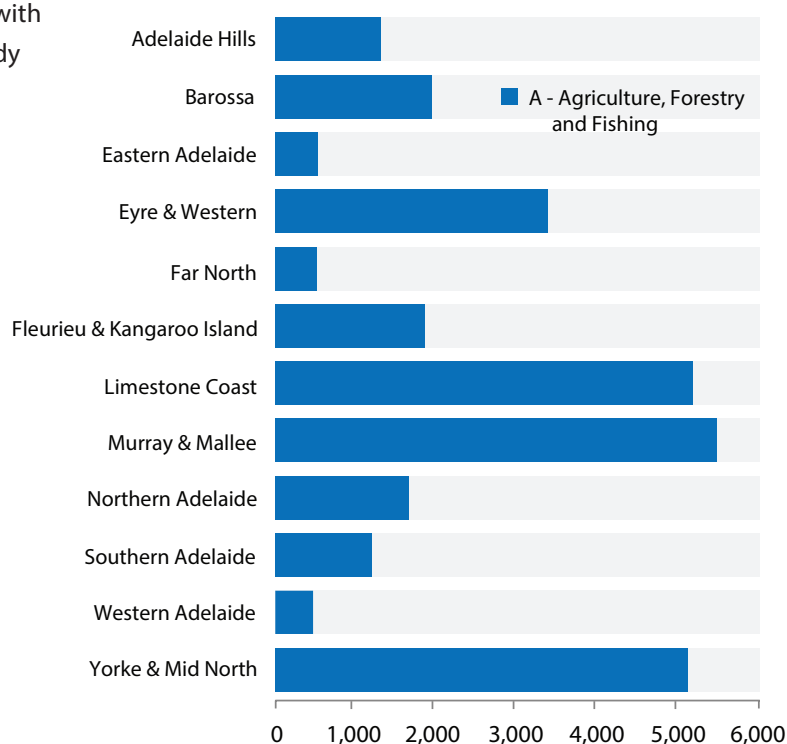
In 2013-14, primary production saw the largest increase of 12,800 jobs or 29 percent, compared to a decline in this category in 2012-13. Employment gains were recorded in food service, which increased by 3,000 or 7 percent. The South Australian food industry and their value-chains represent almost one in five or 18 percent of the State's employed workforce, with this share having remained reasonably steady over the last decade³.

The South Australian Government has a number of strategies to grow the Agrifoods Industry including the:

- SA Food Strategy 2010-2015;
- SA Seafood Industry Food Plan 2010-2015; and
- South Australian River Murray Sustainability Programs (SARMS).

The forest and wood processing sector makes a significant contribution to the Australian and global economy, particularly in rural and regional Australia, through growing and manufacturing renewable and carbon-rich timber materials, bioenergy and other value-adding activities. South Australia's forest and wood processing industries are entirely plantation-based. Importantly, there is no harvesting of native forests in South Australia and they are protected by the Native Vegetation Act (1991). More than 13,000 people are directly or indirectly employed in the sector⁴.

Figure 2 - Agriculture, Forestry & Fishing, Employment by Region



Source: Australian Bureau of Statistics, Census of Population and Housing, 2011

3 - http://www.pir.sa.gov.au/_data/assets/pdf_file/0007/236941/A2191728_Food_and_Wine_ScoreCard_2013-14.pdf

4 - http://pir.sa.gov.au/_data/assets/pdf_file/0012/234030/ForestryDL.pdf

Skills needs

Survey respondents ranked the Work Health and Safety (WHS) skills cluster as having the highest importance, followed by the Managerial and Leadership and then the Information and Technology skills clusters. This is consistent with the risk associated with this industry and the business skills required to run a successful and sustainable business.

Sales and Customer Service and Language, Literacy and Numeracy (LLN) skills clusters were ranked of lowest importance by the Agriculture, Forestry and Fishing Survey respondents. The low LLN ranking was somewhat surprising given the lower education levels held by much of this workforce.

Table 1 - Agriculture, Forestry & Fishing, Ranked Skills Clusters

Skills Clusters	This Industry	All Respondents	Compare
Work Health & Safety (WHS)	1	4	↑
Managerial & Leadership	2	1	↓
Information & Technology	3	3	↔
Sustainability & Environmental	4	9	↑
Financial	5	6	↑
Human Resources	6	8	↑
Administration & Support	7	5	↓
Entrepreneurial	8	11	↑
Marketing & Engagement	9	7	↓
Language, Literacy & Numeracy (LLN)	10	10	↔
Sales & Customer Service	11	2	↓

Workforce development themes and issues

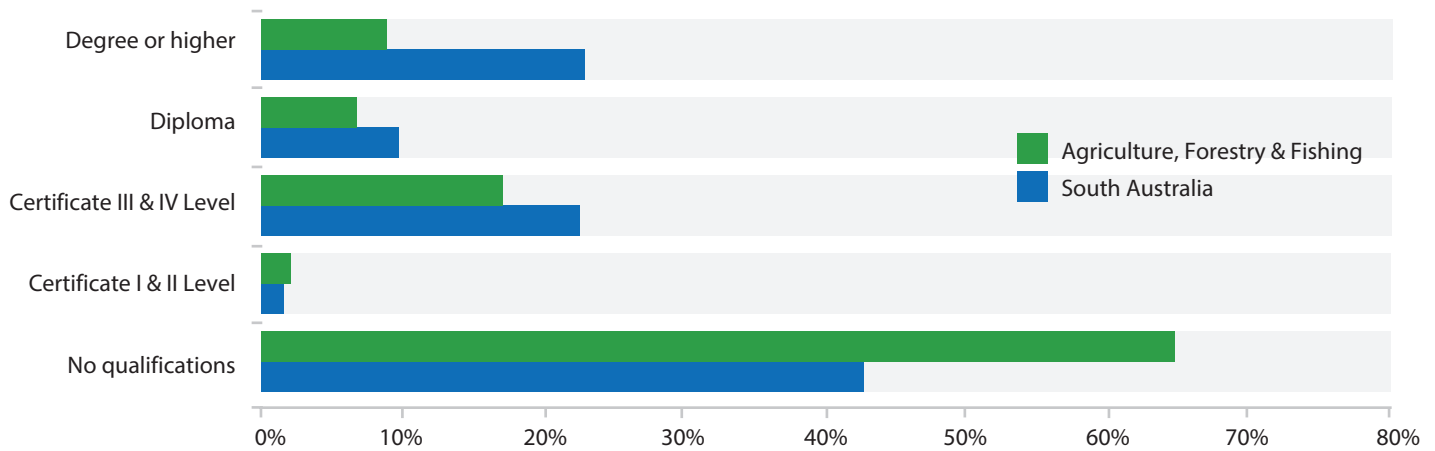
Australia's domestic labour supply does not meet all of the Agriculture, Forestry and Fishing Industry needs due to labour mobility inertia, the regional and remote location of most sectors, the seasonal and temporary nature of work, and in some instances, the harsh working conditions. Over time, automation and technology will replace many of the repetitive and low skilled operator jobs but in the near term the need for foreign labour is expected to continue, particularly in small to medium sized businesses and in sectors such as horticulture.

The Agriculture Industry workforce priorities are:

- building world-class business skills and risk management capability;
- attracting smart, motivated and adaptive workers;
- building higher level knowledge and skills within the existing workforce;
- increasing enterprise's capability to innovate, adopt new technologies and apply research outcomes; and
- retaining the best and brightest workers.

The Agriculture Industry is calling for funding of Skill Sets and individual Units of Competency to meet the incremental learning needs of enterprises and learners; more transparency around the performance of Registered Training Organisations; and restoration of incentives for Certificate II Traineeships in key entry-level occupations.

Figure 4 - Agriculture, Forestry & Fishing, Employment Share by Post-School Qualification Level



Source: Australian Bureau of Statistics, Census of Population and Housing, 2011

Training in the Forestry sector show the following characteristics, which exacerbate an already thin training market:

- economic uncertainty has led to a focus on informal in-house approaches to skill development that don't require payments to external training providers;
- reduced enrolments in Government subsidised training for Apprenticeships and Traineeships; and
- Industry showing preference for fee for service short courses.

In the short to medium-term workforce development strategies supporting business development for the Forestry sector will need to focus on upskilling in several key competency areas:

- advanced process-oriented technical skills and digital literacy in high technology workplaces;
- licence compliance and inventory skills across most workplaces;
- skills for timber products supply chain, logistics solutions and analytics skills; and
- innovation skills including; leadership, communication, critical thinking and strategic thinking

Industry Priority Qualifications

The Agriculture, Forestry and Fishing Industry received a total of 67 responses to the Survey. This was more than double our target responses for this industry, based on employment share. Survey responses indicated a good distribution by sub-sector. Respondents in this industry primarily identified as employers.

Around half of the employers in this industry were micro-businesses. Stakeholders thought this might be underrepresented in terms of the number of micro-businesses in the industry. Stakeholders also commented that the ABS official employment figures might be too low, given the high number of contract and casual workers in the industry. Over half of the employers expected flat or declining employment growth in the short-term.

Stakeholders had some difficulty prioritising qualifications in this Industry, particularly due to the diverse nature of its sub-sectors. Significant discussions around the Priority Qualifications for the industry resulted in a number of changes to the Tiers.

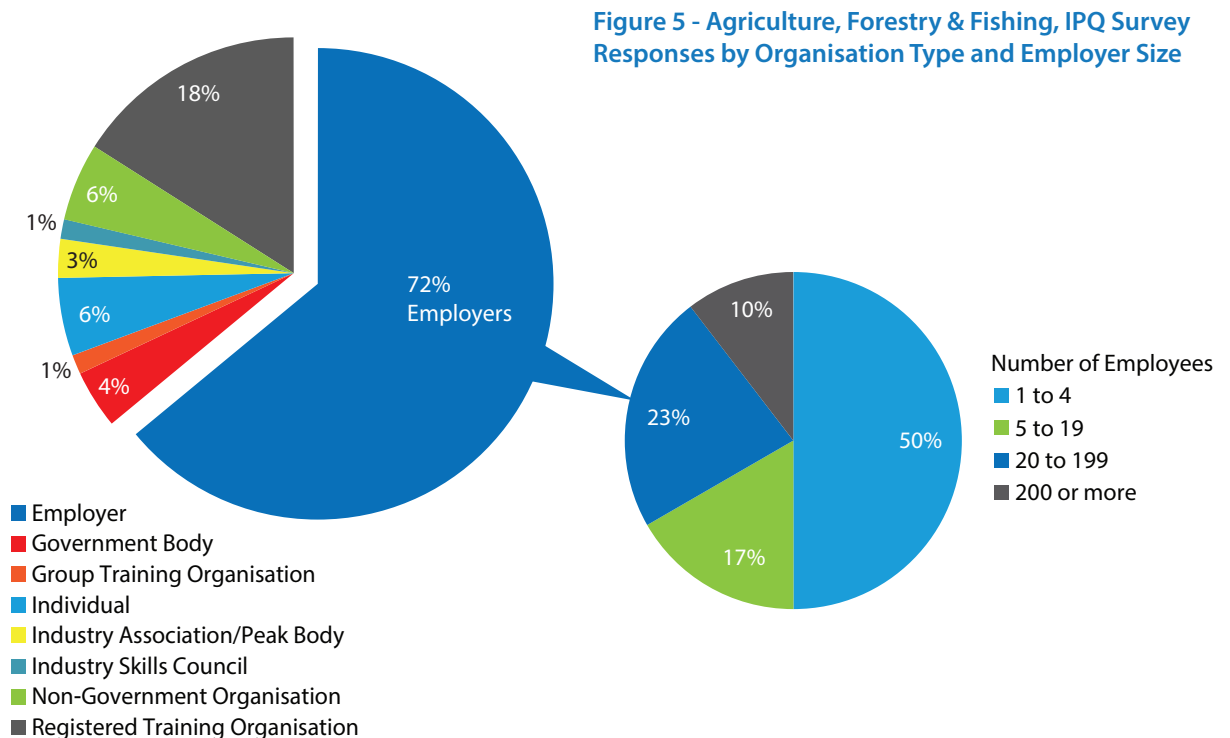


Table 2 - Agriculture, Forestry & Fishing, Prioritised Qualifications

Agriculture, Forestry & Fishing

Tier 1 (Highest Priority)	Tier 3 (Priority)
<p>Certificate IV in Wool Classing Certificate III in Aquaculture Certificate III in Harvesting and Haulage Certificate III in Horticulture Certificate III in Irrigation Certificate III in Papermaking Operations Certificate III in Production Horticulture Certificate III in Sawmilling and Processing Certificate III in Timber Truss and Frame Design & Manufacture Certificate II in Agriculture Certificate II in Maritime Operations (Coxswain Grade 1 Near Coastal) Certificate II in Maritime Operations (Marine Engine Driver Grade 3 Near Coastal) Certificate II in Rural Operations Certificate II in Shearing Skill Set (MAR) - Safety Training Certification Skill Set Skill Set (MAR) - Shipboard Safety Skill Set</p>	<p>Advanced Diploma of Agribusiness Management Advanced Diploma of Agriculture Advanced Diploma of Forest Industry Sustainability Advanced Diploma of Horticulture Advanced Diploma of Work Health and Safety Diploma of Aquaculture Diploma of Conservation and Land Management Diploma of Pulp and Paper Process Management Diploma of Sustainability Diploma of Work Health and Safety Certificate IV in Aquaculture Certificate IV in English Proficiency Certificate IV in Forest Operations Certificate IV in Maritime Operations (Marine Engine Driver Grade 1 Near Coastal) Certificate IV in Maritime Operations (Master up to 35 metres Near Coastal) Certificate IV in Timber Truss and Frame Manufacture Certificate IV in Work Health and Safety Certificate III in Conservation and Land Mgt Certificate III in Fisheries Compliance Certificate III in Forest Growing and Management Certificate III in Pulping Operations Certificate III in Timber Manufactured Products Certificate III in Vertebrate Pest Management Certificate III in Wood Panel Products Certificate III in Work Health and Safety Certificate II in Emergency Medical Service First Response Certificate II in Irrigation Skill Set (FPI) - Skill set for a boom delimber operator Skill Set (FPI) - Skill set for forest and wood product innovation for leaders Skill Set (FPI) - Skill set for forest and wood product innovation for managers Skill Set (FPI) - Skill set for supporting forest and wood products innovation</p>
Tier 2 (High Priority)	
<p>Diploma of Agribusiness Management Diploma of Agriculture Diploma of Arboriculture Diploma of Horticulture Diploma of Production Horticulture Certificate IV in Agriculture Certificate IV in Horticulture Certificate IV in Leadership and Management Certificate IV in Papermaking Operations Certificate IV in Production Horticulture Certificate III in Agriculture Certificate III in Driving Operations Certificate III in Maritime Operations (Marine Engine Driver Grade 2 Near Coastal) Certificate III in Maritime Operations (Master up to 24 metres Near Coastal) Certificate III in Pork Production Certificate III in Poultry Production Certificate III in Rural Operations Certificate III in Sawdoctoring Certificate III in Shearing Certificate III in Wool Clip Preparation Certificate II in Aquaculture Certificate II in Arboriculture Certificate II in Fishing Operations Certificate II in Horticulture Certificate II in Production Horticulture Certificate II in Wool Handling Certificate I in AgriFood Operations Skill Set (FPI) - Skill Set for a forestry log truck driver Skill Set (FPI) - Skill Set for a forwarder operator Skill Set (FPI) - Skill Set for a loader operator</p>	<p>A full list of Tier 4 (Low Priority) Industry Prioritised Qualifications are available in the IPQ Dataset www.tasc.sa.gov.au</p>



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Disclaimer: The material contained in this report has been developed by the Training and Skills Commission and was informed through a detailed survey of industry and consultations with key industry partners and groups. The information contained in this report does not necessarily reflect the views of the Government of South Australia or the Department of State Development, or indicate any commitment to a particular course of action.

The information contained in the report is provided in good faith and all reasonable care has been taken in its preparation. The Training and Skills Commission recommends users exercise care in interpreting this report and carefully evaluate the relevance of the material for their purpose and where necessary obtain appropriate advice specific to their particular circumstances.

A full copy of the Report on South Australia's Industry Priority Qualifications can be accessed electronically at:
www.tasc.sa.gov.au

Images have been supplied by the Department of State Development and the South Australian Tourism Commission.

Acknowledgements: The Training and Skills Commission expresses its sincere gratitude to its key Industry Partners and industry stakeholders who responded to the IPQ survey and have provided detailed information to inform this report. The Commission also acknowledges the contributions of Joshua Rayner, Angela Niedorfer, Heidi Greaves, Joel Pillar and Kimberley Hoey in producing this report.

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