

Workforce, Training and Skills Issues in Agriculture

- Final Report -

**A report to the Primary Industries Ministerial Council
by the Industries Development Committee Workforce,
Training and Skills Working Group**

October 2009

Contents

Executive Summary	4
1. List of Recommendations	7
Introduction.....	7
Key Findings & Recommendations	7
2. Achieving a more coordinated approach.....	11
2.1 Primary Industries Ministerial Council.....	11
2.2 Establishment of the IDC Workforce, Skills & Training Working Group.....	11
2.3 Workshop	11
2.4 Activities of the Workforce, Skills & Training Working group	12
3. Key issues & impediments.....	13
3.1 Introduction.....	13
3.2 Impediments to addressing the labour shortage.....	13
3.3 Impediments to addressing the skills shortage	17
3.4 Other workforce challenges.....	22
3.7 Conclusion.....	25
4. Stocktake of workforce, skills & training initiatives	26
4.1 Introduction.....	26
4.2 Aims.....	26
4.3 Methodology.....	26
4.4 Government & industry response	28
4.5 Results	33
4.6 Conclusions.....	45
5. Meeting the challenge	48
5.1 Greater industry ownership and responsibility	48
5.2 Improving collaboration and coordination across government	48
5.3 Adopting an integrated and strategic approach	49
5.4 Improving communication and engagement with stakeholders.....	50
5.5 Increasing workforce participation in agriculture.....	51
5.6 Building workforce planning and human resource management capabilities.....	51

5.7	Improving data on the supply and demand of labour and skills in agriculture.....	52
6.	Conclusion.....	53
	References	56
Appendix 1.	Terms of reference.....	60
Appendix 2.	Working group membership	61
Appendix 3.	Workshop Program	62
Appendix 4.	Stocktake template & questionnaire.....	63
Appendix 5.	List of stocktake initiatives	66

Executive Summary

Australian agriculture faces a range of challenges, including climate change and global food shortages, which are increasing the labour and skill needs in agriculture industries. Securing an adequate supply of suitably skilled labour is vital in optimising Australia's agricultural productivity. Improving the skill level of the agriculture workforce is essential to enhancing innovation, strengthening competitiveness, boosting resilience and a developing a larger capacity for the agriculture industry to capitalise on opportunities and contribute to global food security.

A number of factors inhibit the agriculture industry in filling demand for workers. These include labour competition from other industries, poor promotion of the industry, including some negative messages about agricultural working conditions, an ageing population and a declining rural population.

Impediments to meeting the industry's skills shortages include low levels of industry participation in education and training, low numbers of under-graduates and graduates in tertiary agriculture courses, poor awareness of agricultural career pathways and the limited capacity of the current education and training system to deliver innovative training solutions.

Other constraints in addressing labour and skills shortages in the agriculture industry relate to the limited availability of detailed labour and skills data for the sector to clearly evaluate contemporary labour and skills needs; less than effective engagement of Indigenous Australians, youth, women and migrants in agricultural employment; and limited workforce planning and human resource management capabilities in many agriculture enterprises.

Although government, industry, education institutions and career service providers are responding to labour and skills shortages in agriculture at national, state and regional levels, the approaches are somewhat fragmented and uncoordinated.

The Industries Development Committee Workforce, Skills and Training Working Group (working group) was established in 2008 under the Primary Industries Ministerial Council, to identify strategies to facilitate a more coordinated and collaborative approach across government and industry to address the major workforce, skills and training issues affecting the whole agricultural supply chain.

The working group conducted a stocktake of current and past government and industry workforce, skills and training initiatives to increase awareness and understanding of the government and industry initiatives which exist in each jurisdiction. The stocktake also enables the identification of linkages or inconsistencies between existing initiatives and determine gaps and opportunities for future work or new initiatives.

The stocktake provides a snapshot of 136 workforce, skills and training initiatives undertaken by Australian and state and territory governments and various industry groups and shows:

-
- many initiatives are targeted at attracting people (particularly young people) to the industry and promoting the industry and career opportunities within it
 - there are a range of activities in place to improve access to education and training within the industry and rural communities, including funding for training and improving facilities to encourage adult learning, and information on training courses
 - there are initiatives in some jurisdictions that take a collaborative and coordinated approach to addressing labour and skills issues (e.g. Queensland's Skills Formation Strategies and South Australia Works in Regions program).

The stocktake highlights gaps in government and industry initiatives and opportunities to:

- improve business management skills in the industry, including workforce development and human resource management skills
- increase the participation of target groups in agriculture, including Indigenous Australians
- address the professional development of trainers and teachers in agriculture
- evaluate the benefits of training and skill development to the industry
- gather comprehensive industry data on labour and skills.

Feedback received on past initiatives provided valuable insight into what factors influence the effectiveness of workforce, skills and training initiatives. These include:

- good program management and administration and dedicated staff working on the program or initiative
- receiving appropriate and reliable funding
- focussing on a particular target group in the industry
- providing quality, well planned and well presented information
- engaging and consulting with industry
- gaining industry ownership of the issue
- developing strategies that suit the issue, the subsector and the geographic region
- achieving flexibility in the education and training system to deliver effective training programs.

While the stocktake shows there are a lot of activities aimed at promoting the industry and the career opportunities within it, the industry still struggles to meet demands for workers, to attract young people to study agriculture and take up careers in the industry and to encourage industry members to participate in further training. It appears the well-intentioned efforts of government and industry are not effectively targeted and information is not delivered clearly or with consistent positive messages.

Better retention of workers within the industry would significantly improve agriculture's labour numbers. Good human resource management practices which provide a safe and rewarding work environment would encourage staff to stay in the industry. The stocktake indicates there is limited information or activity aimed at improving the human resource management and workforce planning skills of primary producers. More effort is required to fill this skill gap within the industry.

The working group acknowledges the crucial role that industry plays in providing leadership to address agriculture workforce, training and skills issues. Industry sectors must work together to develop and drive the implementation of integrated and long-term solutions to agriculture labour and skills needs. Industry needs to take a greater role in promotion and showcasing the innovation that exists within the industry, particularly in dealing with labour shortages.

The working group also recognises there would be significant benefits in improving coordination and collaboration across government, industry and educators. The benefits include:

- a greater understanding of the programs, information and resources available to address workforce, skills and training issues and how to access them
- clearer and more consistent articulation of industry's skills and labour needs including priority areas
- more flexible and accessible tailored training programs, information and resources to ensure appropriate training of employees.

Strengthening partnerships between government, industry and educators will also help to reduce duplication and improve efficiencies. Long-term integrated approaches to addressing agriculture labour and skills needs could also encourage coordination and collaboration and leverage off existing mechanisms and programs. The stocktake provides insight into some excellent models of collaboration and coordination already happening between government and industry in some jurisdictions that may have merit in being adopted more widely across the country.

The working group identified a number of strategies that could assist agriculture industry members become 'employers of choice' in the labour market:

- improving collaboration and coordination across government jurisdictions and portfolios
- improving communication and engagement between industry, educators and government
- adopting integrated and strategic approaches to developing and implementing solutions
- increasing workforce participation in agriculture
- building workforce planning and human resource management capabilities
- improving data on the supply and demand of labour and skills in agriculture
- greater industry ownership and responsibility.

Chapter 5 provides further details on the strategies.

The working group made four recommendations based on these strategies. The working group acknowledges the considerable effort and resources already spent in addressing workforce and skills issues. It also notes that most of the strategies could build on or leverage off existing government or industry measures aimed at addressing Australia's skills and labour shortages.

The working group sees that there is a more immediate need for achieving greater coordination of these efforts and making better use of existing resources and mechanisms, than developing new initiatives or seeking additional funding.

1. List of Recommendations

Introduction

Given the complexity of the agriculture workforce, skills and training issues, a strategic and integrated approach between government and industry is crucial to addressing the issues. Challenges such as the global financial crisis, food security and climate change have created some uncertainty about future labour market trends, but the skills and labour demands of the agriculture industry are expected to grow, particularly given the long term demographic trends.

The working group has developed the following recommendations to facilitate a coordinated and collaborative approach across government and industry in addressing the major workforce, skills and training issues affecting agriculture. The recommendations build on or leverage off existing measures aimed at addressing Australia's skills and labour shortages.

Key Findings & Recommendations

1. Greater industry ownership and responsibility

The working group acknowledges the crucial role industry members play in providing leadership and direction on how to improve labour and skill shortages. They are best-placed to identify labour, skill and training requirements and should develop and drive the solutions which suit their needs.

The current approaches to tackling labour and skills shortages in agriculture are somewhat fragmented and inefficient. Adopting more integrated approaches within and between industry and government agencies should achieve better targeted and long-term solutions to labour and skills issues. Greater coordination and cooperation across industry sectors, educators, federal and state jurisdictions and various government portfolios (including industry, education and training and migration portfolios), will also allow easier and more consistent engagement with relevant stakeholders to streamline processes and reduce duplication.

Finding: That the industry needs to play a crucial role in providing leadership to address agriculture workforce, training and skills issues, including working closely with educators and relevant government agencies to develop and drive the implementation of integrated and long-term solutions to agriculture labour and skills needs.

Recommendation 1: That Ministerial Council request peak industry bodies to work with their member organisations and Agrifood Skills Australia to develop strategies for industry to lead the development of solutions to workforce issues across agriculture sectors; and where appropriate to work with primary industry departments and review activities.

2. Promoting agriculture and career opportunities

The working group recognised the need to coordinate promotion of careers in agriculture from primary schooling through to tertiary education, as well increasing the industry participation in further skills development.

The Primary Industries Education Foundation (PIEF) was established in 2008 and includes representatives from the education and training sector, agriculture sectors and government. PIEF will provide national leadership and direction in raising awareness and promotion of primary industries in schools, including coordinating at a national level, the development and distribution of education information and resources.

Rural Skills Australia provides information and advice to industry on training reforms and packages and supports rural training in schools. RSA also advises Australian Apprenticeships centres, Job Network members and Registered Training Organisations about rural and related Australian Apprenticeships (also known as apprenticeships and traineeships).

The Primary Industries Centre for Science Education (PICSE) is a program being delivered in regional and metropolitan centres and many Australian universities to attract students into science for primary industries.

PIEF is ideally placed to work with PICSE and RSA to ensure better coordination of agriculture career, education and training promotional activities.

Finding: That consistent promotion of the agriculture industry as a successful, sustainable and responsible industry, with a diversity of challenging and rewarding careers is needed to attract more skilled labour in the industry

Recommendation 2: That Ministerial Council request the Primary Industries Education Foundation (PIEF) to work with Rural Skills Australia and the Primary Industries Centre for Science Education to improve access for school children, young people, teachers and the broader community to consistent information and resources on careers, education and training in agriculture and related fields.

3. Human resource management skills

Building workforce planning and human resource management skills in the industry is necessary to improve business performance, better equip the industry to respond and adapt to changes, and increase the industry's capacity to sustain productivity growth. There is a growing need for employers in agriculture to develop and implement appropriate workforce planning strategies. These strategies will help employers establish workplaces that attract and retain staff and which also better manage issues associated with skills gaps and shortages, the ageing workforce, evolving service demands and changing market and climate conditions.

Finding: That the agriculture industry needs to adopt a particular focus on workforce development and planning, including human resource management, as part of a strategy to become ‘employers of choice’ in the labour market.

Recommendation 3: That Ministerial Council request peak industry bodies to work more closely with Agrifood Skills Australia and industry member associations to improve access to and awareness of workforce development tools and increase participation in workforce planning and human resource management training.

4. Improving data on the supply and demand of labour and skills in agriculture

Limited awareness of the programs and activities already in place to address the labour and skills shortages in the agriculture industry impedes effective use of these programs and related information. The poor image of careers in agriculture suggests that many of the current programs and information is inaccessible, ineffective or that delivery is misdirected.

More accurate, relevant and reliable data is needed to clearly quantify the current labour and skills trends in the agriculture industry, including data at the regional level. This information will help predict future labour and skill supply and demands in the industry, including what impact factors such as ageing workforce and global economic trends will have. This information will help develop effective and well informed policies and programs and prioritise action by government and industry. A number of projects are under way around the country to improve labour and skills data collection and dissemination, including in the agriculture industry. The working group considers that these projects and outcomes should be evaluated before starting new work.

The stocktake (see 4. Stocktake of workforce, skills & training initiatives) appears to be a useful tool in reducing duplication of efforts, and potentially increasing collaborative and/or complementary efforts in workforce, skills and training issues for agriculture. It could be used more widely.

Finding: That the ongoing efforts to improve labour and skills data for the agriculture industry need to be monitored, with a view to identifying gaps in labour and skills data and options for addressing the gaps in 2010.

Recommendation 4: That Ministerial Council request PIEF to monitor efforts in labour and skills data improvement with a view to identifying gaps in labour and skills data and options for addressing these gaps in 2010.

Finding: That the stocktake of workforce, skills and training initiatives could be an effective tool to reduce duplication and concentrate efforts across jurisdictions, training, education and career services, and industry sectors, if it were maintained and made more widely available.

Recommendation 5: That Ministerial Council request Agrifood Skills Australia to publish the stocktake of workforce, skills and training initiatives on their website, to monitor the use of the stocktake by recording the number of downloads and to report at least annually to the IDC Working Group on the apparent use of the stocktake. To maintain the list of initiatives, the working group also recommend that Ministerial Council request jurisdictions to update the stocktake on a six-monthly basis.

To assist in implementing recommendations 4 and 5, the working group will continue to monitor efforts in labour and skills data improvement with a view to identifying gaps in labour and skills data and options for addressing these gaps in 2010. The stocktake will be made freely available on government and related industry and training websites, and jurisdictions will update the stocktake via the working group on a 6-monthly basis.

Recommendation 6: That Agrifood Skills Australia, in consultation with peak industry bodies and PIEF, to report back to the Primary Industries Ministerial Council in late 2010 on the industry's progress in implementing these recommendations.

Recommendation 7: That Ministerial Council forward a copy of the Industries Development Committee Workforce, Skills and Training Working Group's final report to the Ministerial Council of Tertiary Education and Employment for their information and appropriate response.

2. Achieving a more coordinated approach

2.1 Primary Industries Ministerial Council

At the Primary Industries Ministerial Forum held on 29 February 2008, Ministers agreed that continued productivity growth is of fundamental importance to the agriculture and food sectors.

Ministers identified a number of influences on agricultural productivity, including:

- training and education
- skills and labour supply, especially retaining and attracting young people.

Ministers tasked the Primary Industries Standing Committee (PISC) with identifying which key priorities would benefit from national action and developing work plans to meet the challenges in these priority areas.

In March 2008, PISC identified workforce, skills and training as key priority areas where further coordinated government actions to improve productivity would be of most benefit.

In identifying these key priorities, PISC considered: the relative value or importance of the issue while taking into account available resources; the value that coordinated action could bring compared to jurisdictional or bilateral action; relevant activities being pursued through other mechanisms; and where the Primary Industries Ministerial Council (PIMC) involvement and action could assist in achieving positive outcomes.

2.2 Establishment of the IDC Workforce, Skills & Training Working Group

The Industries Development Committee (IDC) under PISC was tasked with taking the lead on progressing agricultural productivity issues. In May 2008, the IDC agreed to establish a working group to identify where national collaborative action could occur to address workforce, skills and training issues affecting agriculture. The Terms of Reference for the working group is at [Appendix 1](#). The working group will identify and recommend strategies to facilitate a coordinated and collaborative approach across government and industry in addressing the major workforce, skills and training issues affecting primary industries. The working group agreed to initially focus on the agriculture industry sectors—horticulture, grain, sheep and beef, dairy, poultry, sugar cane and cotton—with the option of covering fisheries, forestry and food in the future. IDC agreed to provide a final report and recommendations to PIMC in April 2009.

The working group has representatives from the Australian, Queensland, Western Australian, South Australian, New South Wales and Victorian governments and is chaired by a senior executive from the Department of Agriculture, Fisheries and Forestry. The list of working group members as at July 2009 is at [Appendix 2](#).

2.3 Workshop

In July 2008, the working group held a workshop in Canberra to share knowledge and information between working group members and experts to begin the processing of

identifying key workforce, training and skills issues facing the agriculture industry. The workshop also provided the opportunity for the group to plan its future activities. The workshop program is at [Appendix 3](#).

The workshop covered issues relating to the availability of labour and skills data, higher education, vocational education and training and the industry's perspective on labour and skills issues facing agriculture. Each topic was introduced by a short presentation given by experts in the area followed by an open discussion between the workshop participants.

A number of key messages regarding the labour and skills shortages in the industry came out of the workshop discussions:

- The competitive labour market is making it increasingly difficult to attract and retain workers.
- Labour attraction is made more difficult by the poor image of agriculture.
- The ageing workforce is posing a significant challenge to maintaining the industry's workforce capabilities.
- The rural location of many jobs in agriculture is detracting people from staying in relocating to regional areas.
- The number of employees in the agriculture industry with formal qualifications is comparatively lower than in other industries and there are also many workers in the industry with skills which have not been formally recognised.

Other issues discussed included the inconsistent labour force planning and forecasting data for agriculture sectors; the need for producers to have better human resource and workforce planning skills; and the need for greater linkages between agricultural colleges, the Vocational Education and Training (VET) system and universities.

2.4 Activities of the Workforce, Skills & Training Working group

The working group agreed to undertake the following activities:

- identify key issues and impediments associated with addressing labour and skill shortages in agriculture
- a stocktake of government and industry workforce, skills and training activities in each jurisdiction
- identify gaps and potential opportunities for a more coordinated and collaborative approach to addressing labour and skills shortages in agriculture.

An extensive literature review was undertaken to identify the key issues and impediments in addressing labour and skills shortages in agriculture. The details of this study are provided in Chapter 3.

The outcomes of the stocktake of government and industry initiatives, including lessons learned from past initiatives is provided in Chapter 4.

3. Key issues & impediments

3.1 Introduction

Agriculture makes an important contribution to Australia's economy. At the farm-gate, agriculture contributes about 3 per cent of national Gross Domestic Product (GDP). When factoring in value-adding activities, the industry contributes more than \$103 billion to the Australian economy annually—an average contribution of 12.1 per cent of GDP (AFISC 2008a). As at November 2008, the agriculture industry employed 373 800 people, or 3.5 per cent of Australia's total workforce (ABS 2008).

Over the last decade, employment in agriculture has fallen by 62 900 jobs (or 14.8 per cent) (DEEWR 2008b). This has largely been attributed to the effects of the drought. However, in the year to November 2008 there has been a turnaround with strong job growth of 20 300 or 5.8 per cent. Improved seasonal conditions and rising commodity prices have contributed to this job growth. Anecdotal reports also suggest that the current global economic crisis is impacting the supply of labour to agriculture. In particular, the mining downturn has led many companies to shed jobs. Displaced workers (with appropriate skills) have been able to find work within the agriculture industry. Prospects are for further job growth in agriculture in the next five years. The latest DEEWR projections, for the next five years, are for employment growth of 1.1 per cent per annum, or 19 700 new jobs (DEEWR 2008a).

Despite the recent growth in the number of employees available to work in agriculture, significant shortages in labour and skills are expected across virtually all regions, sectors and occupations of the agriculture industry in the long term. The challenges facing agriculture, including climate change and global food security will increasingly demand more labour and skills. The labour and skills shortages impede sustainable increases in productivity. The ability to develop and adopt new ideas and techniques to increase productivity and to remain competitive and responsive to future challenges is highly dependent on having the capacity as well as the capability within the workforce.

This chapter discusses the key labour and skills issues facing the agriculture industry¹. The responses by government and industry to these issues, including specific initiatives which have been implemented are discussed in Chapter 4 of this report.

3.2 Impediments to addressing the labour shortage

Government figures indicate that the demand for agricultural labour equates to around 19 700 jobs per annum (DEEWR 2008a). AgriFood Skills Australia (formerly Agrifood Industry Skills Council) suggests that there will be a demand for 10 000 workers per annum for the next five years (AFISC 2008a), while the National Farmers' Federation (NFF) estimates this to be significantly larger once the extensive drought conditions subside and agricultural production re-approaches pre-2002 levels.

¹ Agriculture industries include production horticulture, grain, sheep and beef cattle farming, dairy cattle farming, poultry farming and the sugar cane and cotton industries. While the fish, forestry and food sectors have not been discussed in detail, many of the issues identified in this chapter are expected to be common across all primary industries.

The NFF estimate the demand for workers will be in the range of 80 000 – 100 000 over the next five years (NFF 2008b).

There are various factors affecting the industry's ability to meet these labour shortages and these are discussed in detail below.

3.2.1 A competitive labour market

Competition for labour poses a significant challenge for employers in finding the workers they need. For the agriculture industry, there has been fierce competition for labour particularly from the mining and construction industries (Gelade and Fox 2008). Although there are signs that the global financial crisis and the downturn in the mining industry in particular, are beginning to make it easier for farmers to fill vacancies—for example, anecdotal evidence suggests that as mines close or stop projects affected workers are taking up positions on farms (Weekly Times 21 January 2009)—these conditions are not expected to last in the long term.

The agriculture industry continues to compete with the mining and construction industries for employees in terms of pay and workplace benefits. This is evident when comparing average weekly full-time earnings—\$817 in the agriculture industry compared to \$1772 in the mining industry and \$1107 in the construction industry (ABS 2007). In addition to the higher wages, the agriculture industry has struggled to compete against the campaigns and strategies used by the mining industry to attract workers, such as promoting lifestyle initiatives, developments in occupational health and safety and career advancement opportunities. Although the current mining downturn has weakened the perception of mining as the big-paying, safe and secure employer, (Weekly Times 21 January 2009), the downturn is not expected to last long. The current emphasis on improving infrastructure in Australia, with construction projects being rolled out from schools to railways, will also add to workforce competition.

Not only does the agriculture industry compete with mining and construction industries in terms of salary and workplace benefits, it also competes with less physical, higher paying positions in other industries which require less working hours. Currently, employees in the agriculture industry work an average of 50.8 hours compared to all other industries, which average 41.6 hours (DEEWR 2008a).

Seasonal labour demands and remote or regional employment locations inhibit the provision of attractive and competitive full-time employment packages. And the benefits of some salary packages, such as accommodation, meals, vehicle and bonuses are often not marketed to prospective employees. Anecdotal reports indicate that some farm managers receive salary packages worth up to \$130 000 once the additional benefits have been factored in.

3.2.2 The poor image and promotion of agriculture

One of the most significant impediments to attracting people to study and work in the agriculture industry is its poor image. A common misconception is that the industry is made up of uneducated producers who do not care about sustainability and are harming the environment through poor land and water management practices. Agriculture is perceived to be an industry which is prone to disasters and heavily

reliant on government assistance. It has low prestige due to the common belief that agricultural employment is necessarily manual labour with limited (if any) skill requirements, that may not provide secure ongoing work or opportunities to develop and advance careers. Agriculture is also not considered to have strong economic prospects.

Unfortunately these perceptions are often supported by various media reports drawing attention to some of the negative aspects of agriculture—high debt levels, droughts, floods, extremist campaigns, environmental vandalism, animal cruelty and anti-genetic modification (Pratley 2008). Together with reductions in funding for agricultural research and development, the common media messages reinforce the notion that prospective students and employees should *not* consider agriculture as a good career option.

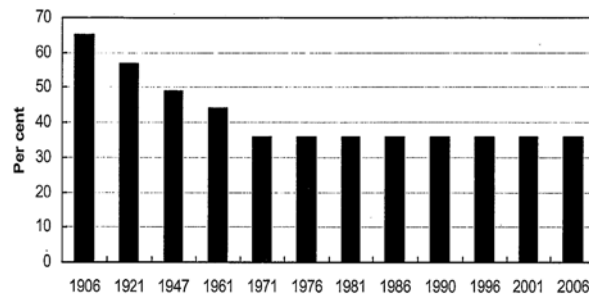
The limited education of young people about agriculture appears to have led an emerging generation of adults who do not appreciate the importance of agriculture to the national economy, or the nature of agricultural careers.

The poor awareness of agricultural career opportunities within the industry may not necessarily result from a lack of available information about careers, but rather difficulties in appropriately targeting the information. Research conducted by Primary Skills Victoria in 2006 found access to information and resources was either restricted (to enable organisations to recoup costs) or locating the material electronically was problematic. In many cases the career information was found to be disjointed and/or information was only available on selective occupations. Agrifood Skills Australia noted in their 2009 Environmental Scan that there is a need for careers advisers and parents to better understand industry's transition and rapid emergence as one of the key areas in the knowledge economy (ASA 2009).

3.2.3 Declining rural population

The number of people living outside capital cities has declined from 65 per cent of the population in 1906 to 36 per cent in the 1970s (Figure 3.1). While some regional centres and coastal areas have grown, most rural and remote areas are continuing to decline (PC 2008). Since the majority of jobs in agriculture are rural-based, the declining population in rural areas is making it very difficult to attract and retain workers.

FIGURE 3.1 - PROPORTION OF POPULATION LIVING OUTSIDE CAPITAL CITIES



^a Excludes residents in Australia's offshore territories, and overseas visitors.

Source: ABS (Census of Population and Housing, various years; ABS Regional Population Growth, various years, Cat. no. 3218.0; IC 1993).

Particularly young people are leaving rural areas for better social and career options. Young people consider they are under valued in rural communities and feel that poor accessibility and limited transportation in many rural and remote areas contribute to isolation and frustration. Limited access to: medical services, local education, appropriate accommodation, and good quality information technology and telecommunications services, also contributes to their migration away from rural and remote areas (Rural Skills Australia 2008). The permanent loss of young people from rural areas is undermining a traditional source of agricultural employees and efforts need to be increased to encourage young people to bring their worldly experiences and education back to the rural areas.

The drought and related reductions in productivity, profits and personal incomes have also contributed to a population loss from rural communities. As local producers are spending less money, businesses are being forced to relocate, shut down or reduce services. In some areas, the decline in local services and businesses has also occurred through the decline in family-owned farms and/or an increase in corporate farms. These larger enterprises are less likely to purchase produce and machinery from smaller local businesses (NSW Standing Committee on State Development 2007).

The continuing drought has also led many older farmers to postpone passing on the family business to the next generation until there is a recovery in production levels. This is making young people more reluctant to consider employment in the agriculture industry as a viable long-term career option particularly given the lack of opportunities in managing or purchasing their own farming enterprise (due to the prohibitive capital required).

3.2.4 An ageing workforce

An ageing workforce is a key concern for the agriculture industry and its future supply of labour. The agriculture industry has the highest median age (46 years), compared to an average median age of 39 years across all industries. Approximately 40 per cent of all farmers are over the age of 55, with those over 65 representing 18 per cent of all farmers. The industry has the highest percentage of workers aged 65 and over (13 per cent), well above the percentage for all industries (2.3 per cent) (DEEWR 2008a).

The loss of jobs as a result of the drought has contributed to a loss of 'prime age' workers and limited the entry of young workers into the industry. Surveys have also

shown that the rising age of farmers is a function of their choice to stay in the business or their inability to relinquish the role to an employee (Farmstaff 2008). In many cases, the inability to hand over the business to a younger family member or employee is being driven by an inability to maintain a retirement income outside farming or a cultural mindset that says an employee would not care for the farm like the owner would.

There is also a significant financial cost for farmers wishing to pass their farm onto their families, which is delaying or deferring a farmers' decision to retire. Under the *Social Security Act 1991*, if farmers pass on their farm to their children upon retirement they become ineligible to claim the pension for five years (NFF 2009).

3.3 Impediments to addressing the skills shortage

In their 2008 environmental scan of the agrifood sectors, AgriFood Skills Australia (ASA) found that skill shortages are being experienced by all sectors and virtually all job roles within the industry (AFISC 2008a). Skills shortages result from being unable to attract highly skilled workers to the industry. They also reflect the rising complexity of work in the industry and the skills gaps among existing workers. The 2009 Environmental Scan (ASA 2009) also reflects that agriculture job roles are rapidly evolving and that people need to be higher skilled across a range of functions (ASA 2009)_

The lack of a suitably qualified workforce is a significant constraint to growth of the agriculture industry. There are a range of barriers preventing the industry from addressing its skill needs and these are discussed below.

3.3.1 A lack of emphasis on education and training in the industry

Education and training engenders an increased capacity, confidence and willingness to change, to seek and adopt innovative technologies and best-practice management techniques, and to manage risk. It is known that farmers who participate in training and education activities are more likely to be profitable and to change their practices to improve performance.

The agriculture industry has historically had a low level of interest in education and training, with formal qualifications being considered less important than practical experience. The statistics substantiate this, with a large number of workers in the industry having relatively low levels of education, including a lower level of formal tertiary qualification than the Australian community at large. As at May 2007, 35.1 per cent of workers from the industry had an education attainment of Year 10 or below, compared with 13.1 per cent of all industries (DEEWR 2008a). More than 42.2 percent of workers in the agriculture industry had completed a non-school qualification, including 16.6 per cent with a Certificate III/IV qualification and 57.8 per cent of the workforce had no school qualifications (DEEWR 2008a). The industry's general attitude towards further education and training is slowly changing, and many agriculture businesses embrace the available training and research and development extension services, but the culture change needs to accelerate.

Much of the disinterest in training and education has stemmed from the perception by many farmers that formal training does not provide immediate financial benefit to

them and their enterprises. There is also the perception by many employers that they will be unable to realise the return of training investment for casual or seasonal employees (Rural Industry Working Group 2001). This may lead to less focus on upskilling existing staff and a greater reliance on employing contactors with specialist skills (Farmstaff 2008). Training must represent value for money, in terms of the immediate returns to the businesses bottom line, or opening up opportunities for new business income streams. The perceived limited return on investment from training must be overcome and this message will be most effective from industry members themselves.

Other reasons that industry members do not take up training include:

Lack of access to good telecommunication and other technology in many regional, rural and remote areas;

Lack of time to train, compounded by the need to travel significant distances to and from structured learning activities; and

Lower literacy levels, either real or perceived, inhibit participation in training. (ASA 2009b)

For many smaller producers, the cost of training is prohibitive. Small businesses with small workforces are generally not able to afford to have staff take time off for training nor do they have the financial capacity to pay for employees to travel to larger towns or cities to access education and training facilities and gain extra or higher qualifications (Gelade and Fox 2008).

Another impediment to engendering an education and training culture within the agriculture industry is a general lack of awareness of what training is on offer and which option or course is best suited to meet industry's needs. This is not necessarily due to a lack of training information, but that the information is presented poorly or unsympathetically to farmers and the language used by training providers is filled with jargon and is too technical. This is confusing to farmers and disengages them from the information.

3.3.2 A failure to attract students to study agriculture

The number of students studying agriculture at university is declining and is well short of the market requirement. There is an estimated demand in excess of 2000 jobs per year for new graduates, with graduate completions being fewer than 800 and declining (Pratley and Copeland 2008). There has also been an overall decline of horticulture graduates (Pratley and Copeland 2008). The Australian Council of Deans of Agriculture estimate that the annual demand for horticulture graduates is 350, however there are only about 100 per year entering the workforce and closer to 50 per year for non-viticulture horticulturalists (J. Pratley pers. comm.).

The declining number of agriculture students appears to reflect their general lack of understanding of agriculture, largely as a result of having minimal exposure to agriculture in school curricula. Those from the university sector argue that the gradual elimination of agriculture subjects from the school curriculum, particular in high school, has contributed to the decline in students choosing agriculture studies at university (Pratley 2008). They also argue that the decline in the availability and qualifications of science teachers in high schools has exacerbated the situation.

There also appears to be a lack of encouragement from parents and strongly negative views of many secondary teachers concerning careers in agriculture. The traditionally low university entry scores for agriculture also projects an image that agriculture is for lower ability students (Pratley 2008).

The graduate shortage is not only evident at the undergraduate level; there is also a shortage of postgraduate students in agriculture. Stipends have not maintained parity with the Consumer Price Index, and there is an increasingly significant discrepancy between stipends and average weekly earnings. Therefore, the brighter, highly employable graduates are attracted to immediate employment in the workforce, particularly as the low level of unemployment provides attractive opportunities to new graduates (Pratley 2008). Many industries and education and training institutions are considering how to address this issue – it is not specific to agriculture.

A consequence of the declining agriculture graduate numbers is that skilled job vacancies are being filled by less qualified professionals or graduates at the bottom level of academic achievement. This arguably does not place the industry in a favourable position to improve productivity and address issues such as sustainability and climate change.

3.3.3 The lack of clear career pathways in agriculture

The diversity of career pathways available within agriculture sectors is not well understood within the community and is making it very difficult to attract people into the industry. Research has shown that agriculture is caught in a cultural stereotype and that jobs in the industry are believed to be ‘dead end’, ‘hard work’, or ‘not well paid’ (Ruralscope 2007).

It would appear that the public’s limited understanding of agriculture careers is not for a lack of information promoting career opportunities within the industry (e.g. brochures and case studies etc). In fact, a survey undertaken by Primary Skills Victoria in 2006 identified a plethora of resources (domestically and internationally) existed which promote career opportunities within the agriculture industry (Primary Skills Victoria 2006). However, the survey highlighted that there were issues in accessing the information. The lack of knowledge of agriculture sectors and a lack of knowledge of what information is available to promote career pathways in agriculture is resulting in a tendency to promote more city based career pathways (Ruralscope 2007).

The lack of awareness of career pathways is compounded by having limited engagement between industry and schools, particularly in late primary and early high school years. This includes poor engagement with teachers and careers counsellors to provide them with knowledge of the industry and training prospects and to encourage student interest in agricultural careers.

The lack of understanding of the career pathways within the industry is not restricted to new entrants. Many existing employees within the industry do not appreciate the various job roles and skill needs within the industry. A failure by employers to provide information on career opportunities and allow access to training will not encourage workers to stay in the industry to improve their skills base and their transferability of skills across a range of sectors.

3.3.4 Inflexibility in the delivery of training

The nature of the agriculture industry poses significant challenges to the delivery of training. Many agriculture businesses prefer more workplace learning, rather than class courses, so that workers are not off site for long periods. Businesses and students are increasingly seeking shorter programs to acquire discrete sets of skills. The low student numbers and the generally large geographical spread make training difficult and expensive.

Some in the agriculture industry are critical that the current vocational education and training (VET) system does not have the capacity to adapt and respond to the industry's wide-ranging and changing skill needs (Gelade and Fox 2008). They have raised a number of concerns over the current publicly funded training model. One of the key criticisms is that the current system is heavily focused on the delivery of full qualifications and training packages rather than competencies and skills which are needed to work within the industry (House of Representatives Standing Committee on Agriculture, Fisheries and Forestry 2007).

Agriculture industry members expect that training courses (and trainers themselves) will adapt as fast as industry and employees. They expect training to meet skills gaps in new technologies and farming practices and training in non-technical areas such as business, finance and information technology with a rural focus. There are also recognised needs within the agriculture industry for more training in broad-based skills such as communication, working in teams, numeracy and literacy and problem solving.

Research has shown that the flexibility of the publicly funded VET system is hampered by the regulatory framework, including funding guidelines and formulas (Gelade and Fox 2008). As a consequence, it is becoming increasingly common for employers to rely on private registered training organisations to provide workplace training.

Official mechanisms to recognise informal training and skills learnt on the job need to be improved to encourage workers to gain more formal qualifications. Improved mechanisms could also assist in addressing the shortage of qualified trainers (Agriculture and Food Policy Reference Group 2006). Based on the findings from the National Extension/Education Review, Coutts et al. (2004) concluded that the Recognition of Prior Learning and Recognition of Current Competency processes are difficult to access, costly and of poor quality.

Skills Australia has recently completed an analysis of the governance arrangements for the Australian tertiary sector and developed a number of recommendations to improve collaborative efforts between government and industry to achieve an improved national training system (Skills Australia 2009).

3.3.5 Disconnect between vocational education and training and universities

Current trends show a relatively few students move between the VET and higher education systems (Industry Skills Council 2008). This has largely been attributed to a

lack of clear and consistent student pathways between these education sectors. AgriFood Skills Australia claims that the poor connection between the VET and university system is not only inefficient, it is also threatens the currency and relevance of courses being offered and their ability to produce 'work ready' graduates (AFISC 2008b).

Articulation pathways exist between some VET providers and universities. However, industry argue that these linkages are tenuous and variable, to the point where some universities selectively recognise particular RTOs as acceptable for applying credits and ignore others (NFF 2008a). Universities' lack of transparency and consistency in recognising formal and non-formal learning remains a significant impediment for individuals seeking to upgrade existing skills or retrain (Industry Skills Council 2008). There are currently no standardised articulation pathways into university for VET sector graduates or for workers with extensive skills and knowledge through informal training.

The issues with student pathways impacts on rural and regional communities more broadly. The absence of linkages between VET and universities in rural areas limits access and opportunities to training and education for people living within those areas. Many students from indigenous and low socio economic backgrounds start their post school training in the VET sector (Industry Skills Council 2008) and do not proceed with higher tertiary education because the linkages or pathways are unclear. The articulation of pathways and linkages between vocational education and training and higher education is an ongoing body of work being tackled by the Department of Education, Employment and Workplace Relations, and Industry Skills Councils including AgriFood Skills Australia.

3.3.6 Demand for new skills

Traditionally, the skills needed to work in the agriculture industry have been hands on, and developed on the job. For many farm occupations, employees are still trained on the job. However, the nature of primary production is changing. The United Nation's Food and Agriculture Organisation suggests that with the predicted world population growth, it is expected by 2050 that global food production will need to double to meet this demand (FAO 2006). The agriculture industry needs to achieve massive increases in productivity, while managing the issues of climate change, land degradation, water scarcity and pest infestations. Increased productivity relies on improved skills in efficient use of land, water, fuel and other inputs. Agriculture businesses are becoming increasingly sophisticated with producers needing to have knowledge across a wide range of disciplines.

Technological and scientific developments and new regulatory requirements are constantly demanding new skills and job roles (AFISC 2008a; Agriculture and Food Policy Reference Group 2006; NSW Standing Committee on State Development 2007). The Australian Government's new Carbon Pollution Reduction Scheme is expected to have a significant impact on the workforce. CSIRO estimate that in high environmental impact industries like agriculture, 3.25 million workers will need to be equipped with new skills in sustainability (CSIRO 2008). New skills will need to be developed in new land and crop management processes and technologies aimed at reducing greenhouse gas emissions, such as new cropping and livestock feeding

methodologies, more environmentally friendly fertilisers and more efficient irrigation systems (NSW Department of Education and Training 2007).

Other emerging issues which are expected to demand new skills include managing biosecurity, food safety, and trade. Skills in product and market development will also be in demand to facilitate the uptake of new knowledge and research outcomes.

To remain globally competitive, the agriculture industry will also need skills and resources to survive, adapt and grow. Enterprises should develop skills in leadership, advocacy and training as well as technical and management skills. Other skills such as governance, strategic planning, administration (including human resources, financial management, and legal matters), fundraising and income generation, diversity development, partnerships and collaboration, and evaluation are also becoming increasingly important.

3.3.7 A shortage of qualified trainers

Another serious impediment to addressing skills shortages in the agriculture industry is the limited availability of qualified trainers with industry currency and credibility in the sectors and in locations where the training is needed. To maintain quality and integrity in the delivery of training, trainers must meet minimum qualifications in skills areas and formal training/teaching qualifications. Industry members claim that the process for gaining these qualifications or gaining recognition for prior learning and current competencies is complex, time consuming and in some cases unnecessary (The House of Representatives Standing Committee on Agriculture, Fisheries and Forestry 2007).

Enhancing the professional development of teachers to enable them continue at the forefront of teaching skills in agriculture is also needed. As new farming techniques and practices are developed to improve productivity, trainers must quickly gain the specific skills necessary to then assist industry to adopt and implement those practices. There is an absence of a formal framework to enable the transfer of skills between researchers, extension officers and trainers and a lack of engagement between research organisations, advisory services and training providers, including the VET system (The House of Representatives Standing Committee on Agriculture, Fisheries and Forestry 2007).

3.4 Other workforce challenges

3.4.1 Poor data on the current and future labour force needs of agriculture

Currently, there are various sources of data being collected to determine the industry's labour and skills demand and supply and participant characteristics. The data is collected by government and non-government agencies and is both quantitative and qualitative in nature.

Many argue that this is a rather piecemeal approach, with little work having been done to comprehensively evaluate the extent of labour shortages in the agriculture industry. There is also very limited data available on skills shortages and the skills needs at the enterprise level. That is, information on where the shortages are, the

extent of the shortages, which sectors are most impacted and which occupations have the greatest deficit in available workers, is not clearly identified.

There are various attributes of the agriculture industry which make it difficult to collect consistent, robust and objective employment data. The industry is largely disaggregated, diverse, has a predominance of small-medium scale businesses that do not use traditional methods of recruitment (such as newspapers, the internet or utilising the Job Network). Consequently, methodologies for collecting data which work effectively for other industries may not necessarily be appropriate for the agriculture industry. For instance, assessing which skills are in demand by surveying employers who have recently advertised vacancies in the metropolitan newspapers for selected skilled occupations does not give an accurate picture of job vacancies in agriculture sectors.

The absence of appropriate data makes it difficult to quantify the current cost of the labour and skills shortages in the industry or predict future labour and skill requirements in the industry. Overall it hinders the development and implementation of effective policies and programs by government and industry.

3.4.2 Workforce participation

A key challenge to addressing labour shortages in the agriculture industry is encouraging marginally employed and unemployed people into agriculture careers. This not only includes the long-term unemployed but other groups, such as young people, women, those with disabilities and Indigenous Australians. These groups face multiple barriers to gaining and remaining in employment which include low education and skills, disability, mental illness, age, caring responsibilities and costs associated with participating in further education and training.

There is currently little engagement of these target groups to understand their needs and values and communicate to them the unique benefits agricultural careers can provide in return, including the most suitable farm occupations which will maximise their contribution to the industry (NFF 2008c). As part of this, the agriculture industry must look at implementing appropriate flexible working arrangements to attract and facilitate the transition of these groups into agriculture careers. This must also involve changing perceptions and attitudes about these target groups and building capacity within the industry to ensure employers have appropriate skills to effectively and appropriately engage with these groups.

3.4.3 Skilled and unskilled migration

Many within the industry argue that the size of the domestic pool of labour cannot meet the labour and skills needs of the agriculture industry (NFF 2008d). This is exacerbated by a failure to attract unemployed or under-employed domestic labour to the industry, largely due to the costs involved in travelling to the necessary workplaces and a general unwillingness to relocate and work on farms in regional areas (NFF 2008d).

Permanent and temporary migration is an important strategy for addressing the labour and skill needs of the agriculture industry. While temporary migration is an essential short to medium term measure, it means that the skills base within the domestic

labour market is not being built and does not address long-term skills and labour shortages. On the other hand, permanent migration does provide an opportunity for addressing long term shortages, particularly given the ageing workforce.

However, industry has concerns over the effectiveness of migration to address labour and skills shortages. They contend that Australia's immigration system is complex and administratively burdensome with average waiting times for processing being between several months and well over a year depending on visa class (NFF 2008d). Industry argues it is this complexity which is deterring many farmers from considering migrants as an option for addressing their labour and skills shortages (NFF 2008d).

There also some within the industry that believe the Australian Standard Classification of Occupations (ASCO) and the Australian and New Zealand Standard Classification of Occupations (ANZSCO) focus on "generic" qualifications and do not reflect the actual skills being used within the industry. They argue that as a consequence of this, skilled migrant demand based on these occupational descriptors is no longer meeting industry's needs or the needs of a rapidly changing workforce.

3.4.4 Business management skills for farmers

Farming has changed and producers now need technical knowledge as well as advanced business management and leadership skills to manage their many challenges, including labour and skills shortages. This includes skills in international markets, risk management, strategic thinking, negotiation, decision-making, financial planning, human resource management and environmental management.

There is also an absence of good people management skills within the industry which is having a significant impact on retaining employees. The majority of producers still see their primary responsibility as being to oversee workers performing set duties on the farm with little or no consideration or responsibility taken for other employer/employee aspects such as performance management and staff development etc. Poor management skills of farmers (e.g. poor communication, lack of feedback and recognition of achievements), fails to create a work environment that engages employees or encourages them to develop their skills and follow a career in the industry. This results in high staff turnover and a loss of knowledge and skills from the workplace (Farmstaff 2008).

Given the pressures being placed on businesses to sustain their performance and productivity growth, there is an increasing need for employers to develop and implement appropriate workforce planning strategies within their enterprise. There is little evidence of these skills within the agriculture industry. This places employers and businesses at risk of not managing issues such as the ageing workforce, fluctuating labour markets and changing service demands. As well as overcoming deficiencies in workforce planning skills within the industry, there is a lack of commitment from management to workforce planning, a lack of responsibility and ownership for workforce issues and a focus on quick fixes or relying on the same strategies to deal with new problems.

3.7 Conclusion

Securing an adequate supply of suitably skilled labour is important for optimising Australia's agricultural productivity and output. The workforce not only needs to be large enough to enable the industry to remain productive and competitive, it must also have the right skills and training to allow the industry to grow and improve its performance by becoming more innovative and responsive to change.

Labour and skills shortages are being experienced in a wide range of sectors and rural and regional areas more broadly. While the current downturn in the mining sector (as a result of the global financial crisis) and seasonal improvements have seen an increase in people taking up jobs in agriculture, these are not expected to cover the short and long term demands within the industry. The issues are complex with various factors contributing to the labour and skills shortages. The issues go beyond the capacity of any one organisation or government portfolio to understand and respond to. As such, it is important to establish better working relationships across government and industry organisations. This will help coordinate and share information on labour and skills policies and programs. It will also help to develop more strategic and consistent approaches to these issues. These strategies may build on existing activities or may require a new policy approach or a new initiative.

Industry plays a crucial role in providing leaderships on agriculture workforce, labour and skills issues and has a responsibility to promote their business and work together to drive and champion these issues. The industry must also recognise that education and training are as important to profitability as production issues.

4. Stocktake of workforce, skills & training initiatives

4.1 Introduction

Currently there are a wide range of workforce, skills and training initiatives being undertaken by the Australian and state and territory governments and industry to address the labour and skills shortages in the agriculture industry. However, despite these efforts, the approach remains fairly ad hoc and piecemeal and there is limited awareness and understanding of these initiatives by key stakeholders.

In this context, the IDC Workforce, Skills and Training Working Group agreed to undertake a stocktake of current and past workforce, skills and training initiatives in the agriculture industry. The aim of the stocktake was to help identify options for increasing stakeholder awareness of these initiatives, identify areas for collaboration and coordination across government and industry and inform the development and implementation of future workforce, skills and training programs.

The stocktake provides a snapshot of the current and past initiatives to address workforce, skills and training issues in agriculture. It is not a complete or exhaustive list and relies on the information provided by the different jurisdictions and industry organisations. However, the stocktake gives a good representation of the types of initiatives being implemented by government and industry.

The conclusions drawn from the stocktake have been predominantly informed by a comprehensive analysis of the information received from contributors. Some conclusions have also been drawn from discussions with other jurisdictions not represented on the working group, and various industry and regional bodies.

4.2 Aims

The aim of the stocktake was to:

- identify existing government and industry initiatives in each jurisdiction that focus on addressing workforce, skills and training/education issues in agriculture
- identify linkages or inconsistencies between existing initiatives
- improve stakeholder awareness and understanding of, and accessibility to existing measures
- share learnings and best practice approaches
- identify gaps and opportunities for future work or new initiatives
- identify ways to improve coordination and consultation between jurisdictions.

4.3 Methodology

Contributions to the stocktake were sought from Australian and state and territory governments and peak industry bodies. The peak industry bodies were asked to collaborate with their state farming groups to provide information on industry initiatives across jurisdictions.

4.3.1 Information requirements

Current initiatives

Contributors were asked to:

- collect information on all current government and industry initiatives that focus on workforce, skills and training in agriculture within their jurisdiction
- source the information from within their own department as well as from other relevant government departments and industry bodies within their jurisdiction
- provide the information in a consistent manner using a template, which contained brief instructions on what information should be included.

Contributors were asked to provide information on initiatives that specifically addressed workforce, skills and training issues in the agriculture industry as well as initiatives that were not targeted at any particular industry but could be applied to the agriculture industry.

Past initiatives

Contributors were also asked to complete a short questionnaire aimed at gathering information on the effectiveness and lessons learned from previous initiatives.

The template and questionnaire are provided at [Appendix 4](#).

4.3.2 Analysis process

There were three stages involved in analysing the data:

Stage 1. Information gathering

Information was collected via the template and questionnaire. Gaps and quality of information were checked. Additional information was sought from contributors to fill gaps or to seek clarification.

Stage 2. Information management

All the information received from government and industry was consolidated into a database. The database enabled each initiative to be organised under one of three key objectives—‘Workforce’, ‘Skills’, or ‘Training’. While most initiatives have multiple objectives, initiatives were classified according to where they had the strongest focus.

‘Workforce’ refers to those initiatives whose primary focus is:

- attracting and retaining workers (includes initiatives aimed at increasing the community’s awareness and understanding of the industry)
- promoting careers in agriculture
- understanding the supply and demand of workers in agriculture,
- developing and/or implementing workforce planning and development strategies for the industry (includes initiatives aimed at increasing workforce participation).

‘Skills’ refers to those initiatives whose primary focus is:

- identifying skills gaps and demands in agriculture sectors.

‘Training’ refers to those initiatives whose primary focus is:

-
- developing appropriate training programs, tools and information to meet skills needs (of both new entrants or existing workers (includes on the job training)
 - delivery and evaluation of training programs and information
 - improving access to education and training (includes providing funding and support and/or improving availability of courses).

Stage 3. Analysis

An analysis of the database information was undertaken once each initiative had been categorised into either the ‘workforce’, ‘skills’ and ‘training’ themes. The database was used to draw out key messages and trends.

4.4 Government & industry response

This section discusses the broad policy approaches currently being taken by government and industry at the national, state and regional level and some of the key departments and organisations involved in driving these policy agendas. Section 4.5 provides more detailed information based on the analysis of the stocktake initiatives that were received.

4.4.1 Government’s response

Australian Government

The Australian Government continues to recognise the importance of addressing Australia’s labour and skills issues to its long-term economic viability and sustainability. The Skilling Australia for the Future initiative outlines the Australian Government’s commitment to skills and workforce development (see Table 4.1). It provides a roadmap for national reform to ensure the training system remains responsive to the needs of the Australian economy, industry, business, communities and individual Australians. The Department of Education, Employment and Workplace Relations (DEEWR) has primary carriage of labour and skills issues across all industry sectors.

The Department of Agriculture, Fisheries and Forestry (DAFF) develops and delivers more targeted strategies to address workforce issues in agriculture sectors. The role of DAFF is to develop and implement policies and programs that ensure Australia's agricultural, fisheries, food and forestry sectors remain competitive, profitable and sustainable. In 2008, DAFF implemented the Australia’s Farming Future program, which provides \$130 million over four years to help primary producers to adapt and respond to climate change. As a key component of the program, primary producers and industry associations are able to receive subsidises for training to enable them to develop strategies to adapt and respond to the impacts of climate change under the \$26.5 million FarmReady program.

The Australian Government further supports innovation in the sector by direct grants and matching funding of industry levies to rural Research and Development Corporations (RDCs). In 2007-08, RDCs spent approximately \$500 million on research, development and extension services of which the Australian Government contributed over \$200 million in matching eligible expenditure. DAFF established the

Rural Research and Development Council to improve coordination and prioritisation of investment and performance in rural R&D. The Council is working cooperatively with jurisdictions and rural industry members, resource management and research stakeholders to monitor and evaluate the impacts of investments and improve rural R&D. A National Primary Industries Research, Development and Extension Framework is being developed jointly by industry peak bodies, rural R&D corporations and industry owned companies (RDCs) and the Primary Industries Standing Committee. The framework provides the structure and institutional arrangements needed to strengthen national research capability and better address cross sectoral and sectoral research and development.

Other key Australian Government departments involved in addressing labour and skills shortages in the agriculture industry are the Department of Immigration and Citizenship (DIAC) and the Department of Infrastructure, Transport, Regional Development and Local Government (DITRDLG). DIAC has two temporary migration programs that have benefited agriculture, fisheries and forestry employers—the Working Holiday Maker program and the Temporary Business Long Stay (sub-class 457) visa. DEEWR, DAFF and DIAC are also conducting a small three year pilot investigating the potential to use workers from neighbouring Pacific nations to supply seasonal labour demands in the horticulture sector. DITRDLG assists the government to promote, evaluate, plan and invest in infrastructure; foster an efficient, sustainable, competitive, safe and secure transport system; and assist regions and local government to develop and manage their futures.

Council of Australian Governments

On 29 November 2008, the Council of Australian Governments (COAG) agreed new agreements for education and skills and workforce development. Through these agreements the Commonwealth and state and territory governments will work in partnership to lift the quality of education and training and target resources to where they are most needed.

The National Education Agreement ensures that the state and territory governments can allocate resources more flexibly, while providing a set of definitive and measurable targets. Education reforms aim to lift achievement in disadvantaged school communities, improve the quality of teaching and ensure greater accountability of education providers.

The new National Skills and Workforce Development Agreement sets out the commitment between the Commonwealth and state and territory governments to work towards increasing the skill levels of all Australians, including Indigenous Australians.

State Government

The state departments of primary industry are responsible for developing and implementing more targeted approaches to dealing with labour and skills issues in the agriculture sectors within their jurisdiction. Some states have developed structured and specific strategies for achieving this (e.g. Future Farming in Victoria, A Fresh Approach in Queensland) (Table 4.1). These strategies have the common objective of encouraging innovation and increasing productivity in the industry through bringing in workers to the industry and/or improving the skills of existing workers.

Similar to the Australian government, the state departments of education (or their equivalent) have lead responsibility for workforce, education and training issues across all industries within each jurisdiction. Many states have implemented broad strategies for addressing labour and skills issues (Table 4.1). For example, the NSW State Plan sets out the goals and priorities for the NSW Government, one of which is to have more people participate in education and training and improve access to training in rural and regional NSW to support local economies. South Australia Works is the South Australian Government's major training and employment strategy implemented by the South Australian Department of Further Education, Employment, Science and Technology (DFEEST) to tackle workforce and labour issues in South Australia (SA). The SA Government is also currently developing industry workforce action plans in partnership with industry in areas of strong economic growth, including for agrifood sectors.

TABLE 4.1 –EXAMPLES OF GOVERNMENT POLICY RESPONSES TO LABOUR AND SKILLS SHORTAGES IN THE AGRICULTURE INDUSTRY*

Government	Lead agency	Key policy documents	Timeframe
Australian	DEEWR	Skilling Australia for The Future	Released 2008
COAG		The National Education Agreement The National Skills and Workforce Development Agreement	November 2008 November 2008
Queensland	QDPIF	A Fresh Approach Rural Skills, Training & Labour Strategy	Released 2008 Released 2008
Western Australia	DAFWA	Food Strategy WA	Currently being considered by government
South Australia	DFEEST PIRSA	South Australia Works Agrifood Workforce Action Plan	Released 2005 Currently in the consultation phase
Victoria	VicDPI	Future Farming Strategy – Productive, competitive and sustainable	2008-2012
New South Wales	Various	NSW State Plan	2007-2017
Tasmania	DPIW	SMART Farming	Released 2006
Northern Territory	NTDET	Jobs Plan 3	2007-2008

*As at February 2009.

4.4.2 Industry's response

Nationally

A number of peak industry bodies provide national leadership and direction on labour and skills issues in the agriculture industry. They work with Australian, state and local government departments, commodity organisations, training providers and the farming community to develop strategies and actions for improving workforce, skills and training pressures on industry.

The National Farmers' Federation (NFF) has developed a Labour Shortage Action Plan (NFF 2008b), which investigates solutions to agricultural labour shortage, their practical implementation and policy implications.

AgriFood Skills Australia (ASA) is recognised as the key body in establishing the skills and knowledge requirements for agrifood sectors. ASA is part of a network of 11 National Industry Skills Councils established to provide accurate industry intelligence to the VET sector about current and future skill needs and training requirements of industry. They also support the development, implementation and

continuous improvement of quality nationally recognised training products and services, including Training Packages. As part of this ASA, in consultation with agrifood sectors, undertakes annual environmental scans of the industry to provide a clear understanding of the factors impacting the agrifood workforce development and indicating how the training sector needs to respond. This provides information for developing a policy framework for the training system. To better understand regional needs for workforce development ASA also collaborates with regional development boards. For example ASA hosted a Regional Jobs Summit in Narrabri where participants from the local council, training institutions, academics, students and farmers determined the region's priority training needs. There was agreement that a locally driven approach would deliver increased employment and productivity. (ASA 2009c)

Rural Skills Australia (RSA) is a national not-for-profit organisation that, in consultation with other industry representatives such as the NFF, the Australian Workers' Union, the Rural Training Council of Australia and various farm commodity groups develops education and training resources for the agriculture industry to increase its skill base. RSA education and training advisers in each state and territory provide advice on industry reforms and packages, and assist Australian Apprenticeships Centres, Job Network members, Registered Training Organisations and schools in delivering rural training.

State industry bodies

Industry training advisory bodies (ITABs) are state based institutions that provide advice to government and enterprises on the current and future vocational and skill needs of industry sectors in their respective jurisdictions, as well as providing a quality assurance of training and workforce development products and service. There is a network of ITABs across all state and territories (except the Australian Capital Territory) which cover the agriculture industry. They are Primary Skills Victoria, QLD Rural Industry Training Council Inc, WA Primary Industry Training Council Inc., Primary Industry Skills Council (SA), Primary Industries Training Advisory Council (NT) and NSW Rural and Related Industries Skills Advisory Committee. These organisations have established networks with producers, training providers, governments, students and community organisations in their states and others. Within the context of industry development, their core focus is specifically on education, training and skills development, and advocating the primary industries education and skills agenda at the state and national levels.

Individual sectors

Many individual sectors of agriculture have undertaken detailed analyses of their current and future skills and labour demands and activities. These include the livestock industry (e.g. Cordery 2006; MLA 2008), the horticulture industry (e.g. Growcom and HAL 2005) and the dairy industry (e.g. Australian Dairy Farmer Surveys).

This work contributes to various recommendations and strategies being developed by the industry groups. For instance, Growcom, Horticulture Australia Limited and the Horticulture Australia Council collaborated to develop the Horticulture Industry Workforce Plan to identify and address aspects of market failure around the demand and supply of labour and skills in the production horticulture sector (Growcom 2008).

The dairy industry is particularly proactive with respect to addressing its labour and skills issues. Dairy Australia developed a strategic plan for the dairy industry with the key priority to improve access to world-class skills and knowledge development through better education. Dairy Australia, in collaboration with Goulburn Ovens Institute of TAFE has established the National Centre for Dairy Education Australia. This centre is dedicated to dairy vocational education and training and also provides a platform for the dairy industry to communicate its skill and training needs.

Regional bodies

At a local or regional level, there are some examples of agriculture industry stakeholders working with relevant agencies to address workforce and labour supply issues by building the training capacity of the industry/region. The Bundaberg District Agricultural Training Group includes representatives from agricultural industry sectors, Australian Agricultural College Corporation, Wide Bay Institute of TAFE, Queensland (QLD) Department of Education, Training and the Arts, QLD Department of Primary Industries and Fisheries, training and labour market service providers, schools sector, higher education sector, local community partnerships and regional career advisors. The Training Group membership can tackle workforce and labour supply issues from a number of angles.

4.5 Results

4.5.1 Summary of information received

Information for the stocktake was received from the following Australian, state and territory governments and industry representative organisations:

- Australian government
 - Department of Agriculture, Fisheries and Forestry
 - Department of Education, Employment and Workplace Relations
 - Department of Immigration and Citizenship
 - Department of Infrastructure, Transport, Regional Development and Local Government
 - Department of Innovation, Industry, Science and Research
- State and territory governments
 - ACT Parks, Conservation and Lands
 - NSW Department of Primary Industry
 - NT Department of Regional Development, Primary Industry, Fisheries and Resources
 - QLD Department of Primary Industries and Fisheries
 - TAS Department of Primary Industries and Water
 - VIC Department of Primary Industries
 - Department of Agriculture and Food, WA
 - Department of Primary Industry and Resources South Australia
- Industry
 - AgriFood Skills Australia
 - National Farmers' Federation
 - Rural Skills Australia
 - Horticulture Australia Council

TABLE 4.2 – SUMMARY OF INITIATIVES RECEIVED FOR THE STOCKTAKE

	Total
Australian Government	45
Victoria	11
Tasmania	10
Queensland	10
South Australia	9
Western Australia	6
New South Wales	4
Northern Territory	4
Australian Capital Territory	1
National industry bodies	23
Other*	13
Total	136

*Other – University and private training organisation initiatives

A list of all initiatives received for the stocktake is provided at [Appendix 5](#).

4.5.2 Workforce initiatives

Attraction and retention within agriculture

Attracting and retaining people within the agriculture industry and in rural and regional areas in general, is a significant impediment affecting the labour and skills shortages in the industry. There are a number of specific initiatives in place aimed at attracting more people into regional areas, and into the agriculture industry. For example, the Regional Employer Alliance Project (REAP) is an Australian and local government partnership with projects being conducted in Tasmania (Tas), QLD and NSW. The initiative recognises that people are more likely to take up a job (and stay in that job) if it matches their skills sets. REAP is trialling various strategies to prevent the loss of local workers to other industries (particularly mining) by offering training which will build skill sets which match the needs of the local industries. A similar initiative, the Regional Skills Mobility Program is also being conducted in South Australia, led by the Primary Industries Skills Council SA. This program aims to attract urban job seekers to regional SA by matching skills of job seekers with available jobs, including offering training to develop the skills that are in demand in the regions. It also assists employers to package their positions so they are more attractive to job seekers. This program is being piloted in the Riverland, Murraylands and Limestone Coast regions and is funded by DEEWR under the Targeting Skills Needs in Regions Program.

There are also a range of other initiatives currently in place which do not have their main objective as being to attract and/or retain workers in the agriculture industry, but which will, as a consequence of their outcomes, bring more people into the industry. For instance, training initiatives will help people develop skills which are needed in the agriculture industry, or will help motivate existing workers to stay and build a career in the industry. Also, initiatives which aim to build management and leadership skills of employers in the industry will help improve the workplace and make it a more attractive and enjoyable place to work.

Promoting careers in agriculture

A significant proportion of initiatives promote the agriculture industry and the career opportunities within it. Some of these initiatives promote the agriculture industry as a whole, while some initiatives specifically focus on particular sectors, such as food processing (chicken meat), forestry and timber. The majority of these initiatives target schoolchildren and young people (i.e. recent school leavers).

Initiatives aimed at promoting the industry and career pathways in agriculture are being conducted by regional and national industry organisations, universities and state/territory and Australian Government departments. Examples of industry groups involved in promoting careers are the National Centre for Pork Industry Training and Education, Horticulture Australia Ltd, Dairy Australia and the National Centre for Dairy Education Australia, Agforce Queensland, National Association of Forestry Industries, Rural Skills Australia and Sustain Ability International. In some cases, industry groups receive government support to develop their career information. For example, DEEWR contract Rural Skills Australia to produce career information for

agrifood sectors. There are also some government-led initiatives being administered through state government departments, such as in QLD, Tas and Victoria (Vic).

Most initiatives aim to develop an awareness of agricultural careers by producing online information and resources (website, DVDs). One example is the On-Track DVD, produced by Rural Skills Australia (and also available on their website). This DVD provides information on careers in various agriculture sectors including dairy, livestock, horticulture, cropping and viticulture. Another example is the Reach for the Skies DVD which promotes the forestry industry and its career opportunities and is produced jointly by the National Association of Forest Industries (NAFI) and the Australian Plantation Products and Paper Industry Council with funding from the Australian Government. Both initiatives include short interviews with young people within the industry, speaking about their own employment and training experiences. There are numerous other examples of initiatives which produce career resources (e.g. Hatchery to Home for the chicken industry; Cows Create Careers for the dairy industry).

Other initiatives promoting careers in agriculture do so by means other than DVDs, websites, brochures etc., and which extend beyond targeting students and young people. Some initiatives involve a range of activities to support schools, career advisers and parents in providing career advice. For instance, Careers Advice Australia (CAA) is an Australian Government initiative which includes a website that provides information to young people (13 to 19 year olds) on careers (including in agriculture), as well as providing advice to parents and schools to support young people in choosing their career. The initiative also supports a network of 57 Regional Industry Careers Advisors (RICAs) established to develop and distribute career information. RICAs are supported by 10 National Industry Career Specialists representing various industries, including agriculture. Among other things, the CAA program also provides funding to Rural Skills Australia to organise an agrifood industries forum to provide up to date information and provide networking opportunities for RICAs.

There are some state-specific programs aimed at promoting careers in agriculture. Many of these initiatives involve work placements or industry visits to encourage closer engagement with industry in their jurisdiction. For example, the Gateway Schools to Agribusiness initiative engages schools directly with QLD-based agribusinesses to promote agriculture to young people and encourage the development of a pathway or “gateway” between schools, TAFEs, universities, industry and employment. These types of initiatives arrange work placements for students to gain hands on experience in the industry or to provide a traineeship or cadetship within the industry. There are similar initiatives underway in Tasmania that involves work placements, farm visits and/or live-in arrangements. They aim to give high school students hands on experience and a greater understanding of agriculture sectors, including wool and horticulture and the career options available within them. They involve the Tasmanian Government (i.e. the Tasmanian Department of Primary Industries and Water and/or the Tasmanian Department of Education) and Rural Skills Australia. Another similar initiative GrowSmart Careers in Science Program operates in SA. This initiative raises awareness of senior high school students about science-based careers in horticulture. GrowSmart implements the Russell Model, developed at the University of Tasmania and rolled out to other states in Australia.

The Russell Model was developed in an attempt to address increase shortfalls in science-based occupations which support the primary industries. The University of Tasmania recently received funding through the Australian Government's Diversity and Structural Adjustment Fund to establish the Primary Industry Centre for Education (PICSE) to expand this model nationally into schools in rural and regional Australia. The PICSE program activities enable students and teachers to investigate science in the primary industries sector—for example, gene technology, precision agriculture, climate, environment, wine, aquaculture, genetics and horticulture—through primary industry science camps and professional development programs. Current university participants are Flinders University, University of Tasmania, University of Western Australia, University of New England, University of the Sunshine Coast, University of Southern Queensland.

The Siemens Science Experience is another initiative which provides Year 9 students with three days of science activities with scientists in universities and TAFE. It aims to provide hands on experience to students in science to promote science-related studies and career pathways. This program operates in all states and territories.

Little information was received as part of the stocktake on initiatives aimed at promoting the benefits of a regional lifestyle. One example is the Moving Forward - Making Provincial Victoria the Best Place to Live, Work and Invest program. This program provides a \$502 million package of 72 initiatives designed to boost sustainable economic growth and development in provincial Victoria, including \$100 million for the Provincial Victoria Growth Fund and \$200 million for the renewed Regional Infrastructure Development Fund. This initiative, now in its second phase, will focus on developing local approaches to tackling specific skills shortages. One element includes establishing a shearing skills centre of excellence to produce trained shearers and retain young people in rural communities.

Understanding the demand for and supply of workers in agriculture

A central element in building a capable, available, adaptive and effective workforce is having a clear understanding of the current labour market as well as being able to make accurate projections of the future demand and supply of workers. Critical to this is having access to relevant and accurate labour and skills data for the industry.

The Australian Government currently puts a significant amount of resources into collecting labour market and skills data for industries across Australia, including the agriculture, forestry and fisheries sectors. This involves work being undertaken by the Australian Bureau of Statistics (ABS) and DEEWR. The SkillsInfo website is a DEEWR initiative which provides access to detailed labour market information across industries. The website provides analysis of the key employment characteristics, trends and prospects of agriculture sectors and draws heavily on ABS data. The Australian Council of Deans of Agriculture is also conducting a project looking at the job market specifically in agriculture in Australia (ABC 24 July 2009.) While some work is being undertaken to collect employment data within jurisdictions (e.g. Department of Agriculture and Food, Western Australia), these efforts appear to be uncoordinated.

Developing and/or implementing workforce planning and development strategies for the industry

Workforce planning and development strategies are important for building and maintaining capacity and capability within an organisation. The stocktake provides information on initiatives in place in QLD and SA to develop and implement workforce planning and development strategies within the agriculture industry. For example, under the QLD Department of Primary Industries and Fisheries' Rural Training, Labour and Skilling Strategy, government is working with industry to develop workforce development plans, new business models, management and operational structures which better meet the needs of businesses and improve their attractiveness to current and future employees. This focuses on a range of sectors within QLD, such as beef, horticulture, sugar and aquaculture. In South Australia, the Building Business Capability in Workforce Development initiative is administered through the South Australian Department of Further Education, Employment, Science and Technology (DFEEST), Office for the Ageing and Safework SA. This initiative aims to improve workforce planning and development across the economy. While the initiative does not specifically target agriculture, it does have applicability to the industry. The initiative aims to develop and deliver a training program to businesses through the South Australian Department of Trade and Economic Development which will encourage employers to integrate business and workforce planning and implement workforce development strategies to resolve workforce issues.

There are also some initiatives in place to manage workforce risks such as an ageing workforce and the loss of knowledge and specialist skills from the workplace through retirement. For example, the Australian Animal Disease Diagnostic initiative, administered through Animal Health Australia, is establishing a national postgraduate training program in animal disease diagnosis to train at least 15 specialist animal disease diagnosticians each year over the next ten years. This will help address the critical and growing shortage of animal health laboratory diagnosticians and imminent retirements of veterinarians and animal health scientists.

As well as workforce management skills, business skills are also important to ensure the future growth and sustainability of agribusinesses. The stocktake provides information on government and industry initiatives focussed on improving the business management skills of farmers. However, it is unclear what provision there is within these initiatives to encourage farmers to develop and implement workforce planning and development strategies.

4.5.3 Skills initiatives

Identifying skills gaps and demand in the industry

Identifying current and future skills shortages or gaps within the industry are vital for ensuring that the available resources are being allocated to meet the priority skills needs of the industry. There are a number of initiatives currently being administered by both the Australian and state governments (e.g. QLD, SA and WA) to monitor current skill levels within the industry and forecast future skill requirements in the industry.

The Australian Government provides funding to AgriFood Skills Australia (ASA) to conduct an annual environmental scan of the different agrifood subsectors to determine current and future skills needs and training requirements. This information is used to develop, implement and improve training packages.

The Department of Agriculture and Food WA is undertaking work to collect qualitative and quantitative data on the skills requirements of WA primary industries and their supply chains. Funding has been provided by both QDPIF and QLD Department of Education and Training and the Arts (DETA) to develop the online tool - Skills Telegraph. This tool enables the government to collect information on the skill needs within the industry to assist in allocating appropriate resources (e.g. training programs) to address those skills shortages. QDPIF are currently reviewing the Skills Telegraph and its usage.

The Rural Skills Passport initiatives in QLD and WA, provides a formal record of an agricultural worker's qualifications in those states. Its key purpose is to provide evidence for a worker seeking recognition of current competencies. However, the Rural Skills Passport also provides the means by which skill gaps can be identified, yet there does not appear to be any efforts currently being made to use the information for this purpose.

4.5.4 Training initiatives

Developing appropriate training programs, tools and information to meet skills needs

It has been demonstrated that industry will undertake training if delivered in such a way that meets their needs and which is flexible, accessible and relevant. The stocktake provides information on a number of initiatives aimed at developing appropriate training programs and resources for industry. These initiatives involve training programs targeted at the industry as a whole, or particular sectors. There are also some initiatives which are developing training programs specifically for regions within jurisdictions.

ASA is currently involved in developing a range of training packages for agrifood sectors. This includes developing training programs in specific skills (e.g. in agri-tourism) and piloting training programs in the industry (e.g. training for the agri-aquaculture industry in regional WA). ASA is also involved in developing training programs and resources in core skills for the industry, such as language, literacy and numeracy.

The Australian Government, through DEEWR, funds the Targeting Skills Needs in Regions (TSNR) program. The program funds various projects aimed at identifying and supporting the implementation of practical, flexible and integrated strategies to improve the supply of skilled labour in strategically important regions and industry sectors. There are currently eight projects focussed on agriculture. These include:

- the Bundaberg Horticulture Professional Workforce Practices project which will enhance the capacity of regional horticultural enterprises to recruit, retain and develop their workforce. It builds the capacity of local training providers to deliver training relevant to current and emerging needs of the horticulture industry.

-
- Ignite—Developing Young People's Capacity for Innovation and Entrepreneurship by Building Sustainable Rural Industries which will bring together young people's capacity to establish agri-enterprises in South Australia that are commercially and environmentally sustainable and innovative.

While this work is done on a region by region basis, the outcomes are shared across states and territories via project network meetings.

To address the looming staff shortages in biosecurity and quarantine issues, an initiative led by QLD University of Technology and funded by the Australian Government, is the Australian Plant Biosecurity Curriculum project. This project develops a post-graduate training framework and course work to increase the knowledge and skills in the area of plant biosecurity.

Delivering and evaluating training programs and information

There are various initiatives in place across Australia to deliver training programs to the industry, to address immediate or future skills shortages as well as improve production and growth in certain sectors within the industry. For example, the Tasmanian Government has established the Tasmanian Skills Investment Fund (TasSkills) which tenders registered training organisations (RTOs) to deliver training programs in areas such as occupational health and safety, quality assurance, dairy farming, vineyards, wine marketing and vegetable processing. The NSW DPI in conjunction with various organisations who subsidise courses (e.g. Catchment Management Authorities) administers ProFarm, which delivers over 100 short courses and training initiatives for primary producers in NSW.

Some initiatives are also in place to meet the increasing demand for specialist skills or new skills within the industry. In WA, training is being delivered through TAFE Challenger to provide dual qualification in Turf Management and Irrigation at AQF levels 2&3. This will enable graduates to have the practical skills and knowledge to carry out basic irrigation work. In NT, the Development of the Value Adding/Forestry and Forestry Products initiative provides training in developing new products utilising waste produce. Other initiatives in place deliver training in specific skills including animal handling, occupational health and safety, farm management and marketing. Training programs are also being delivered to develop specialist skills in the areas of animal and plant health; in particular, better pest and disease identification, and to build skills in managing climate risks. Some initiatives also deliver training in skills which will lead to improved and sustainable operation of businesses and innovation, including making better use of value adding or having better control over value chains.

Some work is also underway to trial strategies for delivering training to industry. One particular example, led by Cotton Australia and funded by the NSW Government is the Cotton Industry Skills Development Pilot Project. This project is developing and trialling innovative strategies for delivering training to best address the skills needs of the cotton industry, such as machinery operator training in rural and regional areas.

As part of the Targeting Skills Needs in Regions initiative, the Bundaberg Horticulture Professional Workforce Practices project also aims to build the capacity

within the local training providers to deliver training relevant to current and emerging needs of the horticulture industry

Improving access to education and training

In combination with initiatives targeted at improving skills within industry, it would appear that a considerable amount of work is being done within government and industry to improve access to and understanding of options available for training. Education and training in agriculture skills is available through different educational pathways, ranging from school based training—through TAFE courses and other skills training—to university degrees. The Australian Government is working to improve the quality of, and access to, education at all levels. The provision of funding or subsidises for training is one of the mechanism designed to improve access to education and training. Funding is provided through Australian and state government programs to subsidise the training costs for industry groups as well as individuals already within the industry or for those looking to enter the industry.

Some examples of Australian Government funding programs for training are given below.

- FarmReady allocates \$26.5 million over four years to subsidise costs associated with attending training courses which develop strategies to adapt and respond to the impacts of climate change. This includes covering costs incurred for travel, accommodation and child care.
- The Australian Apprenticeships Incentives Program will provide \$3.8 billion over four years for employer incentives and personal benefits for Australian Apprentices. This includes a special incentive for employers of Australian Apprentices in skills shortage trades in rural and regional areas.
- The Productivity Places Program, (also involves state government funding) allocates \$2 billion over five years to provide 711 000 additional training places for new or existing workers within the industry.
- The Trade Training Centres in Schools program allocates \$2.5 billion over ten years to help increase the proportion of students achieving Year 12 (or an equivalent qualification) and address skill shortages in traditional trades and emerging industries.

There are also some state government initiatives in place which provide funding to unemployed or underemployed people to attend training and gain qualifications in agriculture (e.g. Farm Force initiative in Queensland).

Expanding people's understanding of the education and training system, including the vocational education and training system is also another mechanism for improving access to education and training. In Victoria, Skills Stores is a new government service which provides individuals with information about vocational education and training courses and providers in the local area. Skills Stores also helps people gain recognition for current skills and provides guidance on how best to gain qualifications or update or improve existing qualifications.

There are some innovative approaches being taken to improve access to training and information within agriculture, and rural communities in general. For instance, the Tasmanian Government is implementing the Community Knowledge Network

strategy which aims to build community knowledge through collaboration and by providing facilities that encourage adult learning. The network is strengthening links between information and community learning services of the Department of Education to improve the way Tasmanians access education and information through a state-wide network of service points.

There have also been a number of lobby groups established to encourage greater access to education and training, particularly in rural areas. These include the Rural Education Forum and the Australian Rural Education Alliance. Both forums involve national organisations, representing consumers and providers of education services in rural and remote Australia. Both groups have been established to lobby government to improve access to quality education and training in rural and remote communities.

Coordination and collaboration

The stocktake has highlighted a number of initiatives in place which take a collaborative and coordinated approach to addressing labour and skills issues.

In SA, the South Australian Works in the Regions program helps regional organisations and networks to identify their region's training and employment needs, and to address them in ways appropriate to each region. It facilitates a collaborative, coordinated and targeted approach to learning, training and employment issues at a regional level, and result in region-specific tailored programs. In QLD, Bundaberg, Inland Burnett and Atherton Tablelands Skills Formation Strategies encourage business, training providers, industry and community organisations and all levels of government to work together on identifying solutions to skills and labour shortages.

At a national level, the Primary Industries Education Foundation (PIEF) has recently been established, involving representatives from the education and training sector, agriculture and government. PIEF will provide national leadership and direction in raising awareness and promotion of primary industries in schools, including coordinating on a national level, the development and distribution of education information and resources.

4.5.5 Gaps or weaknesses in current initiatives

Providing non-technical skills (e.g. IT training, business management, risk planning, workforce development)

There appears to be only a small number of initiatives currently in place to improve the non-technical skills in farmers, such as business management, financial planning and risk management. These are core skills for any business but make up only a small proportion of the training programs being delivered in agriculture industries. The stocktake information also shows there is little effort being put towards improving the workforce planning and development skills of farmers.

Increasing workforce participation

The primary target group currently being addressed by workforce participation programs in agriculture are indigenous Australians, namely in NT. However these were only a very small proportion of the initiatives received in the stocktake. While

the Australian Government's Job Network program is dedicated to finding jobs for unemployed, it does not appear to target any specific groups within the community. There were no current initiatives in the stocktake which aimed to increase the workforce participation of groups such as women, those from a non-English speaking background or those with a disability in agriculture.

Professional development of trainers and teachers in agriculture

The stocktake has provided little evidence of activities being put towards the professional development of trainers and teachers in agriculture. There are initiatives in place to enhance the knowledge of teachers about agriculture sectors to enable them to give career advice to students. However, based on the information provided, there seems to be minimal opportunity for agriculture teachers and trainers to upgrade their technical knowledge and experience or, at the very least, establish networks with other teachers. The working group is aware of Australian Government initiatives which provide grants to teachers to upgrade their skills, but this is primarily targeted at science teachers. There appears to be a lack of activity to establish linkages between teachers, trainers and agricultural researchers and extension officers. This would help to ensure that the latest research findings and modern farming practices are being incorporated into training programs for farmers.

Evaluating initiatives

It is common practice for feedback to be sought from participants on the training program itself, including the delivery of the training and training resources usually at the conclusion of training. From the stocktake information received, there appears to be no work currently being undertaken to measure the longer term impacts of training in the agriculture industry. Since much of the disinterest in training and education has stemmed from the perception by many farmers that formal training does not provide immediate financial benefit to them and their enterprises, there would be value in evaluating the financial and other benefits (e.g. improved attraction and retention of workers) from training. Evaluating the effectiveness of initiatives and sharing the information amongst government, industry and training bodies, would also help improve future workforce and training initiatives.

Labour and skills data

Little information has been received on work being done within states or within specific sectors to collect detailed labour and skills data. There is some work being done by Horticulture Australia Council, Horticulture Australia Ltd and the industry's research & development corporations to gather data on the actual size (numbers, levels of operation, skills, etc.) of all the horticultural sectors in Australia. There is also some labour analysis work being conducted through the Department of Agriculture and Food WA to collect qualitative and quantitative data on labour trends of industry sectors and regions within WA.

4.5.6 Key lessons learned from past initiatives

The feedback received from past initiatives has highlighted a number of factors which influence the effectiveness of any workforce, skills and training program. These are:

- having dedicated staff working on the program or initiative
- receiving appropriate and reliable funding
- focussing on a particular target group in the industry (e.g. young people at school)
- providing quality, well planned and well presented information
- engaging with industry (including engaging with diverse groups and emerging industries)

-
- gaining industry ownership of the issue and
 - developing strategies that suit the issue, the subsector and the geographic region.

There are also some particular factors which impacted on the success of particular initiatives. For instance, initiatives aimed at increasing awareness and understanding of the industry and career opportunities, the best results were gained when students were directly engaged with industry (e.g. through work placements) or provided hands on training where they were able to apply their knowledge and skills in practical exercises.

The lessons learned from past initiatives also showed that acceptance of and participation in training programs, courses, projects or new training models was best achieved by involving industry in the development of the training, promoting the training courses to industry (e.g. through the internet) and engaging with industry to convince them of a need and demand for training and skills acquisition.

The success of a training program was also dependent on flexible delivery—taking into account the seasonality, distance and thinness of market. Experience has shown that farmers prefer that education and training be delivered in the following ways:

- local delivery
- short courses
- relevant training
- hands on training with preference for case-study method rather than lecture format
- flexibility to accommodate seasonal work demands
- provision of child minding
- home study (plus teacher support)
- provision for social interaction
- links to a qualification.

4.6 Conclusions

The stocktake has provided some insight into the diversity of activities being undertaken by government and industry to address labour and skills issues in agriculture. These initiatives are being undertaken at all levels of government, across a range of sectors within the industry and education and training organisations. The stocktake has also provided some valuable insights into lessons learned from past initiatives and key factors which influence the effectiveness of workforce and training initiatives.

The stocktake has shown a lot of government and industry initiatives are in place to promote agriculture and the career opportunities within it. Much of this activity focuses on developing and distributing promotional information via DVDs, websites, brochures and other information resources. However, given there are still problems in attracting people to the industry, there might be opportunities for revisiting these marketing approaches, which may include better targeting the information, with clearer and consistent messages. It would appear that those initiatives which engage industry closely with students and prospective employees (i.e. through work placements, traineeships, industry visits etc) are proving to be highly successful and

would be best adopted across the industry. At present, there only seems to be some states which have adopted such an approach.

Retaining workers is another factor affecting in the industry's ability to address its labour needs. The management skills and workforce planning strategies of employers have a significant impact on keeping employees motivated and satisfied with employment in agriculture. However, little information received on initiatives aimed at improving people management and workforce planning skills of farmers, suggests that this is a skills gap which requires more attention from government and industry.

The stocktake has highlighted some excellent examples of collaborative approaches being undertaken within jurisdictions to address labour and skills issues. Initiatives such as the Skills Formation Strategies in Queensland and the South Australia Works in the Regions program are collaborative programs that involve and engage all relevant stakeholders to collectively identify the solutions which best address their needs. The key to the building on the success of these regional activities is to share the learnings and solutions more broadly. This will avoid duplicating or 're-inventing' the wheel as well as achieve a more consistent approach to these issues. Industry must play a greater role in driving these solutions and facilitate the sharing this information across the industry.

A significant challenge for government and industry is raising awareness within the community of the initiatives. The stocktake has shown that the internet is now the primary mechanism being used to provide information on a program or initiative. However, on closer inspection of some of these websites, the information was difficult to access, out of date or simply inadequate. Obviously in rural and remote areas, there may also be technical difficulties in accessing the internet, so relying solely on electronic means of communication has its risks. This reinforces the need to ensure that if the information is to be made available on the internet, that the information is accessible and up to date and that alternative contact telephone numbers are supplied. A central repository of government and industry workforce, training and skills initiatives will undoubtedly help to improve accessibility to this information but unless it is closely managed and kept up to date, it will quickly lose it relevance and become unreliable. The information from this stocktake will be made available to the contributors to give a snapshot of the types of workforce, training and skills activities being undertaken by government and industry.

There is a clear gap in efforts by government or industry to collect robust and accurate labour and skills data. There is a lot of anecdotal evidence being used by industry to identify their issues. However, in the absence of hard data, it is difficult to get a firm understanding of the current and future employment trends in the industry and be able to identify and develop adequate and well targeted solutions.

The stocktake indicates that there are numerous opportunities for improving collaboration across government. This includes improving networks between the Australian and state departments of primary industries to discuss issues, share learning's, collect industry workforce data and coordinate and prioritise action. It also includes establishing partnerships across jurisdictions on existing or new initiatives to help share resources and engage more widely with stakeholders and industry sectors.

There are also opportunities for agriculture departments to build closer networks with education departments. This will help to improve awareness within the industry of these programs as well as help influence training and education policies and programs to ensure they suit the needs of the agriculture industry. While this interaction appears to be already occurring in some states, this needs to happen across all jurisdictions and at the federal level.

5. Meeting the challenge

The ongoing labour and skills shortages pose significant challenges for government and industry which go beyond the capacity of any one organisation or government portfolio to address.

The working group has identified a number of strategies that could contribute to the agriculture industry becoming 'an employer of choice'. The recommendations detailed on page 7 are a subset of these strategies.

5.1 Greater industry ownership and responsibility

Industry must recognise that attracting new entrants and retaining quality staff is as important to its future growth and productivity as is its economic survival and market development. Industry's own actions will have the greatest impact on addressing agriculture workforce issues. As such, industry must continue to take responsibility and ownership for attracting people to the industry and for ensuring their career development. Industry needs to take a more active role in promoting agriculture and career opportunities in agriculture. Producers should be advocates for the industry by delivering positive messages about working in agriculture and living in regional Australia. Producers should be encouraged to have a greater involvement with schools, other education institutions and communities and to participate in career expos. There also needs to be better promotion of the benefits that education and training can provide to a farm enterprise. Increasing access to industry traineeships or cadetships should also help to encourage more young people to take up a career in the industry and move into rural and regional areas.

Farmers must also look for innovative strategies for addressing their labour and skills shortages. This may include tapping into existing workers in the area or sharing skills between industries such as mining. These strategies need to be communicated to the wider industry and communities to show that challenges such as these can be in fact turned into opportunities.

Development and distribution of case studies is one way to promote industry activity and increase trends in business improvement.

Creating workplaces that are attractive and motivate employees will require some attitudinal changes within the industry, in particular a shift to recognising the importance of education and training in developing employees, and recognising the need to improve business and human resource skills.

The effectiveness of workforce, skills and training initiatives is dependent on strong industry leadership to drive and champion the relevant issues. The role of government is to foster leadership and help industry develop and implement well-targeted and long-term solutions to address its labour and skills needs. For any industry-driven approach, there may be benefits from having a high profile public or industry advocate as its focal point.

5.2 Improving collaboration and coordination across government

It has been a criticism by industry that solutions to labour and skills shortages have been hampered by the fragmented approach being taken by government. The

stocktake of workforce, skills and training initiatives in agriculture (Chapter 4) has shown that there are many programs being administered by different levels of government across Australia, many of which are duplicated across and within jurisdictions. The working group agrees that duplication is not only costly and ineffective, but it also makes it very difficult for industry to understand and access.

Much of this duplication arises from having all levels of government actively involved in both policy development and implementation. There is also a certain degree of overlap and duplication which is unavoidable to be able to address issues associated with an industry sector located in various communities which have their own unique attributes (e.g. structure, demography, geographic locations etc) and stakeholders (e.g. individual enterprises, industry bodies, government agencies, training providers). Given this, a one-size fits all approach will not be appropriate with the industry's issues being better addressed by the combined operations of several governments rather than through the limited efforts of one.

However, better delivery of targeted and innovative policies and programs can be achieved through a more coordinated and collaborative approach by government and better communication across jurisdictions to discuss and share information on workforce, skills and training issues. This needs to include forging stronger linkages across all levels of government and clarifying roles and functions. Collaboration across all levels of governments will help improve policy and implementation as well as eliminate administrative and regulatory barriers that currently exist. For example, a collaborative approach would help to identify the impediments to sourcing migrants for labour and determine how best to streamline these systems and processes to meet or resolve industry and state (and regional) needs. Since resources in all jurisdictions are limited, better coordination of government initiatives by leveraging off existing activities and/or re-aligning programs will also help streamline processes and reduce duplicity.

By working together, jurisdictions can help raise the profile of agriculture and bring a stronger focus to the workforce, skills and training issues facing the industry. Doing this in a coordinated manner, will also help influence the allocation and accessibility of government funding to agriculture, such as the funding available under the new COAG agreements. A concerted approach will also help influence the actions and decisions of government to give priority to the agriculture industry.

Better working relationships between agriculture departments and education departments must also be established. In some states, such as Queensland, close working relationships already exist between the education and agriculture agencies and appear to be operating effectively. These arrangements will help ensure that agriculture departments and their stakeholders are better aware of and informed about what labour and skills programs and assistance are available. It will also help to influence broader government policies to take into account the needs and circumstances of agriculture sectors.

5.3 Adopting an integrated and strategic approach

The working group has noted the array of government bodies, industry organisations, advisory committees, regional networks and other stakeholders involved in workforce, skills and training issues in agriculture. Many stakeholders are focussed on

addressing these issues by working to their own objectives, strategies, policies and programs, often with little if any interaction with other stakeholders.

Adopting more integrated and collaborative approaches to addressing labour and skills issues will help develop an agreed understanding of the key priorities and achieve a more consistent and strategic response to the issues. Stronger partnerships between stakeholders and enhanced awareness of existing mechanisms, knowledge, skills and resources of all stakeholders, will help to develop effective and efficient services and solutions.

A more integrated approach will also help develop and disseminate consistent, accurate and concise information to attract people into the industry and promote careers in agriculture. Strengthening partnerships across government and industry will also help address the duplication of initiatives and consolidate information which currently exists between jurisdictions and between industry groups.

The measure of its success however, will be real tangible solutions. There is a significant amount of activity undertaken by both industry and government in identifying problems, auditing and reviewing activities and proposing recommendations, yet there is very little evidence to show that this has focussed actions which need to be taken now and for the long-term.

5.4 Improving communication and engagement with stakeholders

There is a vast array of government bodies and industry organisations involved in labour and skills issues in agriculture. There have also been a significant number of consultative and advisory committees established to support these bodies and facilitate engagement and cooperation between stakeholders. However, it is difficult to understand the totality of these arrangements and the broader framework in which they operate given their number, the diversity of functions and their geographic location. Their effectiveness in consulting and engaging with industry to understand their needs and issues is also questionable given a lack of clarity of the roles and responsibilities of these groups and how they interact. Unless there had already been contact with some of these groups, stakeholders (including farmers) would find it extremely difficult to access and influence these groups.

In the absence of formal mechanisms, there is some sharing of information and knowledge on labour and skills issues through informal channels and on an ad hoc basis. Much of this is occurring through networks and relationships that have been built between relevant departments and stakeholder groups. However, these arrangements will only be useful if they are outcome-focussed relationships.

Building awareness of the government and industry groups and their role in skills, training and workforce development issues in agriculture is important. This will help stakeholders to understand the current initiatives and how they are being delivered. It will also help to improve linkages between groups, share information and develop and deliver more effective and long-term strategies for improving coordination and collaboration on labour and skills issues. This may also help identify models or processes currently operating within a state or states which may have merit in being adopted nationally.

5.5 Increasing workforce participation in agriculture

Despite the recent influx of skilled workers from the mining sector to the agriculture workforce, long-term solutions to agriculture's labour shortages are still needed. It is important that government and industry remain committed to improving workforce participation in the agriculture industry of target groups, such those with physical and mental disabilities, those from culturally, and linguistically diverse backgrounds, women, youth and Indigenous Australians. The agriculture industry also has a lot to offer these groups in terms of long-term employment opportunities which can also result in economic and social benefits for the community. This includes skills being learnt and developed on the job and significant opportunities for participation in the mainstream economy and community based livelihoods.

The stocktake information indicates that more effort is needed by government and industry to increase workforce participation in the agriculture industry of target groups. With respect to Indigenous Australians, COAG in March 2008, reaffirmed its commitment to close the gap on Indigenous disadvantage and agreed to a new national target for its reform agenda: halving the gap in Indigenous employment outcomes within a decade. PIMC have agreed that engagement with Indigenous communities in primary industries is a matter of priority. The Working Group for Advancing Indigenous Reconciliation in Primary Industries and Natural Resource Management are advising PIMC and the Natural Resource Management Ministerial Councils on specific ways to increase Indigenous participation in primary industries (and natural resource management). As part of this, consideration should also be given to building on successful models already operating in other states such as NT to achieve a nationally consistent approach.

The challenge will be to deliver appropriate training packages and resources which cater for target groups. Equally important is the provision of training for employers to develop their awareness and mentoring capabilities as well as develop skills which enable them to create a workplace that is inclusive and accessible to these groups. Government and industry will need to work together to achieve a consistent approach to addressing these issues across agriculture.

5.6 Building workforce planning and human resource management capabilities

Training to improve business management skills such as financial planning, risk management and marketing can help build farmers' self-reliance and preparedness and ensure the long-term viability and competitiveness of agriculture. However, the stocktake has highlighted a deficiency in activities aimed at addressing business skills gaps, including skills in human resource management and workforce planning within the agriculture industry.

Enterprises must look at implementing integrated solutions to improve their operation. This includes putting into place systems and processes to manage and develop their workforce, as well as developing key behavioural skills in the workplace such as leadership, communication and conflict management. Building skills to help improve human resource management and workforce capability will help attract and retain good quality, highly skilled employees, to better equip agriculture industries to respond to changes and sustain performance and productivity growth.

5.7 Improving data on the supply and demand of labour and skills in agriculture

There is limited hard data to quantify the extent and location of labour and skills shortages in agriculture. This is making it very difficult for government and industry to evaluate the future labour and skills needs of Australian agriculture, fisheries and forestry. Robust and accurate data on the supply and demand of labour and skills is critical for developing well informed and targeted policy.

There has been considerable anecdotal reporting of labour and skills shortages in Australian agriculture, but no attempt to evaluate the extent of that shortage on a comprehensive basis. While there are already efforts in place to collect labour and skill data for agriculture at the national level, there is limited data being collected which provides an accurate picture of the labour and skill demands at a regional level.

As well as helping to better target policies and programs, comprehensive and reliable data on current and future labour and skills needs in the agriculture industry provides evidence to justify where government support and funding should be allocated. Accurate labour and skills data may help develop a strong case for accessing funding potentially available to the agriculture industry (e.g. under the new COAG agreements).

6. Conclusion

There is considerable effort and resources being put into understanding and responding to workforce, skills and training issues in agriculture. There is a clear commitment from industry and government to addressing these issues, however, the work is fragmented and disjointed and involves multiple stakeholders, strategies and advisory groups without any obvious coordination between them. It needs a careful assessment of the existing organisations, frameworks, structures and initiatives to look at what can be built upon. A more strategic and national approach is needed which would enable the development of a long-term strategy and which would require both industry and government at national, state and regional levels to be engaged in and help deliver.

This process has been the first step in building a collaborative and coordinated approach by government towards addressing workforce, skills and training issues in agriculture. The establishment of the IDC Workforce, Skills and Training Working Group has been an important mechanism for focussing attention on these issues by discussing and sharing information across jurisdictions. The working group's activities, including the workshop and the stocktake, have helped to identify key government and industry contacts within jurisdictions and the range of activities being undertaken by government and industry. It has also facilitated a shared understanding of the issues, including the future challenges facing the industry.

The measure of the success of the working group has been improved communication and collaboration between states. Networks have begun to be built across jurisdictions with working group members being invited to participate in other advisory committees on workforce, skills and training issues or working collaboratively on issues outside the direct remit of the working group (e.g. improve linkages between the VET and higher education sectors).

There may be criticisms from industry that this report shows a lack of government action on these issues as the working group's recommendations are not proposing any major new initiatives or delivering any additional funding to address agriculture's labour and skills shortages. However, what must be appreciated is that this process is the first step towards getting better cooperation between states. It has started to build linkages and relationships across states and focussing attention away from developing individual jurisdictional responses to developing more coordinated and long term solutions.

This is not to say that a 'one size fits all' approach is appropriate. Given the differences which exist between jurisdictions, including industry composition and demographics etc., some solutions appropriate in one jurisdiction, may not be in another. However, there is merit in exploring future opportunities for leveraging off successful programs or initiatives or exploring models or arrangements within a jurisdiction which could be applied nationally.

Getting better cooperation between jurisdictions and industry to address Australia's agriculture workforce, skills and training is critical. The outcomes from the activities of the working group have highlighted the benefits to be gained from establishing a

mechanism which facilitates cross-jurisdictional efforts in this area on an ongoing basis. This would also help to establish a coherent and consistent framework for addressing labour and skills issues and identify priority actions and outcomes for governments to focus their resources. Industry and other key stakeholders must be consulted in this process to articulate their needs and concerns and share information on their activities and goals.

The working group's recommendations do not propose new initiatives or changes to existing government policy. Instead, the recommendations build on or leverage off existing government or industry measures aimed at addressing Australia's skills and labour shortages. This recognises the impact that the current global financial crisis is having on employment with some of agriculture's labour and skills demands now being met by workers coming from the declining mining sector. It also acknowledges the considerable effort and resources already being put towards addressing workforce and skills issues by jurisdictions. The working group sees that there is a more immediate need for achieving greater coordination of these efforts and making better use of existing resources and mechanisms, rather than developing new initiatives



References

- ABC SA Country Hour 2008, 'Drought policy review panel in SA', 28 August 2008.
<http://www.abc.net.au/rural/sa/content/2006/s2349337.htm> (accessed 17 November 2008).
- ABC Rural: 'Too many jobs, too few graduates, in agriculture' 24 July 2009.
<http://www.abc.net.au/rural/news/content/200907/s2635338.htm> (accessed 24 July 2009)
- AFISC (Agrifood Industry Skills Council) 2008a, Environmental scan of the agrifood industries.
http://www.agrifoodskills.net.au/uploaded/file/Agrifood%20Proposal_Final.pdf. (accessed 5 February 2009).
- AFISC (Agrifood Industry Skills Council) 2008b, Review of Australian Higher Education. Submission by Agri-Food Industry Skills Council. 11 August 2008.
- ASA (Agrifood Skills Australia, formerly AFISC) 2009, Environmental Scan of the AgriFood Industries. Canberra March 2009
- ASA (Agrifood Skills Australia, formerly AFISC) 2009b Business Skills Project – research overview. Canberra July 2009
- ASA (Agrifood Skills Australia, formerly AFISC) 2009c Regional Jobs Summit at Narrabri
http://www.agrifoodskills.net.au/display_page.php?id=326 (accessed 29 July 2009)
- Agriculture and Food Policy Reference Group 2006, *Creating our Future: Agriculture and Food Policy for the Next Generation*, report to the Minister for Agriculture, Fisheries and Forestry, February.
- ABS (Australian Bureau of Statistics) 2007, *Employee Earnings, Benefits and Trade Union Membership*, August 2007, Cat. No. 6310.0, Canberra.
- 2008, *Labour Force, Australia, Detailed Quarterly, November 2008*, trend data, Cat No: 6291.0.55.003, Canberra.
- Barr, N. 2004, *The Micro-dynamics of change in Australian agriculture 1976–2001*, Australian Census Analytic Program, Australian Bureau of Statistics, Canberra.
- Cordery, J. 2006, Strategies for Improving Employee Retention. Final Report on Project MLA PIP. 129.
- Coutts J, Roberts K, Frost F and Coutts A. 2004, *The Role of Extension in Capacity Building – What works and why*. Rural Industry Research and Development

-
- Corporation, Kingston, ACT. <http://www.rirdc.gov.au/reports/HCC/05-094.pdf> (accessed 25 November 2008)
- CSIRO (Commonwealth Scientific and Industrial Research Organisation) 2008, *Growing the Green Collar Economy: Skills and labour challenges in reducing our greenhouse emissions and national environmental footprint*. June 2008. http://www.acfonline.org.au/uploads/res/CSIROGreenJobsFinalReport_080625.pdf (accessed 13 January 2009).
- DAFF (Department of Agriculture, Fisheries and Forestry) 2006, Inquiry into rural skills training and research. Submission no. 66.
- DEEWR (Department of Employment, Education and Workplace Relations) 2008a, *Employment Outlook for Agriculture, Forestry and Fishing – July 2008*. <http://www.skills.info.gov.au>
- 2008b, *New Jobs – Employment trends and prospects for Australian industries - November 2008*. <http://www.skills.info.gov.au>
- FAO (Food and Agriculture Organization of the United Nations) 2006, *World agriculture towards 2030/2050. Interim Report*. Rome, June 2006.
- Gelade, S. & Fox, T. 2005, *Reality check: Matching training to the needs of regional Australia*. NCVER, Adelaide.
- Growcom 2008, *Horticulture Industry Workforce Plan*. Final Report 30 June 2008
- Growcom and HAL (Horticulture Australia Ltd) 2005, *Horticultural labour situation statement*, CDI Pinnacle Management, Brisbane.
- Holmes Sackett 2008, *Farmstaff 2008—Finding, Keeping And Rewarding People in Agriculture*. Holmes Sackett Pty Ltd, Wagga Wagga NSW.
- House of Representatives Standing Committee on Agriculture, Fisheries and Forestry 2007, *Skills: Rural Australia's Need*. Canberra. February 2007.
- Industry Skills Council 2008, 'Joint Industry Skills Council Response to the Review of Australian Higher Education Discussion Paper', July 2008.
- NFF (National Farmers Federation) 2008a, Submission to the Higher Education Review.
- 2008b, Labour shortage action plan. <http://www.nff.org.au/get/2449841548.pdf> (accessed 17 February 2009).
- 2008c., 'The Pastoral Partnerships Project. Discussion paper'. August 2008. <http://www.nff.org.au/policy/workplace.html> (accessed 17 February 2009).

-
- 2008d, Proposed pilot programme. Workforce from Abroad Employment Scheme. April 2008. <http://www.nff.org.au/policy/workplace.html> (accessed 28 January 2009).
- 2009, Federal Budget Submission 2009—feeding a hungrier world. <http://www.nff.org.au/publications.html> (accessed 19 January 2009).
- NSW Department of Education and Training 2007, *Skills for Sustainability*. <http://www.bvet.nsw.gov.au/pdf/BVETSustainabilityReport.pdf> (accessed 10 November 2008).
- NSW Standing Committee on State Development 2007, Inquiry into aspects of agriculture Report 32. November 2007.
- Pratley, J. 2008, Workforce Planning in Agriculture: Agricultural Education and Capacity Building at the Crossroads. *Farm Policy Journal*, 5(3), pp.27-42.
- Pratley, J., and Copeland, L. 2008, Graduate Completions in Agriculture and Related Degrees from Australian Universities, 2001-2006. *Farm Policy Journal*, 5(3), pp. 1-11.
- Primary Skills Victoria 2006, Rural Training and Career Pathways. Project Report for The Victorian Qualifications Authority. <http://www.eduweb.vic.gov.au/edulibrary/public/voced/Accreditation/Courses/rurltraining.pdf>. (accessed 5 February 2009).
- PC (Productivity Commission) 2008, *Inquiry into Government Drought Support*. Draft Inquiry Report. Canberra.
- Ruralscope 2007, Rural Futures. 15-25 year old future farmer study. <http://www.twia.org.au/RuralFuture%20Project%20Report%20Final%20September%202007.doc>. (accessed 25 November 2008)
- Rural Industry Working Group 2001, *Skill needs now and in the future in the rural industry*. Report for the Hon. Dr David Kemp MP, Minister for Education, Training and Youth Affairs.
- Rural Skills Australia 2008, National Industry Career Specialists (NICS) Network Environmental Scan. 30 April 2008
- SA Primary Industries Skills Council 2008, Key Migration Issues affecting Primary Industries. <http://www.pisc.org.au/skilled-migration/key-migration-issues-affecting-primary-industries-2.html> (accessed 9 January 2009).
- Skills Australia 2009, Foundations for the Future – Proposals for future governance, architecture and market design of the national training system. Canberra, July 2009.
- Stayner, R 1997, 'Getting into farming: family and financial factors'. Proceedings of the 1997 Outlook Conference, ABARE, Canberra.



Appendix 1. Terms of reference

Industries Development Committee Workforce, Skills and Training Working Group

Objective

To identify and recommend strategies to facilitate a coordinated and collaborative approach across government and industry in addressing the major workforce, skills and training issues affecting primary industries.

Problem

Securing an adequate supply of suitably skilled labour is important for optimising agricultural productivity and output.

A range of rural industries are reporting labour and skills shortages and this is likely to impede recovery from the drought and further industry development on a return to more typical seasonal conditions.

There is little hard data about what and where labour and skills shortages are occurring. Anecdotal evidence suggests that the extent and impact of shortages is likely to vary widely between industries and regions.

Although there are a considerable number of government initiatives in the different jurisdictions addressing these issues, there is limited stakeholder awareness and understanding of the extent of these. There is also limited coordination and collaboration between the jurisdictions.

Outcomes

Initially the working group will focus on the agriculture sector to identify options for:

- collective government action to address current and future labour and skill needs
- increasing awareness of current government and industry workforce, skills, training and extension initiatives
- increasing collaboration and coordination between government and industry on workforce, skills and training issues, and
- improving data on labour supply and demand in agriculture.

Members and Stakeholders

The working group will be made up of officers drawn from interested jurisdictions and will be chaired by a senior Australian Government official. The working group will consult with relevant government agencies and industry representatives.

Outputs and Timeframes

A progress report is to be provided to the Ministerial Council in **November 2008**.

A final report is to be provided to the Ministerial Council in **April 2009**.

Resources

The Department of Agriculture, Fisheries and Forestry will provide the working group secretariat. All jurisdictions will make a substantive contribution to the development of the working group reports.

Appendix 2. Working group membership

Industries Development Committee Workforce, Skills and Training Working Group

Commonwealth

Allen Grant (Chair)
Executive Manager – Agricultural Productivity
Department of Agriculture, Fisheries and Forestry

Greg Williamson
General Manager – Innovation, Productivity and Food Security
Department of Agriculture, Fisheries and Forestry

Queensland

Rob Setter
Acting Director-General
Queensland Department of Primary Industries and Fisheries

John Bird
General Manager - Rural Skills, Training and Labour Strategy
Queensland Department of Primary Industries and Fisheries

Western Australia

Lewis Mavrantonis
Farm Business Development
Department of Agriculture and Food, Western Australia

New South Wales

Cameron Archer
Principal Colleges
NSW Department of Primary Industries

South Australia

Andrew Curtis
Program Manager – Workforce Development
SA Department of Primary Industries and Resources

Victoria

Yvette Armstrong
Rural Policy
Victorian Department of Primary Industries

Appendix 3. Workshop Program

Date: Thursday 31 July 2008
Venue: Department of Agriculture, Fisheries and Forestry (DAFF)
 18 Marcus Clarke St. Canberra City, Level 7, Room 07

8.30 am	Introductory Session	Allen Grant (Department of Agriculture, Fisheries and Forestry)
Labour and skills data for the agriculture industry		
9.00 am	Presentation: Adequacy of agriculture labour and skills data	Speaker: Denis Hart (Department of Education, Employment and Workplace Relations)
	Open discussion	Chair: Allen Grant
10.00 am	<i>Break</i>	
Higher Education		
10.15 am	Presentation: Higher education issues for agriculture	Speaker: Prof Jim Pratley (Australian Council of Deans of Agriculture)
	Open discussion	Chair: Allen Grant
Vocation Education and Training		
11.15 am	Presentation: Overview of Skilling Australia for the Future program	Speaker: Melissa McEwen (Department of Education, Employment and Workplace Relations)
	Presentation: Vocational education and training issues for agriculture	Speaker: Arthur Blewitt (Agri-Food Industry Skills Council)
	Open discussion	Chair: Allen Grant
12.30 pm	<i>Lunch</i>	
An Industry Perspective		
1.15 pm	Presentation: An industry perspective of workforce, skills and training issues	Speaker: Andrew Wilshire (National Farmers' Federation)
	Open discussion	Chair: Allen Grant
Workforce, Skills and Training Working Group ONLY		
2.15 pm	Round-up Session	Chair: Allen Grant
3.00 pm	<i>Break</i>	
3.15 pm	Round-up Session (cont.)	Chair: Allen Grant
4.30 pm	Workshop Concludes	

Appendix 4. Stocktake template & questionnaire

Initiative title

Lead agency/organisation

Other agencies and industry organisations involved

Who is involved in the initiative? What is their contribution e.g. advisory, funding, delivery?

Initiative objective

What does the initiative aim to achieve? Why was it introduced?

Initiative description

What does the initiative involve? How does it operate?

Target group or end users

Who is the initiative aimed at?

Timeframe and funding

How long will the initiative run? How much funding has been allocated and by whom?

Key outputs

What are the deliverables associated with the initiative?

Outcomes

What measurable outcomes have there been from the initiative?

Lessons learned (optional)

Outline aspects of the initiative that worked well, things that did not work well and things to consider for future implementation of initiatives.

Plans for the future

What will the continuation of the initiative depend upon?

Contact officer and web details

List contact details and website addresses (if applicable) for initiative

Other comments

Any additional information not previously provided

Questionnaire

The purpose of this short questionnaire is to gather information from jurisdictions about the effectiveness and any lessons learned from previous activities that focus on workforce, skills and training issues in agriculture.

LESSONS LEARNED

What worked well and why?

What did not work well and why?

KEY STAKEHOLDERS

Who are your key stakeholders in relation to workforce, skills and training issues in agriculture?

What mechanisms do you use to engage with these stakeholders?

FUTURE CHALLENGES

Where are the current gaps in the work being done on workforce, skills and training in agriculture?

What do you perceive as the future challenges/key issues facing agriculture in the future?

IMPROVING COLLABORATION AND COORDINATION

What areas would benefit most from improved collaboration and coordination between government and industry?

Do you have any examples to show the benefit of collaboration and coordination between government and industry?

Appendix 5. List of stocktake initiatives

Initiative	State program operating in	Lead agency/organisation	For further details
The Farmer's Guide to Managing Climate Risk - workshop	ACT	ACT Natural Resources Management Council (funded by Australian Government)	
The Australian Animal Disease Diagnostic Disease Initiative	Australian Government	Animal Health Australia	http://www.animalhealthaustralia.com.au/
Asia Pacific Forestry Skills and Capacity Building Program	Australian Government	DAFF	http://www.daff.gov.au/forestry/international/asia_pacific_forestry_skills_and_capacity_building_program
FarmReady	Australian Government	DAFF	http://www.daff.gov.au/climatechange/australias-farming-future/farmready
Forestry Industry Skills Database and Data Needs	Australian Government	DAFF	National Forest Policy Section, Forestry Branch, DAFF
FarmBis	Australian Government	DAFF	Program finalised 30 June 2008. See Climate Change Adjustment Program.
Advancing Agriculture Fund (AgFund)	Australian Government	DAFF	http://www.daff.gov.au/agriculture-food/aaa/advancingindustries/agfund
Advancing Agricultural Industries - Action Grants	Australian Government	DAFF	Terminated program. No contact details available
Aquaculture Industry Action Agenda - Making the most of education, training and workplace opportunities	Australian Government	DAFF	http://www.daff.gov.au/fisheries/aquaculture/agenda
Australian Agricultural Industries Young Innovators and Scientists Awards	Australian Government	DAFF	http://www.daff.gov.au/brs/science-awards
Meat Inspection Traineeship	Australian Government	DAFF	Meat Program AQIS, GPO Box 858, Canberra ACT 2601
Stocktake of Animal Welfare Education and Training	Australian Government	DAFF	http://www.daff.gov.au/animal-plant-health/welfare/aaws/stocktake
Primary Industries Education Foundation	Australian Government	DAFF	http://www.tocal.com/pief/piefmember.pdf
Training Scholarship In Diagnosing Emergency Plant Pests and Diseases- initiative under the Quarantine Research and Preparedness Plan (election commitment)	Australian Government	DAFF (Office of the Chief Plant Protection Officer)	http://www.daff.gov.au/animal-plant-health/plant/publications/ppn/plant_protection_news_-_october_2008
Climate Change Adjustment	Australian	DAFF (Centrelink	http://www.daff.gov.au/climatechange/australias-farming-future/climate-change-adjustment-assistance

Program - Advice and Training Grant	Government	delivery)	
Professional Advice and Planning Grant	Australian Government	DAFF (Centrelink delivery)	Drought Assistance Line 132316 or http://www.daff.gov.au/agriculture-food/drought/assistance/advice
Exceptional Circumstances (EC) Exit Package 2007- Professional Advice and Retraining Grant	Australian Government	DAFF (Centrelink delivery)	http://www.daff.gov.au/agriculture-food/drought/assistance/exit-grants
Harvest Labour Services	Australian Government	DEEWR	http://www.workplace.gov.au/workplace/Programmes/HarvestLabour/
Career Advice Australia	Australian Government	DEEWR	http://www.careeradviceaustralia.gov.au/
Trade Training Centres in Schools	Australian Government	DEEWR	http://www.deewr.gov.au/Schooling/TradeTrainingCentres/Pages/default.aspx
Career Adviser Grants	Australian Government	DEEWR	Program finalised
Productivity Places Program	Australian Government	DEEWR	http://www.deewr.gov.au/Skills/ProductivityPlaces/Pages/default.aspx
Tools for Your Trade payment initiative	Australian Government	DEEWR	http://www.toolsforyourtrade.com.au mailto:
Workforce Innovation Program	Australian Government	DEEWR	http://www.deewr.gov.au/wip
Job Network Services (to be replaced by Universal Employment Services)	Australian Government	DEEWR	http://www.workplace.gov.au/workplace/Programmes/JobNetwork/
Targeting Skills Needs in Regions (TSNR) Program	Australian Government	DEEWR (with COAG)	1300 363 079
Australian Regional Agriculture and Mining Skills (ARAMS) Project	Australian Government	DEEWR / NFF / MCA	http://www.minerals.org.au/ http://www.nff.org.au/policy/workplace.html
Pacific Seasonal Worker Pilot Scheme (Special Program Visa Subclass 416)	Australian Government	DEEWR/DIAC	http://www.workplace.gov.au/workplace/Individual/Migrant/PacificSeasonalWorkerPilotScheme.html http://www.immi.gov.au/visitors/special-activity/pacific-seasonal-worker.htm
Caring for Our Country	Australian Government	DEWHA / DAFF	http://www.nrm.gov.au/
Natural Heritage Trust (NHT) National Action Plan for Salinity and Water Quality (NAPSWQ)	Australian Government	DEWHA/DAFF	Program finalised 30 June 2008. See Caring for Our Country.
Regional Sponsored Migration Scheme	Australian Government	DIAC	http://www.immi.gov.au/skilled/skilled-workers/rsms/
Special Program Visa Subclass 416 - general	Australian Government	DIAC	http://www.immi.gov.au/visitors/special-activity/416/
Temporary Business (Long Stay) - Labour Agreement	Australian Government	DIAC	http://www.immi.gov.au/skilled/skilled-workers/la/

Working Holiday Maker Visa (Subclass 417) and Work and Holiday Visa (Subclass 462)	Australian Government	DIAC	http://www.immi.gov.au/visitors/working-holiday/
Cooperative Research Centres Program	Australian Government	DIISR	https://www.crc.gov.au/Information/default.aspx
ForestWorks ISC	National	ForestWorks	http://www.forestworks.com.au/careers/
Horticulture Industry Workforce Planning Project	National	Growcom	http://www.growcom.com.au/uploads/22341APUHorticulture_Industry_Workforce_Plan_Project_Brief.pdf
Growcom Workforce Planning for Horticulture (Final report)	National	Growcom / DAFF	http://www.growcom.com.au/uploads/22341APUHorticulture_Industry_Workforce_Plan_Project_Brief.pdf
Industry Development Officers	National	HAL	http://www.horticulture.com.au
Drought Information for Irrigators in the Murray-Darling Basin	National	HAL / DAFF	http://www.horticulture.com.au/mdbdroughtinfo/
Agriculture, Food Manufacturing Pathways Charts	National	Industry Training Australia Pty Ltd (under contract to DEEWR)	http://www.aajobpathways.com.au/index.cfm
Regional Employers Alliance Project (REAP)	Australian Government	Local Government Managers Australia / DEEWR	http://www.lgma.org.au/downloads/File/REAP%20Phase%20%20Final%20Report%2024_12_08.pdf
AgriFood Careers webportal	National	Rural Skills Australia (RSA)	http://www.agrifoodcareers.com.au/home.php?id=1
AgriFood Industry Forum for Regional Industry Career Advisers (RICAs)	National	RSA	No contact details available
ONTrack	National	RSA	http://www.ruralskills.com.au/
Rural Skills Careers - DVD (AgriFood Careers?)	National	RSA	http://www.ruralskills.com.au/
Language Literacy and Numeracy Programs	National	AgriFood Skills Australia (ASA)	http://www.agrifoodskills.net.au/
"If Only I Knew" AUSTimber 2008 - Forestry Industry Forum for Careers Advisers	National	AUSTimber	http://www.austimber2008.com.au/PDFs/careers_conf.pdf
From Hatchery to Home	National	Australian Chicken Meat Federation	http://www.chicken.org.au/
Apprenticeship Training (Fee) Vouchers	Australian Government	DEEWR	http://www.australianapprenticeships.gov.au/Australian_Apprentice/training_vouchers.asp
Commonwealth Trade Learning Scholarships	Australian Government	DEEWR	http://www.australianapprenticeships.gov.au/employer/incentives.asp#Scholarships
Standard Commencement, Recommencement and Completion Incentives	Australian Government	DEEWR	http://www.australianapprenticeships.gov.au/employer/incentives.asp
Tools for Your Trade Initiative	Australian Government	DEEWR	http://www.toolsforyourtrade.com.au/

Rural and Regional Skills Shortage Incentives	Australian Government	DEEWR	http://www.australianapprenticeships.gov.au/employer/incentives.asp#Rural%20and%20Regional%20Incentive
AgriFood Skills Australia (ASA) (Formally known as AgriFood Industry Skills Council)	National	ASA	http://www.agrifoodskills.net.au/
Rural Skills Australia	Australian Government	DEEWR	http://www.ruralskills.com.au/
Institute for Trade Skills Excellence	Australian Government	DEEWR	http://www.tradeskills.com.au/
Exceptional Circumstances Drought Declared Incentive	Australian Government	DEEWR	http://www.australianapprenticeships.gov.au/employer/incentives.asp#Drought%20Declared%20Incentive
Temporary Business (Long Stay) - Standard Business Sponsorship (Subclass 457) visa	Australian Government	DIAC	http://www.immi.gov.au/skilled/skilled-workers/sbs/
Industry undertaking research into actual size of all Horticultural industries	National	HAC and HAL	http://hac.org.au/
Reach for the Skies - DVD	National	National Association of Forestry Industries (NAFI)	02 6285 3833
Brochures produced by Rural Skills Australia	National	RSA	http://www.ruralskills.com.au/
School to Industry Program (See also AgForce School to Industry Partnership Program)	National	RSA	http://www.agrifoodcareers.com.au/home.php?id=1
Career Advice Australia - NICS Agri-Food	National	RSA	http://www.agrifoodcareers.com.au/home.php?id=1
KidStart Farms - Golden Circle	National	RSA	Program finalised
Education and Training Advisors Network	National	RSA/DEEWR	http://www.ruralskills.com.au/
Agri-tourism skills sets and implementation tools	National	ASA	http://www.agrifoodskills.net.au/
Research and Development Corporations	Australian Government	Various RDCs	http://www.ruralrdc.com.au/
Machinery Partnership Pilot Training Program - North West NSW	NSW	ASA	http://www.agrifoodskills.net.au/
National accreditation and professional development program for agriculture, natural resources and related sectors	NSW	Australian Institute of Agricultural Science and Technology	http://www.tocal.com/
Cotton Industry Skills Development Pilot Project	NSW	Cotton Australia	http://www.cottonaustralia.com.au/library/publications/2007-08_Cotton_Australia_Annual_Report.pdf
PROfarm	NSW	NSW Department of Primary Industries	http://www.dpi.nsw.gov.au/agriculture/profarm

Ti Tree Indigenous Horticulture Training and Employment Programme	NT	Centrefarm Aboriginal Horticulture Ltd	http://www.centrefarm.com/
Indigenous Pastoral Program	NT	Department of Regional Development, Primary Industry, Fisheries and Resources	http://www.nt.gov.au/d/Primary_Industry/index.cfm?Header=Indigenous%20Horticulture
Development of the Value Adding/Food Processing Industry in the NT	NT	Primary Industries Training Advisory Council (NT)	http://www.pitac.org.au/
Development of the Value Adding/Forestry and Forestry Product in the NT	NT	Primary Industries Training Advisory Council (NT)	http://www.pitac.org.au/
Jumbuck Pastoral	Other	Jumbuck Pastoral	http://www.jumbuckpastoral.com/pages/careers.html
Australian Plant Biosecurity Curriculum	Other	QLD University of Technology	http://www.scitech.qut.edu.au/research/areas/earth_projects.jsp
Junior AgCamp	Other	University of Western Sydney (Hawkesbury)	http://uws.edu.au/natural_sciences/sns
Ollie's Island	Other	Sustain Ability International	http://www.olliesworld.com/island/aus/index.htm
Sustainability - Promoting of Agriculture in Schools	Other	Sustain Ability International	http://www.sustain-ability-int.com/
Tomorrow's Leasers for Sustainability (TLIS) Project	Other	Sustain Ability International / Forest Wood Products Australia Ltd	http://www.sustain-ability-int.com/
Special Interest Group	Other	Australian Institute of Agricultural Science and Technology	http://www.aiast.com.au/
Promotion of Agriculture in Schools	Other	CB Alexander Foundation	http://www.tocal.com/agsch1205.pdf
Careers in the Pork Industry	Other	National Centre for Pork Industry Training and Education	http://www.nationalporkcentre.com.au/html/piged.html
Rural Education Forum Australia (REFA)	Other	REFA	http://www.refa.edu.au/asp/index.asp?pgid=3806
Australian Rural Education Alliance (See REFA)	Other	Rural Education Forum Australia	
SiMERR The National Centre of Science, Information and Communication Technology and Mathematics Education for Rural and Regional Australia (SiMERR)	Other	University of New England (UNE)	http://www.une.edu.au/simerr/pages/index.php
Young Gourmet "Farm to Table" Competition	Other	Young Gourmet	http://www.younggourmet.com/

AgForce School to Industry Partnership Program	QLD	AgForce Queensland	http://www.agforceqld.org.au/tseducation.asp
Horticulture Skills Formation Strategy, Bundaberg Qld	QLD	RSA and Bundaberg Fruit and Vegetable Growers (BFVG)	http://www.dpi.qld.gov.au/documents/BusinessAndTrade_BusinessDevelopment/Bundaberg-3247-SFS-P3-4.pdf
Bundaberg Careers Pathways for Horticulture	QLD	DPI&F (Qld), RSA, HAL, RSA, ASA and BFVG	http://www.agrifoodcareers.com.au/Horticulture/index.html
Rural Training, Labour and Skilling Strategy	QLD	Department of Primary Industries and Fisheries (DPIF)	http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/16_10807_ENA_HTML.htm http://education.qld.gov.au/curriculum/area/science/animal-poultry.html
World's Poultry Science Association High School Poultry Industry Education Competition	QLD	Department of Primary Industries and Fisheries (DPIF)	http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/4791_4235_ENA_HTML.htm
Hermitage Research Station Schools' Plant Science Competition	QLD	Department of Primary Industries and Fisheries (DPIF)	http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/4791_4235_ENA_HTML.htm
Skills Telegraph	QLD	DPI&F (Qld)	http://skillstelegraph.dpi.qld.gov.au/
Gateway Schools	QLD	QLD Department of Education, Training and the Arts (DETA)	http://www.gatewayschools.qld.gov.au
Farm Force I - V	QLD	Quality Innovation Training and Employment	http://www.employment.qld.gov.au/jobseekers/projects/current/NQ.htm#4978
Siemens Science Experience 22-24 January 2008	QLD	University of Southern Queensland	http://www.scienceexperience.com.au/about
Growsmart Careers in Science Program (part of PICSE)	SA	Riverland Horticulture Council Training	http://www.growsmart.com.au/
South Australia Works in the Regions	SA	Department of Further Education, Employment, Science and Technology (DFEEST)	http://www.saworks.sa.gov.au/Informationfor/Regions/tabid/81/Default.aspx
Planning for Recovery Program	SA	Department of Primary Industry and Resources South Australia (PIRSA)	Prudential and Rural Financial Services 08 8226 0240
Building Business Capability in Workforce Development	SA	Department of Trade and Economic Development (DTED)	http://www.workforceinfoservice.sa.gov.au/tools/bbctoolkit
Ignite	SA	DFEEST (Office of Youth)	http://www.officeforyouth.sa.gov.au/ignite
Career Pathways in the Australian Meat Industry: South Australia	SA	Food, Tourism and Hospitality Skills Council	http://www.ftskillscouncil.com.au/downloads/Career%20Progression%20Booklet.pdf info@ftskillscouncil.com.au
Limestone Coast Population and	SA	Limestone Coast	http://www.saworks.sa.gov.au/Informationfor/Regions/LimestoneCoast/tabid/123/Default.aspx

Workforce Development Plan		Regional Development Board	
Regional Skills Mobility Programme	SA	Primary Industries Skills Council Inc SA	http://www.pisc.org.au/
Skills Recognition Service	SA	SA Works (DFEEST)	http://www.work.sa.gov.au/
Discover Agriculture	TAS	RSA	www.ruralskills.com.au
Developing Skills for Sustainable Agrifood Value Chains	TAS	COAG Initiative- Training & Skills Needs in the Regions	www.skills.tas.gov.au
Community Knowledge Network Strategy	TAS	Department of Education	www.education.tas.gov.au
SMART Farming (Particularly School Farms Programs and FarmPoint)	TAS	Department Primary Industries and Water	www.farmpoint.tas.gov.au
Science and Wool	TAS	DPIW	www.dpipwe.tas.gov.au
Introduction to Horticulture and Sustainable Living Industries	TAS	RSA	www.ruralskills.com.au
TasSkills Investment Program	TAS	Skills Tasmania	www.skills.tas.gov.au
Future Focus - AgriFood (Tasmania)	TAS	Tasmania Central North LCP	http://www.njl.org.au/profile.html
15-25 year old Future Farmer study	TAS	Tasmanian Women in Agriculture	info@twia.org.au
Year 9 and 10 School Scientific Research Awards	TAS	University of Tasmania, School of Agriculture	www.utas.edu.au
Plenty Food Group Network	VIC	Plenty Food Group	http://www.plentyfoodgroup.com.au/
The People in Dairy (See also 'Cows Create Careers')	VIC	Dairy Australia	http://www.thepeopleindairy.org.au/
Student Vacation Program	VIC	Dairy Innovation Australia	students@dairyinnovation.com.au
Future Farming strategy (incorporating the Primary Industries Workforce Development Plan)	VIC	Department of Primary Industries	http://www.dpi.vic.gov.au/futurefarming
Rural Skills Connect	VIC	Regional Development Victoria	http://www.moirabusiness.vic.gov.au/BusinessNetworks/RuralSkillsConnect.aspx
Moving Forward - Making Provincial Victoria the Best Place to Live, Work and invest	VIC	Regional Development Victoria, within DIIRD	http://www.business.vic.gov.au/
Skills Stores	VIC	Skills Victoria	http://www.skills.vic.gov.au/skillsstores
Securing Jobs for Your Future - Skills for Victoria	VIC	Skills Victoria, within the Department of Industry, Innovation and Regional Development (DIIRD)	http://www.skills.vic.gov.au/corporate/directions/skillsreform

Rural Training and Career Pathways Project Report	VIC	The Victorian Qualifications Authority	http://www.eduweb.vic.gov.au/edulibrary/public/voced/Accreditation/Courses/rurltraining.pdf
Pathways to a Career: Dairy; Grains; Sheep and Wool (Rural Training and Career Pathways in Agriculture)	VIC	Victorian Qualifications Authority	Level 2, 33 St Andrews Place, East Melbourne VIC 3002 03 9637 2806
Global Skills for Victoria	VIC	Workforce Victoria, within DIIRD	http://www.liveinvictoria.vic.gov.au/digitalAssets/1124_Global%20Skills%20for%20Victoria.pdf
Cows Create Careers	National	Dairy Australia	http://www.thepeopleindairy.org.au/projects/cows-create-careers.htm For DVD training resources JayDee Events Pty Ltd 03 5659 4219
Dual qualification in Turf Management and Irrigation at AQF levels 2&3	WA	Challenger TAFE	http://www.challengertafe.wa.edu.au/Pages/default.aspx
Labour Analysis	WA	DAFWA	http://www.agric.wa.gov.au
Skills Needs Analysis	WA	DAFWA	http://www.agric.wa.gov.au/content/amt/agb/farmbis.htm
Rural Skills Passport	WA	DAFWA	http://www.agric.wa.gov.au/content/amt/agb/farmbis.htm
Conservation and Land Management	WA	Jobs West	http://www.jobswest.com.au/
Dairyworks	WA	Western Dairy	http://www.westerndairy.com.au/

Total number of initiatives

136