National Agribusiness Education, Skills and Labour Taskforce (NEST)

National Agriculture Workforce Development Plan

June 2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This Plan reflects the commitment of the National Farmers' Federation (NFF) to develop an Agriculture Workforce Development Plan to increase the competitiveness of Australian agriculture by delivering on the future labour, skills and education needs of the industry.

The Australian agriculture sector is a critical contributor to the Australian economy. In 2012-13, farm and fisheries production and processing accounted for approximately two percent of Australia's GDP and 16 percent of the total value of merchandise trade exports. Over the past thirty years, the value of Australian agricultural exports has grown from $8.2 to $32.5 billion, and is today sitting at approximately $38 billion. Combined with other businesses in the agriculture supply chain, the total revenue of the Australian Agribusiness in 2013-14 was more than $200 billion.[1] Workforce development and improved productivity in agriculture are fundamental elements of a robust Australian economy.

Despite this growth, the agriculture workforce is facing significant challenges. The workforce is ageing and it is difficult to attract and retain workers both at skilled and semi-skilled levels. Seasonal fluctuations in labour demand, over which farm employers have little or no control, only serve to exacerbate the problem.

At the same time, demand for Australian agricultural produce continues to grow. Food and fibre commodities are integral elements of everyday life and especially overseas, demand for Australian produce often far exceeds supply. The traditional industry structure and demography is undergoing rapid change as a result of increased foreign investment, heightened farm consolidation and the rise of peri-urban agriculture. These indicators show the enormous potential for growth in Australian agriculture in the years ahead. To fully realize that potential, barriers to growth in the Australian agricultural workforce must addressed now.

The Plan recommends the formation of a new national body to oversee and coordinate the efforts of industry to develop workforce strategies for agriculture, horticulture and agribusiness with direct links to areas of government with responsibility for regulating the agriculture workforce.

Immediate priorities include collection of relevant and current data on the state of the Agriculture Labour Force, to ensure that policy settings underpinning agricultural workforce development continue to be targeted to meet industry needs; expansion of the Seasonal Worker Program to cover all agricultural industries; overhauling the ANZSCO system so that it accommodates relevant industry skills and qualifications and a new funding model which supports the delivery of training through Skill Sets. Over time, these measures will incrementally increase the underlying skill-base of the agriculture sector and ease labour market pressures, resulting in increased productivity and opportunities for innovation.

The NFF calls on the Government to adopt the Plan as setting the basis for future workforce development and planning policy in the agriculture sector.

[1] IBISWorld, *Agribusiness in Australia: A Market Report* January 2014

SECTION 1: INTRODUCTION AND OVERVIEW

In 2012, the National Workforce Development Fund provided funding to the NFF in connection with the Agriculture Workforce Development – Strategic Priorities Support Project. The aim of the project was to collect the necessary data in collaboration with AgriFood Skills Australia's National Regional Initiatives Project, to provide evidentiary support for identified key priorities in a new Agriculture Workforce Development Plan (the Plan). The overriding goal is to enable the agriculture sector to remain competitive by retaining and recruiting a skilled workforce.

There are a host of groups involved in the education, training, skills and careers sector within the agriculture sector. In response to concerns about a lack of co-operation and coordination across these various groups, the NFF facilitated the formation of the National Agribusiness Education, Skills and Labour Taskforce (NEST). The intention was to bring together key influencers in the education and training space to develop a collaborative strategy for raising awareness, interest and participation in all aspects of agriculture sector, through an industry owned, developed and endorsed model. NEST aims to:

- improve communication and engagement between industry, educators and government;
- adopt integrated and strategic approaches to developing and implementing solutions;
- increase workforce participation in agriculture;
- build workforce planning and human resource management capabilities;
- improve data on the supply and demand of labour and skills in agriculture; and
- facilitate greater industry ownership and responsibility.

Under the direction of NEST and with the support of Rural Skills Australia, the Plan (developed by the NFF) is intended to set the foundation for increased productivity in agriculture into the future. It does this by dealing with the following issues, identified by NEST along the way:

- The creation of credible training programs combined with job placement, to assist with industry engagement and create linkages to career pathways.
- The potential for Skill Sets to meet industry skill needs in a more targeted and efficient way, with private markets setting course costs.
- The role for a bridging course to assist industry participants move between vocational education training (VET) and tertiary courses.
- Alignment of University and VET courses to deliver best practice to industry, linking Australia's research and development (R&D) outcomes with the education system.
- The value of developing school-based partnerships across all sectors to shift the perception that agriculture equals farming.
- The need for development of online resources content for primary, secondary, VET and tertiary education to aid in the delivery of cross curriculum and best practice course delivery across Australia.
- The implementation of an industry labour sharing model to increase labour retention, up skilling and career development for agriculture employers.

SECTION 2: THE AUSTRALIAN AGRICULTURE WORKFORCE

Industry demographics

Australia's agriculture sector is made up of approximately 135,000 farm or farm-related businesses, ranging from large multinational companies through to small family owned enterprises.[2] The industry has a workforce of more than 319,000 people, with 57% based in regional Australia.[3] Despite the number of farms in Australia falling by more than 40 per cent, or 100,000, between 1981 and 2011[4], the industry is a significant contributor to the national economy. The value of Australian agricultural exports today sits at approximately $38 billion.

The demographic make-up of the industry has implications for attraction and retention of workers, the development of succession strategies, as well as strategies aimed at increasing workforce participation more broadly. The majority of Australia's farmers are Australian born males over the age of 50. Part-time employment for males and industry has increased by 9.7 percent of the last five years whereas full-time employment decreased by 5.2 percent. Half of all farmers work more than 49 hours per week and more than half (56 percent) are self-employed owner managers.[5]

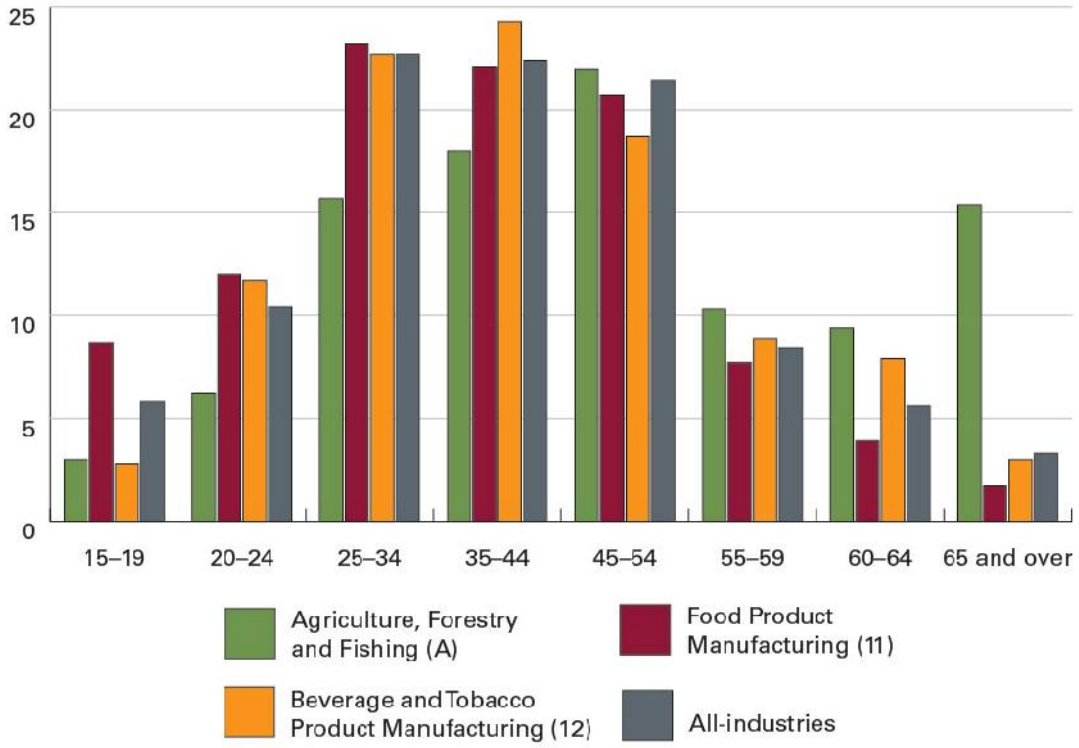
The agriculture, forestry and fishing industry has the oldest age profile of any of the 19 broad industry groups, with a median age of 48 years (compared with 40 years across all industries). In the ten years to August 2013, the proportion of the workforce aged 45 years and over increased from 50.3 per cent to 57.1 per cent, significantly higher than across all industries (39.0 per cent). All sectors within the industry have a median age of 40 years or older, apart from the very small Aquaculture sector (36 years). The median age in the Sheep, Beef Cattle and Grain Farming sector (the industry's largest sector) is 51 years, higher than the industry as a whole.

A range of factors, including a declining number of small farms and fewer young people taking over family farms, has contributed to the agriculture workforce's high median age. Existing workers take their jobs with them as they move into the older age groups, and fewer young people are entering the industry, as young Australians living in regional Australia continue to relocate to metropolitan areas in order to study or seek broader employment opportunities.

Between 1981 and 2011, the proportion of farmers under 35 years declined from 28 per cent to 13 per cent.[6] The Australian Farm Institute (AFI) highlights two factors to consider when looking at the workforce age. A significant proportion of farmers are above retirement age and may no longer be actively involved in farm operations, although they are still classified as farmers due to their ownership of at least some of the farm assets. The presence of this group in the statistics is likely to bias the average age upwards.

[2] Australian Bureau of Statistics (ABS), Agricultural Census, Australia, 2010-11
[3] Department of Employment, Industry Employment Projections, 2014 Report
[4] ABS, Labour force detailed quarterly, Cat. no. 6291.0.55.003.
[5] Ibid.
[6] ABS, Australian social trends 2012, Cat. no. 4102.0, December 2012.

Figure 1: Age distribution of workers (percentage terms) in food-related sectors and all-industries, 2012



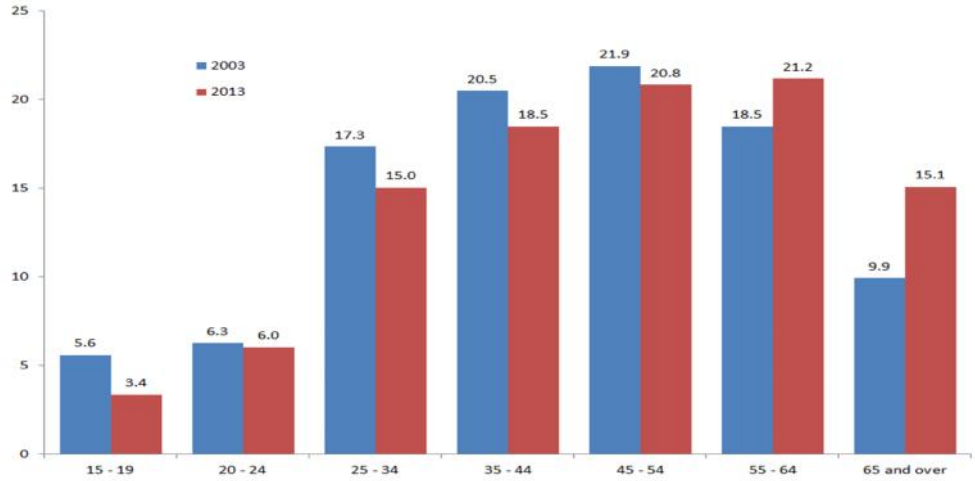
Source: Australian Bureau of Statistics, 2012, Labour force detailed quarterly, cat. no. 6291.0.55.003.

Many stakeholders cite the out-migration of young people from regional communities in search of study and work options as a factor contributing to the older age profile.

The results of a survey of retirement and retirement intentions conducted in 2010-11[7] shows that people working in the agriculture, forestry and fishing industry had the highest average age at retirement (63.4 years); more than five years older than the average retirement age across all industries (58.1 years).

[7] ABS, Labour Force, Australia, Australia, Detailed, Quarterly, cat. no. 6291.0.5.003

Figure 2: Employed persons by age (% share of employment) – August 2003 and August 2013



Source: ABS, Labour Force, Australia, Australia, Detailed, Quarterly, cat. no. 6291.0.5.003, four quarter average of original data

Employment in agriculture, forestry and fishing

Employment in the agriculture, forestry and fishing industries is influenced by a number of factors, in particular, adverse weather conditions such as drought, flooding and natural disasters. More recently, the high Australian dollar has also had a detrimental impact on the nation's export sectors, including agriculture, forestry and fishing. However, the high dollar has coincided with more favourable weather conditions and strong demand for agricultural commodities from Asia, which has partially offset the impact.

The ABS Census of Population and Housing provides detailed data on employment by Industry, Occupation and Employment Type, in addition to other variables. The Employment Type variable examines the nature of the employment relationship, for example whether the person is an employee, a self-employed owner-manager or contributes as a family member to a family-owned enterprise.

The table below shows the key Farmer and Farm Manager occupations and Shearers by their Employment Type. More than half the people employed in each of the three farmer occupations are owner-managers, and around another quarter are contributing family workers. The proportion of employees is very low in the key farming occupations of Crop Farmers (23.4 per cent), Livestock Farmers (15.6 per cent) and Mixed Crop and Livestock Farmers (9.9 per cent) compared with the proportion across all occupations (82.4 per cent). By contrast, Shearers are much more likely to be hired workers, with 79.6 per cent working as employees.

Table 1: Employment type of workers in key agricultural occupations

Employment type (% of employment in each occupation)

	Employee	Owner-manager	Contributing family worker
Crop Farmers	23.4%	53.8%	22.0%
Livestock Farmers	15.6%	55.8%	27.9%
Mixed Crop and Livestock Farmers	9.9%	61.8%	27.6%
Shearers	79.6%	16.4%	2.5%
All occupations	82.4%	15.1%	1.6%

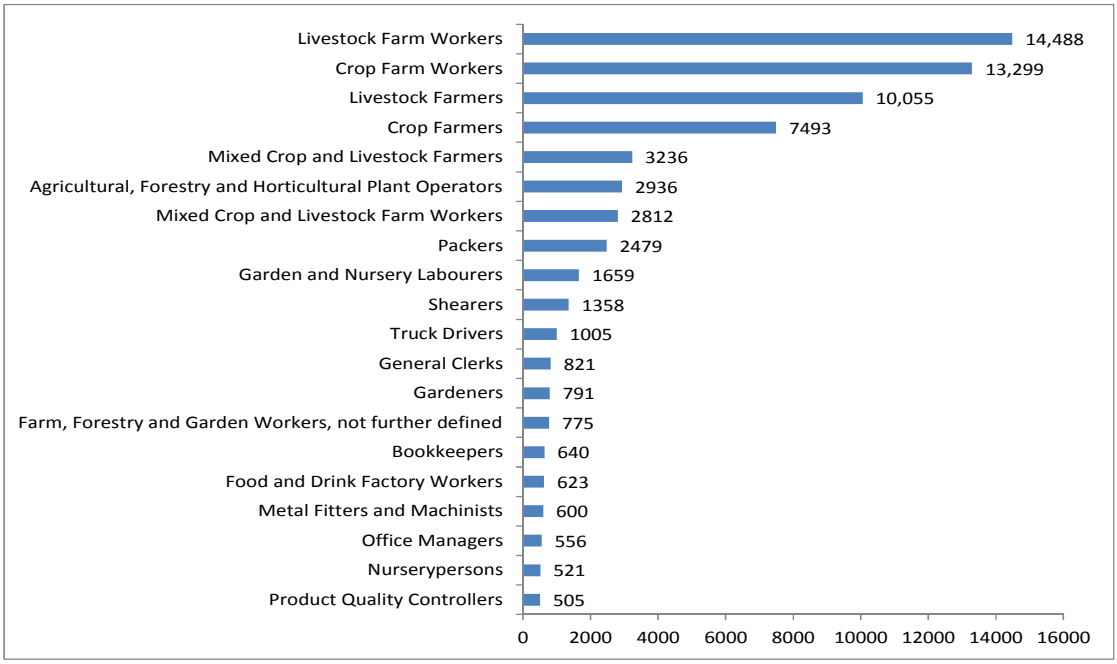
Source: ABS, *2011 Census of Population and Housing*

The largest contributors to employment in the industry are the sheep, beef cattle and grain farming sectors, employing 102,100 workers, the fruit and tree nut growing sector, employing a further 35,700, followed by dairy cattle farming (34,900). Employment in agriculture, forestry and fishing is concentrated in regional Australia, with the largest employment in Northern and Western NSW (30,300 workers), Darling Downs-South West (21,200), and Remainder-Balance WA (20,700).

The analysis of employment type of workers in agricultural occupations provides a useful starting point in determining skills and training requirements from an industry-wide perspective and actual workforce requirement. Using three principal farmer occupations information together with ABS data on the 20 largest agricultural employee occupations it is possible to identify the notional size of agricultural workforce excluding those with a propriety interest, sits in a range between 65,000 to 80,000 people or thereabouts. This distinction is critically important in determining workforce development strategies going forward, as there are quite specific and varying skills and training needs for members of each of these categories of employment type.

Business operators routinely require farm management, business planning, risk management and selected higher level skills to complement practical lower level hands on skills acquired through farming backgrounds and/or participation in various short courses or non- accredited courses undertaken to satisfy regulatory requirements e.g. Farm Chemical User Course. It should be noted that approximately 60-64% of farmers/owner operators/family members engaged in the three principal farmer occupations do not possess any post compulsory school qualifications. Broadly speaking almost of half of those with post-school qualifications (around 15-16%) possess a Certificate III or IV qualification, while an almost equal number (around 8-9%) possess an advanced diploma/diploma or a bachelor degree, with about 2% holding post graduate qualifications.

Figure 3: 20 largest employee occupations in Agriculture (number employed)



Source: ABS, 2011 Census of Population and Housing

Figure 3, above shows the 20 largest occupations in the Agriculture sector in terms of employees only, to give an indication of the occupations required by the sector, without the influence of the large owner-manager and contributing family worker occupations. The largest employee occupations in the sector at the time of the Census were Livestock Farm Workers (14,488) and Crop Farm Workers (13,299). Livestock Farmers, Crop Farmers and Mixed Crop and Livestock Farmers still feature strongly in the largest 20 occupations, likely due to the relatively large number of hired Farm Managers in the sector.

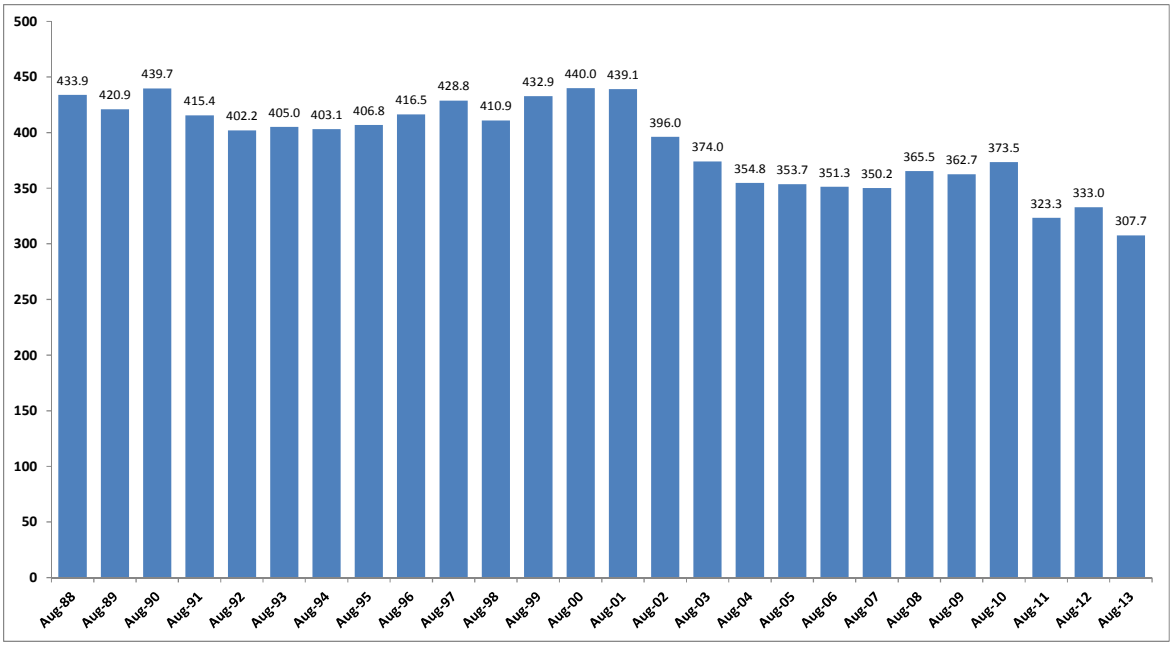
Employment in the industry overall has decreased 27.2 per cent in the last ten years, the largest decline of any industry in Australia over this period. In the medium term, employment declined in nine of the 15 sectors, at a rate of 1.2 per cent per annum. The largest decline was recorded in the fruit and tree nut growing sector followed by the sheep, beef cattle and grain farming and mushroom and vegetable growing sectors.

While overall employment in the industry has declined, some sectors have recorded employment gains. The largest growth was recorded in the dairy cattle sector (up by 54.6 percent) followed by poultry farming (25.9 percent). Federal government projections suggest that employment will be subdued in industry over the five years to 2018, with an expected decline of 0.9 percent per annum (or 2,800 jobs) over the five years to 2018.

Despite the overall incidence of part-time employment in the industry being low, the rate of part-time employment in agriculture is increasing at a faster than average rate. Between 2007 and 2012, a total of 14.4 per cent of workers in Agriculture and Fishing Support Services were

employed on a part-time basis,[8] compared with the all-industries average (across the economy) of 29.6 per cent.

Figure 4: Employment levels – August 1988 to August 2013 ('000)



Source: ABS, *Labour Force, Australia, Detailed, Quarterly*, cat. no. 6291.0.55.003, trend

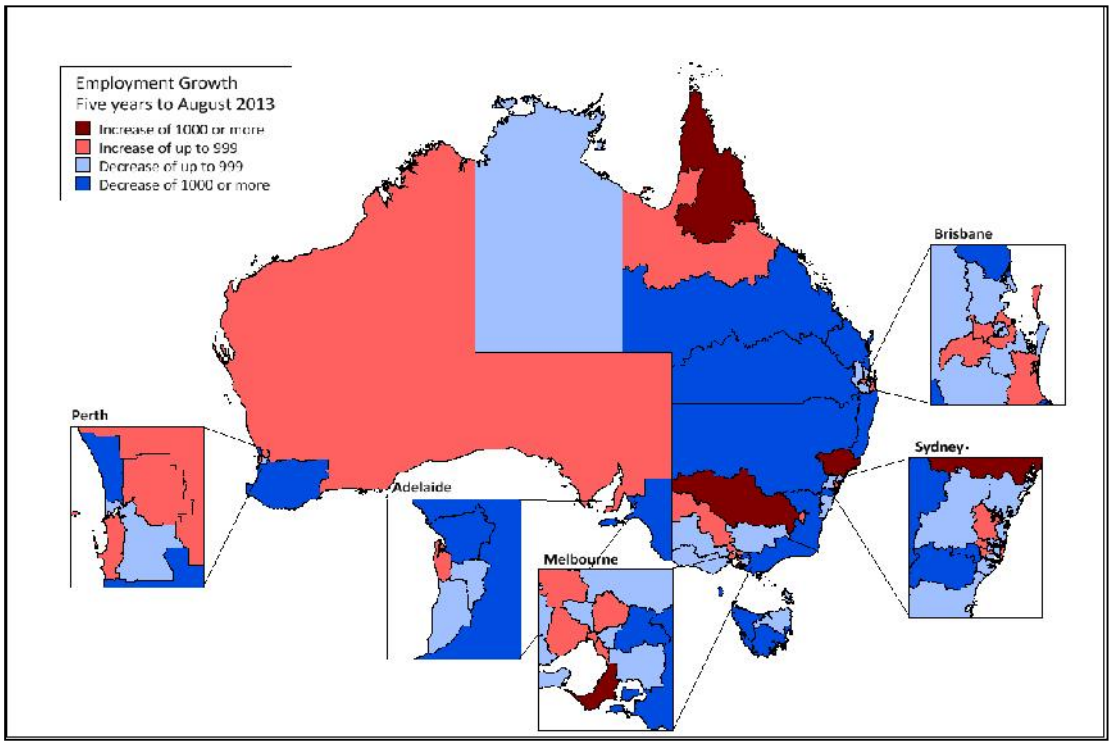
As is evident in Figure 4, employment in the industry is highly variable. Currently, around three quarters of employment in the agriculture, forestry and fishing industry is fairly evenly distributed across New South Wales, Victoria and Queensland, with the remaining one quarter employed in the other five jurisdictions. In the early 1990s, limited rainfall and recession drove employment down sharply, where it remained for several years before recovering briefly and reaching a historic high in November 2001 (443,500). With the onset of the drought soon after, employment in the industry declined by nearly a quarter and the industry has not yet recovered.

Devastating floods in early 2011, particularly in Queensland, resulted in employment falling to 323,300 in August 2011. Employment started a renewed downward trend in August 2012 and reached a historic low of 307,700 as at August 2013. In 2012–13 the total value of farm, fisheries and forest production fell slightly and a subdued outlook is expected over the medium term due to moderate world economic growth, a continued strong Australian dollar (despite recent falls) and strong competition on world markets.[9]

[8] This data on part-time employment refers to hours worked. It provides no indication of the level of casual and seasonal employment within the industry.

[9] ABARES Outlook Conference 2013, *Future food, future farming in perspective*. http://www.daff.gov.au/abares/outlook-2013/conference-program/transcripts/paul-morris

Figure 5: Employment growth by region ('000), five years to August 2013



Source: ABS, *Labour Force, Australia, Detailed, Quarterly,* cat. no. 6291.0.55.003, four quarter average of original data

Female participation

In 2012, women accounted for 45.7 per cent of employment averaged across all industries. Between 2007 and 2012 women's share of employment in the Agriculture sector remained steady at 32 per cent, while it fell in Aquaculture (5.2 percentage points) and increased in Agriculture and Fishing Support Services (6.0 percentage points). These figures compare with a slight increase in the all-industries average (0.6 percentage points) over the five years.

A 2002 study showed that women contribute almost half of real farm income, comprising almost $14 billion in 1995-96 - $4 billion in on-farm work, $1 billion in off-farm work, over $8 billion in household work and almost $500,000 in volunteer and community work.[10] The Women of Influence Initiative found that women in rural and regional Australia are considerably under-represented in decision-making and management roles.[11] Improving this situation is likely to contribute to improved innovation and productivity in agriculture.

[10] Department of Foreign Affairs and Trade, 2002

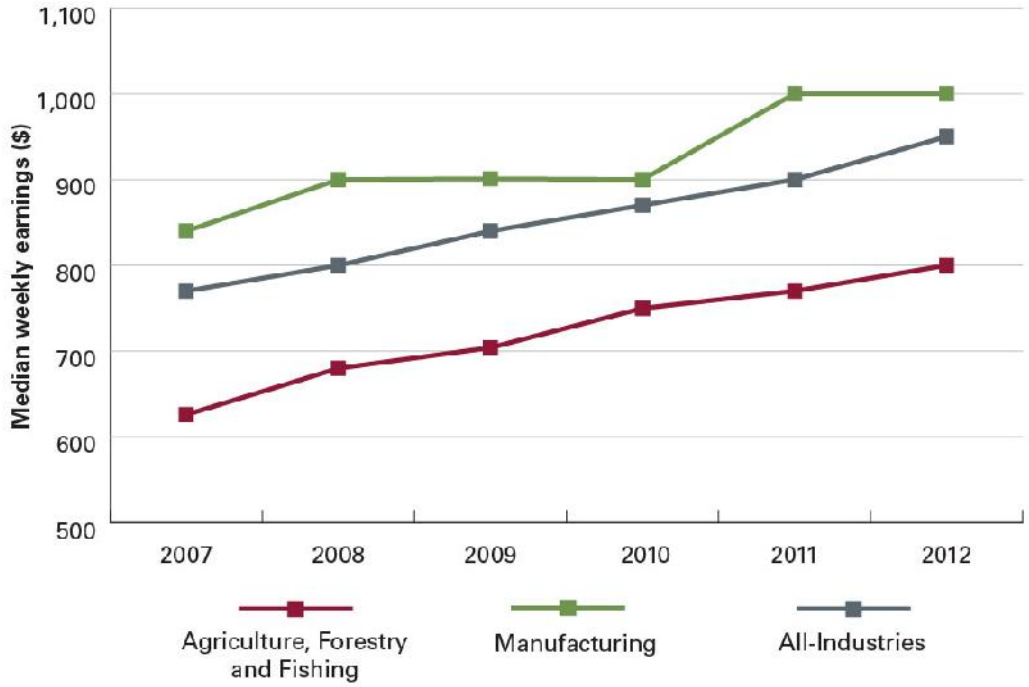
[11] Department of Transport and Regional Services, 2005

Trends in earnings

Over the past five years median weekly earnings in Agriculture, Forestry and Fishing have remained below the all-industries average, while manufacturing earnings have consistently been above the average.

Figure 7 below, provides an overview of weekly median earnings estimates from 2007 to 2011 at the two-digit ANZSIC classification (this is the most current and most disaggregated data available).[12]

Figure 6: Median weekly earnings in main job (persons), for Agriculture, Forestry and Fishing, Manufacturing, and All-Industries, August 2007 to August 2012 (latest available data)



Source: ABS, *Employee earnings, benefits and trade union membership*, cat. no. 6310, August 2007 to August 2012

Supply And Demand Profile – Agricultural occupations

Skills Australia commissioned Deloitte Access Economics to model four scenarios for future change in the economy to 2025.[13] The high-growth 'Long Boom' scenario was the only one which predicted growth in employment in the Agriculture sector to 2025. In each of the scenarios, change in employment numbers in the Agriculture sector was below the all industries

[12] The Wage Price Index is the most accurate measure of wage trends available. However, the ABS does not measure wages information in the Agriculture, Forestry and Fishing industry for the Wage Price Index due to the high number of seasonal workers in the industry. The ABS requires workers to work for six months or more for their wages information to be recorded.

[13] Deloitte Access Economics, Modelling of supply and demand for Skills Australia, 2011

average.

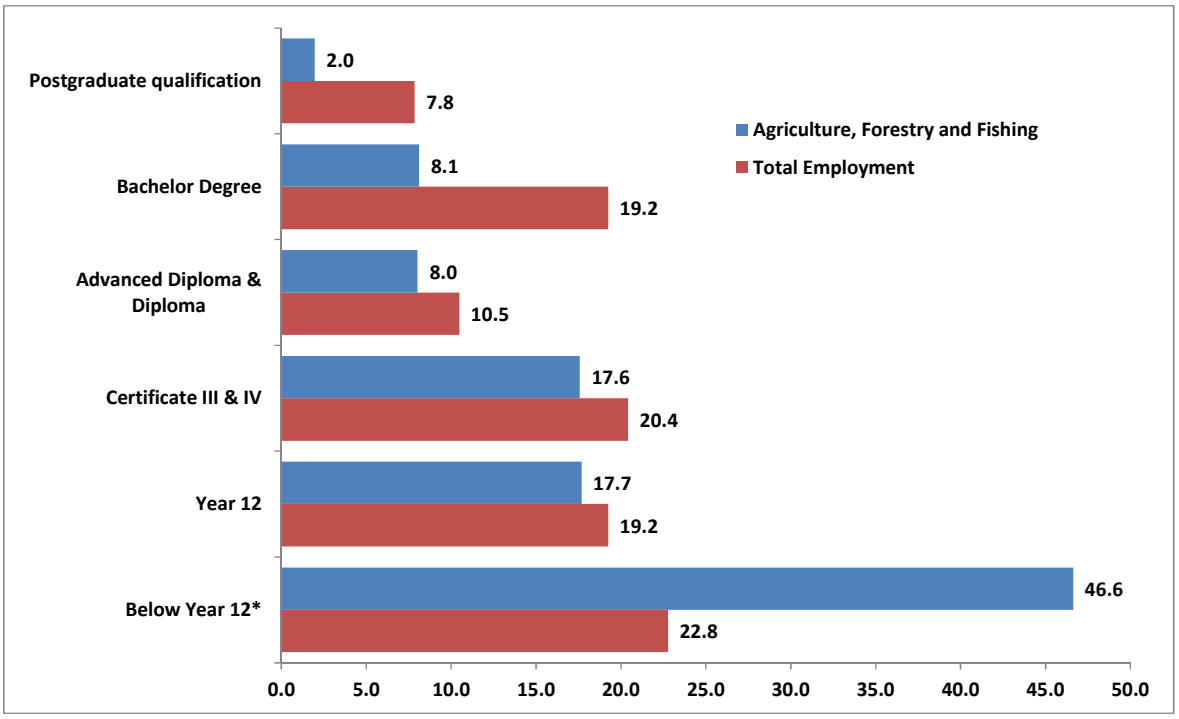
Average annual growth in employment 2011-2025	Long Boom	Smart Recovery	Terms of trade shock	Ring of Fire
Agriculture, Forestry and Fishing	0.9%	-0.2%	-0.3%	-1.0%
Livestock Farmers	2.7%	1.7%	1.6%	0.9%
Aquaculture Farmers	2.2%	1.4%	1.3%	0.7%
Livestock Farm Workers	1.5%	0.8%	0.8%	0.2%
Mixed Crop Livestock Farmers	0.7%	-0.5%	-0.6%	-1.5%
Crop Farmers	0.6%	-0.3%	-0.4%	-1.0%
Mixed Crop and Livestock Farm Workers	-1.1%	-2.0%	-2.1%	-2.7%
Crop Farm Workers	-2.7%	-3.6%	-3.7%	-4.2%
All industry average	2.0%	1.5%	1.6%	0.7%

Despite the overall depressed growth in employment in the Agriculture sector predicted by each of these scenarios, certain key occupations are projected to experience significant growth. Employment in occupations relating to livestock farming will grow under all scenarios, driven in part by increased demand for protein-rich foods from the growing Asian middle class. In contrast, crop farming is expected to require significantly less employees in the future, in part due to productivity, innovation and technology efficiencies.

Skills and qualifications in the agriculture sector

The majority of people employed in the agriculture, forestry and fishing industry have a relatively low level of educational attainment; with 64.3 per cent of the workforce having achieved a qualification no higher than Year 12 or equivalent compared with 42.0 per cent across all industries (see Figure 6). Less than 10 percent of farm managers (7.6 per cent) are degree qualified, compared to a quarter (26.3 per cent) of Australian managers overall. Farm managers (compared to other agricultural workers) were most likely to have completed longer-term formal training and qualifications. Most workers acquire their skills through practice and on-site learning, with the addition of some targeted short courses of study.

Figure 7: Highest educational attainment (per cent share of employment), 2011



* Below Year 12 is an aggregation of the following highest educational attainment categories: Year 11, Year 10, Certificate I & II, Year 9 or below and No educational attainment. Source: ABS 2011 *Census of Population and Housing*.

The low share of workers without higher levels of educational attainment may reflect the long history of agricultural extension activities to share information and improve farm management and practices, such as field days, as well as the effects of the remote location of workers (and subsequent lack of access to formal education and training opportunities) and the traditional family business structures found in the industry. The prevalence of 'word of mouth' work opportunities and on-the-job training are also likely to have contributed.

Figure 8: Formal qualification supply of key skilled occupations in agriculture, forestry and fishing[14]

ANZSCO Unit Group	approximate size of workforce (all industries)	annual formal training completions	% annual change in completions	% of workforce without a post-school qualification
Livestock Farmers	82000	1754	13	55.3

[14] Workforce size is derived from ABS Labour Force Survey 6202.0 four-quarter average to November 2011; latest available completions are taken from the NCVER VET collection and DEEWR Higher Education statistics (Agricultural and Forestry Scientists) – annual changes are 1-year changes for VET (2008 to 2009) and 5-year annual average (2005 to 2010) for Higher Education; workforce without a post-school qualification is derived from ABS Survey of Education and Work 6227.0, 2011.

Crop Farmers	43000			57.4
Mixed Crop and Livestock Farmers	34000			61.6
Agricultural and Forestry Scientists	6500	650	-8	0
Shearers	2700	221	44	57.5
Animal Attendants and Trainers	14100	2389	19	67.8
Agricultural Technicians	1600	333	-3	N/A (assumed <50%)

Demand for Skills

A number of indicators signal that demand for skills in the agriculture, forestry and fishing industry has fallen significantly in recent years. Over the past year employment in High Skill occupations has fallen significantly, whilst employment in Low Skill occupations has also fallen. This has occurred during a period where overall employment has increased.

Employment in the industry is spread across the ABS occupational categories, including Managers, Professionals, Technicians and Trade Workers, and Labourers. The largest employing occupations in agriculture (at the four-digit occupation level) are: Livestock Farmers (83,600), Crop Farmers (45,900), Mixed Crop and Livestock Farmers (33,400) and Livestock Farm Workers (31,400).

In terms of skilled occupations, in 2011 there were seven high-skilled occupations (ANZSCO Skill Levels 1 to 3, requiring at least a Certificate III plus two years on the job training) in the top 20 employing occupations in the agriculture, food and fishing industries. These were:-

- Livestock Farmers;
- Crop Farmers;
- Mixed Crop and Livestock Farmers;
- Agricultural and Forestry Scientists;
- Shearers;
- Animal Attendants and Trainers; and
- Agricultural Technicians.

In five of these occupations, a majority of workers had no post-school qualifications. In only two categories, between 2010 and 2011, there was increased employment (for Agricultural Technicians (an increase of around 150 workers or 10 per cent over the year), and Agricultural and Forestry Scientists (an increase of 500 workers or 22.5 per cent over the year)), but in both categories there has been a decline in the number of graduates over recent years. Skills shortage research undertaken by the Department of Employment[15] indicates that there is a shortage of Agricultural and Forestry Scientists in Australia, with many employers commenting that limited

[15] Department of Employment, *Industry Outlook – Agriculture, Forestry and Fishing* 2013 Report

growth in graduation rates over recent years is restricting the number of entrants to the profession. Domestic completions in the related fields of education for this occupation fell from 1,000 in 2005 to 650 in 2010. For these reasons, this occupation is included on the Skilled Occupation List for permanent independent skilled migration. Australia receives about 80 migrant Agricultural and Forestry Scientists per year through this pathway.

The Department of Employment projects that employment in agriculture, forestry and fishing is projected to decline by 2,800 (or 0.9%) over the five years to November 2018, reflecting a continuation of the industry's long-term decline in employment share as well as the continued investment by the industry in labour saving plant and equipment.[16]

Given the recent trend in negative employment growth, along with the likelihood that the Australian dollar will remain strong on the back of mining, the agriculture sector may be able to fill its skilled workforce needs over the short to medium term. It is likely to mean there will be greater demand for skilled occupations in certain regions and occupations than others and that demand for labour will depend on variable weather conditions.

VET participation rates

The number of students commencing a formal vocational education and training (VET) qualification in 2012 was approximately 12,791 – See Table 3, below. Information on AHC10 Qualifications is included at Appendix F.

Table 3: Total AHC10 Student and Course Commencements in 2012 - NCVER

Sector	**Cert 1.**	**Cert 2.**	**Cert 3.**	**Cert 4.**	**Dip.**	**Adv. Dip.**	**TOTAL**
Agriculture	0	4,343	2,579	831	435	35	8,223
Production Horticulture	0	142	623	505	59	0	1,329
Ag Services	881	1,143	1,018	197	0	0	3,239
Total Agriculture	**881**	**5,628**	**4,220**	**1,533**	**494**	**35**	**12,791**
	7%	**44%**	**33%**	**12%**	**4%**	**0.27%**	Rounded
Total CLM	502	1,907	1,571	452	435	2	4,869
Horticulture Amenity	0	8,287	3,211	350	694	2	12,544
Total AHC10	1,383	15,822	9,002	2,335	1,623	39	30,204

The most prevalent non-school qualification is at the Certificate II level (44%), followed by the Certificate III level (33%), and the Certificate IV (12%) with only a small percentage at the Diploma and Advanced Diploma levels (4.13%). There are over 90 active qualifications in the

[16] Department of Employment, *Industry Employment Projections*, 2014 Report

current Agrifood Skills Australia's Agriculture, Horticulture and Conservation and Land Management Training Package (AHC10).

Given the actual size of the nominal agricultural workforce, excluding owners and farm managers, these VET commencement figures appear to be in line with the numbers of full-time skilled workers required.

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SECTION 3: AGRICULTURE WORKFORCE - FARM SECTOR EMPLOYER SURVEY

To assist with the collection of vital employment data and to develop an informed understanding of critical employment and labour-related issues affecting the agriculture sector, an Agriculture Workforce - Farm Sector Employer Survey was developed to gather data to inform and shape the development of the Plan.

The survey was conducted over a four week period from 23 January 2014 to 20 February 2014. The survey sought to canvass the views of farm sector employers that have, have attempted to or normally do engage rural and related workers, including farm managers and overseers to assist with the operation of their agricultural and horticultural enterprises. There was no requirement for employers to submit business names or specific business details. Information gathered was considered and analyzed on a collective basis. While the number of survey respondents is statistically small, survey results were generally consistent and paint an indicative (rather than wholly representative) picture of the labour issues faced by a typical small Australian farm business. A copy of the survey results is included at Appendix A.

Summary of survey results

Over 500 farm sector employers responded to the survey. Of these, 80 per cent were operating within a single jurisdiction and one in two were operating at a single site. Approximately 70 per cent were engaged across Mixed farming, Livestock and Cropping. Almost 85 per cent were owner/operators, with over a third of these (30 per cent) being primarily family farms.

The age of workers employed by respondents was broken down as follows:

Ages 16 – 24	12 per cent
Ages 25 – 50	68 per cent
Over 50 years	20 per cent

85 per cent of workforces were predominately male and only 15 per cent were predominately female.

Employment and type of engagement

Of the family farms, the average number of employees was 1.5 – 2 (full-time) and 1.4 – 1.9 (part-time). Over two thirds (70 per cent) employed 0-5 employees. 53 per cent employed full time employees and 65 per cent employed casual employees; around 24 per cent engaged part-time, contract and/or seasonal workers. 70 per cent of businesses reported having employed someone in the last twelve months, with 30 per cent filling vacancies within one month and 42 per cent filling vacancies within two months.

1 in 2 respondents indicated that it is difficult to source skilled, trained and committed personnel and when recruiting, they may advertise themselves. 75 per cent of respondents relied on word of mouth referrals to source farm labour. 70 per cent of respondents indicated that they will not need additional staff in next two to five years.

Around 80 per cent of respondents use contractors to perform a wide variety of tasks with between 30-40 per cent using contractors for fencing/yard work, spraying, harvesting and shearing. Only 10 per cent of respondents indicated that they used contractors due to difficulties recruiting skilled workers.

Skill levels required

In terms of labour workforce requirements, 59 per cent of employers required semi-skilled and skilled workers, 15 per cent were able to employ new entrants and trainees, 18 per cent of employers needed supervisory staff and 15 per cent required farm managers. Of currently employed workers, 38 per cent were semi-skilled, 44 per cent were skilled and 18 per cent were highly skilled. Around 1 in 5 had tertiary qualifications, although 35 per cent could not nominate the highest qualification held by their employee/s.

The top six skills required for mixed farming, livestock and cropping businesses were (in order of priority need):

Full-time workers- tractor driving and heavy machinery, animal husbandry, OHS, chemical handling and application, mustering horse and motorbike, supervisory skills
Part-time workers- tractor driving and heavy machinery, animal husbandry, OHS, mustering horse and motorbike, chemical handling and application, fencing and yard work
Casual workers - tractor driving and heavy machinery, OHS, animal husbandry, mustering horse and motorbike, chemical handling and application, fencing and yard work

Use of migrant workers

Among respondents, there was limited involvement in the use of foreign labour other than working holiday visas and backpackers. Only about 9 per cent of respondents had considered using the permanent employer sponsored option and of these, only 1 in 2 had done so successfully. Around 12 per cent had looked to use workers on 457 visas and around 3 out of 4 had done so successfully. Around 27 per cent had looked to use workers on Temporary Working Holiday visas with 19 out of 20 successfully securing workers under this scheme. Around 4 per cent of respondents had looked to use the Seasonal Worker Program and of these, there was a success rate of approximately 70 per cent.

Training and workforce development

Almost 45 per cent of survey respondents had not used or applied any strategies to identify, develop or foster skills training and personnel development. About 48 per cent only assessed labour, skills and workforce development requirements as the need arises.

Business confidence

1 in 2 respondents expected profitability and growth to improve over the next three to five years, but only 1 in 5 expected that they would need to expand their workforce. Almost 14 per cent (or 1 in 7) indicated they may leave the industry. Almost 1 in 2 said that they cannot afford to employ additional personnel, and the same number indicated that the greatest impediment to their business was a shortage of skilled and committed labour.

Of the greatest challenges ahead, 65 per cent of respondents were concerned about financial viability, 42 per cent were concerned about government regulations and 36 per cent were concerned about skill and labour shortages.

SECTION 4: WORKFORCE PRIORITIES

Agrifood Skills Australia's 2014 Environment Scan highlights identified industry priorities (see below). A complete copy of the Scan is included at Appendix E. In summary, these are:

1. **Building world-class business management capability** for employers through Skill Sets and undergrad programs; building workforce planning capabilities in effective job design, work organization and 'employer of choice' principles and developing the role of industry bodies in promoting workforce planning and skills development as a core business strategy.

2. **Attracting a new generation of motivated, skilled and smart workers** through common branding and promotion of careers in agrifood industries for all workers, including indigenous workers, migrants, refugees and returning resource workers; building better learning experiences into industry for school students through the Australian curriculum, VET in schools and industry placements; establishing new agrifood technician / para professional cadetships in new and emerging roles and restoring universal incentives for Certificate II traineeships in key entry level occupations.

3. **Building higher level knowledge and skills within the existing workforce** through delivery of Skill Sets, units of competency and full qualifications; harmonising key industry certification and licensing requirements with nationally endorsed qualifications and increasing language, literacy, numeracy and digital literacy capabilities of the existing workforce.

4. **Increasing industry adoption rates of new technologies and research outcomes** with continuously improved nationally endorsed qualifications, Skill Sets and units of competency; collaboration with VET and universities to increase industry adoption rates of CRC / RDC / CSIRO outputs and formal pathways from VET to the higher education sector.

5. **Utilising the skills of existing workers and lifting retention rates** by building sustainable, grass roots, 'skill formation strategies' and regional 'skills eco-systems'; driving widespread formal recognition of existing skills; promoting skill-based career pathways for existing workers across agrifood sectors; and developing innovative responses to the skill needs of casual, contract and seasonal workers.

Extract - *Agrifood Skills Australia 2014 Environmental Scan*

SECTION 5: WORKFORCE CHALLENGES

An ageing workforce

A major capacity constraint to the agriculture sector is the ongoing supply of skilled and unskilled labour, in the context of a rapidly aging workforce. In a workforce development sense, the industry faces a looming crisis in several sectors due to the ageing of its people, skilled workers exiting the industry and poor attraction and retention rates over an extended period. The on-farm agriculture sector is forecast to lose at least 30 percent of its workforce over the next ten years, mainly due to ageing.[17]

Despite this trend, current educational enrolment numbers could meet future industry skill and labour needs. However low training completion rates, combined with high rates of labour departure from the sector due to portable skills, indicates that the current national training system output of students into industry is likely to be insufficient to meet the challenge of future industry skill and labour demand.

Attraction and retention

Another difficult issue is the attraction and retention of workers. In many aspects, the challenges faced by agriculture are those faced by rural Australia more generally.[18] For example, poor accessibility and limited access to transport, medical services, local education, appropriate accommodation, information technology and telecommunications services have contributed to the migration of young people away from rural areas.

A significant barrier to attracting and keeping skilled workers relates to poor perceptions of agriculture as a career choice. In 2012, the Blueprint for Australian Agriculture[19] linked labour shortages in Australian agriculture to community perceptions of the industry, a lack of knowledge and understanding of the agricultural sector, and a consequent poor uptake of agricultural careers. The McColl Report (1991) attributed the decline in enrolments in agriculture-related tertiary courses in Australia to negative perceptions towards agricultural careers held by the general public, and a failure of the sector to promote the courses. Low levels of industry involvement in education and training, poor promotion of agricultural pathways and the limited capacity of the current education and training system to deliver innovative training solutions all reinforce negativity about working in agriculture. More recent studies have found a link between low uptake of careers in agriculture and a lack of understanding of what such a career entails.[20]

The cost of replacing years of skill and experience is substantial. For example, the average cost of turnover for a farm is around $33,500 per employee, with a translated cost to industry of between $336 million and $364 million per year. This includes the costs of replacement and training as well as lost expertise and relationships.[21] Increased mechanisation of farming processes and the trend towards farm ownership consolidation mean increased farm efficiency

[17] Allen Consulting Group, Rebuilding the Agricultural Workforce, January 2012
[18] Allen Consulting Group, Rebuilding the Agricultural Workforce, January 2012
[19] NFF, Blueprint for Australian Agriculture 2013-2020, 2012
[20] ibid.
[21] Centre for International Economics and the Ryder Self Group, 2008, *Attracting and retaining staff in Australia's beef, sheep and pastoral wool industries*, Meat and Livestock Australia Limited, North Sydney.

and less need to hire new workers. The challenge is to ensure that skills are retained and passed on, and that new skills are developed within the existing workforce to make the most of new technologies.

Other barriers to employment include limited health and education facilities and services, low wages and cost of living considerations such as the cost, availability and quality of housing in rural areas.[22] The population of remote areas continues to decline. Industries and communities within rural Australia have been particularly hard hit by labour shortages, with many small and medium businesses struggling to secure skilled and unskilled labour. Finding appropriately trained staff is an issue that continues to affecting more than 60 percent of rural employers. Skills shortages and workforce inflexibility limit productivity improvements in agriculture as farmers are deterred from taking risks through innovation.

Low levels of education

While farmers are less likely than other occupations to hold educational qualifications higher than school level, growing numbers are pursuing further educational opportunities. Preferences for agriculture degrees jumped by 15 per cent at the beginning of 2013, coinciding with the end of the drought and indicating that the trend may be less predictable than expected, with positive implications for improving enrolments.[23]

While educational attainment in agriculture has increased over time, more than 50 percent of farm workers still do not hold any formal qualifications post-secondary-school, well above the economy-wide average.[24] A number of training issues may limit the supply of skilled labour in rural industries, including low participation in vocational education and training (VET) and tertiary courses.

The number of graduates completing agriculture and agriculture related-courses has been estimated at approximately 700 per year, well below the 4000 positions being advertised each year (Pratley, 2012). Enrolments in agriculture have also declined from approximately 4,500 in 2001 to less than 2,500 in 2010.[25] In agricultural science, in 2010, only 40 percent of advertised positions were filled and there were 1.1 applicants for each job.

In the Australian Council of Deans of Agriculture (ACDA) Submission to the Senate Enquiry - Higher education and skills training to support future demand in agriculture and agribusiness in Australia. The following was stated:-

> "There can be no doubt that there is an alarming shortage of agricultural and agribusiness graduates to service the needs of the greater agricultural industries at a time when the needs of the industry are at an all-time high. Research by the ACDA has shown that there has been a continual decline in graduate completions in university agriculture and related degrees for the last two decades (currently <300 in agriculture and <700 in agriculture and related courses) whereas the job market for

[22] Davies, et al., 2009
[23] Howden & Preiss, 2013
[24] ibid.
[25] Ibid.

graduates, as evidenced by job advertisements, indicates that there have been in excess of 4000 positions per year consistently over the past 4 years."[26]

These issues must be addressed because the sector requires more people with higher education level qualifications, and declining enrolments could lead to the loss of university facilities, leaving a permanent shortage of skilled workers and curtailing the ability of the sector to innovate and grow.[27]

Regulatory policy settings

Governments and academics have traditionally placed great emphasis on the role of qualifications in improving the earning capacity and workforce participation of individuals. A recent Council of Australian Governments (COAG) commitment to the National Agreement for Skills and Workforce Development[28] focused squarely on full qualifications and gave no recognition of Skill Sets or incremental learning, with a resulting limited access to funding for training delivered on a partial or incremental basis.

The Commonwealth Senate Standing Committee on Education, Employment and Workplace Relations Inquiry into 'Higher education and skills training to support agriculture and agribusiness in Australia' in 2012 made a number of key recommendations, including:

- removing impediments to VET participation;
- raising the profile of agriculture in schools;
- improving knowledge transfer in agricultural research;
- commissioning ABARES analysis into the decline of extension services; and
- commissioning a study into the most appropriate framework for governance and funding of agricultural education initiatives.

A Victorian Parliamentary inquiry into agricultural education and training also made a number of recommendations to improve education and training outcomes for agriculture.[29] The report recognized the "strong focus on fostering a more flexible and consultative training system and ensuring that there is a high quality teaching workforce available" as well as "a strong call for education and training to be delivered as skills sets – or 'building blocks – as opposed to full qualifications due to agriculture having a strong preference for acquiring skill sets to perform specific functions or tasks." This followed conclusions that greater flexibility and support was needed in the funding and delivery of skill sets to avoid current for individuals, employers and government through the ongoing low qualification completion rates

Five separate inquiries since 2009 have recommended the creation of a national body to

[26] Australian Council of Deans of Agriculture (ACDA) submission to the Submission to Senate Enquiry - Higher education and skills training to support future demand in agriculture and agribusiness in Australia.
[27] Allen Consulting Group, Rebuilding the Agricultural Workforce, January 2012
[28] A revised *National Agreement for Skills and Workforce Development* reaffirmed the national targets for the VET system to 2020, namely to:
a) halve the proportion of Australians nationally aged 20-64 without qualifications at Certificate III level and above between 2009 and 2020;
b) double the number of higher level qualification completions (diploma and advanced diploma) nationally between 2009 and 2020.
[29] Parliament of Victoria Rural and Regional Committee Final Report May 2012

coordinate and oversee the skills and workforce development needs of the agriculture sector.[30]

In 2014, the Australian Government committed $2 million to fund the Agriculture in Education program to improve understanding of agriculture in Australian schools. The program aims to promote careers in agriculture, by improving student knowledge of where their food and fibre comes from and how integral agriculture is to everyday life. Under the program, a range of agriculture-based online teaching resources will be developed for school students from Kindergarten to Year 10 in subjects across the curriculum.

Varying VET Funding Models across States and Territories

Significant disparities in funding and implementation arrangements across jurisdictions in the VET and VET in School areas highlight inconsistent, inadequate or inappropriate funding models that routinely give rise to significant variations in the quality of training outcomes and the nominal availability of many VET pathways.

A recent review of current funding levels provided across jurisdictions for indicative Agricultural and Horticultural qualifications at the Certificate II, II, and IV level through traineeship and apprenticeship pathways highlighted a myriad of different approaches, differing priorities and in many cases questionable bureaucratic determinations in respect of the level of funding required to deliver training at particular AQF levels; as well as considerable variations in the number and scope of qualifications that attract State/Territory government support.

Across most jurisdictions, despite having similar qualification outcomes and training package requirements, in respect of qualification content and unit of competency inclusions, agricultural and horticultural equivalent traineeship and apprenticeships pathways attract vastly different levels of funding support. In addition, there are considerable variations in the level of fees required to be paid by trainees, apprentices and students.

[30] Australian Workplace Productivity Authority *Food and Beverage Workforce Study* October 2013; NSW Government *Review into Agricultural Education and Training in NSW Report* Jul 2013; Senate Education, Employment and Workplace Relations References Committee *Higher Education and skills training to support agriculture and agribusiness in Australia* June 2012; Allen Consulting Group *Report to the Business / Higher Education Roundtable on Rebuilding the Agricultural Workforce* January 2012; Industries Development Committee Workforce, Training and Skills Working Group *Final Report to the Primary Industries Ministerial Council: 'Workforce, Training and Skills Issues in Agriculture'* October 2009

SECTION 6: DEVELOPING THE FUTURE AGRICULTURE WORKFORCE

> Australian agriculture provides high quality 'clean and green' food and fibre for a global population using innovative technologies and sustainable natural resource management. Built on a tradition of contributing to Australia's economy and culture, while staying innovative and flexible, the agriculture sector is valued as a vital part of Australian life by both communities and the government. The sector is productive and profitable, attracting workers of all ages with a variety of skills, and providing rewarding education opportunities and career paths. Australian agriculture is a world leader in research and development and innovation, helping other countries meet the challenge of providing food and fibre for the global population.
>
> Australian Agriculture to 2013-2050

In 2012, the NFF led a sector-wide effort to set out a strong and sustainable future path for Australian agriculture and its supply chain. A key priority was how to build and maintain a flexible and skilled workforce in both the short and long term. The issue of labour shortages in Australian agriculture was seen as part of a wider, endemic issue related to community perception of the industry, a lack of knowledge and understanding of the agricultural sector, and a consequent poor uptake of agricultural careers.

The Blueprint for Australian Agriculture called for employers in the industry to become 'employers of choice', through better attraction and retention strategies and the development of human capital. Skills development and workforce planning are too often seen as an adjunct to a business that 'costs' and for which there is only time when businesses are profitable or off-season. Driving widespread adoption of better practices will benefit employers who rely on securing skilled workers in a highly competitive labour market and in the longer term, will reposition the sector as one of choice for new entrants. Industry bodies can take the lead on this issue to promote the value of workforce planning and skills development and create strategic alliances with those best placed to support it.

What employees will the industry need?

A Skills and Labour Needs Review[31] survey, conducted by AgForce Queensland, identified that the list of skills needed to run an efficient enterprise were complex, illustrating the complex nature of modern agriculture. The need for a significant number of multi-skilled full-time employees was identified, as was a trend to the use of casual and part-time employees and the increased use of contractors. The Farmstaff Report[32] notes that the greatest deficit in people will be in the semi-skilled and unskilled categories, which are used widely in agriculture, and that these types of roles will have to change in the future, or there will be no growth in the number of people available to do them.

[31] AgForce Queensland, Skill and Labour Needs Review Analysis 2012

[32] Holmes Sackett FarmStaff Report 2008

If the top 20 employing occupations in the agriculture, food and fishing industries in 2011 are any indication, the agriculture sector will continue to require Livestock Farmers, Crop Farmers, Mixed Crop and Livestock Farmers, Shearers, Animal Attendants and Trainers as well as increasing numbers of Agricultural and Forestry Scientists and Agricultural Technicians. The Farm Survey Results suggest that the top skills currently required for mixed farming, livestock and cropping businesses are tractor driving and heavy machinery, animal husbandry, OHS, chemical handling and application, mustering horse and motorbike, fencing and yard work and supervisory skills. Other occupations in demand but not currently accessible to foreign workers under the 457 visa program are identified in Appendix C.

Skill Sets and incremental learning

Within many sectors (and regional Australia more broadly) learning is typically incremental, socially embedded and occurs over a lifetime. Job pathways can be horizontal or tangential and involve a 'building block' approach to gaining a portfolio of skills – fundamental to securing and maintaining employment in rural Australia.

If we are to embrace a philosophy of 'lifelong' learning amid the realities of an increasingly competitive business environment, Skill Sets offer a practical solution with potentially large benefits. There is a need for formal recognition of Skill Sets within Training Packages and individual or groups of units of competency which meet learner's diagnosed needs. Skill Sets can fill the gap for workers who are unlikely to obtain formal qualifications and over time, lead to the development of a skilled workforce through incremental growth. Building skills one at a time enables qualified workers to maintain currency of skills and progress to other job roles.

Publicly funded Skill Sets will be of most value if they are delivered across a nationally consistent framework underpinned by a commitment to incremental learning and responsiveness to industry. Skill Sets are integral to Industry Priorities identified in the 2014 Environmental Scan.[33]

Addressing variations in VET funding models

The VET participation figures for formal agricultural VET training show that the real challenge may not be so much a shortage of people interested in pursuing careers in rural and related occupations but rather the need to improve and expand the matching of participants to current and emerging employment opportunities. Underpinning this is a need for consistent, adequate and accessible VET funding across jurisdictions, and the timely revision and update of Training Packages to ensure training aligns to industry needs.

In July 2013, the NSW Independent Pricing and Regulatory Tribunal (IPART) issued a draft Report – Pricing VET under Smart and Skilled. The following extract from the Report's Executive Summary details what IPART was asked to do?

1.1 What has IPART been asked to do?

The Independent Pricing and Regulatory Tribunal of NSW (IPART) has been asked to provide advice and develop a methodology to determine price and fee arrangements for government-

[33] AgriFood Skills Australia, *Environmental Scan*, 2014

funded VET under Smart and Skilled. In particular, we have been asked to assist the Government in determining 7 key components of the price and fee arrangements:

- *base prices for each course/qualification included on the skills list*
- *loadings to be paid on top of the base price to cover the additional efficient*
- *costs associated with providing training to 'high cost learners'*
- *Community Service Obligations (CSOs), which will initially be paid to TAFE NSW and approved ACE colleges to cover the additional costs of providing training in 'thin markets'*
- *the levels of the student fee and the government subsidy for each course/qualification*
- *the level of concession fees, and fees for apprentices and trainees*
- *arrangements for staged payments to RTOs by students and by government over a qualification, and*
- *arrangements for adjusting prices and fees in future years.*

The methodology we develop should be applicable to all courses, qualifications and part-qualifications government chooses to fund under Smart and Skilled. It should encourage quality training delivery at the most efficient price.

To support uniform training outcomes for Agricultural and Horticultural Australian Apprenticeships (traineeships and apprenticeships) and fee for services VET pathways across jurisdictions, the Commonwealth could adopt consistent and appropriate funding models across jurisdictions based on the rates determined by the NSW Department of Education and Communities and detailed in *Smart and Skilled: 2015 Prices, fees and subsidies* (Appendix G). Such arrangements could be pursued through the National VET Partnership arrangements.

Utilising the IPART identified nominal standard industry hourly rate per unit and nationally agreed nominal hours per unit, and requirements for selected qualifications the following indicative base rates would potentially be applicable to Agricultural and Horticultural Certificate II and III qualifications.

	Certificate II	Certificate III
Agriculture	$5,860	$8,850
Horticulture	$4,570	$9,660

To facilitate the uptake of a publicly funded Skill Set model, a similar consistency of approach could be adopted so that funding for Skills Sets is determined on the basis of the accepted nominal hourly rate established for agricultural training set out in the *Smart and Skilled* report.

Future research needs

Research is required to provide the evidence base to inform future government industry skills policy, in the following key research areas:

1. *Labour supply and demand*: long term tracking of labour market changes by key industry sectors and geographic regions is needed to inform the development of a five yearly 'Labour Market Force Profile' for agriculture. This should include identification of key

structural shifts affecting labour supply and demand as a result of changes in industry ownership, foreign investment and new technology.

2. *Pathways to work*: whether the current supply of graduates in the agriculture sector is meeting the skills demands of the sector and how training and articulation pathways could best be structured.

A 'ten point plan'

The trends identified through this Plan demonstrate a critical need for coordination at a national level of wide ranging strategies to arrest the declining agricultural workforce and revitalize industry. To this end, NEST and the NFF Workforce Productivity Committee have endorsed the following **ten point plan**:

Structural changes

1. A new national body to oversee and coordinate the workings of a wide range of industry stakeholders and government agencies in connection with workforce development for agriculture, horticulture and agribusiness; and
2. Support for locally managed regional or online learning and business hubs to develop skills and co-ordinate job placements, including for out-of-area and migrant labour.

Every five years

3. Publication of an Agriculture 'Labour Market Force Profile'; and
4. Publication of a Regional Workforce plan for all major regions.

Regulatory policy settings

5. Expansion of the Seasonal Workers Program across all agricultural industries.
6. An overhaul of the skills recognition framework for skilled migration so that as a minimum, the Australian and New Zealand Standard Classification of Occupations code system (ANZSCO) appropriately recognises industry skills and qualifications.
7. A more responsive VET model which produces immediacy of skills for the agriculture sector, as well as a firmer qualification base through:
    a. publically funded and delivered units of competency;
    b. nationally recognised Skill Sets; and
    c. consistent and appropriate VET funding models across jurisdictions.
8. Agriculture-based education at all levels (primary, secondary, senior high school and tertiary), including the development of curricula resources, career advisor and teacher development programs.

Joint Industry/Government initiatives

9. Development of new programs to support increased opportunities for Indigenous people to gain careers working on the land and in the supply chain.
10. A sector-wide labour agreement covering skilled and semi-skilled workers in demand across industries within the sector.

The new national body

The new body with responsibility for overseeing the development and coordination of long-term workforce strategies for agriculture, horticulture and agribusiness should have direct links to industry and cross-representation of the various government portfolios implicated in regulation of the agriculture workforce. The following structure is proposed:

NATIONAL BODY				
Secretariat				
Divisions				
GOVERNMENT REPRESENTATIVES	**POLICY & PERCEPTION**	**WORKFORCE DEVELOPMENT**	**EDUCATION**	**PRODUCTIVITY & EXTENSION**
Industry	Training Packages	Implementation	Curriculum	Tertiary
Agriculture	Resource Development (VET)	Attraction & Retention	Language, Literacy, Numeracy	Extension
Employment	Funding & Skill Sets	Seasonal Workers Program and Harvest Labour	Schools	Research & Development
Education	Ag Workforce Profile Review ANZSCO Codes	Apprenticeship Centre	Teacher Professional Development	RDCs
Immigration & Border Protection	Workforce Development – Policy	Workforce Development - Adoption	School Resources	
ABS & ABARES	Australian Migration System alignment	VET – Traineeships & Apprenticeships	Agriculture Careers & Pathways	
Indigenous		Disadvantaged engagement		
		Regional Development (HUBS)		

Priority areas

The new national body would be tasked with addressing four priority areas: policy and perception; workforce development; education; and productivity and extension.

Policy and perception

The broader problem is that the agriculture workforce has a shortage of appropriately skilled workers and this shortage is expected to worsen. The new national body would work with industry bodies, industry and established media channels and outlets to development consistent and positive messages about Australian rural industries. Specifically, it would:

- highlight industry best practice in the areas of animal welfare, land management and stewardship and sustainable production processes;
- promote industry's commitment to sound livestock health and welfare strategies;
- promote industry's contribution to feed and clothe Australians and those overseas;
- highlight the contribution of new technology to improved production and sustainable practices; and
- promote challenging and rewarding career and employment pathways.

Workforce Development

The trend over recent years has been one of inadequate workforce development for industry advancement in the Asian Century. The new national body would promote a skilled Australian workforce by:

- supporting the establishment and adoption of adequate and consistent funding models for training systems and products across jurisdictions;
- encouraging and facilitating 'contractor' involvement with formal VET arrangements and (for example, Australian Apprenticeships and cadetships);
- trialling host employer group training type arrangements with reputable agricultural labour hire companies and/or large agribusiness to pilot the introduction of new cadetship pathways at Certificate IV and Diploma levels;
- expanding the availability of accessible, high quality, cost effective and consistent web-based content and processes to support blended rural and related learning and assessment processes, recognition of prior learning and up-skilling opportunities, regardless of geographical location or thinness of the nominal training market;
- providing advice to government on training and workforce development policies, programmes and initiatives to facilitate increased rural industry involvement (such as funding levels, entitlement models, accessibility and availability in remote areas).

The new national body would promote labour supply solutions to fill gaps in the Australian skilled labour market by:

- advocating for improved access to foreign skilled and semi-skilled labour including through the 457 visa programme;

- identifying and documenting skills shortages and providing advice to Government on the adequacy of the Skilled Occupation List and the National Skills Need Lists in agriculture; and
- establishing fast-tracking induction and up-skilling programmes, premised on Skill Sets, so that new entrants to the agricultural workforce meet specific employer needs.

Education

More VET and tertiary graduates are needed to address the current labour shortage in agriculture. The new national body will promote knowledge of agriculture in the Australian community by:

- advocating for better and more balanced agriculture-based education in schools at all levels from primary to secondary school and college;
- promoting the adoption of consistent school and VET in-school delivery models and options, premised on improved school and industry partnerships and uniform levels of government/school support across jurisdictions (for example, through greater use of Rural Skills Online within schools, hubs, regional centres of excellence); and
- providing advice to government on changes required to education policies, programmes and initiatives to facilitate increased rural industry and student participation (such as funding levels, entitlement models, accessibility and availability in remote areas).

Productivity & Extension

If current trends continue, the viability of the industry will be threatened, undermining the capacity of the industry to grow. The new national body will promote and strong and competitive agriculture sector, by:

- developing innovative approaches to increase student interest and participation in agricultural and related courses;
- developing, facilitating and trialling innovative accessible bridging arrangements between selected VET and tertiary institutions;
- increasing industry adoption rates of new technologies and research outcomes; and
- providing advice to government on changes required to national and State and Territory industry extension policies, programmes and initiatives to facilitate greater relevance and participation of rural industries (through approaches to research and development and related funding models and increased availability of extension services to support industry in rural and remote areas).

The table below takes the initiatives above and breaks them down into short and longer term strategies for implementation in each of the key priority areas. Some risks are identified and possible solutions suggested. Of course, risks will continue to emerge and will need to be monitored and dealt with as and when they arise.

PLAN	POLICY & PERCEPTION	WORKFORCE DEVELOPMENT	EDUCATION	PRODUCTIVITY & EXTENSION
ACTION Short term	Identify key stakeholders, consider and allocate roles to deliver elements of this part of the plan	Gather and compile baseline data on: • Industry involvement with Australian Apprenticeships (AAs) including school based AAs • Students enrolments in TAFE and private RTO fulltime agricultural courses including Diplomas and Advanced Diplomas Encourage high level of industry ownership, identify key stakeholders, consider and allocate roles to deliver elements of this part of the plan	Gather and compile baseline data on: • Student participation in Ag VET in School programs • Students undertaking agriculture in senior secondary, across Australia Identify key stakeholders, consider and allocate roles to deliver elements of this part of the plan Promote education sector commitment to the NEST initiative and WFD plan	Gather and compile baseline data on • Number of Student applications for agricultural tertiary courses • Identify graduate destinations Identify key stakeholders, consider and allocate roles to deliver elements of this part of the plan, and encourage Research and Development Corporation including Cooperative Research Centre involvement with NEST initiatives and WFD plan
ACTION Medium term	Work with industry bodies, industry and established media channels and outlets to development consistent and positive messages about Australian rural industries:	Identify and document skills shortages, where and if possible Seek to increase the number of agricultural occupations on various Skill Shortage Lists to meet specific objectives – 457	Increase the number of people who consider Agriculture Improve agricultural education in schools at all levels primary, secondary and senior high school –	If possible quantify and document tertiary and graduate skills shortages Develop innovative approaches to target increased tertiary student interest and participation in agricultural and related courses

	Highlight industry best practice, animal welfare, land management and stewardship, sustainable production processes Industry's commitment to sound livestock health and welfare strategies Promote the contribution made to feed and clothe Australians and others in many other parts of the world Contribution to supporting Australian in rural and regional communities and the wider economy Highlight the contribution of new technology to improved production and sustainable practices Challenging and rewarding career and employment pathways	visa, migrants in demand, National Skills Need Lists Pursue training outcomes at all levels that support industry growth	including better and more balanced curricula	
ACTIONS Long term		Make recommendations on changes required to training and workforce development policies, programmes and initiatives to facilitate increased rural industry involvement e.g. funding levels, entitlement models, accessibility	Make recommendations on changes required to education policies, programmes and initiatives to facilitate increased rural industry and student participation e.g. funding	Make recommendations on changes required to national and State and Territory industry extension policies, programmes and initiative to facilitate greater rural industries relevance and participation – approaches to

		and availability in rural and remote areas, etc Consider alternative delivery models and options e.g. hubs, centres of excellence.	levels, entitlement models, accessibility and availability in rural and remote areas, etc Consider alternative school and VET in school delivery models and options e.g. hubs, centres of excellence.	R&D, R&D funding models, availability of extension services to support industry in rural and remote areas, etc
RISKS AND POSSIBLE SOLUTIONS	Pivotal to use industry champions Focus on high technology no tractors Use young, exciting and committed young people as the face of our industry	Difficulties in sourcing accurate and definite participation data, revisit PIEF Stocktake and NCVER statistics Staff retention and the seasonal nature of work in many sectors, expand Seasonal Worker program Demise of extension and advisory services; new programs including more rural advisers Skill and labour shortages, expand the use of contractors Ageing and shrinking workforce, improved promotion youth, schools, older workers Inadequate and confusing communications/messages across relevant portfolios including the Department of Agriculture, Department of Employment and Department of Industry, and better co-operation	The term *agriculture* turns many people off, replace with *agribusiness*; Farmers often seen as environmental vandals, promote best practice examples; Agriculture sector seen as backward looking and low skilled; encourage supermarkets chains to highlight higher skilled jobs and high technology aspects of industry and modern productions systems in commercials, print advertisements, etc. Inadequate content in curricula and shortage of resources, expand availability of online consistent high quality materials and improve agricultural content.	Progressive withdrawal of States from delivery of extension, and diminished involvement with research activities, including selling off research facilities, facilitate and support greater involvement of properly trained and accredited farm consultants and private advisory services The irrelevance and unsuitability of some current tertiary courses, better alignment of degree content to actua industry requirements and improved institution to industry Staff poaching within consultancy/advisory firms and unsustainable salary arrangements resulting from the shortage of suitably qualified personnel, develop and adopt new extension training programs and produce more graduates

		and collaboration between agencies.	Poor professional development opportunities for agriculture teachers and instructors, better PD programs and expanded school and industry partnerships; Program and funding uncertainty - PIEF, PICSE and related initiatives, on-going government and agency support.	

Immediate priorities

The Plan will not be implemented overnight. Ongoing collaboration with key stakeholders is required to gain consensus on the Plan so that it underpins their efforts going forward. To make this task more manageable, the NFF considers that immediate priority should be given to:

1. development of a five yearly 'Agriculture Labour Market Force Profile';
2. expansion of the Seasonal Worker Program to cover all agricultural industries;
3. overhaul of the ANZSCO system so that it accommodates relevant industry skills and qualifications; and
4. a new industry skills model that supports publically funded and delivered units of competency and nationally recognised Skill Sets.

Conclusion

The future of Australian agriculture is full of potential. Food and fibre commodities are in ever-increasing demand and traditional industry structures are adjusting to meet this need. The Asian Century is upon us and changes are necessary now to ensure Australia is best placed to take full advantage of the opportunities as they arise.

A new mind set and unprecedented collaboration between all parties – industry, governments and educational institutions alike, is required to reconceive the delivery of education and skills in agriculture to meet industry needs.

The new national body will oversee and coordinate these collaborative efforts to develop effective and sustainable workforce strategies for the future of agriculture, horticulture and agribusiness. The new body will focus on identifying agricultural labour market needs and increasing the availability of workers to fill those needs. At the same time, it will prioritise working in agriculture as a career choice, not a temporary solution.

Immediate priorities include collection of relevant and current data on the state of the Agriculture Labour Force, to ensure that policy settings underpinning agricultural workforce development continue to be targeted to meet industry needs.

Expansion of the Seasonal Worker Program to cover all agricultural industries will help deliver on the Government's 'red tape reduction' agenda by eliminating the need for ongoing review of the program to meet the varying needs of the agriculture sector, which can be hard to predict given the rate of fluctuation. Relaxing restrictions on foreign skilled and semi-skilled workers for all industry sectors will directly ease the pressure of filling vacancies at peak times of the year.

Similarly, overhauling the ANZSCO system so that it accommodates relevant industry skills and qualifications will ensure that the 457 visa program is accessible to more farm businesses in areas where skilled labour needs are evident and unable to be met by the Australian workforce.

Finally, funding models designed to support delivery of Skill Sets will enable farm businesses and individuals to take a targeted approach to learning by aligning skills development with business needs. Over time, this will incrementally increase the underlying skill-base of the agriculture sector and lead to greater farm productivity.

APPENDIX A – Agriculture Workforce - Farm Sector Employer Survey Results

APPENDIX B – Agriculture and the Australian Migration System Issues Paper

APPENDIX C – ANZSCO Issues Paper

APPENDIX D – Review of Earlier Report Recommendations

APPENDIX E – Agrifood Skills Australia 2014 Environmental Scan

APPENDIX F – AHC10 Training Package Qualifications

APPENDIX G – Industry Outlook –Agriculture, Forestry and Fishing

APPENDIX H – National Rural Advisory Council Report on Workforce Planning Capabilities of Agricultural Employers

APPENDIX J – NSW Government Department of Education and Communities – Smart and Skilled: 2015 Prices, fees and subsidies