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Demand for farm workers

ABARES farm survey results 2018

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Summary

Demand for labour on Australian farms has undergone substantial change over the past decade. The number of owner-managers and contributing family workers on family farms has declined as the number of farms has declined and the average size of farms has increased. At the same time, the number of employees across the agricultural sector has increased. The number of overseas workers, particularly in horticultural industries as seasonal labour, has also increased.

To improve understanding of agricultural industries' workforce, ABARES developed a series of farm labour surveys. This report uses data from these surveys to provide an in-depth profile of labour demand, recruitment difficulties and future challenges. The surveys covered the vegetable industry across all states and irrigated fruit and nut farms in the southern Murray-Darling Basin in 2016–17, and the broadacre and dairy industries across all states in 2017–18. In aggregate these industries account for 74% of total Australian agricultural sector employment.

Funding was announced in the May 2018 budget allowing ABARES to conduct a more comprehensive and ongoing collection and analysis of data on agricultural labour. This includes expansion of the surveys in 2019 and projects exploring how the agricultural labour force has changed and factors affecting likely future supply and demand. Results from this work will be available later in the year.



Over
2,400 farms
surveyed in 2018



Surveys covered broadacre
(beef, sheep, grains), dairy,
vegetables and in the MDB
irrigated cotton and fruit
and nut



74%
of total Australian
agriculture sector
employment represented

Key findings

Differences between agricultural industries, farm size and location shape the demand for labour, the workforce make-up and the recruitment experiences of farms.

Horticultural farms use large numbers of low-skilled workers from overseas

At the seasonal peak, horticultural farms (vegetable farms and fruit and nut farms) used more than double the labour per farm of dairy farms and 3 times more labour per farm than broadacre farms on average.

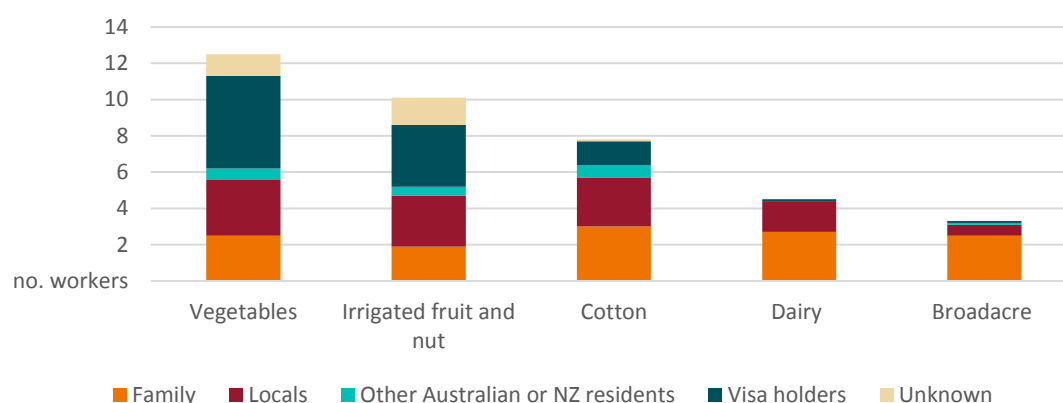
Family and other Australian workers make up the majority of the workforce across the industries. Most of these workers were from the same or a neighbouring district, particularly for full-time and part-time roles. This highlights the importance of local workers to agricultural industries and may reflect limited mobility in the Australian agricultural workforce.

Overseas workers are also used substantially in the agricultural sector. Over one-third of peak seasonal jobs on vegetable and fruit and nut farms were filled by overseas workers. The

dependence on overseas workers in these industries exposes farms to changes in visa arrangements. Only a small proportion of dairy and broadacre farms used overseas workers. Nevertheless, because of the large number of broadacre farms, a large number of overseas workers were employed in these industries in aggregate.

Australians dominate the workforce, with overseas workers and those with unknown backgrounds more common on horticultural farms

Average workers per farm, 2017–18



Most workers are Australians, living nearby highlighting the importance of local labour.

Dependence on overseas workers exposes farms to visa changes.

Contract labour with an unknown background puts farmers at risk of using undocumented workers.

Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Backpackers (Working Holiday Maker subclass 417 and 462 visa holders) were the most commonly employed overseas workers on farms. On vegetable and fruit and nut farms, backpackers accounted for around 20% of all workers at the peak of seasonal employment. New arrangements announced in November 2018 expanding Working Holiday Maker visas may increase the number of backpackers working in agriculture. Ongoing monitoring is required to determine the effect of changes to visa conditions.

Relatively few farms engaged overseas workers through the Seasonal Work Programme in 2016–17 and 2017–18. Around 4% of horticultural farms surveyed used the program, although the number of workers in the program has grown rapidly since it commenced in 2012–13. Promotion and continued streamlining of program requirements (including the latest trial arrangements to help labour hire employers link smaller farms with seasonal workers) could help increase use of this program. In addition, the Pacific Labour Scheme commenced in July 2018, after the period covered by these surveys.

Few farms reported employing workers on skilled visas; farms that did were all large with a turnover greater than \$1 million. Access to skilled visas has tightened in recent years although more agricultural occupations were added in March 2019. Continued work between government and industry to develop labour agreements could further improve access to skilled agricultural workers in other roles.






The use of contract workers by horticultural farms is widespread. The Fair Work Ombudsman has recently uncovered cases of serious exploitation by unscrupulous labour hire operators (Commonwealth of Australia 2019). The Australian Government recently accepted recommendations to create a nationwide licencing scheme to address concerns about the risk of worker exploitation and use of illegal sources of labour.

In the horticultural industry, the background of around one-quarter of contract labourers was unknown. Engaging workers with an unknown background does not necessarily mean workers are illegally employed, but suggests some farmers are at risk of using undocumented workers. Tightening conditions for labour hire companies may make it more difficult for these firms to supply undocumented workers to farms in the future.

Casual and contract labour was generally meeting lower skilled roles, rather than being used to obtain skilled workers. Higher skilled workers were generally employed in more permanent full-time and part-time positions. Horticultural farms reported the greatest use of labourers; broadacre, dairy and cotton farms engaged more managers and machine operators.

Larger farms generally employed a higher proportion of casual and contract workers than smaller farms, across all industries. Looking ahead, which industries experience growth and which farm sizes grow or contract is likely to affect the overall demand for permanent, casual or contract labour.

Horticultural farms use more flexible types of employment

Proportion of farm workforce	 Vegetables	 Irrigated fruit and nut	 Cotton	 Dairy	 Broadacre
Permanent	28	24	57	78	79
Casual	35	20	31	21	18
Contract labour	37	56	12	1	3

Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Rates of recruitment relatively low and concentrated on labourers

Recruitment activity on farms was generally low compared with the rest of the economy. ABARES survey shows 42% of vegetable farms with employees and 39% of fruit and nut farms with employees attempted to recruit workers in 2016–17. The share of farms with employees recruiting was much lower on dairy (18%) and broadacre farms (8%) in 2017–18. In contrast, 72% of all businesses across the whole economy attempted to recruit in 2017–18, up from 69% in 2016–17 (Department of Employment, Skills, Small and Family Business 2019a).

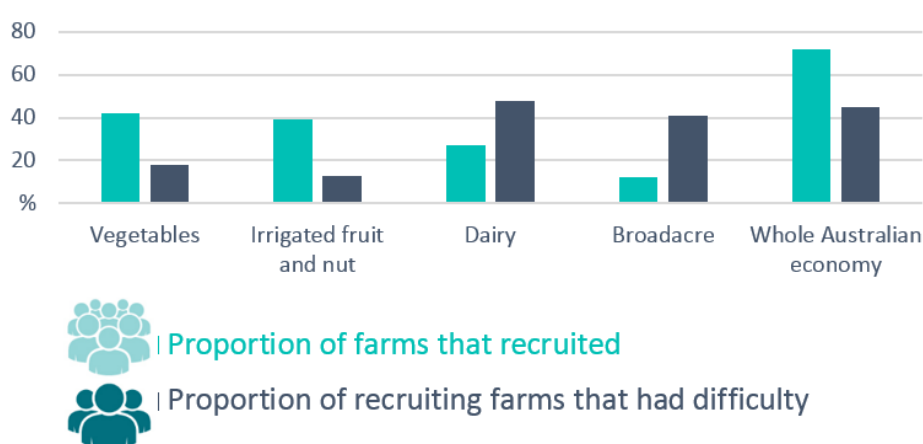
Low rates of recruiting in agriculture reflect the dominance of family labour in permanent positions—reducing the demand for hired workers and the need to recruit. Many farms also reported calling on the same contract and casual labour each year, reducing their need to recruit.

Horticultural farms predominantly recruited labourers in casual or contract positions to meet seasonal needs. Dairy and broadacre farms predominantly recruited casual labourers, but also recruited more permanent and skilled positions, mostly because of staff turnover.

Few horticultural farms had difficulty recruiting

More broadacre (40%) and dairy (48%) farmers reported difficulty recruiting, similar to the proportion of businesses across the economy that reported difficulty (44%) in 2017–18. Fewer vegetable farms (18%) and fruit and nut farms (14%) who recruited reported a difficulty in 2016–17. For horticultural farms, the demand for low skilled workers, the use of contract labour and access to backpackers appears to reduce recruitment difficulties.

The surveys did not find a large number of unfilled vacancies. Farmers reported recruiting for over 20,000 positions, of which around 700 remained unfilled. The proportion of vacancies that were unfilled was lower than that reported by the Department of Employment, Skills, Small and Family Business (2019b) for all businesses across the Australian economy in 2018. Vacancies may be higher in other unsurveyed agricultural industries and regions.



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Source: ABARES farm survey data; Department of Employment, Skills, Small and Family Business 2019a

ABARES surveys show that vegetable and irrigation farms with longer peak production seasons reported slightly more difficulty recruiting workers. This may be because these farms were more selective in hiring workers to ensure the best fit for their business or that backpackers, generally readily available, were less suitable for longer term positions. Before November 2018 backpackers had to leave an employer after 6 months. This may have increased the turnover and increased recruitment difficulty. Future ABARES surveys will include more detailed questions on turnover rates to shed light on the contribution of staff turnover to workforce difficulties.

Farms had more difficulty recruiting skilled positions

Broadacre and dairy farms with difficulty recruiting labourers most commonly reported that applicants did not meet the job requirements, lacking the experience and other required skills

for the job. Horticultural farms who had difficulty recruiting labourers most commonly reported applicants' lack of interest in this type of work. These findings suggest that dairy and broadacre farms were seeking labourers with a higher skill level than horticultural farms were looking to recruit.

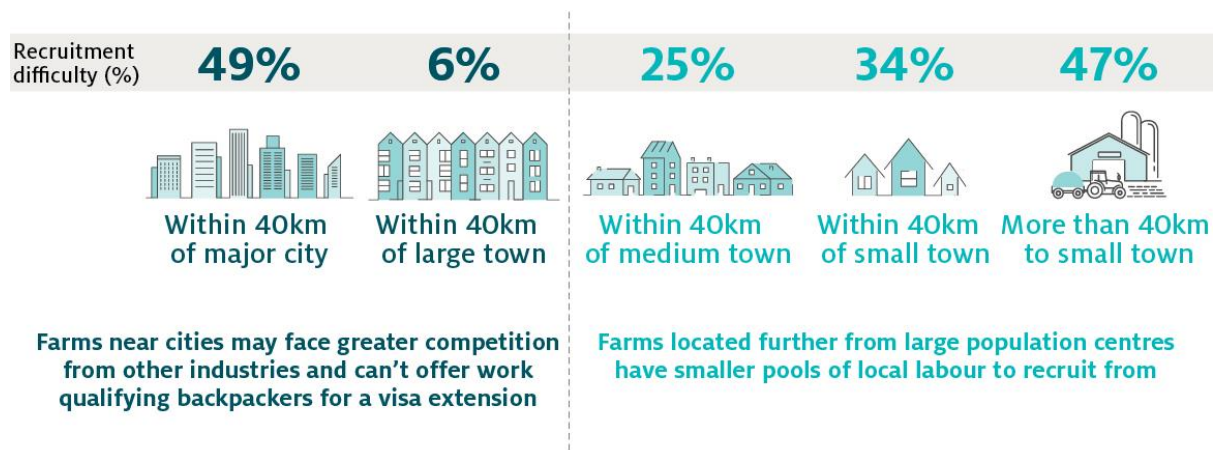
Farms attempting to recruit higher skilled (non-labourer) roles also experienced more difficulty. This issue was not unique to agriculture—it was the result of strong labour market conditions and low entries to trade apprenticeships in 2018 (Department of Jobs and Small Business 2018a). However, it highlights the importance of access to agricultural training to ensure Australians gain the skills and experience necessary to meet labour demand. Competitive wages and conditions are also needed to attract and retain skilled workers.



Location affected recruitment difficulty

Farms located further from large population centres had more difficulty recruiting. This may reflect the generally low use of workers from outside the local district, making it more difficult for those farms with smaller pools of local labour to recruit.

The exception to this trend of increasing distance increasing difficulty was those near major cities, which were mostly vegetable farms. Vegetable farms located near major cities reported more difficulty hiring than vegetable farms in more regional areas. Farms located near cities may face greater competition for workers from other industries despite being able to access a potentially larger pool of available workers. Another explanation is that farms near cities cannot offer work that qualifies backpackers for a second-year visa, reducing the incentives for backpackers to work on these farms. ABARES survey results show backpackers accounted for a smaller proportion of the workforce on farms located in ineligible postcodes. This suggests that backpackers are responding to current incentives to work in regional areas. Any changes to the regional eligibility criteria will likely change the areas where backpackers seek to work.





Future labour needs and challenges may change as farm sizes grow

Looking ahead, ABARES surveys found that horticultural farms expected to need a similar workforce or slightly increase the size of their workforce in 5 years' time, but dairy and broadacre farms generally expected declines in the number of workers required.

Historically, amalgamation of farms and technological advancement has led to fewer farms that are generally larger and employ more people. Continuation of this trend would result in fewer but larger farms employing more people per farm in the future. Large farms (farms with greater than \$1 million in receipts) rely more on non-family labour. As a result, changes in the broader labour market such as competition from other industries or migration are likely to have more impact. ABARES surveys found that competition for workers, particularly from other industries, was commonly reported as a concern for the future by larger farms.

Large farms employ a higher proportion of labourers than small farms, but also a higher proportion of workers with technical skills. Access to workers with appropriate experience in the next 5 years was the most commonly reported concern for large farms. For dairy, broadacre and fruit and nut farms, accessing workers with appropriate skills and experience in the future was a more commonly reported concern than issues around accessing unskilled workers. This highlights the need to attract, train and retain talent.

Large farms employ more workers exposing them to changes in the broader labour market		
	Small vegetable farm (farm turnover <\$500,000)	Large vegetable farm (farm turnover \$5 million+)
Workers per farm (no.)	3	12
Workers that were family (%)	45	6
Workers that were permanent (%)	45	23
Farms that recruited (%)	23	92
Main concern in the future	Farm profit	Attracting workers

Note: Vegetable farm results reported for 2016–17.

Introduction

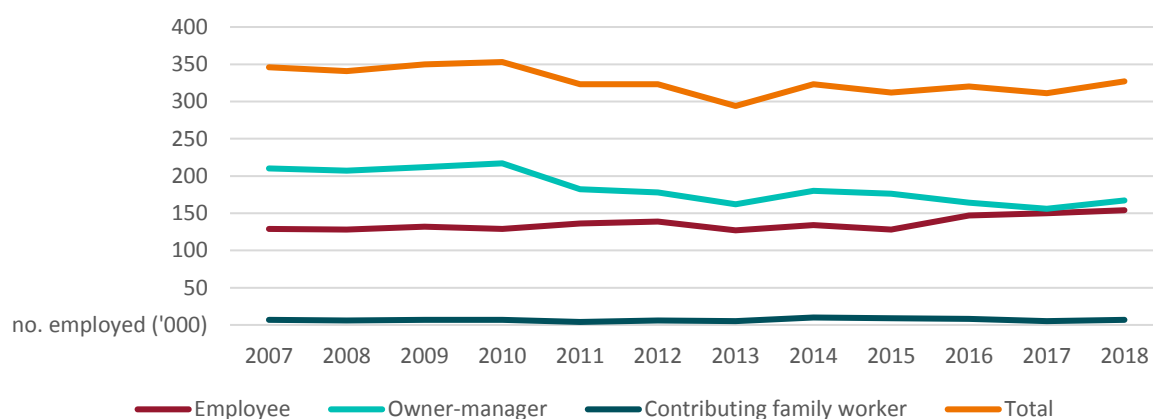
As demand for Australian agricultural produce continues to grow, the Australian Government continues to seek a clearer understanding of the current farm workforce and the difficulties farm businesses experience in recruiting workers. To improve understanding of labour use on Australian farms and recruitment difficulties, ABARES conducted a series of surveys in 2018. These surveys were extensive but not exhaustive, with around 77% of agricultural production represented. This included vegetable, dairy and broadacre farms nationally and irrigation farms in the southern Murray–Darling Basin. ABARES is continuing to improve the collection and analysis of agricultural labour force data. The results from further surveys and other analysis will be available later in 2019–20. This includes work examining how the agricultural labour force has changed and factors affecting future supply and demand for agriculture labour.

Agricultural labour needs are changing

Estimating the total number of workers in the Australian agricultural sector is difficult (Box 1). The Australian Bureau of Statistics (ABS) (2019a) Labour Force Survey data indicate a long-term downward trend in the total employment of workers normally resident in Australia. This has fluctuated between years, including increasing between 1992–93 and 2001–02 and being more stable between 2011–12 and 2017–18. The ABS (2017) Census of Population and Housing indicates that employment of Australian residents in the Australian agricultural sector declined steadily until 2011, then increased by 4% between 2011 and 2016.

ABARES estimates that over 95% of Australian farms remain family owned (Martin et al. 2018). Traditionally, owner-managers, partners and family members have provided most of the labour on family farms. The family farm gives flexibility in the use of labour in terms of hours worked and engagement in off-farm work. However, ABS data indicate that the structure of the agricultural workforce has changed substantially over the past 2 decades, increasing the exposure of farms to the labour market. The number of agricultural employees has increased, as has the number of owner-managers with employees. The number of overseas workers has also increased. These trends are shown in Figure 1 for agriculture, forestry and fishing. Agriculture dominated the overall workforce of the sector (ABS 2019a).

Figure 1 Average annual Australian-employed persons in agriculture, forestry and fishing



Source: ABS 2019a Labour Force Survey

This can be partly explained by the trend towards larger farm sizes through farm amalgamation and the increased intensification of farms (Barr forthcoming; Productivity Commission 2005). Demographic changes such as smaller families and other influences, such as more family members working off-farm, have also reduced the supply of family labour and increased the need for hired labour. Technological change and intensification have increased the requirement for workers with specialist skills.

Employment has also changed across industries. Agricultural industries gaining employment share in the past decade included vegetable and fruit growing. Industries losing employment share included grains, sheep and beef cattle farming, and dairy farming. Services to agriculture experienced employment growth over the period.

Box 1 Agricultural employment statistics

Australian Bureau of Statistics (ABS) estimates of the number of workers in the agricultural sector range from 240,000 to 408,000. Three factors affect these statistics. First, seasonal production on some farms means workers can work on multiple farms, resulting in workers being counted multiple times. Second, overseas workers and contract workers, provided by labour hire companies, are not included in all national statistics. Third, undocumented workers or workers breaching their visa conditions may not be reported.

ABS data on the agricultural workforce include:

- The ABS (2019a) Labour Force Survey, the main source of quarterly and annual information about changes in the agricultural workforce, does not include overseas workers. This survey estimated that in 2017–18, the number of Australians working in agriculture fluctuated throughout the year from 272,000 to 282,000. On average, 279,000 people were employed in 2017–18, up from 252,000 in 2016–17. The survey sample is designed to ensure sampling error is reduced to a minimum at the national and state/territory levels. However, it can be higher for labour force regions or for detailed breakdowns.
- The ABS (2017, 2019b) Census of Population and Housing indicated that 228,300 Australians and 17,400 overseas workers were employed in agriculture in August 2016, giving a total of around 245,000 workers. The census takes place in August every 5 years and only captures seasonal employment in that month. Winter is generally a time of reduced employment on horticultural farms, so this is likely to be a low-end estimate.
- The ABS (2019c) Economic Activity Survey asks businesses about the number of employees regardless of residential status and reported 407,000 jobs in agriculture in 2017–18. The Economic Activity Survey may count people with multiple jobs more than once, inflating the estimate of the number of people employed.

Department of Home Affairs data on overseas workers in the Australian agricultural sector shows:

- The number of overseas visitors on Working Holiday Maker visas (commonly referred to as backpackers) working in the agricultural sector has generally increased. In 2017–18, 31,000 backpackers qualified for a second-year visa by working on farms—down slightly from 32,000 in 2016–17 (Department of Home Affairs 2018a). Some backpackers work on farms but do not qualify for a second-year visa or work on farms on a second-year visa, but data on these visa holders are currently not available.
- Pacific Island and Timor-Leste residents in Australia under the Seasonal Worker Programme have increased from 1,473 in 2012–13 when the program commenced to 8,459 workers in 2017–18 and grew to 12,200 in 2018–19 (Temporary Visa Program Branch, [Department of Home Affairs] 2019, pers. comm., 10 July). These workers are largely employed in farm work. In 2017–18 over 97% of approved seasonal worker placements were in horticulture and 1% in broader agriculture (Seasonal

Work Programs Branch [Department of Employment, Skills, Small and Family Business] 2019, pers. comm., 15 July).

- The number of workers on skilled visas is low—912 workers in the agriculture, forestry and fishing industries were on temporary skilled visas in 2017–18 and a further 442 workers were on permanent skilled visas (Department of Home Affairs 2019a, b).

ABARES surveys extensive not exhaustive

ABARES conducted a labour survey in 2018 to explore current labour use, recruitment difficulties and future challenges on farms. This survey was undertaken using funding from the Department of Agriculture, and provides the first comprehensive report looking at a wide range of agricultural industries' labour needs.

The 2018 labour survey was included as supplementary questions in ABARES annual industry surveys. ABARES annual surveys collect information from over 2,500 farmers via face-to-face interviews about the financial and production performance of their farms.

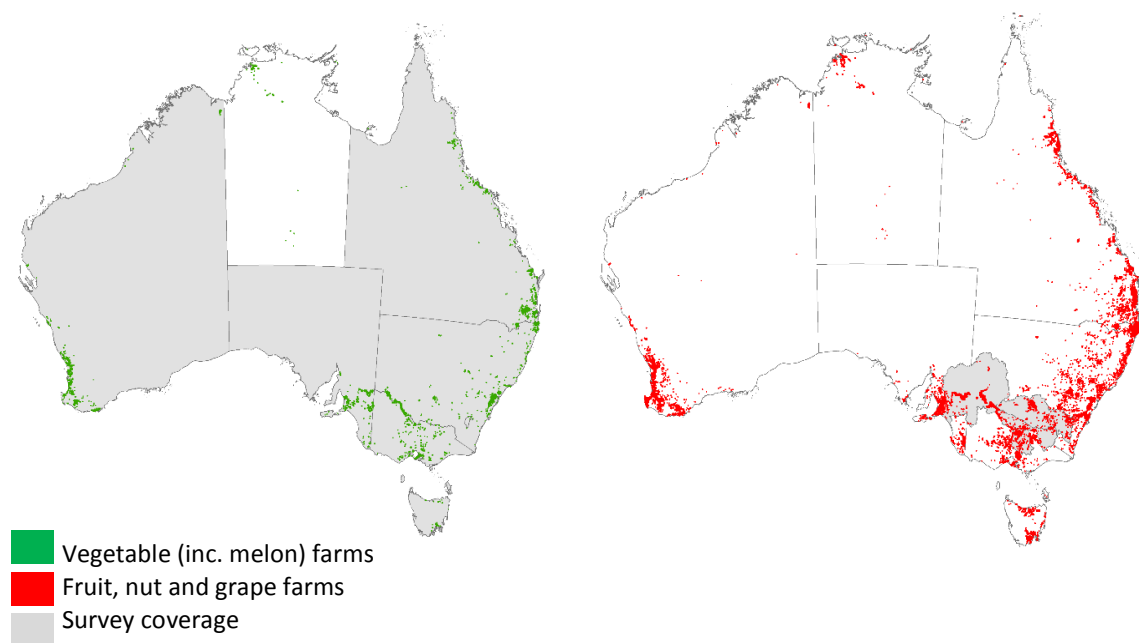
These surveys did not cover all agricultural production, but coverage of industries and regions accounts for around 77% of agricultural production value. ABARES surveyed 300 vegetable farms nationally about their labour use in the 2016–17 financial year. The vegetable industry surveys covered all states and territories, except the Northern Territory (Map 1). Labour use questions were also included in ABARES survey of irrigation farms in the southern Murray–Darling Basin in 2016–17, which included 180 fruit and nut farms (Map 1) and 80 cotton farms. The survey does not represent all horticultural farms, but provides a significant insight into issues facing the industry. For example, there were 8,850 fruit and nut farms (including grapes) across Australia in 2016–17 (ABS 2018a). Around one-quarter (2,230) of these were irrigation farms in the southern Murray–Darling Basin. Given the importance of seasonal labour to fruit and nut industries, future work will explore labour needs outside the southern Murray–Darling Basin region.

The labour questions were also included in ABARES national surveys of the dairy industry (300 farms distributed across the dairy farming regions of all states) and 1,600 broadacre farms (beef, sheep and cropping farms distributed across all states) in the 2017–18 financial year. The survey does not include intensive livestock industries such as pigs, poultry, or beef feedlots, or the sugar cane, turf growing, floriculture or plant nursery industries.

ABARES survey data are weighted to produce estimates for the target populations. Information on ABARES sampling methodology is available online at [ABARES farm definitions methods](#).

The May 2018 budget provided for ABARES to improve the collection and analysis of agricultural labour force data over the next 4 years. Funding is supporting three key projects. First, ABARES is including additional questions on labour in its annual face-to-face surveys of about 2,500 farms and is considering options to include horticulture farms not currently covered in the irrigation survey. Second, ABARES has commissioned a demographic study by Dr Neil Barr to explore how the Australian agricultural labour force has changed. Third, ABARES has commissioned a foresighting study by CSIRO Data61 examining factors affecting likely future supply and demand for agricultural labour. Results from this work will be available later in 2019–20.

Map 1 Coverage of ABARES horticulture surveys



Labour profile

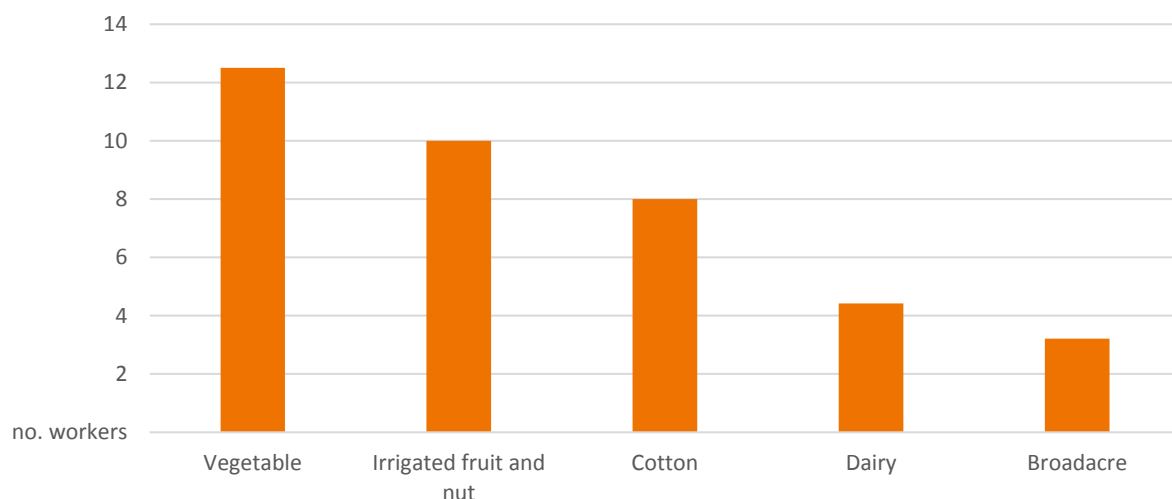
Labour is an essential input on farms and demand varies between industries, largely reflecting the degree of mechanisation. Horticultural farms surveyed (vegetable farms nationally and irrigated fruit and nut farms in the southern Murray–Darling Basin) generally use large numbers of workers at peak periods compared with other industries, and their hired labour costs typically account for a large proportion of farm costs. Within industries, the demand for labour also depends on other factors such as the size of the farm and seasonality of production.

Horticultural farms use more workers to meet peak needs

The number of workers engaged varies substantially, from farms with only the owner–manager to those with over 500 people. On average, vegetable farms and fruit and nut farms engaged more workers per farm than broadacre and dairy farms. Vegetable farms required 13 workers and fruit and nut farms required 10 workers on average per farm at peak demand. This was more than double that of dairy farms (4 workers) and 3 times greater than the average for broadacre farms (3 workers) (Figure 2). However, these averages hide substantial variation in the number of workers on farm.

This intensity of labour use in horticulture (vegetable and fruit and nut farms) is also highlighted by the higher contribution of labour to total farm costs compared with other industries. Usage of hired labour (non-family labour) is also much higher for horticulture farms (Figure 3). This suggests that horticulture farms are most sensitive to factors that affect the supply and cost of labour. For broadacre farms, the high contribution of labour to total farm costs is mostly a consequence of the large amount of family labour used, particularly on broadacre livestock farms. Unpaid family labour is valued at award rates to enable the performance of all farms to be compared regardless of the type of labour used.

Figure 2 Average peak number of workers per farm, 2017–18

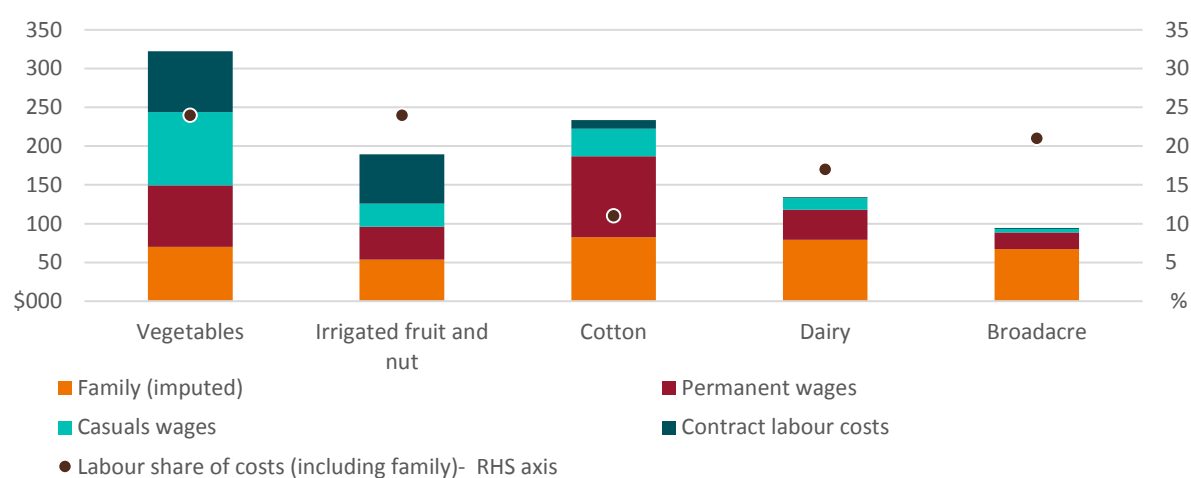


Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17. Labour numbers include family labour, hired labour and contractors who only provide labour, but exclude contract service workers who provide machinery and equipment as part of the contract.

Composition of labour costs varies across industries. Horticultural farms use more hired labour (non-family labour) and contract labour than other industries (Figure 3). The total cost of family labour was similar across all industries. Labour costs were high on cotton farms because they were generally large farms. However, labour was a relatively small share of total costs on cotton farms because of high expenditure on other inputs such as fertiliser, chemicals and contract services.

Contractor service providers are an additional source of labour, where labour is generally hired with machinery as a unit (Box 2). Detailed information on contract service providers was not collected in the surveys.

Figure 3 Average annual labour expenditure and as a proportion of total costs, by industry, 2017–18



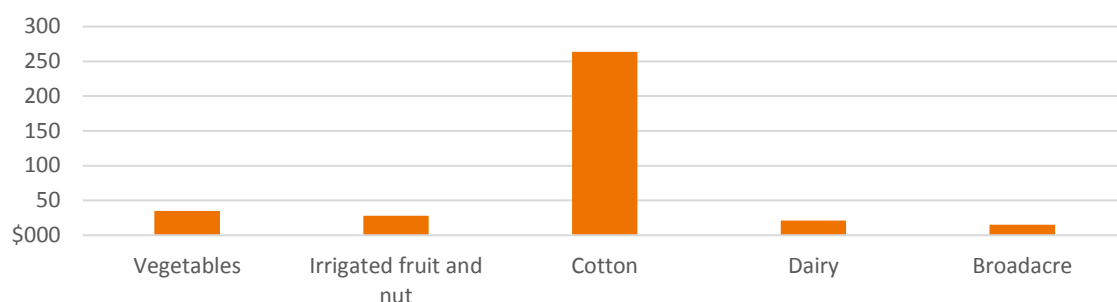
Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17. Labour costs include hired labour and the cost of family labour, but exclude contract service workers who provide machinery and equipment as part of the contract.

Box 2 Contract services

Beyond family, employees and contract labour, farmers also engage contract service providers, where machinery and labour are engaged as a unit. The cost of contract services include both the rent for the capital items and costs for labour. ABARES survey data show that expenditure on contract services was highest for cotton farms, reflecting extensive use of contractors with planting, spraying or harvesting equipment (Figure 4).

Contract services allow farms to outsource both the labour and capital to another provider without ongoing machinery and employment costs. ABARES work suggests that use of contract services to replace self-owned capital can also lift the productivity of small grain farms by allowing them to access more advanced technologies (Sheng and Chancellor 2018).

The labour survey did not investigate the number of contract service workers in the industry. However, ABS (2019a) Labour Force Survey data show the number of people employed in services to agriculture and aquaculture has grown, indicating that farmers are increasing their use of contract service providers to meet their workforce and skills requirements.

Figure 4 Other contract services, expenditure by industry

Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Large farms use more labour and use labour more efficiently

Small and medium-sized farms (farms with cash receipts of less than \$1 million) engaged a large proportion of the workforce. Small and medium-sized farms employed over one-third of the vegetable industry workforce, over half the fruit and nut workforce and dairy workforce, and almost three-quarters of the broadacre workforce.

Large and very large farms (cash receipts greater than \$1 million) on average employ more workers than small farms (Figure 5) and have higher labour costs mirroring the number of workers (Figure 6). Large farms (with cash receipts of \$1 million to \$5 million) had family labour costs around double that of small farms (with cash receipts of less than \$500,000). However, hired labour costs were around 15 times greater because large farms relied more on non-family labour. Historically, amalgamation of farms has led to fewer farms that are generally larger. Continuation of this trend would result in fewer but larger farms employing more people per farm in the future.

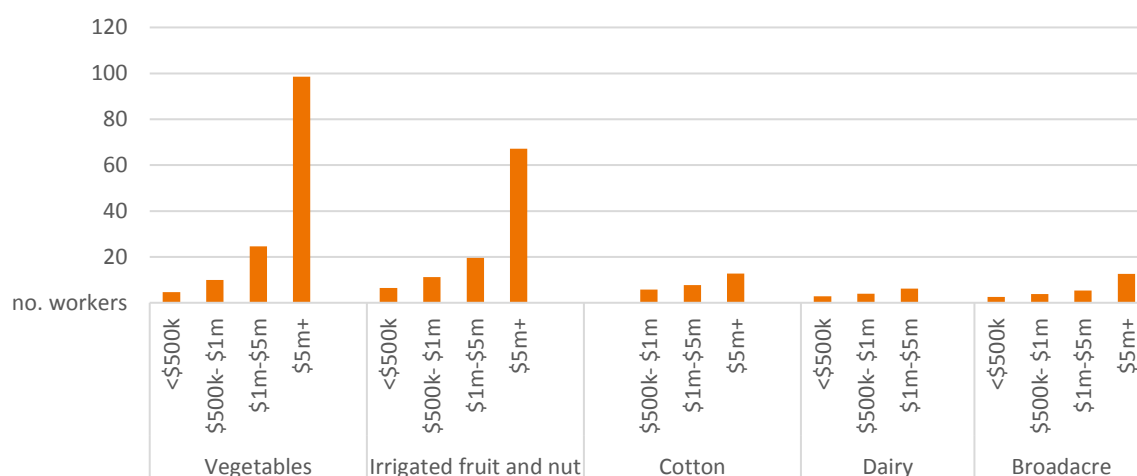
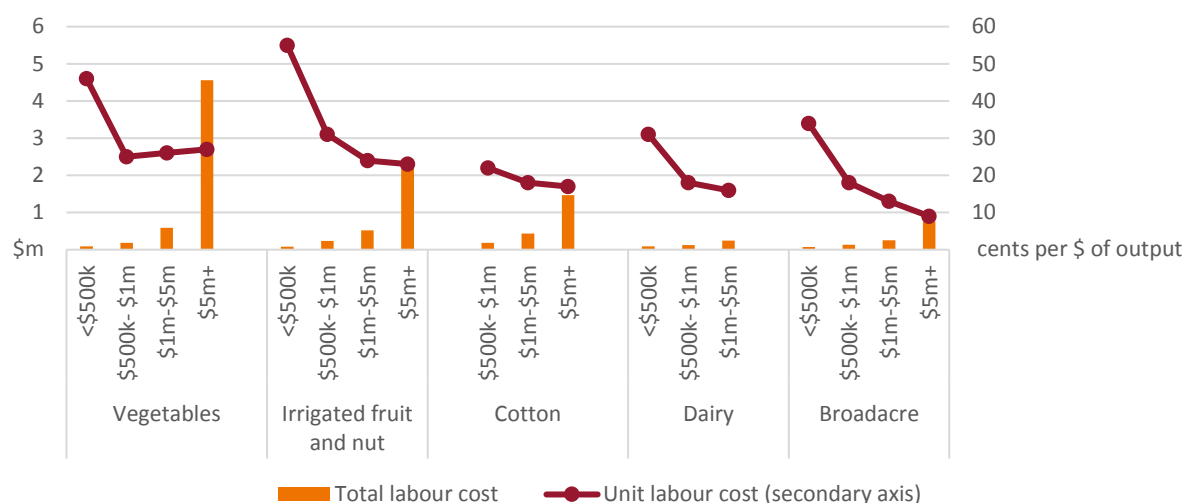
Figure 5 Peak worker numbers, by farm size, average per farm, 2017–18

Figure 6 Total labour costs and unit labour cost, by farm size and labour type, average per farm, 2017–18

Note: Includes imputed family labour costs, hired labour and contract labour, but excludes other contract services. Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Across all farm sizes, horticultural industries generally employ more workers at peak times. For example, on large farms with a farm cash income of \$1 million to \$5 million, vegetable farms and fruit and nut farms employed around 20 workers. In contrast, cotton, dairy and broadacre farms employed less than 10 workers on average.

Across all industries, large farms used labour more cost effectively, with lower labour costs per unit of output (lower unit labour costs) (Figure 6). For example, on average for every dollar of output produced small dairy farms spent 31 cents on labour compared with 16 cents on labour for large dairy farms. This suggests that large farms have a greater capacity to optimise the makeup of their labour force to reduce labour costs. Further, large farms may be better able to invest in labour saving technologies to increase labour productivity.

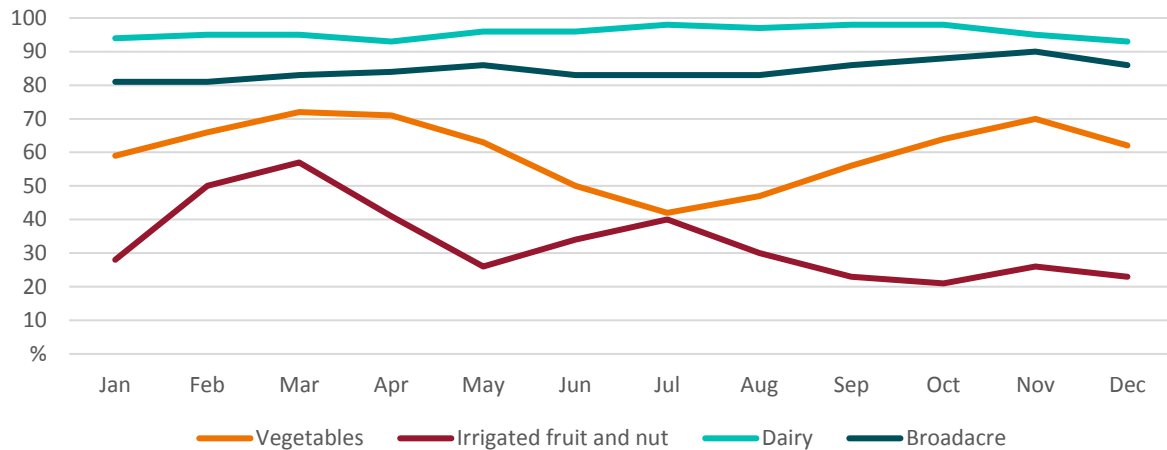
Seasonality affects labour demand

The demand for labour varies with the season and between industries, with most horticultural farms needing workers for short seasons. In the vegetable industry, around half of farms reported their peak labour need lasted for less than 6 months. Around half of fruit and nut farms reported their labour peak lasted for less than 2 months. Farms with a short season need a workforce that can be scaled up or down easily to meet peak demands. Broadacre and dairy farms were generally less seasonal in their demand for labour. Less than 20% of dairy farms and 30% of broadacre farms reported significant seasonal labour peaks.

The months in which farms reported needing their peak number of workers varies by industry (Figure 7). Some industries show multiple peaks during the year, reflecting the need for additional labour to complete work at different times such as planting, pruning and harvesting. Differences in crop types and differences in the timing of operations in different regions also affected seasonal peaks.

Differences in timing of peak demand for workers may allow workers to work across multiple farms or industries if they are willing and able to travel. However, simultaneous peaks in demand across industries makes recruiting and sharing workers more difficult.

Figure 7 Proportion of farms reporting peak number of workers in a given month, by industry, 2017-18



Note: Farms could report multiple peaks through the year, so proportions do not add to 100% over the year. Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Type of employment on farms

Farms use a mix of full-time, part-time, casual (including family) and contract labour to meet their demand for labour. Horticultural farms (vegetable farms nationally and irrigated fruit and nut farms in the southern Murray–Darling Basin) made greater use of more flexible casual and contract labour than other industries, reflecting the seasonal nature of their labour demand. Larger farms across all industries also generally made greater use of casual and contract labour. However, for dairy and broadacre farms permanent labour is still the dominant source of labour across all farm sizes. Growth in different industries and farms will affect the type of workers demanded.

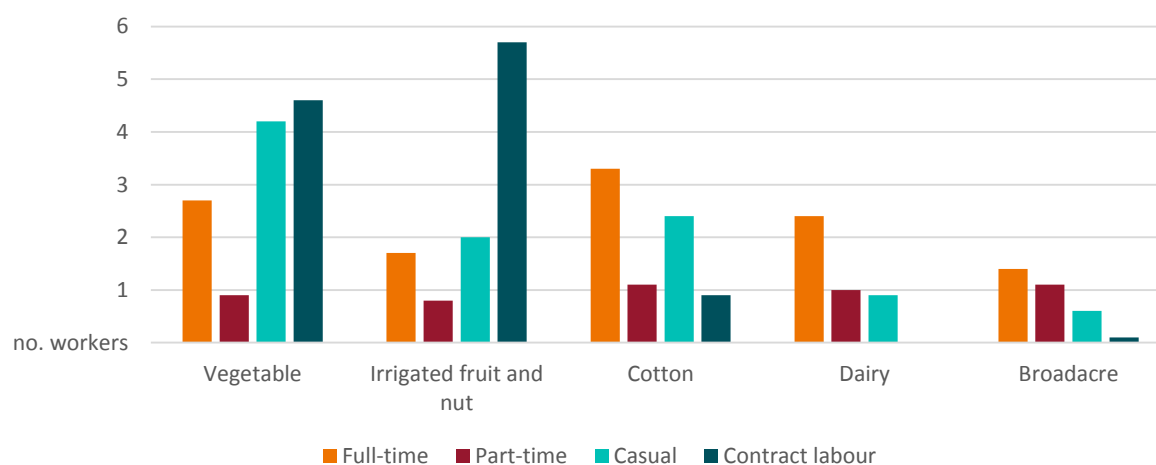
Horticultural farms use more flexible types of employment

All farms surveyed used some permanent workers (full-time or part-time) including family. The number of permanent workers did not differ greatly across industries—ranging from an average of 2.5 people on broadacre and fruit and nut farms, to 3.5 on dairy, 3.6 on vegetables and 4.4 people on cotton farms (Figure 8).

The majority of farms were owner-operated, engaging few permanent staff beyond the operator and their partner. Farms using only permanent full-time or part-time workers were more common in broadacre industries (66% of farms) and the dairy industry (53% of farms) than in vegetable (30%) or fruit and nut farms (12%).

Horticultural farms engaged more casual and contract workers. This largely reflects the seasonal nature of much horticultural production, which makes providing sufficient work year-round more difficult, increasing their need to use non-permanent labour sources. On average, vegetable farms had 9 casual or contract workers and fruit and nut farms had 8 casual or contract workers at peak times. In contrast, dairy and broadacre farms had less than 1 person engaged on a casual or contract basis at peak times, on average (Figure 8).

Figure 8 Average number of workers per farm at the peak, by tenure and industry, 2017–18



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Around 60% of cotton and vegetable farms, 45% of fruit and nut farms and dairy farms and 30% of broadacre farms employed casual workers. Casual labour seems to be preferred over contract labour to fill longer seasonal needs. Casual workers were employed on vegetable farms for 26 weeks a year, on average. This was similar to dairy farms (25 weeks a year), but longer than on fruit and nut farms (16 weeks a year) and broadacre farms (14 weeks a year).

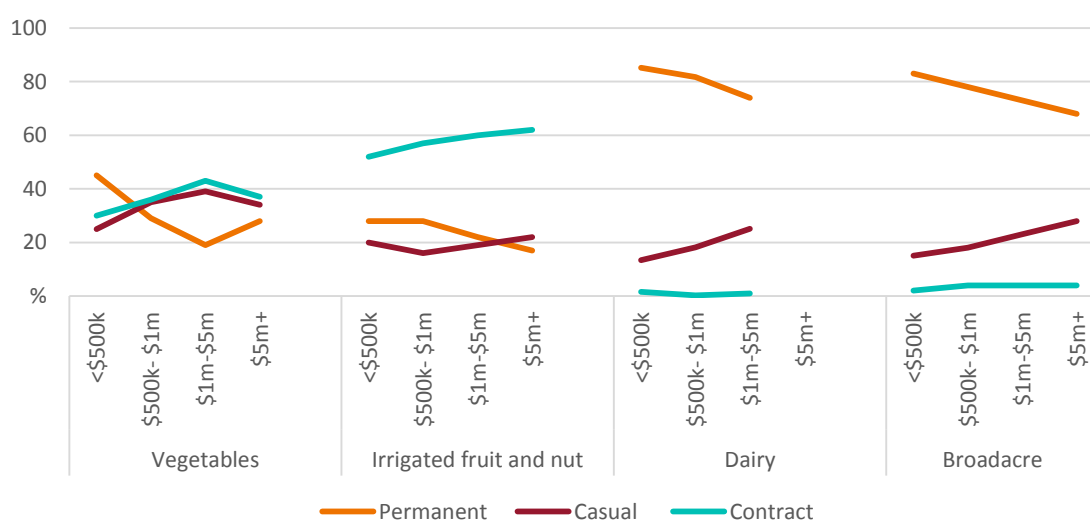
More fruit and nut farms used contract labour (63% of farms), compared with vegetable farms (22% of farms), cotton (13% of farms) and broadacre and dairy farms (less than 6% of farms). Contract labour seems to be preferred for farms with a short peak season. Half of vegetable farms engaging contract labour did so for 4 weeks or less and half of fruit and nut farms engaged contract workers for 2 weeks or less. This is substantially less time than most farms engaged casual workers. Some farms engaged contract labour for longer periods—5% of vegetable farms with contract labour and 1% of fruit and nut farms with contract labour engaged these workers year-round.

Most industries across the economy are far less dependent on contract labour than horticulture. Across all vegetable farms 37% of the peak workforce was contract labour, and on fruit and nut farms 55% of the peak workforce was contract labour. With labour hire firms likely to be the main source of contract workers, it is notable that across the economy only 4% of employees reported being registered with a labour hire firm or employment agency in 2018 (ABS 2018b).

Large farms tend to use more flexible employment types

Larger farms generally employed a greater proportion of casual and contract workers than smaller farms across all industries (Figure 9). The greater use of more flexible labour types on larger farms may allow them to better meet spikes in workload and reduce fixed labour costs by varying labour inputs. Across all farm sizes, horticultural farms employed a smaller proportion of permanent workers than other agricultural industries. Which industries experience growth and which farm sizes grow or contract will affect the overall demand for permanent, casual or contract workers in the future.

Figure 9 Average proportion of workers tenure, by industry and farm size



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

More flexible employment can have challenges

Employing large numbers of workers for a short period can create a significant administrative burden. On average, at the seasonal peak, the top 10% of vegetable farms (by number of workers) engaged more than 60 casual and contract labourers and the top 10% of fruit and nut farms engaged 38 casual and contract labourers. Some farms reported employing a permanent human resources manager to help manage staffing during peak season. Other farms reported outsourcing staff management to a labour hire firm to manage the administrative burden.

Changes to the Harvest Labour Services program announced in the 2019–20 Federal Budget and commencing 1 July 2020 may assist with accessing seasonal workers. Harvest Labour Services links workers (both working holiday makers and Australian job seekers) with seasonal harvest jobs in locations that do not have adequate local labour supply. Changes include expanding the service to cover more regions and increased financial incentives for recruitment service providers recruiting agricultural workers.

When asked about future workforce challenges some farmers expressed concerns about using contract labour companies. Using contract labour companies who may use undocumented workers, engage workers outside their visa conditions or underpay their workers is a risk for the farm. Several farmers noted that they made a conscious decision to use a reputable labour hire company because the risk of being shut down for even a day was too costly.

The Fair Work Ombudsman has recently uncovered cases of serious exploitation by unscrupulous labour hire operators (Commonwealth of Australia 2019). Concerns about the risk of worker exploitation and use of illegal sources of labour has recently led some states to require licencing and registration of labour hire firms (Queensland, Victoria and South Australia). The Australian Government recently accepted recommendations of the Migrant Worker Taskforce to create a nationwide licencing scheme. Tightening conditions for labour hire companies would make it more difficult for these firms to supply undocumented workers to farms in the future.

Workforce occupations

Farms surveyed were asked to specify the occupation of workers across 6 categories: managers, clerical, machinery operators, labourers, technicians and trades, and professionals in line with the broad ABS (2013) classifications ([Appendix A: Worker occupations](#)). The mix of occupations on farms largely reflect industry production systems. Horticultural farms (vegetable farms nationally and irrigated fruit and nut farms in the southern Murray–Darling Basin) reported the greatest use of labourers. Broadacre, dairy and cotton farms engaged more managers and machine operators. Across all industries, larger farms reported using a broader range of occupations, with more workers in specialised roles.

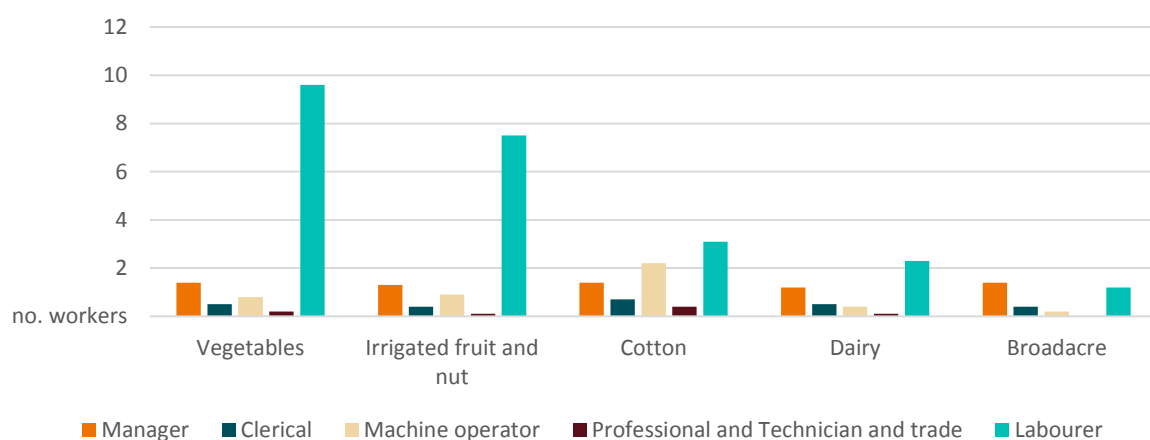
The ‘labourer’ category incorporates a wide range of farm workers, from pickers and packers to cropping farm workers. The classification does not recognise that within the labourer category there is a range of skills, from relatively unskilled workers to more skilled ‘all-rounder’ workers (for discussion see Dufty, Zhao, Shafron and Valle 2018 Appendix A).

Managers more common on broadacre and dairy farms

Managers made up 11% of the workforce for vegetable farms, 13% for fruit and nut farms, 17% for cotton farms, 27% for dairy workforce and 42% for broadacre farms. The relative importance of managers in broadacre and dairy farming reflects the large number of small-scale businesses that have few or no employees in addition to owner–managers. On average, farms in all industries employed just over 1 manager per farm.

Vegetable farms and fruit and nut farms engaged significantly more labourers per farm than other industries (Figure 10). Labourers accounted for around three-quarters of the workforce on vegetable farms and fruit and nut farms, 52% of the workforce on dairy farms, 40% on cotton farms and 36% on broadacre farms. The need for hand picking and packing of produce on many horticultural farms increases the need for labourers compared with other agricultural businesses.

Figure 10 Average number of workers per farm, by occupation and industry



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Machine operators accounted for around 8% of the workforce of farms surveyed, with industry use largely reflecting the degree of mechanisation. Machine operators made up a greater share of the workforce on cotton farms (28%) and broadacre grains farms (18%) compared with vegetable farms (7%), fruit and nut farms (9%), dairy farms (8%) and broadacre livestock farms (3%).

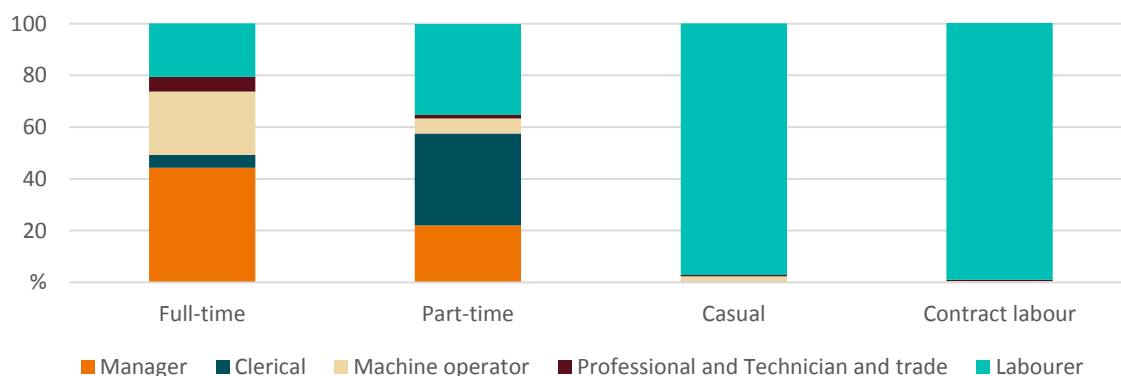
Few farms employed technicians and trades or professional staff, with around 1% of the workforce in these occupations across all industries. Service providers, including contract service providers to the agricultural sector, are not covered in this survey but are likely to be an important source of these required skills. Data from the ABS (2017) Population and Housing Census shows around one-third of people working in the agricultural and fishing support services industry are employed as professionals, technicians and tradespeople.

More skilled workers generally employed on permanent basis

More skilled roles on farms were generally employed in more permanent positions. Managers were mostly employed on a full-time basis. This reflects the dominance of owner-managers in agriculture. Similarly, most clerical workers were employed on a part-time basis, reflecting the role of the farmer's spouse in managing the books on many farms. Machine operators were most commonly employed full-time, although broadacre farms also engaged them on a casual basis and horticultural farms also engaged them as contract labour. Although not commonly employed, professionals and technicians and trades were generally full-time staff. The breakdown of occupations by employment type is shown for vegetable farms in Figure 11, but is similar across all industries.

On horticultural farms, labourers were almost exclusively employed as casual and contract workers. On dairy farms, a greater proportion of labourers were employed in full-time positions. This likely reflects long milk production seasons and intensive production systems for many dairy farms, increasing the need for permanent staff, as well as a greater use of labour beyond the family than on broadacre farms.

Figure 11 Proportion of workforce in each occupation, by employment type, 2016–17, vegetable farms



Although contract labour can be used to obtain skilled workers, the majority of contract labour workers in agriculture were employed as labourers. This highlights the lower skilled nature of the roles farmers needed to fill, generally for short periods of time.

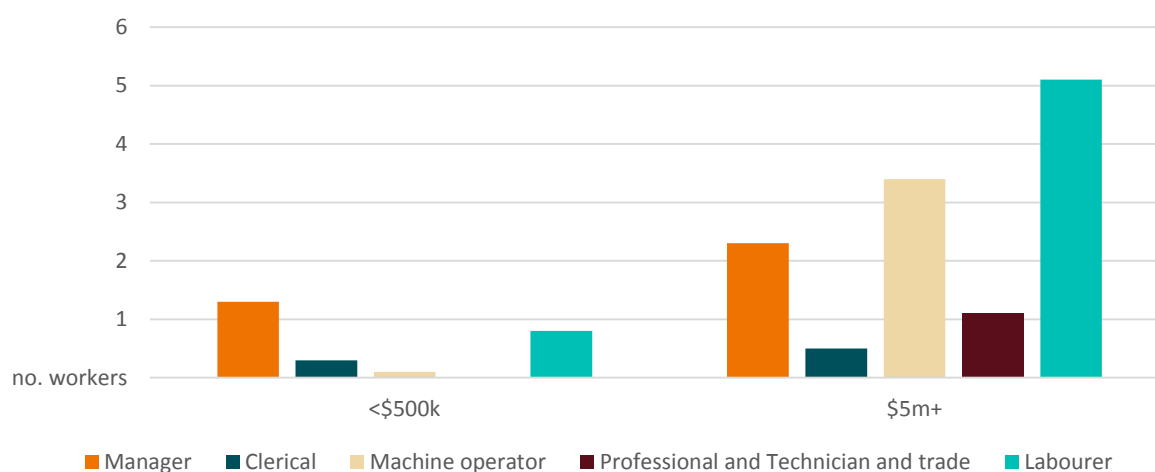
Large farms have greater mix of occupations

Large farms employed a greater range of occupations. Large farms employed a higher proportion of labourers than small farms, a higher proportion of workers with machine operator and technical skills and a lower proportion of managerial and clerical staff (Figure 12). For example, vegetable farms with a turnover greater than \$5 million had 16 labourers for each manager, while vegetable farms with a turnover of less than \$500,000 had 3 labourers to each manager on average. On small farms managers often undertake some of the work done by labourers on larger farms. The breakdown of occupations is shown in Figure 12 for broadacre farms, but is observed in all industries surveyed.

Management roles are generally held by the owner–manager and their spouse on family farms. As more workers are employed, these positions do not need to be duplicated. As more farms are amalgamated, the total number of managers is likely to decline. For example, projections to 2023 undertaken by the Department of Jobs and Small Business (2018b) indicate a reduction in the total number of farm managers.

Larger farms tend to invest more in technologies (Dufty and Jackson 2018) and often have more technologically advanced production systems. In part, the higher proportions of technically skilled workers on larger farms reflects the usage of more advanced technologies. The scale of operation of larger farms may also mean it is more profitable to employ specialist workers rather than relying on contractors and service providers to provide these skills. Projections to 2023 undertaken by the Department of Jobs and Small Business (2018b) indicate an increase in the total number of skilled animal and horticultural workers and agricultural, forestry and horticultural plant operators required.

Figure 12 Average number of workers, by occupation and farm size, 2017–18, broadacre farms



Background of workers

Farm managers were asked to provide information on the background of their workers—for example, whether they are family members, a local resident from the same or neighbouring district to the farm, an Australian from outside the local area or a New Zealand resident, an overseas worker on a visa, or if their background was unknown or other.

At peak periods, family and other Australian workers make up the majority of the workforce across the industries. Horticultural farms (vegetable farms nationally and irrigated fruit and nut farms in the southern Murray–Darling Basin) also use a significant number of overseas workers.

Over one-third of peak seasonal jobs on horticultural farms are filled by overseas workers, particularly backpackers in casual and contract positions. The dependence on overseas workers in these industries exposes farms to changes in visa arrangements, uncertainty in the availability of workers and complexity in managing the workforce.

Many cotton farms also use backpackers, but only a small proportion of dairy and broadacre farms used workers from overseas. Nevertheless, because of the large number of broadacre farms, a large number of overseas workers were employed in these industries in aggregate.

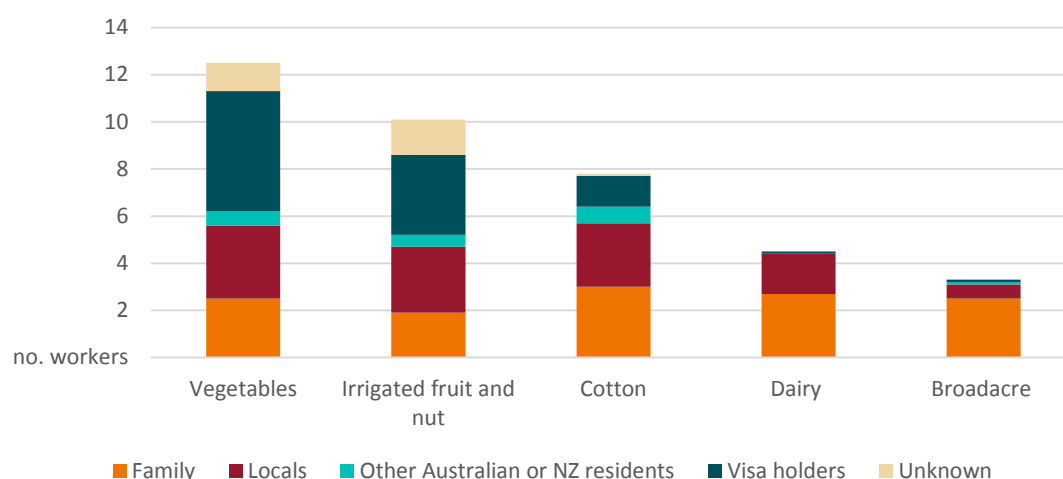
Australians dominate the agricultural workforce

Family members were a major contributor to the farm workforce. Across the industries surveyed, farms employed 2 to 3 family members on average (Figure 13). Broadacre farms were the most dependent on family workers and employed few workers outside the family unit. The common use of family members across all industries reflects the business structure of farms, with more than 95% of farms in the surveyed industries family owned.

Locals and other Australian or New Zealand workers were a common source of non-family workers for all industries. Dairy, cotton and horticultural farms, had an average of 2 to 4 locals and other Australian or New Zealand workers on the farm. Most of these workers were from the same or a neighbouring district, particularly for full-time and part-time workers. This highlights the importance of a pool of local workers to agricultural industries, particularly for full-time and part-time positions. There was very little use of Australian labour from outside the local area, which may reflect limited mobility in the Australian agricultural workforce.

Workers from overseas or with unknown background more common on horticultural farms

Horticultural farms reported the most use of workers on a visa. Overseas workers were reported on 40% of vegetable farms and 35% of fruit and nut farms. In contrast, less than 3% of dairy or broadacre farms used overseas workers. On average, vegetable farms employed 5 overseas workers per farm, and fruit and nut farms employed 3 overseas workers per farm. Although only a small proportion of broadacre farms reported using overseas workers, with nearly 50,000 farms in broadacre industries a large number of overseas workers were employed.

Figure 13 Sources of farm workers, by industry, 2017–18

Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Although the majority of farmers know the background of their workers, around 4% of farmers in the vegetable industry reported not knowing the background of some of their workers. It was slightly higher on fruit and nut farms, with around 7% of farmers not knowing the background of some of their workers. Less than 0.5% of broadacre farms and no dairy farmers reported not knowing their workers' backgrounds. While only a small percentage of farm managers reported workers with an unknown background, these farmers tend to employ more workers than the average farmer. Overall, around 10% of workers in the horticultural industry had an unknown background (1 worker per vegetable farm and 2 workers per fruit and nut farm on average).

Although a minority of farmers we surveyed didn't know the background of some of their workers, it is possible someone else in the farm business would have known. Not knowing the background of workers does not necessarily mean workers were illegally employed but it does expose farmers to the risk of using undocumented workers (see [More flexible employment can have challenges](#)). For farms reporting workers with an unknown background, these workers were almost all employed as contract labour. This suggests these farmers are relying on labour hire firms to provide legal workers.

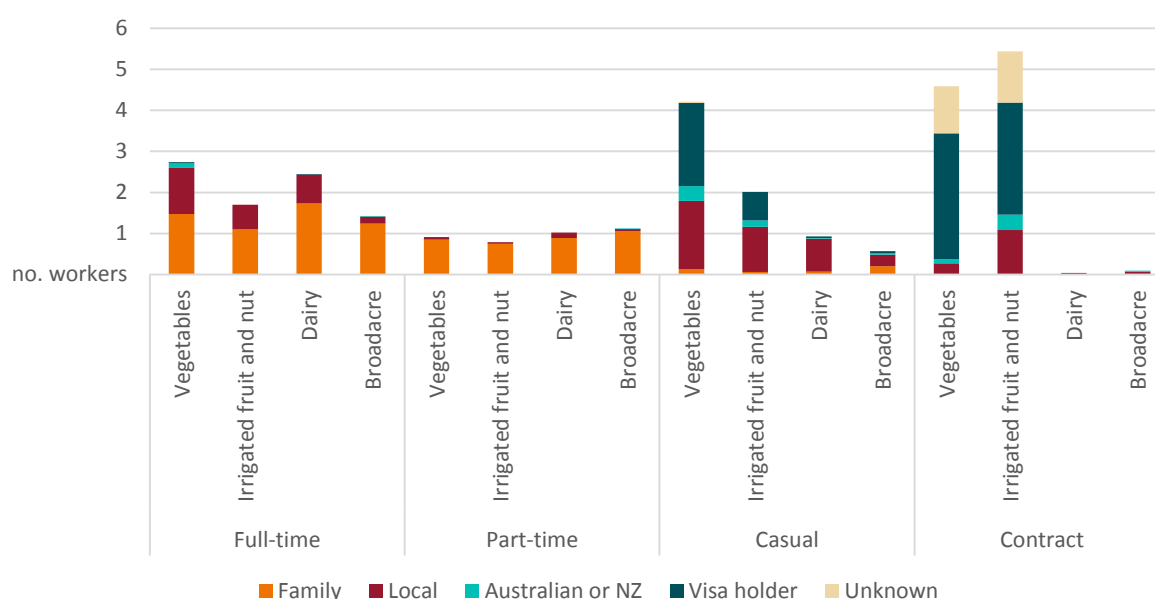
Overseas workers were generally employed as casual and contract labour

Workers' backgrounds generally reflected their type of employment (Figure 14). Across all industries surveyed, full-time and part-time positions were generally filled by family or local residents. Broadacre farms and dairy farms reported the highest proportion of full-time workers as family, because of the low number of workers on the farm on average reducing the need to employ outside the family unit.

The majority of casual workers were locals on dairy and broadacre farms, but on vegetable and fruit and nut farms casual workers were more commonly visa holders (over one-third of casual positions). Although dairy and broadacre farms engaged few contract labour workers, those who were employed were generally locals. In contrast, the majority of vegetable and fruit and nut

farms reported their contract labour were visa holders, although the background of around one-quarter of contract workers was unknown to the farmer surveyed.

Figure 14 Sources of farm workers, by employment type, by industry, 2017–18

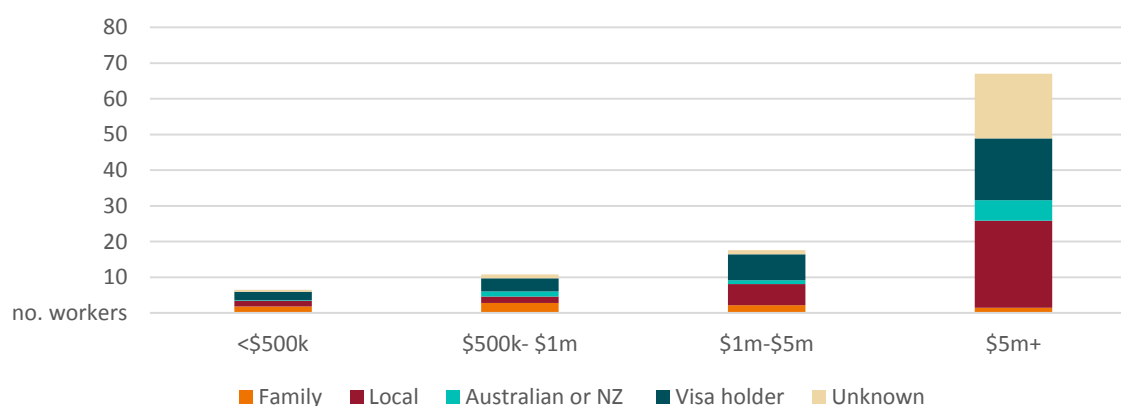


Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Large farms were more reliant on non-family workers

Across all industries, the proportion of the workforce employed who were non-family members increased with farm size (measured as total farm cash receipts). The trend for fruit and nut farms is in Figure 15, but the same trend is seen across all industries. This is because as farms increase in size most families cannot provide all the farm's labour requirements. Large farms rely on more non-family labour so are likely to be impacted more by changes in the broader labour market, such as competition from other industries or migration.

Figure 15 Average number of workers on irrigated fruit and nut farms, by worker background and farm size



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Backpackers are the most commonly employed visa holders

Backpackers

Incentives encourage backpackers (Working Holiday Maker Visa subclass 417 and 462) to work in agriculture in regional Australia in order to extend their visa, with recent changes to the program designed to support regional and rural communities (Box 3). It is not known how many backpackers work in agriculture each year. However, the program is popular and in 2017–18, 30,807 backpackers qualified for a second-year visa based on their work in agriculture, forestry or fisheries (Department of Home Affairs 2018a) (Figure 16). In addition, an unknown number of backpackers work on farms but do not qualify for a second-year visa or work on farms on a second-year visa.

Figure 16 Overseas workers known to have worked in agriculture, forestry and fisheries, 2011–12 to 2017–18



Source: Department of Home Affairs 2018a, 2019a 2019b; Temporary Visa Program Branch, [Department of Home Affairs], 2019 pers. comm., 10 July.

Backpackers were the most commonly engaged visa holders working on farms. The majority of backpackers were engaged as casual or contract workers (around 98%), with survey results showing employment to be almost exclusively in labouring roles.

On vegetable and fruit and nut farms, backpackers accounted for around 20% of all workers on average at the peak of seasonal employment. On average, vegetable farms employed 3 backpackers per farm and fruit and nut farms employed 2 backpackers at the peak. A large number of backpackers were employed on some farms, with around 5% of vegetable and fruit and nut farms engaging more than 30 backpackers during their peak production period.

Backpackers can help farms meet the demand for large numbers of workers for short peak production demands. Vegetable and fruit and nut farms, with shorter seasonal labour peaks (less than 6 months) were more likely to employ backpackers.

Backpackers are a relatively low-cost flexible source of overseas workers for farmers, because they do not have the upfront employment costs required for other work visa programs—

including airfares, minimum work and wage guarantees or local labour market testing administration burden. However, the flexibility of backpackers has a downside. Some farmers face high turnover of backpackers—leaving either because of the visa's 6-month restriction with a single employer or because they were continuing their travels—which increases the costs of recruitment.

Box 3 Policies to encourage backpackers to work in agriculture

Overseas visitors on Working Holiday Maker Visas subclass 417 and 462 (commonly referred to as backpackers) who work in agriculture in regional Australia for 88 days in their first year can qualify for a second-year extension of their visa.

Since the 2018 surveys were conducted, the Australian Government has announced 2 major changes to the Working Holiday Maker program to support regional and rural communities. It is too early to assess the impact on supply and demand of labour:

- 1) Backpackers may be eligible to apply for a third year if they carry out 6 months of specified work in regional areas while on their second-year visa from 1 July 2019 (Department of Home Affairs 2018b). Previous work by ABARES has shown that workers who return year after year are more productive at picking and packing jobs than those in their first year (Zhao et al. 2018). These changes could help to increase the productivity of workers on farms. However, just because backpackers can return does not mean they will because eligible work can be carried out on multiple farms.
- 2) The period backpackers can stay with the same agricultural employer was increased from 6 to 12 months from 5 November 2018. This change could reduce staff turnover costs and may increase employers' incentives to provide training if they can retain workers for longer. However, backpackers may not wish to remain in one location for longer if their intention is to travel and see the country. Further, for farms who only need workers for a season of less than 6 months, this change will not affect their direct and indirect costs of hiring large numbers of workers each season.

Seasonal worker programme

The number of workers employed through the Pacific Island and Timor-Leste Seasonal Worker Programme (SWP) grew from 1,473 in 2012–13 to 8,459 workers in 2017–18 and to 12,200 in 2018–19 (Figure 16) (Temporary Visa Program Branch [Department of Home Affairs] 2019, pers. comm., 10 July). Over 98% of these workers were employed in farm work (Seasonal Work Programs Branch [Department of Employment, Skills, Small and Family Business] 2019, pers. comm., 15 July).

Only a small number of farms surveyed employed workers under this program. Around 4% of horticultural farms surveyed used the program directly or through labour hire companies. No dairy farms surveyed and less than 0.5% of broadacre farms surveyed accessed the program in 2017–18. Horticultural farms surveyed who used the SWP engaged around 15 of these workers per farm, but the number ranged from 2 to over 50.

To employ SWP workers, farms that are a company (incorporated entities) or have a corporate trustee can register as an approved employer and employ workers directly. Other farms must engage workers through an approved labour hire company. Few farms have a company structure—18% of vegetable farms, 13% of fruit and nut farms, 7% of broadacre farms and 6% of dairy farms—limiting the access for many farms to directly hire workers under this program. However, the proportion of corporate entities is higher on large farms and particularly large horticultural farms—more than 80% of vegetable farms with a turnover exceeding \$5 million

were corporate farms. The surveys indicate a similar proportion of corporate and non-corporate vegetable farms accessed the SWP. For fruit and nut farms, corporate farms were more likely to engage SWP workers.

Approved employers must provide seasonal workers with a minimum average of 30 hours per week for up to 9 months, making them a less flexible source of labour than backpackers. The Australian Government is currently piloting a program in 3 regions that makes it easier for selected labour hire employers to link smaller farms with seasonal workers to meet harvest requirements. If successful, this program could help smaller non-corporate farms access these workers—particularly farms that otherwise could not offer an employment duration long enough for workers to earn a reasonable return.

Other visas

The number of workers on skilled visas remains low, with 912 temporary work skilled visas and a further 422 permanent skilled visas issued in 2017–18 in the agriculture, forestry and fishing industries (Department of Home Affairs 2018a, 2018b)(Figure 16).

Few farms reported employing workers on skilled visas. Farms who employed skilled visa holders were all large farms with a turnover greater than \$1 million. Less than 5% of these farms employed workers on this type of visa. Farms accessing these visas generally employed 1 skilled visa holder per farm, although a handful of farms engaged up to 4 workers on skilled visas.

Access to skilled visas has tightened in recent years, with amendments to and then abolishing of the Temporary Work (Skilled) visa (457) (Australian Government 2019). For agricultural businesses, 2 main visa categories allow farms to access skilled visas—Temporary Skill Shortage (TSS) visa (482) and Regional Sponsored Migration Scheme (RSMS) visa (subclass 187). For both visas, businesses are required to meet certain sponsorship obligations, including demonstrating a genuine need for the skilled worker and paying travel costs, upfront processing and training costs. For the Temporary Skill Shortage visa, sponsors must pay at or above a minimum salary requirement (Temporary Skilled Migration Income Threshold). Our survey results suggest that the costs (both monetary and administrative) of accessing skilled labour using these visas may act as a barrier to uptake, even for larger farms. The addition of more agricultural occupations announced in March 2019 may help improve access in the future (Coleman 2019). Continued work between government and industry to develop labour agreements could further improve access to skilled agricultural workers in other roles.

Farmers' recruitment experiences

Difficulty recruiting can be costly and frustrating. Costs include search costs and reduced production or longer hours worked by others when vacancies can't be filled. Most farms did not recruit, but for those that did, more broadacre and dairy farms reported difficulty recruiting than horticultural farms (vegetable farms nationally and irrigated fruit and nut farms in the southern Murray–Darling Basin). For farms with recruitment difficulty, we observed different drivers by industry, location and farm size. This suggests that there is not a one size fits all fix to recruitment difficulties.

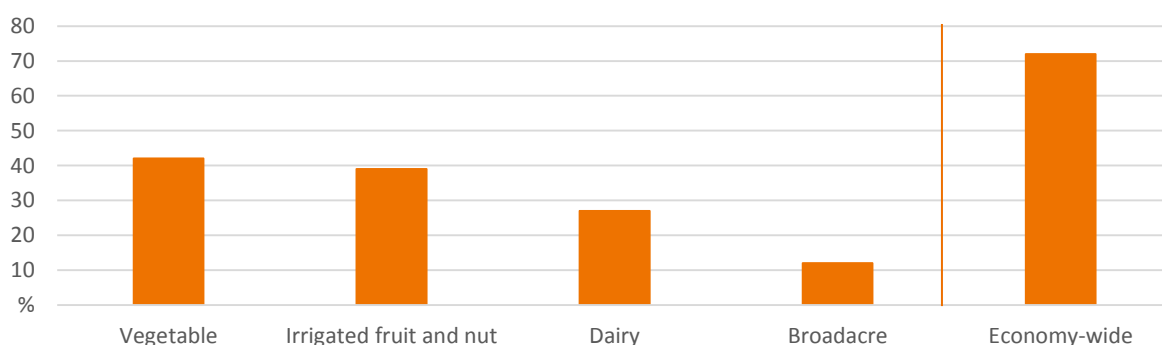
Rates of recruitment were relatively low

Recruitment activity on farms was generally low compared with the rest of the economy. Across the economy, 72% of businesses with employees attempted to hire workers in 2017–18 up from 69% in 2016–17 (Department of Employment, Skills, Small and Family Business 2019a).

ABARES surveys show around three-quarters of vegetable farms and 90% of fruit and nut farms had paid employees (including contract labour). Of these, 42% of vegetable farms and 39% of fruit and nut farms attempted to recruit workers in 2016–17. Around 70% of dairy farms and 60% of broadacre farms had paid employees. Of these, the proportion recruiting was much lower, at 18% for dairy and 8% for broadacre farms in 2017–18 (Figure 17).

Low rates of recruitment partly reflect the dominance of family farms in the agricultural sector. Family labour accounts for most permanent positions, reducing the demand for hired workers and the need to recruit. In addition, many farms use the same casual and contract labour year-after-year, reducing their need to recruit new workers.

Figure 17 Proportion of employing businesses recruiting, by industry, 2017–18



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Source: ABARES farm survey data; Department of Employment, Skills, Small and Family Business 2019a.

The reasons for undertaking recruitment varied across industries. For vegetable and fruit and nut farms, recruitment was most commonly undertaken to fill seasonal positions. For broadacre and dairy farms, recruitment was most commonly due to staff turnover.

In aggregate, vegetable farms recruited around 10,500 workers in 2016–17, and fruit and nut farms in the southern Murray–Darling Basin recruited around 9,000 workers. For both industries this recruitment was around one-third of their peak workforce needs in 2016–17.

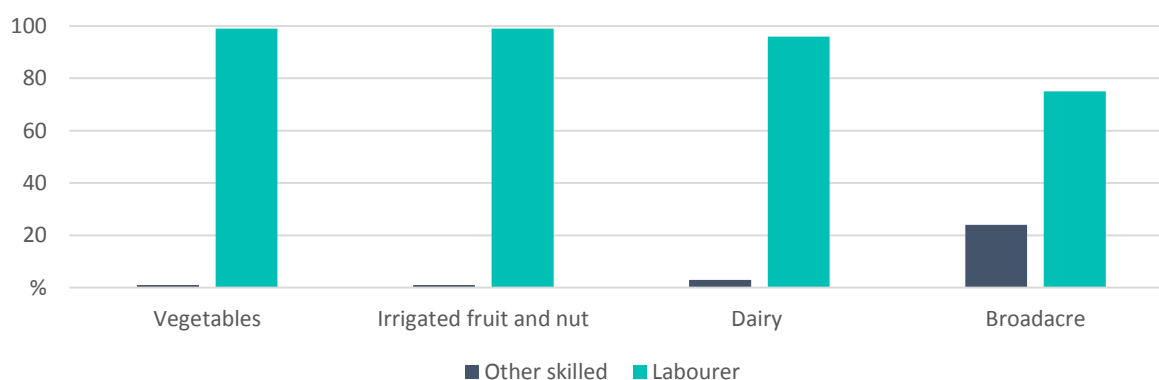
Dairy farms recruited an estimated 1,500 workers and broadacre farms 4,700 workers in 2017–18, or around 5% of the peak workforce.

The ABARES surveys did not include all industries. However, the total number of vacancies farms attempted to recruit is higher than other government estimates because it includes vacancies filled through informal recruitment methods such as personal contacts (including word of mouth) and third parties (including contract labour hire firms). The Department of Employment, Skills, Small and Family Business (2019b) reported around 20,000 vacancies for agricultural workers in 2018 based on data from online job advertisements. ABARES surveys in 2017 indicated most farms used personal contacts and third parties to fill job vacancies. Only 22% of vegetable farms and 10% of irrigation farms reported using external advertisements for recruitment.

Recruitment activity was concentrated on labourers

Across the industries surveyed, recruitment activity was concentrated on labourer positions (Figure 18). In 2016–17 vegetable farms predominantly recruited labourers in casual positions (61% of all positions recruited) or contract positions (38%). Fruit and nut farms recruited labourers in casual positions (15% of all positions recruited) or contract positions (84%). In 2017–18 dairy and broadacre farms predominantly recruited casual labourers, but also recruited workers in more permanent and skilled positions. For dairy farms, labourers accounted for 96% of recruitment activity, mostly in casual positions (70% of recruitment) and full-time roles (25% of recruitment). On broadacre farms, labourer roles accounted for 75% of recruited positions, with most casual (57% of recruitment activity) and full-time positions (16% of recruitment activity).

Figure 18 Proportion of recruitment activity, by occupation, by industry, 2017–18



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

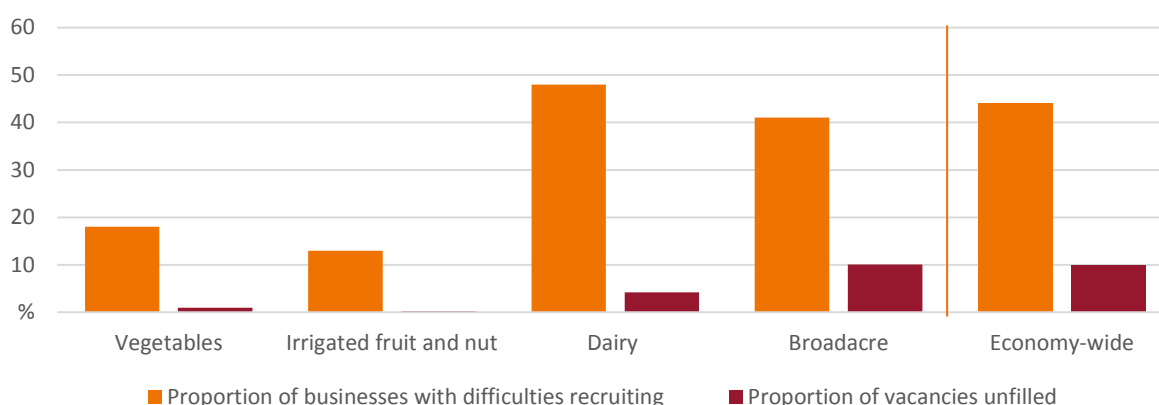
On broadacre farms, non-labourer roles accounted for 25% of recruitment—including recruitment of machine operators on grains farms and technicians on livestock farms. The demand for more skilled workers on these farms largely reflects extensive use of large expensive machinery on cropping farms and the need for workers experienced in handling livestock, such as senior stockmen.

Few horticultural farms had difficulty recruiting

Most vegetable and fruit and nut farms did not report difficulty recruiting workers. Of those vegetable farms that attempted to recruit in 2016–17, 18% indicated that they had some or a lot of difficulty recruiting. On fruit and nut farms that had attempted to recruit, 14% reported some or a lot of difficulty (Figure 19). This is less than the proportion of businesses across the economy that experienced difficulty recruiting in 2016–17 (37%) (Department of Employment, Skills, Small and Family Business 2019a).

Vegetable and fruit and nut farms also filled a higher proportion of vacancies than other businesses. Vegetable farms and fruit and nut farms filled over 99% of vacancies in 2016–17. In comparison, businesses across the economy filled 92% of vacancies on average in 2016–17 (Department of Employment, Skills, Small and Family Business 2019a). For these farms this equates to around 200 unfilled positions. The lower skilled nature of the work may make finding the right worker easier. The low reporting of difficulty and high rate of filling vacancies may also reflect the prevalent use of contract labour, reducing these farms' exposure to the difficulties of hiring workers.

Figure 19 Proportion of businesses with recruitment difficulties and share of unfilled vacancies, by industry, 2017–18



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Source: ABARES farm survey data; Department of Employment, Skills, Small and Family Business 2019a economy-wide estimate.

Horticultural farms with difficulty mainly recruiting labourers

Reflecting the dominance of recruitment for labourer positions, labourer was the most frequently reported occupation that was difficult to fill. Of those farms who recruited and had difficulty, 89% of vegetable farms and 86% of fruit and nut farms had difficulty recruiting labourers. Vegetable and fruit and nut farms who had difficulty recruiting labourers most commonly reported it was because of a lack of interest in this type of work. This was reported by 76% of vegetable farms and 69% of fruit and nut farms (Figure 20). It was less common for these industries to report suitability of applicants as an issue (because of skills, experience or qualifications). Accessing willing workers to harvest horticultural crops appears to contribute more to recruitment difficulty than the skill level of available workers.

Conditions of the work, particularly the seasonal nature, was seen as contributing to recruitment difficulties more often for horticultural farms. One-third of fruit and nut farms and one-quarter of vegetable farms reported that the short seasonal nature of the work increased recruitment difficulty. However, our results show that vegetable and irrigation farms with longer peak production seasons reported slightly more difficulty recruiting workers.

One explanation for this is that farms with a longer production peak look for more qualities in their recruitment to ensure the best fit with the business. Another explanation is that backpackers, who were generally readily available in the survey period, are less suitable for longer term positions. At the time the surveys were conducted, backpackers were required to leave an employer after 6 months. This may have increased the turnover of these workers and increased recruitment difficulty. Future ABARES surveys will include more detailed questions on turnover rates to help identify the contribution of staff turnover to recruitment difficulties.

Broadacre and dairy farms reported more difficulty recruiting

In 2018 dairy and broadacre farms reported significantly more difficulty recruiting than vegetable and fruit and nut farms (Figure 19). Just under half (48%) of dairy farms that recruited and 40% of broadacre farms that recruited reported a difficulty. On average, broadacre and dairy farms had similar rates of difficulty recruiting to that recorded for all businesses across the economy. Across the economy, recruitment difficulties increased from 37% of businesses that recruited in 2016–17 to 44% in 2017–18 (Department of Employment, Skills, Small and Family Business 2019a). The difference in survey timing (vegetable and fruit and nut farms reporting for 2016–17 and broadacre and dairy reporting for 2017–18) may in part have contributed to the higher reporting of recruitment difficulties in dairy and broadacre. However, findings from previous years highlight that vegetable and fruit growers have consistently reported few recruitment difficulties.

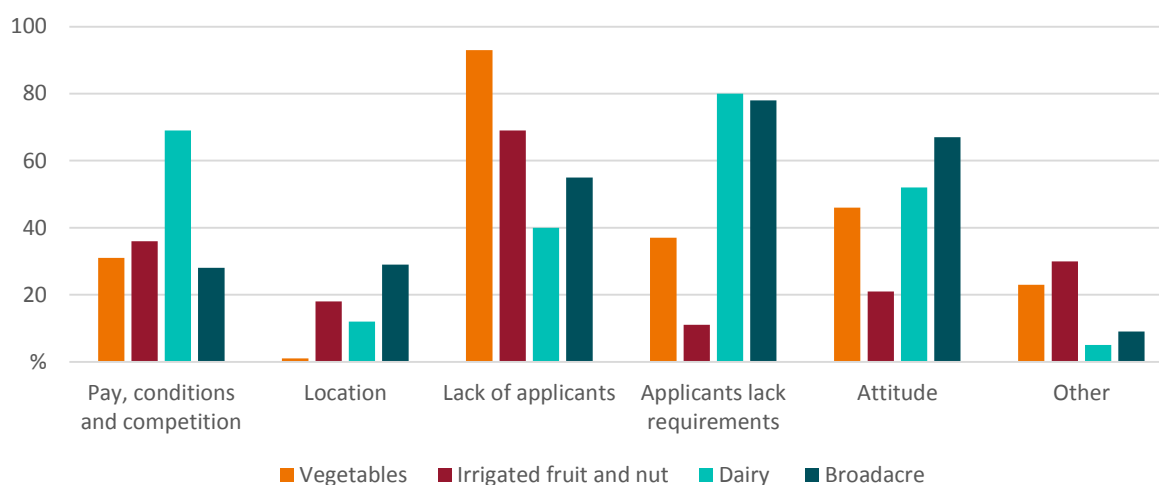
Dairy and broadacre farms also reported filling a lower proportion of vacancies. Dairy farms reportedly filled 96% of vacancies and broadacre farms filled 90% of vacancies. This is above the rate for businesses across the economy on average in 2017–18 (90% of vacancies filled) (Department of Employment, Skills, Small and Family Business 2019a). Based on the survey results, this equates to around 500 unfilled vacancies across both industries in 2017–18.

Difficulty recruiting labourers with more skills

As was the case for horticultural farms surveyed, broadacre and dairy farms most frequently reported labourer as the occupation most difficult to fill. Of those farms who recruited and had a difficulty, 98% of dairy farms and 60% of broadacre farms had a difficulty recruiting labourers.

Broadacre and dairy farms with recruitment difficulty most commonly reported that labourers didn't meet the job requirement (90%) because applicants lacked the experience and skills required for the job. However, few farms reported a lack of suitable qualifications as an issue for recruiting labourers. These findings suggest that dairy and broadacre farms are looking for labourers with a higher level of skill than vegetable and fruit and nut farms.

On dairy farms, unsocial hours were also a commonly reported issue causing difficulty in recruiting labourers (62% of farms). This issue was rarely reported in other industries.

Figure 20 Most commonly reported difficulties with recruiting labourers, by industry, 2017–18

Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Applicants lacking the required attitude and motivation was also commonly reported across the industries surveyed, but was slightly less of a problem for fruit and nut farms. Agriculture is not alone in the challenges of recruiting quality workers to low skilled positions. Across the economy, the Department of Jobs and Small Business (2018c) found many applicants for lower skilled roles didn't meet employers' basic requirements. Employers reported that applicants did not demonstrate an interest in the position or were poorly presented.

More difficulty recruiting higher skilled positions

Few farms surveyed reported recruiting non-labourer positions. For vegetable and fruit and nut farms, 1% of recruited positions were for non-labourer positions. For dairy farms that recruited, around 4% of recruited positions were non-labourers. Although few broadacre farms recruited, recruitment of non-labour positions was more common, making up 25% of the positions recruited.

The sample of farms reporting difficulty hiring skilled workers was too small to provide reliable estimates of reasons for difficulty in each industry. Overall, the results show that farms recruiting non-labourer positions experienced slightly more difficulty recruiting (47% farms of those who recruited had difficulty) compared with those recruiting labourers (36%). Similarly, the Department of Jobs and Small Business (2018a) survey found that across the economy businesses received fewer applicants and filled a smaller proportion of vacancies in a range of higher skilled occupations in 2018. Strong labour market conditions and the lowest number of trade apprentice completions since 2007 were believed to have contributed to this situation (Department of Jobs and Small Business 2018a). This highlights the importance of access to agricultural training to ensure Australians gain the skills and experience necessary to meet labour demand. Competitive wages and conditions also need to be offered to attract and retain skilled workers.

Large farms recruited more workers and had more difficulty recruiting

Large farms were more likely to recruit workers. Vegetable and fruit and nut farms with more than 10 workers were twice as likely to have attempted to recruit workers in 2016–17 as farms with less than 10 workers. Dairy and broadacre farms with more than 10 workers were 5 times more likely to attempt to recruit than those farms with less than 10 workers (Figure 21).

Larger horticultural and dairy farms that employed workers were also more likely to report a difficulty in recruiting. Unlike the other industries, smaller broadacre farms (with less than 10 workers) were more likely to report a recruitment difficulty. The survey results show that small broadacre farms who reported a difficulty were more likely to be filling a non-labourer position than larger farms, unlike smaller farms in other industries.

On vegetable, dairy and broadacre farms that recruited, smaller farms with few employees generally had a higher proportion of unfilled vacancies. For small farms, not filling a vacancy may have a larger effect on production than for large farms. This is because each position on a small farm is more important proportionally than on a large farm where other employees may be able to take on some of the workload. Future ABARES work will look in more detail at the effects of recruitment difficulties.

Figure 21 Proportion of farms recruiting and experiencing difficulty, by industry and number of workers, 2017–18

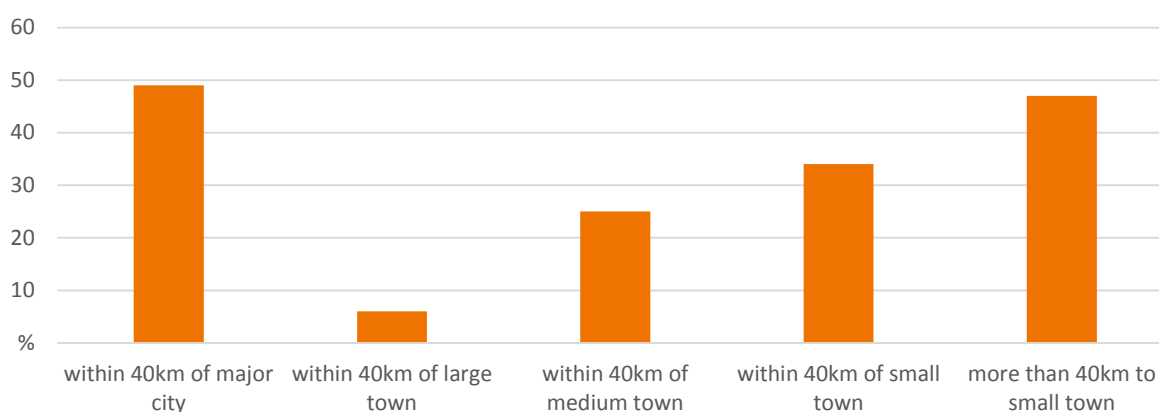


Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Location affected recruitment difficulty

Farms located further from large population centres had more difficulty recruiting (Figure 22). Broadacre farms—generally located in more regional areas—more commonly reported that location contributed to recruitment difficulties than other industries (42% of farms that recruited). More farms located close to small towns had recruitment difficulty than farms located close to larger towns. This may reflect the generally low use of workers from outside the local district, making it more difficult for farms with smaller pools of local labour to recruit.

Some farms reported that they were building onsite accommodation because the distance to town or lack of accommodation in town made it difficult to attract workers.

Figure 22 Proportion of farms who recruited that had difficulty, by distance to location

Note: On average, people living in rural Australia commute 40 km to work each day (ABS 2018c). Locations are classified by population size: major cities have populations of 100,000 people or more; large towns have populations of 50,000 to 100,000 people; medium towns have populations of 10,000 to 50,000 people; and small towns have populations of 1,000 to 10,000 people.

The exception to this trend of increasing distance increasing difficulty was those near major cities, which were mostly vegetable farms. Farms located near major cities may face greater competition for workers from other industries despite being able to access a potentially larger pool of available workers. However, farms near many major cities are also not able to offer work that qualifies backpackers for a second-year visa, reducing the incentives for backpackers to work on these farms.

Vegetable farms located in peri-urban areas reported more difficulty recruiting because they could not offer work eligible for the Working Holiday Maker (WHM) second-year incentive. Vegetable farms located in postcodes not eligible for the WHM second-year visa conditions were 5 times more likely to report difficulty in hiring workers. Around 70% of vegetable farms located in postcodes not eligible for the WHM second-year visa conditions reported difficulty hiring workers compared with 13% of vegetable farms in eligible postcodes. For other industries, the sample of farms surveyed recruiting in non-eligible postcodes was too small to examine this issue.

Vegetable farms in regions not eligible for the second-year visa conditions still reported engaging backpackers, but they made up a smaller proportion of the workforce. In the eligible postcode regions, backpackers made up around one-quarter of the workforce on vegetable farms on average in 2016–17. In ineligible postcode regions, backpackers made up just 9% of the workforce of vegetable farms, on average. This suggests that backpackers are continuing to play an important role for farms in filling farm workforce needs particularly in areas currently eligible for the second-year visa. This also suggests that backpackers are responding to current incentives to work in regional areas. Any changes to regional eligibility criteria will likely change the areas in which backpackers seek to work.

Future labour needs

A number of attempts have been made to estimate the future demand for workers in the agricultural sector. Department of Jobs and Small Business (2018b) modelling projected the number of workers required by 2023 to increase by 7.9% for the vegetable industry and 8.9% for fruit and tree nut growing, but to decline by 1.2% for the dairy industry and by 3.1% for broadacre farming.

Demand for workers in the future will be affected by production decisions, technology change and farmers' beliefs about the future labour market.

Horticultural farms expect similar worker numbers but dairy and broadacre farms expect declines in the next 5 years

ABARES surveys recorded farm managers' estimates of the number of workers required for their business in 5 years. Our survey of farms shows fruit and nut farms expected to increase the total number of workers required by about 1% on average. Vegetable farms reported that they would need around the same number of workers. Dairy farms expected to have 5% fewer workers and cotton and broadacre farms expected 2% fewer workers in 5 years' time, on average. The estimates from these surveys were below the Department of Jobs and Small Business (2018b) estimates based on modelling of the ABS Labour Force Survey (Box 1).

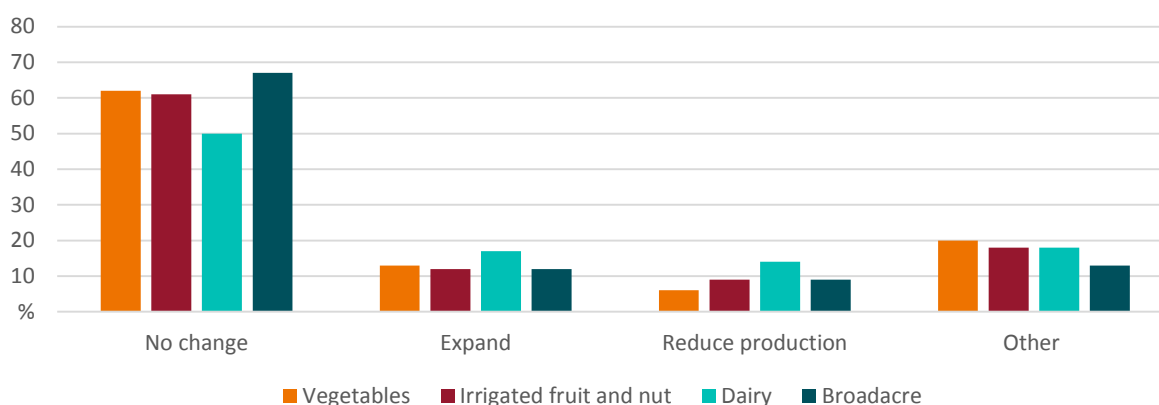
ABARES survey data represent the views of existing businesses and do not include employment created by new businesses entering these industries. The reductions expected for broadacre and dairy farms are broadly in line with reductions in farm numbers. In particular, the dairy industry recorded a reduction of 5% in the number of registered dairy farm businesses between 2015–16 and 2016–17 (Dairy Australia 2019).

Production expectations affect future demand for workers

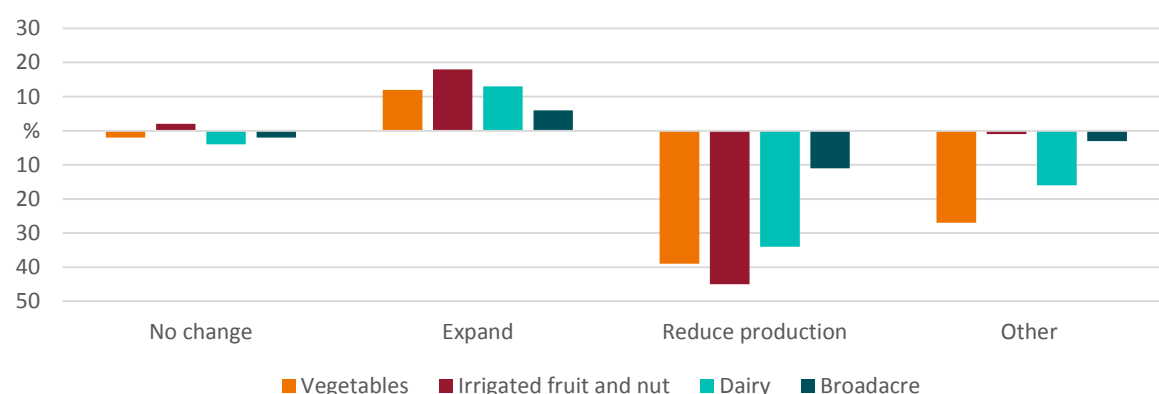
Farmers' expectations of how their farm production and business practices might change in the future affects their perceived workforce needs (Figure 23 and Figure 24).

The majority of farms reported not intending to change their production system or scale over the next 5 years. Nevertheless, on average, these farms expected to reduce their workforce. Vegetable, cotton, dairy and broadacre farmers not expecting to change their business activity expect a 3% to 5% reduction in the number of workers on farm. Irrigated fruit and nut farmers not expecting to change their business activity over the next 5 years expected a slight increase in their workforce of around 1% as currently non-bearing areas enter production.

Around 15% of dairy farms expect to reduce the size of their existing farm business. These farms accounted for almost all of the 5% decline expected in the number of workers required by the dairy industry. Generally, in other industries a small proportion of farms expect to contract, either by reducing production or exiting the industry over the next 5 years (Figure 23). For these farms the expectation of reduced numbers of workers is consistent across all farms. Vegetable and fruit and nut farms reducing the scale of their operation accounted for most of the reduction in their workforce (Figure 24).

Figure 23 Farmers' business plans over the next 5 years, proportion of farms, by industry, 2017–18

Note: Farms reporting they will reduce their production includes those farms planning on exiting the industry, because of retirement or other reasons. Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Figure 24 Change in number of workers over the next 5 years, by industry and farm business plans, 2017–18

Note: Farms reporting they will reduce their production includes those farms planning on exiting the industry, because of retirement or other reasons. Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

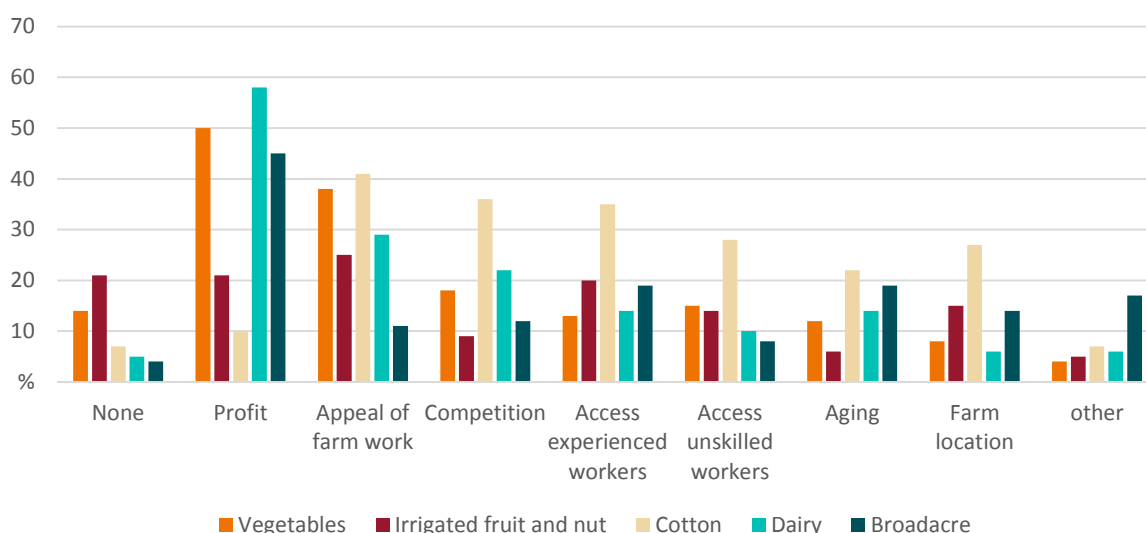
Farmers who anticipate expanding their business are expecting to need more workers. Around 15% of farms surveyed are expecting to increase land holdings or intensify production over the next 5 years. In aggregate, these farms reported needing around 15% more workers over the next 5 years. However, expanding farm output does not necessarily mean a proportional increase in the labour force. Around 4% of both vegetable and fruit and nut farms reported that they intended to invest in increased mechanisation. This is likely to reduce the demand for workers on these farms in the future.

Other actions farms intended to take over the next 5 years include changing production activity, crop varieties or crop–livestock mix, changing management or ownership, or increasing the use of contract service providers. It is not clear from the survey if decisions to change production are driven by a lack of access to labour or other considerations.

Future difficulties include costs and attracting workers

Farmers' expectations of workforce difficulties in the future are grouped into 3 broad categories: the cost of labour; appeal of the work; and the availability of labour. Many farms reported they were expecting to face multiple difficulties (Figure 25).

Figure 25 Proportion of farms expecting major workforce difficulties over the next 5 years



Note: Vegetable farm results reported for 2016–17. Irrigated fruit and nut farm results are based on farms surveyed in the southern Murray–Darling Basin for 2016–17.

Some farms didn't anticipate any major labour issues in the next 5 years (Figure 25)—4% to 21% of farms, by industry. However, most farms anticipating few major issues generally recruited relatively few workers and mainly relied on family labour.

Concerns about the impact of farm profit on the labour force were most commonly reported by dairy farms, followed by broadacre farms and then vegetable farms. In the case of the dairy industry, this is likely to reflect relatively low profitability in the industry in recent years (Martin et al. 2018).

In Australia, the cost of labour is relatively high compared with many other countries (The Conference Board 2018). This increases the incentives to minimise this expense on Australian farms in order to remain competitive on export markets and to compete with imports.

The appeal of farm work can affect farms' ability to attract workers. Appeal of farm work—including reporting of negative perceptions or the work being too hard—can make it harder to attract suitable applicants, increasing recruitment costs. Difficulty of the work was a less common concern on broadacre farms, which may reflect the more mechanised nature of much of the work.

Competition for workers, particularly from other industries, was more commonly reported by larger farms. This may reflect their need to hire more skilled workers and a greater awareness of competition in the national labour market.

Concerns about the ability to attract workers over the next 5 years were common, with several reoccurring themes:

- Accessing workers with appropriate experience was a more common problem than accessing unskilled workers. For vegetable farms, a similar proportion of farms were concerned about access to skilled and unskilled workers, suggesting a continued requirement for both kinds of workers in the future. For large and very large farms, access to workers with appropriate experience was the most commonly reported concern they faced in the next 5 years.
- Age of the workforce was more commonly raised as a concern on cotton, broadacre and dairy farms than on horticultural farms. This may reflect the greater use of young overseas workers in horticulture.
- Location-related factors (including the remoteness of the farm, the desirability of the location or the availability of housing) were seen as a major difficulty affecting broadacre and fruit and nut farms over the next 5 years. Lack of quality housing was more commonly reported as a future concern on fruit and nut farms than broadacre farms and may reflect the need to accommodate large numbers of workers from outside the local area for a short period. Remoteness was the most commonly reported location issue for cotton and broadacre farms and is likely to reflect the greater difficulty recruiting experienced by more remote farms.
- Other issues anticipated over the next 5 years include penalty rates, occupational health and safety, transport, the integrity of some labour hire firms and the possibility of changes to government policy regarding backpackers.

Appendix A: Worker occupations

Table A1 Worker occupations definitions

Occupation	Examples	Indicative qualification
Managers	Farmer or farm manager, chief executive or general managers, specialist manager—such as in advertising, sales, business admin, ICT.	Bachelor degree or above or at least 5 years of relevant expertise.
Professionals	Agronomist, veterinarians, human resource (HR) specialist, plant scientist, lawyer, marketing, engineer, environmental scientist, accountants.	Bachelor degree or above in specific field.
Technicians and trades	Skilled animal or horticultural worker, construction trade (e.g. plumber and carpenter), mechanic, chef.	Bachelor degree or Cert II and 2 years on the job training or 3 years on the job training.
Clerical and administrators	Bookkeeper, project administrator, secretary, office support.	Bachelor degree or Cert II and 2 years on the job training or 3 years on the job training.
Machinery operators and drivers	Harvester operator, forklift operator, processing machine operator.	Cert II or cert III or formal experience related training.
Labourers	General farm hand, wool handler, stable hand, vegetable or fruit picker, packers, meat processing worker.	Can require no formal training.

References

- ABS 2013, [ANZSCO: Australian and New Zealand Standard Classification of Occupations, 2013, version 1.2](#), cat. no. 1220.0, Australian Bureau of Statistics, Canberra.
- ABS 2017, [Census TableBuilder](#), Census of Population and Housing, Australian Bureau of Statistics.
- ABS 2018a, [Agricultural Commodities, Australia, 2016–17](#), cat. no. 7121.0, Australian Bureau of Statistics, Canberra, February.
- ABS 2018b, [Characteristics of Employment, Australia, August 2018](#), cat no. 6333.0, Australian Bureau of Statistics.
- ABS 2018c, [Census of Population and Housing: Commuting to Work - More Stories from the Census, 2016](#), cat. no 2071.0.55.001, Australian Bureau of Statistics, Canberra, May.
- ABS 2019a, [Labour Force, Australia, Detailed, Quarterly, May 2019](#), Table EQ05 Employed persons by Industry division (ANZSIC) and Status in employment of main job, February 1991 onwards, cat. no. 6291.0.55.003.
- ABS 2019b, [Insights from the Australian Census and Temporary Entrants Integrated Dataset, 2016](#), cat. no 3419.0, Australian Bureau of Statistics.
- ABS 2019c, [Australian Industry, 2017–18, Key data by industry subdivision](#), cat. no 8155.0.002, Australian Bureau of Statistics, Canberra, May.
- Australian Government 2019, [Inquiry into the effectiveness of the current temporary skilled visa system in targeting genuine skills shortages](#), The Senate Legal and Constitutional Affairs References Committee, April.
- Barr, N forthcoming, *Data about the Australian Agricultural Workforce from the Australian Census of Population and Housing*, research report to ABARES.
- Commonwealth of Australia 2019, [Report of the Migrant Workers' Taskforce](#), March.
- Dairy Australia 2019, [Farm Facts: Cows and farms](#), Dairy Australia, Melbourne, accessed 15 August 2019.
- Department of Employment, Skills, Small and Family Business 2019a, Survey of Employers' Recruitment Experiences—unpublished data, provided 28 August 2019.
- Department of Employment, Skills, Small and Family Business, 2019b [Online Vacancy Report](#), Labour Market Information Portal.
- Department of Jobs and Small Business 2018a, [Recruitment Difficulty on the Rise](#) (PDF) (350.8KB)
- Department of Jobs and Small Business 2018b, [Industry projections – five years to May 2023](#) (Excel) (49.3KB).

Department of Jobs and Small Business 2018c, [Recruitment for Lower Skilled Occupations \(PDF\) \(584.7KB\)](#)

Department of Home Affairs 2018a, [Working Holiday Maker Visa Program Report – June 2018](#) (283KB PDF).

Department of Home Affairs 2018b, [Working Holiday Maker visa program media release](#), 07 November 2018.

Department of Home Affairs 2019a, [Temporary Work \(skilled\) visas granted pivot table](#), accessed 4 July 2019.

Department of Home Affairs 2019b, [Australian Migration Statistics](#) 2017–18, accessed 6 August 2019.

Dufty, N & Jackson, T, 2018, [Information and communication technology use in Australian agriculture](#), ABARES research report 18.15, Canberra, November.

Dufty, N, Zhao, S, Shafron, W & Valle, H 2018, [Dairy industry workforce survey 2015–16](#), ABARES research report, Canberra, July.

Martin, P, Leventis, C, Shafron, W, Phillips, P & Frilay, J 2018, [Farm performance: broadacre and dairy farms, 2015–16 to 2017–18](#), in *Agricultural commodities: March quarter 2018*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

Productivity Commission 2005, [Trends in Australian Agriculture](#), research paper, Canberra.

Sheng, E & Chancellor, C 2018, [Exploring the relationship between farm size and productivity: Evidence from the Australian grains industry](#), *Food Policy*, vol. 84, April 2019, pp. 196–204.

The Conference Board 2018, [International Comparisons of Hourly Compensation Costs in Manufacturing, 2016 - Summary Tables](#).

Zhao, S, Binks, B, Kruger, H, Xia, C & Stenekes, N 2018, [What difference does labour choice make to farm productivity and profitability in the Australian horticulture industry? A comparison between seasonal workers and working holiday makers](#), ABARES research report prepared for the World Bank, Canberra, February.