Innovative work:

Cotton workforce development for sustained competitive advantage

Lachlan & Murrumbidgee Production Valley Case Study

Milestone Report 1.4:

Review of current industry, regional and farm workforce development activities and human resource practices on farms

CRDC Project UM1201

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Executive summary

The CRDC Project UM1201, *Cotton workforce development for sustained competitive advantage* has undertaken the task of acquiring knowledge and understanding of key workforce issues in the cotton industry, towards the industry developing a more sustainable approach to workforce development. This report builds on two earlier case studies conducted in the Emerald/Springsure and Gwydir Production Valleys documented in a report titled 'Milestone 1.2 report: Review of current industry, regional and farm workforce development activities and human resource practices on farms, and Milestone 1.3 report: The cotton workforce development system: gaps and opportunities for enhancing industry competitiveness' available from the CRDC.

Methodology

Semi-structured interviews (June) and a grower survey (September) were conducted in the Lachlan & Murrumbidgee Production Valleys (LMPV) in 2013. In total 15 interviews were conducted and a total of 24 growers completed the online survey. This material is complemented by workforce-related Census data from 2006 and 2011.

Census – cotton in the labour market

Census data (2006–2011) revealed that labour markets in cotton regions have tightened over the last five years. Additionally, in the cotton regions, mining has increased its share of employment by 1.2%, while agriculture decreased by 2.7% and manufacturing by 1.3%.

The number of people who nominated the cotton industry as their employer in the 2011 is quite small (1,760 growers; 586 ginners); for the LMPV in 2011 there were 73 who indicated their industry of employment was cotton, which increased from 44 in 2006. However, because many cotton growers also produce other crops and/or livestock they may have nominated these industries, so this figure is likely to be an under-representation. Further, the seasonal workers that the industry is heavily reliant on are unlikely to be present in August when the Census is conducted.

These results reflect Australia's ageing population with a higher proportion of those 50 years and over than for Australia as a whole. However, this is consistent with other cotton regions (M 1.3, p.35), and consistent with the ageing of Australia's farmers (Barr, Karunaratne et. al. 2005). The increasingly higher levels of formal education in Southern New South Wales (SNSW) is consistent with other cotton regions as is the lower proportion of academic qualifications and higher proportion of VET qualifications than for all Australia. The higher labour force participation rate in 2011 for males is consistent with other regions and Australia as a whole, but varies across the cotton regions from 48.1% (Bourke) to 59.9% (Dawson-Callide). The female participation rate also varies, from 40.4% (Gwydir) to 47.5% (St George-Dirranbandi). The decrease in female unemployment occurred in most cotton regions and across Australia. Agriculture is the largest employer in all of the cotton regions except Macquarie, Upper Namoi and the Darling Downs where it is health care and social assistance, and the Central Highlands where it is mining. However, the largest category within agriculture is Sheep, Beef Cattle and Grain Farming, except for the Burdekin cotton region, which is Cotton, Sugar and other crop growing. The total number of cotton growers decreased from 1,977 in 2006 to 1,760 in 2011; for ginning there was an increase from 499 in 2006 to 586 in 2011.

Regional influences are important considerations in understanding workforce issues

The Lachlan & Murrumbidgee Production Valley (LMPV) is an example of a valley where the industry is rapidly expanding however, this is shaped by other influences too. The Riverina, where this valley is located, was converted from pastoral use to cropping and horticulture with the introduction of irrigation schemes from early in the 20th century. With the focus on closer settlement schemes, original land parcels were small. Consequently many farms remain so, but to achieve economies of scale, families have expanded their ownership to multiple properties and often these are family businesses among siblings or including two generations. Currently there is a preponderance of young men leading or taking over these businesses, and they have a desire to build the enterprise. Corporate ownership is also reported to be expanding in this area which is known to prefer contractors over permanent staff.

Why cotton has recently expanded in LMPV is through a combination of factors however, a key factor was the full allocation of irrigation water in 2012. Other factors nominated were: varieties that are suitable for this climate; the price and good returns from cotton; and increased automation.

As water was the key to increased production, particularly in 2012, so too was the lack of water responsible for the cessation of irrigation during the long drought. A consequence now negatively impacting on expansion was the retrenchment of skilled on-farm staff during the drought and who are now proving difficult to attract, due in part to the uncertainty around water and its direct link with employment. In addition, during the drought farmers actively discouraged their children from a life on the land. The sale of water licences during the drought has contributed to capped production and development.

For decades, a transition in agriculture has been occurring. The structural changes creating fewer, larger farms and often with corporate structures with a preference for employing contractors for on-farm work, has contributed to a smaller pool of skilled farmhands. In addition, in agriculture but markedly in cotton, there has been an expansion of automated machinery, but this requires a higher level of skill than the traditional farmhand work which was predominantly unskilled labour, though the demand for unskilled work continues to exist. Beyond agriculture, but now influencing it, is the expectation from employees that they will have a work-life balance, yet the demand remains for long working hours.

Attraction to cotton for growers

From the survey data it was clear that the primary attraction to cotton was the financial return however, the interview data revealed a broad range of attractions. The financial return as an attraction is consistent with almost half the survey respondents reporting that they have been in the industry less than five years, which is the period of expansion coupled with good returns.

Current workforce

The 24 survey respondents reported a total of 97 paid employees and 46 who were unpaid (e.g. family). More than half the paid workforce comprised either managerial-level or senior/ experienced-level full-time employees, with almost one-quarter being casuals. A larger workforce is required for cotton production than other crops, with experienced staff being most in demand for both cotton and other crops. Of contracting services, only transporting and spraying services were used with any frequency however, most reported using agronomists frequently.

In interviews, most growers reported having a sufficient number of staff but appeared to lack confidence that this would remain so however, they would have preferred staff with higher skill levels. Many of the permanent farm hands of interviewees are approaching retirement age.

Several interviewees currently sponsor people on 457 visas or have commenced this process. Others have a desire to sponsor 417 visa holders they have found suitable but there is a recognition and frustration that a 417 visa is not a pathway to a 457 visa.

Workforce vacancies

This study found workforce gaps reported in both interviews and the survey. In the survey, 8 of the 17 who responded to the question reported vacancies. In total there were 17 vacancies, (7 casuals; 4 entry-level; 4 senior or experienced staff; 2 managerial-level). Interviewees reported having largely the staff they required, but some had just made decisions to recruit more staff.

Turnover

An estimated 44% of the experienced farm hand staff turned over in the last 12 months and 42% of casual entry-level staff. The survey results shows that approximately two-thirds of staff recruited in the last year were new to cotton, and of the new recruits approximately two-thirds were entry-level and of those not new to cotton, three-quarters were entry-level. By contrast interviewees expressed a desire for staff with ‘cotton experience’.

While the results for casual staff would be influenced by the 417 visa restrictions, it requires investigation. However, the turnover for experienced-level staff indicates that being an experienced farm hand on a cotton farm may not be an attractive job. This resonates with the interviewees, all reporting difficulty attracting experienced staff however, the unemployment rate of 2.8% would account for some of this difficulty. By contrast, the long working hours despite being desired by both employees and employers, in addition to the moderate levels of elements known to engage staff, may contribute to this turnover rate. In the interviews while some reported turnover, there appeared not to be a pattern.

Recruitment strategies

The top two recruitment strategies reported in the survey were informal – from the participant’s own network, or the recruitment of a previous employee. This informal approach is typical of rural communities, but the interviews show that while it is producing an adequate number of staff in the LMPV, it is not attracting skilled staff with cotton knowledge. Most of those recruited were casuals, as these are required for the seasonal work, and are reportedly quick and easy to recruit, with the majority being back-packers who are highly regarded when compared to the quality of Australians as casuals. Most of the interviewees have used employment agencies, some with great success and others not so.

Retention strategies

The five most frequently mentioned retention strategies by survey respondents were: saying thank you; paying above award; giving an employee responsibility for a geographical area;

being flexible about working hours; and recruiting people who live locally. As these are typical strategies, those not using them may not be as competitive.

Development

The survey showed that some training occurred during the last 12 months and that further training is planned. Of the 11 training events reported, 3 were conducted by a machinery manufacturer and 3 by a Registered Training Organisation. All but one of the 11 were reported to be moderately to extremely beneficial to the farm. Interviewees report sending their staff for training, such as chemical handling and plant operations which includes those with staff on 457 visas and one who is doing a Certificate III, to upgrade his skills.

Future employment needs

Thirteen of the 24 survey respondents indicated that they intended increasing their cotton hectares over the next five years and more than one-third that they intended to increase the size of the farming enterprise. This is consistent with the expansion reported by most of the interviewees. However, over one-quarter of survey respondents reported that the decision to plant cotton was a season-by-season decision, which is also consistent with the interview data. Here, the availability of water is key but the price of cotton is also important. Despite clear plans to expand, three-quarters of survey respondents reported that their employment needs would remain the same.

So, while the key factors that influence the expansion of cotton are outside the control of growers (the quantity of water available; price of cotton), in the LMPV the rapid expansion of the recent past is expected to continue. Therefore, because cotton is more labour intensive than other crops, overall the conclusion here is that the demand for skilled farmhands will increase.

Workforce conundrums in the LMPV

In reviewing the attraction, recruitment and retention of on-farm staff within the regional context, the research has revealed a set of workforce development challenges for the LMPV. These are presented as conundrums, with potential solutions, within the four-part workforce development strategy developed following the Emerald/Springsure and Gwydir case studies.

Strategy 1: Identifying a sustainable source of labour

1. The 'right' person: skills plus attitude

The conundrum is that the 'right' person is difficult to find, so they are substituted for those with lower skill levels.

Potential solutions: a) Grow your own skilled farmhands; b) Use targeted recruitment strategies for: i) Casuals, ii) Skilled permanent staff, iii) Unskilled permanent staff.

2. Recruiting by word-of-mouth

A related conundrum is that the favoured approach to recruitment – by word-of-mouth, appears to be ineffective, because growers report not having the 'right' staff.

Potential solution: As suggested for conundrum 1, a more structured, targeted and formal approach to recruitment may be more effective.

3. The expansion of cotton in LMPV

The conundrum is to know to what degree the expansion of cotton in the LMPV will change the demand for on-farm staff. The expansion of cotton will increase the demand for labour because it is more labour intensive than other crops however, increased automation and re-development to bankless channels will temper this demand. Land being developed from grazing country will bring into play more irrigated land so this will increase the demand with irrigated cropping being more labour intensive than grazing. Regardless of the degree of expansion, the future demand will be for skilled staff. However, beyond these considerations, it is the quantity of water available and the price of cotton that will influence workforce demand.

Potential solutions: To acquire staff, a review of recruitment strategies (as suggested in 1 and 2 above) is suggested, in addition to those suggestions made under the second workforce strategy – building good practice in employment relations.

Strategy 2: Building a critical mass of 'good practice' in employment relations

4. The drivers for long hours

The conundrum is that the differing goals for employers and employees coincide to create situations that could not be described as best practice – long working hours for approximately half the year, which are likely to result in fatigue, with one potential consequence of fatigue being accidents. This is a risk that both employers and employees appear prepared to take. However, interviewees reported some recognition that staff now want a better work-life balance and that it is increasingly difficult to find the staff prepared to work those hours.

Potential solutions: Because the drive for long working hours comes from both employers and employees it will be difficult for the industry to see change here as a priority. The pressure for cultural change may come externally. However, at the enterprise level, de-coupling the very close association between financial reward and long working hours for both employers and employees would be an advance.

5. Turnover conundrum

The conundrum is that growers are unable to retain many of the staff they most need – those with experience. An estimated turnover of 44% for experienced staff indicates that there is a problem, and with the majority of recent entrants being new to cotton.

Potential solutions: Review job design for the issues around working conditions taking into account what makes a job attractive from the employee perspective, and best practice from other industries. Also identify whether there are opportunities to make new recruits 'cotton ready' through group and/or formal inductions.

6. The employer's role in human resources management – there is one

The conundrum is that there is a collection of workforce issues, many of which sit at the enterprise level, but the skills and knowledge required to manage these issues effectively are in a different domain to crop production, which is the grower's primary and almost exclusive focus. Therefore, employers may be operating in an area where they have limited knowledge or expertise, particularly if they are moving from rice to cotton, and may therefore have limited experience in managing staff.

Potential solutions: To stay competitive, employers need the human resource management skills to enable them to manage the changing employee expectations about a work-life balance by providing a working environment conducive to retention. This includes knowledge of how to best deploy staff within the enterprise and the provision of opportunities for employees to develop their skills, or for new staff, an effective induction program.

Strategy 3: Over the longer term, developing skill and career pathways

7. Employ skills or labour?

The conundrum is that the short-term solution contributes to a longer term problem. Heavy reliance on back-packers meets a short-term need for staff but contributes to an ongoing loss of the skill-base in agriculture due to few farmhands being trained up to become permanent staff.

Potential solutions: Documenting the various and changing career pathways within and into agriculture, with a focus on opportunities and pathways for a permanent workforce, would make opportunities for action more visible within and outside the industry.

8. 417-> 457 is not a pathway

The conundrum is that while moving from a 417 to a 457 visa appears to be a pathway to locate suitable on-farm staff, usually it is not.

Potential solutions: While information on 417 and 457 visa conditions is readily available, very clearly it is not reaching the target audience, in this case, cotton growers. Therefore, a targeted approach is needed where specialist immigration advice at the enterprise level can be sourced within the industry and where information is provided directly to growers such as via the local grower groups by a specialist in the area.

Strategy 4: Developing a national and regional capacity to coordinate and take action and link to government

9. The cotton industry does not have a framework or system with which to address the workforce conundrums

The conundrum is that a set of workforce challenges exist at the enterprise level but there is no framework at any level around which action could be taken to address any of these issues.

Potential solution: One solution is to use this four-part proposed framework to work at the regional and/or national level.

Conclusions

This case study has demonstrated the complex and interwoven nature of the relationship between attraction, recruitment and retention, which in the LMPV is exacerbated by the rapid current and expected future expansion. The growth in cotton has increased the demand for an on-farm workforce, where most experienced staff are new to cotton and where seasonal work is undertaken largely by back-packers. The increasing automation of the cotton industry adds the requirement for a higher level of skill. However, if this valley continues to expand rapidly there is likely to be increased demand for the number of staff and for those staff to be skilled. While most interviewees are able to find the staff they need now, they are compromising on the skill-level of these staff because those with a higher level of skill cannot be found. However, there is an awareness that cotton expansion will increase the demand for labour but without clear pathways into agriculture for permanent staff and the knowledge that back-packers will not always be so readily available, concerns have been raised about – where to from here? Added to this is what appears to be comparatively low engagement of existing skilled employees.

This case study has identified two key interactions:

1. The relative attractiveness of cotton for farmhands compared to other agriculture or non-agriculture options. Would skilled people from outside cotton come in, and do they know they can build skills in cotton?
2. There is high turnover on some farms in this study, but not definitive data on the reasons for leaving or where the employees went. However, the data on the attractiveness of work and human resources management practices are a source of concern.

Therefore, both developing and retaining skills need to be considered equally. It is important that the comparatively large proportion of entrants who are new to cotton are provided with a positive experience and one that will accelerate skill development.

Recommendations

To address the conundrums and associated workforce implications, an effective approach may be via a working group that:

1) Could link the addressing of workforce issues to the initiatives and activities focused on production. This would include the Monsanto new grower program, the CSD production trials, and IREC grower activities.

2) Could oversee specific activities identified in and targeting the conundrums. These activities could be:
    a. Off-site Cotton Basics induction course for new staff.
    b. Enrolling growers in the National Workforce Development Fund, Tocal, Cotton Australia collaboration training being offered currently in LMPV.
    c. Cotton employees could be invited to be observers in the Monsanto new growers program. Cotton employees could be invited to be observers in the CSD production trials.
    d. Traineeships offered through the local state high school, known to be active in this area, and Tocal College.
    e. Human resources management workshop.
    f. Immigration specialist speaker at a local grower group meeting.

3) Networked to develop and maintain a knowledge base of workforce in the region, with other industries, Labour Hire companies and immigration services.

The formation of a working group, as recommended, has the potential to operate a pilot for the next phase of the *Innovative work* project.

CONTENTS

List of tables

List of figures

List of boxes

INTRODUCTION TO THE CASE STUDY

The Lachlan & Murrumbidgee Production Valleys case study was conducted following completion of Milestone 1.2 of the *Innovative work: Cotton workforce development for sustained competitive advantage* project; a report, 'Review of current industry, regional and farm workforce development activities and human resource practices on farms', and the Milestone 1.3 report, '*The cotton workforce development system: gaps and opportunities for enhancing industry competitiveness'*. This is the third case study in the CRDC funded *Innovative work* project, with this case study being commissioned and in addition to the original two case studies; Emerald/Springsure and Gwydir.

REGIONAL CONTEXT AND THE IMPLICATIONS FOR WORKFORCE DEVELOPMENT

The Lachlan & Murrumbidgee Production Valley (LMPV) is centered in the Riverina in southern New South Wales, one of the most productive and agriculturally diverse areas in Australia. While discovered in 1817 and first settled by squatters with beef cattle predominant in the 1840s then overtaken by sheep in the 1860s, it was the major government sponsored irrigation developments that brought closer settlement. This commenced with the Murrumbidgee Irrigation Scheme in 1920 which allowed the diversion of water to weirs and dams from the Murrumbidgee River. The last large scheme was the Coleambally Irrigation Area created in 1968. The introduction of irrigation has resulted in the Riverina growing a high proportion of Australia's horticulture, but also substantial quantities of rice and maize.

The interviews revealed key influences that shape workforce directly or indirectly in this production valley. Quotes are used throughout the report to illustrate the points.

1. **Settlement patterns:** Much of the LMPV was settled as part of the Irrigation and Soldier Settlement Schemes – each of these schemes is now known to have underestimated the size of the farm required to support a family. Consequently many have sought to achieve the economies of scale required to continue making a living by purchasing neighbouring land. However, many farms remain small which has led to both intensive agricultural practices and efficiencies. In addition, many of those now taking greater responsibilities or taking over family farms are young men in their thirties looking to future expansion and increasing the capital value of the farming land. The proposed expansion implies that a larger workforce will be required but there are other influences that may balance this.

Box 1: Settlement patterns

> '... this area here is Murrumbidgee Irrigation ... when the government set it up they only made it for Soldier settlers and each farm was 600 to 1000 acres, that's what they deemed as a good size farm ... an individual farmer nowadays can't have one farm ... the only people who are doing that have off-farm jobs or off-farm positions, pretty much everyone here now has got two farms or more' (#4).
>
> '... if you're talking to people who are on the schemes - the generation who are now running them, it was their fathers' fathers often who settled. In some cases their fathers, but mostly it's - now you're into the third generation ... this generation that are now running the farms, you've got the 30 year olds who are out there doing it now' (#9).

2. **The expansion of cotton production** While the climatic conditions have always been suitable for cotton, interviewees attributed the expansion to recent changes coinciding to make cotton an attractive option:
    a. Since the drought large quantities of water have been available; it is the availability of water rather than its cost that is key.
    b. Gross margins in cotton have been attractive.
    c. Round bale pickers became available. The attractions are:
        i. reduced harvest time due to the speed of the picking;
        ii. it provided the opportunity for those who have traditionally grown rice to try a small amount of cotton, without having to invest in infrastructure;
        iii. approximately one-quarter of the staff previously required for picking are now needed which has the advantages of:
            1. not having to locate a large staff;
            2. not having to manage the dynamics of a large staff;
            3. not having to pay a large staff to keep them available when picking ceases temporarily;
            4. not having to keep a large staff safe, amidst numerous moving; vehicles 24 hours a day.
    d. New varieties of cotton; better suited to LMPV.
    e. Recent high price of cotton.

    Workforce implications: The expansion of cotton production implies that a larger workforce will be required however, this may be balanced by the fewer staff required due to greater automation but these fewer staff will be required to have a higher level of skill. Since some of the expansion into cotton is from other crops there may not be an overall increase in the demand for an on-farm workforce. Where new or old cotton ground is being developed for bankless channels or where other farming developments are taking place, this will require either extra staff to do the work, or contractors.

Box 2: Why cotton expanded in the LMPV

In summary

'So it's really not until the drought broke that we've been able to grow crops again; so we looked at the options and cotton at the time was very attractive due to its price basically and it had been grown down here probably for 15 years on and off with mixed success. But with the new varieties and a shorter season and new harvesting techniques it was a lot more attractive to us so we decided to go into it, and it's been going well for us, reasonably well anyway' (#5).

Water availability

'... you speak to the guys up at Moree and up at Emerald ... they say "yeah we only irrigated four times", well we irrigated 15 times. But you know that's just one of the things that we have to do, because this is not a rainfall area, especially during summer. We might get some winter rain, but summers ... we don't get anything' (#4).

Gross margins

> 'We'll be continuing as long as the gross margins look okay ... that's the main thing' (#5).

> '...it's not necessarily on gross margins per hectare; it would be done on gross margins per megalitre of water' (#7).

Round bale pickers

Speed

> '... would pick either equal to two or two-and-a-half of other type pickers. So, there was a substantial opportunity to speed up the harvest ... Well the window's very narrow ... they've gone from workforces of eight back to two and getting twice the production' (#1).

Fewer staff, so few to hold

> '... say we had three, there's 15 crew. We don't have to find work for them to keep them busy and earning money to hold on to them. So he can just stop and park the picker ... if it rains. ... Saved us money as well, because you get them to do stick picking and whatever you can do and ... well, it is productive, but it's not a wise use of money sometimes, but you have to hold staff' (#3).

> '... if you got a shower of rain and you had the eight people and you stood them down for the day and then all of a sudden it stopped raining and come 4:00 o'clock in the afternoon, there's no way you could round up the eight people to make it happen again, so the rest of the day was a write-off, but with two people, you can find them. So, that's a really big benefit' (#1).

Fewer staff and Workplace, health and safety

> '... these new pickers are so much better. We really only need one and a half men ... with the old-style picker it was five people to a picker, plus whatever else you needed ... and we were really looking forward to that lack of staff and OH&S issue' (#3).

> '... you could still get injured on one of these round module pickers, if you're not aware of all the exposed bits, but really you've only got two people to worry about, not eight. So therefore, everyone feels a little bit more comfortable ...' (#1).

> '... the adoption of the round module building pickers rather than the conventional basket pickers and module builders. That was a large itinerant workforce and a fairly hazardous operation, so a lot of OH&S issues come with the moving machinery involved' (#8).

Varieties, return and environment

> 'Oh I think probably two things, the return that you can get out of cotton, and that's coupled with probably some newer varieties ... 71PRF, it's a variety that's very adapted to this area down here ... they tried cotton here 40 and 50 years ago, but just the varieties weren't suited ... hot, dry summers which is sort of which is good for cotton if you've got plenty of water. So ... within the Murrumbidgee valley from time to time there's an abundance of water, it's just the cost of that water that varies year to year. And yeah the environment is quite suited to cotton growing with the varieties that have been developed over the last sort of five to 10 years' (#2).

Evidence of the expansion of cotton production in the LMPV:

a. Most growers interviewed reported being new to cotton (see Table 1).
b. Two growers reported that they are developing country that has only been used for grazing previously.
c. The 4 round bale pickers in 2011 increased to more than 40 in 2013.
d. A new gin was built and started operation in 2012, and the old one was expanded, making two local gins.
e. Auscott have recently announced they will build a gin in LMPV.
f. While the difficulties encountered with the 2012 ginning delays impacted significantly on individuals and the community, none of the growers interviewed who are growing less cotton this season reported this as a reason for growing less – they referred to water availability and the cotton price.

3. **Water** :
   a. The quantity of irrigation water available is a key factor in the decision to plant cotton each season. Across the LMPV, water access varies across the multiple irrigation schemes. Licensed access to ground water near Hillston was important during the drought. Water allocations are announced in July each year, then monthly.
   b. The opportunity to sell water licences to the government during the drought for environmental water was taken up. While this has been described as 'selling the family silver' (Wheeler, Zuo et al. 2012) it also provided a much needed income but has reduced the amount of permanent water available in the LMPV and capped the development of local communities.

Workforce implications: The quantity of water available influences how much cotton is planted and this in turn determines staffing needs. However, as cotton is an opportunity crop, it is likely that if cotton is not grown then a different crop will be, unless there is insufficient water allocation to grow any crop. However, the type of irrigation system used (flood or bankless channels) will also influence workforce demand. While the reduction of permanent water licences has occurred across the Murray-Darling Basin, those who have sold these can still purchase 'temporary' water when available, with two growers interviewed indicating that this is how they watered their cotton.

The insecurity of water directly flows on to cause insecurity of employment for on-farm staff. It is reported to be a deterrent to have workers and their families move to the area, but also to make staff permanent.

Box 3: The importance of water availability and the sale of water licences

'[Water] availability before price. Price is obviously then driven by the availability' (#9).

'Yeah we're definitely not locked into growing one crop year in year out ... it's dependant on pricing, water availability too' (#2).

'Like in those years so much water got sold back to the government ... there's rumours that there's been at least 60 water licences move out of this town ...

Q: ... why were they selling them?

A: Money for debt ... a lot of the water that's been used in Hillston is temporary water brought from other valleys and transported down here, pumped further upstream. ... I really think it's put a cap on just how big Hillston will be because once upon a time there was talk that maybe Woolworths will want to come ... and things like that and the town will grow; they wouldn't come now. ... this town was capped, it's population will be capped at around about what it is now forever I would say ... if you take water out of a valley there are consequences you know, and we're facing them now' (#12).

4. **Long-term drought**: The length of the drought, up to 10 years in some locations, resulted in crop production dropping significantly or ceasing altogether. Consequently, many farmhands were retrenched, and they and their families relocated out of the area. In addition, farmers discouraged their children from returning to the land. Post-drought, few have returned. This has resulted in a shortage of on-farm skilled staff.

Box 4: Impacts of the long-term drought

Drought – put off permanent skilled staff

'So over the drought I guess people that used to have a family farm, they might have a parent and one next generation and they might employ a full-time employee. Over the drought the full-time employee went and they're the ones that they're struggling now to actually bring back as permanent employees' (#14).

'So prior to the drought I had three full time employees plus myself and also I'd get another person in for eight months in the year over the summer period, over the peak period which was full time but only for eight months and then when the drought hit I had to put off two of the three permanents and kept one guy on which was, you know, even that was probably pretty hard but anyway we sort of wanted to keep; two of them had been here for 19 years so it was pretty hard to let either of them go but anyway, we didn't have any work so what could we do ... we had some really good people before the drought and we had to let them go ...' (#5).

'... many left agriculture and in the Riverina went to mining ... a lot of our permanent people from the Riverina through the drought went off to work in mines' (#14).

Drought – children discouraged from returning to the farm

'Obviously the drought years had a big impact on the Riverina, and therefore on the farming operations and the staffing levels on those properties. Lots of farms, particularly the family run farms, they discourage, actively discourage their children, who might have in former years come back to the farm and eventually managed it. They've actually discouraged them totally from coming back to the land, and lots of them have gone off to other forms of education and other employment, whatever. So since the drought broke probably two years ago, there's been a bit of a resurgence' (#6).

'Their next generation often went off farm too because that was the easiest way to generate income and not have them depending on the farm and many of them don't want to come back' (#14).

5. **Transition in agriculture and cotton:**
   a. The structural change to fewer, smaller farms continues, with some of these larger farms being family-owned but also with increased corporate ownership. This has resulted in fewer on-farm staff with families providing much of the labour in the

larger conglomerations; and corporates are known to preference the use of contractors for most farming activities.

b. A higher level of on-farm skills is required due to increased automation, but there is still a need for unskilled farmhands for flood irrigation.
c. While the demand for long hours continues from employees and employers, there is some evidence of employees wanting a work-life balance.

Workforce implications: The structural change to fewer, larger farms and increases in corporatisation has lowered the demand for on-farm staff, but these staff are now required to have a higher level of skill, in accord with technical advances. Some on-farm staff now seek a better work-life balance but the demand for long hours continues, for all so this potentially impacts by making recruitment and retention more difficult.

Box 5: Transition in agriculture and cotton

Fewer larger farms

'Hay and the district around here is traditionally a wool growing area, they're big properties, big sheep places and a lot of those properties have merged and so they're quite large sheep places and traditionally they'd have a lot of people on them now, they run them very leanly with one person and they get a few contractors to come in. So there's probably not the pool of people with the skills locally, there are some, and we have a couple of bigger corporate places around here that grow a lot of cotton for instance' (#5).

'So I would say generally it's way more positive than five or six years ago, and there's the combination of the family run farms and then what we call the corporate farms, so bigger companies coming in and buying up large tracks of land and establishing enterprises, and they have farm managers. Don't need as many staff because they can change between one operation and another, they can move them around depending on seasonal needs' (#6).

'I think a lot of properties are now turning into corporate-owned properties. They're no longer family farms like they were years ago because the young people, whether they be male or female, are not coming back to those properties to run them. So therefore they're being sold to corporates, so many of those people - like there's corporate properties here and they don't even have their office here. Their office is in Sydney or Melbourne' (#12).

Skilled staff

'I think the biggest difficulty that people are having is somebody that can walk into a position and work unsupervised and I'm sure that applies to other industries but from our industry's perspective during the drought we scaled right back and most people just existed on their own labour and lost all of their ability to engage labour. So we lost a massive resource in terms of those people that had been regularly employed around the region and I'm hearing from everyone that one of the biggest issues is they can get people but the biggest difficulty is getting someone that can walk into a position and work pretty much unsupervised' (#14).

Work-life balance

'... it's long days and working on weekends which a lot of people don't like these days. Used to be okay but these days everyone wants, which is fine we all want to have time off don't we, but it makes it harder and you've got to just juggle things around a bit more, you probably need more people but they might do less hours to keep everyone happy, because people aren’t happy at working every weekend. When the sun’s shining and we’ve got things to do here we’re working to keep up with things, whether it’s a Monday or a Sunday doesn’t really matter. And that’s hard, and it’s hard on people as well because everyone has a life away from work, or wants a life away from work’ (#5).

METHODS

A case study methodology was used which included interviews and a grower survey, complemented with Australian Bureau of Statistics Census data from 2006 and 2011. The strength of this approach is the provision of in-depth detailed data which is important when there is limited knowledge of the area to be investigated. A limitation of case study research is that due to the sampling approach taken, the results apply only to the sample in the study and cannot be generalised to the broader population.

CENSUS

Data was drawn from Milestone 1.1 for the Innovative work study, Cotton Census data 2006–2011, Mark II, which is a spreadsheet created by the Workplace Research Centre, University of Sydney from the 2006 and 2011 Census of Population and Housing conducted by the Australian Bureau of Statistics (ABS). The spreadsheet contains workforce related Census data, which is reported for 'cotton regions'. These 'regions' were created from mapping the cotton growing and ginning areas onto Statistical Local Areas (SLAs) in early 2012. The spreadsheet and M 1.2 reports are available from the CRDC on request. The SLAs covered by the SNSW cotton region are: Balranald (A); Carrathool (A); Conargo (A); Griffith (C); Hay (A); Lachlan (A); Leeton (A); Murrumbidgee (A); Narrandera (A); Wakool (A); Wentworth (A).

INTERVIEWS

During the week beginning 17th June 2013, a researcher conducted semi-structured interviews in-person in the LMPV (some by telephone). Several telephone interviews were conducted prior to or after this week. In total, 19 people were interviewed in 15 interviews, most with individuals, several with married couples or colleagues. The types of people and the numbers interviewed in each category are shown in Table 1. Throughout the report, participants are identified by the pseudonym in Table 1.

The sample was recruited with assistance from the cotton industry where predominantly farmers were nominated. The goal was to interview a range of farmers to elicit diversity in terms of how attraction, development and retention were perceived, and supply and demand characteristics. These farmers were then approached for interview. Employees were recruited via farmers in the study. Other prospective participants were identified when the researcher attended a CRDC meeting with growers on 4th April 2013 in Griffith. Farmers were recruited targeting the geographical locations of Griffith, Hay and Hillston. There was one refusal and one cancellation due to ill-health which included a farmer and his employee. This unfortunately left only one employee interview which due to extraneous circumstances was very brief.

The in-person and telephone interviews were conducted at a mutually convenient time. Most interviews were audio-digitally recorded. Ethics clearance required that prior to each interview participants read a Plain Language Statement; those consenting then signed a Consent form (see Appendices for these documents).

Table 1: The Lachlan & Murrumbidgee production valleys case study interview sample and their pseudonyms

Participants	Participant type	No. people interviewed	Study pseudonym (#)
Farmers	Family farm owner	6	2, 3, 4, 5
	Company corporate manager	1	9
Employees	Company corporate professional	1	8
	Company corporate farm hand	1	10
Stakeholders	Equipment	1	1
	Wine/Grape industry	1	13
	Rice industry	1	14
	Registered Training Organisation	2	6,15
Support services	Contractor/farmer	2	12
	Re-seller	2	7
	Ginner	1	11

GROWER SURVEY

A survey was conducted with 24 cotton growers in LMPV between 21st August and 13th September 2013 (see Appendix for questionnaire). Following the Cotton Australia Regional Manager sending out a group email containing a link to an online survey, a contractor in Griffith (employed by the University of Melbourne) conducted follow-up telephone calls inviting growers to respond. Of the 70 sent the group email, 51 were eligible and contactable (4 were non-growers; 5 emails bounced and either had no telephone number or did not answer; 2 emails were companies not involved in cotton growing; instances where there were multiple contacts at the same property reducing the number by 8). Prospective participants had the option of completing the survey themselves, online, or with the contractor over the telephone. All respondents chose to complete the survey online. Of the 51 people eligible and contactable, 24 growers completed the survey, giving a 47% response rate.

DEMOGRAPHICS: CENSUS (2006–2011), INTERVIEWS AND GROWER SURVEY

POPULATION AND GENDER – CENSUS, GROWER SURVEY

Census. The population of the Southern New South Wales (SNSW) cotton region decreased from 2006 (71,549) to 2011 (69,976) with the number of males decreasing (36,293 to 35,324), slightly more than the number of females (35,256 to 34,652)(Appendix 4 Figure 24).

Survey. The 17 participants who provided this information, were male.

AGE DISTRIBUTION – CENSUS, GROWER SURVEY

Census. The percentage of those less than 29 years old decreased from 2006 to 2011 (40.3% to 39.4%), as did those in the 30–49 years age group (27.3% to 24.9%). However, the percentage of those 50 years and over increased (43.4.0% to 35.7%)(Appendix 4 Figure 25). When the total SNSW 2011 figures were compared with Australian figures, the percentage in the youngest age group (less than 29 years) (39.4%) for the SNSW was the same as the Australian figure of 39.6%, lower for the middle-age group (39–49 years SNSW 24.9%; Aust. 28.0%), but higher for the older age group (50 years and over SNSW to 35.7%; Aust. 32.4%).

Table 2: Age groups of survey respondents (survey)

What is your age group?		
Age group (years)	*n*	(%)
25-34	3	(17.6)
35-44	1	(5.9)
45-54	9	(52.9)
55-64	4	(23.5)
65-74	-	-
Total	17	(100.0)

Survey. More than half of those who provided this information (52.91%; *n*=9) were aged between 45 and 54 years (Table 2). This was followed by almost a quarter (23.5% *n*=4) in the 55 to 64 years age-group, with the remainder younger (3 in the 25–34 years age group; 1 in the 35–44 years age group).

EDUCATION – CENSUS, GROWER SURVEY

Census. The percentages for each category of educational attainment in SNSW increased from 2006 to 2011 (Bachelor's degree or higher: 5.8% to 6.6%; Advanced Diploma or Diploma: 3.4% to 4.0%; Certificate III/IV: 11% to 12.5%; Certificate I/II: 1.0% to 1.1%) (Appendix 4, Figure 26). While all changes were small, least change was for those with Certificate I/II and the greatest for those with Advanced Diploma or Diploma. When the 2011 figures for SNSW were compared to Australian figures, some differences emerge. A smaller percentage of those in SNSW had academic qualifications than those in Australia (Bachelor's degree or higher: SNSW 6.6%; Aust. 15.2%; Advanced Diploma or Diploma: SNSW 4.0%; Aust. 6.5%). However, the reverse was true for Certificate III/IV (Certificate III/IV: SNSW 12.5%;

Aust. 12.3%) in Vocational Education and Training (VET), with a higher proportion of those in SNSW having VET qualifications than those in Australia overall here, but the same for Certificate I/II (SNSW 1.0%; Aust. 1.0%). When all non-school qualifications were considered 24.3% of those in SNSW have these, whereas for all Australians this figure was higher at 35.0%.

Table 3: The highest level of education completed by survey respondents

What is the highest level of education your have completed?		
Highest level completed	n	(%)
Year 10	8	47.1
Year 12	6	35.3
Tertiary	3	17.6
Total	17	(100)

Survey. When respondents were asked for the highest level of education that had been completed, almost half (47.1%; *n=8*) indicated they had completed Year 10; this was followed by just over one-third who reported Year 12 as the highest level of education completed (35.3%; *n*=6), and the remainder had completed some tertiary education (17.6%; *n*=3) (Table 3).

LOCATION – GROWER SURVEY

Table 4 lists the postcodes of the survey respondents; 17 of the 24 respondents provided this information.

Table 4: Postcodes of survey respondents

Postcodes	Frequency	(%)
Goolgowi 2652	2	(11.8)
Hillston 2675	4	(23.5)
Griffith 2680	5	(29.4)
Leeton 2705	1	(5.9)
Darling Point 2706	1	(5.9)
Coleambally 2707	1	(5.9)
Carrathool 2711	3	(17.6)
Total	17	(100.0)

RESULTS

LABOUR MARKET

PARTICIPATION AND UNEMPLOYMENT – CENSUS

Labour force participation in SNSW showed little variation, as occurred overall in Australia. For males, labour force participation decreased across the Census periods (53.3% to 51.4%), but increased for females (41.9% to 42.5%), with total participation remaining almost the same (2006 47.1%; 2011 47%). When the 2011 figures for SNSW were compared with Australian figures, the participation rate for SNSW was slightly lower than for all Australia (SNSW 47%; Aust.49.6%). This is accounted for by both the slightly lower male participation rate (SNSW 51.4%; Aust. 53.5%) and the slightly lower female participation rate (SNSW 42.5%; Aust. 45.7%), than for Australia (Appendix 4, Figure 27).

Unemployment: In SNSW, male unemployment increased very slightly between the Census periods (4.3% to 4.4%), but for females it decreased markedly (4.7% to 2.8%) which is consistent with the increased labour participation rate for females in SNSW but the unemployment increase is much higher. So it is this decrease in female unemployment in SNSW that accounts for the total decrease in unemployment from 2006 with 4.5% to 2.8% in 2011 in SNSW (Appendix 4 Figure 28). When the 2011 figures for SNSW were compared to those for Australia, male unemployment in SNSW was lower than for all Australia (4.4% and 5.6%), as was the female unemployment rate (SNSW 2.8% Australia 3.3%) and the totals (SNSW 2.8%; Aust. 3.5%).

Overall, across the cotton regions there was a tightening labour market with some valleys having unemployment rates where vacancies would be expected across the sector, with Emerald being an example. The workforce implications for the 2.8% unemployment rate are that there would be few staff available for employment, so adding a challenge to recruitment.

EMPLOYMENT SHARE BY SECTOR – CENSUS

Agriculture, forestry and fishing was the largest employer in SNSW by far in 2006 (23.1%) with the percentage decreasing in 2011 (20.5%). Manufacturing ranked 2nd in both Census periods (12.8%; 12.5%) showing a small decrease over time and employing about half the proportion as for agriculture. Retail was ranked 3rd in both Census periods, showing a slight increase (10.2%; 10.5%), with Health care and social assistance, 4th and showing a larger increase (7.5%; 8.9%) (Appendix 4, Figure 29).

When Agriculture, forestry and fishing was examined by components, more than half (56.5%) were employed in Sheep, Beef Cattle and Grain farming, the largest category and maintained this proportion across Census periods. Fruit and Tree Nut Growing employed 22.9% in 2006 and this decreased slightly in 2011 to 20.2%. Ginning is included in Agriculture and Fishing support services and this sub-industry category decreased from 4.8% to 4.6% during the five-year period. Mushroom and Vegetable Growing remained the same (3.3%; 3.3%), with Dairy Cattle Farming decreasing (3%; 2.7%), Poultry farming increasing (2.1%; 2.9%) and Cotton, sugar and other crop growing increasing (1%; 1.7%).

WHY PEOPLE WERE ATTRACTED TO COTTON – INTERVIEWS

When interviewees were asked what attracted them to cotton, the answers were diverse:

- Married a cotton farmer (#3)
- GM cotton (#12)
- Went to an agriculture camp while at school (#9)
- Not cotton, but crop production (#2)
- An interesting, well paid job (#10).

The contractor/farmer (#12) explained why GM cotton attracted him:

> GM – less complex arrangements with staffing, specifically weed control. As soon as I bought that Roundup Ready cotton that was the green light for me to have a go. ... You see they bought Bollgard II too which - we used to have to spray. Like once upon a time you would spray cotton 12 times for insecticides, with insecticides for insects and now last year we didn't spray it at all, our crop. We didn't give it one insecticide spray. ... So now all of a sudden workers have to wear gloves or should be wearing gloves and all that's gone now. That's all gone, with Roundup Ready, Bollgard Cotton, we just don't need to do it anymore. If there are weeds in there, I spray it with roundup, I do that myself I call the plane in and spray it with roundup. We never put out insecticides or rarely do we put out insecticides.

WHY PEOPLE WERE ATTRACTED TO COTTON – GROWER SURVEY

In response to an open-ended question, 'If you have worked outside the cotton sector previously, what attracted you to this sector', the following responses were provided from 8 growers:

Table 5: Why growers were attracted to cotton (survey)

Category	Responses
Returns/ margins	1. Ability to increase rate of returns on production. 2. Alternative crop good gross margin 3. Cotton had the most encouraging gross margins. 4. Crop and gross margins and water efficient 5. Profitable crop and well structured industry 6. Positive, progressive and profitable industry fellow growers are happy to share experience, knowledge and support.
Water use	1. Crop and gross margins and water efficient 2. Increase production per megalitre of water... 3. Lower water use
The industry	1. Positive, progressive and profitable industry fellow growers are happy to share experience, knowledge and support. 2. Profitable crop and well structured industry
Other	1. Reliability of income 2. Commodity pricing started the introduction to cotton 3. Crop and gross margins and water efficient 4. Potential with the industry growing in our region

COTTON GROWERS AND GINNERS: NUMBERS AND GENDER – CENSUS

When those in SNSW who nominated their industry of employment in the 2006 and 2011 Censuses, as cotton, the numbers were quite small (2006 growers=44, ginners=11; 2011 growers=73; ginners=18) but the number of growers almost doubled by 2011 to 73 growers (Appendix 4 Figure 30). This is in contrast to the Australian grower figures (2006=1,977; 2011=1,760), which showed a small decrease. The increase in the number of ginners reflects the Australian increase in ginners (2006=499; 2011=586), and is likely to reflect the creation of the second gin in the PMPV.

In SNSW, while males predominated as cotton growers for both Censuses (68.2% and 86.3%), and increased, the percentage of female cotton growers in SNSW halved from 2006 (31.8%) to 2011 (13.7%), consistent with Australian percentages of female cotton growers decreasing (18.9% to 17.3) (Appendix 4, Figure 31).

In 2006, almost two-thirds of the cotton ginners in SNSW were males (63.6%; *n*=7) with the remainder females, but in 2011 this changed with the half each being male and female (males=9; females=9), showing an increase for females. This is very different from the Australian gender break-down where for both Censuses approximately two-thirds were males (2006: 69.5%; 2011: 65.2%) and the remainder females (Appendix 4, Figure 32).

It should be noted that many cotton growers reported that they receive income from other agricultural commodities or activities, so when answering the Census form many would have a choice as to what industry they nominated. In addition, the cotton industry relies heavily on casual staff and these numbers and industries may not be well captured by a Census. Further to this, August, when the Census is conducted, is a quiet month for most production valleys so this would be a period when the fewest staff would be employed on cotton farms. This may be reflected in Figure 1 which shows the number of people who indicated that they were employed in the cotton industry on Census night, for 2006 and 2011. While most production valleys show changes, the greatest changes are an almost doubling of the numbers in SNSW and halving of the numbers in Bourke.

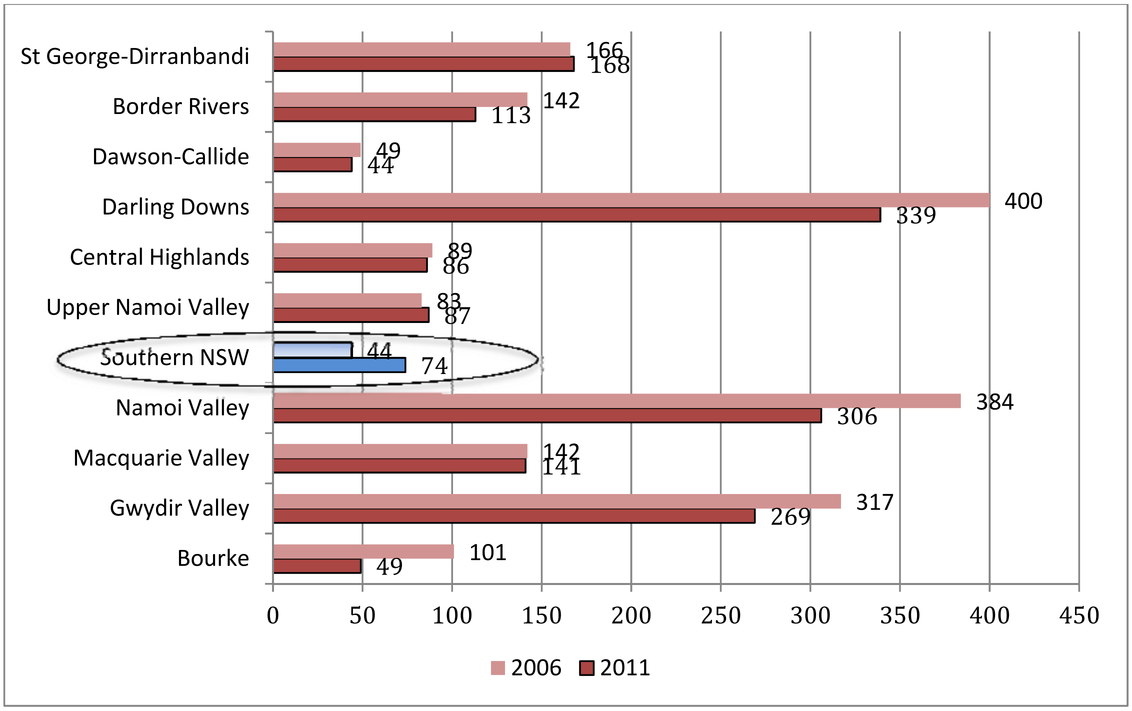


Figure 1: Cotton grower numbers per cotton region, 2006 and 2011

COTTON GROWERS: INTERVIEWS

Of the cotton owner-operators interviewed, the majority involved multiple farms and multiple family members. Table 6 gives a general description.

Table 6: Description of the cotton growers who were owner/operators *(interviews)

	No. farms	No. family members	Staff	Production valleys
1	Two	Two families–one generation	Yes	Within LMPV but not adjacent
2	Four	Three family members–2 generations	Yes	Within LMPV and elsewhere
3	Three	Three family members–2 generations	Yes	Within LMPV but not adjacent
4	One	One	Yes	Within LMPV
5	Two	Two family members–one generation	Yes	Within LMPV

* In this series of tables the pseudonyms are not used and the order that participations are listed varies to protect the identify of interviewees.

The size of the farms and cotton hectares grown by owner/operator interviewees varied, as shown in Table 7 below.

Table 7: Indication of farm size and cotton hectares of owner/operator* (interviews)

	Number of hectares and cotton hectares
1	'283 hectares of irrigated, laser irrigated country and we've put the whole lot into cotton and that's back-to-back'
2	'4000 hectare property with 2000 hectares of irrigation'
3	'about 5,000. ... roughly 920 hectares of cotton this year'
4	'Of 1800 hectares. ... 1000 hectares of summer crop this year and 600 of that is cotton'
5	'1700 hectares in total, we have 950 hectares ... irrigation ... this year we had 200 hectares of cotton'

OCCUPATIONAL DISTRIBUTION – CENSUS

Managers were the largest occupational category in the SNSW cotton region in 2006 and 2011 (24.9%; 22.6%), but showed a small decrease over this time (Appendix 4 Figure 33). Labourers were the next highest proportion occupationally, also showing a small decrease between Census periods (17.1%; 16%). The opposite trend, an increase between Census periods appeared for each of the other occupational categories, but the changes were all minor (Technicians and Trades workers 12.6%; 12.8%; Professionals 11.2%, 11.9%; Clerical and Administrative Workers 10.3%, 10.9%; Community and Personal Services Workers 7.2%, 8.1%; Sales 7.6%, 8.1%; Machinery Operators and Drivers 7.2%, 7.8%). These results are largely consistent with those for Australia.

WORKING HOURS AND INCOME

WORKING HOURS – CENSUS

The pattern for the number of hours worked was relatively consistent over both Census periods, for SNSW and Australia. Consistently, the largest category was the 35 to 48 hours group (SNSW: 2006 53.3%, 2011 52.3%; Aust.: 2006 53.2%, 2011 53%) (Appendix 4, Figure 34). This was followed by the less than 35 hours category (SNSW: 2006 31.2%, 2011 33%; Aust.: 31.7%, 2011 32.2%) and finally those who worked 49 hours per week or more (SNSW: 2006 15.6%, 2011 14.7%; Aust.: 2006 15.1%, 2011 14.8%).

WORKING HOURS – GROWER SURVEY

Paid staff peak periods: number of days and hours worked

Of the 97 employees initially reported, information was provided on the number of days worked per week, during peak periods for 46 of these (Table 8). Respondents were not asked to define what a peak or off-peak period was. During peak periods, half of those reported on at managerial-level (*n*=8) worked 14-day fortnights, with half of the remainder (*n*=4) working 13-day fortnights. Almost half of the senior-experienced employees worked 14-day fortnights, with most of the remainder working between 11- and 13-day fortnights. Only two of the nine entry-level employees worked a 14-day fortnight, with six working between 11-

and 13-day fortnights; the pattern was similar for casuals, with three of the 10 working a 14-day fortnight, three a 10-day fortnight and the remainder in-between.

In summary, during peak periods, of the 46 paid employees reported on, just over one-third worked a 14-day fortnight, with most of the remainder working between 11 and 13 days a fortnight; so almost three-quarters worked a 12- to 14-day fortnight, with senior or experienced staff (82%; *n*=9) and managers (81.25%; *n*=13) most likely to do so.

Table 8: Paid staff peak periods – number of days worked per fortnight (survey)

Peak periods – number of days worked per fortnight									
Position level	Number of days worked per fortnight								No. of employees per position level
	<8	8	9	10	11	12	13	14	
Full time managerial-level	1	-	-	2	-	1	4	8	16
Full time senior or experienced-level	-	-	-	1	1	2	2	5	11
Full time entry-level	1	-	-	-	2	3	1	2	9
Casual	1	-	-	3	-	1	2	3	10
Totals	3	-	-	6	3	7	9	18	46 *

* This information refers to 46 of the 97 employees

Of the 97 employees reported on initially, information was provided on the number of hours worked per week, during peak periods for 49 of these (Table 9). More than three-quarters of employees (79% *n*=39) worked more than 38 hours per week during peak periods. Almost all those at managerial level (94.12% *n*=16) and entry-level (88.89% *n*=8) did so, as well as two-thirds of casuals (66.67% *n*=8) and senior or experienced staff (63.64%; *n*=8).

In summary, more than three-quarters (79.59%; *n*=39) of the paid employees reported on, worked more than 38 hours per week during peak periods.

Table 9: Paid staff peak periods – number of hours worked per week (survey)

Peak periods – number of hours worked per week				
Position level	Number of hours			No. of employees per position level
	Less than 38hrs/week	Average of 38hrs/week	More than 38hrs/week	
Full time managerial-level	1	-	16	17
Full time senior or experienced-level	-	4	7	11
Full time entry-level	-	1	8	9
Casual	2	2	8	12
Totals	3	7	39	49 *

* This information refers to 49 of the 97 employees

Paid staff off-peak: number of days and hours worked

Information was provided for 58 paid employees on the number of days worked per fortnight during off-peak periods (Table 10). The largest group, just over one-third (37.93%; *n*=22) worked a 10-day fortnight; followed by just less than one-third (31.01%; *n*=18) who worked a 9-day fortnight. Less than a fifth (17.2%; *n*=10) worked more than a 10-day fortnight and approximately half of these were managerial-level.

In summary, while most paid employees worked a 10-day fortnight or less, during off-peak, those who worked more than this were most likely to be managerial-level (40%; *n*=6).

Table 10: Paid staff off-peak – number of days worked per fortnight (survey)

Off-peak – number of days worked per fortnight									
Position level	Number of days								No. of employees per position level
	>8	8	9	10	11	12	13	14	
Full time managerial-level	3	-	-	6	-	3	2	1	15
Full time senior or experienced-level	-	-	9	10	-	2	-	-	21
Full time entry-level	1	-	9	4	1	1	-	-	16
Casual	4	-	-	2	-	-	-	-	6
Totals	8	-	18	22	1	6	2	1	58

Information was provided for 43 paid employees, on the number of hours worked per week during off-peak periods (Table 11). Just over half of those reported on (55.81%; *n*=24) worked more than 38 hours per week and just under one-quarter worked less than 38 hours per week (23.25%; *n*=10). Those at managerial-level were most likely to work longer hours (45.83%; *n*=11) followed by those at entry level (25%; *n*=6).

In summary, just over half the paid employees who were reported on, worked more than 38 hours per week (55.81%; *n*=24), during off-peak periods, and under one-quarter worked less than 38 hours a week.

Table 11: Paid staff off-peak – number of hours worked per week (survey)

Off-peak – number of hours worked per week					
Position level	Number of hours				No. of employees per position level
	Not employed then	Less than 38hrs/week	Average of 38hrs/week	More than 38hrs/week	
Full time managerial-level	-	3	2	11	16
Full time senior or experienced-level	-	3	3	4	10
Full time entry-level	-	1	-	6	7
Casual	1	3	3	3	10
Totals	1	10	8	24	43

Tables 8–9 demonstrate firstly that almost three-quarters of all paid staff work either six or seven days per week during the peak period (which interviewees indicated is approximately six months of the year), with managers and senior/experienced-level staff most likely to do this. Secondly, it shows that while more than three-quarters of staff work more than 38 hours a week, it is managers and entry-level staff who are most likely to do this. It is therefore the managerial-level employees who work the longest hours, but they are closely followed either in days per fortnight or number of hours per week by senior/experienced-level staff and entry level staff. Spending this proportion of one's life at work for a period of approximately six months of the year, every year, is unlikely to be a sustainable position, as it allows for little time to spend on other activities.

Tables 10–11 show that in off-peak periods, the working hours for paid staff are substantially less however, 40% of those at managerial-level are still working a 6- or 7-day week. So, in off-peak there is minimal relief for those at managerial-level and while entry-level staff mostly work a 5-day week, almost all continue to work more than 38 hours per week, whereas less than half of the senior/experienced-level staff do so. Overall, those at managerial-level are under most pressure with working hours, with the majority having limited time away from work, year round.

INCOME – CENSUS

In SNSW, there was a marked change in the income category proportions between 2006 and 2011 (Appendix 4 Figure 35). There was a higher proportion of those who earned $600–$1599/week in SNSW in 2011 (55.6%) than in 2006 (48.8%), while for Australia this category was stable over this period. There was a corresponding decrease in the proportion of people who earned less than $600/week from 2006 (47.8%) to 2011 (33.7%) in SNSW, with a similar trend for Australia (2006: 38.9%; 2011 27%). However, there was an increase in the top earning category, $1600/week and above in both SNSW and Australia by almost three times, but the base in SNSW was smaller than for Australia (SNSW: 2006 3.4%, 2011 10.7%; Aust.: 2006 9.2%, 2011 21.2%).

INCOME – GROWER SURVEY

When asked what proportion of their gross income was from cotton, and given options to choose from, the largest group (41%; *n*=7) reported that between 51 and 75 per cent of income was from cotton, followed by 35% (*n*=6) who indicated that between 20 and 50 per cent of their income was from cotton, with the remainder (23.5%; *n*=4) reporting that more than 75 per cent of their income was from cotton (Figure 2).

In summary, almost one-quarter of respondents reported that more than three-quarters of their income was from cotton, 40% that between half and three-quarters of their income was from cotton and approximately one-third reported that less than half of their income was from cotton.

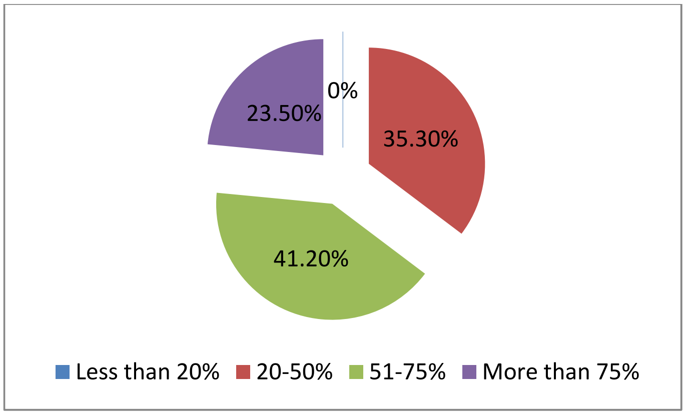


Figure 2: Proportion of gross income from cotton (survey)

Participants were asked to select from a list of options their sources of income, other than cotton (Table 12). More than three-quarters of those who responded to this question reported income from 'other irrigated crops' (82.4%; *n*=14). This was followed by almost half (41.2%; *n*=7) who selected 'other dryland crops'. Similar proportions selected 'livestock' (23.5%; *n*=4), contracting to other farmers (23.5%; *n*=5), 'off-farm income' (17.6%; *n*=4) and 'other farm income' (11.8%; *n*=2).

In summary, more than three-quarters reported income from other irrigated crops, apart from cotton, and almost one-third from other dryland crops, followed about one-sixth each, from livestock and contracting to other farmers.

Table 12: Sources of income, apart from cotton (survey)

Apart from cotton, what other income sources do you have? (Please tick all that apply)		
	n	(%)
Other irrigated crops	14	82.4
Other dryland crops	7	41.2
Livestock	4	23.5
Contracting to other farmers	4	23.5
Off-farm income	3	17.6
Other farm income	2	11.8

That most respondents grow other irrigated crops implies that the employees would be skilled across at least two crops (cotton and one other), with some also able to work on dryland crops and agriculture. Staff with such a comprehensive knowledge and skill-set are likely to be valued employees. Considering the number of hours employees work, it is likely that staff from entry-level up have this capacity.

REMUNERATION: RATES, CASH OR A PACKAGE

When respondents were asked to report on how employees were paid, for most fulltime permanent employees (84%; *n*=21) it was with a package, which was a combination of cash and benefits (Table 13). Part-time staff (three of four) and casuals (four of six) were more likely to receive cash only. Thirty-five employees were reported on.

In summary, most full time permanent employees received a package, with part-time and casual employees most likely to receive cash only.

Table 13: Remuneration: cash only or a package (survey)

Are you (if an employee) and your staff paid in cash only or do your receive cash combined with benefits?		
Position level	Cash only	Cash + benefits
Full time managerial-level	2	7
Full time senior/experienced-level	1	9
Full time entry-level	1	5
Part-time	3	1
Casuals	4	2
Totals	11	24

CASH

Respondents were then asked to report on rates of pay – the cash component (including superannuation) of the package – by selecting categories from a list (Table 14). As expected, generally those in more senior positions earned more however, the range for each category was large. For those in managerial-level positions it ranged from more than $100,000 to $19.97 hour, but the largest range was for those in entry-level positions, which was from $60,000 to $80,000 down to $15.96 hour.

Of the 43 employees where the cash component of their pay was reported on, the two largest groups were 21% (*n*=9) paid between $60,000 to $80,000, and the same proportion paid above the Leading hand rate (Level 8 of the Pastoral Award 2010) of $19.97 per hour.

Table 14: Pay rates (cash component) for employees, by position-level (survey)

Pay categories	Managerial-level	Senior-Experience-level	Entry-level	Casual	Totals
>$100K	3				3
$80-100	4				4
$60-80	5	3	1		9
>$19.97	1	6	2		9
$19.97	1	2	1	1	5
>$17.36		1	3	1	5
$17.36			1	1	2
>$16.65			2	1	3
$16.65					
>$15.96				2	2
$15.96			1		1
Totals	14	12	11	6	43

PACKAGE CONTENTS

Respondents were then asked to select from a list, the contents of the package per position-level.

1	Full vehicle use	17
2	Above award pay	15
3	Farm vehicle use	14
4	All fuel	14
5	Education/training costs	13

These are the five most frequently reported package items for *all* employees.

The contents of the package varied dependent on the position-level. For those in Managerial-level positions these are the six most frequently reported package items.

1	Full vehicle use	8
2	All fuel	7
3	All phone calls	6
4	Above award pay; full accommodation; education/ training costs	5

1	Above award pay	7
2	Education/training costs	7
3	Full vehicle use	6
4	Full accommodation	6
5	Farm fuel	6

For those in Senior/experienced-level positions these are the five most frequently reported package items.

These are the five most frequently reported package items for Entry-level employees.

1	Farm vehicle use	7
2	Farm phone calls	4
3	Above award pay	3
4	Full accommodation	3
5	Education/training costs	2

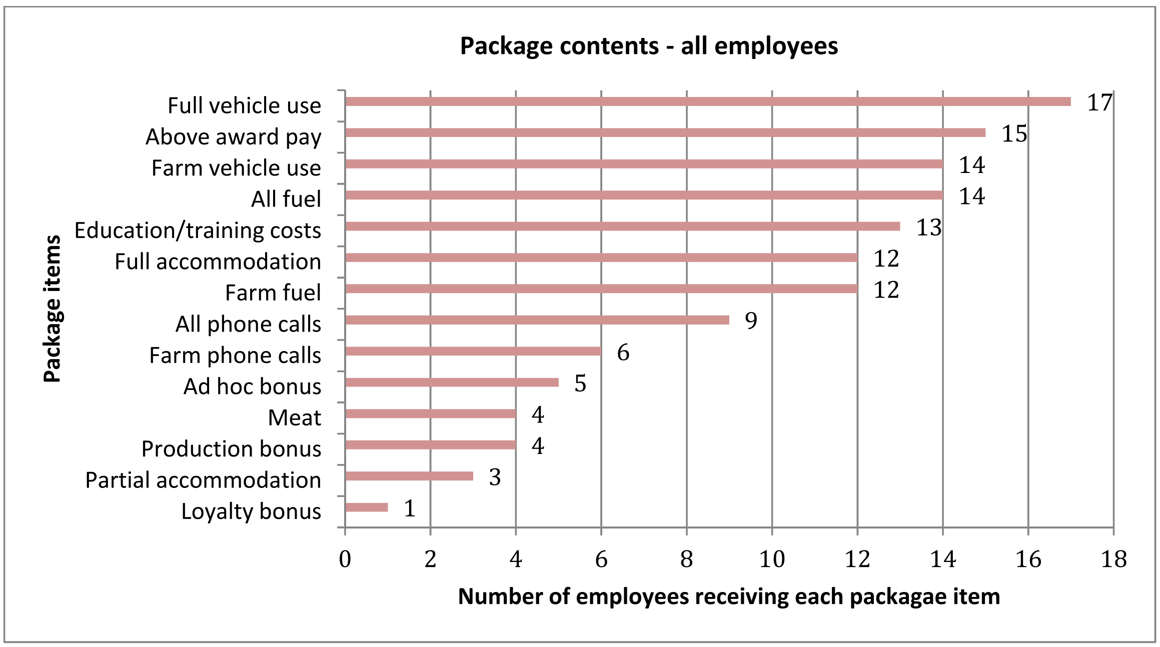


Figure 3: Package contents for all employees (survey)

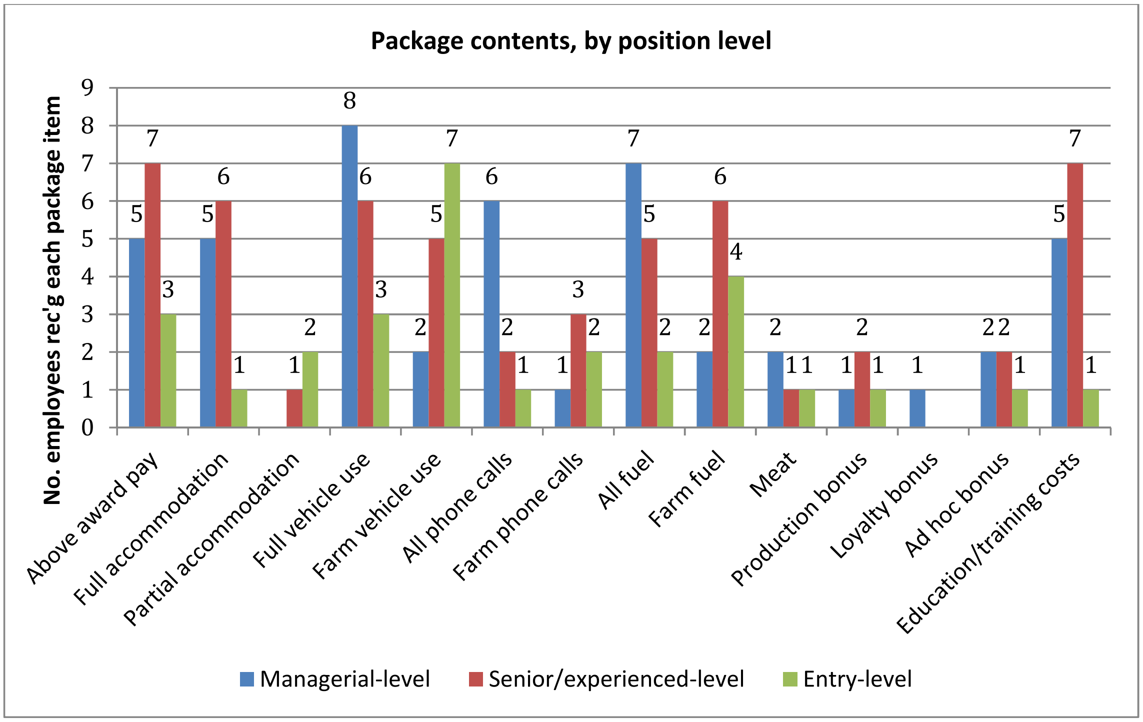


Figure 4: Package contents, per position-level (survey)

The top six package contents listed (Figure 4) are essentially standard practice in agriculture. Therefore, employers not providing these package items may be putting up recruitment and/or retention barriers.

THE FARM – COTTON HECTARES

The number of hectares planted by property to cotton in the LMPV ranged from 100 to 1,500 hectares, with a mean of 519 hectares and sum of 12,451. Half the sample had less than 260 cotton hectares and a quarter had less than 145 hectares. Of these, 12,451 cotton hectares, 12,001 were irrigated, giving an average of 522 hectares being irrigated. While this result suggests that some respondents reported *all* irrigated hectares rather than only cotton hectares irrigated (Table 15), it is apparent that almost all cotton grown by these respondents is irrigated.

Table 15: Number of hectares of cotton planted, and irritated cotton hectares, by property in the 2012–2013 season (survey)

Hectares	n	%	Irrigated hectares	n	%
0	2	8.3	100	1	4.3
100	1	4.2	110	1	4.3
110	1	4.2	130	1	4.3
130	1	4.2	144	1	4.3
144	1	4.2	160	1	4.3
160	1	4.2	175	1	4.3
176	1	4.2	176	1	4.3
200	3	12.5	200	3	13.0
256	1	4.2	256	1	4.3
285	1	4.2	285	1	4.3
285	1	4.2	600	2	8.7
600	2	8.3	640	1	4.3
640	1	4.2	650	1	4.3
650	1	4.2	700	1	4.3
700	1	4.2	730	1	4.3
730	1	4.2	900	1	4.3
900	1	4.2	1100	1	4.3
1100	1	4.2	1285	1	4.3
1285	1	4.2	1500	2	8.7
1500	2	8.3	-	-	-
12,451	24	100.0	12,001	23	100.0

LENGTH OF TIME IN THE INDUSTRY – GROWER SURVEY

Respondents were asked to list the number of years they had been involved in the cotton industry. This ranged from three to 25 years, with a mean of 7.44 years (Table 16) and with half in cotton for six years or less. This demonstrates that the survey sample have quite limited ‘cotton’ experience however, many have substantial cropping experience.

Table 16: Number of years associated with the cotton industry (survey)

How long have you been working in or associated with the cotton industry?					
Number of years	*n*	(%)	Number of years	*n*	(%)
3	5	31.3	8	2	12.5
4	2	12.5	13	1	6.3
6	1	6.3	15	1	6.3
7	3	18.8	25	1	6.3
			Total	16	(100.0)

LENGTH OF TIME IN THE INDUSTRY – INTERVIEWS

While the question was not asked of every owner-operator interviewee, three indicated that cotton was a relatively new crop for them:

- ‘this is our fifth crop’
- ‘two years’ - the time they owned the property
- ‘up until three years ago we hadn’t grown cotton at all’.

ORGANISATION MEMBERSHIP – GROWER SURVEY

Respondents were provided with a list of organisations and asked to indicate whether they were members. Twelve were members of the Lachlan and Murrumbidgee Cotton Growers Association; 10 each were members of Cotton Australia and the NSW Farmers Federation; seven were members of the Rice Growers Association; and one each was a member of the Riverland Winegrape Growers Association, Australian Institute of Company Directors, Lachlan Valley Water, Lachlan River Management Committee and Wine Grapes Marketing Board-Griffith area.

This membership list is suggestive of the crops grown.

CURRENT WORKFORCE

WORK FORCE – GROWER SURVEY

PAID STAFF

Approximately half the respondents reported being either Sole owners/operators or in Partnerships and the other half had either 1–4 or 5–9 employees, typically. The total number of respondents indicates that some who are Sole owner/operators or Partnerships also had employees (Table 17).

Table 17: Typical number of employees, including self (survey)

How many employees (including yourself) typically work on your farm? (Please answer all that apply)(DON'T INCLUDE contractors, consultants or other service providers here)	
Answer options	n
Sole owner/operator	5
Partnership	5
No employees typically	
1–4	9
5–9	9
20–29	-
30–100	-
>100	-
Total	28

Respondents were asked to report the number of employees (including themselves) who typically worked on their farm. There were asked to report the number of people at managerial-level, senior or experienced-level, Entry-level, part-time and casual employees. From lists, respondents were asked to select how many days per week these people worked during peak and off-peak periods and the number of hours they worked per week, during peak and off-peak periods.

When respondents were asked to report on their employee numbers and types of positions, in total, 97 employees were reported (Table 18). These numbers included the respondents themselves.

Of the 97 employees, the largest group – almost one-third – were managerial-level employees (31.96%; *n*=31) (which is where owner/operator and/or managers are classified). This was followed by two groups with approximately one-quarter each being senior/experienced-level (25.77%; *n*=25) and casual (24.74%; *n*=24). Six of the 25 senior/experienced-level employees were accounted for by two respondents nominating 6–10 at this level (the conservative measure of 6 has been used in the calculation, so the proportion of Senior-experienced level employees could be greater). Last were the entry-level employees (17.53%; *n*=17).

In summary, just over half of the paid workforce were either managerial-level or senior/experienced-level full time employees; almost one-quarter were casuals.

Table 18: Typical number of staff and their position levels (survey)

Please list all the employees (including yourself), who typically work on your farm, their role and work time (DON'T INCLUDE contractors, consultants or other service providers here). If a sole owner/operator or you have no current employees, answer for yourself as manager-level.								
Level of experience/ seniority	Nil	One person	Two people	Three people	Four people	Five people	6-10 people	Total
Full time managerial-level	-	7	6	4	-	-	-	31
Full time senior/experienced-level	1	7	1	-	1	-	2	25
Full time entry-level	-	3	4	-	-	-	1	17
Casual	-	1	4	3	-	-	1	24
Total number of staff		18	30	21		4	24	97

UNPAID FAMILY WORKERS

Respondents were asked to report the number of unpaid family members (excluding themselves) who typically worked on their farm (Table 19). They were asked to report the number of people at managerial-level, senior or experienced-level, entry-level, part-time and as casual. From lists, respondents were asked to select how many days per week these people worked during peak and off-peak periods and the number of hours they worked per week, during peak and off-peak periods.

In total, 46 family members were reported to typically work in an unpaid capacity (19 managerial-level; 6 senior/experienced-level; 9 entry-level; 2 part-time; 10 casual).

Table 19: Unpaid workers, numbers per level of experience (survey)

How many family members (excluding yourself) typically work on your farm, in an unpaid role? (Please complete all that apply)(DON'T INCLUDE contractors, consultants or other service providers here)					
Level of experience/ seniority	Number of people				
	Nil	One	Two	Three	Total
Full time managerial-level	3	4	6	1	19
Full time senior/experienced-level	2	1	1	1	6
Full time entry-level	-	-	-	3	9
Part-time	-	2	-	-	2
Casual	-	4	-	2	10
Total number of people		11	14	21	46

Of those reported to work during peak periods (*n*=17), eight worked a 7-day week (5 managerial-level; 1; senior/ experienced-level; 1 entry-level; 1 casual) with the remaining four working less than a 7-day week. Eleven of the 19 people reported on working more than a 38-hour week (6 managerial-level; 2 senior/experienced-level; 1 each entry-level, part-time and casual). Four averaged a 38-hour week and four less than 38 hours per week. In off-peak periods, 15 people were reported on, with most of these being managerial-level who typically worked a 5- or 6-day week; most of these were managerial-level with four of the six working more than 38 hours per week; seven worked less than a 38-hour week.

WORK FORCE – INTERVIEWS

Below are quotes taken from the interviews of the owner-operators to provide some indication of the paid and unpaid on-farm labour.

Table 20: A description of the paid and unpaid labour on the farms of owner-operators* (interviews)

1	'... three full-time permanent staff ... one is, but he's an older gentleman so he's nearly at retirement ... His wife is here with him ... other young fellow he's a single young man, mid –twenties ... single man. ... [wife] took on the role of the office manager'.
2	'... myself and three full time employees. And then we get casual labour ... we do share labour between the two operations. ... [other operation] two full time staff plus casuals in as well ... and a manager. One employee that's been with us for probably 12 years now ... since he left school. ... the ones that we've had for two years are probably more plant operators, like tractor drivers, machinery operators ... like your irrigation staff are yeah the sort of like higher turnover'.
3	Husband, wife and son. 'We have one permanent Australian ... He's a mature age fellow ... We have two backpackers. We usually have two other staff. We're thinking of pulling a third one in, just to get the work done, and we have a person who is on a 457 visa. ... [other farm] we have a manager and a farm hand'.
4	'Well there's myself and my father we're full time, then we have another two additional staff that are full time, and ... my mother as a part time employee because she ... does all the bookwork and accounts ... there were two casuals during the season, they're primarily backpackers'.
5	'So prior to the drought I had three full time employees plus myself and also I'd get another person in for eight months in the year over the ... peak period which was full time ... then when the drought hit I had to put off two of the three permanents and kept one guy on ... well he's 60 I guess, so not quite retirement age ... since the drought ... I've got now two full time employees and then I'll have two others ... casuals'.

* Pseudonyms are not used to maintain the anonymity of interviewees

The quotes below illustrate the experience of growers and some of their concerns. In summary these are:

- Most of these growers have the staff numbers they require but in general, the staff have a lower skill level than is desired.
- Because suitable staff are difficult to find, growers take whoever is available and provide predominantly on-the-job training for the inexperienced.
- Concerns were expressed about where future on-farm staff may come from because there is no pathway.
- While not explicitly stated, it is implied that there is a level of instability around having a full complement of on-farm staff.

> '... we haven't got a huge problem now, but I can see in five years time it may. But there's not a definite defined path there for where our workers, especially some with some level of skill are going to be coming from in five years time.
>
> Q: 'Right, but at the moment your needs are met?'
>
> A: 'They're generally, like we could have a higher calibre of employee almost, but yeah at the moment it's generally satisfactory.'
>
> Q: 'Right and you can get your casuals when you need them?'
>
> A: 'Yes, but you know I do worry that you know if we haven't got the plant operators coming into the country that it could cause a problem' (#2).
>
> Q: 'Do you have the staff that you need at the moment?'
>
> A: 'Yes, we do, with these guys. We probably need another one' (#3).
>
> Q: '... it sounds as though your workforce needs are met, would that be accurate?'
>
> A: Well they are, look, it's always - they are at present. I mean you have to sort of make do with what you can get I guess and at the moment so I've got my full time guy who lives on the farm, the other guy that's full time ... he's only been here for eight months, has very little experience ... so he's not really a farming background at all, but we're trying to train him and it wasn't easy to find someone full time. ... I guess we're pretty right at the moment but we always face that challenge when someone leaves that it is difficult to know where to go to find a suitable person and how to go about it' (#5).
>
> 'I haven't got the two people yet that I think we're going to need to get our irrigation up a notch, they haven't turned up yet. But we've only just identified that need but when I look at the people who've come asking for work, I haven't got those two, that type of person yet' (#9).

Because the growers need to rely on staff with a lower skill set, this puts them in competition with other industries. In particular the poultry industry which is expanding as described in the following quote:

> '... the poultry industry ... is in the process of doubling its production. There are currently 1,100 employees in the poultry industry around Griffith, and that's about to become 1,500, so they've got to find another 400 workers, so they'll be competing with the farmers for those employees and they will be the lower end of the skill level type jobs, they're not high end skilled jobs' (#6).

An issue for consideration is the comparative attractiveness of the two industries, for potential employees, if there is competition. And importantly, can cotton learn from poultry in areas such as job design and shift work? Are there opportunities for complementary roles to be played with the two industries working together on recruitment and retention?

One consequence of inexperienced staff is the costs they incur. Only two growers commented here. One indicated that all staff broke things and did not report that this was a particular or extra cost of production. The other grower indicated that the first cost was inefficiency, a job poorly done, with the cost in the time taken to correct it, as outlined below:

> '... you send them off to do a job, they don't know what they're doing 100% and they don't do the job properly, they drive off thinking they're done and then you come back and you've got to go and fix it up ... Like a few times I've had to fix up jobs it's out of a 10 hour job, I've had to go through and do an hour's worth of work to fix up, so it's only 10%' (#4).

However, this grower reported that the greatest costs are breakdowns, from human error.

There are workforce implications for growers who are taking inexperienced and unskilled permanent staff due to being unable to recruit the skilled experienced staff they most want. One issue is the production loss from mistakes. However, it would be challenging to deliver the on-farm training required in an environment where for approximately half the year, most staff work most days. It appears to be a catch-22. This situation implies that staff with limited knowledge and skills are receiving on-the-job training during what are for all, already long working hours. What underpins this is the employer wondering whether the employee will stay long enough to recoup the value of the training and effort. Is it the necessity of providing on-farm training that extends the working hours? Are there alternatives? Is this an attractive option for the employee? Can the jobs be re-designed?

CONTRACTORS – GROWER SURVEY

Respondents were asked to select from a list of contract services, the frequency with which they used those services on a five-point Likert-like scale (1=Always; 5=Never) (Figure 5). When this scale was collapsed to 1='Always or Often', 2='Sometimes', and 3='Rarely or never', transporting was the most frequently used contracting service, over half (58.33%; *n*=14) reporting they 'Always or Often' used transport contractors. This was followed by contract spraying where one-third (*n*=8) reported that they 'Always or Often' used this service. Less than one-quarter (20.83%; *n*=5) 'Always or Often' used contract harvesting services and only two 'Always or Often' used contract farming services. Correspondingly, contract farming and harvesting were the least used contracting services, with 41.66% (*n*=10) 'Rarely or Never' using contract farming services and just over one-third (37.5%; *n*=9) 'Rarely or Never' using contract harvesting services.

In summary, it was transport and spraying contractors who were frequently used by just over half and contract spraying by one-thirds of respondents.

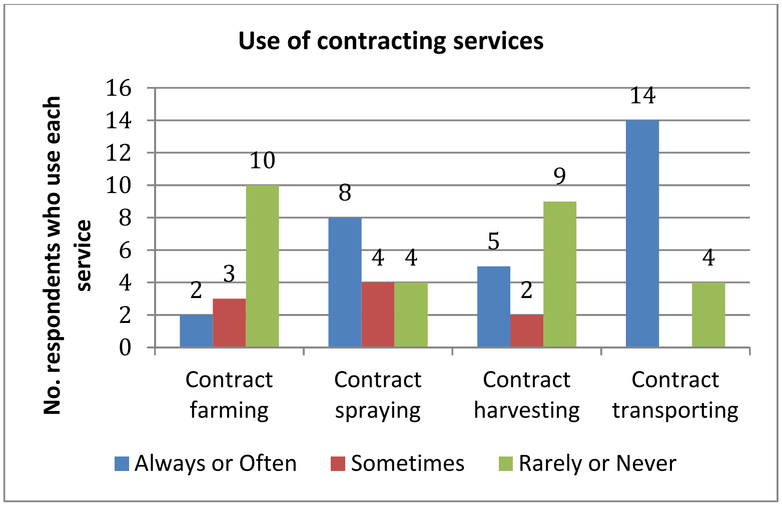


Figure 5: Use of contracting services, by type (survey)

CONTRACTORS – INTERVIEWS

There is a career path in the cotton industry as reported in the following quote:

> 'I think the cotton industry's done pretty good—more than other industries, it does offer a career pathway in that hard working and capable young workers who enter the industry at an operational level are able to progress through to management level so that competence and ability is rewarded ... So you see a lot of people in the cotton industry have been able to progress on farm and then, indeed, then move, if they wanted to, into consultancy and professional fields off farm. So I think of all the rural industries, the cotton industry does provide a fair bit of mobility and opportunity and so that does make it relatively attractive' (#15).

In this case study, two of the growers began their career as contractors and over time acquired the capital to purchase either land or crop. One recently moved from receiving most income from contracting, to cotton production income being the larger share. While this is a side issue in a study with an on-farm workforce focus, the barriers to entering farming through land acquisition is well known, so it is noteworthy that this pathway exists in the cotton industry.

CONSULTANTS – GROWER SURVEY

From a list of types of Consultants and similar support services, respondents were asked to identify the frequency with which they used those services from a five-point Likert-like scale (1=Always; 5=Never). When this scale was collapsed to 1='Always or Often', 2='Sometimes', and 3='Rarely or never' use, Agronomy consulting services were used most frequently, with almost all respondents reporting using Agronomy consulting services (*n*=16), 'Always or Often' (Figure 6). Specialised consulting services and Chemical supplier services were each used 'Always or Often' by almost one-third (29.17%; *n*=7) of respondents; and one-quarter used Fertiliser supplier services and Marketing consulting services. The least used consulting services, those 'Rarely or Never' used, were Irrigation supplies (41.67%; *n*=10) and Human Resource Management consulting services (37.5%; *n*=9).

In summary, agronomy consulting services were frequently used by almost all respondents, but few other services were used with any level of frequency.

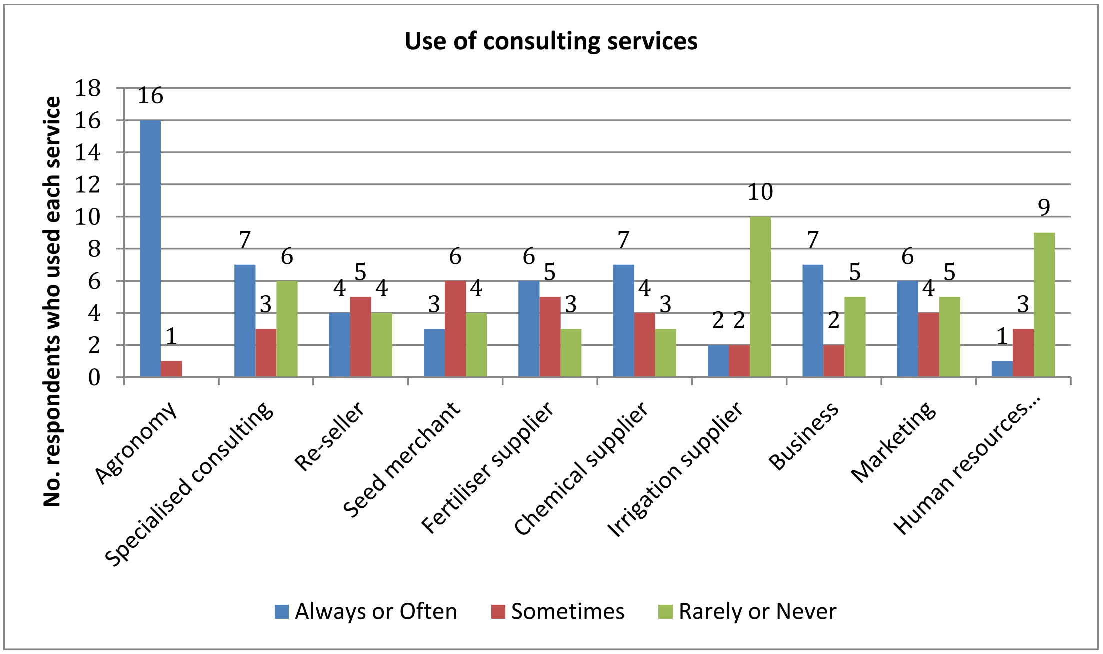


Figure 6: Use of consulting services, by type (survey)

CONSULTANTS – INTERVIEWS

While the resellers interviewed reported that their recent expansion in the provision of agronomy services allowed them to meet the need for cotton agronomy services, they also indicated that during the drought they secured an agronomist who had been made redundant because of the significant decrease in production. They reported recruiting their current staff by word-of-mouth and found this successful. As their need was for agronomists with cotton knowledge, they recruited from outside the LMPV. There were no reports that agronomy services were under pressure or could not be accessed when needed, but comments were made that it was the agronomists who were teaching the farmers how to grow cotton, hence the need for agronomists with cotton experience.

WORKFORCE DEMAND FOR COTTON AND OTHER CROPS – GROWER SURVEY

Respondents were asked to report their workforce demand for cotton, per activity (when is, and what is your workforce demand for cotton (*this includes all people in paid, permanent and casual full time equivalent roles*)? Table 21 shows that 30 people at managerial-level are required during Preparation, and 17 senior/experienced-level, 23 experienced-level, 25 entry-level and 9 contractors. These are the numbers that collectively, the 24 respondents said were required for Preparation.

While the differences are not large, some trends are apparent when the activity and level of experience/responsibility is examined. The largest number required for each activity, consistently, is those at manager-level which reflects the predominance of owner/operators, and for this group doing the bulk of the work. The high number of contractors required for picking is skewed by one respondent nominating that 6 were required, and another, that 7 were required. So while this result appears inconsistent with the reported low use of contracting services, the breakdown shows that 9 respondents in total reported using contractors for picking which is consistent with the 7 who reported ‘Always or Often’ combined with ‘Sometimes’ using harvesting contractors. For picking and planting, staff with greater experience are more in demand (senior-experienced and experienced), whereas for Preparation and Irrigating, there is most demand for those with lower levels of experience.

Table 21: The workforce demand for cotton, per activity* (survey)

Activity	Managerial level	Senior-Exp	Experienced	Entry-level	Contractor
Preparation	30	17	23	25	9
Planting	29	15	16	12	6
Irrigating	27	13	16	21	5
Picking	23	22	19	15	24

* These numbers cannot be totalled by column.

Subsequently, respondents were asked to report their workforce demand for other crops they grew. Table 22 shows that the demand for staff is substantially lower for other crops than for cotton. However, as with cotton, the greatest demand across the activities is for those at managerial-level and they are predominantly owner/managers. Following this, the highest demand for labour is for harvesting; most contractors are needed here as are those with lower levels of experience (experienced and entry-level).

As with cotton, the staff who have the lower levels of experience are also in most demand for preparation. The contrast in demand with cotton is for the senior-experienced staff – in cotton they are in greater demand than for other crops. In cotton, the workload appears to be carried by those at managerial-level across the year, but the level of experience for farm hands varies depending on the activity. However, with other crops, while the managers carry the work, it is the experienced-level staff who share it, regardless of the activity.

Table 22: The workforce demand for other crops* (survey)

Activity	Managerial level	Senior-Exp	Experienced	Entry-level	Contractor
Preparation	17	9	15	13	7
Planting	17	9	11	8	5
Irrigating	19	9	11	7	2
Harvesting	17	9	20	17	29#

One person said 20 contractors were required

* These numbers cannot be totalled by column.

What Tables 21 and 22 demonstrate is that cotton has higher workforce demands than other crops. Therefore, with the expansion of cotton production, often by people who traditionally grew rice, workforce demand could be expected to increase.

WORKFORCE SKILLS – INTERVIEWS

In the following quote what is most needed on-farm now, is contrasted with what was required in the past: 'It used to be that you could run into the pub and find a tractor driver' (#14). The demand is for skilled on-farm staff. As one interviewee phrased it, 'They don't really have to drive a tractor now, they have to drive a computer. ... Now you need someone that's got a deal of experience' (#14). The same demand exists for rice farmers too, many of whom also grow cotton: 'So farm labour is an issue basically for all farmers but for rice farmers, yes it is' (#14). One grower described what he wanted in his operation (#2):

> '... you know when we're looking at recruiting employees they've got to be sort of flexible as well, ... in their knowledge like they've got to be for like dryland cropping as well ... be diverse in terms of their skill set, so they can be flexible across the different aspects of the operation which is irrigation, cropping and livestock'.

The changed skill levels were attributed to increased mechanisation, as in the following quotes:

> '... the ten years of the drought when people weren't employing many people, there's been significant technological developments in terms of equipment that people are using ... So again that comes back to that people cannot walk in and take up a position and work unsupervised and that equipment is very sophisticated and therefore very expensive usually, and so our employers are a bit concerned about who gets on there and what they do with it. I think from a practical point of view means that we need employees with high skills levels. ... It all comes back to ... one of the critical issues for both our industries is the quality and the experience and qualifications of the staff. It's become more difficult in the last few years with precision ag and all that sort of thing to just be able to pick up a tractor driver or a truck driver. They've got to understand a whole lot of other things as well, yield mapping and a whole range of things like that' (#14).
>
> 'Years ago agriculture was classed as an unskilled workforce. You didn't need to have any skills for it. I don't believe that's the case. The machinery is so advanced ... I believe we need educated people within agriculture industries. ... And whether that is from workers or Australian workers, they need to be educated, they have to be educated and it's really important for young people to realise if they want to have a career in agriculture that studying or whether that's practical or theory, it's really important to have those skills and qualifications. It's no longer just a walk in to anywhere and start driving this machinery. It's not the case anymore. The machinery's too advanced' (#12).

A challenge one grower reported is that younger workers are more adept at the newer technology than the older workers however, he also pointed out that while his existing younger staff are mechanically minded, they too are more comfortable with mechanics than technology, as shown in the following quote. He also reported that one farmer with a large operation has deliberately chosen new tractors with power shifts rather than with more advanced technology, to make the transition for staff easier and to reduce training time.

> '... we've looked at older people like 50 plus. And some of them try really hard to try and gather just the scenario with just the GPS and stuff ... So that's why sometimes even the younger guys are probably a bit better, because they can just pick it up within five minutes and "oh yeah these buttons here", bang off they go. Because that's where it's getting difficult now, is it's not only mechanical operations ... we need guys to take in, but it's technical as well when it comes to the computers and everything now running on tractors' (#4).
>
> 'Most of them are mechanically minded, most of them ... really enjoy the spanners and the guy who's on the picker he rebuilds engines and all the rest of it ... Pretty much every guy we've had through is really good with mechanicals. But when it comes to the technical side of things that's where it gets a little bit difficult. Some guys just don't want to have any part of it, they'll drive the tractor, even the new tractors with the variable gear box, it's like "Geez what do I do here". They'd rather have gears that they can change' (#4).

The point was made that with the greatly improved working conditions on-farm, this may assist in attracting better quality staff:

> 'Yes ... the work environment, brilliant. They're in air-conditioned comfort. The person driving the bale pickup is normally in an air-conditioned tractor with the grab on it ... you get better productivity out of them, under those circumstances and you're going to get better quality of employee' (#1).

However, there is a continued demand for unskilled workers as well, specifically for shifting siphons and related activities. The quote below illustrates why this is unattractive work and that people willing to do it are becoming more difficult to locate.

> ' ... now the roaming around in vehicles chasing siphons. It's hard on men's backs, you don't have a social life and it goes to your staff as well ... just not the labour you know of walking channel base stopping and starting so often ... it's long hours, it's odd hours, it's tiring work, it's physical work and you're out in the heat. ... Like the heat out here in summer is unbearable. ... Last year, what was it, 44 and a half. It's a hot summer's day and you're sometimes out there handling those black siphons ... and then you're out there again in the middle of the night. ... So it's hard on everyone, hard on social life, hard on anyone with a family ... you tend to be away from them a fair bit, but it is changing. ... we've experienced really that young fit people who you would like in that industry to do that physical work they really just want to sit on machinery, and they're so up to date with technology and most of the machinery this day and age is full of technology. ...They want to drive big machinery, that's what they want to spend their days doing because manual labour is exactly that; hard manual labour. In the hot sun and the flies. Yes, and long hours, it's very long hours so to be out there doing manual labour for long hours when really they could be doing something a lot easier and the money could still be the same if they were living in Sydney or Melbourne' (#12).

In summary, while most demand is for skilled workers, due to increased mechanisation and advancing technology, there is also a continued demand for unskilled workers. The highest demand for unskilled workers is during watering for flood irrigation, which implies a high seasonal demand. These results suggest that having two distinct recruitment strategies – one for skilled staff and one for unskilled staff – may be advantageous.

VACANCIES – GROWER SURVEY

When respondents were asked to report if they had any current vacancies, just under half of the 17 who responded to the question (47.05%; *n*=8) indicated that they did (Figure 7). Respondents were then asked to detail these vacancies, by employee type. Respondents indicated that in total there were 17 vacant positions. The largest group of vacancies was for casual staff (7), followed by entry-level (4) and senior or experienced-level staff (4) and two managerial-level vacancies.

While the timing of a survey on workforce for a seasonal crop is likely to influence the results, it is particularly relevant here. Most respondents completed the survey during the last week of the three week period it was open for. This final week coincided with the unexpected onset of warmer weather which brought cotton planting forward. Anecdotal evidence indicated that this created an immediate demand for an increased workforce, which is consistent with the greatest demand reported being for casuals. It would appear that the 16 experienced and 12 entry-level staff required for planting (Table 21) were not on board at the time the survey was conducted. The result is also consistent with most respondents reporting that it took less than a week to recruit the last casual.

In summary, 8 respondents reported 17 vacancies; of the vacancies, most were for casual positions followed by entry-level or senior/experienced positions, but there were also vacancies at managerial-level.

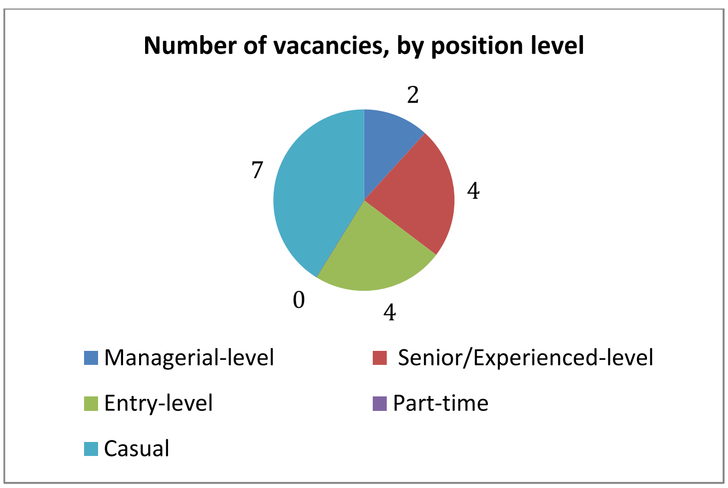


Figure 7: Number of vacancies, by position level (survey)

TURNOVER – GROWER SURVEY

When respondents were asked how many of their paid employees had joined in the last 12 months and were new to cotton, 12 answered the question, with the total number reported as new to cotton being 26 (Table 23). Of these, 18 were entry-level, followed by four at experienced-level and two each at senior-experienced and managerial-levels. When asked how many had joined in the last 12 months but NOT new to cotton, the total number was 12. These were mostly entry-level staff (*n*=9), but with two at managerial-level and one experienced-level.

These results show:

- approximately two-thirds (68.42%; *n*=26) of people recruited in the last year were new to the cotton industry;
- of all new recruits, almost three-quarters (71.05%; *n*=27) were entry-level.

Table 23: Paid staff who joined in the last 12 months, new and not new to cotton (survey)

Position level	New to cotton	NOT new to cotton	Totals
Entry-level	18	9	27
Experienced-level	4	1	5
Senior experienced-level	2	-	2
Managerial-level	2	2	4
Totals	**26**	**12**	**38**

Respondents were then asked how many of their paid employees had left in the last 12 months by their category of employment, with 10 answering this question. In total, 48 were reported to have left in the last 12 months (Table 24). The largest group is casuals who left at the end of the work or season (45.83%; *n*=22), however, casuals were also the largest group who left even though it was not the end of the season or work (22.92%; *n* =11). In both categories most of these casuals were entry-level staff. It is not known whether the turnover is involuntary (i.e. these staff were on trial as casuals but did not work out) or voluntary (the employee chose to leave).

Of more interest is the departure of permanent full time employees. Here the largest group was the experienced-level (75%; *n* =6), the mid-range level of experience among farm hands, followed by senior-experienced (20%; *n* =3), then entry-level (*n* =2) and managerial-level (*n* =1). Among the permanent part-time staff, it was those at the lower levels of experience who left (experienced-level 2; entry-level 1). When the departures of both full time and part-time staff are considered, just over half were experienced-level (53.3%; *n*=8). When the casuals who left because it was the end of the season are considered, a different pattern emerges – the largest group of those who left were entry-level (86.36%; *n*=19), in contract with the experienced-level (13.64%; *n*=3).

In summary, those most likely to leave are casuals, at the end of the season/work. When permanent staff are considered, those at experienced-level are most likely to have left (53.3%; *n*=8). However, when permanent and non-seasonal casual staff are considered, it is those at entry-level who are most likely to have left (50%; *n*=13).

Table 24: Paid staff who left in the last 12 months (survey)

	Perm FT	Perm PT	Totals-perm staff	Casual-end season/ wk	Casual-not end season/ wk	Totals-All staff	Totals-Perm+Casuals non-season end
Managerial-level	1	-	**1**	-	-	**1**	**1**
Senior-experienced	3	-	**3**	-	-	**3**	**3**
Experienced-level	6	2	**8**	3	1	**12**	**9**
Entry-level	2	1	**3**	19	10	**32**	**13**
Totals	**12**	**3**	**15**	**22**	**11**	**48**	**26**

The following diagrams summarise the survey data on current workforce (Figure 8) and turnover (Figure 9). While no new information is provided in Figure 8, it highlights the strong role played by those at managerial-level, the experienced staff and casuals. Figure 9 demonstrates that there is a low estimated turnover at managerial-level (3.23%). This is contrasted by the estimated turnover of 44% for experienced (permanent) staff. For entry-level permanent staff the estimated turnover of 17.65% is lower. Due to variations in categories of the questions asked, assumptions have been made in calculating the estimated turnover for casual staff. In estimate A, the assumption is made that the 24 casual staff are experienced staff, giving an estimated turnover of 4.17%. However, estimate B, where the 24 casual staff are assumed to be entry-level staff is more plausible. This is because interviewees reported that casual staff are typically required for seasonal work, with much of this seasonal work being undertaken by back-packers who are reportedly most likely to have no agriculture experience. Therefore, the estimated turnover for entry-level casual staff is 41.67%, which, like that for experienced permanent staff (44%), is high, particularly when compared with other agricultural sectors (Nettle, Semmelroth et al. 2011).

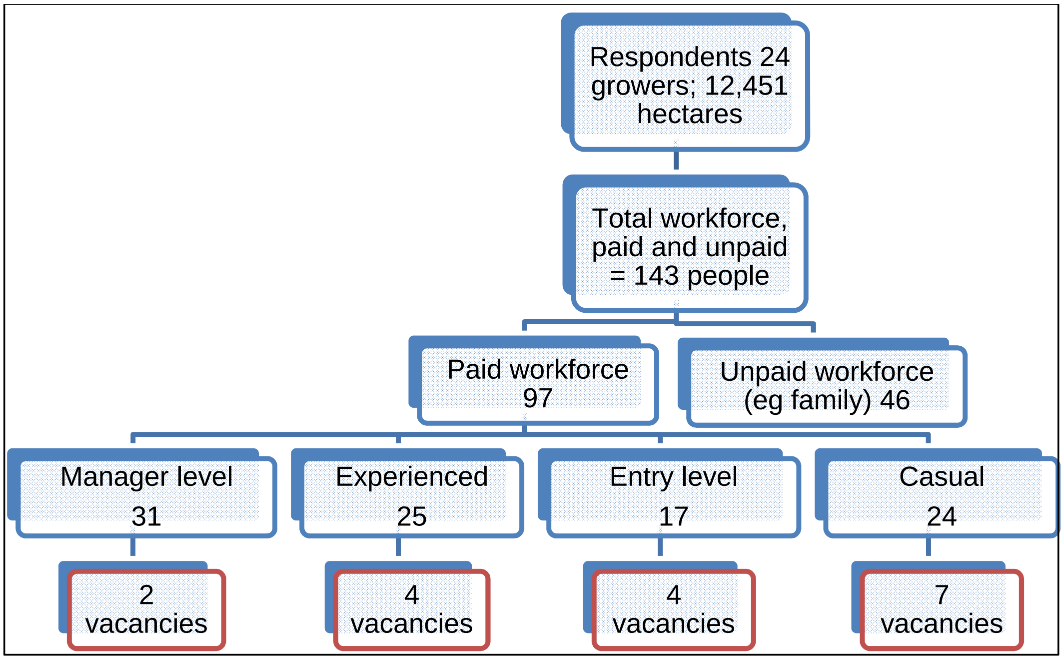


Figure 8: Current paid staff and vacancies (survey)

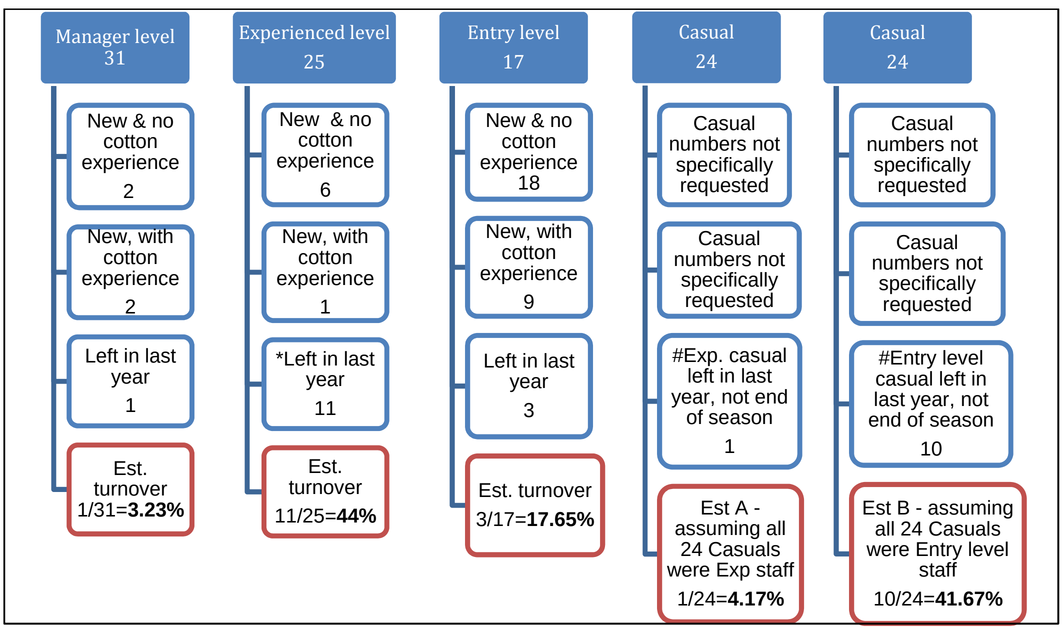


Figure 9: Turnover (survey)

* This figure was calculated by summing full time Senior-experienced staff (3) Experienced level staff (6), and Part time Experienced-level staff (2).

These figures include only staff who left before the end of the season. Those who left at the end of the season, have been excluded from the turnover calculations.

There are several workforce implications from the turnover calculations. Firstly, close to half of the experienced-level farm hand staff turned over in the last 12 months. This is in a production valley rapidly expanding and recruiting staff who are predominantly new to cotton, yet more staff left than were employed at this level in the last year. So clearly some experienced-level staff who were employed prior to the last year, left in the last year, and potentially some of those new to cotton. The interviewees all reported difficulty attracting experienced staff and were looking at other production valleys as a potential source – there was no data indicating local poaching. This result suggests that experienced staff are either leaving the industry or are going to other production valleys. For the LMPV, this results in a loss of the experienced staff so keenly desired, and a degree of productivity lost due to the need to recruit and train replacement staff.

The second workforce implication involves the high turnover of casual entry-level staff – those who leave prior to the end of the season. As casual staff are predominantly back-packers a possible explanation for this figure is that their visa required them to cease work prior to the end of the approximately 6-month season. However, the interview data suggests that people being considered for permanent positions are typically trialled as casuals, so a proportion also could be casuals who were found wanting.

The high turnover of experienced- and casual entry-level staff, who are predominantly new to cotton points to a high demand for a 'new to cotton' staff induction. This is currently being done at the individual enterprise level. The large proportion of entry-level staff being recruited into the industry (with many likely to be casuals), juxtaposed against the interviewees who reported that it is experienced staff that they most want and who they have difficulty recruiting, indicates the need for the skill development for the on-farm staff. While some formal training is reported (see later in this report), much of the training for farm hands is undertaken on-the-job. Again, this is currently being conducted at the individual enterprise level. However, a key issue that needs further investigation is why staff are leaving. The long hours reported suggest that job design could be a retention barrier, with an investigation from the employees' perspective being one approach that could provide insights.

RECRUITMENT

RECRUITMENT IN THE LAST 12 MONTHS – GROWER SURVEY

NUMBER OF EMPLOYEES RECRUITED – GROWER SURVEY

When respondents were asked if they had recruited employees in the last 12 months, of the 16 who responded, 14 said 'Yes'. In total, 37 employees had been recruited by 14 employers. The largest group was casuals, accounting for almost three-quarters of recruits (70.27%; *n*=26) (Figure 10). Four each of part-time and senior/experienced-level staff were recruited, and one at managerial-level.

In summary, in the last year, 37 employees were recruited by 14 employers, with almost three-quarters of these casuals.

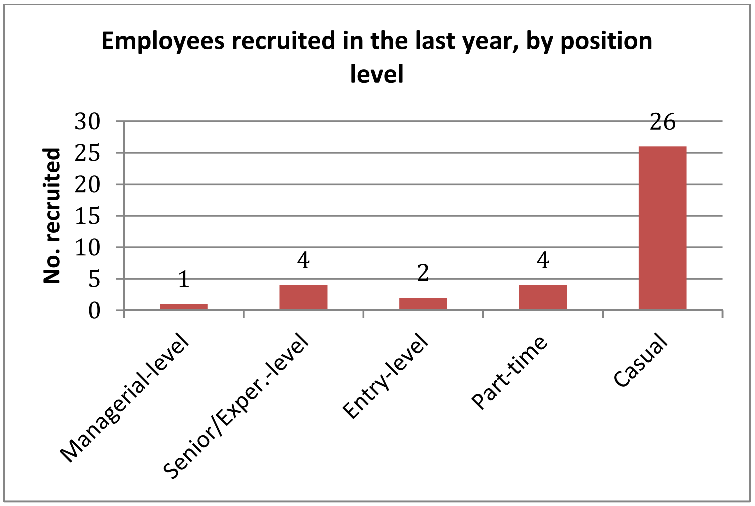


Figure 10: Employees recruited in the last year, by position-level (survey)

HOW LONG IT TOOK TO RECRUIT THE LAST PERSON – GROWER SURVEY

The 14 respondents who had recruited in the last year were then asked to select from a list, how long it took to recruit the last person who was recruited (Figure 11). Almost two-thirds took less than a month (64.29.4%; *n*=9), followed by three taking 1–3 months, then one each taking 4–6 months and more than 6 months. No-one reported being unable to fill the last position recruited for during the last 12 months.

In summary, to recruit the last employee, it took almost two-thirds, less than a month.

Figure 11: Length of time taken to recruit the last permanent employee (survey)

RECRUITMENT STRATEGIES FOR THE LAST PERMANENT EMPLOYEE – GROWER SURVEY

A list of options was provided from which respondents were asked to select strategies they used to recruit the last person recruited (multiple strategies could be selected) (Figure 12). The most frequently selected approach was the use of the grower's own networks (*n*=6), followed by having previously employed the person (*n*=3). Then respondents reported, two each: advertising in the local paper, in rural newsletters and the internet; and using an employment agency or Labour hire firm. One respondent indicated that another recruitment strategy was ‘back-packers’.

In summary, the most frequently used recruitment strategy for the last person recruited, was the employers own network.

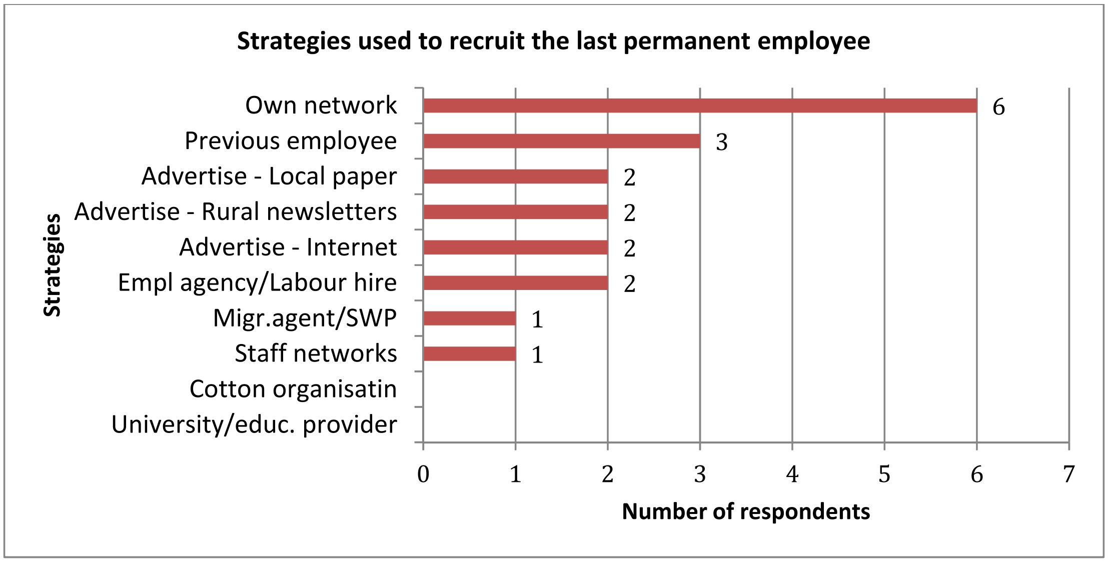


Figure 12: Strategies used to recruit the last permanent employee (survey)

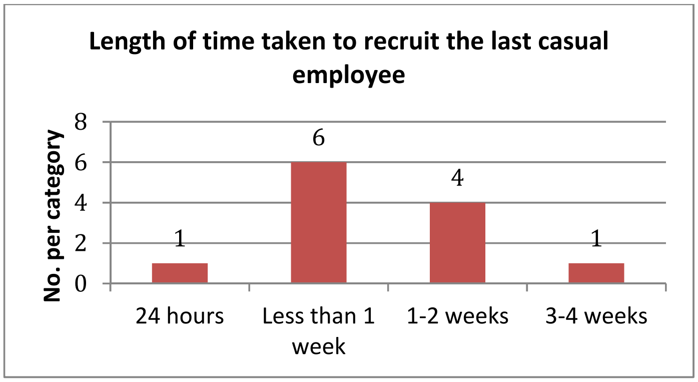
RECRUITING CASUAL STAFF IN THE LAST 12 MONTHS – GROWER SURVEY

NUMBER OF CASUALS RECRUITED

Twelve of the 14 who responded to the question, reported that they had employed casual staff in the last 12 months (85%).

HOW LONG IT TOOK TO RECRUIT THE LAST CASUAL

When respondents were asked to select from a list how long it took to recruit for the last casual position, most often it took less than a week (*n*=6), followed by 1–2 weeks (*n*=4) (Figure 13). One respondent each reported 24 hours and 3–4 weeks.



In summary, to recruit the last casual employee, most often it took less than a week, followed by 1-2 weeks.

Figure 13: Length of time taken to recruit the last casual employee (survey)

RECRUITMENT STRATEGIES FOR THE LAST CASUAL

When asked to select from a list how the last casual was recruited, the most frequently reported strategies were: advertising on the internet (*n* =3); using their staff's networks (*n* =3); and having previously employed the person (*n*=3). Two each, reported using their own network and an employment agency/Labour hire firm and one advertised in a rural newsletter (Figure 14).

In summary, the most frequently reported strategies to recruit the last casual employee were via the internet, staff networks and having previously employed the person.

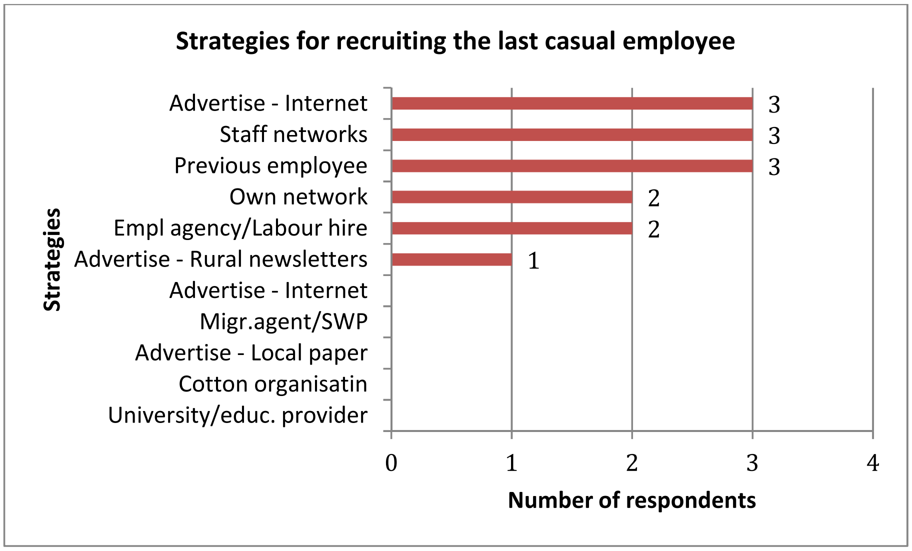


Figure 14: Strategies used to recruit the last casual employee (survey)

EMPLOYING OVERSEAS WORKERS – GROWER SURVEY

When respondents were asked if they had employed overseas workers as casuals, 11 of the 12 respondents said 'Yes' (91.67%; *n*=11). When asked if they had used overseas worker visa schemes to recruit them, five respondents reported they used no particular overseas worker visa or scheme however, three reported using the 457 visa scheme, two the 417 visa scheme and one, the Seasonal Worker program.

In summary, when overseas workers were employed most respondents reported not using a particular visa scheme, but three used 457 and two, 417.

EMPLOYING OVERSEAS WORKERS – INTERVIEWS

All of the growers interviewed reported using 'back-packers' during peak periods. The resellers (#7) confirmed this for a larger group:

> 'I would say 50% of our growers are using backpackers at any one point in time. ... Well just to get deadline on contractors and living, yeah, through their peak seasons. So whether they're planting or whether they're picking or whatever, they need more labour than what they need through when it's just growing, growing season. .... It's not because they're a backpacker, it's because they're available. There's actually a labour force there available to use, otherwise they'd be elsewhere,

> because there’s just not the people there’ (#7).

People on temporary visas are readily available – ‘The 417 is, we utilise it, because there's lots of them’ (#9) – in part because they are a well-established labour source in the horticulture industry so there is a population of temporary workers who move through the Riverina. While some growers report having to wait when recruiting temporary overseas staff, one reported a record of receiving a telephone call within 10 minutes of placing an advertisement on ‘Gumtree’. While the background of temporary overseas staff varies, even if they do have on-farm experience it is only with small machinery, not the size used in the Australian cotton industry, so some training is still required (#12).

417 visa holders were generally held in high regard due to their willingness and capacity to work, and they were better educated.

> ‘... we've had nothing but strife from the Australians, but we’ve had mostly good things from internationals. ... They’ve just got more drive and they just really want to work, and they want to make money actually. I don't know what it is about the Aussies whether it’s the benefits and maybe they think they get something else, I’m not sure what it is about them’ (#4).
>
> ‘... usually they're people that have blown their brains out with drugs in the past. That's why we do like the backpackers. ... our Australian population we get out here is not really bright, that works on the farms, which is - and drugs play a big part of it. I'd say drugs - any Australians we got, I'd say 90% of them are ... They've just fried their brains with drugs in the past and they've lost their common sense’ (#3).
>
> ‘... [417 visa holders] ... I wish it was easier to keep them because they’re very keen and they’re very good and I think they’ve got a much better education than some of the Australians have. ... I think they have a really good work ethic as well, nothing’s a problem for them most of the time’ (#12).

In addition, it was implied that when the Australian workers came through employment agencies the calibre of the person was lower, but some also reported good quality staff were recruited this way. However, this raises an important point made that entry into agriculture on-farm does not require any qualifications (#15).

When temporary overseas workers are found to be valuable employees some growers report supporting them to return the following season. Others saw casual employment as a trial and reported a desire to sponsor those found to be valuable on 457 visas, such as in the following quote:

> ‘... they just pick the job up quickly, they’re so up to date with technology, they’re keen, they want to work, they’re here to work. We were just unexpectedly, were just having great success and there has been a few over the years that they really excelled at anything you give them, and you say wow there’s potential for them to become in a manager’s role in our company. ... We found that we wanted these people so then we started seeking ways that we could keep them on permanently’ (#12).

It appears that some people on 417 visas come with the intention of migrating, largely because of the grim employment prospects in their home countries, with Europe and Ireland being mentioned here. The contrast between the Australian and overseas workers is stark in the following quotes:

> '... the young ones are just driving their vehicles to the airport, pretty well because they can't even sell them. They're driven to come to a country where they know there's work, and I think the young ones in this country haven't felt any - should we call it hunger or need, and maybe there's just too many benefits or too many things, that they know they are safe anyway, that they've got. And so I think that's the reason why there's such a difference between those that are driven, that come from overseas, compared to our Aussie' (#4).
>
> 'I think that they're grateful to have a really good job because they've come from an island ... where things aren't that good, they come over here and they think things are really good over here. If we knuckle down we can have a really good career, can have a good life. I heard one gentleman say a few weeks ago that Ireland will be in recession until 2030 or something, or something like that, and that for a young man or anyone to think gee, my country's going to be in depression or recession for that long, for the next 15 years, that's not ... not a good future is it, where they come out here and look at what's going on out here and there's heaps of work out here and there's good money to be made' (#12).

There were several reports of growers themselves or growers with knowledge of others who had, or intended sponsoring people on 457 visas. With direct accounts one had deliberately sought 457 sponsorship to increase their on-farm staff, another where it had begun with the person working on that farm on a 417 visa, and a third through being contracted by someone wishing to transfer sponsorship and a fourth who had tried to recruit a valued 417 visa holder to a 457 visa holder but was unable to because the person lacked the necessary qualifications. The central issue with transferring from a 417 to a 457 is that a relevant qualification is required, but back-packers often do not have this, and the alternative of the qualifying work experience period is beyond the maximum 417 visa time period. This issue is captured in the following quotes:

> '... there has been a lot over a period of time depending on the ebb and flow of who's looking for what. It's been very difficult. We've had a number of discussions with a number of different people about exactly that issue but there is no acceptable qualification that allows people to apply for a – there's no such thing as a standard job description or position that says "If you meet these conditions then you can apply for a 457 visa under those conditions". It's an issue that we've taken up in a number of different places because "What do you want? What are you looking for? Are you looking for an agriculturalist?". There is no job description that says there's a gap in that sort of area. So it's been an ongoing conversation and people generally get pretty frustrated about it and if they find someone good and they haven't been able to, they might then seek ways to extend visas or sponsor them on some sort of longer term basis. It's certainly happened with a couple of our people who have rice and dairy for instance. They've had people that have been very good and they've then gone through the process of sponsoring them into a position that qualifies so they can keep them here. ... there is no definition or description that says – It's not like a hairdresser or a car repairer or whatever that says "This is what you have to be able to do to qualify for that kind of visa" but it nearly needs to be on

> a case by case basis' (#14).
>
> 'But because he has no other trade nor skill certificate nor degree, so he's not in that sense tertiary qualified, he can't - he has to do five years of work experience, but he can't get the five years. How do you get five years when you've only got a two-year visa? It's a real stupid rule. But he's got all the attitudes you'd want, in he's willing and he's keen and he's able, and only wants to live in rural Australia, and yet he can't stay. What would help us, we can't do' (#9).

Despite the many attributes of overseas workers nominated, there were two disadvantages identified: they require training; and that it is a short-term solution.

Two growers spoke of the time and effort involved in training people who turned over every six months. The following quote illustrates this:

> 'It's hard if these people are only coming for six months and you're training them to operate or to do a specific job. They might be pulling up hills with a Greenstar guidance system. To teach them how to operate that machine and do it properly, to lose him after six months, that's bad, because then I've got to go through it all again. So you spend your whole life training them if you want to do the job properly otherwise if you're not going to train them up properly then you start having trouble with your customers, ringing up the job's not done properly, this isn't right. You can't have that. So to keep these people is great if we can, and we just wish we could keep more of them' (#12).

The following quotes acknowledge that reliance on back-packers, while necessary, is a short-term solution for part of the agriculture workforce.

> 'There's a lot of employment of backpackers, but that's been going on for a lot of years. It's a temporary solution ... it just fills gaps at the operational level. It doesn't really fill personnel gaps at management or supervisory level and it doesn't really cater for the needs of the higher skilled and the cotton specific knowledge base, which is essential' (#15).
>
> '... as a big picture it's only a short term fix to a problem really ... economic conditions will eventually improve in their country, it will be a big hole in our workforce ...' (#2).

MOST EFFECTIVE RECRUITMENT STRATEGIES – GROWER SURVEY

When respondents were asked to share using their own words, what their most effective recruitment strategies were, eight responded. Five times the internet was mentioned: once it was specified as a source for casuals; another respondent reported that it was 'Quick and direct with no middle man'; a third listed a website 'Travellers at Work'. Using networks was mentioned twice: one respondent used the term 'existing labour network' and the other said 'word of mouth from employees'. Mentioned once each were: acquiring permanent staff from Labour Hire companies; 'obtaining young European backpackers from local youth hostels'; and 'giving fuel and accommodation sometimes'. This respondent continued with, 'in the end when they want to move on they do. It is very hard to compete with the mines and other areas that are not as remote; the access to good workers is very limited'.

In summary, the most frequently mentioned recruitment strategy considered to be most effective was the internet, for casuals.

RECRUITMENT STRATEGIES – INTERVIEWS

Growers used several strategies to recruit people. There was a tendency for the internet to be used for casual staff and word-of-mouth for permanent staff, but generally people used multiple strategies for recruitment. The resellers also report using word-of-mouth. Most favoured was the word-of-mouth, illustrated with both quotes below. However, the first highlights the length of time this can take for the right candidate, and the second provides some insights into targeting the recruitment of back-packers.

> '... he came sort of from word of mouth, but yeah we had advertised, but he came through word of mouth. But you know we were specifically looking for someone with cotton experience and generally to get that down here you've got to bring them from another production valley. ... we started that process three years ago' (#2).
>
> '... they will find anybody they can when they've got a job to do but they do rely more heavily on contacts, connections, word of mouth, people who might have been here before, people who know people. ... word of mouth from backpackers is a very powerful way of getting people to come out and at least have a look around the region and see if they're interested in working here and if they're good as I said they're supported and encouraged to stay so they can get the additional work experience. So because we're seasonal they might go away travelling and come back. If they've got another year extension on their visa they might negotiate with them to go away for the winter and then come back for the next rice crop' (#14).

Another strategy to locate permanent staff is to trial a person as a casual then recruit for a permanent position if found suitable, as illustrated below.

> '... he started casual on the cotton harvest and stayed on and we put him on permanent a year later'. 'Sometimes some of them will start casual and if you like what you see then you can offer them, you can say, "Hey he's a really good fellow, let's offer him a position", and so that's how both X and Y, that's how it's happened, they started casual and then became permanent'(#12).

A number of interviewees had used employment agencies in the past, as previously reported, with mixed results (#3, #4, #5, #12).

Other recruitment strategies are newspapers ('The Land'; 'Queensland Country Life') (#3, #4, #12) university students, their own children and their friends, and lastly school leavers, as illustrated in the following quote.

> 'So there's a lot of farmers across the cotton valleys who were keen to get school leavers into the industry to attract youth and keep them engaged locally and get

> them excited about a career in cotton and getting them a job is the best way to do that' (#15).

With the demand for farm hands with cotton knowledge two growers reported advertising in Queensland in the hope that someone may wish to relocate (#4; #2). While employing locals is a strategy for one grower (#9), it was also reported that increasingly agriculture is having to look outside the (geographical) area to meet demand (#14).

In contrast to the above 'active' recruitment strategies, two growers reported a 'passive' strategy (#8; #3), best described as 'receiving', rather than recruiting. This is an aspect of the word-of-mouth approach, where through various channels the grower makes it known that they require staff with specified attributes/skills and simply wait until the 'right' person makes contact. For one grower this was articulated as a deliberate strategy, but for the other this appeared to be their approach to managing the demands of crop production where there was unmet need in an environment where the workforce was unstable.

Specific recruitment barriers that interviewees identified were:

- fewer agricultural graduates (#2);
- the lack of certainty of employment because of water insecurity (#14; #5);
- the isolation of some communities such as Hillston (#12).

In summary, there is a tendency to recruit staff using informal strategies eg network; previous employee, but for casuals the internet is also used. The results show that casuals are the largest group recruited with a heavy reliance on back-packers. While this is largely because they are the only readily available source of labour, this is not their only attraction. Even though most do not have the skills required, they do reportedly have the ideal 'attitude' for the 'right' person. It is the latter that assists employers in providing the necessary on-farm training to up-skill them. This attitude is best described as a good work ethic, which appears to be a key difference between them and Australian farm hands, although this did not apply to all of the Australian farm hands reported on by interviewees.

While interviewees did not discriminate between back-packers whose goal is to holiday in Australia, and those whose goal is to migrate to Australia, it is clear from the data that these two types of back-packers exist. A number of interviewees have sought to recruit permanent staff from back-packers with a migration goal, usually without success. There simply is not a pathway from a 417 visa to a 457 visa. Of the two interviewees who reported staff on 457 visas, none of the staff involved came to Australia on a 417 visa.

Without substantial changes to both visa schemes the 417 visa will continue to be a resource only for casual staff, not for permanent staff. The main workforce implication of continued reliance on 417 visa holders is that tomorrow's on-farm workforce is not being developed; a second implication is that if and when the 417 source ceases, there will be a substantial gap in on-farm workforce supply. This is a key challenge not just for the cotton industry, but for all of agriculture.

While there are pathways to an on-farm agriculture career they are diffuse and not well mapped or developed. Defining these would assist in the development of strategies to attract or train Australian staff with the requisite skills and attitude. One issue that needs clarification is qualifications. For Australians, on-farm unskilled or skilled employment in agriculture does not require formal qualifications. However, 457 visa holders are required to demonstrate qualifications.

It is apparent that there is potential for 457 visa holders to be in part, tomorrow's on-farm workforce. However, specialist assistance is required to move successfully through this system and currently prospective employers individually take this journey.

The results indicate that two different recruitment strategies are required – one for casual staff and one for permanent staff. In addition, while interviewees report using a mixture of recruitment strategies, the favoured approaches are informal and clearly are not effective because interviewees report having enough staff, for now, but would prefer them to be more skilled. The traditional and very practical approach to selecting permanent staff from casuals as trials will not work if the casuals are 417 visa holders, so employers need to be cognisant of this.

Without a more nuanced, diverse and more informed approach to recruitment the current workforce issues are likely to be compounded.

WORKFORCE SHORTAGE WORKAROUND STRATEGIES – GROWER SURVEY

Respondents were asked to write in their own words the strategies they use to work around the shortage of agricultural employees. Seven commented here and their comments fell into three categories: the use of back-packers; working longer hours/family members; and technical/machinery changes.

In summary the most frequency mentioned work around strategies to accommodate the workforce shortage were: to employ back packers; work longer hours; and use technical solutions.

STRATEGIC MANAGEMENT DECISIONS INTERSECT WITH WORKFORCE – INTERVIEWS

There was substantial evidence of strategic management decisions often intersecting with workforce issues among interviewees. While not all growers interviewed were actively expanding their enterprise, three of the five were. The following strategies reported are those that deal in some way with the workforce issue:

- The conversion to bankless channels achieves: more valuable land; approximately one-quarter of the labour requirements of flood irrigation; the need for unskilled labour which is more available than skilled labour.
- Rearranging the tasks/activities of existing staff (family and employees) across properties to take on board suitable staff if/when they become available, rather than focusing on recruiting a particular skill set.
- Re-sellers and equipment stakeholder recruited staff during the drought in order to be prepared for post-drought demand.

It is apparent that for some the relationship between strategic business management and workforce planning is clear. As cotton production expands in the LMPV resulting in the expansion of the on-farm workforce, those paying greater attention to workforce planning as an aspect of strategic business management are likely to benefit.

RETENTION

RETENTION STRATEGIES – GROWER SURVEY

From a list of options, respondents were asked to select any retention strategies that they had found to be effective (Figure 15). The most frequently selected strategy was to 'Say "Thank you"' (*n*=13), followed closely by selected 'paying above award or paying a competitive market-based salary'(*n*=12). 'Give employee responsibility for a geographical region' and 'Be flexible (e.g. family time; hours of work)' were both mentioned 10 times, followed by 'Recruit people who live locally' mentioned 9 times. Strategies mentioned eight times each were: 'Ensure some time off during peak periods'; 'Provide a package (package (e.g. wage, house and transport)'; Provide full time employment (rather than part-time/casual /seasonal)'; and 'Match employee with interests/skills'.

In summary, the five most frequently reported retention strategies were: saying 'Thank you'; paying above award; giving employee responsibility for geographical area; being flexible with family time and hours of work; and recruiting people who live locally.

Figure 15: Most effective retention strategies (survey)

RETENTION STRATEGIES – INTERVIEWS

The strategies that growers reported varied. They included shift work for flood irrigation, flexible hours (though usually around the production cycle), providing employment for the partners of staff, providing transport to and from work, providing accommodation, and an above award wage. Barriers to retention mentioned were lack of suitable or any on-farm housing, being unable to provide suitable employment for partners, and the isolation from a city social life and benefits that occurs in small rural communities.

In summary, it is apparent from the turnover data that growers need to review these retention strategies because they are not as effective as they could be.

TRAINING IN THE LAST YEAR – GROWER SURVEY

NUMBERS, LOCATION AND ACCREDITATION

When respondents were asked if they or any of their employees attended any formal training, education or professional development in the last year, seven of the ten who responded to the question answered in the affirmative (70%). Respondents were then asked to recall the last formal training event and then to select from a list where the training took place – six events took place 'off-farm' and the remaining two were 'on-farm'. When asked for further detail, 11 training events were listed. Eight of these were fully funded by the employer, 1 was partially funded and two attracted no cost.

In summary, almost one-third of the sample reported training in the last year for themselves or their staff. When asked about the last formal training, this referred to 11 training events, with all being accredited and almost all being fully funded by the employer.

PROVIDERS AND ACCREDITATION

The majority of these training events were provided by a Machinery provider (*n*=3), and 'Other registered training organisation (RTO)' (*n*=3); one each was provided by: Seed/product reseller; Equipment manufacturer; TAFE; the employer him/herself; and the employer. All training events were accredited (Figure 16).

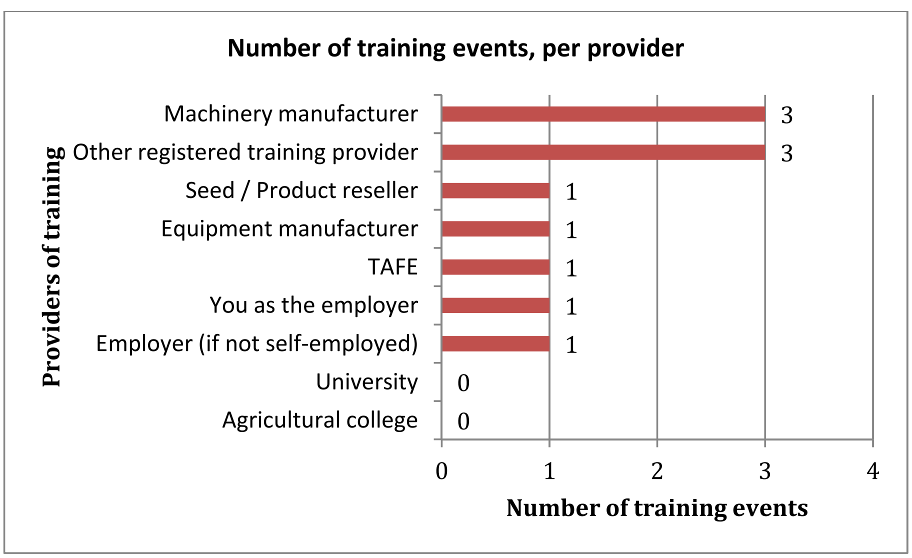


Figure 16: Number of training events, per provider (survey)

BENEFIT OF TRAINING TO THE FARM – GROWER SURVEY

When asked if the training was of benefit to the farm on a 7-point Likert-like scale (1=Nil to benefit; 7=Extremely beneficial), was collapsed into two categories (1=Nil to some benefit; 2=Quite beneficial; 3=Moderately or Extremely beneficial), 10 of the 11 events were rated as 'Moderately or Extremely beneficial' (Table 25).

In summary, almost all of the 11 training events were rated as moderately or extremely beneficial for the business.

Table 25: A rating of how beneficial the training was to the farm (survey)

Training provider	Level of benefit to the farm		
	Nil to Some benefit	Quite beneficial	Moderately to Extremely beneficial
Employer (if not self-employed)			1
You as the employer			1
TAFE			1
Other registered training provider		1	2
Machinery manufacturer			3
Equipment manufacturer			1
Seed / Product reseller			1

TRAINING – INTERVIEWS

Interviewees demonstrated knowledge of training availability and barriers. While one interviewee reported an interest in 'compliance related things in accreditation and plant ticketing of operators' (#15), the focus was on meeting compliance goals. Consistent with this, another interviewee reported that 'only a small percentage were willing to pay for training, e.g. WHS, [as they] prefer an on-farm and informal approach to this' (#1). The concern expressed is that with, for example, the machine owner being trained often by the manufacturer, the owner 'then gives their interpretation of the training to the operators on farms' (#6), which may also happen with contractors (#6). One grower had an employee involved in training (e.g. Certificate III) to upgrade their skills (#3), and those sponsoring 457 visa holders are required to invest in training as a condition of sponsorship. Typically, growers used chemical handling courses and some used plant machinery training for their staff.

The need has been identified for 'training [to be] delivered flexibly and locally ... as in the cotton industry it's essential that you schedule the training during the quiet periods' (#15) and such a program is now available in the LMPV. It is described in the following quote.

> 'We've had a lot of discussions over the years about the need to develop and deliver training which addresses industry needs, but particularly addressed the needs locally using local resources. So people don't want to go away for training and they particularly want the training delivered flexibly and locally. And that's the particular

aim of this project, is to develop a training program which specifically addresses the current and future needs of the industry and deliver it locally and flexibly so that people working on cotton farms can essentially attend what amounts to a series of short courses. The intention is to deliver the training at Certificate III level as a series of one, two, possibly three day courses spread over about an 18 month period. And at this stage, our preliminary plans, we're looking at probably around about 20 days of off the job training and the rest of it being workplace training and assessment. So that will mean that people aren't travelling away, they're not away from the workplace, the real cost to the employer is relatively low. And particularly with the cotton industry it's essential that you schedule the training during the quiet periods because they ain't going to turn up when it's busy, so we're targeting—putting a lot of the training into the winter period, into July/August, perhaps September. And then, one window of opportunity is after the end of irrigation season, before harvest, so sort of February/March in the north is reasonable. ... our intention is to schedule the training to match those seasonal cycles' (#15).

A future potential barrier to training in New South Wales from 1/7/2014, will be the employer contribution to training (estimated $3,000) under the Smart and Skilled Program, 'In other sectors they don't blink at it, but in agriculture that's a barrier' (#15).

LEVEL OF SATISFACTION WITH THE LAST PERSON RECRUITED

When respondents were asked to rate their satisfaction on a number of aspects with the last employee recruited, on a five-point Likert-like scale (1=Very dissatisfied; 5=Very satisfied) (Figure 17). When the scale was collapsed into 'Dissatisfied', 'Neither satisfied nor dissatisfied', and 'Satisfied', most were satisfied with the employee's experience, skills and knowledge, and overall fit with the business.

In summary, respondents were *satisfied* with the last person they recruited in relation to that person's experience, skills and knowledge, and their overall fit with the business.

Figure 17: Level of satisfaction with the last employee recruited (survey)

DEVELOPMENT – GROWER SURVEY

Respondents were asked to respond to a series of questions about their approach to managing staff on their farm, with the answer options being on a Likert-like scale (1=Never; 4=Always).

AUTONOMY FOR EMPLOYEES

Respondents reported moderate levels of autonomy for their employees (Figure 18). Employees were more likely to experience autonomy 'Sometimes' (62.5%; *n*=10) than 'Always' (25%; *n*=4) for 'Participation in decision-making', with 'Challenging and interesting work' (60%; *n*=9; 40%; *n*=6) and for having the 'Freedom to use initiative' (53.33%; *n*=8; 46.67%; *n*=7). However, the reverse was true for 'Feedback and recognition' but the difference in proportions was minor (Figure 18).

In summary, moderate levels of autonomy were reported for employees, with the larger proportion of respondents reporting that their employees sometimes rather than always participated in decision-making, were given challenging and interesting work, and freedom to use their initiative.

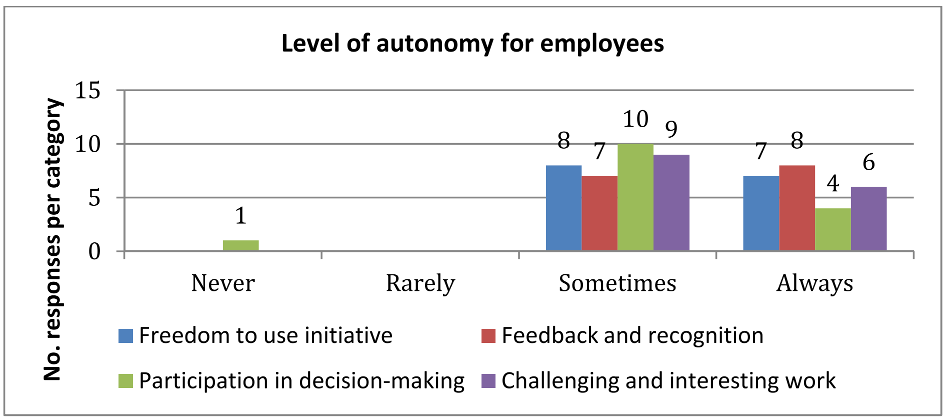


Figure 18: Level of autonomy for employees (survey)

BENEFITS FOR EMPLOYEES

The benefits for employees that respondents reported varied (Figure 19). Almost three-quarters (73.33%; *n*=11) sometimes had a 'Reasonable workload', whereas two-thirds (66.67%; *n*=10) were always paid above award wages and 60% (*n*=9) sometimes had a flexible work schedule.

In summary, variable levels of benefits were reported, with two-thirds reporting that employees always received above award wages, three-quarters sometimes had a reasonable workload and 60% sometimes had a flexible work schedule.

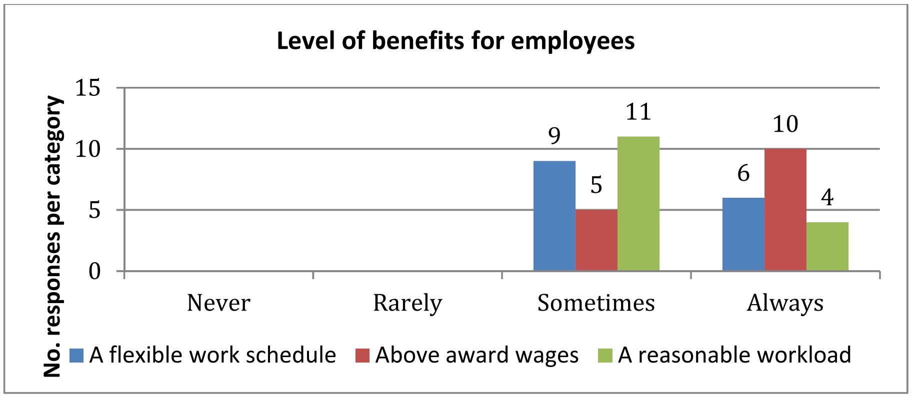


Figure 19: Level of benefits for employees (survey)

WORK ENVIRONMENT FOR EMPLOYEES

Respondents rated their employees' working environment highly (Figure 20). Almost three-quarters (73.33%; *n*=11) indicated that employees 'Always' had a 'Safe work environment'. Two-thirds (66.67%; n=10) reported that employees 'Always' had 'A pleasant working environment', and 60% 'Always' experienced 'Open two-way communication' (60%; *n*=9).

In summary, a very positive work environment for employees was reported - three-quarters, always being provided with a safe work environment, two-thirds a pleasant working environment and 60% receiving open two-way communication.

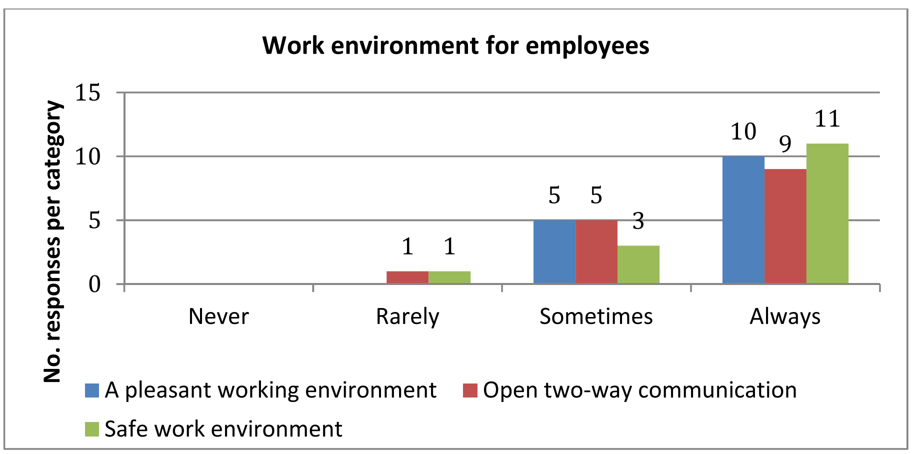


Figure 20: Work environment for employees (survey)

GROWTH (DEVELOPMENT) FOR EMPLOYEES

Respondents reported providing some opportunities for growth for their staff (Figure 21). More than two-thirds each (69.23%; *n*=9) reported that employees sometimes had the 'Career guidance and mentoring' and 'Training during working hours'. Half reported that employees always had the 'Opportunity to develop new skills'.

In summary, growth/development opportunities were reported for employees with approximately two-thirds reporting that employees sometimes did training during work hours and sometimes received career guidance and mentoring, and half always had the opportunity to develop new skills.

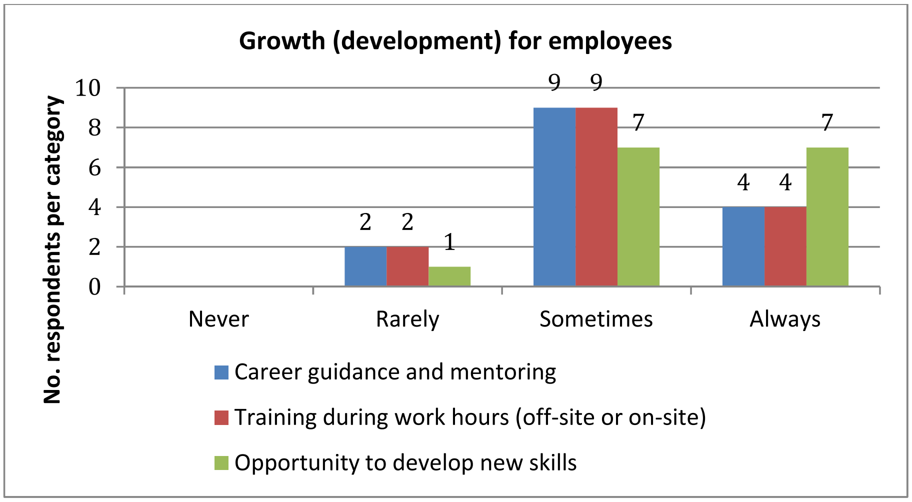


Figure 21: Growth (development) for employees (survey)

In summary, with ABS Census data showing tightening labour markets across cotton regions and with the unemployment rate in the LMPV being a low 2.8%, the results for the employees' workplace may be contributing to the recruitment and retention issues identified. The elements of autonomy, employee benefits, work environment and development opportunities are known to be conducive to employee engagement. Employers indicated that these elements were mostly being available 'Sometimes', apart from the work environment, which was predominantly 'Always'. If the employees have made a similar assessment, they could conceivably conclude that more attractive work is available.

SUPPORT SERVICES, STAKEHOLDERS AND OTHER INDUSTRIES

Ginning: Currently, there are two gins operating in this production valley. With the rapid expansion of cotton production, the existing gin was expanded and supplemented with a new gin that commenced production in 2012. Both gins now take round bales. The attraction of the new gin is that the latest equipment holds promise of a higher quality output which would attract a better price and faster through put. However, this is balanced by the higher costs. Most growers have opted to split their pick between these two gins, but one who suffered from the 2012 delays opted to truck their cotton out of this valley for a guaranteed turnaround time elsewhere. Most staff are locals, with some from outside the area and recruited through advertising in the local paper, but some were back-packers and are reported to have a good work ethic. There is a career path available in cotton ginning. While casual staff are readily available there is some turnover. Ginners, who require technical skills, are more difficult to source, however, this provides them with the skills to enter the mining industry and some staff, once qualified, move on to the mining industry.

Registered Training Organisations (RTO): The RTOs interviewed for this study reported a limited demand from the cotton industry, in part no doubt, due to the small size of the industry; most demand has been from other cropping and beef. However, both RTOs have the capacity and interest to become more involved. The recent National Workforce Development Fund training project is being offered in the LMPV in partnership with a local RTO and Cotton Australia.

Resellers: The reseller interviewed reported a strong increased demand for agronomy services and have increased their staff accordingly. Like growers, they sought people with 'cotton experience'. Due to the demand for agronomy services, which comes predominantly from new growers, clients are now able to have a fee-for-service arrangement as they would with a private agronomist. Some growers reported having a reseller agronomist visit weekly in season, others every 3 to 4 weeks, and on demand.

Rice (#14):

- 'Last year we planted about 120,000 hectares'.
- 'We've only grown 1.1 million tonnes of rice this year ... last time we had a full allocation of water we grew 1.7 million tonnes'.

Wine-grapes (#13):

- 'We've got 390 grape farmers. ... It's contracted quite a bit, but the actual size hasn't gone down, so there's been a lot of neighbours been brought out and things like that. So the average sort of farm, I'd say the smaller farms would be in the 50 acres up to I think the biggest sort of ones are around 500 maybe 600 acres...'.
- '... we've got 22,000 hectares. ... about four-fifths I think, so probably around roughly 16,000 to 17,000 ... would be privately owned and the other would be winery owned'.
- 'be mostly owner operators on farms, things like irrigation and spraying and any sort of on farm activity is done by the owner ...'.
- '... we've been selling less than cost of production for about five years now. ... So we haven't really got the returns, so a lot of people are doing everything themselves. ... I think we've realised that this is how we farm grapes, we need to do a lot more of the work ourselves, just to be viable in just our areas, just we're a bulk wine area, we can't be operating like a premium area when we're a bulk area'.
- '... the local paper, word of mouth or they secure somebody through friends, or there are employment agencies in Griffith that do contract labour hiring and things like that, so they can go to them. We've actually got an employment agency which is specifically for the wine industry'.

LIKELY FUTURE WORKFORCE DEMAND – GROWER SURVEY, INTERVIEWS

PLANS FOR COTTON HECTARES OVER THE NEXT FIVE YEARS – GROWER SURVEY

From a list of options, respondents were asked to indicate their plans for cotton hectares over the next five years (Table 26). Just over half of the respondents (*n*=13) indicated that they intended to increase their cotton hectares of this period, 28% (n=7) that they were uncertain about whether or not they would change the area of cotton grown, that this was a season-by-season decision. Sixteen percent (n=4) reported that they planned no change to the number of cotton hectares. Nil reported that they intended decreasing their cotton hectares during this period.

In summary, just over half intend increasing their cotton hectares over the next five years, just over a quarter reported that a decision to change the number of cotton hectares was a season-by-season decision, and the remainder reported no changes were planned for their cotton hectares. Nil reported decreasing their cotton hectares.

Table 26: Plans over the next five years to change the area of cotton grown (survey)

Over the next five years do you plan to change the area of cotton grown?		
Answer options	n	%
Increase hectares under cotton	13	(56)
No change	4	(16)
Decrease hectares under cotton	-	-
Uncertain/season-by-season decision	7	(28)
Total	24	(100.0)

FARMING PLANS FOR THE NEXT FIVE YEARS – GROWER SURVEY

Respondents were asked to select from options, what their farming plans were for the next five years (Table 27). The largest percentage, more than one-third (36.84%; *n*=7) indicated they intended to expand the size of the farm enterprise. This was followed by approximately one-quarter (26.32%; *n*=5) who reported no change to their farming operations was expected. A similar proportion reported that they planned to activate the family succession plan within this time-frame (21.05%; *n*=4). Two reported they intended to sell the farm and one to reduce the size of the enterprise.

In summary, just over one-third intends expanding their farming operation over the next five years, approximately one-quarter intend making no changes and a similar proportion intend activating the family succession plan.

Table 27: Farming plans for the next five years (survey)

Over the next five years do you plan to change the area of cotton grown?		
Answer options	n	(%)
Expand size of farm enterprise	7	(36.84)
No change expected to farming operations	5	(26.32)
Activate succession plan – within family	4	(21.05)
Sell farm	2	(10.53)
Reduce size of farm enterprise	1	(5.26)
Activate succession plan – corporate	-	(0.0)

FARMING PLANS – INTERVIEWS

Of the six growers interviewed, three were expanding their operation. This involved:

- Developing new land-lazer levelling grazing paddocks for bankless channel irrigation (#4; #12).
- Re-developing existing land – lazer levelling for bankless channel irrigation (#2; #4; #12), with the rationale being '...we're converting ground which has the value of $300 an acre to a value of over $1000 a acre, after running a laser bucket over it' (#4).
- Other re-development is occurring making '...fields into larger more efficient layouts ... and efficiencies with our machinery' (#2).
- Expansion has been recent: '...we're only still all new to this, it's only been the last 24-36 months that we've really started to upscale to a size where we can't personally do it all ourselves' (#2).

EMPLOYMENT NEEDS FOR THE 2013–2014 SEASON – GROWER SURVEY

Respondents were asked to select from options, whether their employment needs for the 2013–2014 season were expected to change from last season. Of the 17 respondents who answered this question, almost three-quarters indicated that their employment needs would stay the same (70.56%; *n*=12), while just under one-quarter reported that they would require more employees (23.53%; *n*=4). One responded indicated that fewer employees would be required.

When respondents were asked to detail the expected changes, reportedly 9 more staff than currently existed would be sought by the 4 respondents who answered this question. The requirements reported were: two at Managerial-level; three at Senior/experienced-level; three at Entry-level and one Casual. By contrast there would be a reduction of two part-time positions and one Casual position.

In summary, of those who responded, three-quarters reported that their employment needs for the 2013–2014 season would remain the same (*n*=12) with less than one-quarter indicating an increase would be required; this increase (for these 4 respondents), is 9 more staff, with most being senior/experienced- or entry-level employees.

FUTURE EXPECTED USE OF CONTRACTORS AND CONSULTANTS – GROWER SURVEY

Overwhelmingly, the future use of contractors and consultants is expected to remain the same. And where changes are expected, they are by a very small proportion (Figure 22).

In summary, respondents predicted future use of contracting and consulting services would remain as it was.

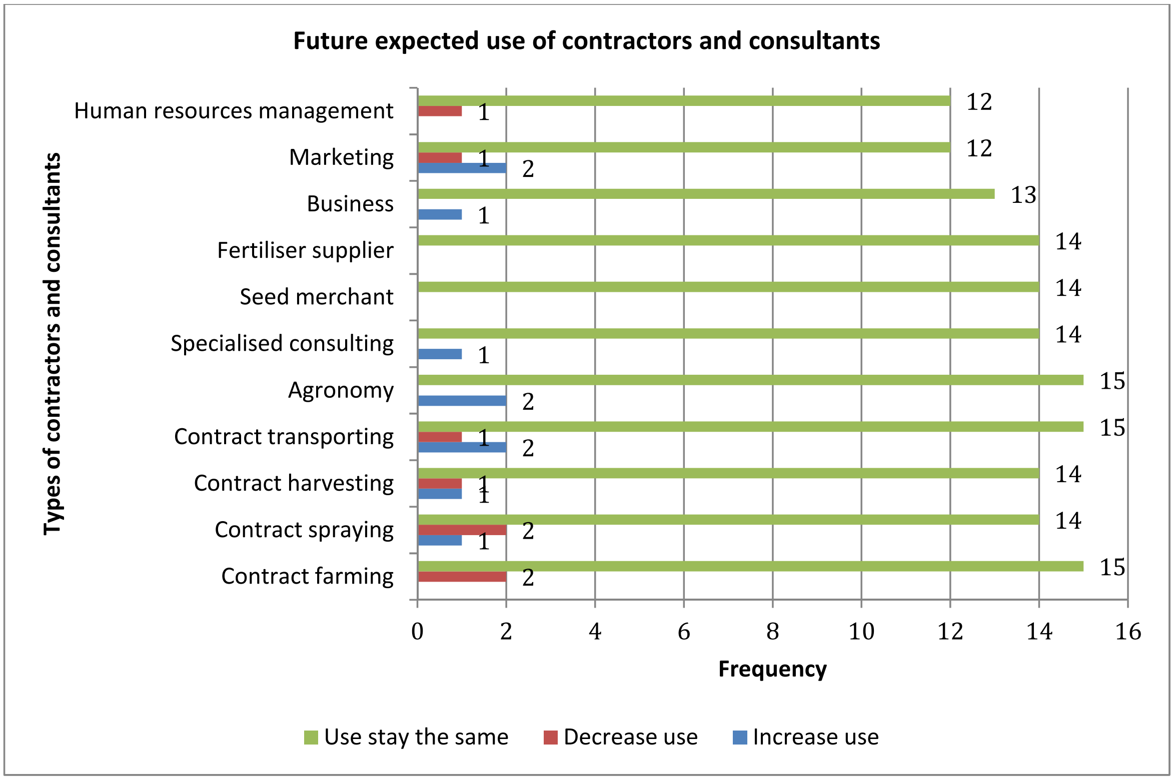


Figure 22: Future expected use of contractors and consultants (survey)

PLANS FOR TRAINING IN THE 2012–2013 PRODUCTION YEAR – GROWER SURVEY

Seven respondents indicated that they were planning some training, formal or informal in the 2012–2013 production year with nine indicating that no training was planned. Of the seven, six indicated that training planned for 2013–2014 was that required for new staff. Other planned training is: 3 - Machinery requiring GPS functionality; 3 - Business management; 2 - General farm duties; 2 - Workplace, Health and Safety; one each – Farming, General machinery, myBMP, HRM, Certificate/Diplomas (Figure 23).

In summary, just less than one-third of the sample indicated they had plans for training in the 2013–2014 season. The five most frequently mentioned areas of training planned were: Training casuals/new staff; Machinery-GPS; Business management; General farm duties and WHS.

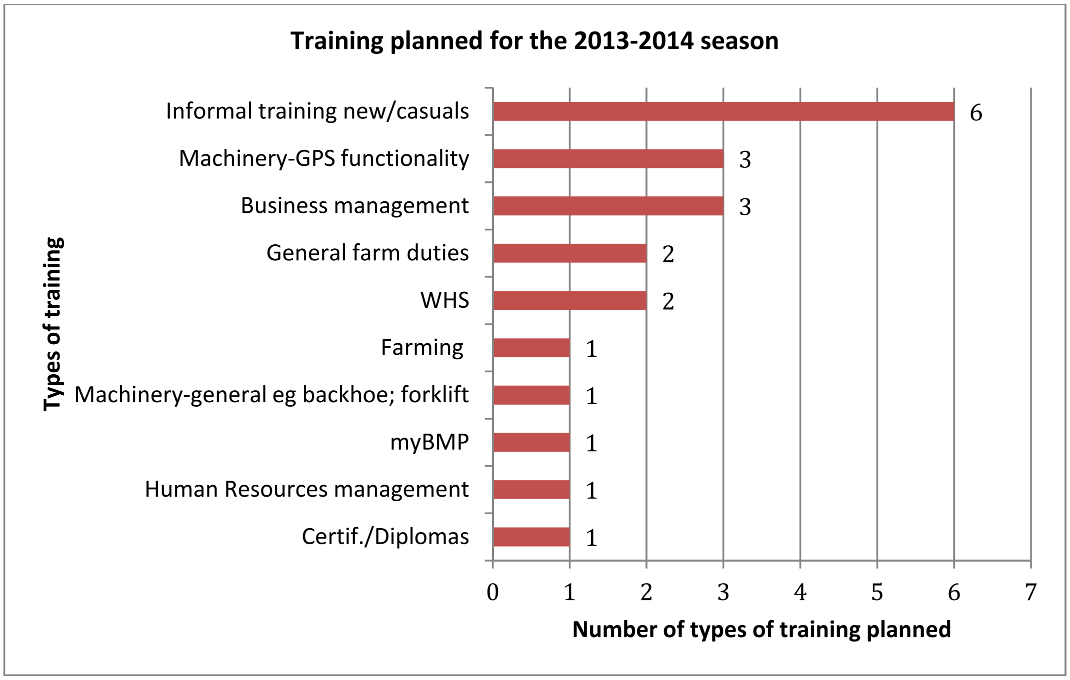


Figure 23: Training planned for the 2012–2013 season (survey)

In summary, there is no apparent competition for an on-farm workforce from the wine-grape or rice industries. This is because of the lack of overlap with cotton and wine-grape growers (and they have their own employment agency), and because growers tend to grow either rice or cotton predominantly in a season, but with a movement to cotton as a preference. While there is potential for competition with the gin for back-packers, the apparent availability of back-packers reported by growers indicates that this is unlikely to be occurring. The resellers interviewed report being able to meet the increased demand for cotton agronomy services.

While there are formal training options apparently readily available in the LMPV, there is reportedly little demand from the cotton industry, which contrasts with the demand from other primary industries. However, an aspect of this is likely to be the small size of the industry.

Because the rice industry reported the same unmet need for skilled staff as the cotton industry, there is opportunity to collaborate with the rice industry with recruitment and retention. This is especially so as many farmers are both rice and cotton growers.

With the high turnover of experienced staff and large proportion of new entrants to cotton and RTOs showing interest, a retention strategy with potential would be formal new entrant induction. This may better prepare staff and provide a more positive experience.

RECRUITMENT ISSUES ANTICIPATED IN THE NEXT FIVE YEARS – GROWER SURVEY

Respondents were asked: 'Looking to the next five years, what do you foresee as the main challenges in finding people to work on your farm?' Fourteen people responded. Comments fell into the categories of the workforce and external factors that impacted on the workforce, but one said there were no recruitment issues anticipated. In the workforce category, comments were made about skills, overseas labour and having experience. Five comments were made about skills, which included: having the right level; the lack of skilled local people; skilled/knowledgeable young people were leaving; having competent staff. Three were about the importance of continuing to be able to access back-packer / overseas labour and two were about staff needing experience.

Comments in the external factors category were made about attracting people to agriculture/rural communities, being competitive with wages, and water. Three comments were about attraction: finding people who share the passion; people wanting to work in agriculture; attracting good people to rural communities where the populations are declining; and having a good education for children. Three comments were also made about being competitive with wages compared with other industries. The two comments about water were about the demand and ensuring there was sufficient water for irrigation.

In summary, the most frequently mentioned anticipated recruitment issues in the next five years were: having the right number of sufficiently skilled staff; having continued access to overseas workers; being able to attract people to agriculture/rural communities; and being competitive with wages.

RETENTION ISSUES ANTICIPATED IN THE NEXT FIVE YEARS – GROWER SURVEY

Respondents were asked: 'Looking to the next five years, what do you foresee as the main challenges in keeping people on your farm and in the cotton sector?' Fourteen responded. Three comments referred to the ability to pay sufficiently competitive wages, two referred to water availability, and two referred to people moving on after a period of employment, now being the norm. Comments were also made about the work/life balance, needing competent experienced staff with a work ethic, staying viable and geographic isolation.

In summary, the most frequently mentioned anticipated retention issues in the next five years were: being able to pay sufficiently competitive wages; water availability; and people moving on after a period of employment, now being the norm.

FINAL COMMENTS – GROWER SURVEY

Respondents were asked if they wished to make final comments on the issues and challenges they faced in attracting and retaining a farm workforce: 'Do you have final comments on the issues and challenges you face in attracting and retaining your farm workforce or any suggestions for how the cotton sector could better address cotton workforce issues?' The comments made by those who responded are quoted here:

1. I would like to find good locally based permanent employees that I could train and retain for a reasonable time but at the moment it appears they are not interested or not available.
2. In the last four years we have mostly employed backpackers on a casual basis in our peak times. The disadvantage of backpackers is their lack of experience but at least they are motivated.
3. It would be good if we had a central agency to source workers from that is attached to the cotton Industry.
4. The cotton industry is a vibrant and stable industry compared with many other cropping and grazing industries. I feel the whole agricultural sector is facing challenging times as we compete with the mining sector and the slow migration of country youth away from the bush.
5. There needs to be a tax break for staff living in remote areas, that is, >50 km from a major town. If employees are paid well they cannot access the tertiary education assistance for their children as they generally exceed the means test.

These final comments place the on-farm workforce in the broader context of rural communities. The departure of people from rural communities, particularly youth has been well-documented. This includes the importance people place on providing their children with the best educational opportunities. With the constant outflow from rural communities, this impacts negatively on the pool of local candidates as on-farm staff.

DISCUSSION

The discussion in this report is structured as a set of workforce conundrums that have emerged from the results. These conundrums are located within the structure of the four-part strategy proposed for workforce development in the cotton industry in the *Milestone 1.3 report: The cotton workforce development system: gaps and opportunities for enhancing industry competitiveness.* Within each strategy the conundrum is described then, possible ways out of the conundrum are listed by identifying key elements of the problem and possible responses. Following the conundrums are the conclusions that have been reached for this case study then, recommendations for action.

1. IDENTIFYING A SUSTAINABLE SOURCE OF LABOUR

This would be a workforce that has the capacity to acquire the necessary skills, and which can accept the physical and social demands of working in the cotton industry.

1. The 'right' person: skills plus attitude

The conundrum is that the 'right' person is difficult to find, so they are substituted for those with lower skill levels. The attributes of the 'right' person, drawn from interview data, are a set consisting of skills and attitudes listed here:

- a skilled farmhand, with previous experience in agriculture, preferably in cotton,
- not intellectually impaired from the over-use of drugs,
- willing to work long hours for about six months of the year,
- having an even temperament conducive to fitting in with a small on-farm team,
- able to use GPS-guided machinery competently, so probably younger rather than older,
- having the capacity and desire to notice if machinery/activities are not operating effectively as they should,
- interested in learning.

The impact of having to substitute the 'right' person with one at a lower skill level (and less desirable attitude) appears to be reduced efficiencies in production. This is because the substitute has limited capacity to operate technically advanced machinery competently, generally lacks interest in the enterprise operation though is likely to be grateful to have a job, particularly if near retirement. Most survey respondents reported being 'satisfied' with the last person recruited which appears to contradict the interviewees who reported that they had the numbers but not the skills. A more nuanced interpretation shows that while their current employees did not have the skill level desired, up to a point employers were satisfied.

Potential workforce solutions: There appear to be two options here as a way out of the conundrum. The first is to 'grow your own' skilled farmhand with the right attitude. A pathway here is through a traineeship which commences during secondary school. The second option is to change the recruitment strategies, which refers to separating out strategies for casual and permanent staff, and rather than relying heavily on informal approaches, further exploring formal approaches. Since unskilled staff continue to be required on-farm, particularly for flood irrigation in season, this suggests a third strategy for recruitment – for unskilled staff.

2. Recruiting by word-of-mouth

A related conundrum is that the favoured approach to recruitment – by word-of-mouth, appears to be ineffective. This is because growers are reporting not having the 'right' staff. An alternative response may be 'Do the "right" staff exist'?

While most growers interviewed reported currently having a sufficient number of staff, they appeared not to be confident that this would remain so, nor were they satisfied with the skill level of at least some current employees. Several growers interviewed appeared to 'receive' staff rather than actively 'recruit' staff. This is an aspect of the word-of-mouth approach to recruiting, where it becomes known that 'X' employee is seeking a person/skill-set. One grower reported this process taking three years for one staff member.

Potential workforce solutions: As suggested for conundrum 1, a more structured, targeted and formal approach to recruitment may be more effective.

3. The expansion of cotton in LMPV

This conundrum is knowing to what degree the expansion of cotton in the LMPV will change the demand for on-farm staff. While cotton expands, largely the proportion of other crops will decrease. The results indicate that cotton production is more labour intensive, so this is likely to increase demand. However, the increasing automation of machinery and the on-going re-development of irrigation to bankless channels suggest that fewer on-farm staff will be required; but with land being developed for cropping that was previously used only for grazing, regardless of what crop is grown, the labour required will increase because irrigated cropping is more intensive than grazing.

In addition, most of the permanent farm hands that growers described are approaching retirement age, so there is a need to consider succession. Looking beyond the LMPV, the demand for staff with 'cotton knowledge' has growers seeking to recruit from other production valleys. This suggests there will be greater recruitment pressure within the industry for on-farm staff. However, the results indicate that most recruited are new to cotton.

Potential workforce solutions: The indications are that cotton production will continue to expand in the LMPV so this will fuel more shortages. Therefore, future demand is likely to be for skilled staff with cotton experience. To acquire these staff a review of recruitment strategies suggested in conundrums 1 and 2 is suggested.

2. BUILDING A CRITICAL MASS OF 'GOOD PRACTICE' IN EMPLOYMENT RELATIONS

This includes establishing a culture of innovation and excellence in this area to: improve job design, manage work across seasons and retention. Share good practice examples widely, within and outside the industry.

4. The drivers for long hours

The conundrum is that the differing goals for employers and employees coincide to create situations that could not be described as best practice. The majority of staff are on an hourly rate which they prefer because they can make money during the peak periods as they know there are quiet times when they will not earn a lot. Growers want staff who are prepared to work long hours when needed, and to have this they are prepared to continue paying them when there is little work to be done. Why growers want the long hours is because of their strong production focus – timing is very important to yield in cotton and particularly in the LMPV due to the climate/seasons, and for those who have invested in machinery they do not want it sitting idle. In a valley that is expanding and where re-development is a key aspect of this, an investment in machinery is required either by the farmer or a contractor.

However, the long hours, with the peak period for cotton being about half the year, are likely to result in fatigue. One potential consequence of fatigue is accidents. However, this is a risk that both employers and employees appear prepared to take.

Interviewees report some recognition that staff now want a better work-life balance and that it is increasingly difficult to find staff who are prepared to work those hours.

Potential workforce solutions: Agriculture has already become a target of SafeWork, the Australian regulator, because of the high incidence of deaths and injuries, and there is some evidence which suggests that the on-farm culture towards workplace, health and safety (WHS) is a key contributor to the high incidence rate. With the drive for long working hours coming from both employers and employees it will be difficult for the industry to see this as a priority. However, an awareness of the importance of WHS is apparent from interviewees who identified that an important attraction of round bale pickers was that there were fewer staff to keep safe. Coupled with the recognition of the transition occurring in agriculture towards a greater work-life balance, there are opportunities from which to leverage but education alone is known to be effective in the WHS domain. A potential structural solution to this issue would be to de-couple the very close association between financial reward and long hours, for both employers and employees. This suggests reviewing the Pastoral Award conditions and job design. It would include reviewing best practice in other industries.

5. Turnover conundrum

The conundrum is that growers are unable to retain many of the staff they most need – those with experience. An estimated turnover of 44% for experienced staff indicates that there is a problem. While further research would be required to accurately identify the causes, this study has revealed likely contributors. These are: the majority of experienced staff recruited in the last year were new to cotton; recruits receive on-the-job training where training was required within the long hours; long hours are undertaken for about half of the year; the levels of autonomy, employee benefits and growth and development opportunities are moderate, with most of these occurring ‘sometimes’. Another contributing factor could be that the recruitment strategies which have already been identified in this report as less than effective, resulting in recruitment of unsuitable people.

While the estimated turnover is high for casuals as well (42%), the high use of back-packers with visa time-limits results in a lack of clarity about the turnover figure. So this too needs further investigation.

Potential workforce solutions: While this conundrum remains unaddressed, the expansion of cotton in the LMPV will result in continued and potentially greater rates of turnover.

Solutions to the turnover issue for experienced staff point to the need to review job design for the issues around working conditions and identify whether there are opportunities to make new recruits 'cotton ready' through group and/or formal inductions. Best practice in job design from other industries could be used as a guide. One example here may be from the expanding poultry industry near Griffith. An important step would be to identify what is attractive to current and prospective future employees.

6. The employer's role in improving human resources management

The conundrum is that there are a collection of workforce issues, many of which sit at the enterprise level, but the skills and knowledge required to manage these issues effectively are in a different domain to crop production, which is their primary and almost exclusive focus. Therefore, employers may be operating in an area where they have limited knowledge or expertise. In the LMPV, those who grew rice traditionally but are now moving into cotton may have not employed staff at all in the past. In addition, while the CRDC and Cotton Australia have a strong focus on attraction programs, there are weak links to the workforce outcomes they seek, as shown in this study.

Potential workforce solutions: Employers need to consider how attractive work in their enterprise is, so they need to consider the situation from the perspective of the employer. To illustrate this point, a common example of a retention strategy is flexible hours. However, when investigated, the flexibility is almost always around the crop production cycle or the weather, so this would not operate effectively as a retention strategy for an employee. It is more likely to be a deterrent. While it could be argued that employees know when they take the job that working hours are determined by the production cycle and weather, it is also apparent that a transition is occurring in agriculture, with examples in this case study, where employees increasingly want a work-life balance. So increasingly, to stay competitive, employers will need the human resource management skills to enable them to manage such employee expectations by providing a working environment conducive to retention. Included here would be knowledge of how to best deploy staff within the enterprise and by providing, for example, opportunities for employees to develop their skills, or for new staff, to conduct an effective induction program.

3. OVER THE LONGER TERM, DEVELOPING SKILL AND CAREER PATHWAYS

This is for workers within the industry who take account of technical improvements in cotton production and the ongoing trend toward capital deepening and automation.

7. Employ skills or labour?

The conundrum is that the short-term solution contributes to a longer term problem. Heavy reliance on back-packers meets a short-term need for staff, but contributes to an ongoing loss of the skill base in agriculture due to few farmhands being trained up to become permanent staff. While the use of back-packers is predominantly for seasonal work, the season is approximately half of each year. Using back-packers is not only an easy option, because they are so readily available, they are highly valued because of their willingness to work and their capacity to do so. It also means that loyal long-term staff will not have to be retrenched in the next long drought, as they were in the last.

Potential workforce solutions: This conundrum identifies the importance of documenting the various and changing career pathways in and into agriculture. In the current climate these appear quite limited however, the Commonwealth Government's strong training focus does provide opportunities. In fact it is the vast and constantly changing array of Commonwealth and State policies and funding opportunities that are a barrier to staying sufficiently abreast and to know what opportunities exist, for what is a small agricultural industry. Key for the cotton industry would be identifying the opportunities and pathways for a permanent workforce. In addition, by clarifying what could be the role of a (short-term) migrant workforce would provide the industry with valuable insights.

While the focus of this study is the on-farm workforce, a career path to farm/crop ownership was revealed – that of contractor to grower and farm owner. Two of the growers interviewed began their career in agriculture as contractors and over a relatively short period have acquired sufficient funds to become land and/or crop owners. This is a rare opportunity in agriculture, as most land is acquired through succession, although there are other examples in the cotton industry. This career pathway too should be documented and with others, made more visible within and outside the industry.

8. 417-> 457 is not a pathway

The conundrum is that while the 417 to 457 visa appears to be a pathway to locating suitable on-farm staff, usually it is not. One approach to recruitment that many growers prefer is to trial casuals. On occasions these casuals are on 417 visas but intend migrating. When a person on a 417 visa is found suitable and wishes to migrate, both employer and employee see the 457 visa as a pathway. However, growers have found that often the person on the 417 visa does not meet the requirements and the visa system does not allow sufficient time for the alternative of on-farm experience.

Potential workforce solutions: While government is being lobbied by agriculture more broadly and the cotton industry in particular, to relax the conditions around 417 and 457 visas to allow longer 417 visas and easier access to 457 visa holders, this is a long-term strategy because it would require policy change at the Commonwealth level. In the shorter term, education about employing overseas workers is needed. While the information is readily available, very clearly it is not reaching the target audience, in this case, cotton growers. Therefore, a more targeted approach is needed where specialist immigration advice at the enterprise level can be sourced within the industry and where information is provided directly to growers, such as via the local grower groups, by a specialist in the area.

4. DEVELOPING A NATIONAL AND REGIONAL CAPACITY TO COORDINATE AND TAKE ACTION AND LINK TO GOVERNMENT

9. The cotton industry does not have a framework or system with which to address the workforce conundrums

The conundrum is that a set of workforce challenges exist at the enterprise level but there is not a framework at any level around which action could be taken to address any of these issues. One solution is to use this four-part proposed framework to work at the regional and/or national level.

CONCLUSIONS

This case study has demonstrated the complex and interwoven nature of the relationship between attraction, recruitment and retention, which in the LMPV is exacerbated by experiencing rapid current and future expected expansion. The growth in cotton has increased the demand for an on-farm workforce, where most experienced staff are new to cotton and where seasonal work is undertaken largely by back-packers. The increasing automation of the cotton industry underpins the decreasing demand for staff numbers, but adds the requirement for a higher level of skill. However, if this valley continues to expand rapidly there is likely to be increased demand for the number of staff and for those staff to be skilled.

While most interviewees are able to find that staff they need now, they are compromising on the skill level of these staff because those with a higher level of skill cannot be found. However, there is an awareness that cotton expansion will increase the demand for labour but without clear pathways into agriculture for permanent staff and the knowledge that back-packers will not always be so readily available, concerns have been raised about – where to from here? Added to this is what appears to be comparatively low engagement of existing skilled employees.

This case study has identified two key interactions:

1) The relative attractiveness for farmhands of cotton compared to other agriculture on non-agriculture options. Would skilled people from outside cotton come in, and do they know they can build skills in cotton?

2) There is high turnover on some farms in this study but not definitive data on the reasons for leaving, or where the employees went. However, the data on the attractiveness of work and human resources management practices are a source of concern.

Therefore, both developing and retaining skills need to be considered equally. It is important that the comparatively large proportion of new entrants to cotton are provided with a positive experience and one that will accelerate skill development.

RECOMMENDATIONS

To address the conundrums and associated workforce implications, an effective approach may be via a working group that:

1. Could link the addressing of workforce issues to the initiatives and activities focused on production. This would include the Monsanto new grower program, the CSD production trials and IREC grower activities.

2. Could oversee specific activities identified in, and targeting the conundrums. There activities could be:
   a. Off-site Cotton Basics induction course for new staff.
   b. Enrolling growers in the National Workforce Development Fund, Tocal, Cotton Australia collaboration training being offered currently in LMPV.
   c. Cotton employees could be invited to be observers in the Monsanto new growers program.
   d. Cotton employees could be invited to be observers in the CSD production trials.
   e. Traineeships offered through the local state high school, known to be active in this area, and Tocal college.
   f. Human resources management workshop.
   g. Immigration specialist speaker at a local grower group meeting.

3. Networked to develop and maintain a knowledge-base of workforce in the region, with other industries, Labour Hire companies and immigration services.

The formation of a working group as recommended, has the potential to operate a pilot for the next phase of the *Innovative work* project.

APPENDICES

APPENDIX 1: PLAIN LANGUAGE STATEMENT

Project title: Innovative work: Cotton workforce development for sustained competitive advantage

INTERVIEWS

Research team

Principal researcher: Associate Professor Ruth Nettle, Department of Agriculture and Food Systems, University of Melbourne (03) 8344 458s, ranettle@unimelb.edu.au

Other researchers: Dr Jennifer Moffatt, Department of Agriculture and Food Systems, University of Melbourne, (03) 9035 8566 jennifer.moffatt@unimelb.edu.au; and staff from the Workplace Research Centre, University of Sydney

Purpose of the research

The aim of the project is for the cotton industry to create a more sustainable workforce through engaging all sectors of the industry and key stakeholders in a three-stage process. Researchers will conduct a labour market analysis from existing data such as the Australian Bureau of Statistics, and through a survey/interviews/focus groups with cotton growers, their employees and advisors within and external to the industry. This information will be collated and presented to the industry in briefings. Up to three Production Valleys will then be invited to prioritise their workforce needs and work towards obtaining funding to address these. The Cotton Research and Development Corporation is funding this research.

What do we ask of you?

We ask approximately 60 minutes of your time to complete a digitally recorded interview about current employment/employee practices and needs, and the cotton workforce.

Ethical considerations

This project has been approved by The University of Melbourne Human Research Ethics Committee. We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. Your name and contact details will be kept in a separate file from any data that you supply. This will only be able to be linked to your responses by the researchers. In the final report, we will remove any references to personal information that might allow someone to guess your identity. Due to the small number of participants there is a chance your responses may be identifiable, however we will take care to avoid this. Data will be kept for 5 years before being destroyed. The risk to you of involvement is not beyond that experienced in everyday life.

Your participation is voluntary and you may withdraw consent at any time.

Project feedback

If you would like a summary of the project results, please advise the research team, and provide contact details.

If you have any concerns about the conduct of this research project please contact the Executive Officer, Human Research Ethics, The University of Melbourne, ph: (03) 8344 2073; fax (03) 9347 6739.

APPENDIX 2: CONSENT FORM

Project title: Innovative work: Cotton workforce development for sustained competitive advantage

CONSENT FORM FOR INTERVIEWS

Investigators

Associate Professor Ruth Nettle and Dr Jennifer Moffatt, University of Melbourne and staff from the Workplace Research Centre, University of Sydney

I agree to participate in the above project and in doing so acknowledge that:

I have read the associated statement outlining the nature and purpose of the project and the extent of my involvement, and a written copy of the information has been given to me to keep.

I am aware that the purpose of the project is to conduct research and it is funded by the Cotton Research and Development Corporation.

I am aware that my participation in an interview may be audio digitally recorded.

I have been informed that participation in this study is voluntary and that I may withdraw from the project at any time, and am free to withdraw any unprocessed identifiable data.

I am aware that I may request further information about the project.

I understand that in respect of any information obtained during the course of the project, the confidentiality of the information I provide will be safeguarded subject to legal requirements. If mentioned I will be referred to by a pseudonym in any publication arising from the research. However, I have also been informed that due to the small number of people involved, it may be possible to be identified.

Name of participant:

____

Signature of participant: ___________________________ Date _______________

Please return to:

Jennifer Moffatt, Melbourne School of Land and Environment, University of Melbourne

Victoria 3010 Ph: 039035 8566; Email: Jennifer.Moffatt@unimelb.edu.au

This form will be retained by the researchers.

APPENDIX 3: INTERVIEW GUIDES

INTERVIEW QUESTIONS FOR GROWERS

Introduction that focuses interviewees on the topic which is workforce in the cotton industry, and that workforce in this interview refers to attraction, retention and development of people. *(NB) These 3 sets of questions may be asked using the first set as a basis, then asking the interviewee to comment at each of the two broader levels.*

Your farm

1. What are your farm's current workforce needs?
2. Describe any new and/or innovative arrangements on your farm. Have you made any changes to how you operate your workforce in the last year?
3. When you think about the workforce on your farm, what do you think is working well What do you think the benefits are? For whom?
4. When you think about the cotton industry workforce on your farm, what do you think could be improved? How?
5. Are new skills required on your farm?
6. When considering the future workforce needs of your farm, regarding attraction, retention and development of people, what is happening to achieve these needs, currently? This refers firstly to this year and next; then your expected workforce needs in approximately five years time; then beyond five years.

Your Production Valley (PV)

1. What are the current workforce needs in this PV? (i.e. related to attraction, retention, development of people; are people working together sufficiently well to have these needs met?)
2. Describe any new and/or innovative arrangements in this PV? (ways people are working together to achieve workforce aims)
3. Have there been any changes to how the workforce operates in this PV, in the last year?
4. When you think about the workforce in this PV, what do you think is working well What do you think the benefits are? For whom?
5. When you think about the cotton industry workforce in this PV, what do you think could be improved? How? (how could people work together; who could work together) What benefits for the PV do you think this would have?
6. Are new skills required in this PV? (this includes people/orgs external to the PV)
7. What organisations are involved in training and other areas of attraction, retention and development of people, in or with this PV? What is their role? How are they contributing? (i.e. funding, expertise, interest)
8. When considering the future workforce needs in this PV, regarding attraction, retention and development of people, what is happening to achieve these needs, currently? This refers firstly to this year and next; then the PV's expected workforce needs in approximately five years time; then beyond five years.
9. What labour market trends are you aware of in your PV?
10. What changes are occurring in the cotton workforce labour market area in this PV?
11. Who would be the prospective regional partners in a regional workforce strategy about attraction, retention and development of people in the cotton industry? Why?

Industry wide

1. What are the cotton industry's current workforce needs? (is the industry working together and with individuals/organisations outside the industry sufficiently well to have these needs met?)
2. Describe any new and/or innovative arrangements in the cotton industry.
3. Have there been any changes to how the workforce operates industry wide, in the last year?
4. When you think about the workforce in the cotton industry as a whole, what do you think is working well? What do you think the benefits are? For whom?
5. When you think about the cotton industry workforce as a whole, what do you think could be improved? How? (how could people work together; who could work together)
6. Are new skills required in the cotton industry as a while? (this includes people/orgs external to the PV)
7. What organisations are involved in training and other areas of attraction, retention and development of people, in the cotton industry as a whole? What is their role? How are they contributing? (i.e. funding, expertise, interest)
8. When considering the future workforce needs in the cotton industry as a whole, regarding attraction, retention and development of people, what is happening to achieve these needs, currently? This refers firstly to this year and next; then the industry's expected workforce needs in approximately five years time; then beyond five years.
9. What labour market trends are you aware of in the cotton industry as a whole?
10. What changes are occurring in the cotton workforce labour market area industry wide?

INTERVIEW QUESTIONS FOR ADVISORS

Introduction that focuses interviewees on the topic which is workforce in the cotton industry, and that workforce is attraction, retention and development of people. *(NB) These 2 sets of questions may be asked using the first set as a basis, then asking the interviewee to comment at the two broader levels.*

Your Production Valley – only for advisors with a Production Valley focus

1. What are the current workforce needs in the Production Valley (PV) you work with most (i.e. related to attraction, retention, development of people; are people working together sufficiently well to have these needs met)?
2. Describe any new and/or innovative arrangements in this PV (ways people are working together to achieve workforce aims)?
3. Have there been any changes to how the workforce operates in this PV, in the last year?
4. When you think about the workforce in this PV, what do you think is working well What do you think are the benefits? For whom?
5. When you think about the cotton industry workforce in this PV, what do you think could be improved? How how could people work together; who could work together? What benefits for the PV do you think this would have?
6. Are new skills required in this PV? (this includes people/orgs external to the PV)? What are they?

7. What organisations are involved in training and other areas of attraction, retention and development of people, in or with this PV? What is their role? How are they contributing (i.e. funding, expertise, interest)?
8. When considering the future workforce needs in this PV, regarding attraction, retention and development of people, what is happening to achieve these needs, currently? This refers firstly to this year and next; then the PV's expected workforce needs in approximately five years time; then beyond five years.
9. What labour market trends are you aware of in this PV?
10. What changes are occurring in the cotton workforce labour market area in this PV?
11. Who would be the prospective regional partners in a regional workforce strategy about attraction, retention and development of people in the cotton industry? Why?

REGION WIDE AND INDUSTRY WIDE – FOR ALL PARTICIPANTS

1. What are the cotton industry's current workforce needs (is the industry working together and with individuals/organisations outside the industry sufficiently well to have these needs met)?
2. Describe any new and/or innovative arrangements in the cotton industry.
3. Have there been any changes to how the workforce operates industry wide, in the last year?
4. When you think about the workforce in the cotton industry as a whole, what do you think is working well? What do you think are the benefits? For whom?
5. When you think about the cotton industry workforce as a whole, what do you think could be improved? How could people work together; who could work together)?
6. Are new skills required in the cotton industry as a while (this includes people/orgs external to the PV)?
7. What organisations are involved in training and other areas of attraction, retention and development of people, in the cotton industry as a whole? What is their role? How are they contributing (i.e. funding, expertise, interest)?
8. When considering the future workforce needs in the cotton industry as a whole, regarding attraction, retention and development of people, what is happening to achieve these needs, currently? This refers firstly to this year and next; then the industry's expected workforce needs in approximately five years time; then beyond five years.
9. What labour market trends are you aware of in the cotton industry as a whole?

INTERVIEW QUESTIONS FOR EMPLOYEES/CONTRACTORS

Introduction that focuses interviewees on the topic which is <u>workforce in the cotton industry</u>

1. Can you tell me about the pathway that has brought you being an employee/contractor on this farm? In particular:
    a. Your work history and education history (including training); length of time in cotton/other?
    b. Motivations to do cotton vs. other work.

    c. Whether or not you consider yourself as someone who has chosen "cotton/x type of contracting" as a career or someone who is in cotton due to place and circumstance (not tied to cotton as a career).
2. Thinking about your time working in cotton as a whole – not just on/with this farm – what has been your overall experience of:
    a. The extent to which you see a career path for yourself; the extent to which you believe a defined career path is visible/well known in the industry and outside/in regions.
    b. And thinking about this farm and your experience here/with this farmer, how do you rate your current experience in relation to this overall experience (no different, better, worse). Why?
3. What brought you to this farm – why did you apply / take this position? Why do you do contract work for this farmer?
4. Can you tell me about the work you do and your working conditions on/with this farm (e.g. pay, hours, safety)?
    a. In relation to these conditions of work and your role, to what extent do these arrangements meet your expectations for a good job?
    b. And are there conditions that have a greater affect on your satisfaction with your job than others? What conditions and why?
    c. And are there conditions that have a greater affect on your intentions to stay with this employer? What conditions and why?
5. How important is it to you that you stay with one employer for a given length of time? Why is this? What do you see as the benefits and weaknesses in staying in work on a farm / with a farmer for more or less than this?
6. Thinking of your cotton work-life to date, what has supported or hindered you in achieving the type of working conditions, job roles and achievements so far?
    a. Opportunities employers have/have not provided; Opportunities industry has/has not provided.
    b. Things you have taken on yourself or been unable to do despite trying.
7. Do you see yourself being in this job this time next year; then in five years; beyond that?
8. Do you see yourself working in the cotton industry this time next year; then in five years; beyond that?
9. What do you consider to be your next step in regards to work? If you stay in cotton/contractor with cotton, what would you like to be doing and why? Is it clear?
10. What is "progression" to you (pay, job title, status, doing better, knowing more etc)?
11. Who do you see as supporting/hindering these next steps? What your current employer does? What is available through cotton industry groups? Up to you personally?
12. In the last year, have you undertaken training or education of any type, either as part of your employment here or independently of it? What was it? Why did you do it? If relevant, did your employee support you in doing this? If yes, how (e.g. paid; time of work)?
13. In what way could regional groups or cotton industry groups help or support employees to develop their careers?

Specific additional questions for:

New entrants: perceptions of farm employers and the industry as a good place to work prior to cotton entry; awareness of and involvement in entry-specific training and networks
Experienced employees: awareness of and involvement in training, and awareness of and involvement in opportunities for progression (development) or networks.
Senior manager/sharefarmer: awareness of and involvement in training, and awareness of and involvement in opportunities for progression (development) or networks. Obstacles for progression. Do you have a contract or any other type of relationship with a training provider?

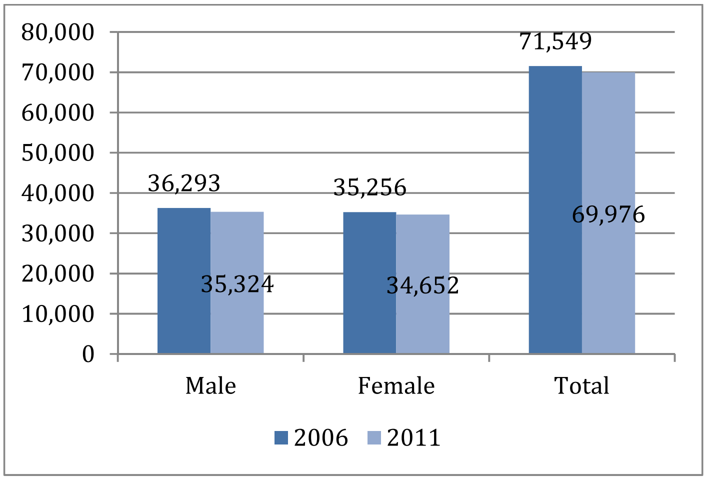


Figure 24: Population of SNSW cotton region by gender, 2006 and 2011

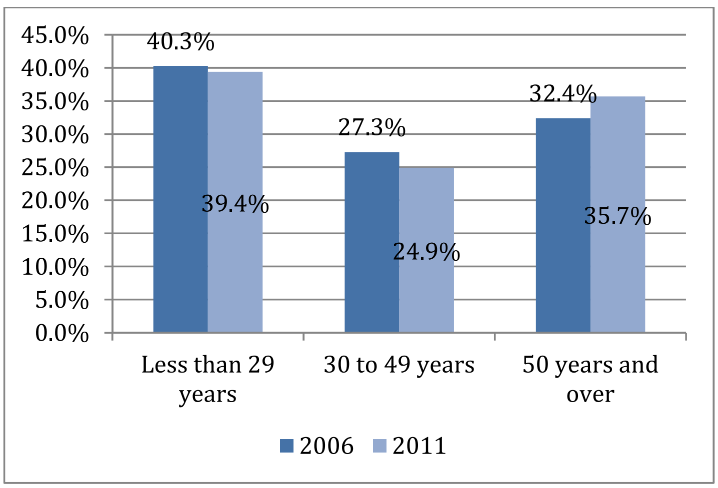


Figure 25: Age groups of SNSW cotton region, 2006 and 2011

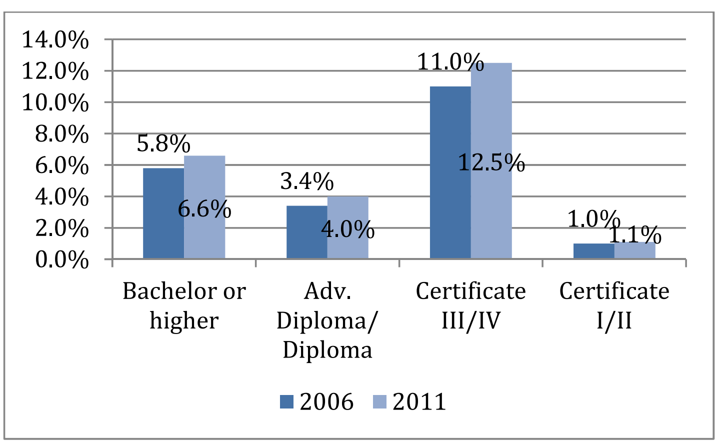


Figure 26: Education attainment, SNWS cotton region, 2006 and 2011

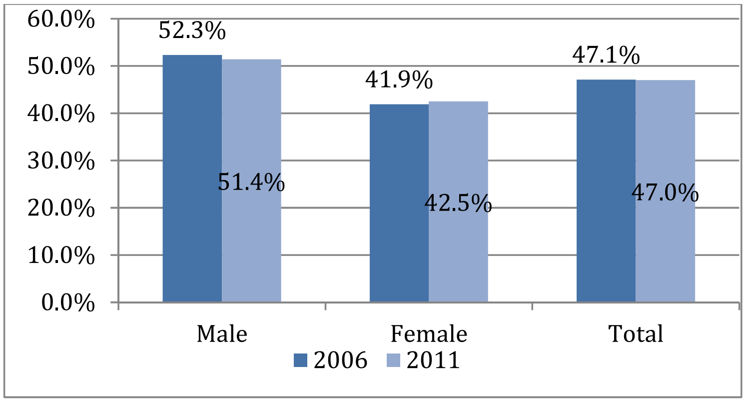


Figure 27: Labour force participation SNSW cotton region, by gender, 2006 and 2011

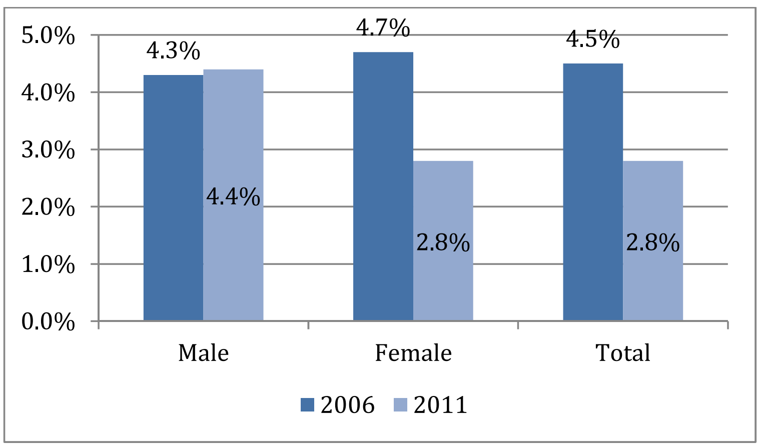


Figure 28: Unemployment in the SNSW cotton region, by gender for 2006 and 2011

Figure 29: Employment share by industry in the SNSW cotton region, 2006 and 2011

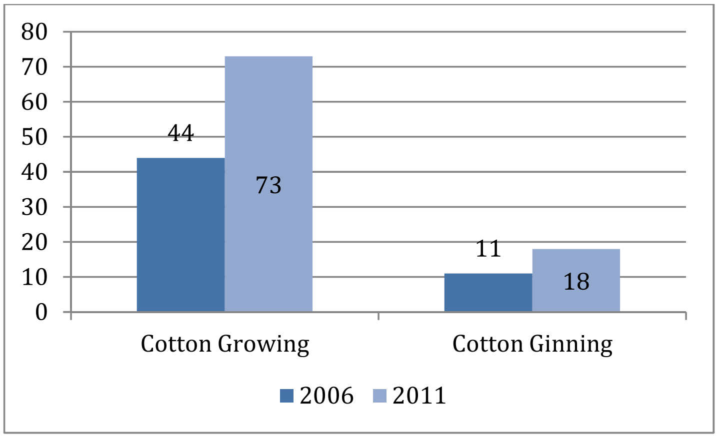


Figure 30: Cotton growers and cotton ginners in the SNSW cotton region, 2006 and 2011

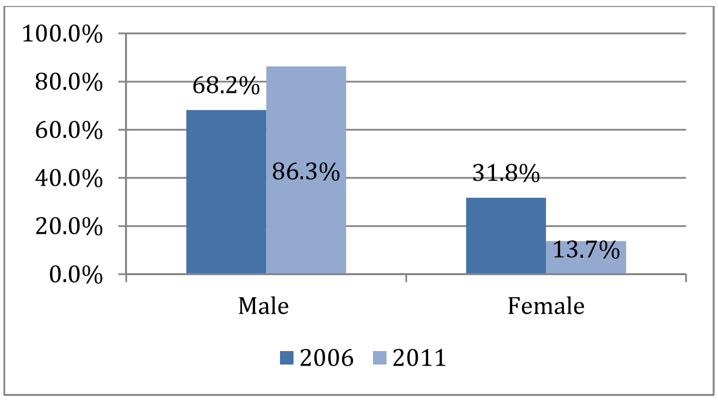


Figure 31: Cotton growers by gender, SNSW 2006 and 2011

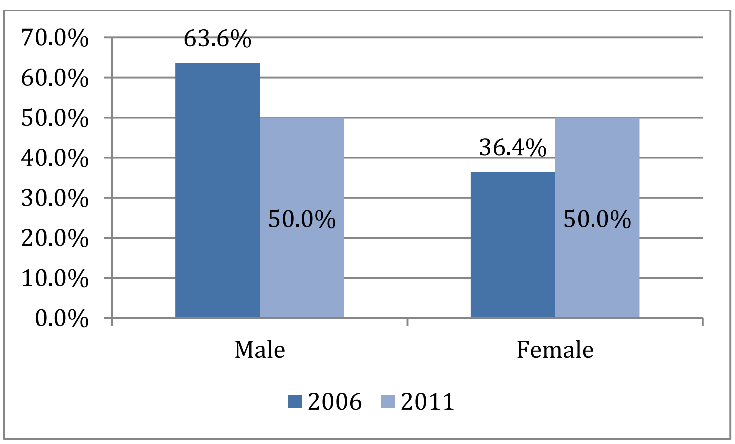


Figure 32: Cotton ginners by gender, SNSW 2006 and 2011

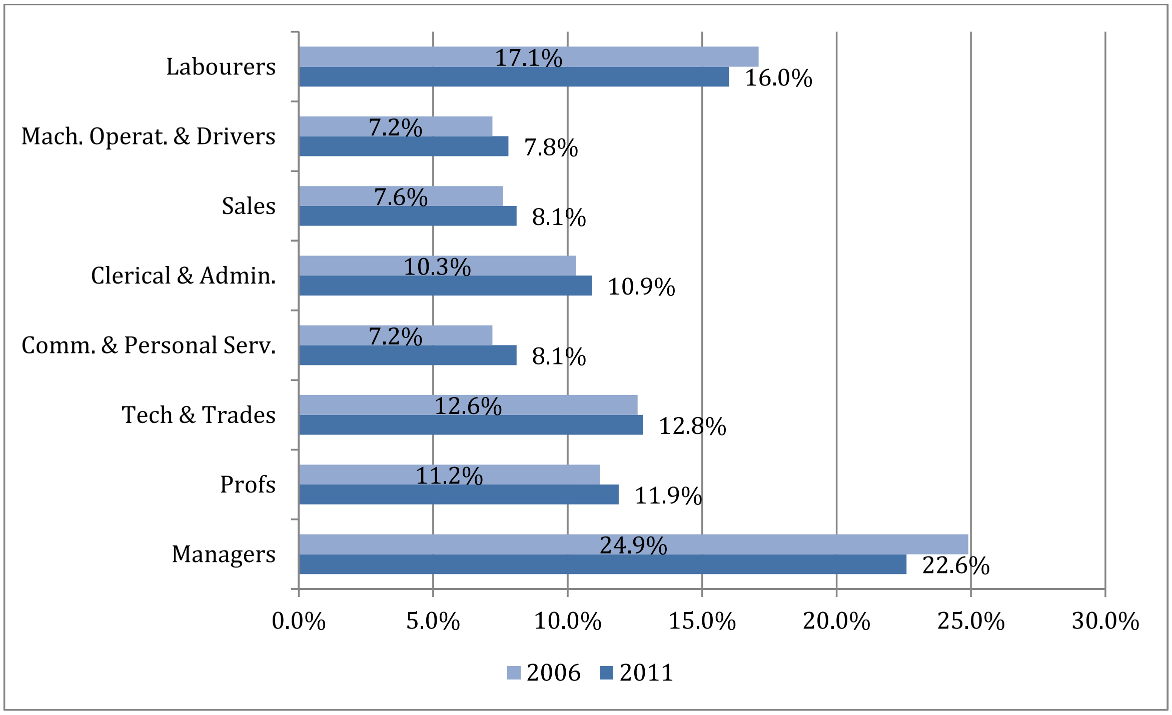


Figure 33: Occupational distribution, SNSW cotton region, 2006 and 2011

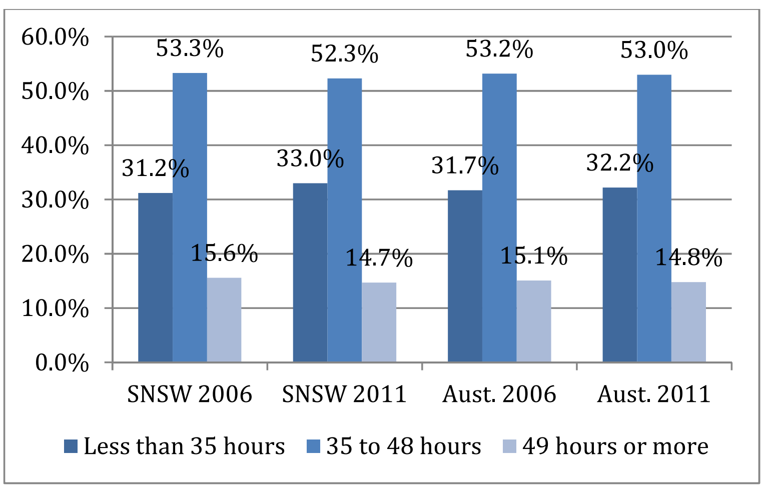


Figure 34: Working hours, SNSW and Australia, 2006 and 2011

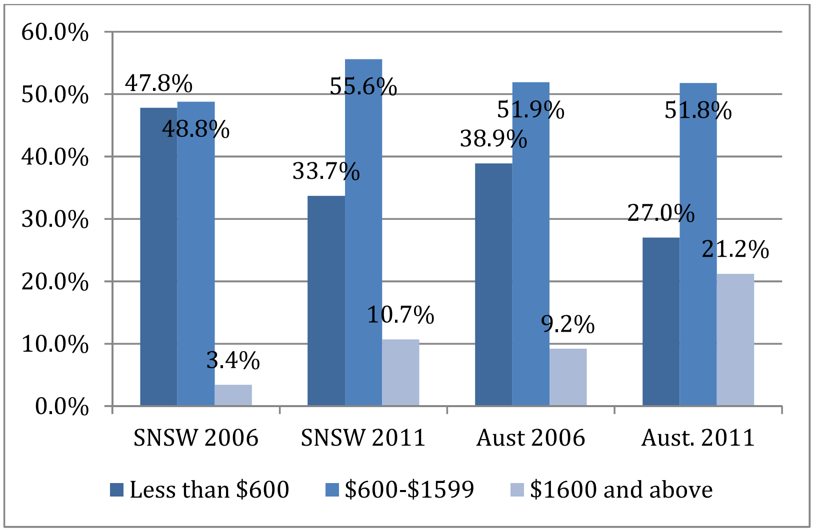


Figure 35: Income distribution in SNSW and Australia, 2006 and 2011

APPENDIX 5: GROWER SURVEY

Innovative work: cotton workforce development for sustained competitive

Cotton industry workforce issues

The CRDC (Cotton Research and Development Corporation) is currently funding research into the workforce issues in the cotton sector. As part of this project with the University of Melbourne, responses from participants in the Lachlan and Murrumbidgee production valleys are requested.

The Cotton Growers Association - Lachlan and Murrumbidgee is assisting with the conduct of the survey.

Your responses are needed to better understand the current workforce issues and needs of the industry.

It will take up to 20 minutes. Ethics clearance has been provided by the University of Melbourne. No individual answers will be reported and all responses are confidential.

Enquiries: Jennifer Moffatt 0422 183 011 jennifer.moffatt@unimelb.edu.au

Your farm

1. How many hectares / acres of cotton did you plant in the 2012 - 2013 season, approximately?

Hectares

or acres

2. Of these hectares / acres planted to cotton, how many were irrigated, approximately?

Hectares

or acres

3. When is, and what is your workforce demand for cotton?
(This includes all people in paid, permanent and casual full time equivalent roles)
(Please give the number of full time equivalent staff for each type of activity; full time equivalent, means the number of staff you would have if you added together the hours worked by those who work part time - for eg if you have 2 who work half time, this equals one full time equivalent person)

	Managerial-level	Senior-experienced level	Experienced-level	Entry-level	Contractors
Preparation					
Planting					
Irrigating					
Picking/harvesting					

4. When is, and what is your workforce demand for other crops you grow on your farm (if any)?
(This includes all people in paid, permanent and casual full time equivalent roles)
(Please give the number of full time equivalent staff for each type of activity; full time equivalent, means the number of staff you would have if you added together the hours worked by those who work part time - for eg if you have 2 who work half time, this equals one full time equivalent person)

(The term 'your farm' is used in this questionnaire to refer to the following: the farm you manage, lease or share-farm on, and if you are primarily an owner/operator, the farm you own).

(All questions relate to your farm/s in the Lachlan and/or Murrumbidgee production valleys)

	Managerial-level	Senior-experienced level	Experienced-level	Entry-level	Contractors
Preparation					
Planting					
Irrigating					
Picking/harvesting					

5. Over the next five years do you plan to change the area of cotton grown?

- ☐ Increase hectares under cotton
- ☐ No change
- ☐ Decrease hectares under cotton
- ☐ Uncertain/season-by-season decision

Staffing and support services

6. How many family members (including yourself if you are not an employee) typically work on your farm, in an unpaid role? (Please complete all that apply)(DON'T INCLUDE contractors, consultants or other service providers here)

	No. people	Hours peak periods	Hours off-peak	Days/fortnight peak periods	Days/fortnight off-peak
Full time managerial-level					
Full time senior/experienced-level					
Full time entry-level					
Part time					
Casual					

7. How many employees (including yourself) typically work on your farm? (Please answer all that apply)(DON'T INCLUDE contractors, consultants or other service providers here)

- ☐ Sole owner/operator
- ☐ Partnership
- ☐ No employees typically
- ☐ 1-4
- ☐ 5-19
- ☐ 20-29
- ☐ 30-100
- ☐ >100

Staffing and support services

8. Please list all the employees (including yourself if you are an employee), who typically work on your farm, their role and work time (DON'T INCLUDE contractors, consultants or other service providers here)

If a sole owner/operator or you have no current employees, answer for yourself as manager-level.

	No. people in this role	Hours peak periods	Hours off-peak	Days/fortnight peak periods	Days/fortnight off-peak
Full time managerial-level positions					
Full time senior or experienced-level positions					
Full time entry-level positions					
Casual positions					

9. Are you (if an employee) and your staff paid in cash only or do your receive cash combined with benefits? (Please tick all that apply)

If a sole owner/operator go to the next question.

	Cash only	Cash + benefits
Full time managerial-level	☐	☐
Full time senior/experienced-level	☐	☐
Full time entry-level	☐	☐
Part time	☐	☐
Casuals	☐	☐

10. What are the pay rates for yourself (if an employee) and the staff on your farm ($/hr or annual CASH salary including Super)? (Please tick all that apply)(Adult award rates listed)

If a sole owner/operator go to the next question.

	Full time managerial-level	Full time senior or experienced-level	Full time entry-level	Casual
Managerial: More than $100,000	☐	☐	☐	☐
Managerial: $80,001-$100,000	☐	☐	☐	☐
Managerial: $60,000-$80,000	☐	☐	☐	☐
Senior (eg Leading hand/L8): more than $19.97/hr	☐	☐	☐	☐
Senior (eg Leading hand/L8): $19.97/hr	☐	☐	☐	☐
Experienced (eg 2yrs in industry/L5): more than $17.36	☐	☐	☐	☐
Experienced (eg 2yrs in industry/L5): $17.36	☐	☐	☐	☐
Entry level (eg 12mths in industry/L3): more than $16.65	☐	☐	☐	☐
Entry level (eg 12mths in industry/L3): $16.65	☐	☐	☐	☐
Entry level (eg Less than 1yr in industry/L1): more than $15.96/hr	☐	☐	☐	☐
Entry level (eg Less than 1yr in industry/L1): $15.96/hr	☐	☐	☐	☐

11. What are the employment package contents for yourself (if you are an employee), and employees on your farm? (Please tick all that apply)

If a sole owner/operator go to the next question.

If there is no employment package go to the next question.

	Managerial-level	Senior/experienced-level	Entry-level
Above award pay/competitive market rate salary	☐	☐	☐
Accommodation: full rental	☐	☐	☐
Accommodation: partial rental	☐	☐	☐
Vehicle: full use	☐	☐	☐
Vehicle: farm use only	☐	☐	☐
Phone: all calls	☐	☐	☐
Phone: farm calls only	☐	☐	☐
Fuel: all	☐	☐	☐
Fuel: farm only	☐	☐	☐
Meat (all/some)	☐	☐	☐
Production bonus	☐	☐	☐
Loyalty bonus	☐	☐	☐
Ad hoc bonus	☐	☐	☐
Education / training costs (all/some)	☐	☐	☐

Other package items (please specify)

Use of Contractors and Consultants

12. To what extent did you rely on Contractors on your farm/s in the Lachlan and/or Murrumbidgee production valleys in the 2012-2013 season? (Include all farms)(Please tick all that apply)

	Always	Often	Sometimes	Rarely	Never
Contract farming	○	○	○	○	○
Contract spraying	○	○	○	○	○
Contract harvesting	○	○	○	○	○
Contract transporting	○	○	○	○	○

Other contracting services used (please specify)

13. To what extent did you rely on Consultants on your farm/s in the Lachlan and/or Murrumbidgee production valleys in the 2012-2013 season? (Include all farms)(Please tick all that apply)

	Always	Often	Sometimes	Rarely	Never
Agronomy	◯	◯	◯	◯	◯
Specialised consulting	◯	◯	◯	◯	◯
Re-seller (multiple topics)	◯	◯	◯	◯	◯
Seed merchant	◯	◯	◯	◯	◯
Fertiliser supplier	◯	◯	◯	◯	◯
Chemical supplier	◯	◯	◯	◯	◯
Irrigation supplier	◯	◯	◯	◯	◯
Business	◯	◯	◯	◯	◯
Marketing	◯	◯	◯	◯	◯
Human resources management	◯	◯	◯	◯	◯

Other consulting services used (please specify)

14. Do you expect your reliance on Contractors and Consultants to change in the 2013-2014 season? (Please tick all that apply)

	Stay the same	Increase	Decrease
Contract farming	☐	☐	☐
Contract spraying	☐	☐	☐
Contract harvesting	☐	☐	☐
Contract transporting	☐	☐	☐
Agronomy	☐	☐	☐
Specialised consulting	☐	☐	☐
Seed merchant	☐	☐	☐
Fertiliser supplier	☐	☐	☐
Business	☐	☐	☐
Marketing	☐	☐	☐
Human resources management	☐	☐	☐

Current vacancies

15. Do you have positions on your farm/s in the Lachlan and/or Murrumbidgee production valleys that are currently vacant?

- ◯ Yes
- ◯ No
- ◯ N/A

Current vacancies

16. Which positions, and how many of each of these positions on your farm/s, are vacant? (Please complete all that apply)

	No. of
Full time managerial-level positions	
Full time senior or experienced-level positions	
Full time entry-level positions	
Part-time positions	
Casual positions	

Other vacant positions (please specify)

Future staffing

17. Will the employment needs on your farm/s in the Lachlan and/or Murrumbidgee production valleys for the 2013-2014 season, change from last season?

- ◯ No, stay the same
- ◯ Yes, more employees
- ◯ Yes, fewer employees
- ◯ Unsure

Increasing or reducing staff in the 2013-2014 season

18. What positions on your farm/s will you be looking to fill? (Please complete all that apply)

	No. of positions to be increased
Full time managerial-level position/s	
Full time senior or experienced-level position/s	
Full time entry-level position/s	
Part-time position/s	
Casual positions	

Other positions (please specify)

19. What positions on your farm/s will you be reducing? (Please complete all that apply)

	No. positions to be reduced
Full time managerial-level position/s	
Full time senior or experienced-level positions	
Full time entry-level positions	
Part-time positions	
Casual positions	

Recruitment

20. In the last 12 months have you recruited employees for your farm/s in the Lachlan and/or Murrumbidgee production valleys? (This includes permanent and casual employees)

- Yes
- No
- N/A

Recruitment

21. Which positions on your farm/s have you recruited for, in the last 12 months?

	No. of positions
Full time managerial-level positions	
Full time senior or experienced-level positions	
Full time entry-level positions	
Part-time positions	
Casual positions	

Other (please specify)

The last person you recruited

22. Thinking of the last person you recruited for your farm/s (excluding Casuals), how long did it take for you to fill the position?

- ◯ Less than 1 month
- ◯ 1-3 months
- ◯ 4-6 months
- ◯ More than 6 months
- ◯ Still looking
- ◯ Unable to fill

23. Thinking of the last person you recruited for your farm/s (excluding Casuals), how did you go about finding the person, did you (Please tick all that apply):

- ☐ Advertise - Local paper
- ☐ Advertise - Qld Country Life
- ☐ Advertise - Rural newsletters
- ☐ Advertise - Internet
- ☐ Use cotton organisation
- ☐ Use employment agency / Labour hire organisation
- ☐ Use network - friends/neighbours/business contacts
- ☐ Migration agent / Seasonal worker program
- ☐ Go to a university / education provider
- ☐ Use existing staff networks
- ☐ Employ the person in the past

Other (please specify)

24. And thinking of the person who filled the position on your farm/s, how satisfied were you with this employee's (This includes permanent and casual employees)

	Very dissatisfied	Dissatisfied	Neither satisfied or dissatisfied	Satisfied	Very satisfied
Experience	◯	◯	◯	◯	◯
Skills and knowledge	◯	◯	◯	◯	◯
Overall fit with your business	◯	◯	◯	◯	◯

Casuals

25. In the last 12 months did you employ Casual staff on your farm/s in the Lachlan and/or Murrumbidgee production valleys?

- ◯ Yes
- ◯ No

26. Thinking of the last Casual position that you filled, how long did it take to fill the position?

- ◯ 24 hours
- ◯ Less than 1 week
- ◯ 1-2 weeks
- ◯ 3-4 weeks
- ◯ More than 1 month
- ◯ Still looking
- ◯ Unable to fill

27. Thinking of the last Casual position you filled, how did you find the person? (Please tick all that apply)

- ☐ Advertise - Local paper
- ☐ Advertise - The Qld Country Life
- ☐ Advertise - Rural newsletters
- ☐ Advertise - Internet
- ☐ Use cotton organisation
- ☐ Use employment agency / Labour hire organisation
- ☐ Use network - friends/neighbours/business contacts
- ☐ Migration agent / Seasonal worker program
- ☐ Go to a university / education provider
- ☐ Use existing staff networks
- ☐ Employ the person in the past

Other (please specify)

28. In finding Casual employees for your farm/s, have you accessed overseas workers?

- Yes
- No

29. Did you use a particular or several overseas worker visa schemes or similar, to recruit them? (Please tick all that apply)

- No
- Yes: 417 (ie Holiday; 88 days for 1st visa)
- Yes: 457 (ie Sponsorship; 3mths-4yrs)
- Yes: Seasonal Worker Program

Other schemes or avenues to access overseas workers (please specify)

Effective recruitment strategies

30. What have been your most effective recruitment strategies for employing people (Casuals and permanents) on your farm/s, and why?

Turnover

31. How many of your current paid employees ...

	Joined the farm/s in the last 12 months	Joined the farm in the last 12 months and were new to cotton?
Entry-level		
Experienced-level		
Senior experienced-level		
Managerial-level		

32. How many of your paid employees left in the last 12 months

	Permanent-fulltime	Permanent-part time	Casual-end of season/work	Casual-not end of season/work
Managerial-level				
Senior-experienced level				
Experienced-level				
Entry-level				

Training

33. In the last year did you or any employees on your farm/s in the Lachlan and/or Murrumbidgee production valleys, attend any formal training, education or professional development?

- ◯ Yes
- ◯ No

The last training

34. Thinking of this last formal training, was the training delivered (Please tick all that apply)

- ☐ On-farm
- ☐ Off-farm
- ☐ On-line

35. Please provide details of this last formal training - provider, how it was paid for, benefits (Please answer all that apply)

	Was the training accredited?	Was the training paid for/subsidised by employer?	Benefit for the farm
Employer (if not self-employed)			
You as the employer			
TAFE			
Agricultural college			
University			
Other registered training provider			
Machinery manufacturer			
Equipment manufacturer			
Seed / Product reseller			

Other training providers (please specify)

Future training

36. Are there plans for any training, formal or informal, for your farm employees or yourself in the 2013-2014 season?

- Yes
- No

Future training

37. What training is planned for your farm employees or yourself for the 2013-2014 season (This excludes training for regulated activities eg ChemCert)(Please tick all that apply)

- [ ] Farming (crop rotation; ground preparation; sowing; crop nutrition; water management; pest management; harvest preparation; harvest transport)
- [ ] Machinery-GPS functionality
- [ ] Machinery-general eg backhoe; forklift
- [ ] General farm duties (eg welding)
- [ ] Informal training necessary for new/Casual staff to carry out their duties
- [ ] myBMP
- [ ] Occupational Health and Safety
- [ ] Human Resources management
- [ ] Business management
- [ ] Certificates / Diplomas
- [ ] Trade / Apprenticeship
- [ ] University

Other training planned (please specify)

Managing staff

38. Thinking about your overall approach to managing staff on your farm/s, to what extent do you provide staff with the following: (If no staff, go to the next question)

	Never	Rarely	Sometimes	Always
Freedom to use initiative	○	○	○	○
A flexible work schedule	○	○	○	○
Feedback and recognition	○	○	○	○
A pleasant working environment	○	○	○	○
Career guidance and mentoring	○	○	○	○
Participation in decision-making	○	○	○	○
Above award wages	○	○	○	○
Training during work hours (off-site or on-site)	○	○	○	○
Open two-way communication	○	○	○	○
Safe work environment	○	○	○	○
Opportunity to develop new skills	○	○	○	○
Challenging and interesting work	○	○	○	○
A reasonable workload	○	○	○	○

39. What have been your most effective retention strategies? (Please tick as many as apply)

If no previous staff, go to next question.

- [ ] Pay above award wages/competitive market based salary
- [ ] Be flexible (eg family time; hours of work)
- [ ] Say "Thank you"
- [ ] Provide a package (eg wages + house + transport)
- [ ] Ensure some time off during peak periods
- [ ] Recruit people who live locally
- [ ] Share staff with family / friends / neighbours (to increase hours of work)
- [ ] Provide full time employment (rather than part time / casual / seasonal)
- [ ] Pay a bonus
- [ ] Give rewards / promotions (eg pay rise; improved benefits)
- [ ] Provide a career path on your farm / company
- [ ] Provide a career path in the region
- [ ] Provide mentoring
- [ ] Provide varied work to develop skills and capability
- [ ] Match employee with interests / skills
- [ ] Give employee responsibility for geographical area / machine

Other effective retention strategies (please specify)

40. What strategies have you used to work around the shortage of agricultural employees?

Now just a few questions about yourself

41. What are your farming plans for the next five years?

- [ ] No change expected to farming operations
- [ ] Expand size of farm enterprise
- [ ] Reduce size of farm enterprise
- [ ] Sell farm
- [ ] Activate succession plan - within family
- [ ] Activate succession plan - corporate

Other (please specify)

42. How long have you been working in or associated with the cotton industry? (Please add a number in digits)

Years

43. If you have worked outside the cotton sector previously, what attracted you to this sector?

44. What proportion of your gross income is from cotton?

- [ ] Less than 20%
- [ ] 20-50%
- [ ] 51-75%
- [ ] More than 75%

45. Apart from cotton, what other income sources do you have? (Please tick all that apply)

- [ ] Other irrigated crops
- [ ] Other dryland crops
- [ ] Livestock
- [ ] Contracting to other farmers
- [ ] Other farm income
- [ ] Off farm income

46. What is your age group?

- ◯ 18-24 years
- ◯ 25-34 years
- ◯ 35-44 years
- ◯ 45-54 years
- ◯ 55-64 years
- ◯ 65-74 years
- ◯ 75 years or older

47. What is your gender?

- ◯ Male
- ◯ Female

48. What is the highest level of education your have completed?

- ◯ Primary school
- ◯ Year 10
- ◯ Year 12
- ◯ Tertiary

49. What is the postcode where you live?

Postcode

50. Are you a member of any of these organisations? (Please tick all that apply)

- ☐ Cotton Australia
- ☐ Lachlan and/or Murrumbidgee Cotton Growers Association
- ☐ NSW Farmers Federation
- ☐ Rice Growers Association
- ☐ Riverland Winegrape Growers Association
- ☐ Australian Institute of Company Directors
- ☐ Australian Human Resources Institute

Other (please specify)

Finally, some questions about the cotton industry

51. Looking to the next five years, what do you foresee as the main challenges in finding people to work on your farm/s?

52. Looking to the next five years, what do you foresee as the main challenges in keeping people on your farm/s and in the cotton sector?

53. Do you have final comments on the issues and challenges you face in attracting and retaining your farm workforce or any suggestions for how the cotton sector could better address cotton workforce issues?

Thank you for your assistance. You have now completed the cotton workforce ...

If you have any questions please contact:
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0422 183 011

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