

# UM1501 CRDC Project

## The impact of farm workforce turnover in the cotton sector – Milestone Report

### Report to Cotton Research & Development Corporation

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**Milestone 2.1:** Results of case study farm analysis: the impacts of turnover on 15-20 cotton farms.



THE UNIVERSITY OF  
MELBOURNE



Australian Government  
Cotton Research and  
Development Corporation

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## Introduction

The Australian cotton industry recognises the value of people and has a vision that by 2029 it will be: “Capable - an industry that retains, attracts and develops highly capable people” (Cotton Research and Development Corporation 2010, p. 4), but the business case and measures for improvement in human resources are not well understood. This represents a major gap in current knowledge for the productivity and profitability of cotton production. Research conducted as part of the CRDC Innovative work project (see Moffatt and Nettle 2013) suggests that high rates of turnover, particularly for casual and less experienced staff are negatively impacting farm business profitability. This occurs directly through lower productivity, as well as higher machinery maintenance costs and other costs like insurance premiums. It also occurs indirectly through increased stress and time lost in repeated recruitment, and induction and training of staff in already tight labour markets. Until now these impacts have remained hidden from conventional farm business analysis and have not contributed to clear messages about people management. In addition, there are no explicit measures of staff turnover currently used either on-farm or in the industry to track improved performance or assess the impact from activities to improve human resource management like changes to employee induction, employer training or employer participation in MyBMP.

This project aims to: 1) establish meaningful measures of turnover that can be used to assess change in human resource management performance and track progress over time at a farm and industry level; 2) examine the real costs and impacts of staff turnover on a sample of cotton farms; 3) identify the practices most strongly linked to low turnover; and 4) explore the relationship between turnover performance and farm profit. The project combines theories of human resource management (i.e. fulfilment of the psychological contract in employment relations) and farm management (financial and economic analysis) to explore the relationship between employee turnover and farm business impacts. Employee turnover is one of many potential indicators of management performance, and it is also one of the more measurable indicators of the status of people management on farms. Employee turnover is known to directly impact business costs and returns.

Our multi-disciplinary research team includes social scientists with experience in human resource management on-farms and for primary industry workforce development, a farm management economist, and the farm management accounting firm Boyce Chartered Accountants. A case study methodology was used with 11 current Boyce Accountants Cotton Comparative Analysis farms. Cotton growers were interviewed and data was collected to complement the physical and financial analysis collected via Boyce. Data included: 1) employers’ attitudes toward employee turnover and the relative importance of employee engagement and retention; 2) the costs, benefits and impacts from turnover (from farmer experience and farm business accounts in the previous 12 months); 3) human resource management practices on farm and employee skills; and 4) training and work engagement. A cross-case analysis will be undertaken to examine any quantitative trends associated with costs of turnover, farm profitability, and social and industry impacts of turnover. Qualitative analysis of the key differences between groups of farms with different employee turnover will be conducted to reveal the areas for potential industry intervention for supporting change.

Findings and recommendations from this project will be used by growers and the industry to consider the business case for improved people management on-farms and in establishing meaningful measures to assess the impact of interventions in improving people management.

## Project background

Attracting and retaining the future workforce is a key issue for Australian agriculture. Efforts to attract a workforce and increase the interest in agricultural careers have been ongoing, but benefits associated with retaining current employees have received less attention. Tightening labour supplies coupled with escalating costs in recruiting and developing a workforce (Davies and Sofo 2006) means many business managers are now putting in place practices that target retention of talented staff as part of their overall business strategy. For example, engaged employees are less likely to leave a business and are more likely to contribute positively to business performance. Failing to retain high performing employees can hinder business success and competitive advantage through chronic understaffing leading to employee fatigue, increased risk of injury and workplace stress, and a less qualified workforce (Rappaport, Bancroft et al. 2003). Beyond individual businesses, poor retention of talented employees across an industry or sector can result in a poor reputation for that sector which limits the attractiveness to potential new entrants and creates experience gaps.

Research in the Australian cotton sector indicates that high staff turnover is impacting directly on the productivity and profitability (Moffatt and Nettle 2013). Within the sector, however, there appeared to be a large variation in staff turnover between farms, and in the motivations and strategies associated with retaining a workforce. As the cotton sector seeks to improve productivity in socially and environmentally sustainable ways, the impacts from high turnover needs to be measured and understood as do the practices that enhance retention and generate positive business impacts. These are current knowledge gaps impacting on the ability of the sector to understand the business case for improved people management.

## Project aim

The main aim of this research project is to generate knowledge about the impacts of employee turnover on cotton business performance and establish useful metrics the industry can use to monitor change in employee turnover.

Growers vary in their perceptions of the cost and impacts of turnover and in their beliefs about what are acceptable levels of turnover. For instance, some growers consider high turnover a cost of doing business in tight labour market conditions, if they exist, and an expected consequence of post-drought expansion in cotton plantings. Some growers gain secondary advantages affecting their workforce requirements from investments primarily made for other reasons such as round-bale pickers. Others value workforce stability and have structure their business in a way to retain staff. This variation is mirrored in a small study of 20 dairy farmers about their perceptions of the financial cost of employee turnover. This ranged from \$1000/employee for those who perceived the “costs” of turnover to be solely recruitment costs through to \$50,000 for those who perceived staff turnover as having wider business impacts (Neal 2013). This project builds on employee turnover research by focusing on the negative (and positive) economic *and* social impacts on the business, rather than on turnover rates alone. This research will engage growers in considering the impact of turnover on their own business and the potential changes they could make to their people management strategies. At the industry level, this research will develop knowledge about the variation in employee turnover and its impacts on a range of cotton farms. This will assist the cotton sector in targeting interventions to support human resource management practices on-farm, assist in measuring change (e.g. cost-benefit of activities to support HRM on-farm and metrics for the HR side of the business) and for use in MyBMP (myBMP 2013)

and farm benchmarking programs. The research will also provide data that can support the business case for both farms and the industry in investing in people.

## This milestone report

This second milestone report presents the progress on the project with respect to:

- Final sample and data collection methods
- Preliminary data analysis for each farm
- Next steps for the project

## Sample and data collection

The cases chosen for this study were purposefully selected. This case study sampling approach aimed to provide variation in farm size, ownership, and production valley that could be relevant to employee turnover. The purpose of the study is to understand variation amongst farms in turnover, and the impacts of that turnover, rather than generalize those findings to a population of farms. Participants were initially chosen from those participating in the Boyce benchmarking exercise. We recruited 11 farms through Boyce, but then extended our sampling frame to obtain the requisite number of 15 farms. An additional 6 participants were identified by the project's advisory panel.

Boyce accountants contacted farmers who had participated in the Cotton Comparative Analysis to ask for their consent to be contacted by a member of the research team. Of these farms, 11 agreed to participate in our study. Almost all were located in the St. George/Dirranbandi, McIntyre, Gywdir or Namoi valleys (see figure 1).

Figure 1: The valleys where most of the interviews took place

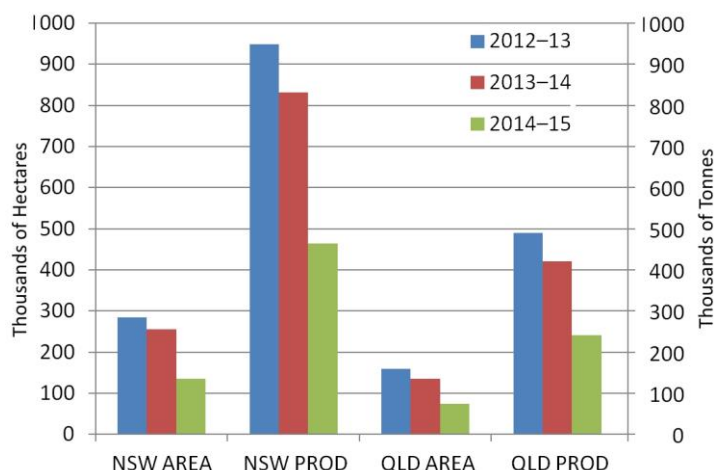


(Map modified from, Cotton Research and Development Corporation 2010)

## Context of this research

The growing season coinciding with this research had substantially reduced water allocations (in some cases down to 20%) compared to the previous season (see figure 2). The reduction in production caused by water scarcity has had profound effects on the general demand for labour, but particularly the demand for casual labour. Some of the farmers interviewed for this research expect nil water allocations for the next growing season.

Figure 2: Cotton area and production in last three years.



In the 2014–15 season the area planted to cotton in Australia declined by nearly half of previous years to around 210,000 hectares. This was mostly due to dry seasonal conditions around planting time and reduced availability of irrigation water (Australian Bureau of Agricultural and Resource Economics and Sciences 2015).

## Grower interviews

Growers were asked to take part in a 60 minute semi-structured face-to-face interview at a location of their choosing. They were asked about their employment practices, their workforce structure, the frequency and reasons for turnover in their workforce, and the impacts from that turnover on their business.

## Employee surveys

Farmers provided verbal consent for us to provide existing employees with our survey. These surveys were posted to the farmer, along with reply paid envelopes, for them to distribute. Currently we have received responses from 1 farm (A), have provided surveys to 3 more farms, and are contacting the remaining 11 farms for permission to send the surveys. Where permission is provided, we will send the remaining surveys in July and follow up with all farms to ask that employees complete and return the survey.

*Farm A:* Nine employees completed the survey (*M* age= 35-44; 78% men). These employees have been in the cotton industry for an average of 8.4 years and 78% are employed full-time. Their average working week consists of 58 hours, but during busy periods they work an average of 72 hours/wk.

## Financial analysis

The financial data from the Boyce Cotton Comparative Analysis from each of the interviewees has been collated (see table 1). Some of these farms had 3 years of data available; others only had 1 or 2 years available. The 11 cotton farms which have made their financial data available are, on average, larger producers than the average farm from the Cotton Comparative Analysis (about 2,500 versus 1,500 ha of cotton grown). They are also substantially larger than the average size of an irrigated cotton farm in Australia which is 656 hectares (Cotton Australia 2015).

The comments in this document mainly relate to the operating profit per bale and per ha, as the asset values to calculate Return on Total Assets were not available for most farms. The Return on Total Assets would provide an important insight into the business performance.

Specific comments have been made using the insights from this data in the following discussion of individual cases.

Table 1: Compiled benchmarking data for interviewed farms

Farm	E	J	D	B	K	H	A	I	G	F	C	CCA Average	Average of growers interviewed
<b>2012</b>													
Hectares of cotton grown	3924	567	1301	.	2208	1368	6650	1348	.	.	.	1676	2481
Yield per hectare (bales/ha)	12.2	12.1	8.9	.	10.0	10.4	9.0	9.0	.	.	.	10.1	10.2
Value per bale	\$ 482	\$ 473	\$ 486	.	\$ 504	\$ 426	\$ 471	\$ 415	.	.	.	\$ 474	\$ 465
Cost of production per bale	\$ 324	\$ 373	\$ 383	.	\$ 332	\$ 329	\$ 356	\$ 379	.	.	.	\$ 363	\$ 354
Cost of production per ha	\$ 3,933	\$ 4,494	\$ 3,397	.	\$ 3,298	\$ 3,432	\$ 3,209	\$ 3,413	.	.	.	\$ 3,601	\$ 3,597
Operating profit/(loss) per bale	\$ 158	\$ 100	\$ 125	.	\$ 178	\$ 191	\$ 115	\$ 37	.	.	.	\$ 116	\$ 129
Operating Profit per Ha	\$ 1,917	\$ 1,207	\$ 1,112	.	\$ 1,775	\$ 1,993	\$ 1,032	\$ 330	.	.	.	\$ 1,157	\$ 1,338
Total Labour Costs as % of income*	14%	17%	10%	.	9%	15%	22%	9%	.	.	.	16%	15%
Owner/Family Labour as % of total Labour Costs	0%	2%	33%	.	4%	4%	0%	39%	.	.	.	3%	3%
<b>2013</b>													
Hectares of cotton grown	4,784	871	1,950	5,298	1,890	1,200	.	1,260	.	.	.	1,518	2,465
Yield per hectare (bales/ha)	10.1	12.7	12.1	10.9	9.3	11.6	.	11.3	.	.	.	.	11.1
Value per bale	\$ 407	\$ 471	\$ 447	\$ 421	\$ 427	\$ 422	.	\$ 443	.	.	.	.	\$ 434
Cost of production per bale	\$ 359	\$ 239	\$ 315	\$ 329	\$ 403	\$ 245	.	\$ 312	.	.	.	.	\$ 314
Cost of production per Ha	\$ 3,609	\$ 3,026	\$ 3,813	\$ 3,584	\$ 3,753	\$ 2,845	.	\$ 3,508	.	.	.	.	\$ 3,448
Operating profit/(loss) per bale	\$ 48	\$ 232	\$ 132	\$ 93	\$ 32	\$ 193	.	\$ 131	.	.	.	.	\$ 123
Operating Profit/Ha	\$ 483	\$ 2,937	\$ 1,598	\$ 1,012	\$ 298	\$ 2,244	.	\$ 1,474	.	.	.	.	\$ 1,435
Total Labour Costs as % of income*	15%	4%	12%	23%	10%	17%	.	9%	.	.	.	21%	16%
Owner Labour as % of total Labour Costs	0%	59%	0%	0%	5%	0%	.	28%	.	.	.	4%	2%
<b>2014</b>													
Hectares of cotton grown	3,590	.	518	4,238	1,351	1,857	7,105	1,334	1,005	513	2,236	1,593	2,490
Yield per hectare (bales/ha)	10.8	.	10.1	10.7	9.2	11.7	7.6	10.5	12.0	10.2	12.8	10	10.6
Value per bale	\$ 452	.	\$ 484	\$ 449	\$ 493	\$ 449	\$ 487	\$ 443	\$ 503	\$ 484	\$ 477	\$ 473	\$ 475
Cost of production per bale	\$ 434	.	\$ 435	\$ 341	\$ 392	\$ 342	\$ 455	\$ 300	\$ 221	\$ 464	\$ 280	\$ 382	\$ 374
Cost of production per Ha	\$ 4,684	.	\$ 4,388	\$ 3,659	\$ 3,593	\$ 3,997	\$ 3,474	\$ 3,131	\$ 2,646	\$ 4,721	\$ 3,583	.	\$ 3,861
Operating profit/(loss) per bale	\$ 82	.	\$ 49	\$ 108	\$ 110	\$ 107	\$ 32	\$ 144	\$ 282	\$ 20	\$ 197	\$ 96	\$ 110
Operating Profit/Ha	\$ 886	.	\$ 489	\$ 1,155	\$ 1,009	\$ 1,247	\$ 246	\$ 1,500	\$ 3,380	\$ 206	\$ 2,524	.	\$ 1,238
Total Labour Costs as % of income*	13%	.	12%	19%	15%	10%	23%	9%	8%	20%	9%	22%	16%
Owner Labour as % of total Labour Costs	0%	.	0%	0%	5%	4%	0%	30%	17%	18%	0%	3%	1%

\* Total labour costs includes employees wages, contract picking, farming and ripping, and the value of owner/family labour.

## Preliminary case analyses

### Farm A

#### Selected quotes from the interview

This farmer explained what he needed to do to manage staff, "... a lot of my job is just getting around, talking to people and making sure that people understand what we're doing and what that guy over there is doing compared to this guy and how those things interrelate and how they need to work with it and around each other. That's sort of bringing the whole thing together."

He went on to explain his approach to staff management:

*Yeah, well it's listening to what they need or what makes life easier for them, and trying to provide good equipment to work with and good accommodation. We always try and accommodate that sort of stuff to keep the family happy. Or sometimes it might be school or whatever else you can help them out. Might be the use of a vehicle sometimes if they're stuck. Generally it's not more money. There's usually something else.*

Employees seem to recognise this and report high levels of workplace support and engagement in work, as well as low levels of burnout. They report enjoying the 'challenges' and 'opportunities' their jobs provide.

#### Preliminary observations

The manager thinks that their workers are happy but they have had to reduce staff numbers because of reduced irrigation water availability.

They emphasise belonging to a team. It seems to be that managers demonstrate that they are willing to do the job themselves. (It's them demonstrating that they are a part of the team.) What seems to set them apart is an empowered workforce that is threatened by the loss of water. It seems that staff will have to go and the team will need to be rebuilt at a later date. Employees are aware of these issues and report uncertainty around their jobs although do not seem to be intending to voluntarily leave the farm.

There is no perceived impact from workforce turnover because they have a lot of skilled workers. Employees also report that their jobs require a high level of skills/qualifications and that it provides them with opportunities to further develop their existing skills and knowledge. Managers come from within the business. Expertise such as agronomists and mechanics come from outside.

They grow about 4 to 5 times the area of cotton compared to the average CCA participant, and produce about 50,000 to 60,000 bales. Their yield per ha was below the average farm in the 2 years which their data was available for. Their operating profit per bale and per ha was below average in both years. Their operating expenses per ha and per bale were not markedly different to the average farm, but the lower yield per ha had an impact on operating profit per ha.

#### Questions to consider

What is the relationship between teamwork and empathy and 'ownership'? What are the factors that contributed to the lower yield per ha, was it, for example, poorer soil types, or less irrigation water applied? Could it be less attention to detail with the large scale of the operation? Could it be that the land value or the cost of water is lower than for some farms in the sample and hence the return on total assets may be relatively efficient?

## Farm B

### Selected quotes from the interview

This interviewee explained the costs and benefits of a contractor model of staffing:

*We use full contract irrigation and full contract for in-field operations; so planting, cultivating, harvesting, picking and spraying is all done on contract. We went to that contract model to bring in skilled people with the resources. The headaches that come with sourcing and managing all those staff, these guys are very happy to do that, there's a profit margin in it for them. We've just created that position where we're one step removed. I do understand that it is a big issue keeping skilled workers within the business. That is a disadvantage in our system, because if you want business continuity of corporate knowledge, etc., that becomes difficult if you haven't got a 2IC in training.*

### Preliminary observations

This business is about management. Contractors are employed for all operations. They expect to pay a premium to avoid the problems of managing a workforce. They recognise that the people who are attracted to work on a cotton farm are of a certain 'type', or at a certain level, and they do not want to be involved in that interaction.

Their yields per ha were similar to the average of the CCA farms. Their operating expenses per ha and per bale were a little lower than the average farm, resulting in an operating profit that is a little above the average per ha and per bale. It appears that their management processes are ensuring good yields with good cost control, which is a significant achievement with that scale of operation.

### Questions to consider

In terms of the Five Capitals framework, the assets of this business are Natural, Financial, and Man-made. The question is how vulnerable are they to the loss of Human and Social resources? Could they maintain their cost control for longer than the 2 years that we have data for?

## Farm C

### Selected quotes from the interview

This interviewee explained what they thought was their biggest problem with staff:

*Because the business is so cyclical, it's actually a very challenging time with labour, because we literally don't have any work. So we've had a very small cotton crop. We've tidied up essentially everything we can tidy up, post cotton crop. The fields that we want to have ready are ready, we've fertilised what we think we should fertilise. We got rid of casual staff a long time ago, now we've got our core staff that we're looking at and we're thinking, how do we justify having these people? ...we really try hard to keep hold of our salaried guys, because we know it's very expensive for us to replace. But a lot of it is not necessarily in dollars, a lot of it is in, in productivity and it's in culture and for us, our culture is ... very important.*

They went on to describe how working holiday makers fitted in with their labour demands, "The beauty of backpackers is that they're happy to come in, sometimes we might only need them for two months, so

they can come in, do the work and go. It suits these sorts of people to come in, work for 2 months, live in single men's quarters, work 12 hours a day or whatever ...”

### Preliminary observations

There seems to be a continual emphasis on the engaged family-style workforce. The owner sees it as important that he knows people’s names. It is a team and a culture that comes from the owner. (It is a large business that could be seen as being a hybrid of a corporate and family business).

Use backpackers at times because they are a good match with their needs. This is because the characteristics of the WHM workforce fit with the requirements of the irrigated cotton industry.

Local people don’t want to do seasonal work. This is not because they don’t want to work but because it doesn’t fit with their needs of security and on-going employment. Cost of staff is in not having good staff. Not in the cost of employing them.

They grew over 2000 ha of cotton in 2014 compared to about 1500ha for the average CCA farm. Had a relatively high yield per ha and the operating expenses per ha and per bale were below average. The operating profit per ha and per bale were more than double that of the average CCA farm.

They have virtually no staff turnover. Although they currently have a problem in retaining their existing trained, enthusiastic and engaged workforce when there is no need for them. They have done things like infrastructure investments. But there is nothing else that makes sense to do. They have high quality, self-motivated staff that would be a loss if they were to leave, but it is difficult to carry them through times when they are not required for on-farm work.

### Questions to consider

This farm only provided data for the 2014 benchmarking exercise. Can they maintain their current performance over the longer term?

## **Farm D**

### Selected quotes from the interview

This farmer explained the biggest problem with workforce turnover, simply saying, “you get good years and bad years, and in a bad year you've got to cut your staff numbers. That gives the farmers and the industry a headache.”

This farmer also saw workforce issues in the cotton industry as having multiple sources, one caused by the Government, “You look at a lot of the school kids coming out of the system and their training's not right. You've got more instability, and that comes from governments disempowering people. Like when you give kids the dole six months after they leave school, you create a brain dead person over time that's unemployable. He also suggested that farmers were also at fault, “I just find so many people out there running farms that don't understand human beings. They understand their own ego and how to get out and bash as much as they can out of men, but it's a 2-way deal, I don't think there's been enough work done on that.”

### Preliminary observations

There was some suggestion that the use of groundwater removes the effects of seasonality. The central message from this interview was a focus on the value of communities, families and personal responsibility. The farmer suggested that cotton farmers, in general, do not understand people very well. They also identified that proximity to a town was an advantage for retaining their staff.

Area of cotton grown varied from nearly 2,000 ha in 2013 to just over 500 ha in 2014. Yield per ha was generally above average, but the costs per ha tended also to be above average. There was a large decrease in the total operating profit between 2013 (over \$3 million) to 2014 (\$0.25 million).

### Questions to consider

As it doesn't appear to be related to water availability, what are the factors associated with the decrease in profit in 2014?

## **Farm E**

### Selected quotes from the interview

Commenting on their use of backpackers, this interviewee suggested,

*"The ones with the better work ethic are the ones that travel. Because they're not frightened to get out, leave their comfort zone and go out and look for work. We've had American guys, Irish, we had Estonians. Terrific work ethics. Some of the locals from in town that have come from Centrelink can leave a little bit to be desired."*

### Preliminary observations

Workforce composition on this farm is Core and Casual. But, the casuals have all gone. The casual staff consists of 50% backpackers and 50% locals. Locals are used to maintain goodwill in the community. Backpackers are used because they are enthusiastic, but they can be hard on the vehicles.

They have reduced their casual workforce and are now contemplating what they will do if they have to reduce their core workforce due to lack of water.

The area of cotton grown over the 3 years has varied between around 3,500 to nearly 5,000 ha. The yield per ha was generally about average, but was about 20% above average in 2012. The operating profit per ha and per bale was generally around the average for the CCA farms. The operating expenses were generally above average per ha and per bale. This business seemed to be able to maintain reasonable efficiency with a large scale operation.

### Questions to consider

How could they maintain their core workforce? What would be the cost of replacing lost experience if they start reducing their core workforce?

## **Farm F**

### Selected quotes from the interview

Talking about how his workforce often went beyond what was expected from them he said, “The guys have been pretty entrenched in the farm, it's amazing they'll come out at night to do siphons and more than I ask. I've seen them out there at all sorts of hours to make sure that everything's done well. “

Explaining how he was able to maintain a workforce year round he suggested,

*“Having dry land cropping has certainly given us a balance for the work force requirements through the year and that's been a real help. Plus we're in an area which is somewhat reliable for rainfall compared to the west, so we actually do harvest a winter crop, virtually every single year. And so while some years it's unreliable, other years it's good. There's kind of work all year round.”*

### Preliminary observations

This farmer wants their workers to be multi-skilled so that they are useful on a range of activities. They want to do as many of the jobs as they can on the farm with the staff they have without the use of contractors.

They were investing in mechanised irrigation because of the availability of government irrigation efficiency funding. It was recognised that a by-product of this investment was that they would need less staff for irrigation, or have staff who were happier not do a menial task. They identified sources of water as contributing to production variation. Some farmers had access to much more reliable water and were able to retain staff more easily. The sources differed between groundwater and surface water, between valleys and within valleys, and between farms whose water holdings were made of different security levels, and different amounts of water compared to their potentially irrigated land.

This farmer suggested that the satisfaction of staff will to some extent depend on the facilities of the local region.

They grew about 500 ha of cotton in 2014, and data was only available for that year. The yield per ha was slightly below average and the operating expenses were above average per ha. The operating profit per ha and per bale were below average. It appears this business may be going through a development phase and partial efficiency measures, such as operating profit per ha and per bale, may increase in subsequent years.

### Questions to consider

How could the different water-holding strategies of farmers be related to their business performance (especially in years of low water availability)? And how does this affect demand for labour and staff turnover?

## **Farm G**

### Selected quotes from the interview

Commenting on the use of foreign workers this farmer stated, “They generally get into the swing of it pretty quickly.... if you're using backpackers they're obviously people with a little bit of initiative to get out to Australia in the first place. Sometimes language is an issue, but mostly it works pretty well. “

They explained their strategy for interacting with their workforce:

*I think communication is the thing. It's a really big thing. If people are free to communicate, then how many issues are an issue? Also keeping them actively involved in what's going on, so that they don't get told this is what to do, and they understand why they're doing it. And if they can come up with a better way of doing it let's go with it. I think that's a lot of it, just keeping them engaged.*

#### Preliminary observations

The farmer reported that their workers do what is asked of them, but do not do more. It is a family-base operation that seems dominated by the patriarch. They reinforced that the best employee is someone that wants to learn and asks questions.

The evidence is that their workers stay a long time. Their longer term employees are paid significantly above the award. The farmer admits to asking a lot from their workers (so workers seldom surprise them by going above and beyond).

They grew about 1,000 ha of cotton in 2014 (the only year which data was available for), this is smaller than the average CCA farm and they have a relatively high proportion of family labour. They had above average yields per ha and below average costs per ha and per bale. This resulted in exceptionally high profit per ha and per bale, about 3 times the CCA average.

#### Questions to consider

Can this performance be maintained over the longer term? How much of their performance is due to their workers?

## **Farm H**

#### Selected quotes from the interview

This farmer explained the costs and benefits of workforce turnover to his business:

*... if people have left here, over the last 10 years, it's because the work's not there. We're not growing the same amount of cotton. The biggest cost of when someone leaves is the money you've invested in them. Both financially, but also from a time point of view and in training, is your biggest cost of loss. Lost expertise; that can be an issue. But at the moment we're finding the reverse. Due to the hard commodity down turn we're replacing men with better men at the moment.*

#### Preliminary observations

Owner emphasises that he wants workers with morals and decency. Hinted at an us (high morals and decency) and a them (low morals and decency) situation. He talks about people from "our socio-economic background". He suggests that the next productivity improvement on cotton farms will be to employ more women. They are softer on machinery, but they do need to have the right facilities. His management style is a bit removed from employees. Managers are paid for managing the workers. Workers are seen as a resource. There appears to be a gulf between this owner and their workers. His strategy was to use contractors rather than direct employees to shift the problem to the contractors.

Owner has no issues with getting workers. As the mines have wound down high-quality workers are looking for jobs and are prepared to work for less money than they were while the mining boom was on.

Owner appeared to be at arm's length. His managers are the communicators, or the bridge between labour and ownership. The owner can communicate with his managers because they have a similar background. He is less able to communicate with (or even really know) his employees.

The area sown to cotton was slightly less than the average of the CCA farms (about 1,200 to 1,400 ha). This operation had above average yields per ha and above average operating profit per ha and per bale in 2012 and 2013. However, in 2014 they had yields per ha that were below average and about average operating profit per ha and per bale. The costs per ha tended to be lower than the average farm.

#### Questions to consider

Were there any factors, other than low water availability, associated with the lower yields in 2014?

### **Farm I**

#### Selected quotes from the interview

Describing low expectations for his staff this farmer suggested, "I wouldn't say [he's] good, but he's reliable. Turns up every day and tends to like to stand around and talk a lot. But yeah, he's here every day. He's honest. You know what to expect from him. And you tend to look after him a bit. If they're reliable, it just makes a big difference."

This farmer explained some of the frustration with employing staff, "Some jobs are just fiddly jobs. And you actually get to the point where you end up just doing it yourself. But you try to keep all the repetitive jobs for a lot of them. Some guys you can get them interested and then there's other guys, you've just got to tell them everything. Like, I mean you try and get them interested, but unless you tell them to do that it doesn't seem to happen."

#### Preliminary observations

Staff management and training appeared to be a problem for this farmer. Workers classified according to whether they were good or not-so-good. Not so good workers were unmotivated and needed to be directed so that the grower often ended up doing the job himself because the workers can't do it. He does not feel that the situation will change.

This business had slightly less area sown to cotton than the average CCA farm and had a higher proportion of family labour than most of the farms interviewed. Yield per ha was close to the average for the CCA farms, as were total costs per ha and per bale. The operating profit per ha and per bale was below average in 2012, but above average in 2013 and 2014.

#### Questions to consider

Do unsatisfactory workforce cultures develop and get reinforced over time to such a level that they are difficult or impossible to change?

## **Farm J**

### Selected quotes from the interview

Suggesting that there were benefits to workforce turnover one farmer said, "... the ones that have had previous farming experience they've come with a different approach to farming, or having been in the mines they're a lot more work, health, and safety conscious."

They admitted that developing a team culture was difficult, but important:

*...it's sometimes challenging to work as a team if you're sitting on a tractor for 12 hours. But then you've got the opportunity of the changeover and there's certainly a bit of teamwork that goes on there. Certainly trying to encourage a team culture is very important for us, because we've found if you have one non-type team player it affects the rest of the team and the employees and staff morale.*

### Preliminary observations

This farmer was not able to promote staff from within their workforce (but this may have been a timing issue) whereas others have too many people who were able to be promoted.

Casual workers are often criticised for their inexperience, but in this case the owner saw a problem with their older age. They also identified generational issues as being more important than gender issues.

The farmer reported that casual staff from the mines bring with them a different approach to WHS issues and treat machinery better.

This was a smaller operation with from 500 to nearly 900 ha of cotton grown. Had above average yield per ha. The operating profit was about average in 2012, but well above average in 2013. There was no data available for 2014.

### Questions to consider

As there was a higher proportion of family labour in 2013, is there a link between this and the increased profitability?

## **Farm K**

### Selected quotes from the interview

Talking about the difference drivers for corporate and family farms this interviewee said, " we probably risk a little bit more than corporates ... the thing is a lot of the corporates have [external] money so therefore they always worry about losing money. "

The impact of low water allocations (and low levels of production) were felt on the need for staff, "Look, we're very fortunate we've got a lot of people who have been here a long time, 30 odd years, or 20 years or 15 years, or that sort of thing. Yeah, basically we let two good people go. All those casuals will be gone and part time will be gone. So there's 7 gone this year, .. It was a great pain. Terrible. But anyway, they all moved on to better things, we hope."

### Preliminary observations

This farmer reported low employee turnover and emphasised the importance of decency. They demonstrated empathy by mentioning that a long-term employee had given so much of his life to him, so he treated him more leniently. It appears he is respected/liked by his employees and seems to have an understanding of what motivates people. Older people want to see the boss doing the same job. He suggests that the attraction of working on a cotton farm is the lifestyle. He is very reliant on his workforce, and is not attempting to manage the whole operation by himself.

Low staff turnover and long-term employees have created a team culture. Two permanent staff and seven casual staff were not re-employed in the current year because of the lack of water.

Generally grow about 2,000 ha of cotton, but varied slightly over the 3 years. The yields per ha were similar to the average for the CCA farms, except for 2013 when the yield was below average. The operating profit per ha and per bale was also well below average for 2013. The operating profit per ha and per bale was above average in 2012 and 2014.

### Questions to consider

What are the issues associated with this growers lower yields and operating profit in 2013.

***The participants in the following interviews were not part of the CCA. The material presented below is derived from interview notes. The interviews have not been transcribed at the time of writing this report.***

## **Farm L**

### Preliminary observations

The focus for this farmer is on maintaining the core workforce and maintaining morale. They use backpackers to supplement when necessary. They have low or no turnover of core staff.

While it would not have an impact on their staff turnover (which is low or none) they are trialling irrigation technology to avoid using syphons. If this was successful the owner suggested that the morale of the whole team would be lifted, because nobody likes doing syphons. On this farm irrigation is the main seasonal requirement for labour.

The trialling of labour saving technology suggests that if the manager/owner is familiar with the tasks that are required from their employees (which this one was) they would be more likely to make decisions that made the work more enjoyable for their workers thereby increasing their morale. This is because they will be aware of the difficulties of the job and try to reduce those difficulties.

## **Farm M**

### Preliminary observations

This farmer reports trying to build a team. They have a core team and contractors for irrigation (seasonal surge). He is trying to think of his employees beyond their role on the farm. He is a new manager and is attempting to rebuild morale by instituting management changes that were needed but previously ignored.

## **Farm N**

### Preliminary observations

This farmer wants a core team that doesn't change regardless of production and water availability but his strategy to achieve this is to have smaller workforce numbers. This can result in higher levels of work being required from employees in normal times, but when water is scarce (and the need for labour drops) he does not need to reduce staff numbers. He had higher levels of empathy demonstrated by his thinking about what was the most important thing for his workers.

## **Farm O**

### Preliminary observations

This farmer appears to have a 'no nonsense' approach to managing staff. They have a long-term core staff and seem strongly critical of the younger generation. No apparent empathy. His existing staff appear to fit in with his personality. Staff will disagree with the owner, but will eventually need to back down because they realise they are arguing with the owner.

## **Farm P**

### Preliminary observations

This farmer admits to being soft on staff and consultative. They deliberately engage their staff in decisions that are made on the farm to encourage ownership. They realise that their non-authoritative style is the only way that they can manage the employees. They can't do it any differently than that. They were a very empathetic employer.

They obtain their casual workers by word of mouth from current employees. They see their employees as an overhead, not as a variable cost.

## **Next steps**

Over the coming months we will:

- Complete data analysis for the interview transcripts, the employee, and the financial data for all farms (who are willing to provide data). All analyses will be synthesised so that we are able to

develop a richer picture of the business impacts from workforce turnover for each farm, and the HRM practices associated with this turnover.

- Conduct cross-case analyses related to the key themes that will be identified from more detailed interview analysis. This cross-case analysis will also include the employee and financial data to provide an indication of the variation in turnover across the 16 farms in the study, and the business impacts and HRM practices that are associated with this.
- Plan for engagement with industry bodies and farmers in September-November, 2015. Although this action was part of the current milestone, we suggest that the more fully developed results arising from the cross-case analysis (Milestone 2.2) are likely to be more useful for these groups than the preliminary results presented in this report. We propose that this activity is included in Milestone 3.
- Conduct an advisory group teleconference on 21st July, 2015.

## Discussion and Conclusions

The preliminary analysis of the research results highlighted a range of factors that may influence human resource management strategies on-farms and therefore workforce turnover, including 1) the employer's approach to staff, 2) their sources of 'capital' (natural, financial, human, etc), 3) the location, and 4) the reliability of their water sources.

The employer's approach to staff is about what they want from, and for, their staff. It includes notions of empathy, and encouraging ownership and belonging in the workplace. This seems likely to affect work conditions and how employees feel about their employer and their job.

The sources of capital and preferences of the farmer (i.e. natural, financial, human, etc) determine the return on investment they require, and the time frame over which it can be recovered. Businesses that rely on external sources of funding (e.g. shareholders) that can potentially move to other more attractive investments seem to be making different decisions related to, and therefore impacting on, their staff than those that do not.

An interesting theme from examining variation between farms related to staff management and business performance is related to asset values (which we are currently unable to provide, but plan to). It is possible that the more remote areas with cheaper land are easier to achieve a high Return on Total Assets but have challenges associated with attracting staff. The location of the business (and the services available at that location) will likely influence the initial attractiveness of the position to an employee. Indeed, several employees commented on regional location as a key factor influencing their opinion of their workplace. This may, however, change as families grow and the employee's requirement from the community change. However the trade-offs for farm decision-making (remoteness, staffing, business performance) is an interesting initial finding.

The reliability of the irrigation water sources influences the levels of production that are able to be achieved by the business, and the demand for labour. The types of irrigation resources held, and the amount of irrigation water available will affect the business's ability to maintain a constant level of production and a stable workforce.

Further financial data collection and analysis of the research results will specifically examine the relationship between workforce turnover, employee attitudes, and business performance as well as the factors underpinning human resource strategies of growers. Together, this analysis will help target more effective support to farmers in their human resources management, based on their region, access to 'capitals' and their current staffing approach.

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## UM1501 CRDC Project

### The impact of farm workforce turnover in the cotton sector – Milestone Report

#### Report to Cotton Research & Development Corporation

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##### **Milestone 2.2** Results of cross-case study analysis

- The variation in impacts from employee turnover across 15-20 cotton farms is explained.
- The options for improving business performance through people management are described



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15<sup>th</sup> August, 2015

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## Introduction

The Australian cotton industry recognises the value of people and has a vision that by 2029 it will be: “Capable - an industry that retains, attracts and develops highly capable people” (Cotton Research and Development Corporation 2010, p. 4), but the business case and measures for improvement in human resources are not well understood. This represents a major gap in current knowledge for the productivity and profitability of cotton production. Research conducted as part of the CRDC Innovative work project (see Moffatt and Nettle 2013) suggests that high rates of turnover, particularly for casual and less experienced staff are negatively impacting farm business profitability. This occurs directly through lower productivity, as well as higher machinery maintenance costs and other costs like insurance premiums. It also occurs indirectly through increased stress and time lost in repeated recruitment, and induction and training of staff. Until now these impacts have remained hidden from conventional farm business analysis and have not contributed to clear messages about people management. In addition, there are no explicit measures of staff turnover currently used either on-farm or in the industry to track improved performance or assess the impact from activities to improve human resource management like changes to employee induction, employer training or employer participation in MyBMP.

This project aims to: 1) establish meaningful measures of turnover that can be used to assess change in human resource management performance and track progress over time at a farm and industry level; 2) examine the real costs and impacts of staff turnover on a sample of cotton farms; 3) identify the practices most strongly linked to low turnover; and 4) explore the relationship between turnover performance and farm profit. The project combines theories of human resource management (i.e. fulfilment of the psychological contract in employment relations) and farm management (financial and economic analysis) to explore the relationship between employee turnover and farm business impacts. Employee turnover is one of many potential indicators of management performance, and it is also one of the more measurable indicators of the status of people management on farms. Employee turnover is known to directly impact business costs and returns.

Our multi-disciplinary research team includes social scientists with experience in human resource management on-farms and for primary industry workforce development, a farm management economist, and the farm management accounting firm Boyce Chartered Accountants (Boyce). A case study methodology was used with 11 current Boyce Cotton Comparative Analysis farms. Cotton growers were interviewed and data was collected to complement the physical and financial analysis collected via Boyce. Data included: 1) employers’ attitudes toward employee turnover and the relative importance of employee engagement and retention; 2) the costs, benefits and impacts from turnover (from farmer experience and farm business accounts in the previous 12 months); 3) human resource management practices on farm and employee skills; and 4) training and work engagement. A cross-case analysis will be undertaken to examine any quantitative trends associated with costs of turnover, farm profitability, and social and industry impacts of turnover. Qualitative analysis of the key differences between groups of farms with different employee turnover will be conducted to reveal the areas for potential industry intervention for supporting change.

Findings and recommendations from this project will be used by growers and the industry to consider the business case for improved people management on-farms and in establishing meaningful measures to assess the impact of interventions in improving people management.

## Project background

Attracting and retaining a workforce is a key issue for Australian agriculture. Efforts to attract a workforce and increase the interest in agricultural careers have been ongoing, but benefits associated with retaining current employees have received less attention. Tightening labour supplies coupled with escalating costs in recruiting and developing a workforce (Davies and Sofo 2006) had meant that many business managers put in place practices that target retention of talented staff as part of their overall business strategy. For example, engaged employees are less likely to leave a business and are more likely to contribute positively to business performance. Failing to retain high performing employees can hinder business success and competitive advantage through chronic understaffing leading to employee fatigue, increased risk of injury and workplace stress, and a less qualified workforce (Rappaport, Bancroft et al. 2003). Beyond individual businesses, poor retention of talented employees across an industry or sector can result in a poor reputation for that sector which limits the attractiveness to potential new entrants and creates experience gaps. One farmer from the study group suggested that there was a problem with how some farmers treated their employees:

*I just find so many people out there running farms that don't understand human beings. They understand their own ego, and how to get out and bash as much as they can out of men, but it's a 2-way deal. I don't think there's been enough work done on that.*

Research in the Australian cotton sector indicates that high staff turnover is impacting directly on the productivity and profitability (Moffatt and Nettle 2013). Within the sector, however, there appeared to be a large variation in staff turnover between farms, and in the motivations and strategies associated with retaining a workforce. As the cotton sector seeks to improve productivity in socially and environmentally sustainable ways, the impacts from high turnover needs to be measured and understood as do the practices that enhance retention and generate positive business impacts. These are the current knowledge gaps impacting on the ability of the sector to understand the business case for improved people management.

## Project aim

The main aim of this research project is to generate knowledge about the impacts of employee turnover on cotton business performance and establish useful metrics the industry can use to monitor change in employee turnover.

Growers vary in their perceptions of the cost and impacts of turnover and in their beliefs about what are acceptable levels of turnover. For instance, some growers consider high turnover a cost of doing business if labour market conditions are tight, and an expected consequence of post-drought expansion in cotton plantings. Some growers gain secondary advantages affecting their workforce requirements from investments primarily made for other reasons, such as, round-bale pickers. Others value workforce stability and have structured their business in a way to retain staff. This variation is mirrored in a small study of 20 dairy farmers about their perceptions of the financial cost of employee turnover. This ranged from \$1000/employee for those who perceived the costs of turnover to only be recruitment costs through to \$50,000 for those who perceived staff turnover as having wider business impacts (Neal 2013). This project builds on employee turnover research by focusing on the negative (and positive) economic and social impacts on the business, rather than on turnover rates alone. This research will engage growers in considering the impact of turnover on their own business and the potential changes they could make to their people management strategies. At the industry level, this research will develop knowledge about the variation in employee turnover and its impacts on a range of cotton farms. This

will assist the cotton sector in targeting interventions to support human resource management practices on-farm, assist in measuring change (e.g. cost-benefit of activities to support HRM on-farm and metrics for the HR side of the business) and for use in MyBMP (myBMP 2013) and farm benchmarking programs. The research will also provide data that can support the business case for both farms and the industry in investing in people.

## This milestone report

This second milestone report presents the progress on the project with respect to:

- The cross-case analysis of farms involved in the study
  - Analysis framework
  - Initial findings
  - Implications and questions
- Options for improving business performance
- Next steps for the project

## The cross-case analysis of farms involved in the study

### Analysis framework

The 5-capitals framework (natural, human, social, physical, and financial) provides a structured way of thinking about farming systems, farm businesses and decision making in relation to the larger systems farms are situated, and the framework has been usefully applied in developing countries (Bebbington 1999, Ellis 2000) and in rural Australia (Macadam, Drinan et al. 2004). This framework is flexible enough to be used for different purposes, such as examining resilience in a developed country context (see Brown, Nelson et al. 2010), or in understanding adaptive capacity of dairy farmers to climate challenges in SE Australia (Ayre, Waller et al. 2014 ). We are using the structure of the 5-capitals framework as a way to identify and explore the influences and explanations for workforce strategies and outcomes, specifically related to employee retention/workforce turnover.

This approach recognises that although the different ‘capitals’ of a farm business interact and influence each other in multiple ways, different capitals take priority or underpin choices at different times, because of a sequence of events or a particular historical context. This in part goes to explain the presence of multiple systems of cotton production, business models and workforce organisation as suggested by one of the project’s interviewees:

*...that’s the thing about farming, there’s multiple business models operating in different systems and surprisingly every system, certainly what’s left now, everyone’s making a success of it, they’re still in the business. They haven’t gone bankrupt yet, so they must be doing something well. So there’s lots of different styles and systems, this is the style we’ve gone for here and it seems to be going OK.*

Considering the capitals-framework as a dynamic interaction (rather than static representation) of capitals that can be drawn upon to sustain or change a business operation within a particular context, we apply this to understand the reasons for the variation between growers strategies and decisions related to human resources management and workforce organisation that can underpin high or low employee turnover.

The dynamic interaction of the capitals on the farms interviewed, and the resultant complexity in understanding employee turnover impacts, we suggest comes from the unique constraints of the crop that is being grown and how it is grown. One interviewee described the complexity in cotton farming:

*Growing cotton is a challenge. It's a difficult crop and no crop is ever the same and you know the bloody weather throws all sorts of challenges. There are pricing challenges. The crop itself, there will be new insects that might start feasting on it, or might start to have resistance with herbicides. There are different things that need managing all the time and it's challenging. And for all of us, whilst we all want to be able to grow 15 bales of cotton, and we want it to cost as little as it possibly can, that's the ultimate, and along the way of trying to get there, it's constantly looking at different ways, different ideas, there's nothing fixed.*

Putting this complexity into context, and describing how it influences workforce strategies, one farmer said:

*Most farmers are under stress. Because the good years don't necessarily cover the bad years. Especially in the last few decades, there's been a lot of money lost. Cotton farms are not going up in value for a reason. When you get good years and bad years, you've got staff in a good year and in a bad year you've got to cut your staff numbers. So that doesn't work, that gives the farmers in the industry a headache. And people's expectations are high now, so if you've got a farm 100 km west of town, you've got to have accommodation on your farm to support the people who work for you. I suspect some of that's not as good as it could be. Then if you need four men to do a job they're probably trying to do it with three men.*

The weather adds a seasonality factor into the demand for labour, but the technology embedded in the cotton plant and the machines and practices that are used to manage the cotton crop have also had a longer term impact on the need for labour.

*Cotton's changed so now it's not only the insect protection in there, but they're Roundup ready, so you can spray Roundup over the top and not kill it, so now instead of being in there and cultivating with tractors 2-3 times, you spray it once or twice, so we're now spray rigs at a 24-36m wide, doing a job that an 8m cultivator used to do. So the requirement for labour has dropped, but the irrigating part's still the Achilles heel. So you still need a lot of labour to start siphons (see Figure 1). Everyone hates it.*

**Figure 1.** Siphons stored between seasons

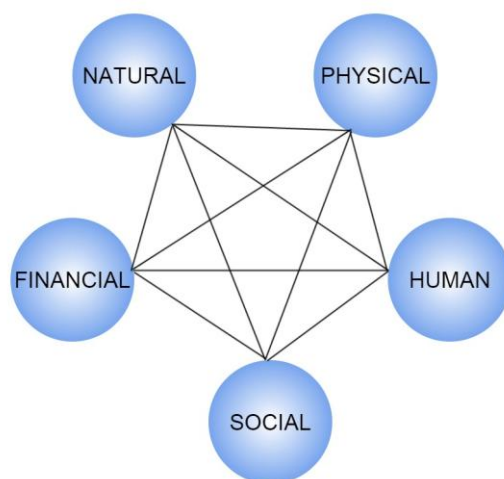


Every capital listed in the 5-capitals framework is able to be influenced by every other capital (see Figure 2). The strength or direction of influence will vary from farm to farm.

Whilst the interactions between the five capitals will be unique for every farm, our analysis has identified *particular patterns of interaction between particular capitals* which are influencing (i.e.

partially explaining) resultant workforce strategies and outcomes across the case study farms. This is not to suggest that any one farm's "interaction of specific capitals" predicts workforce organisation or turnover, rather, the patterns are illustrative of the variation between farms in workforce strategies and then how these strategies influence workforce turnover. This is important for the research, because the impact of workforce turnover on the farm business is partly explained by the interaction of capitals in the business.

**Figure 2.** The 5-capitals framework



To achieve business outcomes these capitals are combined in various ways that involve trade-offs, combinations, sequences, and trends (Scoones 1998). To illustrate this process we have adapted Scoones (1998) checklist of questions related to the analysis of livelihood resources and used it to inform the following discussion of business strategies and how those strategies impact on the workforce. The modified checklist of questions that we have used to guide our discussions are:

- Sequencing – What is the starting point for a strategy, and does one resource need to be in place before being able to access others?
- Substitution – Are the capitals substitutable, or are they needed in particular combinations?
- Trade-offs – What are the trade-offs that groups with different access to different types of resource make to pursue a particular strategy?
- Trends & threats – What are the trends in resource availability and access, and how is this affected by environmental, economic and social changes?

## Initial findings

### ***Finance Capital–***

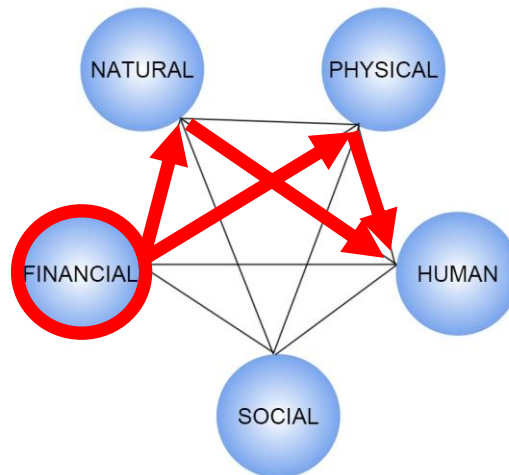
Finance resources consist of:

- Funding source and expectations of growth and dividends
  - Superannuation funded
  - Shareholder funded
  - Bank funded
  - Family funded
- Other sources of credit
- Savings
- Assets

(Scoones 1998, Ellis 2000, Campbell, Sayer et al. 2002)

Businesses that start from the point of financial resources (see Figure 3) are likely to make decisions about their natural and physical assets that flow through to impact on their Human resources.

**Figure 3.** The Finance-focused scenario



The example that illustrates this most convincingly is a corporate cotton farm with a source of finance that has narrow expectations that are focused on receiving a return to investment commensurate with the risk involved with the investment. This means that they may be making decisions to satisfy the demands of an investor who could withdraw their investment if the performance of the investment falls below their requirements.

Businesses that start focused on the **Financial** capital will make decisions about the natural and physical assets that will flow through to effect human assets. This could occur via investments in land and water that are chosen based on the returns that are able to be achieved from them. City investors are likely to have little interest in the attractiveness of the landscape, or the cultural activities or community facilities that might be important to the employees who need to operate the farm businesses.

The choice of land and water resources that are made to satisfy financial considerations will impact on employees. This occurs because:

- Cheaper land is likely to be further away from facilities, making it a less desirable location for employees to live.
- Cheaper water is likely to be less reliable which means that production levels will have more variation than farms with more reliable water. This will result in a fluctuating demand for labour. For instance the Southern Riverina area, and possibly Northern Victoria, with its regulated water supply and the potential for purchases of temporary irrigation water from a large and mature market may be considered a key strength in that it leads to a reliable financial dividend. However this can come at a cost which is lower yields and an uncertain ability to attract and retain a cotton-specific workforce and contractors.

The trade-off that these businesses, with a starting point of the **Financial** capital is that the **Human** capital (the knowledge, skills and experience that people have) are likely to be seen in the same way as any other resource that can be purchased. The business's main interest is likely to be the returns that can be generated from their investment in land and water. The workforce is seen in terms of the labour they provide rather than how a farming system could be adapted to better attract and retain a workforce, often leading to a reliance on short-term/casual workers with recruitment reliant on

“anyone who will work under the system”. This leads to high employee turn-over metrics and high costs related to recruitment, training, and potential errors, higher maintenance costs of machinery and often, employer burn-out.

One interviewee said, “... we have some casuals that come and go when we are irrigating. I always make a point of when I see a new face of introducing myself. But we don't necessarily know them all very well.”

This strategy has its greatest impact on the workforce when returns fall due to low commodity prices, or water becomes scarcer and more expensive, due to seasonal variability, government reforms, or climate change. One of the threats is the impact on a farms managerial expertise or ‘corporate memory’:

*The day to day operations are all done by the managers and they are the ones that sort of would build a team or build the work ethic. Their job is to create that environment if the blokes want to come and work for us. To date it's been great, we don't seem to turn over staff very regularly. We have to put them off when the work runs out, which is a pity.*

One way that some businesses manage the fluctuating demands for labour is to engage contractors. This shifts the problem of locating and managing suitably skilled staff to the contractor. One interviewee stated, “ ... we had rapid growth. And to be able to operate with such rapid growth and deliver good outcomes, we went to that contract model to bring in skilled people with the resources straight up. So we hit the ground running.”

The contract labour model not only makes getting skilled staff easier, but it also shifts the problems of communicating and interacting with workers to the contractor. An interviewee said, “to be honest not having to source those staff at that end of the spectrum that you need to drive tractors, to start siphons, it takes a lot of the complication out of our mind and I guess you're passing that level of complication to someone else.”

But contractors are not only used for managing the supply of labour they are also used to manage the costs associated with the machinery (one of the **Physical** resources) that is used on a cotton farm with less funds tied up in machinery related to return on investment (Financial capital). One interviewee described how, “...it's not only to do with the labour, but also with the machine. The costs of the machinery ownership and depreciation lives with them. So there's a lot of financial modelling that goes into it, but there's also a profit margin built into their rates as well.”

Contractors can make a profit from ownership of machinery, such as round bale pickers (see Figure 4), when farmers are unable to do so because they are able to operate the machine for longer each year as they move between different districts with different picking times. An interviewee explained how “each machine costs you about a million dollars and we need to get our crops off in a month. We would probably need 4 of those, so it's a lot of capital tied up in machinery that only gets used a month in a year. So we find your better off to do that with contractors.”

**Figure 4.** Round bale pickers are progressively replacing aging traditional basket pickers



The move to round bale pickers has meant that farmers have a lesser demand for labour. It is not only that they need to organise and manage fewer people, but that they have fewer concerns associated with the health and safety aspects of inexperienced workers using potentially dangerous machinery. A farmer suggested that “since then we’ve gone to round baling... it’s nice that there’s a lot less people getting around, a lot less OH&S issues, or risk or anything.” However other attributes (such as the attractiveness of less menial types of jobs and the link to attracting or retaining skilled labour or core staff), doesn’t feature as an attribute in these strategies.

#### ***Human Capital–***

Human resources consist of:

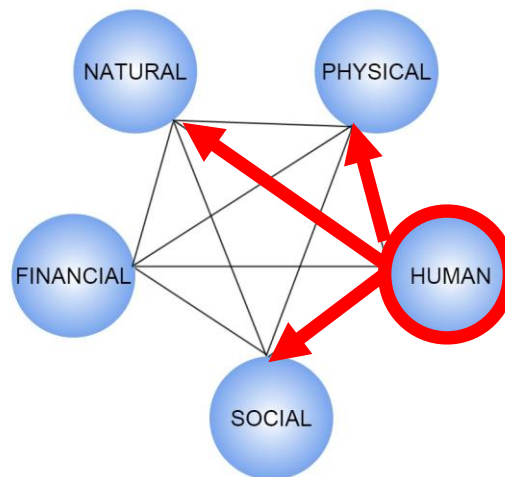
- Knowledge, skills and experience of everyone engaged in the farm business (eg. Family members, farm owners, managers, employees, contractors)
- People interested, available and capable of working in cotton
- Workplace culture
- Management style

(Scoones 1998, Ellis 2000, Campbell, Sayer et al. 2002)

This scenario (see Figure 5) could be illustrated by a family farmer who strongly associates with the family farming culture, with knowledge and skills developed from a long experience as a cotton grower. For them, the starting point of **Human** capital means that they will be more focused on developing the knowledge, skills and experience of their employees, and ensuring a favourable workplace culture, in part, through their management style.

They will attempt to maintain their core staff through times of low production and supplement the core staff with the use of casual labour as needed. The trade-off that they make is that higher profits may be foregone for a better workplace environment.

**Figure 5.** The Human-focused scenario



A way for employers to fully utilise skilled employees is to use contractors for the jobs where high levels of skills and experience are not needed:

*The other thing we found with picking is it ties up your best blokes. You've taken those core people out of every other operation you're trying to do. We've had our pickers for a few years and we found that our best guys were off driving cotton pickers and the quality of our work that was meant to be going on sort of lessens. Just didn't make sense to be doing it.*

Some businesses recognise the value of a culture of loyalty among their skilled employees:

*We really try hard to keep hold of our salaried guys, because we know it's very expensive for us to replace them. But a lot of it is not necessarily in dollars, a lot of it is in productivity and it's in culture and for us, our culture is very important. Now we have guys that are... the loyalty that they have to the company is just unfathomable. It's not driven from the top down, it's driven from the bottom up. And that's a really important culture to have.*

Employers want staff who take an interest in their work and care about what they are doing. One described how one of their employees had, "been here for a fair while, and he takes a lot of pride. He always has taken a lot of pride. That's just the way he's wired. Some guys they just don't. And I suppose that's why he's the manager." Some farmers actively encourage their workers to develop an interest in their work by involving them in discussions about the farm:

*I've sort of got an unwritten rule if your siphons aren't through by 10 o'clock, just come and do it early in the morning. But I've seen them out there at all sorts of hours to make sure that everything's done well. They're fully involved and I'm pretty open about our finances on the farm. They are all sort of realising that this farm's got to be profitable for them to still have a job, so we do talk a bit about that.*

Some employers see their staff as more than just a source of labour, they also recognise that they bring skills, knowledge, and experience that can be of use on the farm:

*I expect everyone to bring something to the farm, more than what I currently know. So through the interview I want to find out what their expertise is, what they're good at, what they're passionate about in farming and they have to show me they can bring something special to the business, or I won't put them on from the start.*

One interviewee explained a difference between workers who have knowledge of what needs to be done, and workers who have had experience with doing it:

*You have farm managers who have grown through the system and some are not particularly well educated, they have had a fantastic operational education and it's important to make the distinction between those things. The thing for us is we need both. We need guys that are well educated because they're the ones who are probably more capable of thinking about strategy and more capable of thinking about change and the positive impact that can have on our business and how to embrace technology as it becomes available.*

One interviewee described the positive benefits to their workers from their challenging them to achieve more:

*I think the biggest risk is not asking enough of your workers and them feeling as if it's a dumbed down job. I think you're more at risk of not asking enough and thinking they're not capable. I'd prefer to ask more of them and challenge them. That's different than asking them to work longer hours. They've got to be able to be problem solvers themselves, because you can't be there the whole time. So the biggest risk is not asking enough of your workers.*

Workers who have built up experience of the farm over a period of time can have a valuable understanding of the complex operations of the farm:

*He understands the water and he understands the whole system and all of that, it would take a while to get somebody else up to speed with that. He knows if that channel's too high then there's obviously an issue down there at that gate. Whereas you know, somebody coming in takes a while to learn all that sort of stuff.*

One farmer discussed how they recognised the value of their employee's experience:

*It's definitely challenging, but pretty satisfying as well, to be able to keep someone on, because really that level of experience you can't beat that really. After 2-3 years people start getting good at what they're doing, but after 5 years they become quite reliable, it's really invaluable for me to try and manage that relationship well.*

### **Physical Capital-**

Physical resources consist of:

- Irrigation infrastructure
- Staff accommodation
- Agricultural tools and machines
- General farm infrastructure

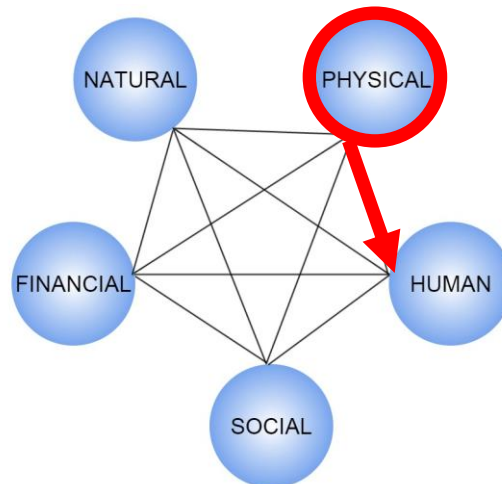
(Scoones 1998, Ellis 2000, Campbell, Sayer et al. 2002)

This scenario focuses on the physical or the man-made resource (see Figure 6). On an irrigated cotton farm this is most prominently the water delivery infrastructure and the land developed for growing the irrigated crop. These infrastructure developments can be difficult and expensive to change and therefore become limiting factors. The **Physical** capital can have effects that are felt in almost all of the other capitals. For example the physical layout of the farm can limit the layout and length of the cotton rows. This could then influence, 1) the choice of picker technology, and the options for irrigation technology such as bankless channels or mechanical irrigators, 2) the financial payback from choices made regarding irrigation and picker technology, and 3) the number of workers and the skills they need to operate the chosen irrigation or picking technologies.

**Physical** capital can provide a more attractive job that is likely to enable attraction or retention of relatively skilled people as core staff. Further, the physical work environment has been identified as a key factor in retaining staff in dairy and in other studies (see Ford, Nettle et al. 2012). An example is the

investment in round balers and irrigation infrastructure. While they are made for a combination of reasons such as increasing water use efficiency, increasing yield, or changing the labour requirements they can also have the effect of protecting a core of skilled workers by making their job more attractive. However, this type of investment may be more difficult to justify to shareholders that have high expectations in terms of the annual dividend return in the short-term.

**Figure 6.** The Physical-focused scenario



The strategy of buying cheaper land and less reliable water has a trade-off in that there may be reduced financial returns from a greater requirement for labour from systems that are uneconomic to be changed due to their physical layout.

There is a trend toward the adoption of water saving technologies. This has been brought about by programs involving government subsidies, by government water reforms, and by the effects from climate change and variability. This means as the **Natural** capital resource of water becomes scarcer and more expensive the **Physical** capital may need to be modified in response.

The effects from the cycle of workforce reduction and expansion due to seasonality (as water scarcity impacts on production) is a large issue that affects all areas of the business including the need for labour. One interviewee described how, “when we came out of the drought in say 2010, it was difficult. We had to start again. We had to build from say 12 people to 40 in a hurry. And with mining sort of at its peak we struggled.”

The fluctuating demand for labour occurs not just between seasons as a result of fluctuations in water availability, but also within season when irrigation needs to be done. One farmer described their strategy for dealing with seasonality:

*It's just the people on siphons that's the killer. Having enough people to start water. If we can create a system that doesn't rely on that, we can have more flexibility and again our normal year is a thing of the past. There is no normal year; it goes from high then normal to next to nothing depending on the season. And from a labour point of view, we're trying to make it so nothing changes. And that will go on to affect morale on farm.*

As people's expectations from their employment rise there are likely to be fewer people prepared to do entry level jobs like placing siphons during the irrigation season. Farmers also realise that the use of their skilled staff for jobs like this is not a very effective use of their skills.

As the traditional method of flood irrigation with siphons (see Figure 7) has a high demand for labour, albeit low skilled labour, some farmers are considering changing the physical layout of the irrigation

infrastructure. The downside to this is that it can be expensive and difficult to do; and it can also carry a psychological and emotional burden to the farmer:

*Dad bought here in '65... and I was born in '70. It wouldn't have been until the mid '70s this was starting to be developed for flood style irrigation. It wasn't until the early '80s that cotton really kicked off here. All of these old channels have been here for 50 years. For me it's a bit surreal. I've been here my whole life and it's been the main water delivery for this farm, it's this channel. So anyway it will make things a lot easier to pick.*

**Figure 7.** Traditional flood irrigation infrastructure



These changes are not necessarily made with the intention of reducing overall labour requirements, but rather with the aim of improving the workplace for their existing labour:

*We keep talking ourselves into why we should be doing it. We irrigate on a 12-hour turnaround, because it's easier for the workforce to do 6 am to 5-6 pm. Some people, depending on how long their runs are, are forced to do 8-hour turnarounds, so you've got middle of the night changes and things like that. But being on 12 hours it's convenient to an extent, but there's times when we've got water running too long and we should be doing that 8-hour turnaround. Whereas, if we needed to do that under this new system, one guy does that. It's not everyone out of bed during the middle of the night. So there is a healthy portion of labour concerns in doing it.*

One farmer described the benefits from the adoption of mechanical irrigation technology in terms of how it impacted on the **Physical, Financial** and **Human** capitals, when they said, "Yeah, we're pretty convinced that we're getting advantages. Firstly it's water saving, secondly its labour savings, and then third we're getting yield increases."

### **Social Capital-**

Social resources consist of:

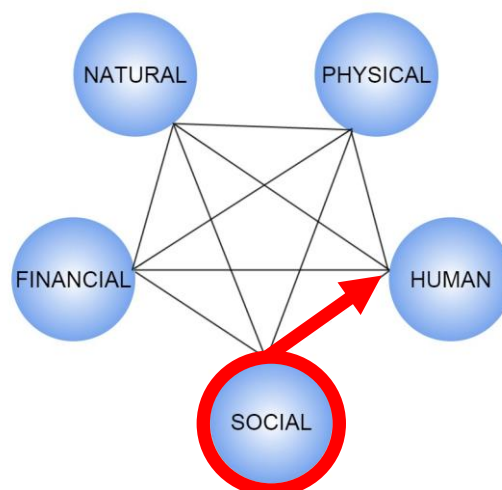
- External social networks
  - Affiliations and association memberships
  - Training sources
  - Labour sources
  - Community
- Internal social networks
  - Relationships of trust between employer and employee
  - Mutuality of interests
  - Leadership provided by employer
  - Long term employee loyalty
  - The team approach
  - Employer's approach and empathy

(Scoones 1998, Ellis 2000, Campbell, Sayer et al. 2002)

Employers who have a strategy focused on the **Social** capital (see Figure 8) start with a concern for employees and their needs. They have core beliefs about how humans (including themselves) should be treated which drives how they employ, interact with, and develop their staff. They will emphasise the importance of developing a team. Farmers who find that this is an important resource are unlikely to substitute for it.

A family farmer may have been born on the farm and have a long historical association with the land and a long experience in employing particular people. These ties can be limiting and reduce available options. This social resource can then become a social constraint involving family obligations and expectations.

**Figure 8.** The Social-focused scenario



Employers who are focused on this resource are likely to be those who are the most engaged with their workers. They are likely to forego some **Financial** rewards for the sake of maintaining or building **Social** capital. Because they emphasise the **Social** they may adjust the **Physical**. An example would be changing the traditional flood irrigation infrastructure to bankless channels to replace an unpleasant work task, so that their skilled employees find the workplace more enjoyable. In this situation a trade-off occurs with **Financial** resources because changes to the **Physical** layout of the farm can be expensive.

The threats to this strategy come from the need to manage the personal interactions between employees, and the effects on employees from unsatisfactory team members. The strategy comes at a cost, which is the time taken to build and maintain a team.

Farmers who take this approach can view their job as being about facilitating communication:

*A lot of my job is just getting around, talking to people and making sure that people are understanding what we're doing and what that guy over there is doing compared to this guy and how those things interrelate and how they need to work with it and around each other. That's sort of bringing the whole thing together.*

They also recognise how the work can affect their employees, "...because we worked so many hours, often when people are tired and fatigued, personalities can clash, that will come to the fore, it will get exposed, so it's in your interests, [to manage those] relationships".

There are various reasons why employees might leave their job including when their social relationships deteriorate:

*... we've had people come and go, sometimes people have got a family and are looking to do a more regular hour job so we have people go for that, sometimes people go for more higher paid jobs, sometimes you get personality clashes and someone says I can't work with that person any more...*

Social networks are useful and mostly trustworthy means of sourcing farm labour. One interviewee described how they source their casual labour, "we either get them from a contractor in town, employment agency or just people we know. For picking time we get a lot of backpackers from the Gold Coast [see Figure 9], I have some connections there."

**Figure 9.** Much of Australian agriculture relies on backpacker labour



Some farmers are increasingly focused on vetting potential workers by only employing people that they know or who have been referred on to them by other farmers:

*Been speaking to a fellow, both those guys were working at a farm and he knows them really well, they were both really good employees. So rather than bringing people to [the local town] and try to retain them here, it's a lot easier to find the people that really want to be here and then put some effort into those guys.*

Often farmers will rely on their social network to source reliable employees or to get jobs for employees that they are unable to keep employed:

*A lot of farmers have to advertise, but for me it's all word of mouth between families and friends in town. It's funny, if you just tell someone in the tool store you're looking for a person, then someone will come in the next time looking for a job, they'll go, 'oh, call this farm'. That's pretty well how it works.*

One farmer suggested that employees on family farms could feel differently toward their employers than what the employees found on corporate farms would:

*I think the employees like the family farming operation.... I've never been involved in a corporate farming operation so I don't know that side of things, but I think people typically would be more loyal to a family farm. At the end of the line it's my pocket and the fellows know that.*

The commitment and sense of ownership of employees is not, however, something that just occurs with those working on family farms. Because it is encouraged by management focusing on the **Social** capital it can just as easily occur with corporate farms. One corporate farm interviewee suggested:

*Everyone is passionate. These blokes treat these farms as if they're their own. You don't hear anyone in this organisation talking about 'them', what are 'they' doing, referring to head office or the farms. It's always we. What are we going to do about this? What's everyone thinking about this? We don't have an 'us' and 'them'.*

Employee commitment and ownership is fostered when the employees have a feeling that they are being valued. This is not only about being valued for the work that they have done but importantly it is also being valued for what they think:

*I'm really hands on... working with the staff and that helps you sort of build the relationship, so we've been through lots of times together and understand each other and certainly share the load fairly. If we try and buy a new tractor then I ask them what model we should get, or what are the reasons for going that way, or anything like that. So try to be involved in that.*

Employers who are focused on the **Social** capital recognise the value of building a team. One said, "encouraging a team culture is very important for us, because we've found if you have one non-team player it affects the rest of the team and the employees and staff morale."

When employees leave their job it can impact on the remaining team in a range of different ways. One interviewee suggested that:

*Depending on who it is in the team that leaves, if it's somebody who's pretty good at mentoring other people, like they're an experienced guy, in a technical field, that can have a big impact. But sometimes if it's just a normal tractor driver then there's no great impact whatsoever.*

Some farmers build team cultures using egalitarian rather than hierarchical approaches:

*And you've got managers that are all prepared to do the same jobs that others have got to do. Just because they're called a manager or a supervisor it doesn't mean they don't drive a grader or an excavator; or hop in a tractor, or any of that sort of stuff, is it? Or the manager of the workshop doesn't pick up a spanner. That's not how it is. I think they like that sort of culture and everyone's prepared to get in and give each other a hand.*

Teams are not just groups of people that can work together, but they are groups of people who ideally are working together in the pursuit of a common goal:

*If I put them together, they tend to talk too much and too much conversation and not getting any work done and not concentrating on the job, because they're talking about other stuff. I find it a lot better to split them up, a lot of the times you get more work done by splitting them up.*

Some farmers have a view of their employees that is more holistic and take an interest in their life beyond the farm:

*I see this position more of as a coaching role... my job is to get the best out of them and to steer them in the right direction you've got to give orders as well, but it's more about coaching them to a certain level. It's just about behaving correctly, which I hope they take away from here to home for their partners or wives, whatever. My interest is not just in what they do on farm, but off farm as well... not that they know that....*

On the other hand some employers show disdain for the social aspects of the workplace. One described how their employees, "all want to bring their emotions to work and I'm not paying them for their emotions. Their feelings. "Oh, you've hurt my feelings". Well, I don't really care. They don't like to be told what to do."

Some farmers show a high level of concern for how they choose and manage their employees, and the results of their choices and actions:

*Typically if someone leaves it will be because they're not happy. We've discussed... "is the employee's poor performance because you've made him that way? Or was he like that when you employed him?" I don't like that either way. If I employed someone that had poor performance, I should have picked it up. And if you've got poor performance because you've made him that way, then how am I managing things?*

Illustrating how their emphasis on the **Social** resource might impact on their financial returns, one farmer said:

*You can only operate in a style you feel comfortable in. You can't be anything other than yourself. And it's difficult for me to be authoritarian; it's just not how I naturally talk to people. It's enjoyable for me to work here and I hope it's enjoyable for the staff, it doesn't mean that we're the lowest cost operator or running with the leanest staff in the industry or getting the maximum output from the staff, so maybe we're not performing on the other metrics but for us this is the way we feel comfortable working.*

Employers that are prepared to participate in the same tasks as their employees naturally have higher levels of empathy and a better understanding of what they are asking from their employees. One described how "I try and put myself in their shoes a bit and I might say, look this is a shit of a job but we've just got to get it done so we can go onto something else."

Employees with the **Social** resource approach recognised that employees were not solely motivated by money but by a range of factors that included experiencing a variety of tasks, having the opportunity to take responsibility, and having their opinions valued:

*We do pay quite well. But I don't think that's the driver because they can get more money at the mines. I think there's a variety of work, they get responsibility that they like. I don't follow a huge amount of formal staff meetings, but we just have a lot of conversation. We spend a lot of time walking around the workshop talking about things, about why we're doing things, what are their ideas? How do we fix this problem? So when they see me they know what I'm thinking. And that's generally worked pretty well.*

Another farmer had a very different outlook on the role of money as a motivator:

*I've been to things where everyone says people just want recognition and things, it's not about the money, but every time I have a conversation with an employee it's about money. So I'm not sure how that works out. In the end they still come and discuss money with me all the time.*

### **Natural Capital–**

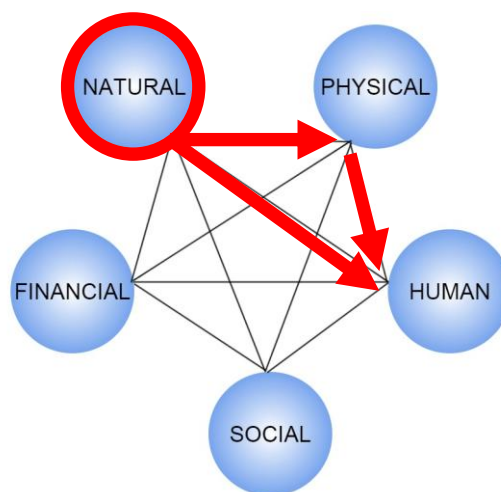
Natural resources consist of:

- Water resources (quantity and reliability)
- Weather and climate
- Land (quantity, quality and fertility)

(Scoones 1998, Ellis 2000, Campbell, Sayer et al. 2002)

The operators of irrigated cotton farms will all, in one way or another, be exposed to **Natural** capital (see Figure 10). They will own or manage land and water that is used to grow cotton. The quality and quantity of land and water will determine many of their management actions including those that impact on their employment strategies.

**Figure 10.** The Natural-focused scenario



Trade-offs can be made with the **Natural** capital when cheap land and water are purchased. This can result in more variable production because of less reliable water. This variable production then has a flow on effect to the demand for labour.

Trends and threats are that society will be less willing to accept effects to the environment from the agricultural use of natural resources and the social licence to operate could be withdrawn. Water policy can also change, leading to less available water. Another potential cause for reduced availability of water is the threat of climate change which is a risk that is borne by irrigators.

The availability of the natural resource of water can vary dramatically between years and have dramatic impacts on production and the need for labour. One farmer described their situation at the time of the interviews:

*We're growing 12% of the size crop we grew last year. This is because the only water we've got available is groundwater. We've had no water coming into this season, so it's tough. That's where from an investment perspective, when you have all of this water on the balance sheet and there are years when you get nothing. But we know that there are going to be years like this.*

Reduced availability of water lowers levels of production which then means there is less of a need for staff:

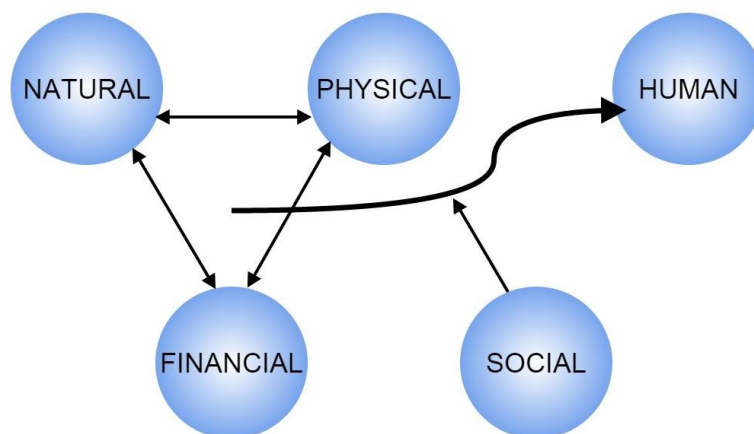
*Yeah, if we were at our normal season we'd have another 8 men on, 10 even, probably even more than that. The unfortunate thing is you come into a cycle like we're about to with no water, and potentially we're going to lose half of them. If you don't have water you've got no productivity. No productivity you can't employ people.*

### Implications and further questions

In the previous section we focused on the five capitals framework and described scenarios for each of the capitals to demonstrate how they can interact to influence farm business decision making and the flow on impacts on workforce strategy and employee turnover. In this next section we discuss the three capitals that have the most relevance to farm workforce turnover impacts and farm business performance and workforce strategies more generally (see Figure 11).

- Financial capital – The financial resources that determine much of the business’s strategy.
- Natural capital– The water and land resources have a profound impact on production levels and therefore workforce strategies.
- Physical capital– The infrastructure and the man-made environment that is shaped by the Financial and the Natural resource.

**Figure 11.** The influence of the combined resources



The **Financial**, **Natural** and **Physical** capitals are, to some extent, set by past events and the circumstances of the business. Their interaction, and the choices that a farmer makes with regard to them (if they are able to make a choice) determines the requirements for **Human** capital, but are moderated by **Social** capital acting as an intervening variable.

As we described in the previous section each of the **Financial**, **Natural** and **Physical** capitals can vary and be compensated for by adjustments in the others. Most of these adjustments have flow on effects which change the number or the skill and experience level of employees that are required for the business. **Social** capital moderates these requirements. For example when the economically rational choice would be to reduce employee numbers a farmer might choose not to do so with the intention of keeping a high performing team together.

The implications for advisers and the industry are that workforce turnover is an expected occurrence in an industry that experiences such uncertainty of resource access. It can be managed to some extent by adjustments to **Financial**, **Natural** and **Physical** capital but judging whether the costs of these adjustments are balanced out by avoiding the costs of losing experienced staff is only able to be done by looking at the individual farmer’s circumstances<sup>1</sup>.

<sup>1</sup> Initial analysis of the employee surveys showed many experiencing uncertainty as a result of significant changes in financial, natural, or physical capital in their workplaces. These were changes to management, improved technology, and water supply uncertainty. The employee surveys will be fully discussed in the Milestone report 3.

## Options for improving business performance

### Option 1: Lowering cost from workforce turnover:

Costs from workforce turnover can be reduced by paying particular attention to recruitment and selection of employees and their training and focusing on encouraging their engagement once they are employed. Some turnover of the workforce will always be expected. High workforce turnover is expected with low skilled casual workers who are employed for a period of time and a specific task. Turnover of skilled staff is also experienced due to seasonality, and people's changing circumstances and expectations. Mostly turnover of skilled staff is caused by how the business is performing (usually as a result of water scarcity) rather than being a cause of poor business performance.

### Option 2: Strategic HRM: considering the people in the farm system

Good managers consider the employee as a whole person and make decision with that in mind. They do not just see them as a unit of labour<sup>2</sup>. Empathising and engaging with employees leads to a workforce that has a greater level of commitment and ownership, and a greater willingness to take actions that can flow through to the business's bottom line. This option can also encourage choices around physical infrastructure towards those that are more compatible with the workforce.

### Option 3: Improving infrastructure to retain skilled employees

The return on investment from investing in infrastructure improvements, particularly irrigation infrastructure, will be very much related to *Financial*, *Natural* and *Physical* capital. The benefits could be saved water, saved labour, or increased yield. They may also be due to the total quantity of labour saved being less significant than the change in the nature (and the cost) of the labour required. The improved infrastructure may significantly increase the ability of a business to attract and retain skilled workers. The profitability of such investments will depend on the costs of the labour turnover that it reduces.

## Next steps

Over the coming months we will:

- Complete the qualitative analysis of the interview transcripts.
- Assemble and analyse the financial data for all farms that are willing to provide data. Data on asset values will continue to be collected where possible to provide insights when analysing businesses from a range of regions. All analyses will be synthesised (and some follow up questions will be asked of participants) so that we are able to develop a richer picture of the business impacts from workforce turnover for each farm, and the HRM practices associated with this turnover.

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<sup>2</sup> Initial analysis of the employee surveys shows that employees would often like more flexibility in working hours and better work-life balance, particularly during busy periods. The employee surveys will be fully discussed in Milestone report 3.

- Complete the analysis of the employee surveys. Results will be presented at the industry representative meeting of 2<sup>nd</sup> September and reported in Milestone 3.
- Develop a plan for engagement with industry bodies and farmers is being developed in consultation with Boyce and CRDC at a meeting of 2<sup>nd</sup> September in Moree. Engagement with case study farms and industry will occur between September-November, 2015. Although this action was part of the current milestone, we suggest that the more fully developed results arising from the cross-case analysis (Milestone 2.2) are likely to be more useful for these groups than the preliminary results presented in this report. We propose that this activity and the results from it are included in Milestone 3.

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# UM1501 CRDC Project

## The impact of farm workforce turnover in the cotton sector – Milestone Report

### Report to Cotton Research & Development Corporation

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**Milestone 3.1** Recommendations for industry people management strategies:

- Growers and advisers are aware of the research findings and are considering changes in practices.
  - Industry is tracking change in turnover performance.
- 

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29<sup>th</sup> February, 2016



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## Executive Summary

The purpose of this research was to:

- Establish measures of turnover to assess change in human resource management performance and track progress over time at a farm and industry level
- Examine costs and impacts of staff turnover on a sample of cotton farms
- Identify practices most strongly linked to low turnover
- Explore relationship between turnover and business performance

This third milestone report presents an update on the cross-case study analysis

- The variation in impacts from employee turnover across 15-20 cotton farms is explained.
- The options for improving business performance through people management are described.
- Recommendations for industry people management strategies are provided including options to ensure:
  - [1] Growers and advisers are aware of the research findings and are considering changes in practices.
  - [2] Industry is tracking change in turnover performance.

### Findings: Measuring turnover

Whilst specific metrics were not able to be determined for each farm, two key observations were made that provide guidance for future effort in measures of workplace turnover.

- Farms described workforce strategies revolving around core-permanent staff (often managers and experienced/senior farm hands) and casual/contract staff that could be skilled and experienced with trades or inexperienced (backpackers). Retaining core staff, in particular managers, who led the human resource management initiatives on most of the case farms was a key focus. It would be important to focus the measurement and monitoring of turnover to the separation rate and stability index of **managers**.
- Whilst it was difficult to calculate turnover metrics because of a large number of casuals employed and many on short term arrangements, it is possible for employers to monitor monthly turn-over rates across the total number of staff in this category (i.e. the no. of new staff each month replacing staff that have left/total staff numbers). Figures from small-medium size manufacturing businesses suggest a benchmark metric of <10% turnover per month in order to minimise the impact of turnover on staff morale and other costs.
- From an industry perspective, it is recommended that national surveys be used to collect and analyse high-level information on the number of staff employed on cotton farms and some turnover data so to better inform workforce policy and determine staff development and training priorities in the sector

### Findings: Farm profitability, labour costs and turnover

With a limited amount of data from the CCA (in some cases for only one year) we were not able to establish a clear relationship between employee turnover and profit. For example, there is a wide range in labour costs in the farms with an operating profit of less than \$50/bale. Possibly some businesses are not profitable partly because they spent too little on labour, and others are not profitable partly because they spent too much on labour. There does seem to be a tendency for the farms with operating profit of over \$150/bale to spend less than 15% of income on costs on labour, but they generally still spend over 8% of income on labour (if we ignore one outlying point).

- While workforce turnover is likely to increase costs and reduce profit, it is difficult to identify this specifically from the whole farm profitability. We were not able to establish any clear relationship between workforce turnover and profit.

### Findings - Employee engagement

Employees were surveyed on their feelings about and experiences at work. Twenty-two surveys were returned from five different farms. In terms of working hours, employees reported working, on average, 20 hours more during busy periods (52 hours to 74 hours). In spite of this, they reported moderately high levels of engagement (5.4/7) and low intention to quit (2.1/7), suggesting that they were motivated at work: absorbed in, enthusiastic about, and dedicated to, their jobs. This may be because these employees felt relatively high levels of support from their supervisors (5.7/7) and were emotionally committed to the farms that they worked on (5.5/7). But these positive outcomes were combined with low-moderate levels of burnout (3.9/7) a job-related stress condition linked to experiencing lots of demands at work. While burnout is linked with poor outcomes for employees and businesses, engagement is consistently linked with positive outcomes like better wellbeing and performance. Providing employees with additional resources at work like feedback, support from supervisors and co-workers, and autonomy over their roles can help them to deal with job demands, increase engagement, and reduce burnout.

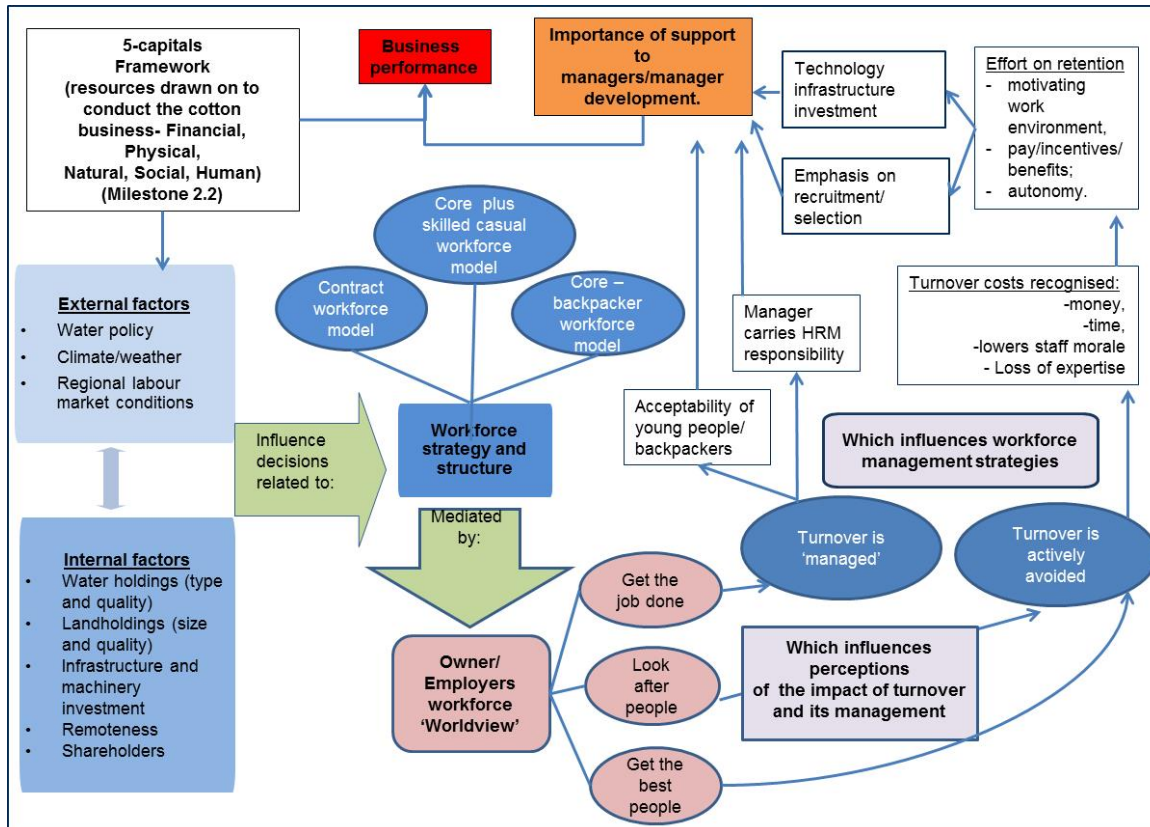
### Findings – integrative analysis of influences on workforce turnover

- Influences on workforce turnover, its impacts and management were explored across the 15 cotton businesses involved in the study. Whilst no direct relationship between the extent of workforce turnover and farm profit was able to be distinguished, different workforce strategies of growers were noted, along with patterns linking these strategies with the attitudes of employers and the relative importance of retaining staff as well as the perception of the costs and impacts of turnover. Further, different workforce management practices were noted to match particular strategies and world-views of employers.
- The findings show a link between farm workforce strategies deployed and **remoteness/isolation of farms; the location of farms and their water security** (including the **influence of climate/weather**) and the investment in technology and infrastructure. This range of internal and external factors influenced decisions related to workforce strategies. Three main workforce strategies were defined across the case farms and these strategies were observed in the organisation of the workforce or the workforce structures: **Core-Contract; Core-casuals (skilled); and Core-casuals (inexperienced)**.
- Although internal and external factors played a large role in the workforce strategies undertaken, the choices were also seen to be mediated by **the ‘worldview’ of the farmers** particularly with respect to the relative importance of valuing people and their needs to achieve business outcomes. Three predominant world-views related to workforce were noted across the case farms: **‘Get the job done’**: This worldview emphasises efficiency; **‘Look after people’**: a world view related to needing to meet the needs of people in order to get the best performance (work output) for the farm. This world view emphasises retention; **‘Get the best people’**: a world view related to needing to find people with the best fit and match with the farm culture and goals. This worldview emphasises recruitment, selection and induction.
- These worldviews and workforce strategies led to particular management practices related to turnover whereby growers either **a) ‘managed’ turnover** and management practices included labour contracting (outsourcing HRM), selection favoured particular attributes of employees based on ease of recruitment/short-term (e.g. backpackers; younger or older staff) and there are high expectations of managers to lead the human resources management tasks/responsibilities and model desired behaviour; or **b) ‘actively avoided’ turnover** where management practices favoured strong recruitment, selection, induction and retention processes because the costs of turnover were perceived to be too high in lost time, lost expertise, meaning there was a heavy burden on the manager in continual training, and the negative impact on staff morale/staff productivity unless “good turnover” (removing those having a negative impact on the team culture). Practices included strong selection processes using personality profiling and fit with the farm culture, strong training and induction programs, employees empowered with autonomy and develop a sense of ownership in the business and strong use of feedback rewards and incentives. These farms also appeared more likely to consider technology options to assist or augment workforce strategies.

Each workforce strategy therefore has risks and consequences, in particular related to effective support for managers, development pathways for managers and the additional burden on managers with high-turnover/casual inexperienced staff. Therefore, irrespective of the workforce strategy deployed, the attraction, retention and development of managers on cotton enterprises is an important consideration for individual farms and also the industry collectively. Whilst no direct quantitative measure was identified to link different strategies to business performance outcomes, these results indicate that different strategies bring different risks and consequences and therefore need to be considered or re-adjusted. It also hints at an

expanded set of criteria for considering new business ventures to not only consider water security and return on assets, but access to appropriate human and social capital. These findings are summarised in the conceptual diagram below.

**Conceptual diagram summarising the influences on farm workforce turnover, perception of business impacts from workforce turnover and the management of turnover in 16 cotton businesses.**



**Recommendations for CRDC**

1. Consider alternative means of tracking turnover
2. Consider greater investment in Business Management and Benchmarking in the Cotton Industry
3. In industry training and development efforts – consider employees more, particularly managers
4. Directly support industry people management strategies and focus on:
  - a. Increase awareness of business costs from workforce turnover:
  - b. Promote strategic HRM and change in worldview when it comes to people in the cotton business
  - c. Support grower investment decisions related to infrastructure by considering and communicating business, environmental and workforce benefits (e.g. retain skilled employees)
  - d. Support growers to consider different ways to reward and motivate employees

**Further research**

This study has uncovered four key areas where further research is needed. They concern developing a better understanding of: a) the foundations of employee/employer engagement; b) the employee as a whole person; c) the impact of climate change on workforce turnover; d) the responsiveness of employers to workforce changes.

# 1 Introduction

The Australian cotton industry recognises the value of people and has a vision that by 2029 it will be an - an industry that “retains, attracts and develops highly capable people” (Cotton Research and Development Corporation 2010, p. 4). Implementing this vision is, however, difficult to do when the costs and benefits of human resources improvements are not well understood. For example there is a major gap in current knowledge in how employee turnover could be expected to the productivity and profitability of cotton production. Research conducted as part of the CRDC Innovative work project (see Moffatt and Nettle 2013) suggests that high rates of workforce turnover, particularly for casual and less experienced staff are negatively impacting farm business profitability. This occurs directly through lower productivity, as well as through higher machinery maintenance costs and to some extent through other costs like increased insurance premiums. It also occurs indirectly, and less obviously, through increased stress and time lost in repeated recruitment, and induction and training of staff. Until now these impacts have remained hidden from conventional farm business analysis and have not contributed to clear messages about employee management. In addition, there are no explicit measures of staff turnover currently used either on-farm or in the industry to track improved performance or assess the impact from activities to improve human resource management like changes to employee induction, employer training or employer participation in MyBMP (myBMP 2015).

This project aims to: a) establish meaningful measures of turnover that can be used to assess change in human resource management performance and track progress over time at a farm and industry level; b) examine the real costs and impacts of staff turnover on a sample of cotton farms; c) identify the practices most strongly linked to low turnover; and d) explore the relationship between turnover performance and farm profit. The project combines theories of human resource management (i.e. fulfilment of the psychological contract in employment relations) and farm management (financial and economic analysis) to explore the relationship between employee turnover and farm business impacts. Employee turnover is one of many potential indicators of on farm workforce management performance. Employee turnover could be expected to be one of the many influences having an impact on business costs and returns.

Our multi-disciplinary research team includes social scientists with experience in human resource management on-farms and for primary industry workforce development, a farm management economist, and the farm management accounting firm Boyce Chartered Accountants<sup>1</sup> (Boyce). A case study methodology was used with 11 current Australian Cotton Comparative Analysis (ACCA) farms (Boyce Chartered Accountants 2015). Cotton growers were interviewed in person and data was collected to complement the physical and financial analysis collected for the ACCA. Data included: a) employers’ attitudes toward employee turnover and the relative importance of employee engagement and retention; b) the costs, benefits and impacts from turnover generated from the farmer’s experience and their business accounts from the previous 12 months; c) human resource management practices on farm and employee skills; and d) training and work engagement. A cross-case analysis was undertaken to examine trends associated with costs of turnover, the effects on farm profitability, and the social and industry impacts of turnover. Qualitative analysis of the key differences between groups of farms with different employee turnover was conducted to reveal the areas where there was potential for the industry to intervene to support change.

The findings and recommendations from this project will assist growers and the industry to consider the business case for improved people management on-farms, identify the interventions that could be implemented to improve people management, and also to assess their impact.

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<sup>1</sup> The ACCA is a financial and production benchmarking activity that had been compiled by Boyce since 1988/89 season. It went into recess from 2006 during the drought years but was reinstated from the 2010/11 season (Boyce Chartered Accountants 2015).

## 2 Project background

Attracting and retaining a workforce is a key issue for Australian agriculture. Industry efforts to attract a reliable motivated workforce that is interested in pursuing an agricultural career have been ongoing, but quantifying the benefits to farmers from retaining and developing their existing employees have received less attention. The benefits from having engaged employees are that they are less likely to leave a business and are more likely to make a positive contribution to business performance. Failing to retain high performing employees can hold back business performance through the effects from chronic understaffing which can be increased employee fatigue, increased risk of injury and workplace stress, and a less qualified workforce (Rappaport, Bancroft et al. 2003). Beyond individual businesses, poor retention of talented employees across an industry or sector can result in a poor reputation for that sector which limits its appeal to similarly talented potential new entrants, with the end result being that the overall level of experience within the sector can decline. Some of the examples of poor retention will be related to employee's decisions but some of it will also be related to the farmer's approach toward their employees. One farmer from the study group suggested that:

I just find so many people out there running farms that don't understand human beings. They understand their own ego, and how to get out and bash as much as they can out of men, but it's a 2-way deal. I don't think there's been enough work done on that.

The research in the Australian cotton sector that showed that high staff turnover was having an impact on farmers' productivity and profitability (Moffatt and Nettle 2013) also identified a large variation in staff turnover between farms, and a variation between farms in the motivations and strategies associated with retaining a workforce. As the cotton sector continues to seek improvements in productivity in socially and environmentally sustainable ways, the impacts from high turnover needs to be measured and understood as do the workforce strategies and practices that contribute to high levels of workforce retention. Filling these knowledge gaps will add to the sectors' ability to understand the business case for improved people management.

### 3 Research aim

The purpose of this research was to:

- Establish measures of turnover to assess change in human resource management performance and track progress over time at a farm and industry level
- Examine costs and impacts of staff turnover on a sample of cotton farms
- Identify practices most strongly linked to low turnover
- Explore relationship between turnover and business performance

The research project aims to increase grower and industry knowledge about the impacts of employee turnover on cotton business performance and establish useful metrics that the industry can use to monitor change in employee turnover.

## 4 Research Approach and summary of earlier findings

The research proceeded in stages:

### 1. Development of instruments for the research: turnover calculations, workbook, employee survey, sampling method. (See Milestone 1)

### 2. Employer interviews:

Sixteen face-to-face interviews of about one hour each.

- 11 Boyce CCA participants (21 - 28 March).
- 5 Cotton Info Team contacts (1 - 5 June).

Preliminary analysis (milestone 2) highlighted a range of factors that may influence human resource management strategies on-farms and therefore workforce turnover, including: 1) the employer's approach to staff, 2) their sources of 'capital' (natural, financial, human, etc.), 3) the location, and 4) the reliability of their water sources.

The employer's approach to staff is about what they want from, and for, their staff. It includes notions of empathy, and encouraging ownership and belonging in the workplace. This seems likely to affect work conditions and how employees feel about their employer and their job.

The sources of capital and preferences of the farmer (i.e. natural, financial, human, etc.) determine the return on investment they require, and the time frame over which it can be recovered. Businesses that rely on external sources of funding (e.g. shareholders) that can potentially move to other more attractive investments seem to be making different decisions related to, and therefore impacting on, their staff than those that do not. Further, it is possible that the more remote areas with cheaper land are easier to achieve a high Return on Total Assets but have challenges associated with attracting staff. The location of the business (and the services available at that location) will likely influence the initial attractiveness of the position to an employee. Indeed, several employees commented on regional location as a key factor influencing their opinion of their workplace. This may, however, change as families grow and the employee's requirement from the community change. The trade-offs for farm decision-making (remoteness, staffing, business performance) is an important findings as the cotton sector changes and the influence of attracting a workforce become more important. Finally, the reliability of the irrigation water sources influences the levels of production that are able to be achieved by the business, and the demand for labour. The types of irrigation resources held, and the amount of irrigation water available will affect the business's ability to maintain a constant level of production and a stable workforce.

### 3. Employee surveys:

- 98 posted -22 returned from 5 farms - 45% from one farm.
- 68% of respondents identified as supervisors.
- The average length of time in the industry was 11.5 years.
- The average length of time with their current employer was 8.5 years.
- The qualitative analysis of the interview transcripts was conducted using NVivo to code to themes.

### 4. Financial data and economic analysis

The financial data for all farms that were willing to provide data via the Cotton Comparative Analysis (CCA) was assembled with the assistance of Boyce accountants. This was combined with farm asset and other farm demographic information obtained at the interviews.

Analysis involved the calculation of farm profit metrics such as: costs of production (per bale and per hectare); operating profit per hectare; return on assets managed (cotton enterprise), total labour costs as a percentage of income and owner/family labour as a % of total labour costs. Analysis was conducted for

year 2012, year 2013 and year 2014. Not all farms were involved in the analysis in each year, leaving some gaps in the analysis and interpretation of results.

All analyses were synthesised (and some follow up questions were asked of Boyce and the farmers directly) to develop a richer picture of the business impacts from workforce turnover for each farm, and the HRM practices associated with this turnover.

Provisional results from the financial analysis, employer interviews and employee surveys were presented to industry representatives at a meeting on 2<sup>nd</sup> September, 2015 at Boyce accountants, Moree. (Table 1. and Figure 1.)

## 5. Integrative analysis

Cross-case analysis is a means of grouping together common responses to interviews as well as analysing different perspectives on central issues (Patton, 1990). The method starts with writing a case for each cotton growing business being studied, and then grouping interviewee's response according to themes and issues. In this study, results from the farm economic analysis, the preliminary analysis of employer interviews and the employee survey results were brought together to complete an integrative analysis of each farm. A summary was provided to each farm (see Appendix 1) and then a research analysis across all farms (Appendix 2) was conducted by examining key patterns influencing workforce turnover, business impacts and workforce management strategies, in particular related to:

- a. Employers' attitudes toward workforce turnover and employee engagement.
- b. Employers' perceptions of costs & benefits from workforce turnover
- c. Management practices associated with low turnover
- d. Business impacts reported from turnover
- e. Employees experience of work related to work engagement, work hours, burnout and turnover intent.

## 5 Research findings

### Metrics and measures of farm workplace turnover

Calculating the turnover rate on case study farms (i.e. Separation rate and stability index) proved to be too difficult to complete. This was because of either the size of the operation (number of staff); a lack of records of staff numbers and employment type (e.g. in cases involving a large number of backpackers or staff spread between different business units) and the relative stability in employment of managers and senior farm hands in some cases). Whilst this type of information is very important from a farm management perspective (i.e. measuring staff turnover is standard business practice to assess the HR strategy) and also from an industry perspective (measures of turnover assists the industry in understanding changing demand for staff and the sources of demand (from growth or churn) and target training and development efforts).

Whilst specific metrics were not able to be determined for each farm, two key observations were made that provide guidance for future effort in measures of workplace turnover.

1. Farms described workforce strategies revolving around core-permanent staff (often managers and experienced/senior farm hands) and casual/contract staff that could be skilled and experienced with trades or inexperienced (backpackers). Retaining core staff, in particular managers, who led the human resource management initiatives on most of the case farms was a key focus. It would be important to focus the measurement and monitoring of turnover to the separation rate and stability index of **managers**.
2. Whilst it was difficult to calculate turnover metrics because of a large number of casuals employed and many on short term arrangements, it is possible for employers to monitor monthly turn-over rates across the total number of staff in this category (i.e. the no. of new staff each month replacing staff that have left/total staff numbers). Figures from small-medium size manufacturing businesses suggest a benchmark metric of <10% turnover per month in order to minimise the impact of turnover on staff morale and other costs.

From an industry perspective, it is recommended that national surveys be used to collect and analyse high-level information on the number of staff employed on cotton farms and some turnover data so to better inform workforce policy and determine staff development and training priorities in the sector.

### Perceptions of the impact of turnover varied

Growers vary in their perceptions of the cost and impacts of turnover and in their beliefs about what are acceptable levels of turnover. For instance, some growers consider high workforce turnover as a cost of doing business when there is contraction and expansion of cotton plantings due to fluctuating water availability. Other growers value workforce stability and have structured their business in such a way that they are better able to retain their staff through varying seasonal conditions. This variation in approaches to workforce strategy is also seen in a small study of 20 dairy farmers about their perceptions of the financial cost of employee turnover. This ranged from \$1000/employee for those who perceived the costs of turnover to only be recruitment costs through to \$50,000 for those who perceived staff turnover as having wider business impacts (Neal 2013).

### Results from economic analysis

A key finding from the financial analysis (see Figure 1 and Table 1) is that the ACCA benchmarking data showed substantial profit variation between farms (\$20 to \$282 per bale and \$206 to \$3,380 per ha). This could indicate substantial potential for improvement in profitability on some farms. However, the farms that provided more than one year of data also showed substantial variation between years. Some follow up questions indicated that some of the years with low profit were associated with issues such as, reduced irrigation water availability and storm damage.

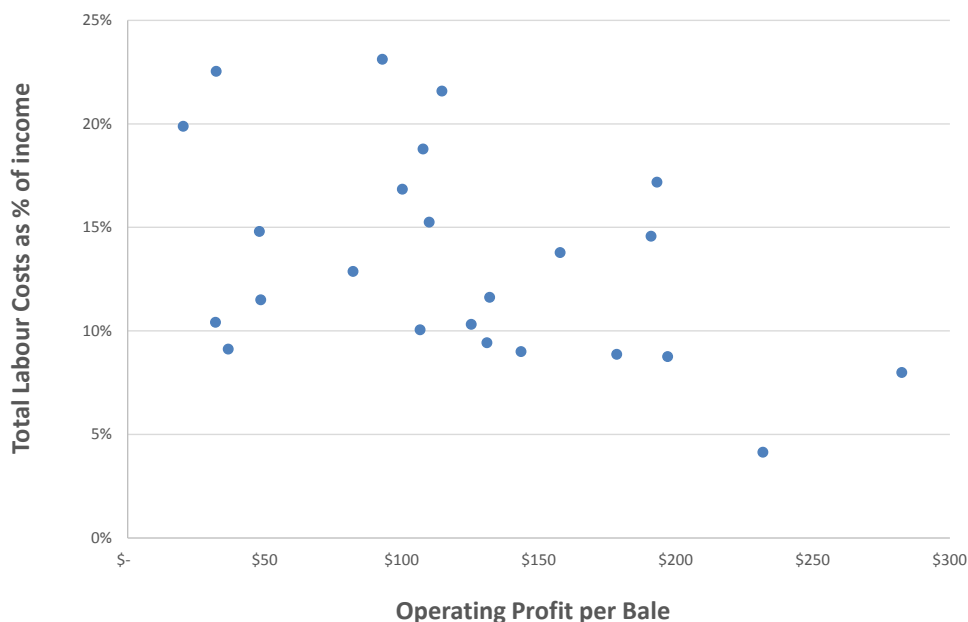
The Return to Total Assets managed varied from 1 to 18%, with substantial variation between farms and between years on the same farms. The data on the Return to Total Assets managed provided additional insights to the operating profit per ha. One of the farms with a below average operating profit per ha had a relatively high Return to Total Assets managed as the asset values for land and water were relatively low. Unfortunately, the data to calculate the Return to Total Assets managed was not available for all farms.

**Table 1. Summary of the financial analysis of some of the farms involved in the study.**

COTTON COMPARATIVE ANALYSIS 2012													
Farm	E	J	D	B	K	H	A	I	CCA Average	Average of growers interviewed			
Hectares of cotton grown	3924	567	1301		2208	1368	6650	1348	1676	2481			
Yield per hectare (bales/ha)	12.2	12.1	8.9		10.0	10.4	9.0	9.0	10.1	10.2			
Value per bale	\$ 482	\$ 473	\$ 486		\$ 504	\$ 426	\$ 471	\$ 415	\$ 474	\$ 465			
Cost of production per bale	\$ 324	\$ 373	\$ 383		\$ 332	\$ 329	\$ 356	\$ 379	\$ 363	\$ 354			
Cost of production per ha	\$ 3,933	\$ 4,494	\$ 3,397		\$ 3,298	\$ 3,432	\$ 3,209	\$ 3,413	\$ 3,601	\$ 3,597			
Operating profit/(loss) per bale	\$ 158	\$ 100	\$ 125		\$ 178	\$ 191	\$ 115	\$ 37	\$ 116	\$ 129			
Operating Profit per Ha	\$ 1,917	\$ 1,207	\$ 1,112		\$ 1,775	\$ 1,993	\$ 1,032	\$ 330	\$ 1,157	\$ 1,338			
Return on Assets Managed (cotton enterprise)	-	4.7%	4.7%		9.8%	-	13.0%	1.0%					
Total Labour Costs as % of income*	14%	17%	10%		9%	15%	22%	9%	16%	15%			
Owner/Family Labour as % of total Labour Costs	0%	2%	33%		4%	4%	0%	39%	3%	3%			
COTTON COMPARATIVE ANALYSIS 2013													
Farm	E	J	D	B	K	H	A	I	CCA Average	Average of growers interviewed			
Hectares of cotton grown	4,784	871	1,950	5,298	1,890	1,200		1,260	1,518	2,465			
Yield per hectare (bales/ha)	10.1	12.7	12.1	10.9	9.3	11.6		11.3	10.8	11.1			
Value per bale	\$ 407	\$ 471	\$ 447	\$ 421	\$ 427	\$ 422		\$ 443	\$ 435	\$ 434			
Cost of production per bale	\$ 359	\$ 239	\$ 315	\$ 329	\$ 403	\$ 245		\$ 312	\$ 354	\$ 314			
Cost of production per Ha	\$ 3,609	\$ 3,026	\$ 3,813	\$ 3,584	\$ 3,753	\$ 2,845		\$ 3,508	\$ 3,763	\$ 3,448			
Operating profit/(loss) per bale	\$ 48	\$ 232	\$ 132	\$ 93	\$ 32	\$ 193		\$ 131	\$ 82	\$ 123			
Operating Profit/Ha	\$ 483	\$ 2,937	\$ 1,598	\$ 1,012	\$ 298	\$ 2,244		\$ 1,474	\$ 886	\$ 1,435			
Return on Assets Managed (cotton enterprise)	-	17.6%	10.1%	-	1.4%	-		4.2%					
Total Labour Costs as % of income*	15%	4%	12%	23%	10%	17%		9%	21%	16%			
Owner Labour as % of total Labour Costs	0%	59%	0%	0%	5%	0%		28%	4%	2%			
COTTON COMPARATIVE ANALYSIS 2014													
Farm	E	J	D	B	K	H	A	I	G	F	C	CCA Average	Average of growers interviewed
Hectares of cotton grown	3,590	0	518	4,238	1,857	1,351	7,105	1,334	1,005	513	2,236	1,593	2,490
Yield per hectare (bales/ha)	10.8		10.1	10.7	11.7	9.2	7.6	10.5	12.0	10.2	12.8	10	10.6
Value per bale	\$ 452		\$ 484	\$ 449	\$ 449	\$ 493	\$ 487	\$ 443	\$ 503	\$ 484	\$ 477	\$ 473	\$ 475
Cost of production per bale	\$ 434		\$ 435	\$ 341	\$ 342	\$ 392	\$ 455	\$ 300	\$ 221	\$ 464	\$ 280	\$ 382	\$ 374
Cost of production per Ha	\$ 4,684		\$ 4,388	\$ 3,659	\$ 3,997	\$ 3,593	\$ 3,474	\$ 3,131	\$ 2,646	\$ 4,721	\$ 3,583	\$ 3,973	\$ 3,861
Operating profit/(loss) per bale	\$ 82		\$ 49	\$ 108	\$ 107	\$ 110	\$ 32	\$ 144	\$ 282	\$ 20	\$ 197	\$ 96	\$ 110
Operating Profit/Ha	\$ 886		\$ 489	\$ 1,155	\$ 1,247	\$ 1,009	\$ 246	\$ 1,500	\$ 3,380	\$ 206	\$ 2,524	\$ 998	\$ 1,238
Return on Assets Managed (cotton enterprise)	-	0.0%	0.8%	-	5.8%	-	3.3%	4.5%	-	3.5%	12.6%		
Total Labour Costs as % of income*	13%		12%	19%	10%	15%	23%	9%	8%	20%	9%	22%	16%
Owner Labour as % of total Labour Costs	0%		0%	0%	4%	5%	0%	30%	17%	18%	0%	3%	1%

\* Total labour costs includes employees wages, contract picking, farming and ripping, and the value of owner/family labour.

**Figure 1: Scatter plot of labour costs as a proportion of income versus Operating Profit per bale (all years).**



With a limited amount of data from the CCA (in some cases for only one year) we were not able to establish a clear relationship between employee turnover and profit. For example, there is a wide range in labour costs in the farms with an operating profit of less than \$50/bale. Possibly some businesses are not profitable partly because they spent too little on labour, and others are not profitable partly because they spent too much on labour. There does seem to be a tendency for the farms with operating profit of over \$150/bale to spend less than 15% of income on costs on labour, but they generally still spend over 8% of income on labour (if we ignore one outlying point).

While workforce turnover is likely to increase costs and reduce profit, it is difficult to identify this specifically from the whole farm profitability. We were not able to establish any clear relationship between workforce turnover and profit. There are many factors that contribute to profit, such as, irrigation water availability, weather, soil type, irrigation practices, agronomic practices, and price of cotton. Hence, it is unlikely that there would be a clear relationship between a single factor, such as workforce turnover, and profit.

### Employee survey results: employee work hours, engagement, burnout and turnover intent

Employees were surveyed on their feelings about and experiences at work. Twenty-two surveys were returned from five different farms. Overall, there was a wide range in employee age with 31% 25-34 old. The vast majority of these employees, however, were male (86%), in supervisory roles (68%), and working full-time (91%). They have worked in the cotton sector for 11.5 years and on their current farm for 8.5 years.

In terms of working hours, employees reported working, on average, 20 hours more during busy periods (52 hours to 74 hours). In spite of this, they reported moderately high levels of engagement (5.4/7) and low intention to quit (2.1/7), suggesting that they were motivated at work: absorbed in, enthusiastic about, and dedicated to, their jobs. This may be because these employees felt relatively high levels of support from their supervisors (5.7/7) and were emotionally committed to the farms that they worked on (5.5/7). But these positive outcomes were combined with low-moderate levels of burnout (3.9/7) a job-related stress condition linked to experiencing lots of demands at work. While burnout is linked with poor outcomes for employees and businesses, engagement is consistently linked with positive outcomes like better wellbeing and performance. Providing employees with additional resources at work like feedback, support from supervisors

and co-workers, and autonomy over their roles can help them to deal with job demands, increase engagement, and reduce burnout.

When considering this data, however, it is worth keeping a number of factors in mind:

- Due to the relatively low response rate (22.4%), it is unclear whether this sample of employees is representative of the majority of employees working on cotton farms
- It is possible that the employees who elected to participate in our research did so *because* they are engaged at work or emotionally connected to the farm
- Nearly half of all returned surveys are from one farm which means that the overall results are heavily skewed towards the results of this farm

### Integrative analysis: Processes involved in workforce turnover on cotton farms

Influences on workforce turnover, its impacts and management were explored across the 15 cotton businesses involved in the study. Whilst no direct relationship between the extent of workforce turnover and farm profit was able to be distinguished, different workforce strategies of growers were noted, along with patterns linking these strategies with the attitudes of employers and the relative importance of retaining staff as well as the perception of the costs and impacts of turnover. Further, different workforce management practices were noted to match particular strategies and world-views of employers. The differences in these key aspects of workforce on the case study farms were analysed. A summary of the key concepts and their interrelationships are summarised next:

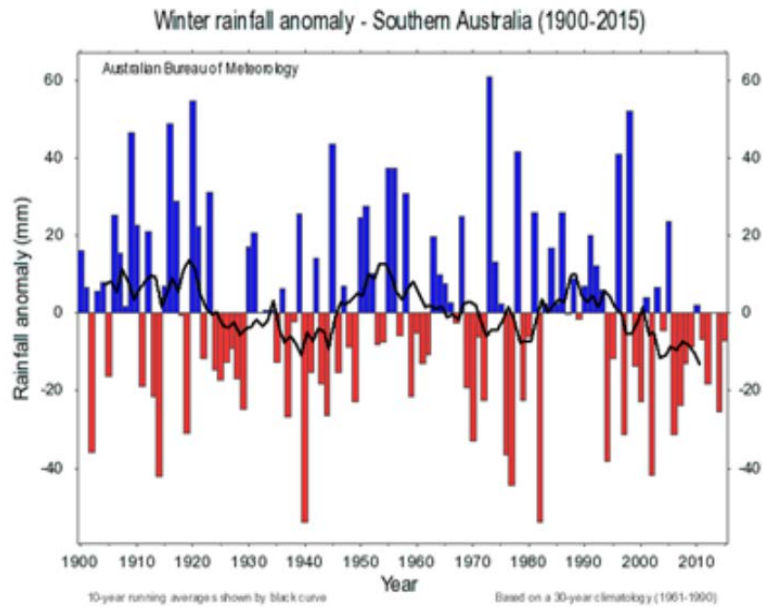
#### External and internal factors influence decisions related to workforce strategies:

In Milestone 2.2 the ‘five capitals framework’ (also see Appendix 3) was used to examine the influence of the farm context and resources available in influencing the formation of workforce strategies. There is a wide variation of influences from the different capitals. For example, one of the most prominent influences is the Physical Capital. This means that farms which are located in a particular district, using a particular water source (with a certain security), with a particular geographic shape, or previous infrastructure development will be constrained in how viable it is to adopt mechanised irrigation or even the type of picking equipment. These constraints, which are all related to Physical capital, then also affect the choices that they can make around their workforce. In the integrative analysis, these early findings were confirmed and extended to identify a link between these factors and the workforce strategies deployed.

- Remoteness/isolation of farms:** case study farms held different views on the role of isolation in attracting and retaining a workforce. Some believed isolation hampered staffing (C, D, F) especially when towns and infrastructure can provide incentives or attract different groups like younger employees (G) whilst others viewed it as an advantage because it reduced competition from other farmers or alternate industries (A, I). One grower related competition from the mines as a factor in “having to use backpackers” (I). Others noted that travelling long distances was a problem for staff – even if better pay follows.
- Location of farms and their water security, influence of climate/weather:** Many of the growers related the availability of water or the experience of climatic extremes to specific workforce strategies undertaken (Figures 5, 6, 7). For instance one farm noted that because the farm had secure water, they were able to recruit a good manager who was jaded by previous positions where they had to lay off workers every year or two dependent on water availability (B). For corporate farms there appeared to be a trade-off between the amounts of water purchased (and price) relative to the impact and costs from laying off staff and needing to rehire at a later stage if a decision was made not to grow cotton (A). Other farms mentioned being ‘under pressure’ because of variability in weather or the need to try different models as it was ‘survival of the fittest’ (P, L). Tactically, this meant growers had to “balance jobs in tough weather” and know in a bad year areas of crop grown could be 20-30% of the best year. Other growers noted that the location of their farm with less “trouble with water” means that they could

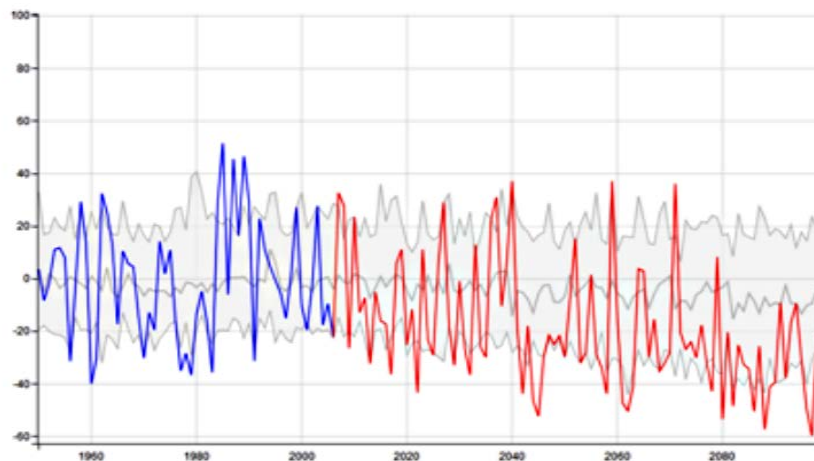
grow a range of crops that offered stability for the workforce and a range of work even in quieter years. These farms were not “boom and bust” with one noting “we’ve only reduced our area once in about 48 years” (O). These farms had a stable, permanent workforce over many years and were now investing in efficiency measures and technologies to reduce the workforce in the irrigation season.

**Figure 2: Farmers in Southern Australia have had a long experience with dealing with a variable climate**



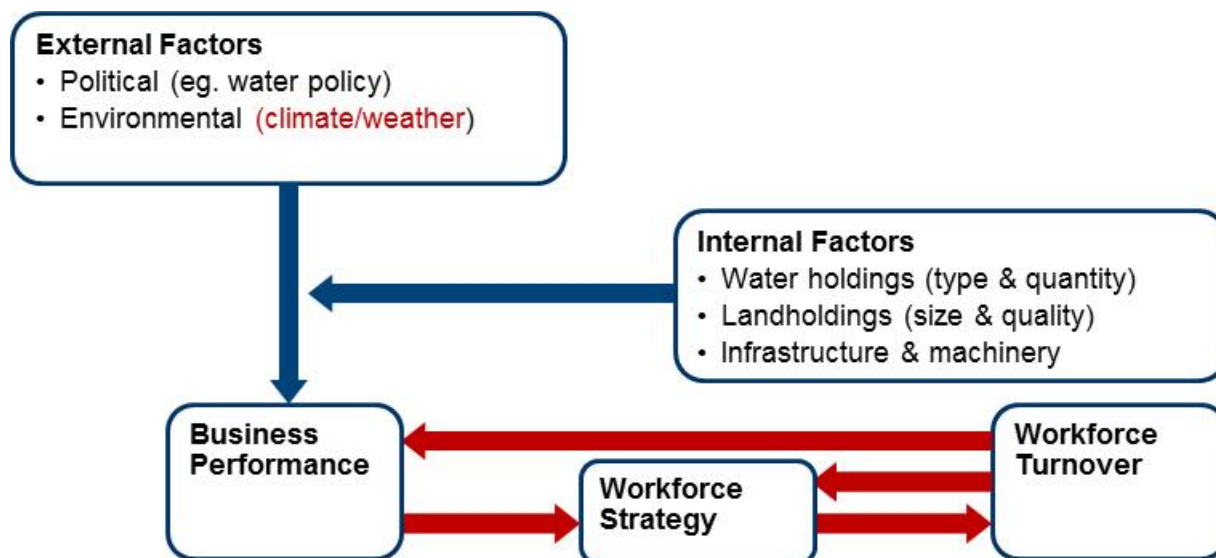
(CSIRO and Bureau of Meteorology 2015)

**Figure 3: Projected rainfall fluctuations in Southern Australia**



(CSIRO and Bureau of Meteorology 2015)

Figure 4: Climate and weather has an impact on workforce turnover



C. **Investment in technology and infrastructure:** Case study farms varied in their consideration of investment in technologies /infrastructure with many reporting investment as a consequence of workforce issues. Some farms specifically noted their investment related to “trying to reduce staff numbers” or “reducing over-reliance on staff” or ‘increase efficiency’ (L, F, O, N) or to “be more attractive to staff” (e.g. related to being able to do a range of jobs on the farm (enriched work) and retaining the skills base. Others stated that such investment was ‘too expensive’ and they recruited more staff to cover picking and irrigation (G).

### 3 Main Workforce Strategies

This range of internal and external factors influenced decisions related to workforce strategies. Three main workforce strategies were defined across the cases, made visible through the organisation of the workforce or the workforce structures.

1. **Core-Contract:** Apart from key managers, all staff on farm are employed through a contractor – this strategy was favoured when external and internal factors favoured retention of a managers and a desire to outsource all operations related to attracting and retaining a workforce.
2. **Core-casuals (skilled):** This was the predominant strategy across farms in the study, consisting of key managers/experienced farm hands employed on a permanent basis and responsible for the management of a casual workforce generally made up of skilled/trade-qualified workers. This strategy suited many of the farms constrained through water security issues and needing flexibility in total workforce numbers from year to year as well as those
3. **Core-casuals (inexperienced):** Similar to the second strategy but with heavy use of backpackers and short-term inexperienced staff. This strategy suited many farms constrained by location or water security and with less interest in technology options to reduce staff requirements.

Although internal and external factors played a large role in the workforce strategies undertaken, the choices were also seen to be mediated by the ‘worldview’ of the farmers (values, attitudes and beliefs about how the world works/what is most important), particularly with respect to the relative importance of valuing people and their needs to achieve business outcomes.

### Three predominant world-views related to workforce were noted across the case farms:

1. **'Get the job done'**: a worldview related to a transactional/traditional arrangement in that work is about money being exchanged for work output. This worldview emphasises efficiency, and was most strongly related to workforce strategies of contracting or core-casual unskilled.

Values, attitudes and beliefs associated with this worldview on case farms included:

- Casual staff are considered “more disposable” “it doesn’t matter if they are casuals” (K)
  - Reliance on backpackers to ‘do what they are told needs to be done’.
  - Different employees have different attributes therefore farms develop a preference for e.g. avoid younger (D) or older staff (N).
  - Farms use less staff – high work hours to compensate in busy times
  - Growers report it is “Hard to manage expectations seems expectations are getting higher” (N)
  - Good to have people that can come and go and don’t need accommodation (G)
  - Backpackers staying for the designated time and turning over to other backpackers is not considered ‘real turnover’.
  - Backpackers are either a hassle (M) or are motivated
  - The constant need to supervise: “You need to be there daily or problems arise”
  - “Some staff are interested and get involved, but half won’t” (I).
  - Training is seen as something to get the job done: “The problem with training new staff is that there’s so many different jobs and every farm is different – so it may not matter that they’ve worked on another farm” (I)
2. **'Look after people'**: a world view related to needing to meet the needs of people in order to get the best performance (work output) for the farm. This world view emphasises retention.
  3. **'Get the best people'**: a world view related to needing to find people with the best fit and match with the farm culture and goals. This worldview emphasises recruitment, selection and induction.

Values, attitudes and beliefs associated with these worldviews (2 and 3) on case farms included:

- Prefer not to rely on backpackers (A)
- Avoid turnover actively (thresholds of acceptable turnover) (A)
- Graduate internships for grooming managers
- Build farm around key people (O, D) , avoid backpackers
- Work environment important – need to get rid of people that negatively affect the team
- Old and young have different strengths or attributes (F) , focus on people willing to learn (G); with decency (K, H), passion (J) and reliable (I)
- Emphasise training
- Good people are hard to find when you do find them you try hard to keep them
- Without people we wouldn’t be able to do a lot of our operations (J)

These worldviews and workforce strategies led to particular management practices related to turnover:

### Difference in management practices:

**A) Growers ‘managing’ turnover:** management practices associated with core-contract and core-casual (inexperienced) strategies and worldviews aligned with “get the job done” include:

- Labour contracting (outsourcing HRM) (B)
- Selection favours particular attributes of employees based on ease of recruitment/short-term (e.g. backpackers; younger or older staff) (D, L)
- High expectations of managers to lead:

- Human resources management tasks/responsibilities
- And model desired behaviour (A,B,K,F,M)

## **B) Growers ‘actively avoiding’ turnover:**

Growers favouring strong recruitment, selection, induction and retention processes had a clear perception that the costs of turnover were too high and hence management practices were put in place to avoid turnover. Growers described the costs of turnover in terms of : lost time, lost expertise, a heavy burden on the manager, the cost of continual training, and the negative impact on staff morale/staff productivity unless “good turnover” (removing those having a negative impact on the team culture)

Management practices of those farms focusing on recruitment/selection procedures were:

- Select on fit with culture (e.g. employees can live together/get on) and observation skills
- Strong training and induction
- Match personalities, Match with buddies (C )
- Graduate internships (C )

Management practices of those farms focusing on retention included:

- Employees empowered with autonomy and develop a sense of ownership in the business (A,C,F)
- Use feedback rewards and incentives
- Explore options for retaining staff through drought
- Manager models behaviour, works closely with staff
- Non-hierarchical
- Time and effort is put to the workplace culture and being attuned to staff.

These farms also appeared more likely to consider technology options to assist or augment workforce strategies.

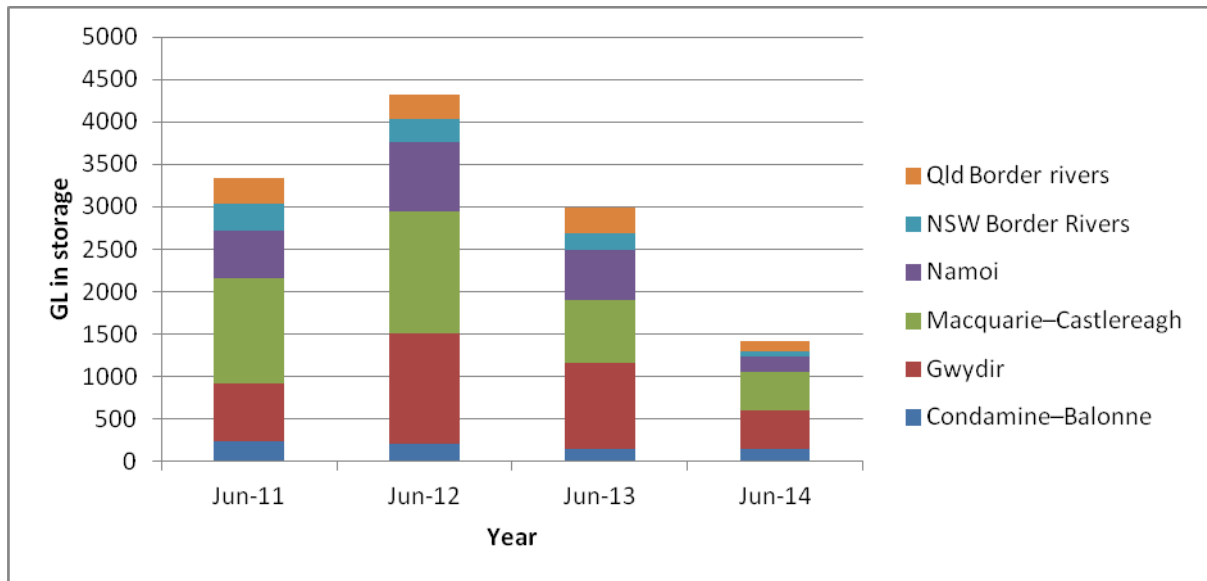
Each workforce strategy therefore has risks and consequences, in particular related to effective support for managers, development pathways for managers and the additional burden on managers with high-turnover/casual inexperienced staff. Therefore, irrespective of the workforce strategy deployed, the attraction, retention and development of managers on cotton enterprises is an important consideration for individual farms and also the industry collectively. Whilst no direct quantitative measure was identified to link different strategies to business performance outcomes, these results indicate that different strategies bring different risks and consequences and therefore need to be considered or re-adjusted. It also hints at an expanded set of criteria for considering new business ventures to not only consider water security and return on assets, but access to appropriate human and social capital.

These concepts and their interrelationships are summarised in a conceptual diagram (figure 5.)



The reduced plantings were caused by low water availability (see 6).

**Figure 6: The amount of stored water in the Northern Basin at the time of the research was substantially lower than in recent years**



(Bureau of Meteorology 2015)

Individual interviewee's production levels will have been influenced by the amount of water available in their respective valleys, but will also vary according to the amount and the security of their own water holdings, and also by their water trading strategy. They can own a mix of groundwater and surface water, and a mix of different types of surface water with different levels of security. In addition to this they can have different approaches to trading water in and out of their business.

## 6 Conclusion

This project has built on existing employee turnover research by examining the positive and negative economic *and* social impacts on the business, rather than just focusing on turnover rates by themselves. These research results should be useful for engaging growers in considering the impact of workforce turnover on their own business and the potential changes they could make to their workforce strategies. At the industry level, this research will add to the knowledge about the variation in employee turnover and its impacts, across a range of cotton farms. These research results will assist the cotton sector in developing interventions targeted at supporting human resource management practices on-farm, assist in measuring change such as the cost-benefit analysis of activities to support on-farm human resource management, and metrics aimed at the human resources side of the business. In addition it will provide information that could usefully be incorporated into myBMP (myBMP 2015) and other farm benchmarking programs. These research results have provided an argument to support the business case for both farm businesses and the industry in investing in people.

Until now these impacts have remained hidden from conventional farm business analysis and have not contributed to clear messages about employee management. In addition, there are no explicit measures of staff turnover currently used either on-farm or in the industry to track improved performance or assess the impact from activities to improve human resource management like changes to employee induction, employer training or employer participation in MyBMP (myBMP 2015).

## 7 Recommendations

### 1. Consider alternative means of tracking turnover

- Recognise costs of turnover and monitor turnover of managers and groups of employees
- Industry surveys to identify industry turnover to plan interventions related to training/manager development.

### 2. Greater investment in Business Management and Benchmarking in the Cotton Industry

Some of the areas where there may be potential for improvement are:

- Using the benchmarking activity to build more capability in the Farm Business Management area amongst extension staff, such as the Cotton Info team.
- Fostering stronger links between the agronomic and farm business management disciplines.
- Wider participation from farmers (it appeared that the smaller family businesses may be underrepresented in the CCA analysis). Participation may increase if a service provider with reasonable industry knowledge was available to come out and carry out the data collection in an interview style process.
- Improved timeliness in data availability. The benchmarking exercise would be more valuable if the data was collected soon after the financial year finished. It would enable the data to be used more when making plans for the following season. It would also provide more timely information for industry and policy groups. The accuracy of the data may also improve if collected earlier.

The involvement of the CottonInfo team in the data collection and validation process could address many of these issues.

A greater emphasis on Return to Total Assets managed would provide more useful insights when looking at data from farms with substantial variation in land and water values.

In terms of the Business Management area for the Cotton Industry, most of the resources are going into 'backward looking' benchmarking of historical performance, and less into 'forward looking' or 'what-if' type analyses for decisions into the future. A good benchmarking program can be very useful in building capability, ensuring common methods of analysis and terminology, and in fostering an inquisitive business culture. However, extension/development activities relating to forward looking analysis are likely to contribute more in terms of improved decision making.

### 3. More attention to employees, particularly managers

Employees' experiences at work influence the way that they feel about and conduct their work. This has important implications for business outcomes and for employees' wellbeing and general life satisfaction. This research has shed light on the employee perspective and started to assess how this is related to farm owners' perspectives and farm financial performance. Because of the low number of employee surveys returned from a small number of participating farms it is difficult to extend these results to the entire cotton sector.

With this in mind, we propose a nation-wide employee engagement survey. This could examine both positive and negative experiences at work, as well as the types of resources that we can provide for employees to better manage the demands of their jobs. This survey may examine links between farm demographics, existing people management practices, and employee engagement and burnout. As part of this survey it is important to ask employees about the types of demands or hassles that they face at work, as well as they types of strategies or resources that most help them deal with those demands. Identifying the resources that most help employees currently, and considering additional resources that can be provided, has implications for employee performance, their commitment to the farm and their job, and attitudes towards managers and colleagues. These outcomes are all important for farm businesses. It is also possible that this survey could be extended to examining employees across multiple farm sectors.

4. Directly support industry people management strategies and focus on:

a. Increase awareness of business costs from workforce turnover:

Employers can reduce the costs from workforce turnover by paying particular attention to recruitment and selection of employees so that the most suitable person is identified and employed. Once they are employed the focus can change to training and focusing on encouraging their engagement.

This strategy won't always appear to be successful in reducing workforce turnover because some turnover of the workforce will always be expected. For example high workforce turnover is expected with low skilled casual workers who are employed for a period of time and a specific task such as starting syphons during the time the crops are irrigated. On the other hand turnover of skilled staff can also be expected from the effects of seasonality, such as when water becomes scarce and production falls.

Employees' circumstances and expectations change over time; for example when children reach high school age and locally available options are unsatisfactory. Mostly turnover of skilled staff is caused by how the business is performing (usually as a result of water scarcity) rather than causing poor business performance. This strategy could be useful for lowering the costs from unexpected and undesired turnover and might be particularly relevant in those circumstances when employees are not readily available.

b. Promote strategic HRM and change in worldview when it comes to people in the cotton business

Good managers consider the employee as a whole person and make decisions with that in mind. They do not just see them as a unit of labour that appears at the start of the day and disappears at the end of the day. Employers that are able or willing to empathise and engage with employees are likely to encourage their workforce to develop a greater level of commitment and ownership, and a greater willingness to take actions that can flow through to the business's bottom line. This option can also encourage choices around physical infrastructure towards those that are more compatible with the workforce (see next option).

c. Support grower investment decisions related to infrastructure by considering and communicating business, environmental and workforce benefits (e.g. retain skilled employees)

The return on investment from investing in infrastructure improvements can be saved water, saved labour, or increased yield. They may also be due to the total quantity of labour saved being less significant than the change in the nature (and the cost) of the labour required. Improved infrastructure that eliminates or reduces mundane and repetitive tasks may increase the ability of a business to attract and retain skilled workers. This research identified that even when investments in irrigation infrastructure received Government support the returns from these investments were still not immediately compelling. Cotton growers are very unlikely to justify investments in improving infrastructure for the purpose of retaining or attracting skilled employees, but they could use the benefits to the workforce, and to the business from a more satisfied workforce, as an added argument for the investment.

d. Support growers to consider different ways to reward and motivate employees

Equity partnerships or profit-sharing schemes may help employers to retain skilled managers with flow on effects from retaining institutional knowledge, improving employee engagement, and motivating employees. This is likely to be most suitable for staff who have been employed for longer periods (typically already in management roles) and who have already demonstrated their value to the business through their actions. This strategy is most likely to be successful in influencing workforce retention in situations where high performing working relationships already exist, and not as a way to change underperforming employees into higher performing employees.

## 7.1 Remaining areas for research

This study has uncovered four key areas where further research is needed. They are about developing a better understanding of the:

1. Foundations of employee/employer engagement
2. Employee as a whole person
3. Impact of climate change on workforce turnover
4. Responsiveness of employers to workforce changes

**Understanding the foundations for employee engagement:** This could be achieved through a large scale survey focused on gathering and analysing measures of employee engagement and burnout and other workplace data. This would allow recommendations to be provided that would be useful for informing employers' workforce management options.

**Understand the employee as a whole person:** The aim of this research area would be to better determine the non-economic values of employees so that people related measures could be incorporated into business analysis and benchmarking. This would result in a greater focus on people leadership than HR training. It would also be helpful to understand how the employer's business goals and employee needs can be combined without too great a compromise being made by one or the other.

**Impact of climate challenges and variability on workforce turnover:** There needs to be a better understanding of the interaction between climate, water (amount held and reliability), infrastructure, technology and workforce strategy. Farmers in southern Australia have had a long experience in managing variable rainfall (see Figure 6). However, with the projected effects of climate change (see Figure 6) leading to fewer good years and more poor years, the variability in rainfall that farmers have always managed will become more pronounced. Production levels, and the demand for labour, are likely to become increasingly variable. Analysis of management options that might help farm businesses to adapt to the changing climate and manage risks associated with cotton production and workforce turnover is likely to provide very useful insights. Understanding the interrelated factors (Figure 5) that combine to effect workforce turnover would be very useful for future workforce planning.

**Responsiveness of employers to workforce change:** Better understand the dynamics of a responsive workforce that expand and contract as needed due to competition for labour or the effects of changes in climate/weather. It would be useful to explore how this fluctuating demand for labour could potentially be managed by using a combination of permanent core, casual, contract and seasonal workers, and how this combination might vary for different farmers.

## 7.2 Communication Activities – Completed to date:

The communication of these outputs to the industry has been thorough:

- First Milestone Report November 2014 – Planning of the project.
- Second Milestone Report June 2015 – Progress of the project.
- Discussions with the advisory group about the progress of research.
- Preliminary results presented to Boyce Accounting and to representatives of the Cotton Info team in September 2015.
- Presentation at the CRDC Workforce Strategy Meeting Dec 11 2015.

### 7.3 Communication Activities – Planned to the future:

Future communication activities are:

- Advisory group teleconference to inform of findings : March 2016
- Presentation of results to cotton-info team
- Publishing one paper in an academic journal.
- Article to be developed for Spotlight
- Conference paper and presentation on farm work research (Brazil, November, 2016)

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## Appendix A. Individual farm reports/analysis

Example of information provided to individual farms in the study (next page)



THE UNIVERSITY OF  
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### Definitions

**Engagement:** being absorbed in, dedicated to, and enthusiastic about work.

**Burnout:** stress associated with cynicism, exhaustion, and not feeling effective at work

**Annual operating profit:** gross income—variable & overhead costs

**Return on assets (ROA):** operating profit expressed as a percentage of the value of total farm assets.

**Labour costs % income:** includes wages, contractors, farming, & family labour.

## The impact of farm workforce turnover in the cotton sector

Thank you for participating in the University of Melbourne project "The impact of farm workforce turnover in the cotton sector". As part of your involvement with this project, we are providing you with some of our observations of your business. These are based on the Australian Cotton Comparative Analysis (ACCA), the interview that we did with you, and an employee survey of some of the ACCA farms. We have also added some of our thoughts on how employee strategies could be impacting on businesses like yours. You may have already considered these issues, but if not we hope that they might make some small contribution when you think about employment issues in the future.

### Your farm analysis (A)

Business performance (from ACCA):

	2012		2013		2014	
	Farm A	CCA Average	Farm A	CCA Average	Farm A	CCA Average
Hectares of cotton grown	6650	1676		1,518	7,105	1,593
Yield per hectare (bales/ha)	9.0	10.1		10.8	7.6	10
Value per bale	\$ 471	\$ 474		\$ 435	\$ 487	\$ 473
Cost of production per bale	\$ 356	\$ 363		\$ 354	\$ 455	\$ 382
Cost of production per ha	\$ 3,209	\$ 3,601		\$ 3,763	\$ 3,474	\$ 3,973
Operating profit/(loss) per bale	\$ 115	\$ 116		\$ 82	\$ 32	\$ 96
Operating Profit per Ha	\$ 1,032	\$ 1,157		\$ 886	\$ 246	\$ 998
Return on Assets Managed (cotton enterprise)#	13.0%				3.3%	
Total Labour Costs as % of Income*	22%	16%		21%	23%	22%
Owner/Family Labour as % of total Labour Costs	0%	3%		4%	0%	3%

The per ha and per bale operating expenses were not markedly different to the average farm participating in the ACCA in 2012, but were less in 2014. The lower yield than the average ACCA participant reduced per ha operating profit, but lower asset values per ha meant that a high ROA was still achieved in 2012. In 2012 the ROA was 13%, but decreased to 3.3% in 2014. This farm was one of the largest farms involved in the study which may account for the slightly lower yields compared to the ACCA average which includes farms that are more intensively managed. Compared to some other cotton growing districts, the opportunities to trade irrigation water in your district appear to provide the business with a competitive advantage, but when water is traded away from the business (and production is reduced) it also impacts on the morale and the ability to retain motivated staff.

**Employee management:** There is a clear emphasis on people management on this farm, with community orientation for new employees a clear example. This seems to reflect the reliance on social capital to attract and retain staff in a remote location. An internal promotions focus means that many managers come from within the business which has distinct advantages with benefits gained from retained institutional knowledge, but it may also mean that greater efforts are needed to ensure that ideas are still sought from outside of the business to maintain business innovativeness.

Employees from your business reported relatively high levels of supervisor support and engagement in their work, and low levels of burnout. They report enjoying the 'challenges' and 'opportunities' their jobs provide. At the same time, they are conscious of the uncertainty surrounding their jobs, commenting on water scarcity and possible takeover bids as sources of concern.

**Considerations for farms like yours:** Properties employing large numbers of employees could consider retention strategies which allow suitable and interested employees to build equity in the business over time. Making it possible for employees to build equity (either through bonuses or salary sacrifice) could improve employee engagement, with the potential for a wide range of benefits from more motivated employees.

**Feedback:** If you'd like to discuss your farm summary please contact Dr Geoff Kuehne on Tel: 0417 831 591.

## Appendix B. Research analysis of case-study farms

### B.1 Table of results from integrative analysis of each farm (economic, employee engagement/burnout and turnover intent and interview results)

	Context	Workforce strategy/philosophy	Management practices	Employee perspective	Staff numbers	Turnover estimate	Remoteness	2014-15 % of full planting	Labour costs	Profitability
<b>Farm A</b>	<ul style="list-style-type: none"> <li>Isolated, but seen as an advantage to build culture &amp; means no competition—have built staff housing etc.</li> <li>Very large corporate—other farms report they don't want to be like this one</li> </ul>	<ul style="list-style-type: none"> <li>People core of business</li> <li>Employ a stable core of staff</li> <li>Actively avoid turnover—use technology to minimise staff numbers/reliance</li> </ul>	<ul style="list-style-type: none"> <li><b>Recruitment:</b> managers= people-people, strong staff selection, strong staff induction to reinforce culture</li> <li><b>Retention:</b> training managers to create team, promote from within</li> <li><b>Managers:</b> model desired behaviour</li> <li><b>Communication:</b> praise &amp; feedback, staff input/ideas</li> <li><b>Job:</b> provide challenges, diversity, autonomy, resources</li> </ul>	<ul style="list-style-type: none"> <li>Age: 35-44, on farm for 5 yrs (less)</li> <li>Hrs/wk= 57, busy= 72 (same)</li> <li>Engagement 5.4/7 (same)</li> <li><b>Burnout 2/7 (less)</b></li> <li>Turnover intent 2/7 (same)</li> </ul>	Large	High	Remote		23%	Medium, 1yr low
<b>Farm C</b>	<ul style="list-style-type: none"> <li>Doesn't want to turn into (A)</li> <li>Isolated- believes could hamper staffing</li> </ul>	<ul style="list-style-type: none"> <li>Core staff and backpackers</li> <li>Distinguishes between younger/older employees— younger seen as an advantage</li> </ul>	<ul style="list-style-type: none"> <li><b>Recruitment:</b> graduate internships, match with buddies through personality profiles</li> </ul>		Large	High		25-33	9%	High*
<b>Farm K</b>	<ul style="list-style-type: none"> <li>Us vs. them attitude towards corporates- doesn't want to turn into (A)</li> </ul>	<ul style="list-style-type: none"> <li>Core staff and casuals</li> <li>Don't value casual staff "it doesn't matter if they're casuals"</li> </ul>	<ul style="list-style-type: none"> <li><b>Manager:</b> same as staff to gain compliance/respect, model desired behaviour</li> </ul>		Large	Low	Close	20-30	15%	Medium
<b>Farm B</b>	<ul style="list-style-type: none"> <li>Rapid organisational growth</li> <li>Secure water</li> </ul>	<ul style="list-style-type: none"> <li>Contract staffing with one farmhand</li> <li>Distance from staff- expensive, hassles, and need to fire in lean times— don't have to hire unskilled staff</li> <li>Turnover: lack continuity and loss of corporate knowledge</li> </ul>	<ul style="list-style-type: none"> <li><b>Manager:</b> model desired behaviour</li> <li><b>Organisation:</b> push decisions &amp; admin to individual farms</li> <li><b>Job:</b> Believe provides pay &amp; autonomy—best of family &amp; corporate farms</li> </ul>		Large	High		<50	19%	Medium

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	Context	Workforce strategy/philosophy	Management practices	Employee perspective	Staff numbers	Turnover estimate	Remoteness	2014-15 % of full planting	Labour costs	Profitability
Farm E	□	□	□	<ul style="list-style-type: none"> <li>□ Age: 55-64,</li> <li>□ Working on farm for 18 yrs (more)</li> <li>□ Hrs/wk= 51, busy= 75 (same)</li> <li>□ Engagement 4.9/7 (same)</li> <li>□ Burnout 2.3/7 (less)</li> <li>□ Turnover intent 3.5/7 (more)</li> </ul>	Large	High	Close	25-33	13%	Medium
Farm H	□	□	□				Remote	<50	10%	Medium to High
Farm D	<ul style="list-style-type: none"> <li>□ No turnover for past 2 years</li> <li>□ No problems finding/keeping staff even through mining boom</li> <li>□ *I think they involved in an Indigenous employment program*</li> </ul>	<ul style="list-style-type: none"> <li>□ Expect lots from employees &amp; they deliver</li> <li>□ Need to know how to manage people—like us, not like other farms</li> <li>□ Hierarchy with staff—us vs. them</li> </ul>	<ul style="list-style-type: none"> <li>□ <b>Staff:</b> have high expectations of rewards/benefits i.e. accommodation, hire enough staff (many places try and get by with 3 instead of 4), expect lots from staff, involved in decision-making</li> <li>□ <b>Worldview:</b> problems with younger staff</li> </ul>	<ul style="list-style-type: none"> <li>□ Age: 40% 25-34 &amp; 40% 35-44,</li> <li>□ Working on farm for 5.8 yrs (less)</li> <li>□ Hrs/wk= 43, busy= 86 (less, more)</li> <li>□ Engagement 5/7 (same)</li> <li>□ Burnout 4.1/7 (same)</li> <li>□ Turnover intent 1.8/7 (same)</li> </ul>			Close	25-33	12%	Medium, 1yr low
Farm F	<ul style="list-style-type: none"> <li>□ Compete with mining for staff</li> <li>□ Used dryland cropping and technology to stabilize finances and staff requirements</li> <li>□ Location of this farm means that there are more stable crops—further west= more trouble with water—they also focus on</li> </ul>	<ul style="list-style-type: none"> <li>□ Positive turnover: gets rid of bad apples</li> <li>□ Expect lots from employees &amp; they deliver—just be honest about finances</li> <li>□ Keep core staff at all costs</li> </ul>	<ul style="list-style-type: none"> <li>□ <b>Managers:</b> managers model desired behaviour</li> <li>□ <b>Job:</b> provide challenges, diversity, autonomy, resources</li> <li>□ <b>Communication:</b> regular informal chats with staff, ask for input, positive/constructive feedback</li> <li>□ <b>Retention:</b> flexibility for family commitments</li> <li>□ <b>Worldview:</b> distinction between younger tech savvy workers and older reliable workers</li> </ul>			Low	Close	50	20% (18% is owner)	Medium

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	Context	Workforce strategy/philosophy	Management practices	Employee perspective	Staff numbers	Turnover estimate	Remoteness	2014-15 % of full planting	Labour costs	Profitability
	<p>infrastructure in quieter years</p> <ul style="list-style-type: none"> <li>They try to do most things on farm themselves—this retains their skill base</li> </ul>									
<b>Farm G</b>	<ul style="list-style-type: none"> <li>Lots of turnover</li> <li>Close to town so attracts lots of younger workers</li> </ul>	<ul style="list-style-type: none"> <li>Core &amp; casuals</li> <li>Focus on can-do attitude—like to train to do things their way</li> <li>Technology: too expensive, so rely on larger staff</li> <li>easier to get locals rather than having to put up outsiders at their house, but then become close</li> <li>Rely on one manager—would need a while to train up anyone else</li> </ul>	<ul style="list-style-type: none"> <li><b>Recruitment:</b> through agency, friends etc.—blank canvases</li> <li><b>Retention:</b> flexible—irrigator can do picking, staff leave and come back later</li> <li><b>Communication:</b> is key—makes workers feel valued—meetings every few weeks, listen to ideas, engagement &amp; satisfaction</li> <li><b>Rewards:</b> 30% above award, phone, ute</li> <li><b>Manager:</b> does everything staff do</li> </ul>	<ul style="list-style-type: none"> <li>Age: 25-44</li> <li>Working on farm for 10 yrs (more)</li> <li>Hrs/wk= 47.5, busy= 57.5 (less)</li> <li>Engagement 5.8/7 (same)</li> <li>Burnout 2.1/7 (less)</li> <li>Turnover intent 1.3/7 (less)</li> </ul>			Close	20-30	8% (17% is owner)	Very High*
<b>Farm L</b>	<ul style="list-style-type: none"> <li>No turnover in years—actively avoiding it</li> <li>'cleaned house' during previous drought—reduced workforce and readvertised roles—didn't rehire problem staff &amp; now more pleasant workplace</li> <li>Great facilities—can be picky with casuals</li> </ul>	<ul style="list-style-type: none"> <li>Core &amp; casual—avoiding backpackers due to problems—take manager time</li> <li>Want to minimise staff &amp; attract contractor—smaller staff means manager more attuned to needs</li> <li>Onus on management to ensure staff stay—onus on staff to support manager</li> </ul>	<ul style="list-style-type: none"> <li><b>Technology:</b> use e technology/innovation (round bales &amp; round up) to minimise staff, OHS issues—minimising labour changes to boost morale</li> <li><b>Rewards:</b> ute, housing, tools—element of ownership—but money not only thing important—switched to salary over casual rates</li> <li><b>Communication:</b> daily chat with staff</li> <li><b>Environment (social):</b> don't keep problem staff</li> <li><b>Job:</b> enrichment for core staff as casuals given all unskilled labour</li> <li><b>Retention:</b> flexibility, lifestyle, money</li> <li><b>Manager:</b> work as one of staff</li> </ul>	<ul style="list-style-type: none"> <li>Age: 35-44,</li> <li>Working on farm for 16 yrs (double)</li> <li>Hrs/wk= 53, busy= 77 (same)</li> <li>Engagement 4.3/7 (less)</li> <li>Burnout 2.4/7 (less)</li> <li>Turnover intent 2/7 (same)</li> </ul>				50	NA	
<b>Farm M</b>	<ul style="list-style-type: none"> <li>Removed previous staff member—positive effect on team</li> </ul>	<ul style="list-style-type: none"> <li>Keep core staff—turnover costs in expertise—casuals lots of work</li> </ul>	<ul style="list-style-type: none"> <li><b>Manager:</b> model desired behaviour, does same thing as staff</li> <li><b>Communication:</b> autonomy over jobs,</li> </ul>					50	NA	

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THE IMPACT OF FARM WORKFORCE TURNOVER IN THE COTTON SECTOR – MILESTONE REPORT

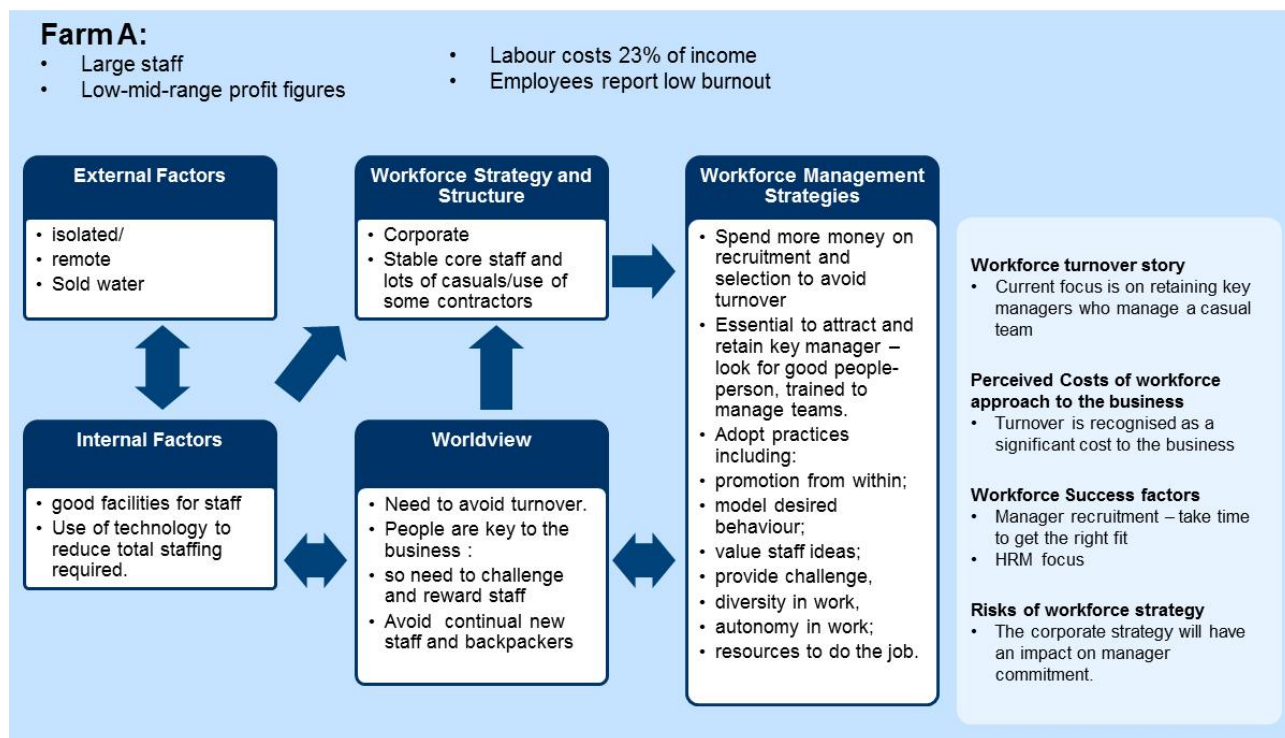
	Context	Workforce strategy/philosophy	Management practices	Employee perspective	Staff numbers	Turnover estimate	Remoteness	2014-15 % of full planting	Labour costs	Profitability
		<ul style="list-style-type: none"> <li>No backpackers—too much hassle—only simple short jobs—machinery</li> </ul>	<ul style="list-style-type: none"> <li>positive feedback, coaching team</li> <li><b>Job enrichment:</b> can structure job, get involved in farm/work for interest</li> <li><b>Retention:</b> internal promotion, flexibility for family—values/interest in staff</li> </ul>							
<i>Farm N</i>	<ul style="list-style-type: none"> <li>Anti-corporate farms (but more opportunities for growth)</li> <li>Lots of pressure from climate/weather</li> </ul>	<ul style="list-style-type: none"> <li>Use technology to reduce reliance on staff—but typically won't put people off—keep core staff</li> <li>Focus on getting right person—turnover costs in time, manager time, team, expertise</li> <li>High expectations of staff—need to adjust down and they get upset—biggest risk not asking enough</li> </ul>	<ul style="list-style-type: none"> <li><b>Communication:</b> positive feedback, informal chats</li> <li><b>Rewards:</b> Christmas bonus, attending cotton show for training, can work longer hours for extra \$\$</li> <li><b>Technology:</b> picker innovation to reduce staff</li> <li><b>Recruitment:</b> if can't get right person, significant financial &amp; morale cost, only if they bring something to farm, word of mouth, personality, local better, trade valued for backpackers, induction &amp; training—tend to return</li> <li><b>Retention:</b> staff ownership over equipment &amp; roles, interest in life outside &amp; flexibility</li> <li><b>Job:</b> choose jobs for interest</li> </ul>					<50	NA	
<i>Farm P</i>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Focus on good relationships over lean/low-cost management—regular turnover is crippling</li> <li>Core &amp; casual</li> <li>Empower staff to take charge</li> </ul>	<ul style="list-style-type: none"> <li><b>Recruitment:</b> select if pay attention to what's going on on farm</li> <li><b>Environment (social):</b> enjoyable—against leanest/meanest style—costs in terms of people</li> <li><b>Job:</b> enrichment for core staff who get high value roles—challenge/diversity/autonomy etc.</li> <li><b>Rewards:</b> money</li> <li><b>Communication:</b> feedback, appreciation</li> <li><b>Manager:</b> one of staff</li> <li><b>Worldview:</b> other farms want our staff but they don't manage properly</li> </ul>					50	NA	
<i>Farm I</i>	<ul style="list-style-type: none"> <li>Affected by turnover: put into people and they take off</li> <li>Competition from</li> </ul>	<ul style="list-style-type: none"> <li>Affected by turnover: put into people and they take off—don't like backpackers as have to train and they</li> </ul>	<ul style="list-style-type: none"> <li><b>Managers:</b> do technical jobs</li> <li><b>Environment (social):</b> want teams, but they talk too much so split up, give breaks so don't work too hard</li> </ul>				Close	25-33	9%*(30%ow	Medium

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THE IMPACT OF FARM WORKFORCE TURNOVER IN THE COTTON SECTOR – MILESTONE REPORT

	Context	Workforce strategy/ philosophy	Management practices	Employee perspective	Staff numbers	Turnover estimate	Remoteness	2014-15 % of full planting	Labour costs	Profitability
	mining—needed backpackers	<ul style="list-style-type: none"> <li>leave—training focus</li> <li>Don't feel staff involved enough and they're not satisfied</li> <li>Staff over deliver on expectations</li> <li>Building up another manager so don't rely on just one</li> <li>Reliability valued</li> <li>Staff valued</li> </ul>	<ul style="list-style-type: none"> <li><b>Retention:</b> internal promotion—worked their way up so you help them, motivate staff, flexibility in tenure &amp; hours, training hard as so varied (4months)</li> <li><b>Rewards:</b> high pay for good manager—pay won't make a difference if they don't like their job</li> <li><b>Communication:</b> positive feedback</li> </ul>						ner)	
<i>Farm J</i>	<ul style="list-style-type: none"> <li>Many staff now coming from mining</li> <li>Good year= 800 hectares, currently 257</li> </ul>	<ul style="list-style-type: none"> <li>Value older workers</li> <li>Hierarchical—staff report to manager</li> <li>Encourage staff engagement/ enjoyment—do the little things</li> <li>Turnover costs in time, staff pressure, expertise</li> <li>Pay not sole motivator—passion—then over deliver</li> </ul>	<ul style="list-style-type: none"> <li><b>Recruitment:</b> advertise on gumtree, don't want backpackers (more experience)</li> <li><b>Communication:</b> formal performance feedback, informal positive feedback</li> <li><b>Manager:</b> models behaviour and employees follow</li> <li><b>Retention:</b> flexibility—keep in touch with staff and some return</li> <li><b>Rewards:</b> pay, housing, vehicles, maintenance</li> <li><b>Environment (physical):</b> planning new gear</li> </ul>				Remote	<50	NA	Variable, 1yr high, 1yr low/medium
<i>Farm O</i>	<ul style="list-style-type: none"> <li>People leave if town doesn't offer enough</li> <li>Only reduced area once in 48 years</li> <li>Focus on infrastructure building to keep staff levels employed—water innovations to maintain staff</li> </ul>	<ul style="list-style-type: none"> <li>Strong opinions on suitable employees—problems with younger workers who don't want to work—too emotional</li> <li>Focus on technology</li> <li>Transactional focus—I pay so they should do the job accordingly</li> <li>Traditional view—man should work hard</li> </ul>	<ul style="list-style-type: none"> <li><b>Technology:</b> innovation (round baler)—costs more but can do greater area</li> <li><b>Worldview:</b> long-term staff want me to manage retirement</li> <li><b>Communication:</b> criticism helpful, but not allowed to anymore</li> <li><b>Rewards:</b> money most important—people say it's not, but that's what staff complain about</li> <li><b>Retention:</b> recognition</li> </ul>					25-33	NA	

## B.2 Conceptual summary of results from integrative analysis of each farm

### Farm A



### Selected quotes from the interview

This farmer explained what he needed to do to manage staff, “... a lot of my job is just getting around, talking to people and making sure that people understand what we're doing and what that guy over there is doing compared to this guy and how those things interrelate and how they need to work with it and around each other. That's sort of bringing the whole thing together.”

He went on to explain his approach to staff management:

*Yeah, well it's listening to what they need or what makes life easier for them, and trying to provide good equipment to work with and good accommodation. We always try and accommodate that sort of stuff to keep the family happy. Or sometimes it might be school or whatever else you can help them out. Might be the use of a vehicle sometimes if they're stuck. Generally it's not more money. There's usually something else.*

Employees seem to recognise this and report high levels of workplace support and engagement in work, as well as low levels of burnout. They report enjoying the ‘challenges’ and ‘opportunities’ their jobs provide.

### Preliminary observations

The manager thinks that their workers are happy but they have had to reduce staff numbers because of reduced irrigation water availability.

They emphasise belonging to a team. It seems to be that managers demonstrate that they are willing to do the job themselves. (It's them demonstrating that they are a part of the team.) What seems to set them apart is an empowered workforce that is threatened by the loss of water. It seems that staff will have to go and the team will need to be rebuilt at a later date. Employees are aware of these issues and report uncertainty around their jobs although do not seem to be intending to voluntarily leave the farm.

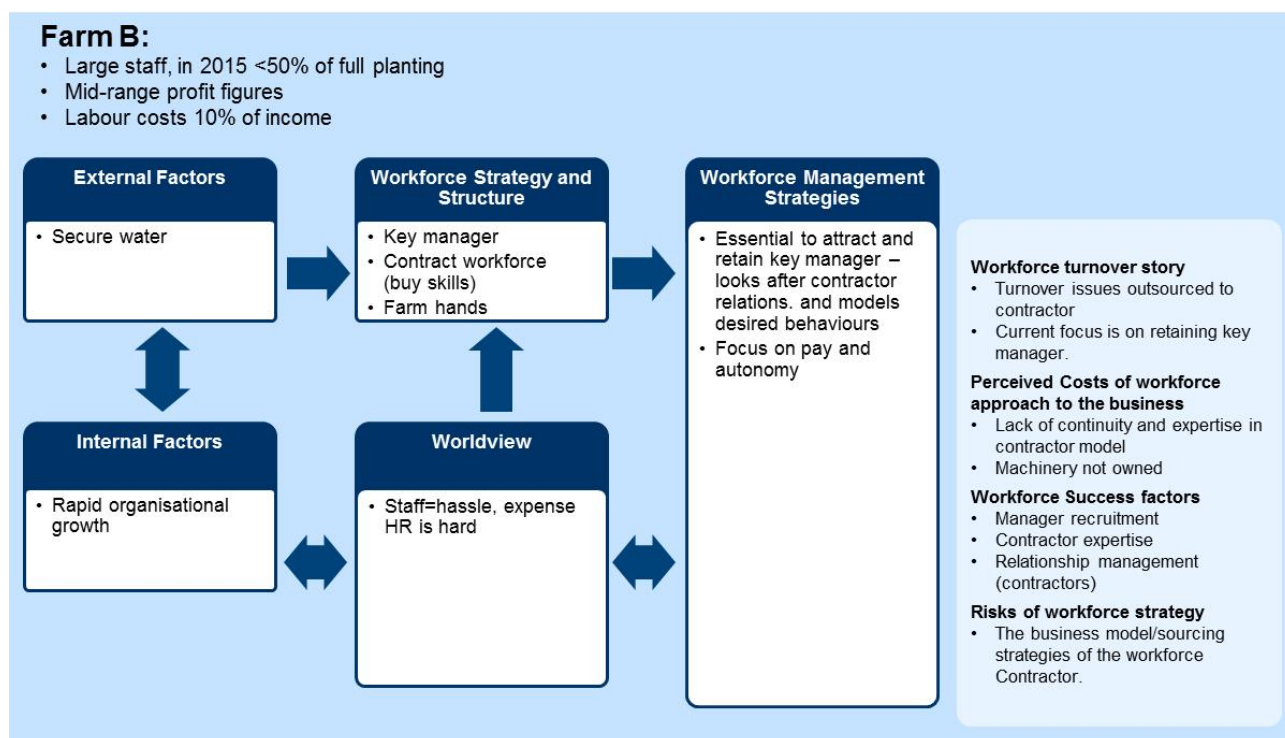
There is no perceived impact from workforce turnover because they have a lot of skilled workers. Employees also report that their jobs require a high level of skills/qualifications and that it provides them with opportunities to further develop their existing skills and knowledge. Managers come from within the business. Expertise such as agronomists and mechanics come from outside.

They grow about 4 to 5 times the area of cotton compared to the average CCA participant, and produce about 50,000 to 60,000 bales. Their yield per ha was below the average farm in the 2 years which their data was available for. Their operating profit per bale and per ha was below average in both years. Their operating expenses per ha and per bale were not markedly different to the average farm, but the lower yield per ha had an impact on operating profit per ha.

### Questions to consider

What is the relationship between teamwork and empathy and 'ownership'? What are the factors that contributed to the lower yield per ha, was it, for example, poorer soil types, or less irrigation water applied? Could it be less attention to detail with the large scale of the operation? Could it be that the land value or the cost of water is lower than for some farms in the sample and hence the return on total assets may be relatively efficient?

### Farm B



### Selected quotes from the interview

This interviewee explained the costs and benefits of a contractor model of staffing:

*We use full contract irrigation and full contract for in-field operations; so planting, cultivating, harvesting, picking and spraying is all done on contract. We went to that contract model to bring in skilled people with the resources. The headaches that come with sourcing and managing all those staff, these guys are very happy to do that, there's a profit margin in it for them. We've just created that position where we're one step removed. I do understand that it is a big issue keeping skilled workers within the business. That is a disadvantage in our*

*system, because if you want business continuity of corporate knowledge, etc., that becomes difficult if you haven't got a 2IC in training.*

### Preliminary observations

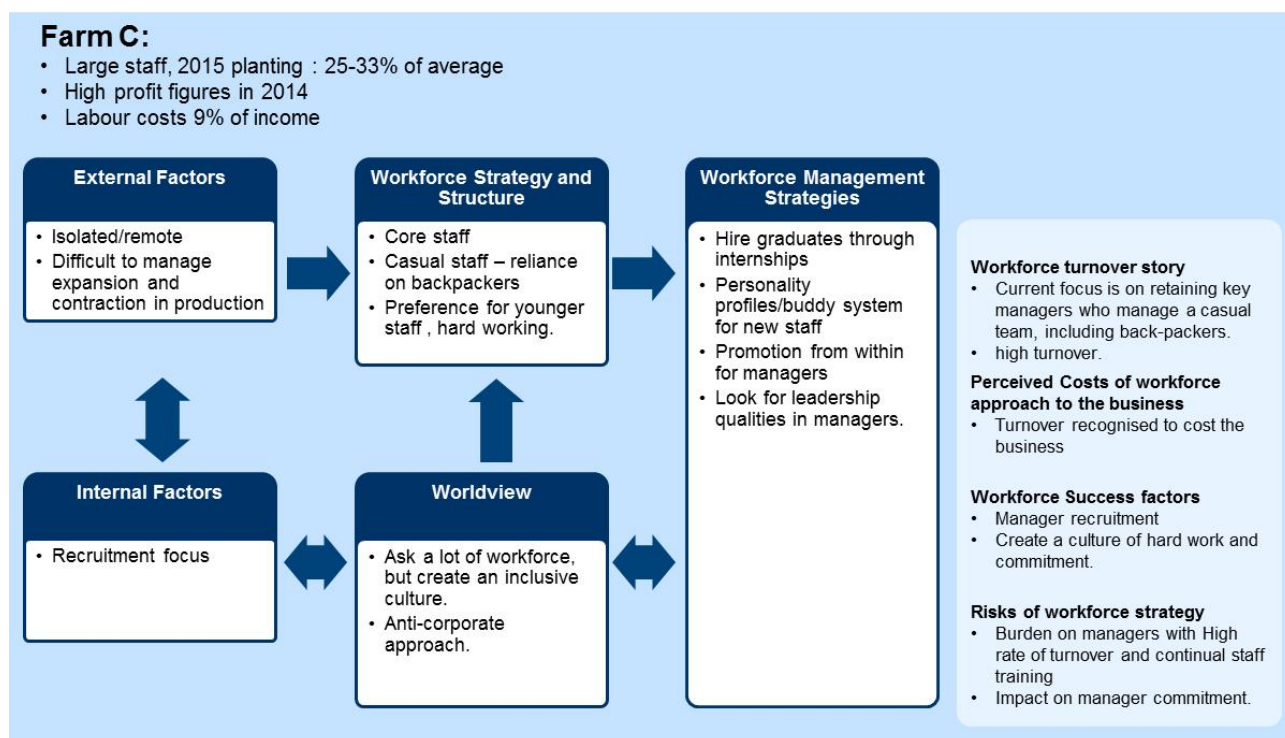
This business is about management. Contractors are employed for all operations. They expect to pay a premium to avoid the problems of managing a workforce. They recognise that the people who are attracted to work on a cotton farm are of a certain 'type', or at a certain level, and they do not want to be involved in that interaction.

Their yields per ha were similar to the average of the CCA farms. Their operating expenses per ha and per bale were a little lower than the average farm, resulting in an operating profit that is a little above the average per ha and per bale. It appears that their management processes are ensuring good yields with good cost control, which is a significant achievement with that scale of operation.

### Questions to consider

In terms of the Five Capitals framework, the assets of this business are Natural, Financial, and Man-made. The question is how vulnerable are they to the loss of Human and Social resources? Could they maintain their cost control for longer than the 2 years that we have data for?

### Farm C



### Selected quotes from the interview

This interviewee explained what they thought was their biggest problem with staff:

*Because the business is so cyclical, it's actually a very challenging time with labour, because we literally don't have any work. So we've had a very small cotton crop. We've tidied up essentially everything we can tidy up, post cotton crop. The fields that we want to have ready are ready, we've fertilised what we think we should fertilise. We got rid of casual staff a long time ago, now we've got our core staff that we're looking at and we're thinking, how do we justify having these people? ...we really try hard to keep hold of our salaried*

*guys, because we know it's very expensive for us to replace. But a lot of it is not necessarily in dollars, a lot of it is in, in productivity and it's in culture and for us, our culture is ... very important.*

They went on to describe how working holiday makers fitted in with their labour demands, “The beauty of backpackers is that they're happy to come in, sometimes we might only need them for two months, so they can come in, do the work and go. It suits these sorts of people to come in, work for 2 months, live in single men's quarters, work 12 hours a day or whatever ...”

### Preliminary observations

There seems to be a continual emphasis on the engaged family-style workforce. The owner sees it as important that he knows people's names. It is a team and a culture that comes from the owner. (It is a large business that could be seen as being a hybrid of a corporate and family business).

Use backpackers at times because they are a good match with their needs. This is because the characteristics of the WHM workforce fit with the requirements of the irrigated cotton industry.

Local people don't want to do seasonal work. This is not because they don't want to work but because it doesn't fit with their needs of security and on-going employment. Cost of staff is in not having good staff. Not in the cost of employing them.

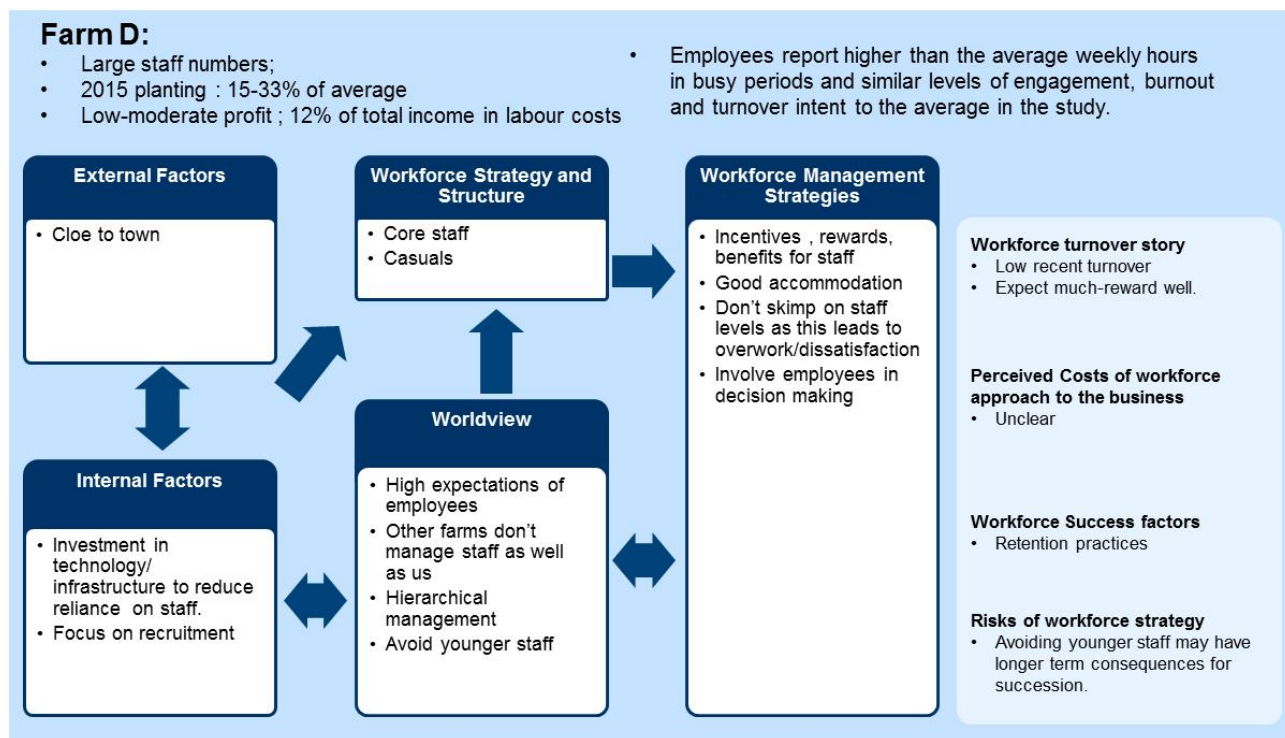
They grew over 2000 ha of cotton in 2014 compared to about 1500ha for the average CCA farm. Had a relatively high yield per ha and the operating expenses per ha and per bale were below average. The operating profit per ha and per bale were more than double that of the average CCA farm.

They have virtually no staff turnover. Although they currently have a problem in retaining their existing trained, enthusiastic and engaged workforce when there is no need for them. They have done things like infrastructure investments. But there is nothing else that makes sense to do. They have high quality, self-motivated staff that would be a loss if they were to leave, but it is difficult to carry them through times when they are not required for on-farm work.

### Questions to consider

This farm only provided data for the 2014 benchmarking exercise. Can they maintain their current performance over the longer term?

## Farm D



### Selected quotes from the interview

This farmer explained the biggest problem with workforce turnover, simply saying, “you get good years and bad years, and in a bad year you've got to cut your staff numbers. That gives the farmers and the industry a headache.”

This farmer also saw workforce issues in the cotton industry as having multiple sources, one caused by the Government, “You look at a lot of the school kids coming out of the system and their training's not right. You've got more instability, and that comes from governments disempowering people. Like when you give kids the dole six months after they leave school, you create a brain dead person over time that's unemployable. He also suggested that farmers were also at fault, “I just find so many people out there running farms that don't understand human beings. They understand their own ego and how to get out and bash as much as they can out of men, but it's a 2-way deal, I don't think there's been enough work done on that.”

### Preliminary observations

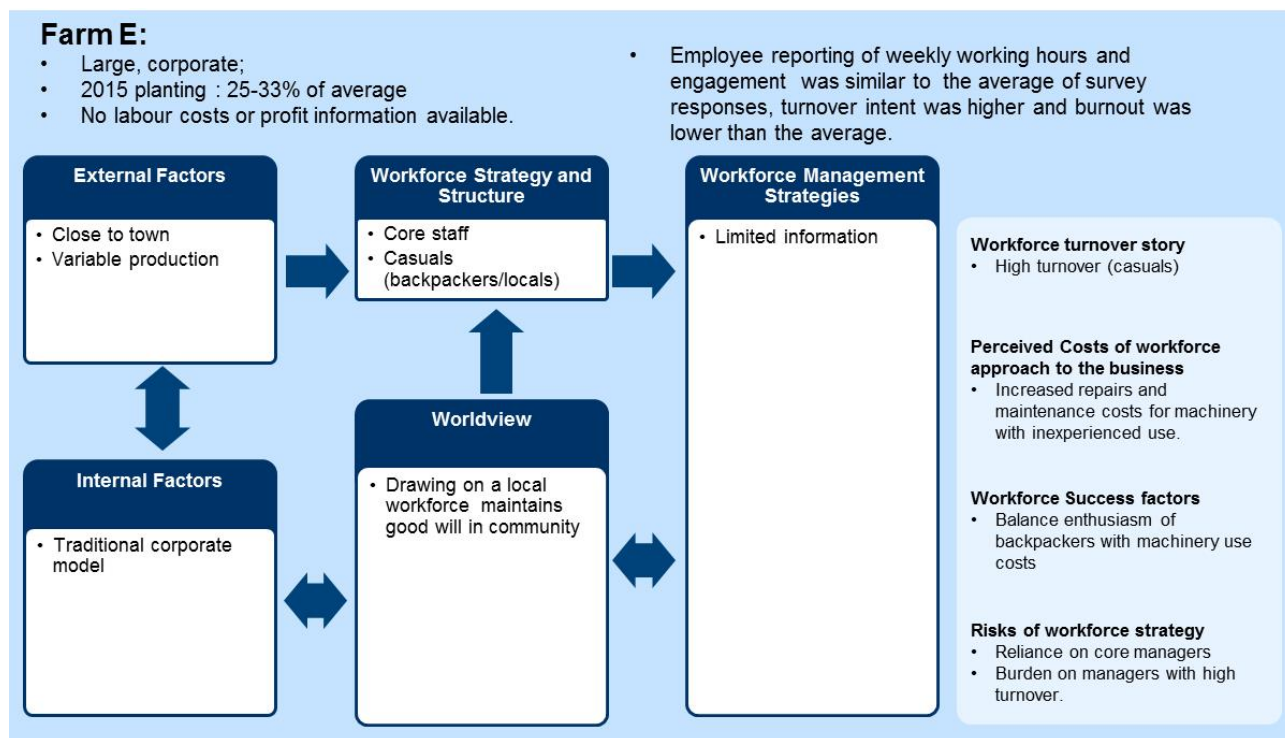
There was some suggestion that the use of groundwater removes the effects of seasonality. The central message from this interview was a focus on the value of communities, families and personal responsibility. The farmer suggested that cotton farmers, in general, do not understand people very well. They also identified that proximity to a town was an advantage for retaining their staff.

Area of cotton grown varied from nearly 2,000 ha in 2013 to just over 500 ha in 2014. Yield per ha was generally above average, but the costs per ha tended also to be above average. There was a large decrease in the total operating profit between 2013 (over \$3 million) to 2014 (\$0.25 million).

### Questions to consider

As it doesn't appear to be related to water availability, what are the factors associated with the decrease in profit in 2014?

## Farm E



### Selected quotes from the interview

Commenting on their use of backpackers, this interviewee suggested,

*“The ones with the better work ethic are the ones that travel. Because they're not frightened to get out, leave their comfort zone and go out and look for work. We've had American guys, Irish, we had Estonians. Terrific work ethics. Some of the locals from in town that have come from Centrelink can leave a little bit to be desired.”*

### Preliminary observations

Workforce composition on this farm is Core and Casual. But, the casuals have all gone. The casual staff consists of 50% backpackers and 50% locals. Locals are used to maintain goodwill in the community. Backpackers are used because they are enthusiastic, but they can be hard on the vehicles.

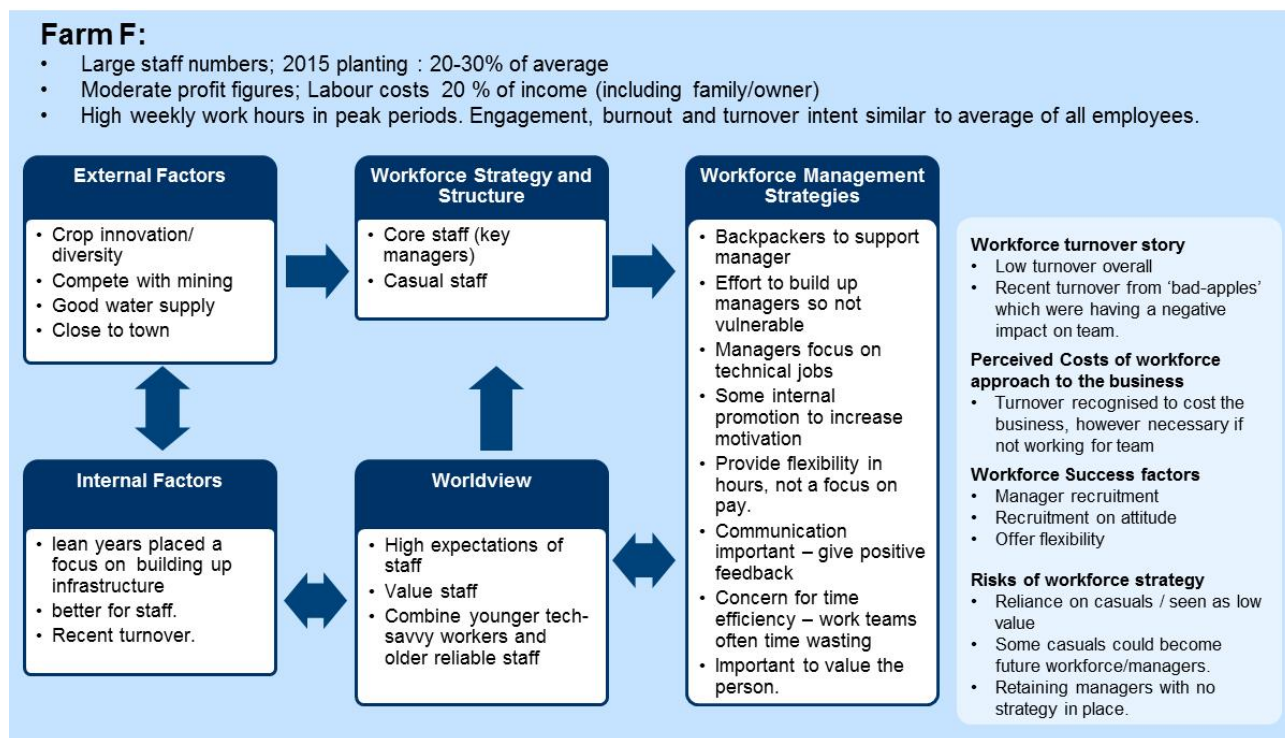
They have reduced their casual workforce and are now contemplating what they will do if they have to reduce their core workforce due to lack of water.

The area of cotton grown over the 3 years has varied between around 3,500 to nearly 5,000 ha. The yield per ha was generally about average, but was about 20% above average in 2012. The operating profit per ha and per bale was generally around the average for the CCA farms. The operating expenses were generally above average per ha and per bale. This business seemed to be able to maintain reasonable efficiency with a large scale operation.

### Questions to consider

How could they maintain their core workforce? What would be the cost of replacing lost experience if they start reducing their core workforce?

## Farm F



### Selected quotes from the interview

Talking about how his workforce often went beyond what was expected from them he said, “The guys have been pretty entrenched in the farm, it's amazing they'll come out at night to do siphons and more than I ask. I've seen them out there at all sorts of hours to make sure that everything's done well. “

Explaining how he was able to maintain a workforce year round he suggested,

*“Having dry land cropping has certainly given us a balance for the work force requirements through the year and that's been a real help. Plus we're in an area which is somewhat reliable for rainfall compared to the west, so we actually do harvest a winter crop, virtually every single year. And so while some years it's unreliable, other years it's good. There's kind of work all year round.”*

### Preliminary observations

This farmer wants their workers to be multi-skilled so that they are useful on a range of activities. They want to do as many of the jobs as they can on the farm with the staff they have without the use of contractors.

They were investing in mechanised irrigation because of the availability of government irrigation efficiency funding. It was recognised that a by-product of this investment was that they would need less staff for irrigation, or have staff who were happier not do a menial task. They identified sources of water as contributing to production variation. Some farmers had access to much more reliable water and were able to retain staff more easily. The sources differed between groundwater and surface water, between valleys and within valleys, and between farms whose water holdings were made of different security levels, and different amounts of water compared to their potentially irrigated land.

This farmer suggested that the satisfaction of staff will to some extent depend on the facilities of the local region.

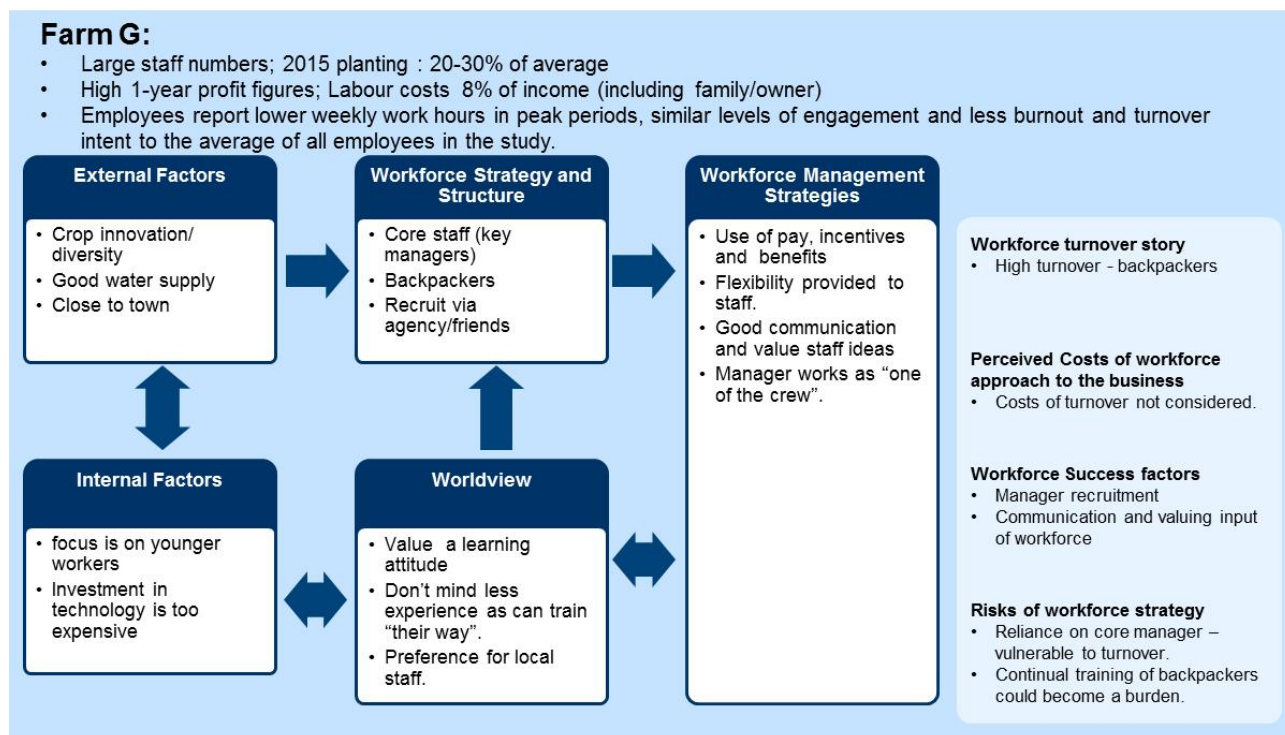
They grew about 500 ha of cotton in 2014, and data was only available for that year. The yield per ha was slightly below average and the operating expenses were above average per ha. The operating profit per ha

and per bale were below average. It appears this business may be going through a development phase and partial efficiency measures, such as operating profit per ha and per bale, may increase in subsequent years.

### Questions to consider

How could the different water-holding strategies of farmers be related to their business performance (especially in years of low water availability)? And how does this affect demand for labour and staff turnover?

### Farm G



### Selected quotes from the interview

Commenting on the use of foreign workers this farmer stated, "They generally get into the swing of it pretty quickly.... if you're using backpackers they're obviously people with a little bit of initiative to get out to Australia in the first place. Sometimes language is an issue, but mostly it works pretty well. "

They explained their strategy for interacting with their workforce:

*I think communication is the thing. It's a really big thing. If people are free to communicate, then how many issues are an issue? Also keeping them actively involved in what's going on, so that they don't get told this is what to do, and they understand why they're doing it. And if they can come up with a better way of doing it let's go with it. I think that's a lot of it, just keeping them engaged.*

### Preliminary observations

The farmer reported that their workers do what is asked of them, but do not do more. It is a family-base operation that seems dominated by the patriarch. They reinforced that the best employee is someone that wants to learn and asks questions.

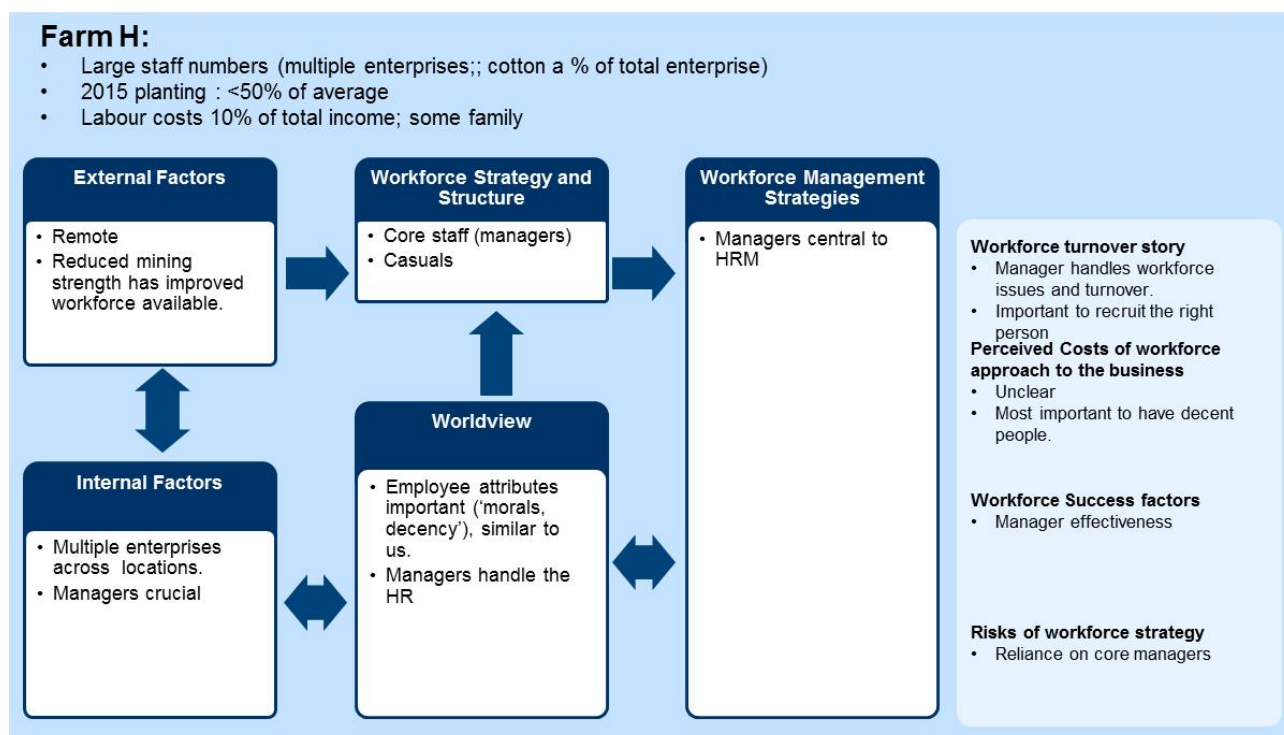
The evidence is that their workers stay a long time. Their longer term employees are paid significantly above the award. The farmer admits to asking a lot from their workers (so workers seldom surprise them by going above and beyond).

They grew about 1,000 ha of cotton in 2014 (the only year which data was available for), this is smaller than the average CCA farm and they have a relatively high proportion of family labour. They had above average yields per ha and below average costs per ha and per bale. This resulted in exceptionally high profit per ha and per bale, about 3 times the CCA average.

### Questions to consider

Can this performance be maintained over the longer term? How much of their performance is due to their workers?

### Farm H



### Selected quotes from the interview

This farmer explained the costs and benefits of workforce turnover to his business:

*... if people have left here, over the last 10 years, it's because the work's not there. We're not growing the same amount of cotton. The biggest cost of when someone leaves is the money you've invested in them. Both financially, but also from a time point of view and in training, is your biggest cost of loss. Lost expertise; that can be an issue. But at the moment we're finding the reverse. Due to the hard commodity down turn we're replacing men with better men at the moment.*

### Preliminary observations

Owner emphasises that he wants workers with morals and decency. Hinted at an us (high morals and decency) and a them (low morals and decency) situation. He talks about people from "our socio-economic background". He suggests that the next productivity improvement on cotton farms will be to employ more women. They are softer on machinery, but they do need to have the right facilities. His management style is a bit removed from employees. Managers are paid for managing the workers. Workers are seen as a resource. There appears to be a gulf between this owner and their workers. His strategy was to use contractors rather than direct employees to shift the problem to the contractors.

Owner has no issues with getting workers. As the mines have wound down high-quality workers are looking for jobs and are prepared to work for less money than they were while the mining boom was on.

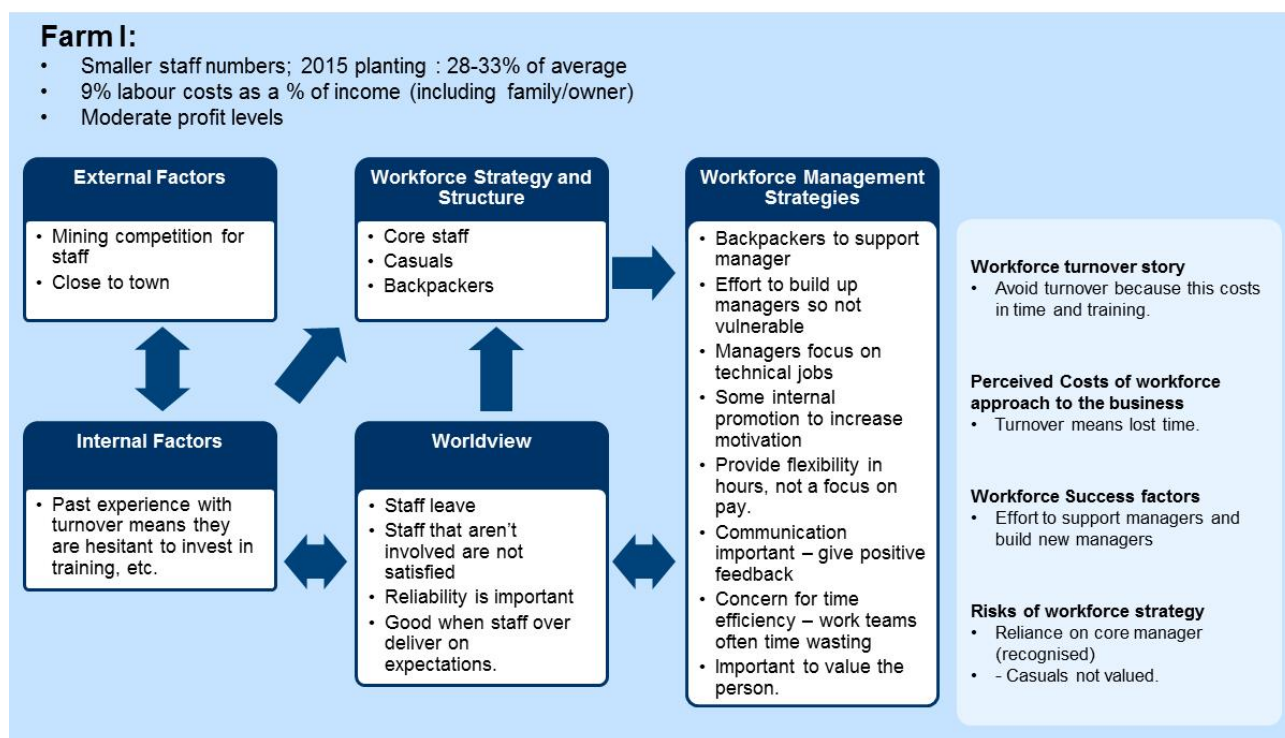
Owner appeared to be at arm's length. His managers are the communicators, or the bridge between labour and ownership. The owner can communicate with his managers because they have a similar background. He is less able to communicate with (or even really know) his employees.

The area sown to cotton was slightly less than the average of the CCA farms (about 1,200 to 1,400 ha). This operation had above average yields per ha and above average operating profit per ha and per bale in 2012 and 2013. However, in 2014 they had yields per ha that were below average and about average operating profit per ha and per bale. The costs per ha tended to be lower than the average farm.

### Questions to consider

Were there any factors, other than low water availability, associated with the lower yields in 2014?

### Farm I



### Selected quotes from the interview

Describing low expectations for his staff this farmer suggested, “I wouldn't say [he's] good, but he's reliable. Turns up every day and tends to like to stand around and talk a lot. But yeah, he's here every day. He's honest. You know what to expect from him. And you tend to look after him a bit. If they're reliable, it just makes a big difference.”

This farmer explained some of the frustration with employing staff, “Some jobs are just fiddly jobs. And you actually get to the point where you end up just doing it yourself. But you try to keep all the repetitive jobs for a lot of them. Some guys you can get them interested and then there's other guys, you've just got to tell them everything. Like, I mean you try and get them interested, but unless you tell them to do that it doesn't seem to happen.”

### Preliminary observations

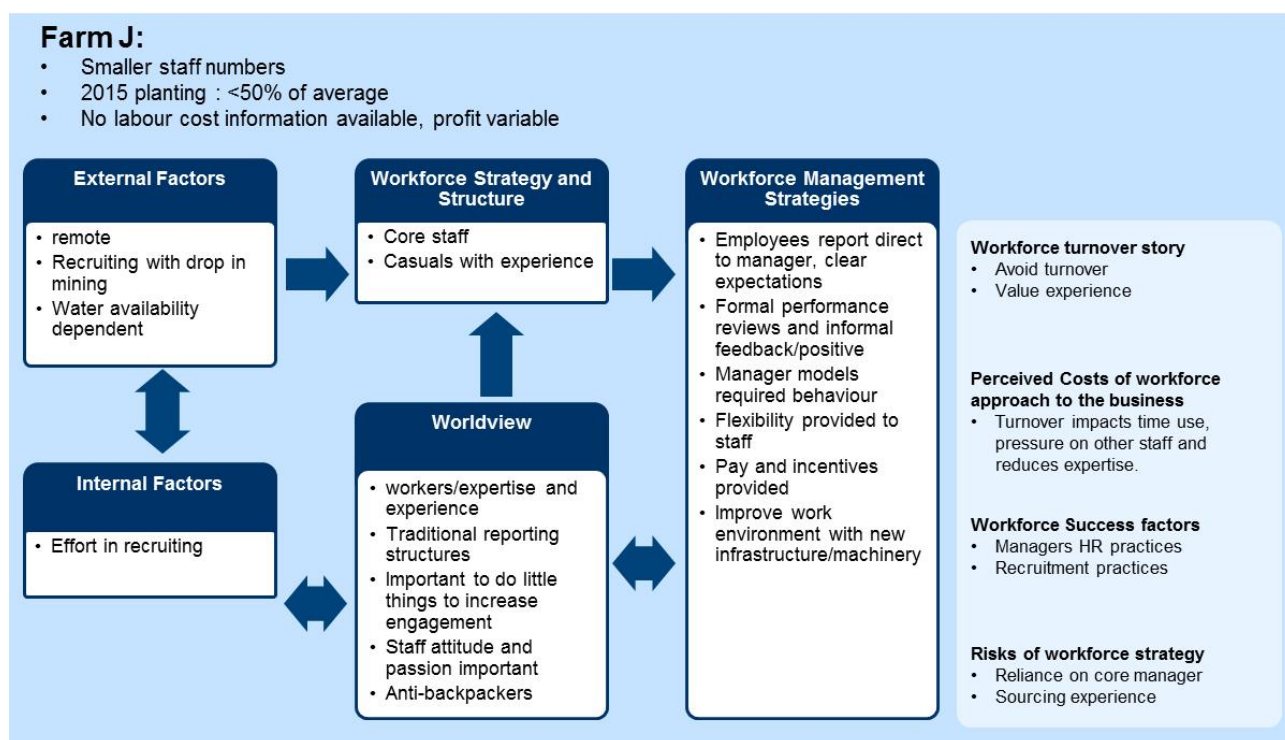
Staff management and training appeared to be a problem for this farmer. Workers classified according to whether they were good or not-so-good. Not so good workers were unmotivated and needed to be directed so that the grower often ended up doing the job himself because the workers can't do it. He does not feel that the situation will change.

This business had slightly less area sown to cotton than the average CCA farm and had a higher proportion of family labour than most of the farms interviewed. Yield per ha was close to the average for the CCA farms, as were total costs per ha and per bale. The operating profit per ha and per bale was below average in 2012, but above average in 2013 and 2014.

### Questions to consider

Do unsatisfactory workforce cultures develop and get reinforced over time to such a level that they are difficult or impossible to change?

### Farm J



### Selected quotes from the interview

Suggesting that there were benefits to workforce turnover one farmer said, "... the ones that have had previous farming experience they've come with a different approach to farming, or having been in the mines they're a lot more work, health, and safety conscious."

They admitted that developing a team culture was difficult, but important:

*...it's sometimes challenging to work as a team if you're sitting on a tractor for 12 hours. But then you've got the opportunity of the changeover and there's certainly a bit of teamwork that goes on there. Certainly trying to encourage a team culture is very important for us, because we've found if you have one non-type team player it affects the rest of the team and the employees and staff morale.*

### Preliminary observations

This farmer was not able to promote staff from within their workforce (but this may have been a timing issue) whereas others have too many people who were able to be promoted.

Casual workers are often criticised for their inexperience, but in this case the owner saw a problem with their older age. They also identified generational issues as being more important than gender issues.

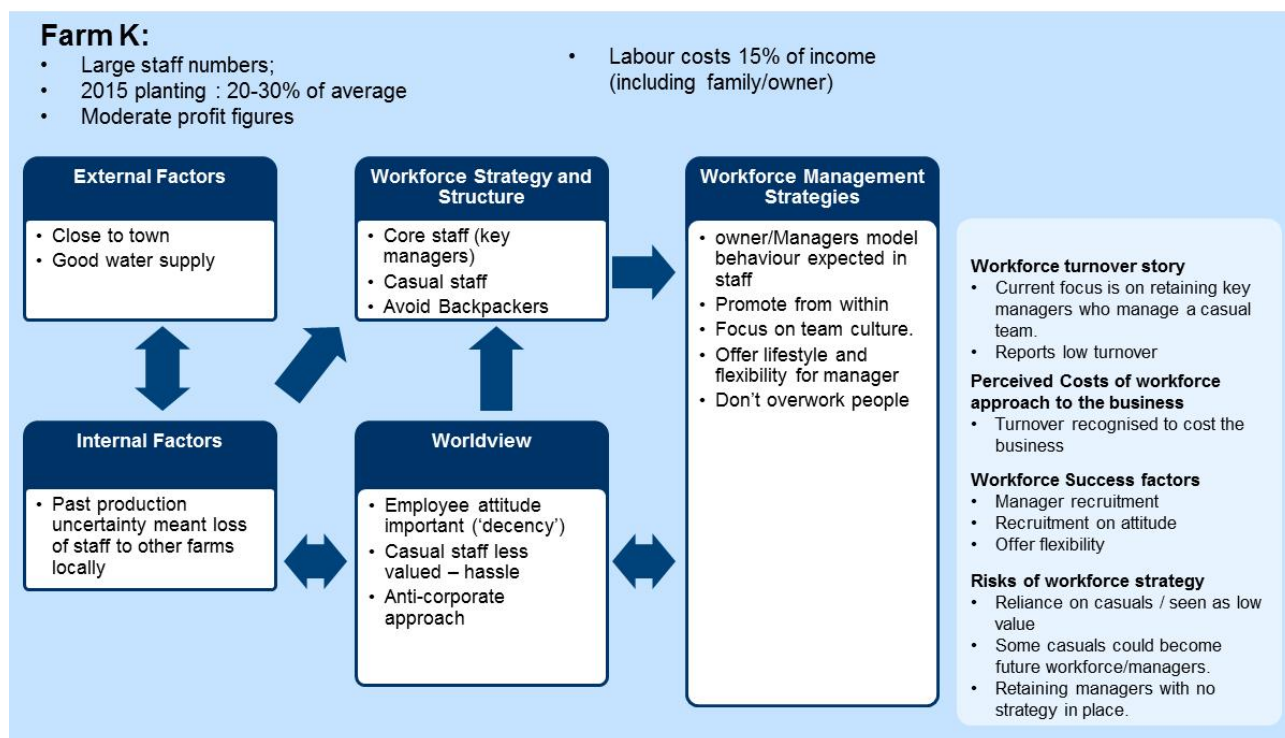
The farmer reported that casual staff from the mines bring with them a different approach to WHS issues and treat machinery better.

This was a smaller operation with from 500 to nearly 900 ha of cotton grown. Had above average yield per ha. The operating profit was about average in 2012, but well above average in 2013. There was no data available for 2014.

### Questions to consider

As there was a higher proportion of family labour in 2013, is there a link between this and the increased profitability?

### Farm K



### Selected quotes from the interview

Talking about the difference drivers for corporate and family farms this interviewee said, “ we probably risk a little bit more than corporates ... the thing is a lot of the corporates have [external] money so therefore they always worry about losing money. “

The impact of low water allocations (and low levels of production) were felt on the need for staff, “Look, we're very fortunate we've got a lot of people who have been here a long time, 30 odd years, or 20 years or 15 years, or that sort of thing. Yeah, basically we let two good people go. All those casuals will be gone and part time will be gone. So there's 7 gone this year, .. It was a great pain. Terrible. But anyway, they all moved on to better things, we hope.”

### Preliminary observations

This farmer reported low employee turnover and emphasised the importance of decency. They demonstrated empathy by mentioning that a long-term employee had given so much of his life to him, so he treated him more leniently. It appears he is respected/liked by his employees and seems to have an understanding of what motivates people. Older people want to see the boss doing the same job. He suggests that the attraction of working on a cotton farm is the lifestyle. He is very reliant on his workforce, and is not attempting to manage the whole operation by himself.

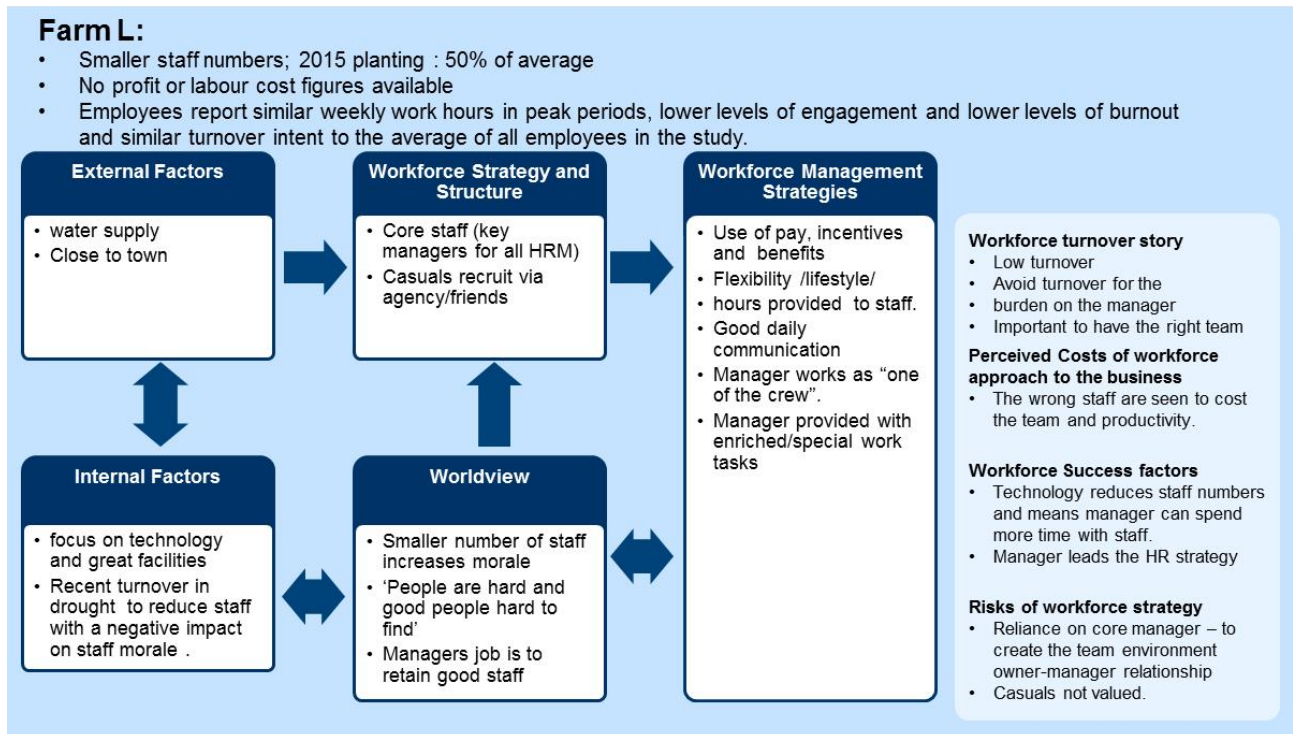
Low staff turnover and long-term employees have created a team culture. Two permanent staff and seven casual staff were not re-employed in the current year because of the lack of water. Generally grow about 2,000 ha of cotton, but varied slightly over the 3 years. The yields per ha were similar to the average for the CCA farms, except for 2013 when the yield was below average. The operating profit per ha and per bale was also well below average for 2013. The operating profit per ha and per bale was above average in 2012 and 2014.

### Questions to consider

What are the issues associated with this growers lower yields and operating profit in 2013.

The participants in the following interviews were not part of the CCA. The material presented below is derived from interview notes. The interviews have not been transcribed at the time of writing this report.

### Farm L



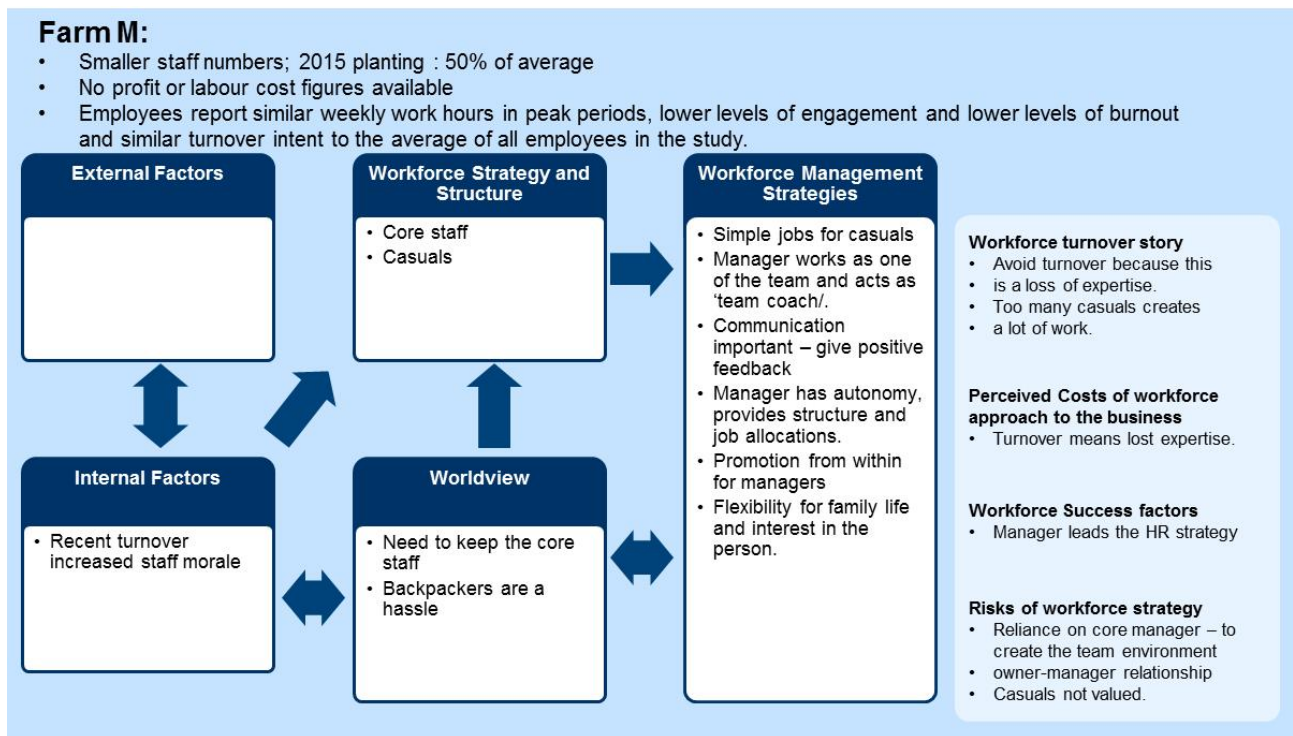
### Preliminary observations

The focus for this farmer is on maintaining the core workforce and maintaining morale. They use backpackers to supplement when necessary. They have low or no turnover of core staff.

While it would not have an impact on their staff turnover (which is low or none) they are trialling irrigation technology to avoid using syphons. If this was successful the owner suggested that the morale of the whole team would be lifted, because nobody likes doing syphons. On this farm irrigation is the main seasonal requirement for labour.

The trialling of labour saving technology suggests that if the manager/owner is familiar with the tasks that are required from their employees (which this one was) they would be more likely to make decisions that made the work more enjoyable for their workers thereby increasing their morale. This is because they will be aware of the difficulties of the job and try to reduce those difficulties.

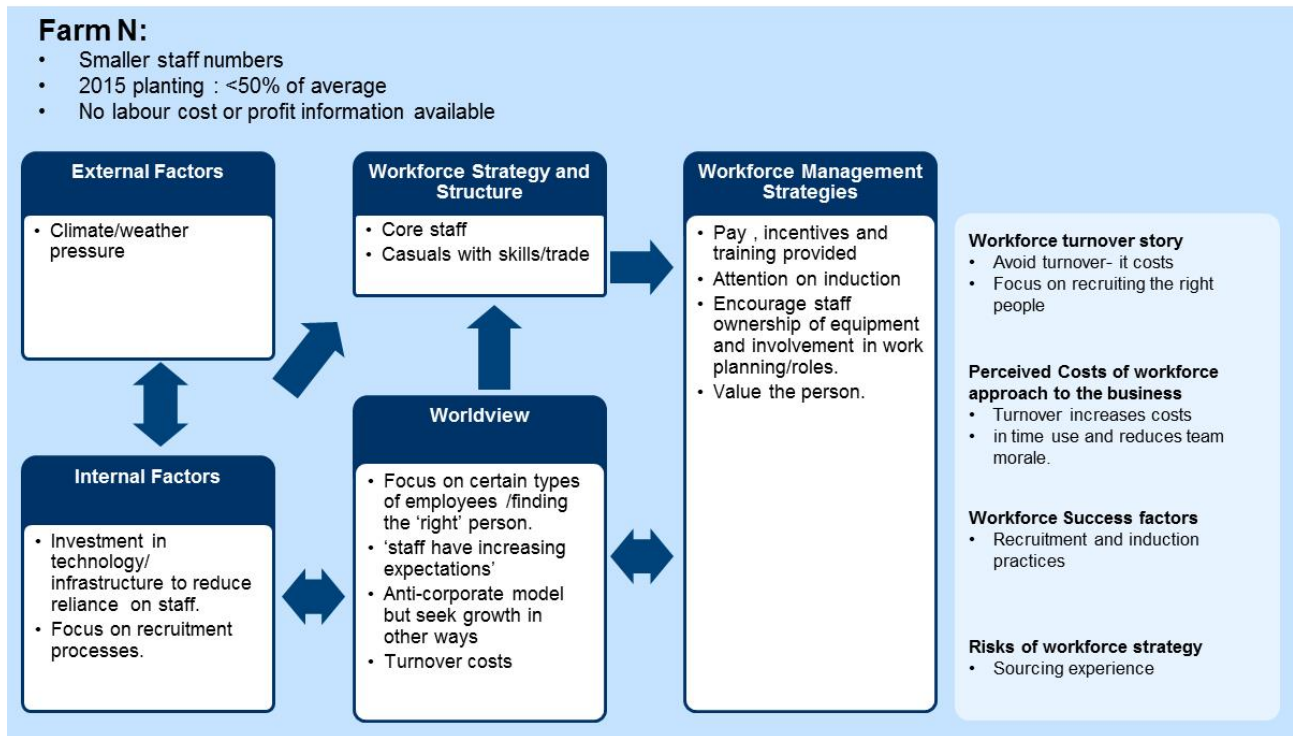
**Farm M**



**Preliminary observations**

This farmer reports trying to build a team. They have a core team and contractors for irrigation (seasonal surge). He is trying to think of his employees beyond their role on the farm. He is a new manager and is attempting to rebuild morale by instituting management changes that were needed but previously ignored.

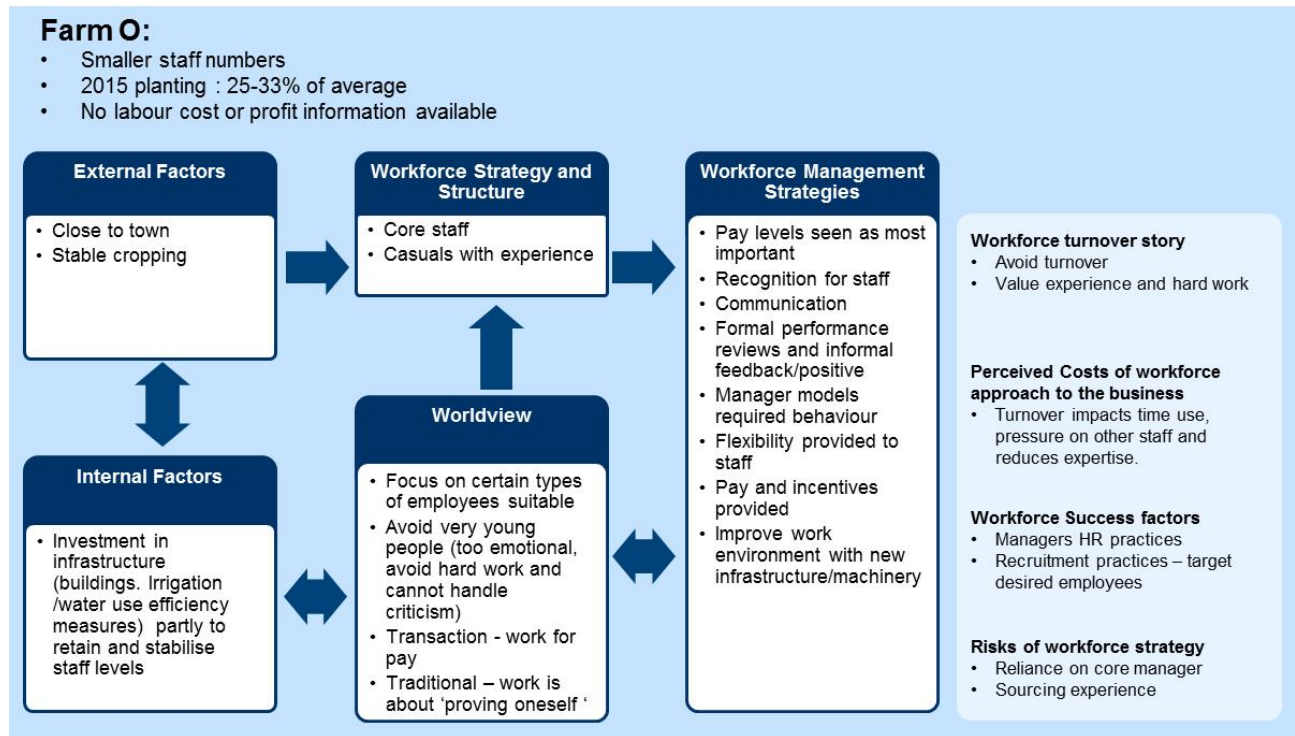
**Farm N**



**Preliminary observations**

This farmer wants a core team that doesn't change regardless of production and water availability but his strategy to achieve this is to have smaller workforce numbers. This can result in higher levels of work being required from employees in normal times, but when water is scarce (and the need for labour drops) he does not need to reduce staff numbers. He had higher levels of empathy demonstrated by his thinking about what was the most important thing for his workers.

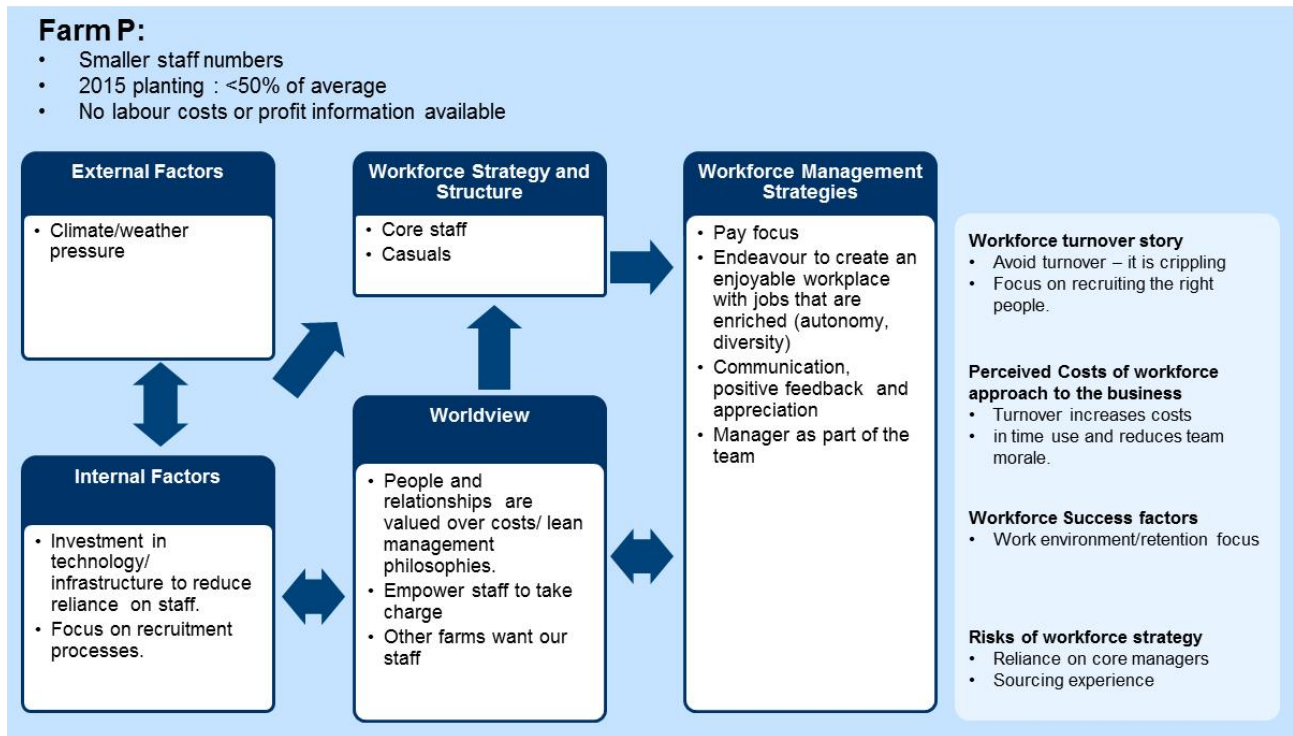
**Farm O**



**Preliminary observations**

This farmer appears to have a ‘no nonsense’ approach to managing staff. They have a long-term core staff and seem strongly critical of the younger generation. No apparent empathy. His existing staff appear to fit in with his personality. Staff will disagree with the owner, but will eventually need to back down because they realise they are arguing with the owner.

**Farm P**



**Preliminary observations**

This farmer admits to being soft on staff and consultative. They deliberately engage their staff in decisions that are made on the farm to encourage ownership. They realise that their non-authoritative style is the only way that they can manage the employees. They can't do it any differently than that. They were a very empathetic employer.

They obtain their casual workers by word of mouth from current employees. They see their employees as an overhead, not as a variable cost.

## Appendix C. Early typology of farms to assist in cross-case analysis

Interviewees were firstly classified into a simple typology according to production size and their engagement with their employees (see Figure 2). These classifications were to some extent arbitrary subjective judgements. Some of the 'Large' farms had elements of family farms and some of the 'Small' had elements of corporate farms. Similarly the employee engagement criteria was not a dichotomous classification. In practice cotton growing businesses would have a range of approaches to their engagement with their workers.

Despite their arbitrariness these classifications are a useful way for helping to understand the differences and similarities between cotton businesses and to think about how those differences may impact on their workforce strategies.

The relative importance and impact of workforce turnover on case study farms was strongly influenced by the specific workforce strategies of the farm which in turn were strongly influenced by the business context and in turn the physical farm resources available.

Decisions influencing workforce strategies are part of a broader business context involving decisions about the farming system. Across the farms, decisions around workforce issues were of lesser prominence than broader business decisions such as investments in land (the type, size and location), water (the cost, security, tradability and amount), infrastructure development (the physical layout of the water delivery), technology (methods of irrigation and machines used for production). For some farms, workforce decisions related primarily to labour as a factor of production. In this research we label farmers with this attitude to their employees as being 'uninvolved'.

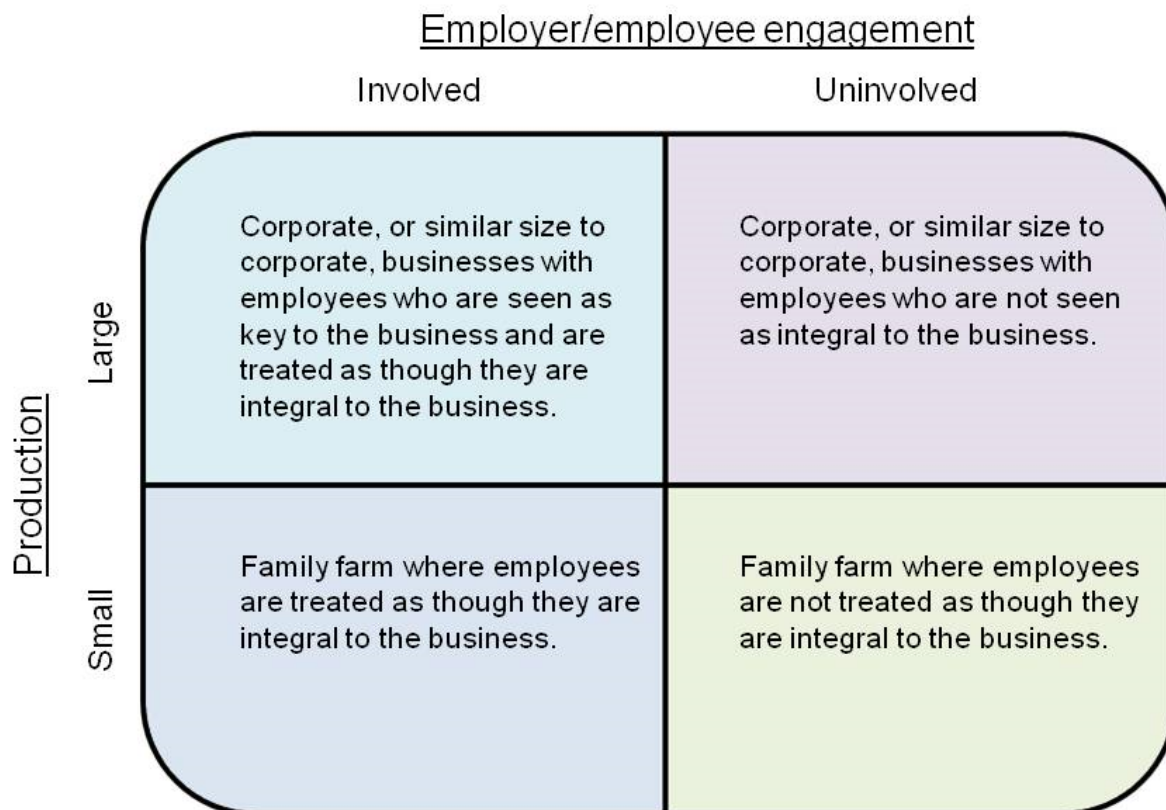
This attitude can be involved in terms of whether the farmer shows prosocial behaviour or not. Prosocial behaviour involves actions that "benefit one or more people other than oneself— behaviours such as helping, comforting, sharing, and cooperating" (Batson and Powell 2003, p. 463). The reasons why people act or do not act prosocially are complex and vary in different circumstances and at different times (Batson and Powell 2003). One prosocial norm with relevance to the employee/employer relationship is reciprocity. For cotton growers the norm of reciprocity requires that they help those who have helped them, and that they do not harm those who have helped them. The norm of reciprocity imposes obligations that are in relation to the benefits given by others (Gouldner 1960) When growers do not act in a prosocial manner towards their employees it may mean that they do not feel that they are subject to the norm of reciprocity, which is possibly because they perceive that their obligation to their employee has been satisfied. They may simply perceive that the payment for their employees' labour has extinguished their felt obligations. This theory suggests that those growers who are not acting in a prosocial manner are not bound by the obligations of a reciprocal relationship that would otherwise guide their behaviour.

The farmers that we label as having 'involved' management act more prosocially toward their employees and are likely to make workforce decisions that are primarily related to maintaining stability or capacity. The 'involved' and 'uninvolved' employers (see Figure 2) are each likely to give different weights to the importance of the workforce in the overall business context.

Whilst the types of decisions that cotton growers need to consider, and the decision choices that they have available to them, are in part as a result of past decisions made by them and others choices are also made subject to the constraints of:

- Finance; which includes ease of access to finance, who provides the finance, and the returns that the financier expects.
- The decision-makers' personal goals, and even whether they are the goals that need to be satisfied.
- Family goals which might be influenced by time of retirement choices or whether succession is expected.
- The personality and psychological makeup of the person making the decision.

Figure 6: Conceptualising according to production size and employer/employee engagement



This typology does not explain the heterogeneity of the groups. One way to examine the within-group variation is to use the Five-capitals framework that includes the capitals of Finance, Human, Physical, Social, and Natural (see Table 1).

Table 1: Conceptualising study participants according to the five capitals framework

Group	Farm <sup>2</sup>	Finance	Human	Physical	Social	Natural
1) Large / Involved	A	X	X	X	X	X
	C	X	X		X	X
	K		X		X	X
2) Large / Uninvolved	B	X		X		X
	E	X		X		X
	H	X		X		X
3) Small / Involved	D		X			X
	F		X		X	X
	G		X		X	X
	L		X	X	X	X

<sup>2</sup> The individual farms are identified as A through to K.

	M		X	X	X	X
	N		X		X	X
	P		X	X	X	X
4) Small / Uninvolved	I					X
	J			X		X
	O			X		X

What Table 1 shows is how a complex set of circumstances can come together to produce a particular result. Individual cotton growing businesses are inherently complex, and are also substantially affected by the complexity of the context that they are operating in which means that the individual cases may not be able to be used to make generalisations.

Context is especially important in this situation because little can be known about the cause of workforce turnover until the context in which the workforce turnover occurs is described and the behaviour is understood from the position of the person who carries out the behaviour. Ragin (1987) describes the problem with this type of research by suggesting that the problem is not that there are a large number of variables affecting the research but that the problem is trying to unravel the multiple and complex ways in which the variables combine to produce an outcome. This research attempted to develop the needed contextual understanding through face-to-face interviews which aimed to develop a more intimate understanding of the situation than that gained from other methods (Maanen 1983).

The context of a farm can include features such as its soil type, its topography and climate, and include built infrastructure such as the physical layout of the farm. The farm context can also include considerations such as availability and timing of labour, or the type of irrigation technology in use (Kaine and Bewsell 2008).