



Cotton Industry Succession and Professional Development - A Review of Employer and Industry Needs in the Agribusiness Sector

Final Report -
To Cotton Research and
Development Corporation
Project No. CRDC 1213



PO BOX 7642
TOOWOOMBA SOUTH QLD 4350
AUSTRALIA
Phone 61 7 4615 2255
Fax 61 7 4615 2330
Mobile 0408 063 229
E-mail gordon@cdi.net.au

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Gordon Stone
Director
Gordon Stone and Associates Pty Ltd and Corporate Development Institute Pty Ltd
PO Box 7642
TOOWOOMBA SOUTH Qld 4350
Phone: 07 4615 2255
Fax: 07 4615 2330
Email: gordon@cdi.net.au

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Executive Summary

Based on the data that has emerged from this project, the initial objectives were condensed to the following key issues of interest to the industry:

1. The scope and coverage of the cotton agribusiness sector
2. The expected professional staffing needs of the cotton agribusiness sector over the next 5-10 years
3. Factors affecting succession and professional development in the cotton agribusiness sector
4. The extent to which a program – focussing on young professionals and/or cotton industry succession and professional development – is relevant to the future of the industry
5. The extent to which current service providers could or would support addressing identified cotton industry succession and professional development issues.

1. Scope and coverage of the cotton agribusiness sector

The cotton agribusiness sector is far from being a homogenous sector. In this study respondents were defined broadly under the organisation types of – cotton processors, larger family farming operations, merchandise and equipment suppliers, merchandise and equipment suppliers with ancillary advisory services, on-farm advisory services only, on-farm advisory services with other services, and specialist cotton industry suppliers. A considerable range of additional roles were covered.

Approximately half of the cotton agribusinesses had less than 10 personnel, one quarter 11-20 and one quarter greater than 20 personnel. Approximately half of the cotton agribusiness personnel were aged from 25-40 years of age, one quarter 41-50 and one quarter under 25 years.

As the industry diversity makes developing a cohesive professional development and succession strategy potentially a relatively complex task, access to good demographic data, would support a more comprehensive understanding of the cotton agribusiness sector. A short sharp desktop project would help gain a more comprehensive understanding of the true extent of the sector – its size, composition and location.

Recommendation 1

That a more wide ranging data gathering process via desktop review is undertaken so as to ensure the scope, extent and coverage of the cotton agribusiness sector is known.

2. Expected professional staffing needs of the cotton agribusiness sector over the next 5-10 years

While making predictions about likely staff numbers in the cotton industry over the next 10-years has a high degree of uncertainty, there is a strong probability that at least the following numbers of graduate personnel and roles will be required over the next 5-years to 2016, across the agribusiness sector, in the wider cotton industry:

- Agronomists – 65
- Researchers – 34
- Professional water engineers – 2
- Technicians – 2
- Science Graduates – 4
- Sales (agronomist) – 4
- Plant Pathology – 2
- Plant Breeder – 2
- Other – 4.

However these numbers of over 110 personnel required in the next 5-years do not make allowances for a range of occupations including – Senior/strategic professional management staff, Farm managers, Management Staff, Business Advisors, Finance personnel including CFOs, IT and electronics personnel, as well as company directors. Nor do they make allowance for retiring or departing personnel from the industry.

Concern was expressed about the capacity of current universities to supply the present staffing needs. While data on graduates accessible by the cotton industry is difficult to access, the potential for those courses to supply the well over 100 personnel likely to be required to 2016 is highly unlikely to be able to meet demand. Further work on this issue is required.

There is added urgency based on:

- Recognition that 3-4 year degree courses are the norm for graduates required by the industry
- This means that action is required in 2012 to start securing students from Years 11 and 12 at school to enter those degree courses in 2013 or 2014 at the latest. This would then help secure the supply of personnel required around 2016.
- Anecdotally study respondents reported that the UNE cotton course appears to be faltering in its ability to supply the necessary numbers of graduates for the industry
- The quality of some of those graduates is also thought to be below the level required by the cotton industry
- There is likely to be increased competition from banks, mining companies, and other employers
- The nexus between supply and demand across the varied universities is known to be problematic according to Pratley (2012).

Recommendation 2

That the cotton industry moves swiftly during 2012 to create strong relationships and partnerships with suitable universities to secure the well over 100 undergraduates expected to be needed in the next 5-years to service the needs of the cotton agribusiness sector.

Recommendation 3

That the cotton industry moves swiftly during 2012 to secure the future relevance of the UNE Cotton Course in all its forms to service the needs of the cotton agribusiness sector.

3. Factors affecting succession and professional development in the cotton agribusiness sector

It appears that market failure is occurring in the cotton industry, particularly in the acquisition then retention of key quality personnel, due to:

- Declining numbers of experienced personnel being available
- Declining numbers of high quality personnel entering the industry
- Declining numbers of high quality personnel being available through universities
- Lower than required levels of industry profitability.

The potential for a more industry based strategic approach to professional development (and industry succession) clearly warrants serious consideration, as there appears to be a strong cultural interest and desire to support cotton agribusiness succession and professional development. This must recognise the disparate needs of the sub-sectors of the cotton agribusiness sector.

The role of a number of current initiatives could be expanded to support such an approach – including the cotton conference; the UNE Cotton Course and the CCA training program.

In contrast the ARLP; Future Cotton leaders; Nuffield Scholarship; AICD, myBMP “Certified Agronomist” initiative generally appear to have minimal levels of support in the agribusiness sector.

If the industry has supported these initiatives previously to support the agribusiness sector, it calls into question the relevance of these programs to meet future needs of a contemporary cotton agribusiness sector, or the way in which the cotton agribusiness sector was made aware of these opportunities. However this issue may be better considered in context of the wider needs for future leaders in the cotton industry and wider support of industry programs. If there is a wider industry need then these programs could be more relevant for sectors other than the cotton agribusiness sector although they may usefully feature in any proposed professional development and industry succession program that is developed.

Recommendation 4

That an industry based strategic approach to professional development (and industry succession) warrants serious consideration in the cotton industry.

Recommendation 5

That the relevance of cotton industry funding to support the cotton agribusiness sector's use of the ARLP; Future Cotton leaders; Nuffield Scholarship; AICD, myBMP "Certified Agronomist" initiative is reviewed with a view to substituting more sought after programs including the cotton conference, the UNE cotton short course module program and the CCA training program; or focusing specifically on making these programs known/available through a more industry based strategic approach to professional development.

4. The relevance of a cotton industry succession and professional development program

There was strong support for the development of, and investment in, a targeted and relevant industry wide program that would focus on succession and professional development in the cotton agribusiness sector. Close to half the respondents were prepared to pay directly to access the services of such a program, providing it was practical and relevant and half were prepared to supply specific in-kind support.

They proposed that such a program would focus on the following issues, in priority:

- Creating a supply chain of young people into the industry
- Changing their (young people's) perceptions of the industry
- Understanding the industry implications of an aging current workforce
- Establishing a mentoring program for key personnel
- A coordination / sourcing role for training opportunities; workplace placements and creating a source of HR and training resources
- A clearing house for good industry examples of succession / professional development that could be learned from – and that supports cotton agribusiness networking opportunities
- Learning from known programs including the PICSE model and the Qld Resources Council personnel program
- An outreach program to demonstrate the value and benefits of working in the cotton industry.

The industry good parts of the program may well have to be part of a wider industry funding consortium, of which the agribusiness sector would be a part funder. Such a program ought to have an innovative name that is highly contemporary and relevant to a 'vibrant, creative and exciting cotton industry'. This could be posed as a challenge for more youthful participants in for example, a cotton PICSE program.

Recommendation 6

That the proposed cotton industry succession and professional development program would commence its focus on the priority issues identified from this study.

Recommendation 7

That a highly contemporary name relevant to a 'vibrant, creative and exciting cotton industry' ought to be created as a public signature statement and its creation could be posed as a challenge for participants in for example, a cotton PICSE program, where young people gather.

5. The role of current and potential service providers to resolve cotton industry succession and professional development issues

The most pressing issues to be resolved, in order to meet the current agribusiness sector needs, are those identified above. The most urgent of those, relevant to the services on offer from current potential cotton industry service providers, PICSE, RIRDC, PICSE and CA, appear to be:

- Maximising the number of young people who can be channelled through university in the next 5-years – by supporting the Year 11/12 schools program of PICSE, and increasing support of the RIRDC Horizons Scholarship program to maximise the throughput of students from final years at school into university and then supporting their university careers with a focus on cotton.
- Enrolling the cotton agribusinesses themselves so they formally commit to levels of support
- The most significant weak link appears to be universities as a group. Developing and strengthening relationships with aligned universities is clearly a significant priority.
- Setting up a supply chain of young people – through determining how to best use the complementary resources of PICSE, RIRDC, PIEF and CA. This process is expected to take time to develop and integrate and so this task is proposed as an initial focus of the succession and professional development program.
- Changing the perceptions of the industry is an important yet specialised task. The Allen Consulting Group (2012) also proposed such an initiative and recommended the PICSE program for national expansion. An association of the cotton program with B-HERT would be a cost effective linkage

Due to the urgency of this issue, an establishment phase of the proposed cotton industry succession and professional development program is proposed for commencement as early as possible in 2012.

Recommendation 8

That one of the first roles of the proposed cotton industry succession and professional development program in 2012 is to secure a 5-year graduate supply chain of young people from Years 11 and 12 and through partner universities; using the resources of the PICSE program and RIRDC, to lock-in the maximum numbers of young people it can acquire to meet the industry needs identified above.

6. An action plan for the proposed cotton industry succession and professional development program

Drawing on the above issues, an Action Plan is outlined below as means to commence the set-up of the proposed cotton industry succession and professional development program:

- i. Approve the concepts contained in this report – and cost out a 2012/13 program
- ii. Appoint a coordinator and small coordinating group – drawing largely from the agribusiness sector
- iii. Approve this Action Plan and allocate funds
- iv. Approve a name
- v. Develop relationships with suitable universities
- vi. Concurrently commission PICSE and RIRDC to action a 2012 program to secure a cotton supply chain of young people from school to university under the auspices of this program – so that the first students flow to university in 2013
- vii. Define how to ensure those universities can increase their numbers of students into the cotton industry

- viii. Engage with the cotton agribusiness sector more widely to ensure they are engaged to deliver their level of support for the program
- ix. Review the Qld Resources Council model to determine key learnings that can be applied to the cotton industry
- x. Work with CA and PIEF to determine their contribution to the longer term supply chain of young people
- xi. Determine how the program can support the professional development functions outlined above and budget accordingly based on the extent to which fee for service and in-kind support can assist with funding
- xii. Consider areas of collaboration with the cotton conference and CCA training programs
- xiii. Review the processes that B-HERT proposes for implementation of the Allen Consulting Group report in order to create synergies where appropriate
- xiv. Address other issues that arise.

Recommendation 9

That the proposed program Action Plan is approved to get planning and action underway rapidly and by 1 July 2012 at the latest.

Summary

In summary the proposed cotton industry succession and professional development program is clearly a necessary innovation to address areas of market failure and the need to support the development of the cotton agribusiness sector into the future.

There appears strong industry support and buy-in as a result of this project. The proposed Action Plan provides a check of the level of real buy-in early in the process, to ensure the agribusiness sector commitment remains high and they take a real stake in the successful outcome of the proposed program.

It is important that the industry moves swiftly as it is clearly on a very tight timeline to address these outstanding issues. Engagement with universities and with PICSE and RIRDC are regarded as important immediate initiatives where the most immediate gains can be made.

All the other issues raised in this report can be readily addressed under the auspices of the proposed cotton industry succession and professional development program.

One participant summed up the general feeling relating to attracting more people into the industry:

The current position of recovery from drought shows the importance of a structured program to get more people into the industry as it is getting harder to get staff. It is important to do outreach to universities to get graduates coming into the industry, however we need to get the funnel started in the first place by getting kids in school into courses at uni. Industry levels of support depend on the program that is implemented.

1. Project Objectives

This project was conceived during 2011 as result of concerns in the cotton industry regarding its 'future supply of labour'. This has been particularly focussed as a result of the good rains during 2011 which has resulted in growers increasing their acreage planted to cotton. This is in stark contrast to the experience over the last decade of drought.

There have been recent plans announced regarding industry expansion in southern areas of the cotton region. Also growers who moved from cotton are now returning as a result of better overall water access (whether dryland or irrigated) and ability to achieve better returns from cotton crops than the alternatives. There are a range of other factors which have also impacted on recent cotton growing activities including the Murray-Darling Basin Plan.

One particular set of industry concerns covers the future supply of labour at large. There are three components of this issue:

1. On farm operational labour
2. Skilled on-farm labour, and
3. Access to professional advisers and service providers.

It is widely known that many in the industry have not replaced key personnel who left during the drought nor have many of them actively sought additional key personnel – principally in order to reduce overheads in the face of an extended drought.

However it is known that the industry is now re-grouping in order to move forward due to an expectation that confirmed water will be available over at least the next few growing seasons.

1.1 Strategic industry investment

The Cotton Research and Development Corporation (CRDC) took on the role of considering the extent to which some form of strategic investment in industry succession and professional development support is needed, particularly in professional cotton careers which generally have a tertiary qualification. As a result it commissioned this Review of Employer and Industry Needs to focus on succession and professional development in the agribusiness sector – addressing issue 3 above regarding cotton industry access to professional advisers and service providers.

In this review a number of specific issues and considerations were considered important:

- What are the current strategies used by cotton industry employers – the level of strategic vs. opportunistic decision making that is occurring to secure key personnel (short and long term) and manage their professional development (PD) needs?
- What post-drought strategies are employers considering – and the extent to which they are different from drought related decision making and whether they are more longer term in nature?
- The potential contribution that could be made by several industry programs that CRDC is investing in / could invest in – namely the Primary Industry Centre for Science Education (PICSE), the Rural Industries Research and Development Corporation (RIRDC) managed Horizon Scholarship, the Primary Industries Education Foundation (PIEF) and the UNE Cotton Course; to meeting / supporting these needs to focus on the cotton industry's strategic growth. The views of Cotton Australia (CA) were also canvassed.
- If CRDC were to help develop some form of a "young professionals" program by integrating / linking or leveraging the functions of these and other programs on behalf of industry – what

employer contribution in general interest, engagement, support, monetary and in-kind levels could specific industry organisations / employers be expected to commit over 3-years to secure personnel / PD needs over a 10-year horizon?

- What factors affecting these decisions are relevant – and could impact CRDC decision making?

These questions were re-defined into a series of project objectives.

1.2 Project objectives

1. Define the expected/factors affecting professional staffing needs of the cotton agribusiness service sector in the period 2012-2020 and in the face of varied climatic / market scenarios
2. Define the expected/factors affecting professional staffing needs of the larger cotton growers under similar circumstances
3. Define the expected/factors affecting professional development needs of the cotton agribusiness service sector personnel (on a segment basis) in that period
4. Report on the contribution that programs, including but not limited to PICSE, Horizon Scholarship, PIEF and the UNE Cotton Course, could make to those needs
5. Report on issues affecting professional development opportunities for existing staff e.g. Australian Rural Leadership Program (ARLP); Future Cotton leaders; Nuffield Scholarship; Australian Institute of Company Directors (AICD), etc as well programs such as the myBMP “Certified Agronomist” initiative
6. Report on the likely contributions from employers that could be expected if CRDC were to invest in those or additional programs that may be identified as being relevant
7. Identify any innovative practices in relation to professional development of staff that could be shared across the industry
8. Make recommendations on actions that would meet these needs in context of project findings.

1.3 A strategic industry wide initiative

It was recognised that some form of strategic initiative, such as a “young professionals” program, may have a role to play in the future. This project sought to investigate the extent to which this might be useful or relevant.

1.4 The definition of agribusiness

In this project report ‘agribusiness’ is an overarching term that deals with on-farm advisers, who work in the private sector, for some form of financial remuneration, and work directly with farmers or others in the industry in solving their enterprise management issues, through some form of collaborative decision-making process.

Specifically input was sought from the resellers of products and services, the suppliers of those products and the range of private consultants from single operators to organisations of several consultants. In addition the input of other components of the corporate agribusiness sector – processors of cotton and larger corporate farms – was also sought.

1.5 The definition of ‘researchers’ and ‘research’

In this project report ‘researchers’ or ‘research’ are specific terms relating to more applied on-farm research work conducted to support the agribusiness sector’s advisory work. In most cases it focuses on trial work rather than the more strategic work undertaken by those commissioned by CRDC. However the agribusiness sector does undertake both strategic and applied research.

2. Project Process

2.1 Overview

The focus of the review was to obtain data to:

- Create a baseline understanding of the status of key professional personnel in the sector, principally graduates from university who fill specialised roles
- Seek out an understanding of how the sector sees its personnel numbers, age structure, roles and needs unfolding in future – especially with a five and 10 year time horizon
- Establish the factors affecting these issues – now and in the future. This includes external influencing factors such as water availability and company profitability, as well as staff acquisition and management issues
- Determine the extent to which any form of industry intervention could be usefully undertaken, the form it could potentially take and the outcome to which it could be directed
- If such an intervention program should be undertaken, gain an understanding of key issues surrounding that intervention
- Allow recommendations to be made about how best to address those key issues.

2.2 Methodology

The review was based on developing a series of defined questions to seek out the information required to address the project objectives. They were directed to a wide range of industry personnel during personal interviews in the period late December 2011 to late-February 2012. A list of potential respondents was supplied by CRDC.

The key elements of the project process were to:

1. Develop a structured interview process and key questions in consultation with CRDC and Cotton Australia (CA) – see Attachment 1.
2. The project intention was for the project manager to travel to key sites in all cotton growing catchments – and interview a representative sample of respondents, based in regions focussed on – Gunnedah, Narrabri, Moree, Dirranbandi, St George, Goondiwindi, the eastern and western Darling Downs and Emerald. However due to high summer rainfall and flooding, plus the workload of respondents, the use of telephone interviews proved the only feasible option to seek out the information.
3. While it was initially proposed to seek data from personnel in the new cotton areas in Southern NSW it was decided to exclude them from this first task
4. Interviewees were selected from the following respondent categories:
 - National resellers, including Landmark, Elders, CRT/Ruralco, etc
 - Regional resellers, including Pursehouse Rural, B&W Rural, AgNVet, AMPS Agribusiness, etc
 - Specialist cotton industry suppliers, including CGS, CSD, etc
 - Key larger private cotton/crop consultant organisations, with employed personnel
 - Larger farming business enterprises that were thought to employ numbers of professional personnel.
5. Interview key decision makers in the Primary Industry Centre for Science Education or PICSE, the Primary Industries Education Foundation (PIEF), Rural industries Research and Development Corporation that manages the graduate across-Research and Development Corporation focussed Horizon Scholarship program, in order to determine the extent of alignment or otherwise of those programs with cotton respondent / industry needs – plus to engage with Cotton Australia
6. Analyse data and review findings and implications

7. Report the findings, implications, and data to CRDC in a draft report
8. Submit final report.

2.3 Factors affecting this process

In the planning phase, it was recognised that the logistics of such a face-to-face interview process were considerable. It was also noted that the Christmas and New Year period along with the cotton growing calendar would potentially adversely influence the interview process. However the aim of the project was to personalise the interviews, so that where possible the 'outside the square' or more subtle material could be obtained from respondents.

While CRDC supplied a list of names of some potential respondents, it was up to the project manager to ensure a representative list of Informed Persons could be interviewed. During discussions with Crop Consultants Australia, they readily agreed to seek 'expressions of interest' from members who were interested to be participants in the project. During early December 2011 twelve of their members expressed interest in being interviewed and of them nine were eventually interviewed. For reasons of privacy the names of all respondents – many of whom did not want to be personally identified – are excluded from this report.

During early December, respondents were contacted to secure interview times. In reality the lead-up to Christmas 2011 proved a very busy period and few respondents were able to spend time being interviewed, despite many attempts to make appointments.

During January 2012 considerable rainfall and flooding occurred in the cotton growing areas. This also adversely affected respondents' ability to contribute. For example over a two week period several attempts were made to interview a CEO of a regional reseller – his interview finally took place while he was flood bound and stuck in Sydney!

For that reason the interview process was somewhat disjointed.

However it is noteworthy that respondents considered this project compelling and very relevant to their future viability and to the industry's future. In most cases respondents gave willingly of their time and most spent from 40-60 minutes providing considered responses to the questions. For many the idea of an 'industry program' proved novel and worthy of strong consideration.

2.4 Attribution

Of the 19 respondents 10 sought reporting only on a sector basis rather than attribution to them personally or to their organisation.

As a result these results are reported on the basis of 'sector type attribution'.

3. Results

In this section of the report, the project results are outlined. At the conclusion of each section those results are summarised. Their implications are discussed in Section 4 – Key Findings.

3.1 Organisation Details

Participant Organisation Details

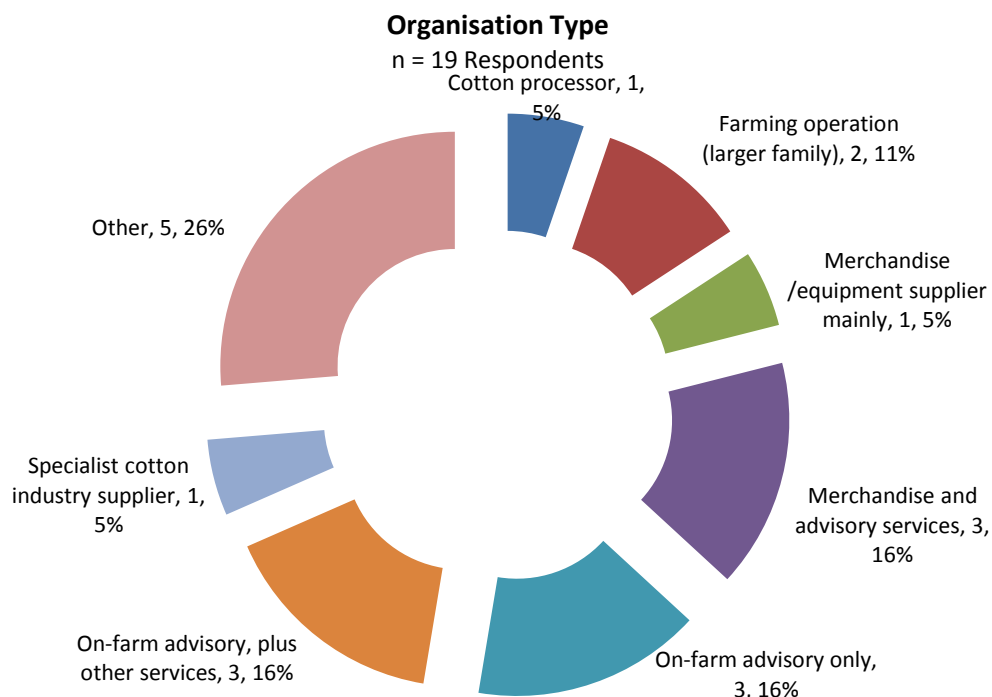
Figure 1: Participants in this study represented a range of Agribusiness sectors. 5 participants indicated roles other than those initially outlined in the questions – see Attachment 1. These additional roles included:

- Private R&D contractor
- Irrigation scheduling, loss assessor, irrigation products
- Industry training and mgt consultant for Central Qld (CQ)
- Production, ginning, marketing, warehousing, etc
- Biotechnology

On Farm Advisory participants which involved other services included:

- Consulting engineers – water on-farm/gov/industry
- Fee For Service R&D; uni lecturing
- R&D

The 1 participant involved in Merchandise/equipment supplies, identified a speciality of *mineral fertiliser*.



Regional Coverage of business

Figure 2: The regional coverage of business represented by participants included either one office only (9 participants) or several offices in the cotton growing areas (10 participants). The location of offices is detailed in **Table 1** below.

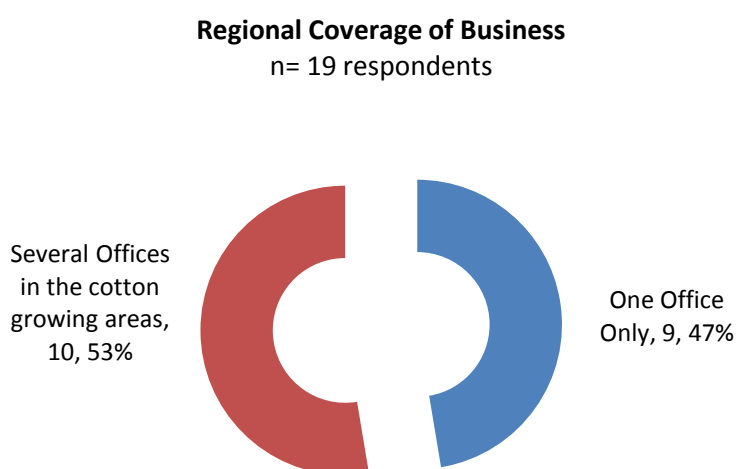


Table 1: All 3 Merchandise and Advisory Services participants have several offices in the cotton growing areas with other participant groups identifying both one office only or several office locations.

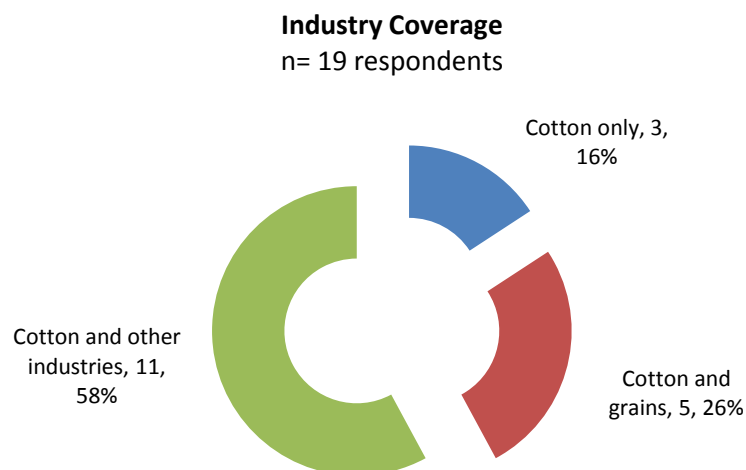
Organisation Type	One office only	Several offices in the cotton growing areas
Cotton processor		2x main offices – Toowoomba / WeeWaa + Trangie, Moree, Goondiwindi
Farming operation - larger family	Thallon	
	Goondiwindi	
Merchandise / equipment supplier mainly		Toowoomba Moree Griffith
Merchandise and advisory services		Toowoomba, Dalby, Pittsworth, Chinchilla, Goondi
		Moree, Mungindi, Collarenebri, Nth Star 10x sites
On-farm advisory only	Narromine	
	Emerald	
On-farm advisory, plus other services		Griffith, Trangie - covering 3x valleys Warren and Narrabri
	Goondiwindi	
Specialist cotton industry supplier		12 offices Narrabri, Wee Waa, Dalby
Other	Toowoomba	
	Narromine	
	Emerald	
		in Namoi Valley office and warehouse
	Toowoomba lab + 5x regional personnel, HO Melbourne	

Industry Coverage of business

Figure 3: 3 participants in this study represented only the *Cotton Industry*. 11 participants represented *Cotton and other industries* and 5 participants *Cotton and Grains*.

The most commonly mentioned *other industries* covered by participants included grains (8 mentions), horticulture (7 mentions) and livestock (4 mentions):

- Grains and livestock
- Grains, lamb feedlots, transport and grain drying
- Horticulture, grains
- Grains, horticulture, livestock, mining
- Grains and horticulture
- Cotton 80%, horticulture 15%, grains 5%
- All Agriculture; local and overseas; 25% mining and % growing
- Grains, livestock, horticulture and dairy
- Grains, horticulture
- Grains, horticulture
- Canola



Organisation Details in Summary

The 19 survey respondents covered a range of sectors of the cotton industry. They can be grouped into – larger more corporate farming operations (2), pure merchandise supplies (1), merchandise and advisory services (3), on farm advisory consultants (3), on farm advisers who supply other services such as water consulting, R&D and university lecturing and some contract R&D work (3), specialist product suppliers (1) and a range of others.

The others included – a Private pure R&D contractor, a specialist with a focus on Irrigation scheduling, loss assessor, irrigation products; an Industry training and management consultant for Central Qld (CQ); a company involved in a range of services including Production, ginning, marketing, warehousing, etc, plus a product supplier representing the Biotechnology product supply sector.

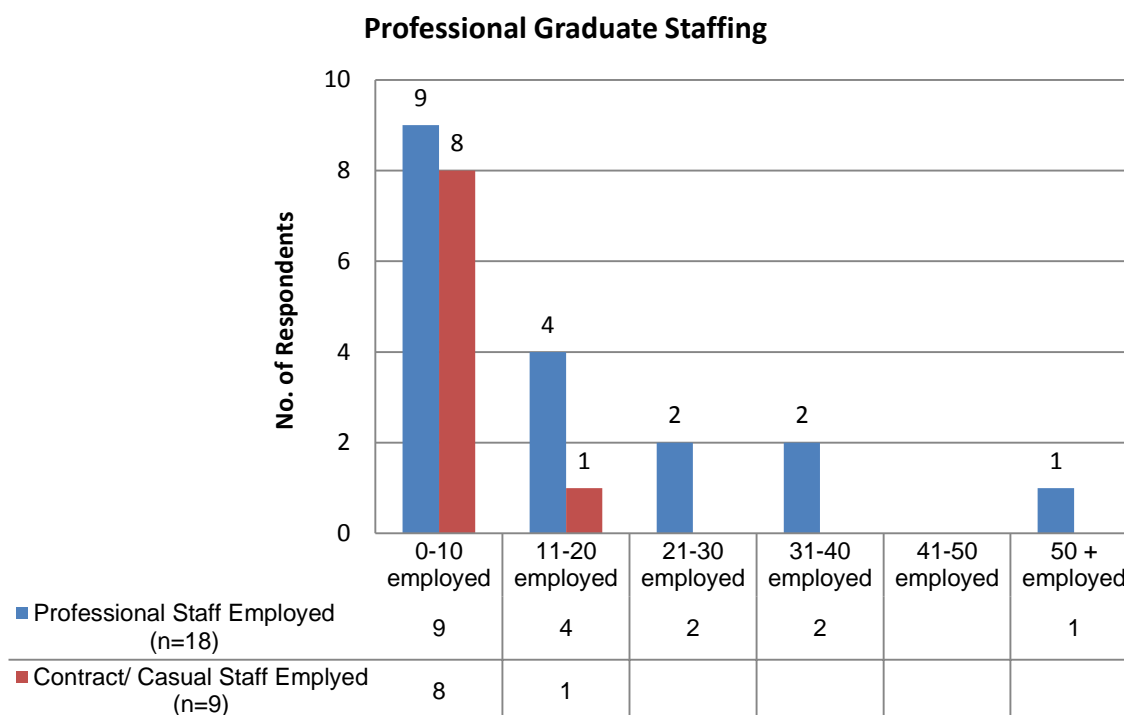
There were a range of single office and multi-office representatives providing good geographical coverage of the cotton industry.

Only three participants purely serviced the cotton industry – the majority serviced the broadacre cotton and grains industry with a strong horticultural focus as well as some livestock.

3.2 Professional Graduate Staffing

Number of Professional graduate staff employed

Figure 4: The average number of professional staff employed by the various agribusiness sectors represented is 15.8, with the average number of casual/contract staff employed being 4.9. One on farm advisory business noted they currently employed 68 professional staff.

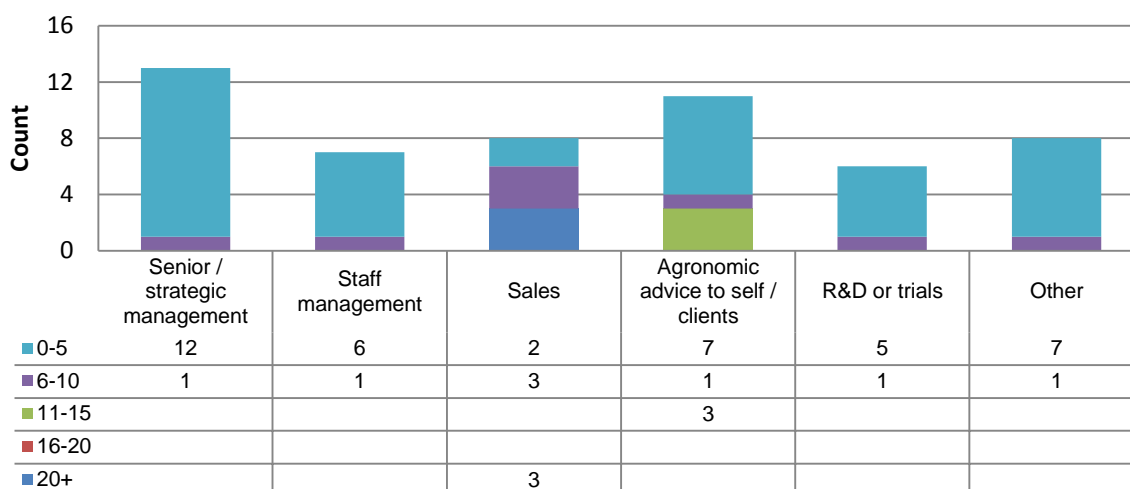


Roles undertaken by staff employed

Figure 5: Of the staff employed, more were employed in the roles of Senior or Strategic management (13 mentions), to provide Agronomic advice to self/clients (11 mentions) as well as into sales positions (8 mentions). Other roles mentioned, included:

- Farm Management
- Company biz (business) advisers
- Finance
- Office
- Bug checkers
- Project engineer
- Technicians
- Trials and bug checking
- Engineers
- Electronics programming
- Marketing
- Product Management/compliance
- Information Technology

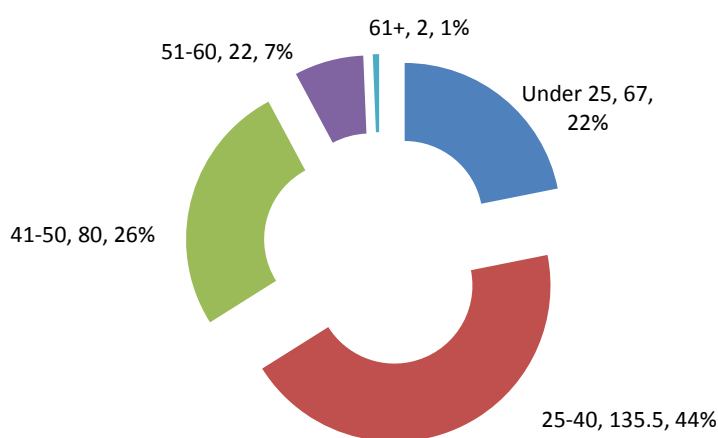
Roles undertaken by staff employed



Age of staff employed

Figure 6: The majority of staff employed by businesses represented by participants in this study is aged between 25 and 40 (135.5 mentions, 44%). The second most represented age group is 41-50 (80 mentions, 26%).

Age Categories of staff employed



Issues relating to age structure across roles

Table 2: A commonly mentioned remark (7 mentions) relating to the age structure across roles is that there are less graduates or experienced staff available (the loss of experience during the drought was mentioned as a factor). A lack of young professionals entering the agricultural arena was also mentioned by 6 participants, with the concern highlighted that the Agricultural sector is an aging workforce, which will lead to a *hole in the future*.

In an effort to combat these issues, several participants noted that they are *using student casuals as part of their succession strategies* (4 mentions).

Issues relating to the age structure across roles	Number of mentions
<p>Lack of Experience available to choose from</p> <ul style="list-style-type: none"> not the supply of young personnel we need - ideally want 3-5 yrs experience not enough personnel available there are less graduates and experienced staff around for us to access; a big issue is the lower quality of the lesser number of young people to choose from The 30s are difficult years - some experience to demand higher fees/wages - not enough to be given full responsibility - clients are seeking low wages/fees or highly experienced who can manage complete multi-facet projects big skills shortage across CQ advisory sector; many have less formal tertiary qualifications than they should have as simply can't get those with qualifications only 4x new personnel in last 10 yrs; only attract people who live locally - they may go away and come back significant lack of personnel in 30-40yrs ages due to loss in drought 	8
<p>Lack of Young Professionals entering the industry</p> <ul style="list-style-type: none"> less young professional agronomists to choose from insufficient young people coming through agronomists are an aging workforce which will lead to 'a hole in the future' the agronomy work is a 'younger person's game' very hard to find young people to work in these roles 	5
<p>Student Casuals are being supported as part of succession Strategy</p> <ul style="list-style-type: none"> the student casuals are part of our succession strategy; both parties get to know ea other; also our corporate contribution to try to get young people into industry 2/3 bug checkers are uni/Yr11/12 students bug checkers are part of succession plan the casuals are all uni students from UNE; part of industry contribution to make students more aware; potential future staffers we have a strong focus on young people as quite a number of our more experienced left during the dry; last 12-months young people starting to come back to the industry 	6
<p>Other</p> <ul style="list-style-type: none"> company has strong assoc with financial advisers who are part of management team no aging workforce issues 	2

3.2.1 Looking to the Future

Expected changes to staffing levels

Figure 7: in the context of the drought and current staffing levels post-drought, over the next 5 years, the majority of participants in this study expect that their staffing needs will increase (12 participants, 63%). 6 participants expect their staffing needs to remain the same, with only 1 mentioning an expected decrease in staffing needs.

Expected changes to staffing levels (post drought, over the next 5 years)
n=19 respondents

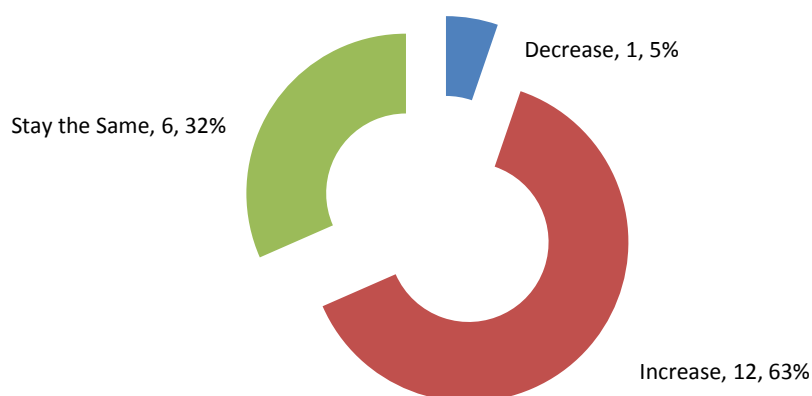


Table 3: Those participants who expect to increase their staffing levels identified employing more agronomists (6 mentions), employing farm managers, both to replace those retiring and to become more progressive as some of the employment changes to be made. Those who suggested their staffing levels would remain the same explained they are currently at capacity and may even decrease numbers in the future (2 mentions). Change was mentioned as being dependant on the industry over time, financial considerations as well as impacting issues relating to accommodation and mining.

Expected change	Type of change anticipated/ required
Increase	<ul style="list-style-type: none"> Seeking good farm Manager aged 40-50 yrs; hard to get due to mining; hard to get leading hands due to mining (paid >\$120k)
	<ul style="list-style-type: none"> turnover of farm mgrs x2; as older mgrs retire replace with younger more progressive farm mgrs
	<ul style="list-style-type: none"> increase of agronomists; business is expanding
	<ul style="list-style-type: none"> increased agronomists, advisory staff and sales persons
	<ul style="list-style-type: none"> want 5-10 professional agronomists
	<ul style="list-style-type: none"> agronomists; there increasing demand from farmer client for increased levels of prof advice; increased moves into FFS for grains based on increased need for higher level advice; cotton is largely static - has reached its peak
	<ul style="list-style-type: none"> 2x agronomists - 1x experienced and 1x new grad
	<ul style="list-style-type: none"> 1x professional engineer + 1x technician
	<ul style="list-style-type: none"> biggest issue is the available water; also not fewer specialist cotton personnel and more generalists available; change in levels of client servicing in the future
	<ul style="list-style-type: none"> agronomists we maintained levels during drought = sustainable numbers; during peak times

	use casuals; we have 9x Company Directors - 8 are over 60 yrs - will need to create succession
Stay the same	• at capacity now;
	• may also decrease - depends on industry change over time; principal may move more into uni lecturing while business ticks over
	• would like to employ assistant for field R&D work; however getting income to do it is very difficult - ideal is 1x snr R&D person with assistant at lower fees
	• could even decrease
	• mostly consolidate the increases of last 12-months; have to deal with pressures of older people possibly moving on; need to think about 'advancement strategies' and how to deal with structural issues like accommodation/mining, etc
Decrease	• Current staff mix is good. No value in expanding; stay same for 5yrs then decrease numbers

Factors impacting changes in employment requirements

Table 4: Participants were asked to comment on any factors they saw as contributing to the need to increase or decrease staffing number in the context of recent drought effects, or if they expected staffing levels to remain the same and why.

Now that the drought years are over the industry is experiencing changes in service required by clients and an increase in their spending (3 mentions). In line with this, an *increase in client numbers* and increased planting areas is now available, due to water availability, and this is contributing to overall *industry expansion* (5 mentions). The need to increase staffing levels post-drought can be attributed to the loss of workforce to higher paying, more attractive opportunities such as mining (2 mentions). It has now become necessary to attract those with the knowledge and professional expertise back to the industry, as well as more trade staff include plumbers, mechanics and farm workers.

Reasons identified for staffing requirements to remain the same included a *lack of confidence* in the industry and the expectation that if there were to be another downturn in the industry, further reductions in size would be made. The impact of large *bank debts* and *limited opportunities* to expand in certain areas (Emerald) were also identified. The impact of *mining* on the industry was mentioned in line with the *aging structure* of agriculture.

Expected Change	Reasons for this trend (in context of the drought effects)
Increase	• Mining can pay max wages and conditions that overshadows their ability to pay; so many dry years has affected <i>ability to pay high wages also</i> ; we have / need 6x key professional staff - only half have required <i>level of professional knowledge</i> ; <i>need more trades than professional staff</i> eg mechanics, plumbers and farm workers
	• Need to match innovation of family enterprise managers with support staff; big issue is leading hand and farm workers; at present <i>use backpackers as farm workers as all we can get due to mining</i> .
	• Need to <i>increase the 'perceived value' of the role</i> or 'designation' of agronomist;
	• Experiencing growth in numbers of clients and level of service required by clients.
	• increased planted area and market needs for cotton
	• want to take a structured approach to business development;
	• As long as clients <i>get/keep water this will be fine</i> ; <i>increased cotton in</i>

	<p><i>Murrumbidgee area = growth for us</i></p> <ul style="list-style-type: none"> As clients have <i>reduced spending during drought it is all increasing now</i>, more work Expected <i>industry expansion</i>; industry seeking greater flexibility due to changing roles and more flexible crops; more job sharing expected; clients expecting higher level of service. Expand the business into aligned areas Due to <i>increased industry use of our products</i> and further rollout of potential products Biggest challenge is keeping focussed on innovation and R&D;
Stay the same	<ul style="list-style-type: none"> Don't expect cotton crop to increase markedly; if another downturn we could have to reduce in size Same because of <i>effect of Bollguard and Roundup Ready are changing market dynamics</i> - have to go with it; the industry may go either way in the future - our complement of 12 is a good balance to ride good and bad times; <i>casuals give us ability to access more / replace staff quickly</i> The need for increased numbers of agronomists will remain over time <i>Trend in cotton is to either employ new graduates in big orgs to do grunt R&D work or have highly experienced personnel</i> - trouble is you need the middle ground to get from one to the other. Many agribusiness companies and <i>banks have large debt due to floods</i> on their books; if one of them couldn't retain those debts / went under then there would be big impact; also who will buy private consultant/smaller companies; impact of increased focus on OH&S; as age structure increases difficult for older people to 'keep up the pace' and maintain their current passion for the industry and their business. No hiring during the drought; <i>age structure got 10-yrs older during it</i>; Agriculture has lost its appeal to young professional people; mining has put a strain on it all; including local accommodation and facilities for families and workers; <i>mining and drought/now floods have changed the nature of the communities</i>; Aussie \$ a big issue too as is global financial climate;
Decrease	<ul style="list-style-type: none"> Only limited opportunities to expand around Emerald; expect to personally get out of industry because want to follow personal interests, expect employee to take over the business;

Staffing requirements over next 5 years

Table 5: 17 of the 19 participants (89.5%) noted they would seek out new graduates in the next 5 years. Reasons included the fact that people are needed who have the right work ethic, common sense and are willing to work. It was mentioned that more experienced staff is preferred, but this is too difficult to find. In addition, banks are able to pay agronomy type staff better and are therefore the industry's biggest competitor for experienced staff.

Organisation Type	Reason for seeking new graduates over the next 5 years
YES: 17 mentions	
Farming operation - larger family	<ul style="list-style-type: none"> Yes <i>right work ethic</i> and gets paid accordingly; good Ag College graduates are needed; mainly <i>need people with common sense / right ethics / willing to work / may need to do physical work</i>. <i>Depends on expansion</i> plans that depend on water security that depends on MDB plan that relates to whether we re-invest
Merchandise /	<ul style="list-style-type: none"> Want 2-3 in 2012 for R&D/trials with 3-5yrs experience as 'self starters';

equipment supplier mainly	expect to want 2-3 / yr from then on as new grads
Merchandise and advisory services	<ul style="list-style-type: none"> Always seeking them; generally seek at least 3x year graduate agronomists for broadacre as well as cotton
	<ul style="list-style-type: none"> Only if problems keeping current staff; there is a lot of competition out there for good staff; <i>banks are now one of our biggest competitors</i> for agronomy type staff; banks pay more than we do; banks are bigger competitors than chemical supply companies now.
	<ul style="list-style-type: none"> Prefer to get experience agronomists - too hard to find - so getting grads straight from uni; seeking 2/3 / yr; aim to attract them in 2nd/3rd yr at uni through cadetships;
On-farm advisory only	<ul style="list-style-type: none"> 1-2 new staff - would like 1x new graduate + 1x experienced staffer;
	<ul style="list-style-type: none"> 2x agronomists - 1x experienced and 1x new grad
	<ul style="list-style-type: none"> 1x professional engineer + 1x technician
	<ul style="list-style-type: none"> Yes for agronomy roles; if some of the current agronomists staffers leave the casuals might replace them
	<ul style="list-style-type: none"> Yes in two areas - agribusiness management will go down 2x paths; first is agronomy with stronger business management focus; second agronomy with programmed services with more intimate client role that has whole farm biz planning and 'programming' of services
Other	<ul style="list-style-type: none"> Yes but need R&D field work to justify it
	<ul style="list-style-type: none"> Yes science graduate staff sought - 1/2 in 5yrs
	<ul style="list-style-type: none"> Yes - not sure of numbers
	<ul style="list-style-type: none"> Need more grads; the success rate to place / keep them is lower than in previous yrs too; electronics and engineers
	<ul style="list-style-type: none"> Barring another drought, expect to increase R&D personnel (say 2) and more sales (say2)
Specialist cotton industry supplier, which is:	<ul style="list-style-type: none"> increases in plant pathology x1 + plant breeding x1
No: 2 Mentions	
Cotton processor	<ul style="list-style-type: none"> no
On-farm advisory only	<ul style="list-style-type: none"> no - use bug checkers; they may replace employee if she leaves (not likely as a local who was bug checker = limited opportunities for her)

Staffing requirements over next 10 years

Table 6: the uncertainty of the future meant that 58% of participants (11 participants) were unsure about hiring new graduates over the next 10 years. Issues identified included water security, continued growth and fees. 26% of participants (5 participants) expect they will hire new graduates in the next 10 years, based on diversification strategies, global expansion and the need to replace retiring personnel.

Organisation Type	Reason for seeking new graduates over the next 10 years
Yes: 5 mentions	
Merchandise / equipment supplier mainly	<ul style="list-style-type: none"> expect significant expansion as being bought by global company = potential global opportunities for Australians
Specialist cotton industry supplier	<ul style="list-style-type: none"> active diversification strategy in seeds - if goes to plan then would double staff numbers

Other	<ul style="list-style-type: none"> • science graduate staff sought - approx 4 • yes - bulk of current personnel getting close to 50 - in 10yrs can expect attrition as they leave the industry; at least they need to be replaced - at best additional personnel required to add depth to advisory business; • Repeat of next 5 years again barring another drought
No: 3 mentions	
Cotton processor	<ul style="list-style-type: none"> • no
On-farm advisory only	<ul style="list-style-type: none"> • decrease back to 1x staffer
Other	<ul style="list-style-type: none"> • the problems of lack of people will intensify; not likely to make the necessary headway;
Unsure: 11 mentions	
Farming operation - larger family	<ul style="list-style-type: none"> • savvy in new technology while being down-to-earth • depends on expansion plans that depend on water security that depends on MDB plan that relates to whether we re-invest
Merchandise and advisory services	<ul style="list-style-type: none"> • continue that growth trend based on increased need for advice and increased fee for service roles • wait and see • if we increase over next 5 yrs that will leave us with stable base we need for future
On-farm advisory only	<ul style="list-style-type: none"> • too far out • no idea
On-farm advisory, plus other services	<ul style="list-style-type: none"> • unknown • too hard to tell • water security is biggest issue; continued change in client service levels / type of servicing
Other	<ul style="list-style-type: none"> • not sure

Professional Graduate Staffing in Summary

Appendix 2 provides a detailed outline of current staff employment and roles as well as future staffing requirements according to the various agribusiness organisations involved in this study. The one **cotton processor** involved in this study currently employs 5 senior/strategic professional management staff, 10 sales people and 15 agronomists. They do not see a need to increase staffing requirements over the next 5 – 10 years, noting they do not expect their cotton crop to increase. Across the **farming operations** a total of 7 senior/strategic professional management staff are employed, 4 agronomists, 2 farm managers and 2 business advisors. No specific increases in staffing requirements were noted, with one participant noting that re-investment depends on expansion plans, water security and MDB plans.

Within the **merchandise and equipment supply** sector 4 senior/strategic professional management staff are employed, 6 sales staff, 2 R&D staff and 3 finance staff are employed. It is expected that R&D staff requirements will increase by 2-3 over the next year with another 2-3 additions per year over the next 5 years. This particular supplier expects significant expansion within 10 years as a result of global expansion.

Merchandise and advisory organisations involved in this study employ a total of 4 senior/strategic professional management staff, 13 management staff, 42 sales staff, 7 agronomists and 2 R&D staff.

One participant expected their employment needs to increase at a rate of 3 new graduate agronomists per year over the next 5 years to meet a growing number of clients. Another also expects to employ 2-3 cadets per year over the next 5 years.

Organisations in the **on-farm advisory sector** employ a total of 2 senior/strategic professional management staff, 0.5 management staff, 6 agronomists, 0.5 admin staff and 5 bug checkers. While one participant expects their staff requirements to drop back to 1 agronomist over the next 10 years due to limited expansion opportunities in the Emerald region, another expects to employ up to 6 agronomists within the next 5 years. This is dependent on water security and increased growth in cotton in the Murrumbidgee region.

Within the **on-farm advisory sector where organisations offer additional services**, a total of 9 senior/strategic professional management staff are employed, 3 management staff, 40 sales people, 18 agronomists, 4 R&D staff, 1 project engineer, 2 technicians and 5 bug checkers. Over the next 5 years an additional professional engineer and technician are noted as well as a need for additional agronomists if current staff leave. A 10 year prediction was unknown with participants noting water security as an issue as well as changes in client service level requirements.

The one **specialist cotton supplier** participant currently employs 2 senior/strategic professional management staff, 4 management staff, 5 agronomists, 3 R&D staff, 1 farm worker, 1 seeder and 5 IT staff. Although an increase in staff requirements is expected over the next 5 years, the type of requirement is dependent on available R&D field work.

3.3 Succession and Recruitment

Existence of Succession Plan

Figure 8: 63% of participating agribusinesses indicated they do not have a succession plan in place.

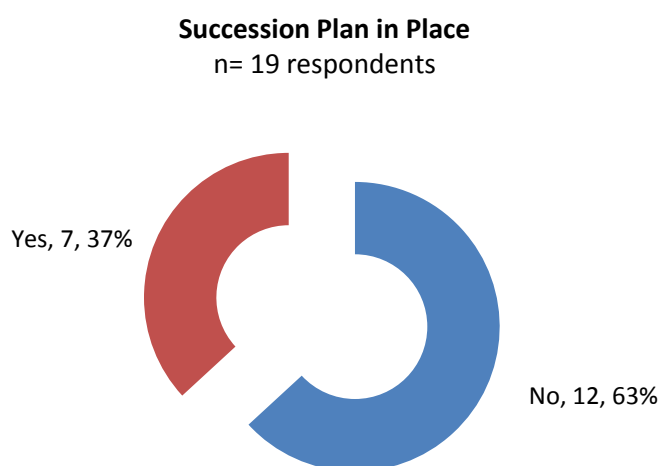


Table 7: 7 participants identified the existence of either a formal or informal company succession plan. These included a *Centralised company graduate program*, a *structured career path* for all professional staff employed and support provided to those most likely to progress in the business. Several participants noted that they do not currently have a succession plan in place due to impacting factors such as drought and profitability and the need for business survival (8 mentions). Others noted they have been in the process of building up the business and will now be in a position to focus on succession planning (2 mentions).

Organisation Type	Comments regarding existence of succession plan
Yes: 7 mentions	
Merchandise and advisory services	<ul style="list-style-type: none"> Centralised company Graduate Program that inducts new uni graduates (mostly from UofQ Gatton and CSU) over 12-months and sends them across the whole company network as trainee agro for 2 yrs, however easier to get graduates for near coast sites on Darling Downs; not so easy to get them in Emerald and Roma
On-farm advisory only	<ul style="list-style-type: none"> It is to bring 1x new grad in/yr; then they are <i>mentored by older persons</i>
On-farm advisory, plus other services	<ul style="list-style-type: none"> Looking to sell business internally; this is known and part of taking on younger engineers; all <i>succession processes in place</i>;
	<ul style="list-style-type: none"> It is <i>via our use of casuals</i>; they are already known to us and have at least some limited experience; I have just used this system to replace a staffer and it continues to work well
	<ul style="list-style-type: none"> Not formal but recognises staff mixes, Gen X and staff turnover that comes with using them; levels of flexibility needed
Other	<ul style="list-style-type: none"> Are embedding certain strategies in company culture; <i>choose those that are likely to progress</i> thru company - not just in this locality - elsewhere in xxx too; also <i>support those who want to stay</i> and unlikely to progress
	<ul style="list-style-type: none"> Every person in company that reports to senior personnel / via a professional role <i>has a structured career path for the future</i> (they have given personal consent for it) and a replacement nominated on their succession plans.
No: 12 mentions	
Cotton processor	<ul style="list-style-type: none"> <i>Based on younger people moving</i> to senior roles internally.
Farming operation - larger family	<ul style="list-style-type: none"> Did offer school based scholarships to uni; part of our corporate commitment to community; want to create succession plan however with work environment as it is ... <i>very hard to implement</i>
	<ul style="list-style-type: none"> need one but <i>due to drought we just went for survival</i> / getting on with the job
Merchandise / equipment supplier mainly	<ul style="list-style-type: none"> We are trying to set up a succession plan now; <i>need to work out how to access young personnel</i>
Merchandise and advisory services	<ul style="list-style-type: none"> <i>We have stable staff with good jnr/snr mix</i>; our strategy is give good snr staff with high workload a jnr to work with them to do 'grunt work' thus building their skills; if any one leaves it is jnr who is less valuable than snr;
	<ul style="list-style-type: none"> should have one; not enough time to prepare one; just as important to keep what we have too
On-farm advisory only	<ul style="list-style-type: none"> Set up the business for growth - <i>starting that process now</i>
	<ul style="list-style-type: none"> Now <i>starting to think about succession</i> (last 12-24 months) as I want to eventually leave industry; main plan is to have someone internally buy the business
Specialist cotton industry supplier	<ul style="list-style-type: none"> We have a flat structure - <i>our focus is on individual needs</i>;
Other	<ul style="list-style-type: none"> I have to go with what clients want and level of profitability of my business; in fact I may have to give up contract field R&D work and work as employee of larger chemical, R&D org (Peracto, Agritech) or re-

	sellers; to survive I must either get stronger links with clients/create JVs with the few industry equivalents of me/be an employee as above
	<ul style="list-style-type: none"> • I first have to grow the business • Succession plans not generally in place; if you cannot get people in the first place or if it affects your ability to expand your business you just 'make do';

Recruitment Strategies for Professional Staff

Table 8: the most commonly relied on recruitment strategies for professional staff included word of mouth (8 mentions), recruitment from within the company (6 mentions) and the use of recruitment agencies (6 mentions). Local Advertising is used (5 mentions), however it was noted by some that this does not always attract valuable candidates.

Recruitment Strategy	No. Of Mentions
Word of Mouth <ul style="list-style-type: none"> • word of mouth is the best (current staff act as informal lookouts) • word-of-mouth for experienced people - prefer 'people who are known' • rare that job is given to a totally unknown person 	8
Recruit from within company <ul style="list-style-type: none"> • we try to appoint from within company; rarely use outside support; if we need to recruit we do it internally • from our casuals and promote internally where possible • it is via our use of casuals - they are already known to us and have at least some limited experience • leads come from current staff mostly • follow up to those who have left our company and are good - try to get them back 	6
Recruitment Agencies <ul style="list-style-type: none"> • have use recruiter not so good • do use Rimfire though know they are struggling to get quality personnel from unis • rarely use agencies due to cost • if a strategic role may use external recruiter 	6
Local Advertising <ul style="list-style-type: none"> • ads in regional papers • last resort ad in papers • may run ads for inexperienced / new grads tho could find in field too • have tried ads in papers /on-line – both good / poor quality respondents • sometimes use ads in Qld Country Life 	5
Direct from Universities <ul style="list-style-type: none"> • hand pick new staff direct from uni - mostly UNE and Gatton (UofQ declining value) • build relationships direct with unis especially UNE, Hawkesbury and Sydney Uni • new grads and bug checkers for source of new staff • go straight to unis(USQ then UNE - no others) • go direct to uni thru 'meet and greet' process 	5
Poach from other companies <ul style="list-style-type: none"> • we poach from others • poaching from other companies • inter-business staff poaching 	4

Industry Networks <ul style="list-style-type: none"> • first try industry networks - if no luck try public networks (prefer not) • personal contacts • traditional access to experienced people is from consultants or resellers 	3
Rely on Company Brand <ul style="list-style-type: none"> • use our company brand as attractant • we maintain our 'preferred employer status' as competitive advantage to access staff; sometimes people come to us 	2
Use of attractive packages <ul style="list-style-type: none"> • use good pay levels to attract and retain • have 51 Fijian farm workers - very happy with them - very professional in what they do as farm workers; we supply houses, food, cars, phones, etc plus above award pay 	2
Other <ul style="list-style-type: none"> • must be males (no gender issues) as they get on better with clients (tried women) • have tried scholarship and cadetships - not a success - as often the recipients don't come back to ag; regard scholarship and cadetships as part of community contribution more so than staff acquisition 	3
None	1

Different strategies for different roles and ages of staff

5 participants noted that they used the same strategies to attract staff of any age and for any role. Particular strategies were mentioned to attract CFO versus labouring staff. These were:

- *word-of-mouth is best in particular for CFO roles*
- *for farm personnel use labour hire company*

Other comments included:

- *moved admin office from farm to Goondiwindi to allow easier access to admin staff for company*
- *industry knows good personnel by reputation; hard to recruit good known experienced people*
- *cannot get Australian people with experience and degree qualified; recent positive experiences of employing people from Southern Africa - particularly Zimbabwe*
- *Graduate recruits have proven difficult as few stay long term; as they have higher expectations than we can provide for immediately. Have to seek out persons with right personality for role*

Overall Success of Recruitment Strategies

Table 9: the general discussion regarding the success of various strategies was positive. Of noteworthy mention is the success achieved in using word of mouth as a recruitment strategy as well as the value of appointing staff from within the company (6 mentions each).

Success of Recruitment Strategy used	No. of mentions
Appoint from within company (use good pay levels to attract and retain) Positive <ul style="list-style-type: none"> • Well; most staff have been with company for 20yrs - at the least from 5-15yrs • Internally, we always have someone ready to move up as roles become available. • Reasonable and acceptable at present; too small a pool to choose from though; very hard to get trades 	6
Negative <ul style="list-style-type: none"> • Not too well - very hard to get top-end professional staff - esp farm manager and leading hands for skilled cotton work; contracted agros work out OK 	1

Word-of-mouth for experienced people Positive <ul style="list-style-type: none"> • Word of mouth is best strategy • Reasonable given state of market and competition from mining (case study: offered a job to well qualified agro - he took mining job at substantially more money saying 'I can do mining for several years, get good \$ then maybe return to agronomy when I am sick of the lifestyle') • Simply have to approach known people and put proposition to them 	6
Hand pick new staff direct from uni Positive <ul style="list-style-type: none"> • Our strategy works well • Reasonable Negative <ul style="list-style-type: none"> • Very labour intensive 	3 1
Recruitment companies Positive <ul style="list-style-type: none"> • Reasonable Negative <ul style="list-style-type: none"> • HR companies are waste of money; • recruiter not so good; ads are of mixed success 	2 2

Most difficult staff to recruit

Table 10: the hardest staff to recruit was identified by participants as being agronomists (7 mentions), followed by financial staff (3 mentions). R&D personnel, tradespeople and technical staff (2 mentions each) were also noted as being difficult to recruit.

Most difficult staff to recruit	No. of Mentions
Agronomists <ul style="list-style-type: none"> • 'ready to work' agronomists • experienced agronomists • agronomists are hardest to get • lack of experienced agronomists is biggest issue 	7
Financial Staff <ul style="list-style-type: none"> • financial management staff - this role is the least specialised; that group is relatively transient as seeking CFO role as their key career goal • financial controllers are very hard to get 	3
R&D Personnel <ul style="list-style-type: none"> • R&D personnel hardest • Contract R&D field staff and assistants are very few in the industry - hard to find extras as all go to larger companies. 	2
Tradespeople <ul style="list-style-type: none"> • trades such as electrician and fitters etc are the hardest to obtain/keep • hardest group to recruit is trades 	2
Technical Staff <ul style="list-style-type: none"> • both engineers and techs - especially engineers with >5yrs experience - all leave after initial grounding to better money/conditions (we can't afford to pay) • most challenging role is to find IT people who are good yet prepared to work in a regional setting 	2

On Farm Workers <ul style="list-style-type: none"> farm mgrs and leading hands leading hands on farm very hard due to mines as competition 	2
Field Staff <ul style="list-style-type: none"> Field staff as consultant pool is diminishing; need people with right attitude /capability; also need good communication skills. Also promotions tend to come from field staff so need to backfill. 	1
Delivery Staff <ul style="list-style-type: none"> male merchandise managers with required skill sets (plenty of good female workers about - concern is the physical lift and shift side of merchandise) 	1
Other <ul style="list-style-type: none"> good known experienced people younger staff - in this case may go to public networks earlier in the process because few are 'known'; however for experienced staff word-of-mouth is the key all professionals of any sort are hard to get 	3

Factors affecting suitable staff recruitment

Table 11: positive factors identified as affecting the ability of agribusiness to recruit suitable staff in a timely manner included an upturn in the industry and the ability to offer an attractive compensation package (3 mentions). In addition it was also mentioned by 2 participants that the industry is able to offer valuable career opportunities, for example as a result of technical changes. The most commonly mentioned factor having a negative impact on businesses' ability to recruit staff was the general lack of available and/or experienced staff to choose from (11 mentions). A contributing factor to this issue was identified as competing industries attracting staff into more attractive and higher paying positions (6 mentions). Financial issues such as the profitability of the cotton industry and the ability to pay higher wages were mentioned (5 mentions) as well as the remoteness and isolation associated with the industry (5 mentions).

One comment made relating to the lack of available staff :

Farmers want advisers who are known, that they can develop personal connections with over time. Personal relationships of farmer-advisers are the key. This goes for both private consultants and resellers. Negative issues relate to the need for well rounded advisers with experience and expertise and must be prepared to work longer term together - this means farmer profits must be such that this long term relationships can be maintained

Positive and negative factors affecting suitable staff recruitment	No. of Mentions
Positives	
Industry Upturn <ul style="list-style-type: none"> Now at least we are making enough income to pay them We have good reputation - small industry so we know 'right others' Good reputation means we attract staff through word of mouth 	3
Career Opportunities <ul style="list-style-type: none"> National Company X has increasingly good name as a employer given the (international parent company) takeover and (international parent company)plans for better career paths Technical changes make the work more interesting compared to other industries 	2
Industry Networks	1

<ul style="list-style-type: none"> Peer referral, Snr management contacts 	
Negatives	
<p>Lack of Experienced Staff to choose from</p> <ul style="list-style-type: none"> Not enough good farm mgrs around to even access Getting enough and suitable persons Insufficient pool of good known experienced people to call on Insufficient number of graduates coming through Not many people want to do our type of work; becoming less popular as it is dirty and hard Hard to find 'right people', our rate is 2:7 success rate of approaches - they need good communication, interpersonal skills and good attitude / work ethic - hard to find Level of specialisation required for cotton and also for R&D personnel Need well rounded advisers with experience and expertise and must be prepared to work longer term together Agriculture less attractive than other businesses 	10
<p>Competing Industries</p> <ul style="list-style-type: none"> Mining companies and finance industry Industry doesn't pay well overall so we are less competitive in wages than banks Poor pay compared to competitor industries; they weigh up their capability and look at value for money/pay Agriculture people going into roles such as rural finance. 	6
<p>Financial</p> <ul style="list-style-type: none"> Inflated values (real and imagined) that agronomists have of themselves in today's market Level of business profitability Supply vs. Demand Sector profitability Costs for wages and equipment for assistant 	6
<p>Remoteness/Isolation</p> <ul style="list-style-type: none"> People want to work in larger regional centres Work life balance for everyone - location of farms in more distant areas to get key personnel as wives don't want to live there even though good package of house, food, etc Housing - rents from \$6-900/wk for 3-brm home; 3-month waiting period at least Social networks starting to break down due to pressure of work and changed dynamics in communities with increasing mining influence Ability to get good people willing to live in regional inland Australia 	5
<p>Water Security</p> <ul style="list-style-type: none"> Water available 	2
<p>Seasonal Nature of Work</p> <ul style="list-style-type: none"> Seasonal nature of work - these suit some people and few others 	1

Professional staff development and retention strategies

Table 12: Strategies aimed at retaining staff include creating a flexible working environment in an attempt to foster increased job satisfaction (13 mentions). Specific strategies mentioned include using *state of the art technologies*, giving employees *autonomy*, providing employee *feedback*, building relationships of *trust and integrity* and *listening to staff issues*. Offering attractive pay packages and incentive programs was mentioned by 10 participants as also being important in retaining staff. This included paying above the award rate, paying for professional development and

training courses, company buy-in and profit share opportunities as well as tangible incentives such as housing and cars.

Training and professional development opportunities (9 mentions) as well as opportunities for professional career development (7 mentions) were also identified as a strategy used to retain professional staff. Strategies mentioned included specific professional development and training courses aimed at developing employee skills and well as keeping them professionally challenged. Mentoring, access to professional networks and succession planning were also mentioned.

Professional Staff Development and Retention Strategies	No. of Mentions
<p>Work Environment and Job Satisfaction</p> <ul style="list-style-type: none"> • flexible work environment and work activities • use state of the art technologies • give flexibility and autonomy - effectively they work for themselves but don't have to manage the business • insights into business (v important as makes them feel part of it) • feedback on performance • flexible working hours / arrangements • level of trust and integrity in employer-employee relationships; we are willing to listen to staff issues • draft staff management strategy - not yet implemented; we must change overall business culture to more engaged / less conflict / better communication 	13
<p>Attractive Pay Strategies and incentives</p> <ul style="list-style-type: none"> • pay relative to what we can afford • they can buy into the business; have bonuses and profit share • above award wages • company pays for post-grad study • incentive program - bonus schemes for success • lifestyle issues (housing, cars) have to be addressed to keep families • Salary aligned to expectations and role 	10
<p>Training and Professional development opportunities</p> <ul style="list-style-type: none"> • create 'tribal teams' with support networks although young ones have to earn respect and loyalty • specific Director focussed PD • develop their professional skills via CCA forums/Cotton conference/targeted training courses - have also done overseas training courses; PD like this makes a big difference re job satisfaction, novel travel and increases tech expertise • all professional staff are doing post-graduate study to increase skills levels - keeps them interested, increases their skills and level of thinking and they can access cutting edge info/thinking that gets passed onto their/our clients • use PD programs that are mostly external • keep them professionally challenged and set personal/coy goals that are managed through their 6-monthly reviews in order to provide structured support / personal-professional development • align PD with job roles and their satisfaction; customised training 	9

Opportunities for career development <ul style="list-style-type: none"> professional exposure to the best clients Advantages of being in a network with varied opportunities (now include international with international parent company) mentoring from senior to junior strong peer networks used and created Internal succession plan; aim to keep people in locations that work for them 	7
Nothing <ul style="list-style-type: none"> not enough time to do PD; personnel losing their passion for the work as it is so intense - as they do that their desire for PD and their skill levels decrease over time 	1

General Comments about Succession and recruitment in the cotton industry

Table 13: Discussion from the On-Farm Advisory participants captured the concerns of most participants, highlighting the difficulties associated with the costs involved in attracting and retaining good staff, including salary and professional development opportunities, all contributing to overall job satisfaction. The issue relating to the lack of quality graduates moving up to take on management roles was also noted by several.

Organisation Type	General comments about succession and recruitment
Farming operation (larger family)	<ul style="list-style-type: none"> it is good to get enthusiastic young people from school to give them work experience; we might have to look at a career path from jackaroo to farm mgr
Merchandise / equipment supplier mainly	<ul style="list-style-type: none"> biggest issue is to get good personnel
Merchandise and advisory services	<ul style="list-style-type: none"> our system continues to work well attraction is a very big issue for us then it is about quality - up to us to retain them
On-farm advisory only	<ul style="list-style-type: none"> bigger businesses find it easier as more money, resources and systems; today a lot involved in employing people and you have to get it all right combination of money; PD and job satisfaction must have right people and keep them happy aligned to their interests
On-farm advisory, plus other services	<ul style="list-style-type: none"> it is very hard to sell consulting businesses even if going concern (3x good water consultancies have simply closed their doors on retirement of Directors in absence of buyers over last 5yrs); need to start good management early in their employment; about keeping very good people in industry key problem is unis do not have enough quality / quantity of graduates; need to remove skew of supply vs. demand
Other	<ul style="list-style-type: none"> transferable skills across varied industries are seen as less useful than industry specific; this strategy means R&D will run out of people; larger companies are taking short term approaches which benefit them more than the industry in which they work; an aging workforce - very critical issue is attracting young people to create succession the little training / PD that is done is normally done locally; this is now disconnected as when reps/other specialists do come to town there is little co-ordination so it is done on the terms of the trainers not

	trainees; this also makes it more difficult; there is an Emerald based HR company who is successfully seeking personnel for both mining and ag from Zimbabwe
	<ul style="list-style-type: none"> • biggest issue is to get young people, • Real skills shortage of both mature people and younger people coming through with the right employable characteristics. We try to hold onto good people through flexibility and offering opportunities.

Succession and Recruitment in Summary

7 organisations involved in this study identified the existence of either a formal or informal company succession plan in existence. 8 participants noted that they do not currently have a succession plan in place due to impacting factors such as drought and profitability and the need for business survival. 2 noted they have been in the process of building up the business and will now be in a position to focus on succession planning.

The most commonly relied on recruitment strategies by organisations were **word of mouth, recruitment from within** the organisations, the use of recruitment agencies, local advertising as well as approaching university graduates directly through universities.

Consequently these strategies were also noted to work the most effectively when recruiting staff within the cotton industry. In conjunction with attractive pay packages and a successful succession strategy, appointment of staff from within the company was favoured, as one participant noted *we always have someone ready to move up as roles become available*. Word of mouth was favoured when recruiting experienced staff. Recruitment from universities and through recruiting agencies received mixed responses with some finding these successful and others not.

The most difficult staff to recruit was identified as **agronomists**, due to a lack of available and experienced staff.

A general **lack of available and/or experienced staff** to choose from was highlighted as having a negative impact on recruitment across the industry. A contributing factor to this issue was identified as **competing industries** attracting staff into more attractive and higher paying positions within the mining and banking sectors in particular. Financial issues such as the **profitability** of the cotton industry and the ability to pay higher wages are also having a negative impact on recruitment as well as the remoteness and isolation associated with the industry.

In order to retain staff, organisations are creating **flexible working environments** in an attempt to foster increased **job satisfaction**. Specific strategies mentioned include using *state of the art technologies*, giving employees *autonomy*, providing *employee feedback*, building relationships of *trust and integrity* and *listening to staff issues*. Offering attractive pay packages and incentive programs was mentioned as also being important in retaining staff.

Training and professional development opportunities as well as opportunities for professional **career development** are also strategies used to retain professional staff. These include specific professional development and training courses aimed at developing employee skills and well as keeping them professionally challenged. Mentoring, access to professional networks and succession planning were also mentioned.

3.4 Professional Development

Required professional development programs

Figure 9: 63% of Agribusinesses indicated that their personnel must undertake some form of formal/mandatory/industry best practice development programs.

Formal/mandatory/industry best practice development programs

n= 19 respondents

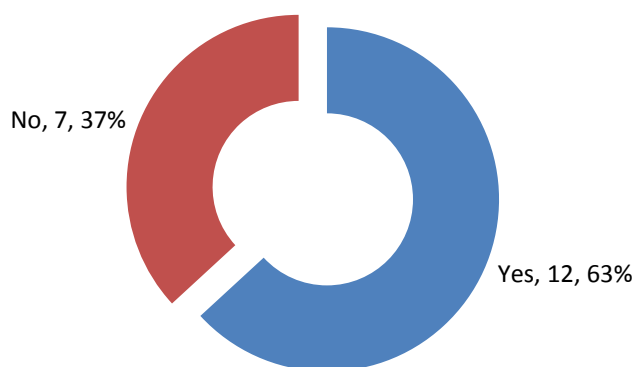


Table 14: Ag-Safe and ChemCert were commonly mentioned mandatory training requirements by participating Agribusinesses. Internal company inductions and business development courses as well as leadership and trade training were also mentioned.

Organisation Type	Formal/mandatory/industry best practice professional development programs to be undertaken by personnel
Cotton processor	<ul style="list-style-type: none"> Gin OH&S - not for professional staff - done on a personal request basis
Farming operation (larger family)	<ul style="list-style-type: none"> Driving course ticket Chemsafe and refreshers
Merchandise/equipment supplier mainly	<ul style="list-style-type: none"> Fertcare accreditation Members of AIA
Merchandise and advisory services	<ul style="list-style-type: none"> Agsafe Internal company programs of induction national policies - plus cotton industry best practice programs (industry led)
	<ul style="list-style-type: none"> Ag-Safe
	<ul style="list-style-type: none"> Ag-Safe Web based training on Trade Practices and Harassment type issues formal inductions for agronomists
On-farm advisory only	<ul style="list-style-type: none"> We set our own mandatory program - agronomic update and business development
	<ul style="list-style-type: none"> New graduates do UNE cotton course - 5 have done it so far Go to all possible field days/seminars in region Look for group PD opportunities
	<ul style="list-style-type: none"> Credit points for engineer certification Annual training to upgrade technical skills Business management skills for senior people
On-farm advisory, plus other services	<ul style="list-style-type: none"> Credit points for engineer certification Annual training to upgrade technical skills Business management skills for senior people

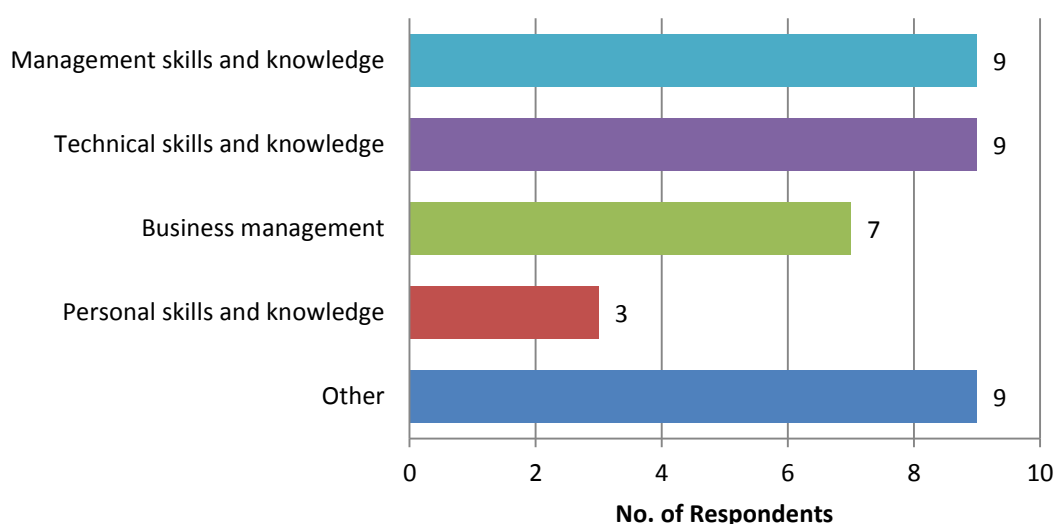
Other	<ul style="list-style-type: none"> • Those using GMOs do mandatory training • Chem Cert • Advisors mostly do only mandatory training as too little to do other things
	<ul style="list-style-type: none"> • Leadership • Trades have own specific programs • Managing small teams
	<ul style="list-style-type: none"> • We like them to do varied training to increase skills based on SMART goals that are personally motivating, realistic and structured and agreed upon between supervisor and staffer

Other Professional development areas

Figure 10: Other professional development areas provided, covered and encouraged by participating organisations include management and technical skills and knowledge training (9 mentions each), business management training (7 mentions) and personal skills and knowledge training (3 mentions). 9 other professional development areas were mentioned, these included:

- Directors course; NAB course on management
- have our own Executive program
- Progression programs for those wanting to become Branch Managers
- All done on-the-job
- People management skills (clients) and communications
- New software
- Cert 4 in training, very limited opportunities for PD in R&D work
- specialist training per person

Professional Development areas provided/covered and/or encouraged
respondents could select more than one option



Courses

Table 15: within the farming operations sector, courses which employees are encouraged to undertake include business management courses aimed at *decreasing staff turnover and increasing retention*. Advisory businesses noted more industry related training programs including technical development as well as attendance at industry conferences with the focus being on *up skilling*.

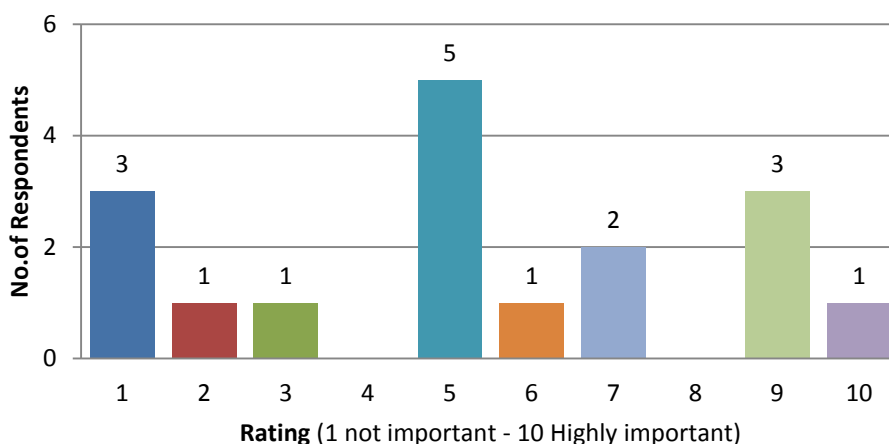
Organisation Type	Courses run by organisation and/or which staff are sent on/encouraged to undertake
Cotton processor	<ul style="list-style-type: none"> Cotton conference for sales, advisory and management staff
Farming operation (larger family)	<ul style="list-style-type: none"> Aiming to get whole extended family through business management courses Conflict resolution, staff management overall; change culture, decrease staff turnover and increase retention
Merchandise/equipment supplier mainly	<ul style="list-style-type: none"> cotton conference; any agronomy conferences; commodity conferences such as Almonds, Citrus, etc
Merchandise and advisory services	<ul style="list-style-type: none"> Industry courses for cotton, GRDC Adv Updates, cadetships where cadets are encouraged to add particular external uni subjects, eg agronomy, to their skills Industry programs such as leadership, extension, communication,
On-farm advisory only	<ul style="list-style-type: none"> up skilling is important for professional indemnity insurance = legal implications
On-farm advisory, plus other services	<ul style="list-style-type: none"> Technical, business development via business coach TenX Varied course on needs basis; strong focus on UNE cotton course as basis for their Masters degree UNE cotton course is only one; want to increase communication and problem solving skills
Specialist cotton industry supplier	<ul style="list-style-type: none"> OH&S, first aid; could do more with a more organised professional development / succession program; communication at interpersonal level
Other	<ul style="list-style-type: none"> Accredited courses are not relevant to single/smaller operators - more relevant to company staff so they have some qualifications (piece of paper) when they move on; Formal accreditation is only important for individuals seeking a piece of paper for when they move on; not important at wider institutional level; few people now Go to GRDC Nth Adv Updates; numbers from CQ at Cotton Conference are dropping off too ARLP, leadership/teams management; tailor training to personal interests/needs Courses are based around internal training, personal development and recognise need for future people leaderships skills; 5-6 mandatory internal course. Also provide external training as identified in Development Plans

Formal Accreditation of staff training

Figure 11: With an average rating of 5.3 the importance placed on the accreditation of staff training was varied across participating organisations. Those organisations that rated it as being important (rating 6 or more) included 2 on-farm advisory business, 2 merchandise and advisory service providers, 1 specialist cotton industry supplier and 1 other participant.

Importance of Formal Accreditation of staff training to organisation

n = 19 respondents (average rating 5.3)



Ensuring staff undertake professional development

Table 16: most organisations involved in this study noted that professional development is a part of their company policy, either formal or informal. Strategies to ensure staff undertake professional development were mentioned by several as being a part of *annual personal performance plans*, a result of mentoring processes where junior personnel receive training *based on skills assessment*. Less formally, employees are encouraged to complete post-graduate studies and attend field days. Some sectors noted that professional development is pursued at the request of employees or as a result of direct discussions with staff that ask and identify needs.

Organisation Type	Strategies used to ensure staff undertake professional development
Cotton processor	<ul style="list-style-type: none"> On request only
Farming operation (larger family)	<ul style="list-style-type: none"> Want to increase skill levels in core areas of the business - external formal courses not too relevant; send good staff to field days eg Cotton Grower of the Year meeting / cotton grower field days First need to change our overall culture - working on it
Merchandise and advisory services	<ul style="list-style-type: none"> Annual personal performance plan (they initiate, supervisors support where they define their preferred professional development for year), mapping out staff course needs is part of Branch Manager KPIs based on both personal and company preferences Mentoring of senior to junior; less about formal courses and more about setting up internal system of PD; our business culture is one of learning while doing; aim to make our senior people very good so that mentoring to juniors is good too Board position is that junior personnel should have training; based on skills assessments
On-farm advisory only	<ul style="list-style-type: none"> It is most about the ability of the personnel - their attitude to learning and up-skilling PD plus encourage excellence
On-farm advisory, plus other services	<ul style="list-style-type: none"> Encourage post-grad study / Masters degree; seems to work Direct discussion / negotiation; staff have to ask and identify needs;
Specialist cotton	<ul style="list-style-type: none"> Via annual performance appraisals we align needs for PD to duties and

industry supplier	current performance; aligned to agreed professional goals;
Other	<ul style="list-style-type: none"> No structured process; all about increased professionalism, understanding contemporary approaches to financials /24-hr derivatives trading type info tailored to their needs
	<ul style="list-style-type: none"> Personalised and mapped out PD strategy

Professional Development based on role or level of experience

Within the Farming sector, one participant noted that professional development is *based on the level of staff skills and their ability to learn*. This seems to be the general consensus amongst most participants as another noted *skills assessments dictates who gets what training* (merchandise and advisory services participant). Other comments included:

- *Vary from new graduates to more experienced personnel - based on ROI*
- *Used mostly for Senior people*
- *Casuals are uni students; no PD for them apart from in-house on-the-job training for their required tasks*
- *Are tailored to level of experience*
- *Tailored to people and roles*
- *Part of the personalised strategy agreed between staff and management*
- *Customised to role and length of service*

Ability to provide and/or obtain professional development

Table 17: the most commonly mentioned factor impacting the ability of businesses to provide or obtain professional development was the costs associated with courses relative to the *return on investment to the business* (8 mentions). Time pressures were also identified as having a negative impact on the ability of businesses to provide or obtain professional development, in particular distances required to travel to events (5 mentions). The availability of relevant courses was highlighted by 5 participants. In some instances this was noted as being positive, *cotton industry has good network of local courses; easy to get to Chemsafe courses*, however there was also concern that it was difficult to identify the right courses and that in-house options were preferable. Several businesses noted that professional development is a part of their company policy and that training is *prioritised to happen* or has a *level of organisation commitment to support staff* (5 mentions).

Factors affecting ability to provide/obtain professional development across roles/service	No. of mentions
Financial Factors <ul style="list-style-type: none"> • Money allocation spread across 30 people - many of the \$5-10k courses are of questionable value • Costs - however linked to staff rewards schemes for performance, eg get pilots licence where there is mutual benefit • Look for value for money across all personnel • Business profitability • As an SME I compete with larger companies that have big budgets for PD; if I don't have same level of PD I am regarded as being a lesser professional • All our training is basically in capital cities = significant costs • Regional companies need to use novel ways; salary sacrifice/cars/rental 	8
Availability of relevant courses <ul style="list-style-type: none"> • Plenty of field days / courses around - cotton industry has good network of local courses; easy to get to Chemsafe courses • Finding right courses; must be relevant - but how do we know? • Availability of in-house programs via specialists bought in 	5

<ul style="list-style-type: none"> A lot of good industry resources exist so we use them; also AIA 	
Time Factors <ul style="list-style-type: none"> Both older farm managers and young senior management group in 40s with younger families = limited time Time available depends on cotton crop Distance from PD venues (a 1-day meeting down south = 3-days out of program) - are some good local courses when they come to town Travel time to go outside region means less time servicing clients (too little time anyway) 	5
Company Policy <ul style="list-style-type: none"> All our training is actively prioritised to happen; occurs with high level company support and part of employment packages; high level company support / leadership internationally Level of organisation commitment to support staff PD; Board is working this through at present Do encourage specific trades related courses, eg ginning Encourage staff to seek out own PD based on own needs; also encourage programs like time mgt and personal self motivation Larger organisations try to have at least one person attend GRDC Updates / Cotton Conf to bring knowledge back; important element is social side of interacting with others in the industry; important for farmer clients to see advisors at these events too 	5
Use own Internal Facilities <ul style="list-style-type: none"> (international parent company) has bought considerable internal expertise and a culture of personnel development to the business; they have internal companies globally that have a strong learning culture; increasing capacity to undertake trials to support implementation of on-farm innovation and sales 	1
Value of Professional Development <ul style="list-style-type: none"> in the water management business - accreditation could be important for federal government jobs however there is no structure to put this in place; farmers don't see value in accreditation - the industry knows if you can do the job via your reputation 	1

Future professional development opportunities and activities required over next 5 years

Table 18: a greater understanding of technology and online based applications and training was mentioned as an area requiring future professional development opportunities (5 mentions). More business development courses and specific industry training were also identified as being required over the next 5 years. Business development courses mentioned included staff management, conflict resolution, leadership and staff motivation courses (5 mentions). Specific industry training included resistance managements, genetic technologies and bio-security management. In addition it was noted that more regional specific training was required (4 mentions).

Professional development opportunities and activities required over the next 5 years	No. of mentions
Technology Training <ul style="list-style-type: none"> Computer skills for 30 people Use of electronic/internet based tools Use of social media Electronics to manage hi-tech equipment ; these techs have to understand uses of equipment; we do some contracting to 3rd parties who don't understand our needs/applications of the gear = problems and grief for us 	5

<ul style="list-style-type: none"> • Improve technologies of seed development and production on the basis of new genetics; need to be alot smarter in what we do and how, eg use of electronic communication 	
<p>Business Development Courses</p> <ul style="list-style-type: none"> • Conflict resolution, staff management overall, leadership, how to motivate staff • Business management / development so we can run our business better in future • More ad-hoc internal staff training done 1:1 • Psychology • More short courses 	5
<p>More Specific Industry training</p> <ul style="list-style-type: none"> • Tertiary institutions are not responsive to emerging industry issues to build into training new graduates; emerging issues are - resistance management, preserving genetic technology; glyphosate resistance, bio-security management issues, etc • Tailored to regions of the industry, eg Nth NSW, CQ; also very focussed on needs eg. insect ID and management based on 'snapshots'; UNE course too long - needs to be 2-3 days max • As VET courses aren't of sufficient level we prefer tertiary study because of the high level info we have to pass onto clients • Continued development over time with Precision Ag and better product updates 	4
<p>Communication skills</p> <ul style="list-style-type: none"> • Personal skills such as communication and interpersonal interactions; these are best for teams of 3-4 agronomists • Public speaking and presentations 	3
<p>Quality Assurance</p> <ul style="list-style-type: none"> • More QA based technology to support field work • Formally starting a QA process for Quality management 	2
<p>Other</p> <ul style="list-style-type: none"> • Safe driver training - not avail in regional areas • We will look at any ideas that come out 	2
<p>Nothing</p> <ul style="list-style-type: none"> • Plenty of courses there if you need them 	2

Opportunities for industry based strategic approach

Table 19: in order to deliver more specific and relevant industry training it is suggested there needs to be more engagement between industry organisations and universities to develop courses that are *more appropriate to industry needs*, there also needs to be a *stronger role for cotton in school curriculums* (5 mentions). An overall lack of support for the cotton industry is highlighted as a gap which could be filled by a more strategic, industry-wide approach. Strategies suggested to improved industry support included an improvement in access to industry staff and the need to increase *overall industry skills levels* (4 mentions). There needs to be an *industry-wide program to attract more of the right people* (young people). More specific industry training and improved engagement with agribusiness and consultants are also suggested (4 mentions each).

Gaps in PD that could be filled by an industry based strategic approach	No. of mentions
<p>More engagement between industry and Universities</p> <ul style="list-style-type: none"> • Better university courses that are more appropriate to our needs, we need agricultural scientist specialists who come out job ready 	5

<ul style="list-style-type: none"> • More engagement of industry with uni courses to increase relevance • Stronger role for cotton in school curriculum, need to engage more strongly with relevant southern unis for future staff • Make UNE cotton course available in 'short course modules' for young agronomists • Need interaction between tertiary and VET courses • UNE course too long - needs to be 2-3 days max 	
<p>Better Access to staff</p> <ul style="list-style-type: none"> • Just access more good staff • Less valuable for us - more valuable to secure additional agronomists, etc into industry (biggest need); one key issue is the 'shine' has gone off the role of agronomists - they were once sought after / well thought of - now less attractive • Increase number of people into industry - increase overall industry skills levels • industry wide program to attract more / right type young people 	4
<p>Specific Training Requirements</p> <ul style="list-style-type: none"> • Good Rabobank Course - for business owner and also for farm mgrs • More short courses; tailored to regions of the industry, eg Nth NSW, CQ; also very focussed on needs eg. insect ID and management based on 'snapshots' • Business mentoring + basic sales/marketing skills • Focus on people management to ensure 'best practice people development strategies'; how to take personnel to another level of development 	4
<p>Improved Agribusiness/Consultant engagement</p> <ul style="list-style-type: none"> • Water engineers have underrated value in the industry - need to be part of the thinking • Current industry training / PD is very dis-jointed; more cohesion and strategic interaction is required • Increase industry networks; • See value in industry networking as part of this planning/implementing of a strategy 	4
<p>More industry support</p> <ul style="list-style-type: none"> • Greatest need for support amongst younger staff up to 5yrs experience, less so up to 7yrs; very little for experienced personnel • Bring a more even approach to professional development - mainly for smaller organisations that have less resources; assurance that min stds of professionalism used; help smaller businesses run their business better via good business management programs • An industry approach is needed to resolve some pressing issues like electronics, engineering type issues peculiar to cotton and its future direction/equipment needs • While we are strong internally we see the need for wider industry strategy because we see the value of our own training and would like to see if knowledge of this sort of structure would help the industry 	4
<p>Role of CCA</p> <ul style="list-style-type: none"> • Suggest CCA takes bigger role with more on-line programs and greater co-ordination of ensuring we get R&D info • I would prefer for CCA to do this for us (as consultants) as it is targeted direct to our needs; we are a specific sector with specific needs - other parts of the industry are the same with their needs; must be 'horses for courses' 	2
<p>Other</p> <ul style="list-style-type: none"> • Don't know what we don't know; not a lot of this sort of thing available; 	2

- Some organisation to speak on behalf of the needs of those in the cotton industry; someone to think strategically about how to address these issues; someone to take the necessary action who has a real stake in seeing/managing change in the industry

Professional Development in Summary

Management training and technical training and business management courses are identified as the most common professional development strategies which organisations focus on, encourage and ensure their staff undertake. Most organisations involved in this study noted that professional development is a part of their company policy, either formal or informal. Strategies to ensure staff undertake professional development were identified as being a part of *annual personal performance plans* or a *result of mentoring processes* where junior personnel receive training *based on skills assessment*. Some sectors noted that professional development is pursued only at the request of employees or as a result of direct discussions with staff that ask for it or identify a need.

It was widely acknowledged by participants that their professional development strategies are *based on the level of staff skills and their ability to learn*. Skills assessments carried out during formal or informal company appraisals, determines what training employees receive.

Opportunities for improved professional development activities offered / sought over the next 5 years included the need for more technology and online based training. The need for more business development courses and specific industry training were also identified as being important development areas. In particular it is suggested these areas require a more industry-wide strategic approach within the cotton sector. In order to deliver more specific and relevant industry training it is suggested there needs to be more engagement between industry organisations and universities to develop courses that are *more appropriate to industry needs*. Other strategies suggested to improved industry support of professional development included an improvement in access to industry staff and the need to increase *overall industry skills levels*.

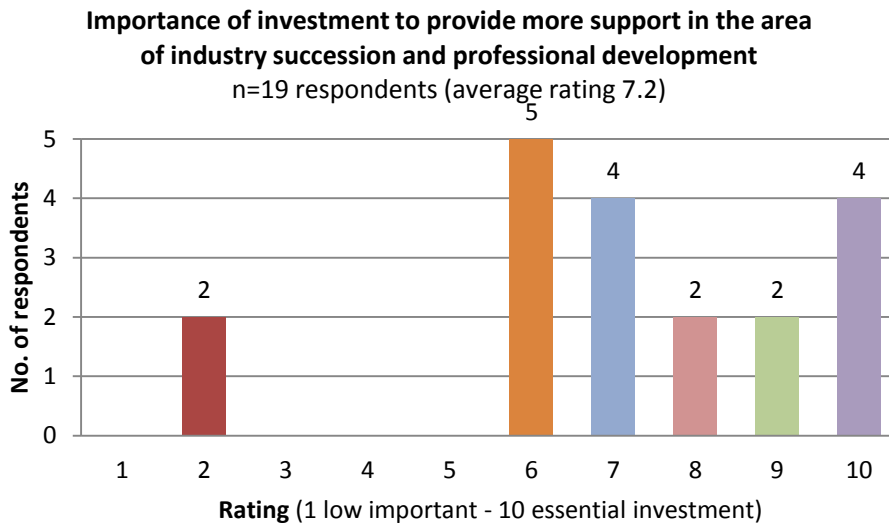
With an average rating of 5.3 the importance placed on the accreditation of staff training was varied across participating organisations. On-farm advisory businesses, merchandise and advisory service providers, the specialist cotton industry supplier and one other participant, identified this as being important to their business.

Factors impacting the ability of organisations involved in this study to provide and obtain professional development across various roles and services were largely governed by the costs involved in these activities. These include the costs associated with the courses and the resulting returns on investment. Time pressures and the availability of courses in the relevant regions were also mentioned as impacting on the type and amount of professional development undertaken.

3.5 Reaction/Interest in proposed Industry Wide Program

Importance of investment to support succession and professional development

Figure 11: With an average rating of 7.2, participants felt that investment and support in the areas of industry succession and professional development from organisations like Cotton Australia and the Cotton R&D Corporation, represents an important investment.



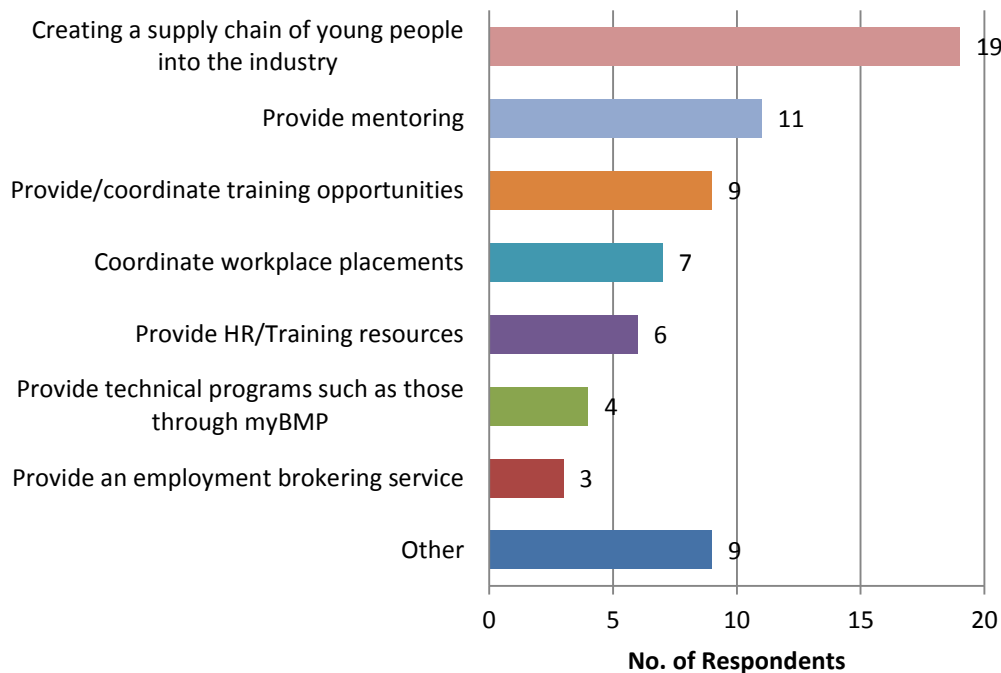
Main areas of investment that would provide most support to businesses

Figure 12: all participants agreed that *creating a supply chain of young people into the industry* is an important area of industry investment that would best support their business. Also of value would be the availability of mentoring within the industry (11 mentions). *Coordinated training opportunities* (9 mentions), *coordinated workplace placements* (7 mentions) and *HR and training resources* (6 mentions) were also identified as important areas where industry investment would be valuable. Other areas that industry could invest in were identified as:

- *Operational roles of trades, support professional development at a professional level with less costly meaningful courses - not that we really need them*
- *Must compete with mines somehow*
- *Rimfire GradLink is good; PICSE stories are real*
- *Mentoring is an internal role*
- *PICSE*
- *Support UNE cotton course*
- *Share info on what works well, succession, grad programs*
- *Not enough time for mentoring to be done*
- *Electronics / engineering*

Main areas that industry could invest in to better support businesses

respondents could choose more than one option



Possible ways in which agribusiness companies/employees could support initiatives

Figure 13: Participants were asked to identify possibly ways in which agribusiness companies and employers could or should support industry based initiatives as discussed above. 7 participants suggested that *paying for services and resources accessed on a fee-for-service basis* would be fair. 6 participants felt *in-kind contributions* would be sufficient support of industry efforts. 5 participants felt that a combination of direct financial contribution, in-kind contributions, sponsorship and paying for services and resources on a fee-for-service basis would be appropriate.

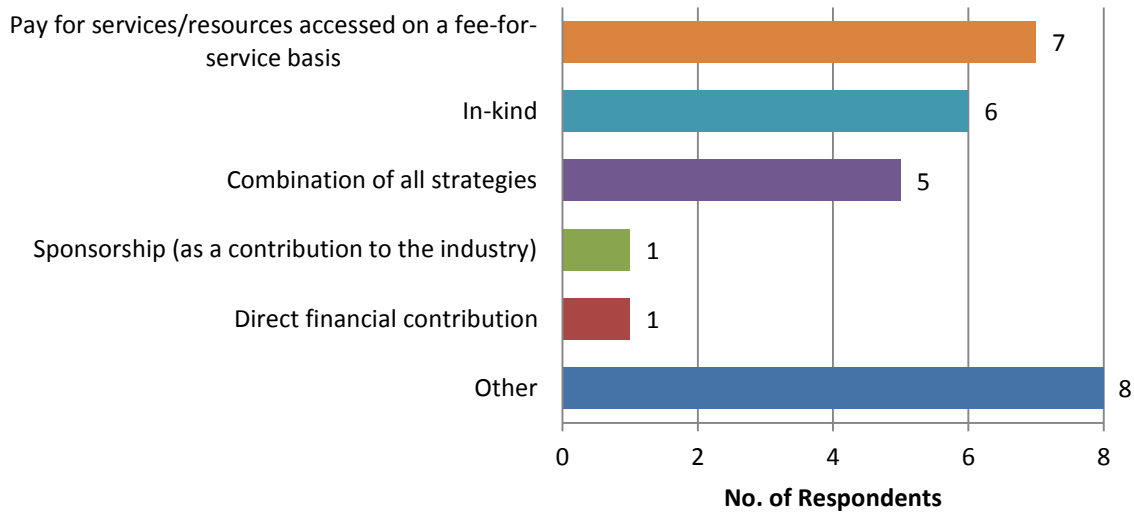
Comments relating to *other* possible ways that agribusiness companies and employees could support industry initiatives included:

- *Prefer FFS (fee for service) to pay our way*
- *CRDC have to be seeing water engineers as part of industry; do their bit to attract young people*
- *Co-sponsoring with our R&D partners;*
- *Those doing courses as small operators already take time out of the business and pay travel/accom costs*
- *Get significant funds from CA and CRDC; also from supplier beneficiaries like Monsanto; also 50:50 user pays*
- *We already pay for many services; if there is market failure we will pay / pay more*
- *Need to put a 'value' on this level of support*

4 participants felt that direct financial contribution would be most effective in supporting industry initiatives and indicated that an annual amount of between \$1001-5000 would be a reasonable contribution for a business of their size to contribute.

Possible ways in which agribusiness companies/employees could support initiatives

respondents could choose more than one option



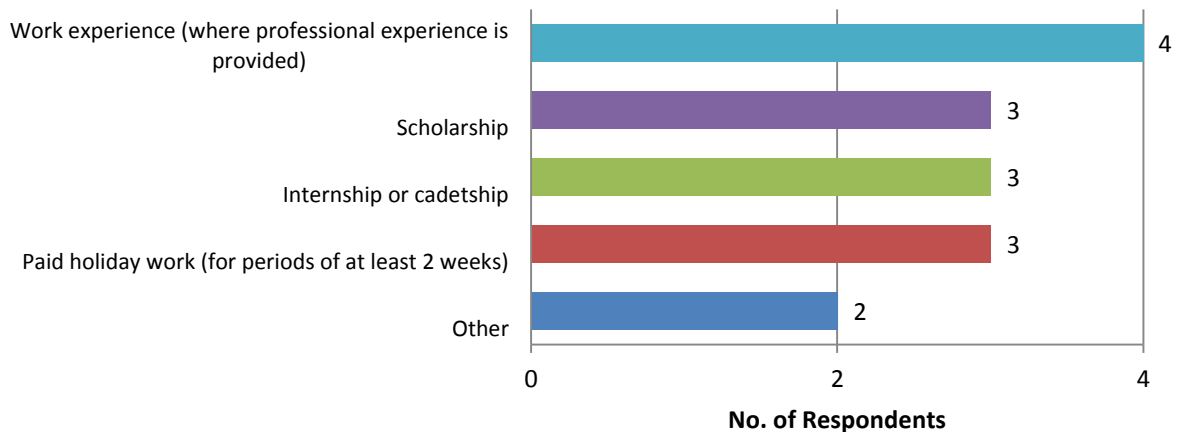
Possible in-kind contributions to be made by businesses

Figure 14: 6 organisations identified in-kind contributions as the most effective means of providing support to industry initiatives aimed at supporting succession and industry development. Possible in-kind contributions included providing professional work experience (4 mentions), scholarships, internships or cadetships as well as paid holiday work for periods of up to 2 weeks (3 mentions each). Other possible in-kind contributions mentioned included:

- *Links with internal graduate programs*
- *Senior staff mentoring to checkout possible personnel*

Possible in-kind contributions to be made by businesses

respondents could choose more than one option



Future strategic industry framework/support needed

Table 20: Participants were asked to provide any additional insights relating to strategic industry frameworks and support that would assist employers to operate efficiently to meet future industry needs.

Within the farming operation sector, access to more farm workers and management personnel is noted as being important in being able to better meet future industry needs relating to succession and professional development. One participant noted they have tried holiday work and work experience, but the time and cost commitments meant there was no value in this approach.

Participants agreed that attracting young people and experienced personnel into the industry is a priority. One participant highlighted the fact that the agricultural industry is too *fragmented and* not an attractive option for young people. This participant’s comment serves to capture the general tone relating to attracting more people into the industry:

The current position of recovery from drought shows the importance of a structured program to get more people into the industry as it is getting harder to get staff. It is important to do outreach to universities to get graduates coming into the industry, however we need to get the funnel started in the first place by getting kids in school into courses at uni. Industry levels of support depend on the program that is implemented

Cadetships were mentioned by merchandise and advisory services as being valuable, with specific mention of the Insect Scout Program whereby *both students and we benefit as does the wider industry that get these students we have given basic grounding to. This program could be rolled out more widely.*

Industry wide training programs are mentioned as being of importance in providing a strategic framework and support to succession and professional development. Mention was made of existing programs available through the UNE Cotton Course, CCA courses, QLD Resource Council as well as PICSE through school curriculums. It is suggested these current programs should be supported and expanded.

It was suggested that the impact of the mining industry as an alternative for young people be considered and that their successful, strategic approach be replicated to provide a positive holiday and work experience for young people.

Other factors which were noted as being valuable in assisting employers to meet future industry needs included supporting gap years, paid holiday work experience, internships, mentoring for new graduates from over 50s as well as the value of RDCs/CRC/public funded agencies and projects.

Organisation Type	General comments about strategic industry framework/support
Farming operation - larger family	<ul style="list-style-type: none"> Ideally for this farm access to 10-15 farm workers / yr would be ideal + farm management personnel tried <i>holiday work / work experience - big cost and time commitment</i> but not the value in it for us; need to know what works from collective experiences in industry; good 'world of hard knocks info out there'
Merchandise / equipment supplier mainly	<ul style="list-style-type: none"> Mining industry has a strategic approach - replicate that; agriculture is very fragmented and not 'attractive'; mining takes an aggressive approach - agriculture is very laid back; need to give young people a real and positive holiday and work experience; show them staff who are very good as role models

Merchandise and advisory services	<ul style="list-style-type: none"> • Most important thing is initial attraction of personnel as need more agronomists; second thing is so much competition from mining companies and big pressure from them on salaries; cadetships are a good expenditure • We do our bit through our Insect Scout Program - both students and we benefit as does wider industry who get these students we have given basic grounding to; this program could be rolled out more widely; we have to look at other industry programs and analyse their level of success - why re-invent something • Have to connect schools to unis to increase awareness of cotton and agriculture careers and link into teaching; students have to experience real life in the business
On-farm advisory only	<ul style="list-style-type: none"> • Attracting young people into industry is top priority followed by training /PD; have to ask why are young people not coming into industry now like they did - core part of program; however there is a wider issue of the industry internally and the external community appreciating the value of any industry wide program; there would have to be real perceived value • Attracting people into industry is #1; happy to support work experience, internships and holiday work; this has to be broken up to meet direct needs of sub-sections of the cotton industry and also regional variations - so categorised and managed accordingly • Such a program is already available through UNE cotton course and CCA courses/seminars, etc have good coverage; important to support current CCA work and possibly expand; important to retain 'cutting edge PD'; support practical experienced to in-experienced agro mentoring
On-farm advisory, plus other services	<ul style="list-style-type: none"> • #1 issue is to get young people in because of food security; offer incentives to get people into regions; look at what mining is doing and mirror it - they are getting to kids in Yrs11/12; we would give work experience; internships in Yrs2/3 at uni; realise during 2002-9 we lost alot of young workers - have to make that deficit up too; food and fibre security are big issues; support longer term smaller companies from closing through supporting attracting of more people to regions - as those orgs shut down they take the specialist skills and industry support with - that requires a value being placed on them • Most organisations are not equipped to mentor personnel; larger companies are more distant from the coal-face so less equipped than consultants to really understand on-ground issues; means knowledge gaps and poor mentoring; good mentoring is a high priority • Attracting young people is biggest issue; need to make young people aware at school that the cotton industry is an attractive industry - use the PICSE program as it is proven
Specialist cotton industry supplier	<ul style="list-style-type: none"> • Need a much more innovative approach to attract young people - our industry pioneers are retiring - where is the expertise to take their place to take industry into a new generation?; recognise a lot of in-kind resources already go into programs like 'Field to Fabric'; any program has to have a real need that is clear and identified - not done for the sake of doing it
Other	<ul style="list-style-type: none"> • Support gap year; paid holiday work experience; internships; mentoring new grads from over 50s; RDCs/CRC/public funded agencies and projects, eg NGA employ young people/new grads as part of social conscience; • myBMP is of questionable value in any case; attracting young people is crucial; any industry program must be well structured and directed to be sure it meets industry needs; could have industry badged accreditation as long as it means something to farmer employers • The most important issue is to get more young people into the industry; Qld Resource Ccl is a good and highly effective model; some form of local training co-

	ordination is important; once this starts it will have to have longer term funding for initiatives as this is a big issue to turn around;
	<ul style="list-style-type: none"> • Have given rating a 7 if is implemented well - if not then rating 1 so don't start; attracting young people is most crucial issue for us; next is competing with mining; please don't re-invent the wheel; has to be pitched at right level for employers/staffers; most coordinated existing services first = #1 issue; already support work experience and holiday work • The current position of recovery from drought shows importance of a structured program to get more people into the industry as it is getting harder to get staff; important to do outreach to uni to get graduates coming into the industry; however need to get the funnel started in the first place by getting kids in school into courses at uni; industry levels of support depend on the program that is implemented; we may be able to support by explaining how Monsanto does it(as an example) so others can learn from that experience.

Reaction and interest in proposed industry wide program, in summary

Participants felt that investment and support in the areas of industry succession and professional development from organisations like Cotton Australia and the Cotton R&D Corporation, represents an important investment. It was agreed that creating *a supply chain of young people into the industry* is an important area of industry investment that would best support business. Also of value would be the availability of mentoring within the industry, *coordinated training opportunities, coordinated workplace placements and HR and training resources*. Participants felt that agribusiness companies and employers should contribute to the support of industry wide initiatives by *paying for services and resources accessed on a fee-for-service basis*, through *in-kind contributions* as well as direct financial contribution and sponsorship.

Of those who felt that direct financial contribution would be most effective in supporting industry initiatives, indicated that an annual amount of between \$1001-5000 would be a reasonable contribution for a business of their size to contribute.

Possibly in-kind contributions were identified as providing professional work experience, scholarships, internships or cadetships as well as paid holiday work for periods of up to 2 weeks.

Overall participants agreed that attracting young people into the cotton and agriculture industry is a priority when considering strategic industry frameworks and support need to further assist employers in the future. More attractive work experience opportunities were noted as well as better mentoring. Internships, cadetships and industry wide programs through schools and universities were highlighted as being important in achieving this objective.

3.6 Other Relevant Issues

3.6.1 Information Sources

Information sources relating to succession, recruitment and professional development

Table 21: When seeking information about succession, recruitment and professional development, participants rely mostly on internal company sources (8 mentions) including the experience of their own staff, HR resources, internal company contacts and research. Also of value is the importance of word of mouth and media sources (7 mentions each).

Information sources relating to succession, recruitment and professional development	No. of mentions
Internal company sources <ul style="list-style-type: none"> Industry experience from family over last 30 yrs Internal (national company) HR resources Internal company contacts Personal investigation - cannot apply broad brush to the specific needs; need contextualisation Mostly in-house programs 	8
Media <ul style="list-style-type: none"> Newspapers Financial Review industry news sources CA magazine General industry publicity Case studies in the media/magazines and other industry sources 	7
Word of Mouth <ul style="list-style-type: none"> Word of mouth Especially speakers at Border Women's Network Open market Other consultants - what they have done/are thinking of doing; see what similar businesses in other sectors are doing Industry relationships 	7
Recruitment Companies	4
Universities <ul style="list-style-type: none"> Direct contact with unis Through existing contacts Making good student contacts 	4
Industry Experts <ul style="list-style-type: none"> Business coaches and business development specialists CCA and CRDC Look to other non-agriculture industry best practice General industry discussion often reveals info 	4
Accountants <ul style="list-style-type: none"> Accountants as they asses risk 	2
Government Agencies	1

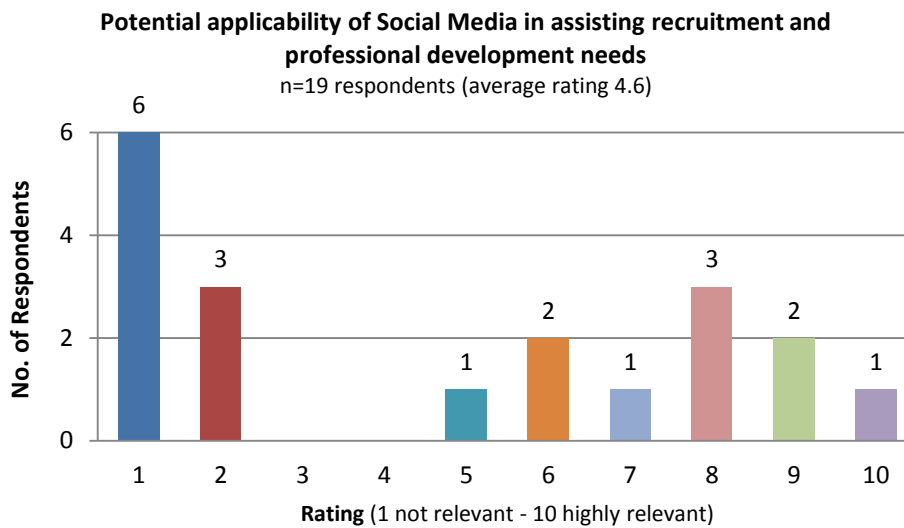
Additional more relevant sources of useful information

Comments relating to other information sources that could more effective than those mentioned in Table 21 included:

- An industry program could assist - problem is the required number of people are just not out there - so have to get young people interested in the industry
- Banks
- Ways of 'screening people'
- Part of the industry focus is to create strong industry networks and support structures - support info flow to and from us
- Social media (Facebook and LinkedIn were mentioned)
- Institute of Engineers are pro-active

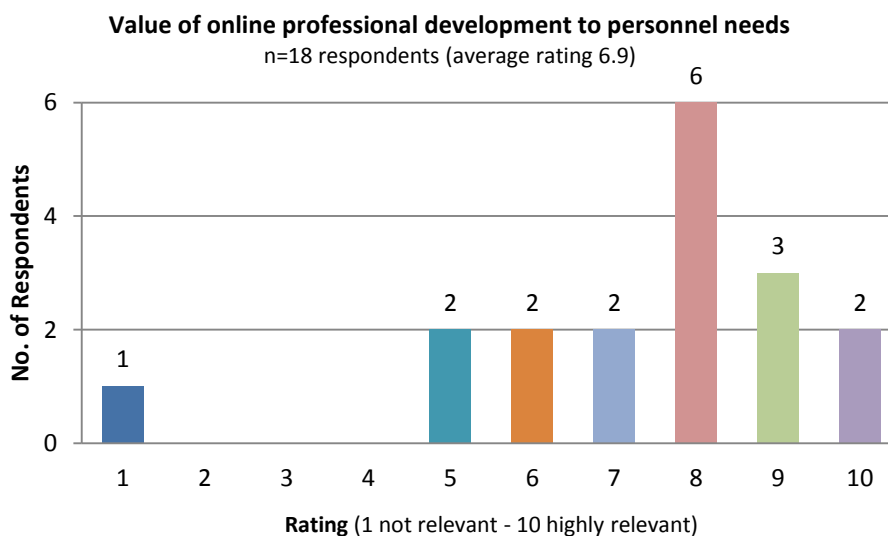
Potential applicability of Social Media in assisting recruitment and professional development needs

Figure 15: With an average rating of 4.6 participants regarded the potential applicability of social media in assisting recruitment and professional development as having varied importance and relevance.



Value of Online Professional Development to personnel needs

Figure 16: The potential value of online professional development to personnel needs was rated as being somewhat important and relevant with an average rating of 6.9.



General Comments relating to the value of online and social media

Table 22: Social media and online professional development applications are regarded as being age dependant and possibly not suitable to working with farmers. Social media is considered to possibly be valuable to the under 30s and for those capable of using. One participant notes that they had used Facebook as part of recruiting, but it is *not really mainstream in our business*.

Comments relating to the usefulness of online professional development include: *supporting motivated people, will work as long as the tools are good, valuable because of geographical spread of cotton industry and works well as part of wider program*. However most agree that the use of online applications must be coordinated with face-to-face learning, *especially for farmers*, online must be *practical with at least some face-to-face*.

Organisation Type	Comments relating to the value of online and social media
Cotton processor	<ul style="list-style-type: none"> No great need for staff professional development; all done on case by case basis; prefer face to face courses though some dual delivery like ASIC courses work ok
Farming operation - larger family	<ul style="list-style-type: none"> Social media only relevant to young people; on-line only for those capable of using it Social media is very age related focussed on younger people who get it; have used Facebook as part of recruiting - not really mainstream in our business; on-line has to be linked to face to face learning especially for farmers; needed for wide range of skills
Merchandise and advisory services	<ul style="list-style-type: none"> We would use on-line however prefer face-to-face as seeing is believing; we have done on-line and works well as part of wider program Social media important for under 30s - we don't know how to capitalise on it;
On-farm advisory only	<ul style="list-style-type: none"> Face-to-face is still best way of PD; have to move with the times too = balanced approach On-line must be practical with at least some face-to-face
On-farm advisory, plus other services	<ul style="list-style-type: none"> Social media is potentially very dangerous for us;
Specialist cotton industry supplier	<ul style="list-style-type: none"> Already use Linked-in and Facebook to check out potential employees; on-line programs also need personal face to face interaction;
Other	<ul style="list-style-type: none"> There is a lot of realistic practical industry experience to draw on - needs inclusion in any planned program; Social media has low relevance due to current age structure; need motivation / a motivating person to support on-line delivery to ensure courses are completed given so much time pressure; for on-line use the model of the on-line Sunflower workshops ready in July 2012 On-line only supports motivated people; face-to-face and experiential is better even tho more expensive; Will work as long as the tools are good; valuable because of geographic cotton industry spread; need to continue to up-skill the industry

Information Sources in summary

When seeking information about succession, recruitment and professional development, participants rely mostly on **internal company sources** including the experience of their own staff, HR resources, internal company contacts and research. Also of value is the importance of **word of mouth** and **media sources**.

Social media and online professional development applications are regarded as being age dependant and possibly not suitable to working with farmers. With an average rating of 4.6 (where 1 is not relevant and 10 is highly relevant) **social media** is considered to possibly be valuable to the under 30s and for those capable of using. One participant notes that they had used Facebook as part of recruiting, but it is *not really mainstream in our business*.

Comments relating to the usefulness of **online professional development** include: *supporting motivated people, will work as long as the tools are good, valuable because of geographical spread of cotton industry and works well as part of wider program*. With an average rating of 6.9 (where 1 is not relevant and 10 is highly relevant) most agree that the use of online applications must be

coordinated with face-to-face learning, *especially for farmers*, online must be *practical with at least some face-to-face*.

3.6.2 Factors Affecting Business Development and Profitability over the next 5 years

Current Issues currently impacting overall business

Table 23: The most commonly mentioned issue currently affecting business development and profitability across all organisations involved in this study is water related: water availability, drought and floods, water reforms and water security. Also widely mentioned is the availability of experienced staff in the industry. Staffing issues include finding and retaining good staff, a lack of experienced agronomists and succession issues relating to young people in the industry.

Financial issues currently impacting organisations include debt, operational costs, costs associated with hiring employees and the profitability of the industry. The uncertainty of the cotton industry was also mentioned by several, recognising the development of mining as a competitor.

Organisation Type	Issues currently affecting business development and profitability
Farming operation - larger family	<ul style="list-style-type: none"> • Water • Access to staff • Management of cutting edge technology required by industry including the people to manage it for us; a good farm manager is now paid at least \$70k plus all add-ons (car, house, etc)
	<ul style="list-style-type: none"> • water security • debt and gearing • staff keeping them and getting them - the mines as competitor
Merchandise / equipment supplier mainly	<ul style="list-style-type: none"> • Floods • getting and retaining good people • generational change where young people are increasingly incompetent
Merchandise and advisory services	<ul style="list-style-type: none"> • lack of agronomists • seasons • commodity prices
	<ul style="list-style-type: none"> • climate influencing amt of cotton grown • cotton markets • cost of our agronomy service/employee costs • quality of staff able to be accessed • enough suitable people
On-farm advisory only	<ul style="list-style-type: none"> • water access • water reforms • access to personnel • energy costs
	<ul style="list-style-type: none"> • water access • availability • mining development as competitor to agriculture and taking over irrigated areas; getting staff - both agronomists and bug checkers
	<ul style="list-style-type: none"> • water • staff • attracting young people
On-farm advisory, plus other services	<ul style="list-style-type: none"> • Getting staff • Keeping staff • Succession to ensure the business remains into future
	<ul style="list-style-type: none"> • my ability as company owner to survive financially and mentally

	<ul style="list-style-type: none"> • this is due to the myriad of outside influences that we have to deal with apart from core business • aging workforce is a big issue 	
	<ul style="list-style-type: none"> • water access • GMOs and their impact on the industry and wider community with profit implications • staffing overall 	
Specialist cotton industry supplier	<ul style="list-style-type: none"> • areas of cotton planted is based on seasons vs markets • level of advisory service required based on market demands • increased technology levels 	
Other	<ul style="list-style-type: none"> • Drought • uncertainty in the minds of farmers re whether they will plant/spend \$; lack of focus of farmers in uncertain times • profitability of industry 	
	<ul style="list-style-type: none"> • access to staff • Professional development • dealing with profitability issues with high cost structures in mining areas 	
	<ul style="list-style-type: none"> • financial risk - uncertainty and risk management • Agriculture in a world without water / land security • access to good people 	
	<ul style="list-style-type: none"> • Drought, resistance management • industry profitability • regulatory environment 	

Strategic Issues requiring attention

Table 24: *Agriculture as a whole has lost its shine and interest* according to many participants involved. In line with current issues impacting business development and profitability, several participants mentioned the need to improve perceptions of the cotton industry to influence how future employees will see the industry. It was noted by several participants that modern media and technology should be employed to better *position the cotton industry in community hearts and minds* to achieve an *integrated approach to getting more and better people*. This need to improve the attractiveness of the industry is based on growing competition from the mining sector.

The strategic use of technology at an operational level was also identified in relation to the increased use of high tech machinery and the need for technical know-how to manage it as well as more precision agriculture, mapping using GIS and increased bio-technology.

Organisation Type	Strategic Issues requiring attention
Farming operation - larger family	<ul style="list-style-type: none"> • As our machinery is becoming so hi-tech we must have the technical know-how to manage it; WUE • competing with mines to create food rather than fuel • changing our culture to one of training and professionalism in the work place • work life balance for all
Merchandise / equipment supplier mainly	<ul style="list-style-type: none"> • transport and logistics infrastructure • mining is draining our resources in regional communities and wrecking infrastructure
Merchandise and advisory services	<ul style="list-style-type: none"> • things have improved with (international parent company) as owner - greater simplicity and accountability, (international parent company) regard 'their people as being everything' • cultural issue in communities of their view of cotton industry; have to

	<p>continue to position cotton industry as integral and crucial industry in hearts and minds of the wider community (I believe still strong negative perceptions in cities); this needs to change to influence how future employees will see the industry</p> <ul style="list-style-type: none"> • more web based good news stories; position cotton industry positively in community hearts and minds = industry sales process • management of succession • how to link with modern electronic media better; it is necessary to get some integrated approach to getting more and better people
On-farm advisory only	<ul style="list-style-type: none"> • continued up-skilling; business development to help me grow my business; • too few young people both in the industry / coming in, 10-15 yrs ago; those that do come in don't last as long as us – a lot of churn; Agriculture as a whole has lost its shine and interest; banks are our biggest competitor as they pay up to \$20k more than us; poor media image; city is very removed from rural issues; lack of familiarity of them with us is a big one; a structural problem due partly to decreasing populations in rural areas; we can co-exist with mining if properly planned at industry level • water; staff; attracting young people
On-farm advisory, plus other services	<ul style="list-style-type: none"> • Precision agriculture, mapping issues using GIS
Specialist cotton industry supplier	<ul style="list-style-type: none"> • Increased level of technology being used in the industry, eg communications/computers, etc plus increased bio-technology with seeds, etc

Development and profitability over the next 5 years, in summary

The most commonly mentioned issues currently affecting business development and profitability are water related, financial issues, the uncertainty of the cotton industry and the availability of experienced staff in the industry and the fact that *agriculture as a whole has lost its shine and interest*.

Based on these impacting issues, participants identified the need to improve perceptions of the cotton industry to influence how future employees will see the industry. It was noted by several participants that modern media and technology should be employed to better *position the cotton industry in community hearts and minds* to achieve an *integrated approach to getting more and better people*.

The strategic use of technology at an operational level was also identified as requiring strategic attention within businesses over the next 5 years.

3.6.3 Additional Information: Service Providers

Type and scale of farming systems of clients represented

Figure 17: Service providers involved in this study assist clients across all farming sectors including family operations (13 mentions), mixed farms (11 mentions) and larger corporate specialists (9 mentions).

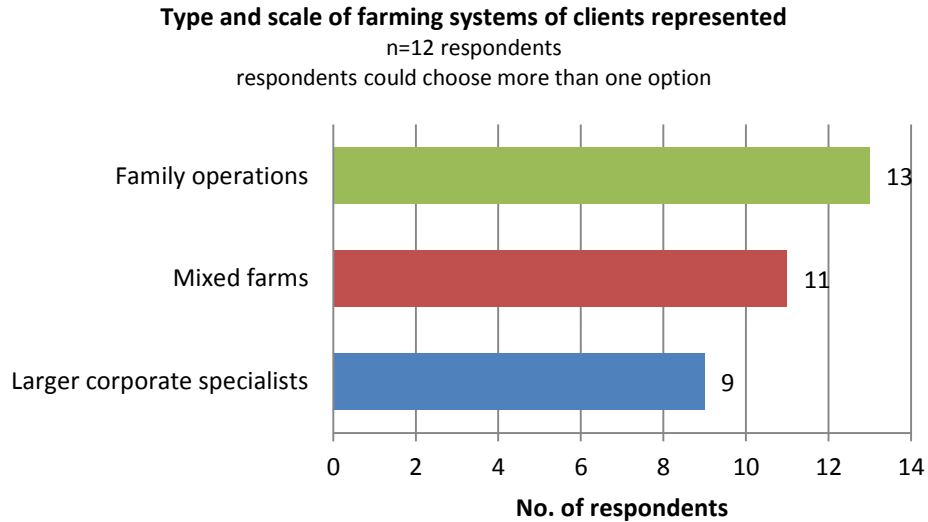


Table 25: Service providers assist their clients with decisions relating to business management and strategic decision making, including budgets, marketing, sales and general support. They also provide advice to support all agronomy related decisions including crop nutrition, pest management, irrigation rotations, water management and weed management. It is noted by most service providers that the advice and assistance they provide to their clients supports and complements that which they are receiving from current on-farm workforces. Only in two instances did service providers indicate they replaced the need to hire on farm agronomists or related staff.

Service Provider	Decisions Assisting clients with	Does decision this making replace/ complement need for on-farm workforce	Type and Scale of farming systems of clients
Merchandise / equipment supplier mainly	Helping them make input decisions	Service provider to farmers and advisers	<ul style="list-style-type: none"> • Larger corporate specialists • Family operations • Mixed farms
Merchandise and advisory services	All client decision making due to closeness of our relationships	Our work complements current on-farm personnel	<ul style="list-style-type: none"> • Larger corporate specialists • Family operations • Mixed farms
	Agronomy	Supporting internal farm programs	<ul style="list-style-type: none"> • Larger corporate specialists • Family operations • Mixed farms
On-farm advisory only	Supporting agronomic issues dealing with crop selection/management, nutrition, water management, plus increasingly marketing, production sales, support in business decisions	Our role is to support current decision making not replace people on farm	<ul style="list-style-type: none"> • Family operations
	Pests, nutrition of crops, irrigation rotations, all farm management / crop	Yes we do replace bug checkers; we operate almost like 2IC to	<ul style="list-style-type: none"> • Family operations

	growing; all about interpersonal psychology;	farmers	
	All technical details about their farm production	Take place of farm employed agro	<ul style="list-style-type: none"> • Corporate operations • Family operations • Mixed farms
On-farm advisory, plus other services	We give strategic advice to clients and empower decision making on urgent water issues		<ul style="list-style-type: none"> • Larger corporate operations • Family operations • Mixed farms
	Every level of decision from business budgets to pre-crop preparation to crop management while in the ground to post-harvest		<ul style="list-style-type: none"> • Family operations • Mixed farms
	How to manage all aspects of the farm business	Support their decisions	<ul style="list-style-type: none"> • Larger corporate specialists • Family operations • Mixed farms
Specialist cotton industry supplier	Seed markets and agronomy	Supporting current advisory functions and knowledge levels	<ul style="list-style-type: none"> • Larger corporate specialists • Family operations • Mixed farms
Other	Irrigation scheduling		<ul style="list-style-type: none"> • Corporate operations • Family operations • Mixed farms
	Nutrients, insect and weed management	Hard to get farm workers too	<ul style="list-style-type: none"> • Family operations • Mixed cotton and grains
	Our main interaction is through distributors with growers and stewardship of the product; help growers through distributors to decide cropping decisions of whether cotton suits their enterprise / them	Replacing workers - nil	<ul style="list-style-type: none"> • Larger corporate specialists • Family operations • Mixed farms

3.6.4 Additional Information: Service Providers who could support program development

Experience with personnel problems in the cotton industry

Four service providers with a focus on providing education in the cotton industry contributed additional discussion relating to personnel and professional development issues (See Appendix 3). Collectively these participants agreed that in order to address the emerging industry succession and professional development issues in the cotton industry, school students should be viewed as a key attraction strategy.

Experience and Skills

The *potential contributions* of the participants' organisations to addressing emerging industry succession and development issues include strategies aimed at direct engagement with school-age students and teachers. Comments included:

PICSE:

- We can bring cotton into the wider agricultural arena giving students specific cotton or wider agriculture experience – equating to career portability that suits students of today.
- Engage with students in Yrs 11&12 direct
- Give teachers a more in-depth understanding of industry through PICSE Teachers PD that are an experiential process which gives them personal understandings – then creates a multiplier effect to students over successive years
- Provide a structured way of students and teachers engaging with cotton employers – showing cotton bio-science in action.

RIRDC:

- We run the Horizons Scholarship program which along with the Rural Women's Award is our primary capacity building investments.
- We would be prepared to target both of those toward Cotton Industry capacity needs.

PIEF:

- Must increase teacher and student understanding – the current level is far too low
- Direct school education connection and communication with teachers
- These connections to be made direct to teachers, school administrators and bureaucrats.

Cotton Australia:

- Currently our website is well used by teachers and students (3rd highest use group) looking for teaching resources and careers info. Teachers approach CA at talks for use of their presentations to use as resources in the classroom. Have current university relationships, e.g. UNE, UofQ and Sydney Uni that could be built on.
- Support attraction of young people into industry
- Change community wide perception of the industry

These organisations are skilled in creating linkages to ensure initiatives achieve maximum value. For example RIRDC works to create linkages between PICSE and PIEF. They have the knowledge and understanding required to *match industry needs with cotton needs*.

KPIs to measure success of contributions

Discussion relating to possible KPIs to be used to measure the success of these organisations' contributions to succession and professional development issues in the industry included – the need to monitor the number and level of engagement in schools. This includes levels of student and teacher engagement; measuring any changes in interest, awareness, participation as well as student employment destinations.

KPIs to be used at the university level include – measuring attitude changes in university students, the retention levels of students entering university agricultural degrees and the level of graduates going through university and entering the cotton industry.

Industry Support Required

In order to achieve success in these areas of professional development, the following industry support is suggested:

PICSE: Expand the current level of cotton support into a larger PICSE Cotton Activity Centre to increase levels of engagement and student numbers.

RIRDC: Require funding from the cotton industry to do so.

PIEF: Become a member of PIEF. Give PIEF specific contracts for work to be done; based on cash and in-kind. Define the outcomes needed.

Cotton Australia: Overall strategic plan and all parties on board spanning next 5-10 years. Value in a roundtable to get them on board and committed long-term

4. Key Findings and Implications

In this section the key findings of the data in Section 3 are reported and the implications are considered.

The ability to interpret implications is somewhat restricted due to the commitment made to the majority of respondents of respondents that their anonymity would be retained. They generally preferred to be reported on a sub-sector basis rather than by company / staff member name. Accordingly a 'sector based reporting' process is used.

4.1 Organisation Details

During development of the questionnaire it was identified that potential respondent categories of Type of Organisation could be:

- On-farm advisory only
- On-farm advisory, plus other services
- Merchandise / equipment supplier mainly; with potential specialties
- Merchandise and advisory services
- Farming operations – larger family
- Farming operations corporate – signified by non-family shareholders
- Cotton processors
- Specialist cotton industry supplier, with potential specialties; and
- Other.

This was based on the author's understanding of the cotton industry (Stone 2010) and a list of 16 potential project respondents supplied by CRDC in December 2010 at project start. After the request for input via CCA in December 2010 the number of potential respondents grew to 29.

It was also identified that potential Regional Coverage of the businesses could be one office; several offices in the cotton growing areas based at varied locations – and it could also be assumed there were likely to be some businesses that were national or regional with head / regional offices based at varied locations.

Similarly it was expected that Industry coverage of the agribusiness sector is unlikely to be cotton specific with the expected options being - cotton only; cotton and grains and potentially cotton and varied other industries.

Figure 1 demonstrates that of the 19 respondents, the farming operations (2), merchandise and advisory services (3) and on farm advisory services (3) filled the expected roles. A range of the Other category – including water industry consulting engineer (1), merchandise and equipment suppliers in mineral fertilisers (1), an irrigation scheduling specialist (1), a private R&D contractor (1), a biotechnology product supplier (1) and an industry training and management consultant (1) – were filling specialist niche roles. In addition a number of multi-faceted businesses operate in and service the cotton industry. They include university lecturing, ginning, etc.

There were a range of single office and multi-office representatives providing wide geographical coverage of the cotton industry. Table 1 demonstrates that the farming operations were largely associated with one office; while the merchandise focussed organisations generally had several offices / outlets across the cotton broadacre regions; the largely on-farm advisory were mostly

restricted to one or two sites; and one national organisation had a number of regional personnel plus a laboratory based in Toowoomba.

In terms of industry coverage, only three participants purely serviced the cotton industry – the majority serviced the broadacre cotton and grains industry with a strong horticultural focus as well as some livestock.

4.1.1 Key findings

It is apparent that the cotton agribusiness sector is far from homogeneous. While there are a small number of organisations focussed solely on cotton, the majority have interests in the wider broadacre industries with a strong focus on grains, a large number have horticultural links and a small number with livestock connections. Some have mining coverage also. Respondents widely covered the cotton growing areas.

Of the potential 29 respondents, 19 were personally interviewed and the interviews were wide ranging (taking up to an hour) with a range of categories of respondents being interviewed. It is noteworthy that in the review of social trends from the Crop Consultant's Association Business Survey 2011, Roth reported on the views of 32 crop consultants as being sector representative.

4.1.2 Implications

The implications for this project are that it appears that the respondents can be readily considered a group of 'informed persons' and that their views can be considered to be broadly representative of the cotton agribusiness sector.

4.2 Professional Graduate Staffing

Figure 4 demonstrates the while one agribusiness employer has 68 staff, the majority have a small number of professional graduate employees (approximately half have less than 10 employees) and a quarter have less than 20. Only one quarter have greater than 20 personnel.

Appendix 2 provides a detailed outline of current staff employment and roles as well as future staffing requirements according to the various agribusiness organisations involved in this study.

The one cotton processor involved in this study currently employs 5 senior/strategic professional management staff, 10 sales people and 15 agronomists. They do not see a need to increase staffing requirements over the next 5-10 years, noting they do not expect their cotton crop to increase.

Across the farming operations a total of 7 senior/strategic professional management staff are employed, 4 agronomists (all others businesses contracted in), 2 farm managers and 2 business advisors (also contractors). No specific increases in staffing requirements were noted, with one participant noting that re-investment depends on expansion plans, water security and MDB plans.

Within the merchandise and equipment supply sector 4 senior/strategic professional management staff are employed, 6 sales staff, 2 R&D staff and 3 finance staff are employed. It is expected that R&D staff requirements will increase by 2-3 over the next year with another 2-3 additions per year over the next 5 years. This particular supplier expects significant expansion within 10 years as a result of global expansion plans of their company.

Merchandise and advisory organisations involved in this study employ a total of 4 senior/strategic professional management staff, 13 management staff, 42 sales staff, 7 agronomists and 2 R&D staff. One participant expected their employment needs to increase at a rate of 3 new graduate

agronomists per year over the next 5 years to meet a growing number of clients. Another also expects to employ 2-3 cadets per year over the next 5 years.

Organisations in the on-farm advisory sector employ a total of 2 senior/strategic professional management staff, 0.5 management staff, 6 agronomists, 0.5 admin staff and 5 bug checkers. While one participant expects their staff requirements to drop back to 1 agronomist over the next 10 years due to limited expansion opportunities in the Emerald region, another expects to employ up to 6 agronomists within the next 5 years. This is dependent on water security and increased growth in cotton in the Murrumbidgee region.

Within the on-farm advisory sector where organisations offer additional services, a total of 9 senior/strategic professional management staff are employed, 3 management staff, 40 sales people, 18 agronomists, 4 R&D staff, 1 project engineer, 2 technicians and 5 bug checkers. Over the next 5 years an additional professional engineer and technician are sought, as well as a need for additional agronomists if current staff leave. A 10-year staff prediction proved difficult with participants noting water security as an issue as well as changes in client service level requirements.

The one specialist cotton supplier participant currently employs 2 senior/strategic professional management staff, 4 management staff, 5 agronomists, 3 R&D staff, 1 farm worker, 1 seeder and 5 IT staff. Although an increase in staff requirements is expected over the next 5 years, the type of requirement is dependent on available R&D field work.

4.2.1 Key findings

The numbers of professional graduate employees across the cotton agribusiness sector demonstrates that approximately three-quarters of employers are small organisations with less than 20 personnel – or more simply, only one quarter have greater than 20 personnel. It can be concluded that the cotton agribusiness sector is largely made of quite small employers who are potentially subject to employment pressures from adverse conditions such as droughts.

In terms of age structure, there were 7 mentions noting that there are less graduates or experienced staff available (the loss of experience during the drought was mentioned as a factor). A lack of young professionals entering the agricultural arena was also mentioned by 6 participants, with the concern highlighted that the Agricultural sector is an aging workforce, which will lead to a *hole in the future*. It was also noted that in central Queensland a number of less skilled staff were taking on advisory roles as appropriately skilled personnel are simply not available.

In the context of the drought and current staffing levels post-drought, over the next 5 years, the majority of participants in this study expect that their staffing needs will increase (12 participants, 63%). This is due to an expectation of future industry expansion. A number discussed the use of casual personnel and bug checkers as a source of future personnel particularly for agronomists and as part of their succession plans.

In terms of seeking new graduates in the next five years, 17 of the 19 participants (89.5%) noted they would specifically seek out new graduates in the next 5 years. This was based on seeking personnel who have the right work ethic, common sense and are willing to work. It was noted that while more experienced staff are preferred, they are too difficult to find. Several respondents noted that banks are able to pay agronomy staff better and are therefore they are the industry's biggest competitor for experienced staff.

In terms of the 10- year outlook, only 5 participants expected to hire new graduates in the next 10 years, based on diversification strategies, global expansion and the need to replace retiring

personnel. For many this time horizon proved too problematic. However the aging workforce means that for many their key personnel will have reached or exceeded 50 years of age so they could ... *'expect attrition as they leave the industry'*.

Change in numbers was regarded as being dependant on the industry over time, water availability, and financial considerations, as well as impacting issues relating to accommodation and competition from mining and banks. In other words issues of business viability and taking care with business overheads continues to have an impact on personnel hiring decisions.

Farm managers and leading hands on farm are particularly difficult to access due to competition from mines. Advisory organisations are particularly seeking agronomists – ideally experienced personnel, noting they are particularly hard to access; or if not, then good quality new/recent graduates are sought. This is due to increased expectations of farmer clients for greater levels of skilled service delivery. However this is also in the face of increased competition from mining companies (plus banks).

One respondent reported to the author *'I have lost a top agronomist to a mining company – there is no way I can pay the sort of money on offer'*. He further reported that the agronomist expected to return to the company in the future ... *'after a few years of top money'*.

There were several less obvious personnel needs:

- Company directors who are aging
- IT personnel to manage the increasingly sophisticated electronically run equipment of the cotton industry including water management systems
- CFOs or financial controllers who are ... *'less committed to cotton and more committed to career advancement'*
- Further water engineers to help manage irrigation and water management projects.

Looking to the future – and recognising water security and profitability as major limiting issues, it is anticipated that due to a growth in client numbers and the level of service required and expected expansion in the cotton industry, the estimated need for agronomists as the major cotton industry professional staff requirement will increase from 55 to 87 over the next 5 years, based on 19 respondents. As long as industry growth and client numbers continue, this level of expansion is expected to continue over the next 10 years, however due to uncertainty in the industry; participants were unwilling to estimate growth numbers with any confidence. Based on the availability of field work, the cotton agribusiness R&D sector is expected to increase employment from 11 to 28 over the next 5 years and to 30 in the next 10 years.

As the sample size of respondents is 19 out of a possible 29 that were identified – and recognising that according to Stone (2010), the CCA had membership of 140 primarily consultant members of a potential pool of 300 members – it is possible that these requirements could double or even triple. Taking a conservative approach in the absence of better data, the current figures are doubled to give some indication of the expected future requirements in 5 years (on the basis that the data beyond that is too unclear).

	Current Numbers Employed – from 19 respondents	Estimated additional requirements in 5 years – from 19 respondents	Estimated additional requirements in 5 years – in the wider cotton industry	Estimated additional requirements in 10 years
Agronomists	55	32	64	
R&D Trial Work	11	17	34	2
Professional engineer	1	1	2	
Technician	7	1	2	
Science Graduate		2	4	4
Sales	56	2	4	
Plant Pathology		1	2	
Plant Breeder		1	2	
Senior/strategic professional management staff	33			
Farm managers	2			
Management Staff	20			
Business Advisors	2			
Finance	3			
Other		2	4	

4.2.2 Implications

Many employers in the cotton industry are quite small and subject to a range of adverse business forces. It is apparent that insufficient younger graduate personnel are entering the industry, even though approximately 50% of the industry personnel are in the 25-40 age group. This is a cause for concern and is being manifested in some areas with insufficiently qualified personnel undertaking certain roles. In some cases casual personnel including bug checkers are part of the succession strategy.

However this is compounded by recognition that there is a lack of young professionals entering the industry – and the *aging structure* of agriculture.

There are particular roles, such as a lack of agronomists, causing greatest problems currently and this is predicted to get much worse in the next 5 years; added to this agronomy is ‘a younger person’s game’. Other less obvious roles are causing concern, aging company directors, specialties such as IT personnel to manage industry electronics and water engineers, plus financial controllers. Farm management personnel are another problem area.

Concurrently however farmer clients are thought to be seeking expanded services from the agribusiness sector. This explains the desire and plans for 90% of respondents to be specifically seeking out new graduates in the next five years. They do recognise that both mining and banks are significant competitors who have ability to supply graduates with far better pay and conditions than does the cotton industry.

A similar 10-year expansion trend is evident from a lesser % of the respondents, due largely to business uncertainty and lack of confidence in making longer than five year predictions. The big cautionary note is that the personnel in the 41-50 year age group will then be '10-years older'.

While making predictions about likely staff numbers in the cotton industry over the next 10-years has a high degree of uncertainty, there is a strong probability that at least the following numbers of extra graduate personnel in key roles will be required over the next 5-years across the agribusiness sector in the wider cotton industry:

- Agronomists – 65
- Researchers – 34
- Professional water engineers – 2
- Technician – 2
- Science Graduate – 4
- Sales (agronomist) – 4
- Plant Pathology – 2
- Plant Breeder – 2
- Other – 4.

However these numbers do not make allowances for a range of occupations including – Senior/strategic professional management staff, Farm managers, Management Staff, Business Advisors, Finance personnel including CFOs as well as company directors.

Not do they make allowance for retiring or departing personnel from the industry.

4.3 Succession and Recruitment

Seven organisations involved in this study identified the existence of either a formal or informal company succession plan, while 8 participants noted that they do not currently have a succession plan in place due to impacting factors such as drought and profitability and the need for business survival. Two noted they have been in the process of building up the business and will now be in a position to focus on succession planning.

The most commonly relied on recruitment strategies by organisations were word of mouth, recruitment from within the organisations, the use of recruitment agencies and local advertising, as well as approaching graduates directly through universities.

In conjunction with attractive pay packages and a successful succession strategy, appointment of staff from within the company was favoured, as one participant noted *we always have someone ready to move up as roles become available*. Word of mouth was favoured when recruiting experienced staff. Recruitment from universities and through recruiting agencies received mixed responses with some finding these successful and others not.

The most difficult staff to recruit was identified as agronomists, due to a lack of personnel including available and experienced staff.

This general lack of available and/or experienced staff to choose from was regarded as having a negative impact on recruitment across the industry. A contributing factor to this issue was identified as competing industries attracting staff into more attractive and higher paying positions (within the mining and banking sectors in particular). Financial issues such as the profitability of the cotton industry and the ability to pay higher wages are also having a negative impact on recruitment as well as the remoteness and isolation associated with the industry.

In order to retain staff, organisations are creating flexible working environments in an attempt to foster increased job satisfaction. Specific strategies mentioned include using *state of the art technologies*, giving employees *autonomy*, providing *employee feedback*, building relationships of *trust and integrity* and *listening to staff issues*. Offering attractive pay packages and incentive programs was mentioned as also being important in retaining staff.

Training and professional development opportunities, as well as professional career development programs are also strategies used to retain professional staff. These include specific professional development and training courses aimed at developing employee skills and well as keeping them professionally challenged. Mentoring, access to professional networks and succession planning were also mentioned.

4.3.1 Key findings

Less than one-third of respondents had a planned succession process in place. Some that did had quite structured plans whereas some revolved around simpler strategies such as using bug checkers as a way of seeking out replacement agronomists.

Word of mouth through industry networks was most favoured (11 mentions overall) when recruiting most staff, specifically experienced staff. Recruitment direct from universities and through recruiting agencies received mixed responses with some finding these successful and others not. Local advertising was less favoured due to its lower success for all but very operational and lower skilled personnel. Approximately a third favoured internal recruitment. A slightly lower method was 'poaching from other companies' though most respondents realised this was an unsustainable strategy in the face of declining numbers and quality of personnel.

Agronomists were regarded as the most difficult staff to recruit followed by financial management personnel and also IT personnel.

However an underlying issue was that of retaining graduates in regional cotton areas ... *due to their higher expectations than we can provide*, noting the need to ... *seek out persons with right personality for role*. This was further defined by one respondent to be ... *good communication, interpersonal skills and good attitude / work ethic*.

Training and professional development were mentioned by the majority of respondents as being critical to retaining professional staff, as was ... *creating a flexible working environment in an attempt to foster increased job satisfaction*, as well as to keep personnel professionally challenged.

A repeated comment related to the costs involved in attracting and retaining good staff, including salary and professional development opportunities, plus the lack of quality graduates to undertake the work (then a transition supporting their move up to take on organisation management roles).

4.3.2 Implications

A mixed approach was taken to securing personnel; recognising that a planned approach to succession was only reported by a minority of employers. Most approaches were reactive, although where possible most employers sought to 'appoint from within'. However the primary issue was clearly 'how to acquire quality personnel initially'.

Word of mouth and acquisition of new graduates direct from universities were the two most favoured strategies – with the use of recruitment companies being less favoured. The other key issue was to how to retain personnel once acquired.

The approach to these two key issues – acquisition then retention of key quality personnel – was clearly problematic. A ready supply of quality agronomists, financial controllers and IT personnel are clearly crucial future roles in a growth industry such as cotton that relies on well run businesses with a strong technology focus.

Once the acquisition / retention of key quality personnel issue is resolved, a strong training and professional development function is clearly crucial to the industry's future. The capacity of the industry to pay suitable salaries and to create suitable working conditions are also crucial considerations, as currently employers do not regard the cotton industry as being sufficiently profitable to support the higher salaries and conditions they suggest are required for the future.

It appears that market failure is occurring in the cotton industry, particularly in the acquisition then retention of key quality personnel, due to:

- Declining numbers of experienced personnel being available
- Declining numbers of high quality personnel entering the industry
- Declining numbers of high quality personnel being available through universities
- Lower than required levels of industry profitability.

4.4 Professional Development

Management training and technical training and business management courses are identified as the most common professional development strategies which organisations focus on, encourage and ensure their staff undertake. Most organisations involved in this study noted that professional development is a part of their company policy, either formally or informally. Strategies to ensure staff undertake professional development were identified as being a part of *annual personal performance plans*, or a *result of mentoring processes* where junior personnel receive training *based on skills assessment*. Some sectors noted that professional development is pursued only at the request of employees or as a result of direct discussions with staff that ask for it or identify a need.

It was widely acknowledged by participants that their professional development strategies are *based on the level of staff skills and their ability to learn*. Skills assessments carried out during formal or informal company appraisals, determines what training employees receive.

Opportunities for improved professional development activities offered over the next 5 years included the need for / interest in more technology and online based training. The need for more business development courses and specific industry training were also identified as being important development areas. In particular it is suggested these areas require a more industry-wide strategic approach within the cotton sector. In order to deliver more specific and relevant industry training it is suggested there needs to be more engagement between industry organisations and universities to develop courses that are *more appropriate to industry needs*. Other strategies suggested to improved industry support of professional development included an improvement in access to industry staff and the need to increase *overall industry skills levels*.

With an average rating of 5.3 the importance placed on the accreditation of staff training was varied across participating organisations. On-farm advisory businesses, merchandise and advisory service providers, the specialist cotton industry supplier and one other participant, identified this as being important to their business.

Factors impacting the ability of organisations involved in this study to provide and obtain professional development across various roles and services were largely governed by the costs

involved in these activities. These include the costs associated with the courses and the resulting returns on investment. Time pressures and the availability of courses in relevant cotton growing regions were also mentioned as impacting on the type and amount of professional development undertaken.

4.4.1 Key findings

While most respondents indicated that their personnel must undertake some form of formal/mandatory/industry best practice development programs with a strong focus on Management training, technical training and business management courses; these were by no means homogenous across the cotton agribusiness sector. These programs were strongly aligned to the cotton agribusiness sub-sectors where those needs were articulated.

For example where chemicals are handled then training to meet the requirements of the Agsafe Accreditation & Training program is undertaken. However such training is specific to that sector. For many but not all independent consultant agronomists, the UNE cotton course is used for professional development.

The project brief sought levels of interest in courses including Australian Rural Leadership Program (ARLP); Future Cotton leaders; Nuffield Scholarship; Australian Institute of Company Directors (AICD), etc as well programs such as the myBMP “Certified Agronomist” initiative. Only two respondents referred to these courses – one to the AICD course and one to the ARLP. In contrast the UNE cotton course and the annual cotton conference were both seen to be generally the most industry specific professional development opportunities.

Interest in accreditation of staff training was varied with a stronger focus amongst the merchandise, supplier and advisory sectors.

While most organisations reported that professional development is a part of their company policy, either formally or informally, there was limited consistency to how this is undertaken. A common theme was the linkage of personal interest with company policy positions and ability to cost effectively supply the professional development opportunities within personnel time constraints ... *through direct negotiation and skills assessments*. Respondents also reported ... *it was difficult to identify the right courses and that in-house options were preferable*.

A number expressed concern about ... *how do they know which are the best courses*, given the time and cost involved in professional development.

Looking to the future, a number of factors were consistent needs across respondents:

- greater understanding of technology and online based applications
- business development courses and specific industry training
- business development courses mentioned included staff management, conflict resolution, leadership and staff motivation courses
- specific industry training included resistance managements, genetic technologies and bio-security management
- more regional training would be relevant.

In that context respondents commented that the opportunities for a more industry based strategic approach are worthy of consideration based on:

- universities to develop courses that are more relevant to industry needs so graduates are more ‘job ready’
- a stronger role for cotton in school curriculums

- the need to increase overall industry skills levels through more targeted and professional courses
- an industry-wide program to attract more of the right people (young people)
- supporting stronger industry networks amongst the industry overall with a focus on agribusiness and consultants
- changes in the UNE cotton course to include a 'short course format'
- addressing strategic issues of how to position the cotton industry as an employer of choice
- using current suppliers including the CCA.

4.4.2 Implications

The potential for a more industry based strategic approach to professional development (and industry succession) clearly warrants serious consideration, as there appears to be a strong cultural interest and desire to support cotton agribusiness professional development. However this must recognise the disparate needs of the sub-sectors of the cotton agribusiness sector.

The role of a number of current initiatives could be considered for expansion in such an approach:

- the cotton conference
- the UNE cotton course including creation of short course modules
- the CCA training program.

In contrast the ARLP; Future Cotton leaders; Nuffield Scholarship; AICD, myBMP "Certified Agronomist" initiative are generally not well supported apart from slight support of the AICD and ARLP courses. As the industry appears to have supported these initiatives in the past, it calls into question their relevance for the future needs of a contemporary cotton agribusiness sectors.

However it must be recognised that these programs may have been less strongly targeted to the agribusiness sector and more strongly focussed on the production sector or other cotton sectors. Equally these programs may well have been widely focused on 'generically' seeking future cotton leaders and supporting cotton industry-wide programs. If the cotton agribusiness sector was not necessarily a specific target, this may well explain the lower level of awareness of these programs.

Regarding the potential value of a more industry based strategic approach, it could focus on the expected future needs of the cotton agribusiness sector in:

- fostering an overall increase in cotton industry skill levels
- supporting professional development in technology and online based applications
- seeking out business development courses
- supporting specific industry technical training
- considering how to maximise regional training opportunities
- ensuring universities develop more relevant courses
- the extent to which cotton could feature in school curriculums
- ensuring an industry-wide program to attract more of the right people (young people) is put in place
- supporting stronger industry networks amongst the industry and agribusinesses / consultants
- specifically focusing on potential changes in the UNE cotton course
- addressing strategic issues of how to position the cotton industry as an employer of choice.

4.5 Reaction/Interest in a proposed Industry Wide Program

In this section of the report, respondents' reactions to the specifics of an industry wide program are reported. This is in contrast to their 'general thinking on the issues' which was reported above.

Participants felt that investment and support in the areas of industry succession and professional development from the cotton industry, via organisations like Cotton Australia and the Cotton R&D Corporation, represents an important investment (average rating of 7.2). It was agreed that creating *a supply chain of young people into the industry* is an important area of industry investment that would best support their business development. Also of value would be the availability of *mentoring* within the industry, *coordinated training opportunities*, *coordinated workplace placements* and *HR and training resources*. Participants felt that agribusiness companies and employers should contribute to the support of industry wide initiatives by *paying for services and resources accessed on a fee-for-service basis* and through *in-kind contributions*, with lesser interest being shown in overall sponsorship of such a program.

Of those who felt that direct financial contribution would be most effective in supporting industry initiatives, an annual amount of between \$1001-5000 was indicated as a reasonable contribution for a business of their size.

Possible in-kind contributions were identified as – providing professional work experience, scholarships, internships or cadetships, as well as paid holiday work for periods of up to 2 weeks.

Overall participants agreed that attracting young people into the cotton and agriculture industry is a high priority when considering strategic industry approaches, as well as being of greatest future support to employers. More attractive work experience opportunities were noted as well as better mentoring. Internships, cadetships and industry wide programs through schools and universities were highlighted as being important in achieving this objective.

4.5.1 Key findings

Respondents reported an average rating of 7.2 regarding how essential it was for the cotton industry to invest in an industry wide program that would focus on succession and professional development.

When specifically asked about the issues to which such a program ought to contribute, they commented in order of priority:

- Creating a supply chain of young people into the industry
- Mentoring of key personnel
- Coordinated training opportunities
- Coordinated workplace placements
- Source of HR and training resources.

In terms of how the agribusiness sector could contribute they commented in order of priority (noting 8 respondents made aligned comments in 'Other'. Where there was obvious alignment, the following key responses are denoted by a +):

- Paying a fee for service for resources and services – 7 + 2 out of the 19 supported this
- In-kind contributions would be sufficient – through providing professional work experience, scholarships, internships or cadetships, as well as paid holiday work for periods of up to 2 weeks (6 + 3 respondents)
- A combination of direct financial contribution, in-kind contributions and sponsorship, where between \$1001-5000 per year would be a fair financial contribution (5 + 1 respondents).

One participant summed up the general tone relating to attracting more people into the industry:

The current position of recovery from drought shows the importance of a structured program to get more people into the industry as it is getting harder to get staff. It is important to do outreach to universities to get graduates coming into the industry, however we need to get

the funnel started in the first place by getting kids in school into courses at uni. Industry levels of support depend on the program that is implemented.

A number commented on the role of 'bug checking' to give university students insights into the attributes of the industry. However some comments related to ... *the importance of handling such an entry point well, as an adverse experience could be counterproductive.* Several also commented on the role model of experiential programs run by the Qld Resources Council as an entry point to the mining industry, while several others commented on the PICSE model.

Other important issues raised included:

- The aging current workforce
- A structured program to attract young people into the industry by changing their perceptions
- Any program has to be implemented well and should not 'reinvent the wheel'
- An outreach program is important
- Already there are good industry examples that could be learned from – and a number of respondents offered to provide their experiences.

4.5.2 Implications

There was a strong response to the need and value of developing an industry wide program that would focus on cotton industry succession and professional development. As approximately half the respondents were prepared to pay fee for service for the support of such a program, while the other half were prepared to support the program at an in-kind level; it is reasonable to assume that a program underwritten by the industry and at least partly paid for by users would be successful.

Such a program would ideally focus on the following:

- Creating a supply chain of young people into the industry – through a structured attraction program
- An important element of this is to focus on changing their perceptions of the industry
- Understanding the industry implications of an aging current workforce – and potentially predicting how the cotton industry succession process might occur over 5-10 years
- Establishing a mentoring program for key personnel
- A coordination / sourcing role for seeking or creating relevant training opportunities; a workplace placements program and creating a source of HR and training resources
- A clearing house for good industry examples that could be learned from – where key industry organisations could provide the benefit of their experiences on succession and professional development for others in the industry
- The program must be implemented well; should not 'reinvent the wheel' and could learn from known programs such as the PICSE model and the programs run by the Qld Resources Council for the mining industry
- An outreach program to demonstrate to potential employees the value and benefits of working in the cotton industry.

The cautionary note, however, is in the development process of such a program and its perceived value to users and those who are expected to pay for it. It is notable too that some parts of the program are of an industry good nature.

It appears that some in the agribusiness sector would take the view that it is reasonable for industry organisations to pay for those programs while others are prepared to pay some form of sponsorship. At the least however, they appeared to support providing at least in-kind support through planned professional work experience, scholarships, internships or cadetships, as well as paid holiday work.

4.6 Other Relevant Issues

4.6.1 General issues

While a range of industry sources are used by respondents to seek information about cotton industry succession and professional development issues, one of the most widely used tools is internal company processes. However this is easiest for larger organisations and less easy for smaller organisations.

For this reason the use of the proposed industry program as a 'clearing house' would potentially be a valuable resource for the whole industry.

Social media appears largely unknown amongst the agribusiness sector – although there is recognition of its potential value to the under 30s and those capable of using it to advantage.

The potential value of online professional development to personnel needs was rated as being somewhat important and relevant with an average rating of 6.9. Several qualifications to these comments were made:

- supporting motivated people
- will work as long as the tools are good
- valuable because of geographical spread of cotton industry
- works well as part of wider program
- must be coordinated with face-to-face learning, especially for farmers
- must be practical.

Therefore consideration of social media and online professional development linked to face-to-face training would have to be canvassed as part of a wider strategic program.

Key indicator questions regarding 'current issues impacting on overall business' revealed the key issues currently affecting business development and profitability across all organisations involved in this study were, in order of priority:

- Water related – covering water availability, drought and floods, water reforms and water security
- Availability of experienced staff in the industry – as well as wider staffing issues covered above
- Financial issues – including debt, operational costs, costs associated with hiring employees and the profitability of the industry
- Overall uncertainty of the cotton industry – particularly with the development of mining as a competitor.

A range of strategic issues impacting the industry have been reported above. They include:

- Lower level of interest in / perceptions of agriculture by the wider population
- Using modern media and technology to help reposition in the industry
- Issues associated with the increased use of high tech machinery and the technical know-how in its management / use, eg. precision agriculture, GIS mapping and bio-technology

4.6.2 Data sought for wider industry concurrent programs

Ruth Nettle sought additional information to input to her proposed work:

Type of clients assisted by service providers – these were family operations (13 mentions), mixed farms (11 mentions) and larger corporate specialists (9 mentions).

Role of service providers in assisting clients – most of these service providers assist their clients with decisions relating to business management and strategic decision making, including budgets, marketing, sales and general support. They also provide advice to support all agronomy related decisions including crop nutrition, pest management, irrigation rotations, water management and weed management. Most service providers provide advice and assistance which complements the tasks undertaken by current on-farm workforces. Only in two instances did service providers indicate they replaced the need to hire on farm agronomists or related staff.

4.6.4 Service Providers who could potentially address some of the succession and professional development issues

Four service providers were considered likely to be able to assist the cotton industry in its succession and professional development issues. Their contributions can be summarised as:

Organisation	Contribution	Implications for the industry / KPIs
PICSE	Existing role in engaging with students in Yrs 11&12 direct to tell cotton stories related to the curriculum Existing role in giving teachers a more in-depth understanding of cotton industry through PICSE Teachers PD Uses teachers to create a multiplier effect to students over successive years Provide a structured way of students and teachers engaging with cotton employers	Could expand the current level of cotton support into a larger PICSE Cotton Activity Centre to increase levels of teacher and employer engagement Could increase Yr 11/12 student numbers into tertiary education Would require industry funding to do so.
RIRDC	Runs the Horizons Scholarship program which provides nominated tertiary entrants with scholarships Could be more targeted toward Cotton Industry capacity needs Could create linkages with PICSE and PIEF to maximise value to sector	Could increase numbers of university scholarships for the cotton industry Would require industry funding to do so Neither PICSE nor PIEF discussed the linkages through RIRDC – so this coordination role would need discussion to ensure their engagement with RIRDC.
PIEF	Can make direct school education connection and communication with teachers which are needed to increase their understanding of cotton issues Also connections to be made direct to teachers, school administrators and bureaucrats	Would require industry funding to do so through a cotton industry membership of PIEF. Would seek cotton industry contracts to undertake work.
Cotton Australia	Well used website by teachers / students Make school presentations available to teachers Varied university relationships in place Seeking to change industry perceptions Seeking to appoint contracted Education Officer to integrate the PICSE and PIEF work.	Seeking to create a strategic plan of engagement over time – 5-10 years Dedicated cotton Education Officer available Value in a roundtable discussion of key personnel.

One of the key issues to emerge from this study is the importance of ‘setting up a supply chain of young people into the industry’. Another is to change the perceptions of the industry in the wider community.

Considering this logically it is important to seek engagement at these levels with potential contributions by each of these service providers in an integrated manner:

Timing	Role and function	Responsibility	Resource base*
During primary school	To create awareness about careers	PIEF and CA	PIEF 1.5 FTEs with future potential of 1.5-3 FTEs CA 2 FTEs
During school years 7-10	In order to focus final year subject choices	PIEF, CA and PICSE	PIEF 1.5 FTEs with future potential of 1.5-3 FTEs CA 2 FTEs PICSE 19x FTEs
During school years 11 and 12	In order to secure interest in potential career choices by confirming interest in tertiary study courses relevant to cotton	PIEF, CA and PICSE	PIEF 1.5 FTEs with future potential of 1.5-3 FTEs CA 2 FTEs PICSE 19x FTEs
University years 1-4	To secure and maintain interest in cotton careers and continued tertiary study	PICSE and RIRDC	RIRDC 1x FTE PICSE 19x FTEs

** Note through the consultations with respondents and a roundtable meeting convened by the author in December 2010 including PICSE, PIEF and RIRDC – an estimation of their resource availability is included here.*

It is notable that of all the service providers PICSE has the largest resource base. It has undertaken work for the cotton industry and it is the only one whose credentials are reported amongst the agribusiness sector. Cotton Australia has extensive past experience and the intent to put in place dedicated teaching personnel. It is regarded as one of the potential bodies responsible for an industry wide program

PIEF has one dedicated officer and the potential for additional personnel – with large networks of volunteers. Its current role in the cotton industry appears unknown in the agribusiness sector. Likewise RIRDC has one dedicated officer and has undertaken work for the cotton industry. However its current role in the cotton industry appears unknown in the agribusiness sector.

It appears that all organisations have a role to play –although some are as yet unproven.

The role of the proposed industry succession and professional development program is expected to be to create strong linkages amongst these service providers to create real integrated value from their respective roles. The proposal of CA about convening a roundtable meeting – potentially as part of the proposed industry succession and professional development program has real merit.

5. Discussion

Section 4 reports a series of key findings and their implications based on the data reviewed in Section 3. This reporting is discussed below based on the project objectives which are to:

1. Define the expected/factors affecting professional staffing needs of the cotton agribusiness service sector in the period 2012-2020 and in the face of varied climatic / market scenarios
2. Define the expected/factors affecting professional staffing needs of the larger cotton growers under similar circumstances
3. Define the expected/factors affecting professional development needs of the cotton agribusiness service sector personnel (on a segment basis) in that period
4. Report on the contribution that programs, including but not limited to PICSE, Horizon Scholarship, PIEF and the UNE Cotton Course, could make to those needs
5. Report on issues affecting professional development opportunities for existing staff e.g. Australian Rural Leadership Program (ARLP); Future Cotton leaders; Nuffield Scholarship; Australian Institute of Company Directors (AICD), etc as well programs such as the myBMP “Certified Agronomist” initiative
6. Report on the likely contributions from employers that could be expected if CRDC were to invest in those or additional programs that may be identified as being relevant
7. Identify any innovative practices in relation to professional development of staff that could be shared across the industry
8. Make recommendations on actions that would meet these needs in context of project findings.

Key issues regarding cotton industry agribusiness sector succession and professional development

Based on the data that has emerged from this project, these objectives are condensed to the following key issues of interest to the industry:

1. The scope and coverage of the cotton agribusiness sector
2. The expected professional staffing needs of the cotton agribusiness sector over the next 5-10 years
3. Factors affecting succession and professional development in the cotton agribusiness sector
4. The extent to which a young professionals or cotton industry succession and professional development program is relevant to the future of the industry
5. The extent to which current service providers could support addressing identified cotton industry succession and professional development issues.

5.1 Scope and coverage of the cotton agribusiness sector

The cotton agribusiness sector is far from being a homogenous sector. In this study respondents were defined broadly under the organisation types of – cotton processors, larger family farming operations, merchandise and equipment suppliers, merchandise and equipment suppliers with ancillary advisory services, on-farm advisory services only, on-farm advisory services with other services, and specialist cotton industry suppliers. A considerable range of additional roles were covered.

Additional roles covered - Private R&D contractor; Irrigation scheduling, loss assessor, irrigation products; Industry training and management consultant; production, ginning, marketing, warehousing, etc; Biotechnology and On Farm Advisory participants which involved other services including - Consulting engineers with a focus on water for on-farm use, government needs and

industry needs; Fee For Service R&D including university lecturing and R&D work as a standalone speciality.

The specific industry coverage was considerable including - Cotton only and Cotton and grains. There were cotton and 'other industries' being - Grains and livestock; Grains, lamb feedlots, transport and grain drying; Grains, horticulture, livestock and mining; Grains and horticulture; all-of-Agriculture with local and overseas connections and mining (growing), as well as Grains, livestock, horticulture and dairy.

Approximately half of the cotton agribusinesses had less than 10 personnel, one quarter 11-20 and one quarter greater than 20. Employed professional agribusiness personnel covered roles including Senior or Strategic management, providing Agronomic advice, sales, farm management, business advisers, financial controllers, office management, bug checkers, project and water engineers, technicians, R&D personnel, electronics personnel, marketing, product management and compliance personnel and information technology personnel.

Approximately half of the cotton agribusiness personnel were aged from 25-40 years of age, one quarter 41-50 and one quarter under 25 years.

Therefore the industry diversity makes developing a cohesive professional development and succession strategy potentially a relatively complex task. In the absence of good demographic data, it is recommended that a more comprehensive understanding of cotton agribusiness is acquired. A desktop project including telephone contact to gain an understanding of the extent of the sector ought to be able to be undertaken quite cost-effectively.

Recommendation 1

That a more wide ranging data gathering process via desktop review is undertaken so as to ensure the scope, extent and coverage of the cotton agribusiness sector is known.

5.2 Expected professional staffing needs of the cotton agribusiness sector over the next 5-10 years

While making predictions about likely staff numbers in the cotton industry over the next 10-years has a high degree of uncertainty, there is a strong probability that at least the following numbers of graduate personnel and roles will be required over the next 5-years to 2016, across the agribusiness sector, in the wider cotton industry:

- Agronomists – 65
- Researchers – 34
- Professional water engineers – 2
- Technicians – 2
- Science Graduates – 4
- Sales (agronomist) – 4
- Plant Pathology – 2
- Plant Breeder – 2
- Other – 4.

However these numbers of over 110 personnel required in the next 5-years do not make allowances for a range of occupations including – Senior/strategic professional management staff, Farm managers, Management Staff, Business Advisors, Finance personnel including CFOs, IT and electronics personnel, as well as company directors. Nor do they make allowance for retiring or departing personnel from the industry. These numbers could be considerable given one quarter of current personnel are over the age of 41 years.

Study respondents reported concern about the capacity of current universities to supply the present staffing needs. However they reported contact with UNE, UofQ, USQ, Sydney University, and CSU as access points for potentially suitable undergraduate students.

The Cotton Catchments CRC reported between 10-25 final year graduates per year from the UNE cotton course in the period 2008-11. While data on graduates accessible by the cotton industry is difficult to access, the potential for those courses to supply the over 100 personnel likely to be required to 2016 is highly unlikely to be able to meet demand.

It is apparent that further work is required to establish which universities the future personnel will come from and in which of the above disciplines. It is also apparent that an assessment of the potential for those universities to be able to supply high quality graduates to meet the expected demand is also required, given that the cotton industry is not the only industry likely to be seeking graduate personnel in that period.

There is added urgency based on:

- Recognition that 3-4 year degree courses are the norm for graduates required by the industry
- This means that action is required in 2012 to start securing students from Years 11 and 12 at school to enter those degree courses in 2013 or 2014 at the latest. This would then help secure the supply of personnel required around 2016.
- Anecdotally study respondents reported that the UNE cotton course appears to be faltering in its ability to supply the necessary numbers of graduates for the industry
- The quality of some of those graduates is also thought to be below the level required by the cotton industry
- There is likely to be increased competition from banks, mining companies, and other employers
- The nexus between supply and demand across the varied universities is known to be problematic according to Pratley (2012).

Recommendation 2

That the cotton industry moves swiftly during 2012 to create strong relationships and partnerships with suitable universities to secure the well over 100 undergraduates expected to be needed in the next 5-years to service the needs of the cotton agribusiness sector.

Recommendation 3

That the cotton industry moves swiftly during 2012 to secure the future relevance of the UNE cotton course in all its forms to service the needs of the cotton agribusiness sector.

5.3 Factors affecting succession and professional development in the cotton agribusiness sector

It appears that market failure is occurring in the cotton industry, particularly in the acquisition then retention of key quality personnel, due to:

- Declining numbers of experienced personnel being available
- Declining numbers of high quality personnel entering the industry
- Declining numbers of high quality personnel being available through universities
- Lower than required levels of industry profitability.

The potential for a more industry based strategic approach to professional development (and industry succession) clearly warrants serious consideration, as there appears to be a strong cultural interest and desire to support cotton agribusiness professional development. However this must recognise the disparate needs of the sub-sectors of the cotton agribusiness sector.

The role of a number of current initiatives could be considered for inclusion in any such industry wide program, based on industry feedback during this study, for expansion of such an approach:

- the cotton conference
- the UNE cotton course including its creation into short course modules
- the CCA training program.

In contrast the ARLP; Future Cotton leaders; Nuffield Scholarship; AICD, myBMP “Certified Agronomist” initiative generally appear to have minimal levels of support in the agribusiness sector. If the industry has supported these initiatives previously to support the agribusiness sector, it calls into question the relevance of these programs to meet future needs of a contemporary cotton agribusiness sector, or the way in which the cotton agribusiness sector was made aware of these opportunities. However this issue may be better considered in context of the wider needs for future leaders in the cotton industry and wider support of industry programs. If there is a wider industry need then these programs could be more relevant for sectors other than the cotton agribusiness sector although they may usefully feature in any proposed professional development and industry succession program that is developed.

It may also demonstrate that, even though the agribusiness sector was less of a specific target, they may well have need of access to such programs. This could well become a relevant focus of a more industry based strategic approach to professional development.

Recommendation 4

That an industry based strategic approach to professional development (and industry succession) warrants serious consideration in the cotton industry.

Recommendation 5

That the relevance of cotton industry funding to support the cotton agribusiness sector’s use of the ARLP; Future Cotton leaders; Nuffield Scholarship; AICD, myBMP “Certified Agronomist” initiative is reviewed with a view to substituting more sought after programs including the cotton conference, the UNE cotton short course module program and the CCA training program; or focusing specifically on making these programs known/available through a more industry based strategic approach to professional development.

5.4 The relevance of a cotton industry succession and professional development program

There was strong support for the development of, and investment in, a targeted and relevant industry wide program that would focus on succession and professional development in the cotton agribusiness sector. Close to half the respondents were prepared to pay directly to access the services of such a program, providing it was practical and relevant and half were prepared to supply specific in-kind support.

They proposed that such a program would focus on the following issues, in priority:

- Creating a supply chain of young people into the industry – through a structured attraction program
- Changing their perceptions of the industry – in the wider community and amongst young people
- Understanding the industry implications of an aging current workforce
- Establishing a mentoring program for key personnel
- A coordination / sourcing role for seeking or creating relevant training opportunities; a workplace placements program and creating a source of HR and training resources

- A clearing house for good industry examples of succession / professional development that could be learned from – where key industry organisations could provide the benefit of their experiences on succession and professional development for others in the industry; along with networking opportunities
- The program to be practical and relevant and learn from known programs such as the PICSE model and programs run by the Qld Resources Council (for mining)
- An outreach program to demonstrate to potential employees the value and benefits of working in the cotton industry.

In addition it is proposed that the program would focus on maximising the benefits of the cotton conference, the UNE cotton course and the CCA training programs as described above.

The parts of the program that are of an industry good nature may well have to be part of a wider industry funding consortium, of which the agribusiness sector would be a part funder.

Such a program ought to have an innovative name. Rather than something somewhat conventional such as the Cotton Careers Program, a highly contemporary name relevant to a 'vibrant, creative and exciting cotton industry' ought to be created. This could be posed as a challenge for more youthful participants in for example, a cotton PICSE program.

Recommendation 6

That the proposed cotton industry succession and professional development program would commence its focus on the priority issues identified from this study.

Recommendation 7

That a highly contemporary name relevant to a 'vibrant, creative and exciting cotton industry' ought to be created as a public signature statement and its creation could be posed as a challenge for participants in for example, a cotton PICSE program, where young people gather.

5.5 The role of current and potential service providers to resolve cotton industry succession and professional development issues

The most pressing issues to be resolved, in order to meet the current agribusiness sector needs, are those identified in Section 5.4 above. The most urgent of those, relevant to the services on offer from current potential cotton industry service providers, PICSE, RIRDC, PICSE and CA, appear to be:

- Maximising the number of young people who can be channelled through university in the next 5-years – this could be relatively easily activated by supporting the Year 11/12 schools program of PICSE, and increasing support of the RIRDC Horizons Scholarship program. This would maximise the throughput of students from final years at school into university and then support their university careers with linkages to the cotton industry.
- Implicit in this is enrolling the cotton agribusinesses themselves so they formally commit to providing the level of support they have indicated through this study
- As noted above, one of the most significant weak links is the universities themselves. Developing and strengthening relationships with aligned universities is clearly a significant priority for the succession and professional development program.
- Setting up a supply chain of young people – through determining how to best use the complementary resources of PICSE, RIRDC, PIEF and CA. This more lengthy and structured process is expected to take some time to develop and integrate. Accordingly it is proposed as an initial focus of the succession and professional development program.
- Changing the perceptions of the industry is an important yet specialised task. It is noteworthy that the Allen Consulting Group (2012) in their work for the B-HERT also proposed such an

initiative for wider agriculture. Likewise they recommended the PICSE program for national expansion. Accordingly an association of the proposed cotton succession and professional development program with B-HERT would be a cost effective linkage

However these actions ought to be undertaken strategically and in context of the creation of the proposed cotton industry succession and professional development program. Accordingly an establishment phase of the proposed cotton industry succession and professional development program should be commenced as early as possible in 2012.

Recommendation 8

That one of the first roles of the proposed cotton industry succession and professional development program in 2012 is to secure a 5-year graduate supply chain of young people from Years 11 and 12 and through partner universities; using the resources of the PICSE program and RIRDC, to lock-in the maximum numbers of young people it can acquire to meet the industry needs identified above.

5.6 An action plan for the proposed cotton industry succession and professional development program

Drawing on the above issues, the following Action Plan is outlined as means to commence the set-up of the proposed cotton industry succession and professional development program:

- i. Approve the concepts contained in this report – and cost out a 2012/13 program
- ii. Appoint a coordinator and small coordinating group – drawing largely from the agribusiness sector
- iii. Approve this Action Plan and allocate funds
- iv. Approve a name
- v. Develop relationships with suitable universities
- vi. Concurrently commission PICSE and RIRDC to action a 2012 program to secure a cotton supply chain of young people from school to university under the auspices of this program – so that the first students flow to university in 2013
- vii. Define how to ensure those universities can increase their numbers of students into the cotton industry
- viii. Engage with the cotton agribusiness sector more widely to ensure they are engaged to deliver their level of support for the program
- ix. Review the Qld Resources Council model to determine key learnings that can be applied to the cotton industry
- x. Work with CA and PIEF to determine their contribution to the longer term supply chain of young people
- xi. Determine how the program can support the professional development functions outlined above and budget accordingly based on the extent to which fee for service and in-kind support can assist with funding
- xii. Consider areas of collaboration with the cotton conference and CCA training programs
- xiii. Review the processes that B-HERT proposes for implementation of the Allen Consulting Group report in order to create synergies where appropriate
- xiv. Address other issues that arise.

Recommendation 9

That the proposed program Action Plan is approved to get planning and action underway rapidly and by 1 July 2012 at the latest.

Summary

In summary the proposed cotton industry succession and professional development program is clearly a necessary innovation to address areas of market failure and the need to support the development of the cotton agribusiness sector into the future.

There appears strong industry support and buy-in as a result of this project. However the value in the proposed Action Plan is to check the level of real buy-in early in the process, to ensure the level of agribusiness sector commitment remains high before too much funding is allocated.

As the sector is beneficiaries, it is important they take a real stake in the successful outcome of the proposed program. The Cotton Australia proposed roundtable discussion could become a relevant forum for such engagement.

However it is important that the industry moves swiftly as it is clearly on a very tight timeline to address these outstanding issues. Therefore the engagement with universities and with PICSE and RIRDC are regarded as important immediate initiatives. It is through these two programs that the most immediate gains can be made.

All the other issues raised in this report can be readily addressed under the auspices of the proposed cotton industry succession and professional development program.

One participant summed up the general tone relating to attracting more people into the industry:

The current position of recovery from drought shows the importance of a structured program to get more people into the industry as it is getting harder to get staff. It is important to do outreach to universities to get graduates coming into the industry, however we need to get the funnel started in the first place by getting kids in school into courses at uni. Industry levels of support depend on the program that is implemented.

References

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Stone, G (2010) – Facilitating strategic engagement between CRDC and CCA; Report to CRDC

The Allen Consulting Group (2012) – Rebuilding the Agricultural Workforce; Report to the Business-Higher Education Round Table; January 2012

Attachment 1 – Succession / Professional Development Questionnaire for the cotton agri-business sector

(being used during face-to-face or phone interviews)

Hello I'm Gordon Stone and I am a consultant undertaking this project for Cotton R&D Corporation. Its purpose is to seek out industry views on the extent to which CRDC or other industry organisations such as Cotton Australia may need to consider supporting industry employers in their professional development and personnel succession strategies.

This project is part of a wider cotton industry strategy looking at workforce needs to support future industry growth. This particular section focuses on agribusiness employers – advisers, service providers, processors and larger, corporate growers – specifically those who employ university graduate professional employees.

This interview seeks answers to specific questions, as well as having several more open questions to seek out general views on industry issues. It may take anything from 15-30 mins.

While we would like to attribute the views expressed to you individually or to your organisation, if you would prefer not, we would at least like to attribute those views to your industry sector. Please let me know if you would prefer your identity to be confidential.

Section 1 – Your organisation

Your name: _____

Your position: _____

Name of organisation: _____

How would you describe your Type of organisation:

- On-farm advisory only
- On-farm advisory, plus other services which are: _____
- Merchandise / equipment supplier mainly; any specialty being: _____
- Merchandise and advisory services
- Farming operation – larger family
- Farming operation corporate – signified by non-family shareholders
- Cotton processor
- Specialist cotton industry supplier, which is: _____
- Other: _____

Regional coverage of the business:

- One office only based at: _____
- Several offices in the cotton growing areas based at: _____
- National or regional head office based at: _____

Industry coverage:

- Cotton only
- Cotton and grains
- Cotton and other industries, which are: _____

Professional Graduate staffing

How many professional staff do you employ overall?

How many do you Contract or pay as Casuals?

How many undertake any of the following roles (consider their primary role):

- Senior / strategic management
- Staff management
- Sales
- Agronomic advice to self / clients
- R&D or trials
- Other: _____

Can you please indicate how many fit into the following Age categories:

- Under 25
 - 25-40
 - 41-50
 - 51-60
 - 61+
- Additional comments on relevant issues of age structure across roles: _____
- _____

Looking to the future

In context of the recent drought, and current staffing levels post-drought, over the next 5 years, are you expecting your staffing needs to:

- Decrease
 - Stay the same
 - Increase
- If you expect change, to what extent / across which roles: _____
- _____

Please comment on the reasons for this trend (in context of the drought effects):

Do you have any particular need to seek new graduates over the next 5 years:

Over the next 10-years:

Section 2 – Succession / Recruitment

In this section, we are seeking information on strategic thinking, as distinct from the operational elements, around Succession and Recruitment.

Do you or your organisation have any form of structured Succession Plan to replace key personnel?

- Yes
- No

Please Comment: _____

What strategies do you use to recruit professional staff?

How do these differ between the different roles / ages of staff?

How well are your strategies working, particularly in regard to different roles / ages of staff?

What type of staff are the hardest to recruit?

What (positive and negative) factors are affecting your ability to recruit suitable staff in a timely manner?

What strategies do you use to develop and retain professional staff?

Do you have any other comments about succession and recruitment?

Section 3: Professional Development

Do your personnel have formal / mandatory / industry best practice professional development programs they must undertake:

- Yes
- No

If yes; what programs _____

What other professional development areas do you provide/cover/encourage:

- Technical skills and knowledge
- Personal skills and knowledge
- Management skills and knowledge
- Business management
- Other: _____

Please note any specific courses you run and/or send/encourage staff to undertake:

How important is formal accreditation of staff training to your organisation?

Not important 1 2 3 4 5 6 7 8 9 10 Highly important

What strategies do you/ your organisation use to ensure your staff undertake professional development?

How do these strategies differ based on roles or levels of experience?

What factors affect your ability to provide/obtain professional development across these Roles / services?

What other/extra professional development opportunities/activities do you think will be needed for staff over the next 5 years, than is currently the case?

What are the gaps that you think could be filled by a more industry based (wide) strategic approach (rather than those provided in-house)?

Section 4: Reaction/interest in proposed Industry Wide Program

In your view, how important is it for the Cotton Industry, through organisations like Cotton Australia or Cotton R&D Corporation, to invest in and provide more support in the area of industry succession and professional development?

Nil Value ...Low importance 1 2 3 4 5 6 7 8 9 10 Essential investment

What are the main areas that the industry could invest in to best support businesses like yours?

- Provide/coordinate training opportunities
- Provide mentoring
- Coordinate workplace placements
- Provide an employment brokering service
- Provide HR/Training resources
- Provide technical programs such as those through myBMP
- Attracting young people into the industry
- Other: _____

In what ways could/should agribusiness companies/employers support such initiatives?

- Direct financial contribution
- Sponsorship – as a contribution to the industry
- Pay for services/resources accessed on a fee-for-service basis
- In-kind
- Combination of the above
- Other: _____

If you indicated direct financial contribution, what annual level might be reasonable for a business your size?

- Under \$500
- \$501-1000
- \$1001-5000
- Over \$5000
- No idea

If you indicated in-kind, what might be possible for an organisation like yours?

- Work experience – where professional experience is provided
- Paid holiday work – for periods of at least 2 weeks
- Internship or cadetship
- Scholarship
- Other: _____

Other general comments on a strategic industry framework/support, that would assist employers to operate in a different way to meet future industry needs better:

4. Other relevant issues

Information sources

When thinking about accessing Succession / Recruitment and Professional Development, what are the top 3 sources of information you use to access support and assistance?

Are there additional more relevant sources that could be more effective for you:

What potential applicability does Social Media, e.g. Facebook, Twitter, Linked-In, etc have in assisting you in your recruitment and professional development needs; (where 1=Not Relevant and 10=Highly relevant):

Not Relevant 1 2 3 4 5 6 7 8 9 10 Highly relevant

What potential does on-line Professional Development have for your personnel needs?

Not Relevant 1 2 3 4 5 6 7 8 9 10 Highly relevant

Comments: _____

Factors affecting your business development and profitability over the next 5-years

What are the top 3 issues impacting on your overall business Right Now:

Looking to the future, what other strategic issues do you feel need attention in your business over time:

Finally if you have Other Comments on these issues:

Additional information from service providers

As a service provider, what type of decisions are you assisting clients to make?

Does this decision making replace or complement the need for an on-farm workforce?

What type and scale of farming systems do your clients mostly represent:

- Larger corporate specialists
- Family operations
- Mixed farms
- Other

Additional comments on the farming systems overall.

Thank you for your time.

If you would like a copy of the report from this project, please advise.

Attachment 2 – Current and Future Staffing Requirements over the next 5-10 years

Organisation Type	TOTAL CURRENT STAFFING		CURRENT PRIMARY ROLE OF STAFF						FUTURE STAFFING REQUIREMENTS		reasons for this trend (in context of the drought effects)
	Professional Staff employed	Contract or paid as Casuals	Senior / strategic management	Staff management:	Sales	Agronomic advice to self / clients	R&D or trials	Other	5 years	10 years	
Cotton processor	30		5		10	15			no	no	Don't expect cotton crop to increase markedly; if another downturn we could have to reduce in size
Farming operation (larger family)		2 agronomist	2			2		2 Farm managers 2 company business advisors	good Ag College graduates are needed	Need those savvy in new technology while being down-to-earth	mining can pay max wages and conditions that overshadows their ability to pay; so many dry years has affected ability to pay high wages also; we have / need 6x key prof staff - only half have req'd level of professional knowledge; need more trades than professional staff eg mechanics, plumbers and farm workers. mainly need people with common sense / right ethics / willing to work / may need to do physical

												work
	5	2	5			2			Depends on expansion plans that depend on water security that depends on MDB plan that relates to whether we re-invest	Depends on expansion plans that depend on water security that depends on MDB plan that relates to whether we re-invest	need to match innovation of family enterprise managers with support staff; big issue is leading hand and farm workers; at present use backpackers as farm workers as all we can get due to mining	
Merchandise / equipment supplier	15		4		6	2	3 finance	2-3 in 2012 for R&D/trials with 3-5yrs experience as 'self starters'; 2-3 / yr from then on as new grads	Expect significant expansion as being bought by global company = potential global opportunities for Australians	Need to increase the 'perceived value' of the role or 'designation' of agronomist;		
Merchandise and advisory services	9 for cotton out of 85 total	6 bug checkers			7	7	2	At least 3 x year graduate agronomists for broadacre as well as cotton	continue that growth trend based on increased need for advice and increased fee for service roles	experiencing growth in numbers of clients and level of service required by clients		

	12	20 students (bug checking)	1	3	8 and agronomy				Only if problems keeping current staff;	wait and see	Same because of effect of Bollguard and Roundup Ready are changing market dynamics - have to go with it; the industry may go either way in the future - our complement of 12 is a good balance to ride good and bad times; casuals give us ability to access more / replace staff quickly; there is a lot of competition out there for good staff; banks are now one of our biggest competitors for agronomy type staff; banks pay more than we do; banks are bigger competitors than chemical supply companies
	40	3	3	10	27				seeking 2/3 / yr; aim to attract them in 2nd/3rd yr at uni through cadetships;	If we increase over next 5 yrs that will leave us with stable base we need for future	increased planted area and market needs for cotton Prefer to get experience agronomists - too hard to find - so getting grads straight from uni;
On-farm advisory only	2.5	2		0.5					1-2 new staff - would like 1x new graduate + 1x experienced staffer;	too far out	want to take a structured approach to business development;

	2	2 or 3 (bug checkers)				2			no	decrease back to 1x staffer	only limited opportunities to expand around Emerald; expect to personally get out of industry because want to follow personal interests, expect employee to take over the business;
	6.5		2			4	office 0.5; 5 bug checkers	2 agronomists (1x experienced and 1x new grad)	no idea		as long as clients get/keep water this will be fine; increased cotton in Murrumbidgee area = growth for us
On-farm advisory, plus other services	5	0	2				1 project engineer 2 technicians	1 professional engineer 1 technician	unknown		as clients have reduced spending during drought it is all increasing now = more work
	3	5	1			3	5 trials and bug checking	yes for agronomy roles; if some of the current agronomists staffers leave the casuals might replace them	too hard to tell		the need for increased numbers of agronomists will remain over time;

	68		6	3	40	15	4		yes in two areas – agri business management will go down 2x paths; first is agronomy with stronger business management focus; second agronomy with programmed services with more intimate client role that has whole farm biz planning and 'programming' of services	water security is biggest issue; continued change in client service levels / type of servicing	expected industry expansion; industry seeking greater flexibility due to changing roles and more flexible crops; more job sharing expected; clients expecting higher level of service
Specialist cotton industry supplier	15	1	2	4		5	3	1 farm 1 seed 5 IT	yes but need R&D field work to justify it	not sure	biggest challenge is keeping focussed on innovation and R&D;
Other	self						1		yes science graduate staff sought - 1/2 in 5yrs	science graduate staff sought - approx 4	trend in cotton is to either employ new graduates in big orgs to do grunt R&D work or have highly experienced personnel - trouble is you need the middle ground to get from one to the other

	1 myself							all of above	yes - not sure of numbers	yes -	expand the business into aligned areas Bulk of current personnel getting close to 50 - in 10yrs can expect attrition as they leave the industry; at least they need to be replaced - at best additional personnel required to add depth to advisory business;
	for CQ - there are 34 advisory staff				23 resellers	11 private consultants			need more graduates; electronics and engineers	the problems of lack of people will intensify; not likely to make the necessary headway;	many agribusiness companies and banks have large debt due to floods on their books; if one of them couldn't retain those debts / went under then there would be big impact; also who will buy private consultant/smaller companies; impost of increased focus on OH&S; as age structure increases difficult for older people to 'keep up the pace' and maintain their current passion for the industry and their business

	15		1	5	1	3		4 engineers 1 electronics programming	barring another drought, expect to increase R&D personnel (say 2) and more sales (say2)	Repeat of next 5 years again barring another drought	no hiring during the drought; age structure got 10-yrns older during it; Agriculture has lost its appeal to young professional people; mining has put a strain on it all; including local accommodation and facilities for families and workers; mining and drought/now floods have changed the nature of the communities; Aussie \$ a big issue too as is global financial climate;
	21		4	1	4		7	2 marketing 3 prod management/co compliance	1 plant pathology 1 plant breeding	active diversification strategy in seeds - if goes to plan then would double staff numbers	Due to increased industry use of our products and further rollout of potential products

In summary

Recognising water security and profitability as major limiting issues, it is anticipated that due to a growth in client numbers and the level of service required and expected expansion in the cotton industry, the estimated need for agronomists as the major cotton industry professional staff requirement will increase from 55 to 87 over the next 5 years bases on 19 respondents. As long as industry growth and client numbers continue, this level of expansion is expected to continue over the next 10 years, however due to uncertainty in the industry; participants were unwilling to estimate growth numbers with any confidence. Based on the availability of field work, the cotton agribusiness R&D sector is expected to increase employment from 11 to 28 over the next 5 years and to 30 in the next 10 years.

As the sample size of respondents is 19 out of a possible 29 that were identified – and recognising that according to Stone (2010), the CCA had membership of 140 primarily consultant members of a potential pool of 300 members – it is possible that these requirements could double or even triple. Taking a conservative approach in the absence of better data, the current figures are doubled to give some indication of the expected future requirements in 5 years (on the basis that the data beyond that is too unclear).

	Current Numbers Employed – from 19 respondents	Estimated additional requirements in 5 years – from 19 respondents	Estimated additional requirements in 5 years – in the wider cotton industry	Estimated additional requirements in 10 years
Agronomists	55	32	64	
R&D Trial Work	11	17	34	2
Professional engineer	1	1	2	
Technician	7	1	2	
Science Graduate		2	4	4
Sales	56	2	4	
Plant Pathology		1	2	
Plant Breeder		1	2	
Senior/strategic professional management staff	33			
Farm managers	2			
Management Staff	20			
Business Advisors	2			
Finance	3			
Other		2	4	

Attachment 3 – Service Provider Responses (Education)

Questions	PICSE (based on meeting with Assoc Prof David Russell)	RIRDC (based on email communication with Anwen Lovett)	PIEF (based on phone interview with Ben Stockwin)	Cotton Australia (based on phone interview with Adam Kay)
Do you have experience of these issues and if so, to what extent can you contribute to the level of understanding about the emerging professional personnel problems of the cotton industry?	<p>Yes due to the current CRDC / CRC pilot project since 2009.</p> <p>Of current 8 PICSE activity centres, UNE, CSU, USQ and UTAS could all be specifically engaged in cotton issues.</p> <p>PICSE ‘employment ready’ graduates have already gone through this process into the workforce.</p>		<p>Yes due to:</p> <p>Government and industry connections, our Senate Inquiry connections</p> <p>Our education focus and connections of how schools operate and think including their decision making processes</p> <p>Raise awareness at the school level.</p>	<p>We have past experience with running education programs including the Cotton Store education facility at Darling Harbour.</p> <p>We have worked with CRDC /CRC in working these issues through – we know a strategic approach is required where each plays an agreed, integrated part</p> <p>Worked with NFF to try to resolve these issues</p>
What potential contribution could your organisation make to addressing some / all of the emerging industry succession / professional development issues?	<p>Our experience means we can bring cotton into the wider agricultural arena giving students specific cotton or wider agriculture experience – equating to career portability that suits students of today.</p> <p>If industries want good post-grad qualified people, industry needs to get to the right quality students at school and shepherd them through to post-grad stage</p>	<p>We run the Horizons Scholarship program which along with the Rural Women’s Award are our primary capacity building investments.</p>	<p>Schools are a key attraction strategy.</p> <p>Must increase teacher and student understanding – the current level is far too low</p> <p>Current historical agricultural industry stereotype reinforcement must change.</p>	<p>Bring our people, experience and funds to the table.</p> <p>Bring our teaching and other resources developed over time.</p> <p>Currently our website is well used by teachers and students (3rd highest use group) looking for teaching resources and careers info.</p> <p>Teachers approach CA at talks for use of their</p>

	This makes Yr1&2 of uni critical to retain high quality students 'In the system' so they go right through to employment.			presentations to use as resources in the classroom. Have current university relationships, e.g. UNE, UofQ and Sydney Uni that could be built on – there are other unis where relationships at lower level
If you were asked to be part of a cotton industry-wide personnel program, what specific contribution could you make?	Engage with students in Yrs 11&12 direct as defined above Give teachers a more in-depth understanding of industry through PICSE Teachers PD that are an experiential process which gives them personal understandings – then creates a multiplier effect to students over successive years Provide a structured way of students and teachers engaging with cotton employers – showing cotton bio-science in action.	We would be prepared to target both of those toward Cotton Industry capacity needs.	Direct school education connection and communication with teachers These connections to be made direct to teachers, school administrators and bureaucrats.	Money and resources as we are integral part of industry contribution, until drought caused the education support to 'drop-off the agenda' We suggest our major contribution is: 1. Support attraction of young people into industry 2. Change community wide perception of the industry As both are cost-effectively done together We would like to engage the unis – maybe a Cotton Chair –to create a uni advocate for us and to create enthusiasm in young people and the tertiary sector
What specific skills and experience could you bring	The above student, teacher and employer interactions are part	We work to create linkages with PICSE and	Knowledge of how all these systems work –and their	See ourselves as part of an overall integrated strategy or

to the table?	of the current PICSE program – in cotton and other industries PICSE has registered science teachers who can interpret the cotton stories to PICSE contacts The PICSE Science Investigation Awards use cotton examples right down to Yrs 7-10	PIEF to ensure across the initiatives we get the maximum value for the sector.	needs and drivers Matching others industry needs with cotton needs Showing what other industries are doing to the cotton industry so they can learn from it = saving industry time and money.	industry plan (Ruth Nettle’s role) where all players are coordinated / integrated We will have contracted Education Officer to manage current and planned resources / programs soon This will integrate with work of PIEF and PICSE in particular + Gateway Schools
What would you regard as the KPIs on which the success of your contribution could be judged?	Independent evaluation – giving data on: Changes in levels of Awareness, Interest and Participation amongst cotton employers, students and teachers from Yr 7-12 who are in a cotton industry program Numbers and level of engagement in school class visits, student engagement, teacher engagement, employer engagement and student employment destinations Level of attitude change of students in uni Cotton industry access to proven track record of PICSE skills, experience and expertise – developed since 1998; via current 18 staff of science	These would be based on the levels of investments made.	Levels of student and teacher engagement Numbers of teachers PD Extent of direct student learning’s Changes in student behaviours.	Level of grads going through uni into cotton industry that we have influenced Level of retention when they get to uni Schools abit harder to state – most likely change in student perceptions, level of engagement with PICSE in particular at the late school years to tell ‘cotton stories’ One of the big issues is poor participation in VET and training

	teachers			
What would the industry need to do to support your efforts	Expand the current level of cotton support into a larger PICSE Cotton Activity Centre to increase levels of engagement and student numbers.	It would require funding from the cotton industry to do so.	Become a member of PIEF Give PIEF specific contracts for work to be done; based on cash and in-kind Define the outcomes needed.	Overall strategic plan and all parties on board spanning next 5-10 years Value in a roundtable to get them on board and committed long-term

