



FINAL REPORT

(Due on completion of project)

Part 1 - Summary Details

Cotton CRC Project Number: 5.01.26 CRC 147

Project Title: Professional Development Manager
(Cotton)

Project Commencement Date: 01-07-2008 **Project Completion Date:** 30-07-2011

Cotton CRC Program: The Adoption

Part 2 – Contact Details

Administrator: Helen Kamel
Organisation: Department of Employment, Economic Development and Innovation
Postal Address: PO Box 102, Toowoomba , Qld 4350
Ph: (07)4688-1286 **Fax:** (07)4688-1190 **E-mail:** Helen.Kamel@deedi.qld.gov.au

Principal Researcher: Mark Hickman
Organisation: Department of Employment, Economic Development and Innovation
Postal Address: PO Box 102, Toowoomba , Qld 4350
Ph: 07 4688 1206 **Fax:** 07 4688 1472
E-mail: mark.hickman@deedi.qld.gov.au

Supervisor: Geoff McIntyre
Organisation: Department of Employment, Economic Development and Innovation
Postal Address: Po Box 993, Dalby , Qld 4405
Ph: 0746690801 **Fax:** (07)4662-4966 **E-mail:** geoff.mcintyre@deedi.qld.gov.au

Signature of Research Provider Representative:

Part 3 – Final Report Guide (due on completion of project)

Background

1. Outline the background to the project.

This project was established in 2008. During 2008-2011, the Australia Cotton Industry experienced drought, reductions in water allocations and increasing competition for human resources from alternative regional industries. Cotton enterprises have had to do more with less, demanding an increase in technical efficiencies to remain profitable. In 2008, the CRC 5.01.26 National Cotton Training Coordinator was established to increase industry capacity to respond to these challenges. It built on the strong foundation established by the former project CRC 5.01.01 Cotton Training Coordinator which was focused on facilitating and developing (where appropriate) targeted and practical grower short courses. Project officer Mark Hickman established mechanisms to strategically link the industry resources to the Vocational Education and Training (VET) sector. This linkage has allowed skills sets required by industry to be developed and promoted through an educational pathway. Where deemed suitable, these courses were aligned to national competencies from the Australian Qualification Framework.

CRC 5.01.26 was an extension of CRC 5.01.01 to build on this innovative foundation with a particular focus on the development of a life long learning culture within the cotton industry. This philosophy is an essential element towards building resilience within a business and developing capacity within the individual. CRC 5.01.26, continued to build the vocational and skilling relationships previously established as well as developing new working relationships with E learning expertise from the Australian Flexible Learning framework. The project worked with both the CRC and CRDC to develop strategies that addressed the continuum of workforce development and focused on supply, attraction, retaining and continuous improvement within the business workforce. Industry embarked on a holistic approach to life long learning. With CRC 5.01.26 undertaking activities that assisted industry in reaching this target, the project strategically influenced and leveraged various federal, state and industry based organisations involved in skill development complemented by developing programs to demonstrate the benefits of skill development in the workforce as a mechanism to drive sustainability. An important aspect of note is that this project is focused on the workplace learning and vocational alignment associated with the cotton producer. It is not focused at school engagement programs which are tertiary orientated such as senior science secondary school or post graduate programs, such as the UNE/ Cotton CRC Post Graduate Cotton Course. These elements of the supply chain are addressed through alternative industry funded projects.

CRC 5.01.26 identified the following strategic areas as leverage points in developing a culture of learning in the workplace. Including:

- Establishment of vocational activities that help bridge the gap between secondary school and industry employment
- Recognition of workplace skills and establish industry intelligence on skilling needs by formalised face to face interviews using techniques like Recognition of Prior Learning skills and focus group interviews
- Complemented known skill sets with gap training
- Developed programs that are skill set for the client not simply focused on knowledge creation.

- Provided alternative but complimentary learning pathways to cater for all learning styles - pathways such as online learning or blended delivery models for industry extension programs.

This project was very successful and has established strategies that industry can invest in to enhance the learning culture and overall industry capacity.

2. Objectives

Between 2008 – 2011, the focus of CRC 5.01.26 evolved in response to industry's demands. This evolution was formalised in January 2010 with a modification to the original proposal's project milestones and objectives endorsed. This modification effectively broadened the scope of the original project. Listed below are both sets of objectives and associated milestones for the historical record. Appendix one, contains the documentation to show the alignment of the old (2008-2010) and new (2010-2010) milestones and compatibility of the activities against the strategic plans of CRC, CRDC and Cotton Australia. However, for ease of reporting and given the old milestones are encapsulated within the new milestones, this final report will record all activities and outcomes against the evolved milestones.

The project officer, Mark Hickman, is in a strategic industry position that brokers / enables benefits and opportunities between the industry, research community and the vocational education sector. For the detailed evidence to justify the 'extent' in which each milestone has been achieved, please refer to the combined results and outcome section of the report. It is considered that all performance indicators associated with the project were met.

In January 2010, the project position title was also amended to reflect the strategic nature of the position with the change from National Cotton Training Coordinator to Professional Development Manager (Cotton).

2008-2010 Objectives

Objective: Develop industry training to ensure sustainable and profitable practices within the cotton industry.

Milestone 1.1: Facilitate, coordinate and align national competencies where appropriate, to targeted industry short courses that are developed.

Key Performance indicator: Level of interaction with researchers and extension staff in advising and developing training activities within the industry.

Milestone 2.1: To foster the development of vocational training and to advocate and coordinate activities to increase capacity within the cotton industry.

Key Performance indicator: Level of interaction and discussions with VET organisations to promote and foster development of training opportunities within the industry

Milestone 2.2: To provide the cotton industry with a technical resource for vocational and technical education and training related issues.

Key Performance indicator: Details contained within both frequent and infrequent reports to industry on the training opportunities and current activities that exist.

2010-2011: Modified Objectives

New Objective: To develop a culture of professional development within the cotton industry via establishing products / services and pathways.

New Milestones

Milestone 1:

Provision of strategic leadership for skilling and professional development in industry

Key Performance indicator: Interaction with industry Researchers, Extension providers to develop client focused capacity building programs such as, but not exclusive, to industry short courses, RPL assessments or vocational programs initiated at the industry, State and Federal government levels

Milestone 2:

Leadership and co-development of capacity building programs.

Key Performance indicator: Level of interaction and discussions with VET organisation to promote and foster development of training opportunities within the industry.

Milestone 3:

Promotion and advocacy of a culture for professional development.

Key Performance indicator: Provision of industry information and internal / external technical support to both develop and enhance existing capacity building programs / services that support professional development within the industry.

3. Methods

Enhancing or creating cultural changes requires a strategic and holistic approach for programs. Industry recognised that the drought of the late 2000's and the increasing regional competition from the resource and energy sector was reducing the traditional pools of labour and technical expertise (research and agribusiness) to support the growth required in the Australian Cotton Industry. Simply targeting school based activities was not the only solution. Hence, RD&E investment associated with the CRDC Human Capacity program and the collaboration with the Cotton Catchment Communities CRC collectively addressed the complete workforce supply chain. Industry strategies included tertiary scholarships for schools and the appointment of a schools coordinator who conducts school based science programs at the secondary and primary levels. The School Coordinator is also a part time science officer for the Primary Industry Centre for Science Excellence (PICSE) – a program in which the cotton industry has invested. At the tertiary level industry has invested in a post graduate course targeting 4th year students, producers and agribusiness associated with the cotton industry. All these strategies are targeting the supply aspect of the chain.

In relation to CRC 5.01.26 the project also addressed the supply chain of future skills through the joint conceptualisation with Agrifood Skills Australia and NSW Industry and Investment of a regional workforce committee known as the “Make it Work Initiative”, based in Narrabri. Mark Hickman is a member of the steering committee and the industry PICSE steering committee. The strategy of this project is to identify and enable

opportunities to be developed rather than to drive the program, as indicated by Mark Hickman's involvement at the steering committee level.

This project has focused on creativity in relation to the attraction, retention and continuous improvement of the workforce. To attract people to the industry, employers need to be an employer of choice, where employees will desire and strive to work. Mark Hickman worked as part of the 'Make It work' steering committee to advise and test the development of an 'employer of choice' survey targeting both employer and employee of small to medium enterprises. A survey designed to identify positives and limitations in the work place that can be addressed through conversation between employer and employee in an anonymous group environment using key card survey tools.

The project has lead the development of the Cotton myBMP Human Resource module which supplies both template resources and information on how to become an employer of choice. Mark Hickman is the myBMP target lead for practical HR issues whilst James Houlahan (Cotton Australia) is the Industrial Relations and OH & S target lead.

The project has utilised the vocational education and training (VET) system to implement in industry, a RPL assessment process which acknowledges industry skill sets by identifying skilling opportunities and allowing the alignment of the myBMP program to the educational program. These opportunities have not been confined to simply production based skills and include skilling in the soft science of HR management and the management / implementation of Green Skills within the workplace. Aligning extension program with a skill focus and linking these activities with educational outcomes through the VET sector has created many new opportunities including the development and piloting of industry's first online learning (E Learning) resources to accommodate all learning and delivery styles.

The project has established a significant and strategic network with researchers, Cotton Australia, CCC CRC and CRDC to develop training and extension courses which meet the needs of the industry. Extensive networks have been established with other VET organisations and State / Federal departments addressing national workforce and training agendas. Several independent external peer reviews have been conducted on the cotton industry, the full details of which are outlined in the result sections of this report with a copy of each review in the appendix section. The cotton industry is regarded as a proactive and leading industry in skill set implementation and is acknowledged for it investment in a professional development manager position that plays a pivotal brokering role on industry's behalf.

Results (Combination) Section:

This section is a combination of both the outputs (Q4) and associated outcomes (Q5) achieved by the project. The programs and activities conducted over the last three years are aligned to the modified milestones established in 2010 as they encompass the 2008-2009 milestones established at the beginning of the project.

4. ***Outputs Detail*** and discuss the results for each objective including the statistical analysis of results. AND
5. ***Outcomes:*** Describe how the project's outputs will contribute to the planned outcomes identified in the project application. Describe the planned outcomes achieved to date.

Milestone 1: Provision of strategic leadership for skilling and professional development in industry.

1.1. Certified BMP Farm Manager Award

The cotton industry's first individual BMP accreditation award that is independent of the business BMP accreditation was launched in August 2008 at the ACGRA Australian Cotton Conference. The Certified BMP Farm Manager award equates to the vocational qualification of Diploma of Agriculture (specialising in Cotton Production). This program provides both an individual BMP recognition, but also rewards the individual for achieving BMP for their enterprise with a Diploma of Agriculture specialising in cotton production thus promoting both the benefit of a BMP program to the industry and rewards to the individual with an educational outcome. Background research was conducted for this industry award in the previous project CRC 5.01.01, and finalised in this project, CRC 5.01.26. In both cases the Professional Development Manager (Mark Hickman) established this new industry standard.

Formalities for the 2008 ceremony included presentations from Joanne Grainger (Chair, Cotton Australia), Stuart Higgins (Chair, ACIC BMP Committee) and Mark Hickman (Professional Development Manager). The first three industry certificates were presented as part of the launch. Successful industry people received this qualification via participation in a Recognition of Prior learning program. Beside the direct benefit to individuals within the Australian cotton industry, this new methodology of aligning a best management practice with an educational outcome and creating a skilling program that addresses workplace skill sets has seen several other agricultural industries develop similar programs. External to industry this initiative is a leading example of how green skills can be assessed and enhanced in the workplace as demonstrated in a recent national review by Sydney University Researcher Dr Mike Rafferty who selected this cotton industry initiative as an Australian example of green skills in the workplace.

1.2. Cotton Industry's Skills Recognition Program

Previously, the Australian Cotton Industry has not been engaged formally with the vocational skills assessment processes known as Recognition of Prior Learning (RPL). This methodology was identified by the project as an enabling process to enhance the workplace skills and establish practice change. Achievement of this outcome first requires the business and individual to understand their existing level of skills and what opportunities could be taken to improve their skill base. A RPL assessment provides a process to capture existing skills and identify where gap training would be beneficial thus providing the individual, the business and more broadly the industry with the strategic intelligence on where to invest to create change and improve productivity. The units of competencies contained within the Agriculture, Horticulture and Conservation National Training Package (AHC 10) were used as the benchmark. This project worked closely with Agrifood Skills Australia (ASA), the industry advocate for the content of the National package to ensure the competency units used as the benchmark reflected industry practices regarded as BMP applicable. These units of competencies were endorsed by DEEWR and now form the units of competencies that national qualifications for cotton related vocational training are required to achieve.

In conjunction with vocational training, the project continued to foster a strong working relationship with Tocal College (Patterson NSW) and the Australia Agricultural College Corporation (AACC) in Queensland. Through these relationships and the industry guidance Mark Hickman provided to ASA, the project was able to develop an RPL assessment process that strongly reflects the management skills required to implement a BMP within the business. This RPL system is now used by both Tocal College and AACC to assess participants from the Cotton Industry for the Certified BMP Farm Manager award and normal Diploma of Agriculture qualifications. This is a good example of industry embedding a BMP process into the education system.

To expose industry to the benefits of RPL assessment, this project was able to broker discussions and agreements with the former Queensland Department of Education, Training and the Arts and NSW Department of Education and Training ensuring the cotton industry is eligible for the significant RPL subsidies. These subsidies formed part of the Productivity Placement Program (PPP) Funding from the Commonwealth government. In 2010, the project was able to establish the industry on the federal funding scheme known as Enterprise Based Productivity Placement Program (EBPPP). In all cases the Productivity Placement Program provides financial support for up skilling or skills recognition of managers at AQF 4+ level. That is Certificate IV, Diploma (Certified BMP Farm Manager award and or equivalent Diploma of Agriculture (cotton specialisation)) as well as Advance Diplomas. The Federal government provided 50 % subsidies, DETA via the RTO provided 40% and industry will be required to provide a minimum of 10% for training. In NSW this equated to an 80 % subsidy to the producer and in Qld a 90% subsidy. This percentage breakdown resulted in Diplomas of Agriculture (Certified BMP Farm Manager) normally valued at \$2400-\$2500 for an RPL being delivered with a producer contribution of \$240 in Qld and \$500 charge in NSW.

Uptake by industry was cautious in the early stages of this strategy. However, it is considered that the program has been highly successful. Starting from a low base the PPP and EBPPP program resulted in 54 participants from across NSW and Qld taking up the opportunity to have an RPL assessment. Of the 32 qualifications that have been issued, the following breakdown represents these applicants: 10 Certificate IV, 15 Diploma of Agriculture and 7 Advance Diplomas in Rural Business management. Of note, in many cases for the Advance Diploma awards, these individuals initially identified the Diploma in Agriculture as the target qualification. However when the registered training organisation (Tocal or AACC) commenced the interview it was clear these individuals operated in a higher level within the business and were better suited to the Rural Business management qualification.

The process of RPL also provided strong industry intelligence with applicants being below par in systems and documentation associated with the management of staff: HR aspects were the weakest criteria presented. As a result, the myBMP HR module was initiated by Mark Hickman and co developed with Louise Adcock (former BMP General Manager) and James Houlahan (Cotton Australia). This is a good example of industry intelligence collected by the RPL program being addressed.

1.3. Machinery Partnership Project

The project collaborated with a NSW DET funded project which delivered machinery skills for agricultural enterprises in NW NSW. The project lead for the program was Niel Jacobsen (DANE Consulting). The project was allocated a seat on the cross industry advisory committee to identify appropriate skills and resources. Narrabri's local employment agency BEST employment selected 16 suitable long term unemployed participants to complete the training in a nominated machinery skill set. The training was conducted by Toowoomba based training provider, AgTraining. Of these 16 participants, 12 have gained employment in numerous areas that all stemmed from this skill set training. In addition, Ag Training have established an agreement with certain insurance companies which allows producers with OH&S tickets and trained machinery operators (yellow card holders) to receive a 5-10% discount on their business public liability premium. Engaging in this project as a steering member for the project ensured the quality of training delivered by meeting the cotton industry needs.

1.4. Centre Pivot, Lateral Move System Evaluation Workshop

The uptake of centre pivot and lateral move systems is increasing within the irrigated farming system community. Historically, the cotton industry developed a course under the leadership of Dr Joe Foley which provides producers with the technical knowledge of the specifications required for different irrigated crops and the aspects producers must consider in purchasing a machine. That course then merged into the CRC Irrigation Future CPLM course that is delivered by Growcom in Queensland and by NSW DPI in NSW. However, the resellers and consultants advising producers have variable technical capacity to validate the systems they supply. Combined with limited industry endorsed Australian standards for methodology has created a technical deficiency and market failure in this sector. During August 2008, Mark Hickman convened several meetings to commence the development of a centre pivot systems evaluation course for producer, consultants and resellers. The target of this training is to build the commercial capacity within the irrigation sector to deliver consultancy services. The working group developing the training and resources were: Lance Prendergast, Merv Jessen (CRC IF and Commercial evaluation provider), David Wigginton (private consultant), Murray Boschhammer (Private Consultant), Peter Smith (NSW DPI), Emma Brotherton, Graham Harris and Mark Hickman (all DEEDI).

The working group decided that the original task of developing a workshop focused on consultants would require Irrigation Australia (IAL) engagement and those certain Australian standards would have to be developed and endorsed by a peak body for the course to be legally valid. Subsequently, IAL have established a special interest group for CPLM systems and this is one of the tasks at hand. However, a system evaluation awareness course was developed with producers in mind and now a course is available under the Healthy Headwater initiative in Queensland. These ½ day courses assist producers to identify aspects which they can modify on their machine and perform simple checks to optimise the machine's performance. The course contains a trouble shooting guide and is aligned to a Certificate III unit of competency for irrigation system evaluation. The competency will be achieved through a combination of course attendance, exercises and post workshop reviews demonstrating the learning's in the workplace. The course has also been converted into an online environment and details of this blended delivery model are contained with the E learning section of the report. Demand for the course is strong and IAL are interested in holding discussions on how this course could be utilised to develop the broader nation wide consultant accreditation.

1.5. Skills training for new consultant in Integrated Pest Management.

Like all sectors of the industry there is a shortage of consultants to assist in the production of the crop. As in many areas, Central Queensland has a limitation in the experience level of those presently operating within the valley. Many established consultants and resellers have employed junior agronomists to meet the commercial demand placed on their business. Through the coordination and drive of the CQ Development and Delivery Officer (Susan Maas), Mark Hickman help facilitated and delivered a one day modified version of the successful Cotton CRC IPM Short Course. The Emerald workshop was attended by 12 junior agronomists from the district. Presenters included, Sharon Downes (CSIRO) and Rob Mahon (CSIRO), Vikki Osten(DEEDI), Richard Sequeira (DEEDI) and Mark Hickman (DEEDI). The face to face workshop was supported by Susan Maas through a series of field walks to highlight the principles throughout that season. This successful model was subsequently repeated by regional D & D team members in Southern NSW, and the Darling Downs with the same level of success. This activity highlights how a short course developed by a previous program has a demonstrated legacy and can be implemented when required.

1.6. Weed Resistance Workshop

Queensland DEEDI researchers, Steve Walker, Jeff Werth, David Thornby, Vikki Osten, in conjunction with extension officers Susan Maas and Mark Hickman adapted an existing grains workshop addressing herbicide resistance for cotton specific farming systems. The existing workshop was modified to include cotton specific weeds and an online assessment tool for glyphosate resistance management strategies. This tool provides producers with a customised risk indicator for management strategies which are implemented in relation to glyphosate use patterns. The workshop concept was to allow the participant to use the tool before undertaking the resistance workshop. The results would be collected and used by the coordinator to customise the information delivered during the workshop which is relevant for those regional practices. The one workshop conducted in St George was well received. As glyphosate resistance becomes an increasing issue in the industry this workshop will be of increasing value.

1.7. E- Learning Projects

i). 2009 Projects

Mark Hickman coordinated two E learning funding applications which were lodged and successfully funded by the Australian Flexible E-Learning Framework in both 2009 and 2010. The NSW application was lodged by Tocal College to develop an online skills assessment program which supports the *myBMP* platform. This online skills auditing tool allowed the individual producers to review the skilling needs required by their business and to better prepare Recognition of Prior Learning (RPL) assessments for interested producers. The second application, developed on behalf of industry by the Australian Agricultural College Corporation will develop a series of E learning modules for Human Resource management.

While these two projects were only a six month term, the outputs from the projects value added to the cotton Industry *myBMP* platform and the organisational capacity of both AACC and Tocal College. The E learning projects provided industry with a business performance tool to assess the skills within their operation and to provide an online

professional development program in Human Resource management - an area identified as a significant skilling target following RPL assessments.

The AACC lead project focused on an E learning tool that addressed the key topic areas within the Diploma level unit of competency called "RTE 5807 Manage Staff". The content development was done by Penne Vincent (AACC) whilst Rick Whistler provided the project leadership. In terms of industry content and relevance, Mark Hickman was the industry stakeholder and reference person.

The Tocal lead project team was Jamy Somerville - developer, Charlie Bell - project leader, Jo Hathaway - assistant developer. The product developed was a rapid skills auditing system, which allows producers to review how they may go in an RPL assessment and start the collection of information that will help in a RPL assessment.

On November 26th 2009, the cotton industry partnered with the Australian Agricultural College Corporation (AACC) and Tocal College to showcase two E learning courses at the Australian Flexible Learning Framework conference, "The Big VetE conference", held in Brisbane. Mark Hickman in conjunction with Rick Whistler and Penne Vincent presented the findings. The presentation addressed the industry need and the practical aspects of coordinating two cross state projects with two different funding sources. The industry and department were showcased and much interest was generated by the innovation highlighted in the projects. In particular, the linking of E learning to the myBMP program, development of resources through both Tocal College in NSW and Australian Agricultural Colleges Corporation in Qld attracted much interest. Both products are now available to the industry.

ii). 2010 projects

As in 2009, the Cotton Research and Development Corporation utilised the working relationship with AACC and Tocal College to successfully gain two new E learning projects from the Australian Flexible E Learning Framework. As in 2009, Mark Hickman again provided the industry coordination. The AACC (Qld) project developed a blended learning system framework for growers wishing to gain knowledge via online services. This system was used in the Centre Pivot Lateral move blended learning program. The Tocal College (NSW) project developed a framework for an online OH & S induction program for transit staff on cotton farms for the harvest period. The Harvest OH& S tool allows back packers, casual staff or new staff to a business to undertake OH&S training at a time that is convenient thus increasing their knowledge base of what is acceptable behaviour prior to the specific farm tour the farm manager provides on their arrival. This process saves downtime with employee orientation. Over time a review by the producer of the individual performance and subsequent vocational assessment could result in a unit of competency being issued.

The project teams in both organisations were the same as in 2009 and in early 2011: the two products were piloted within industry with success.

1.8. Cotton Ginning Traineeship program.

Like the production and agribusiness sectors of the Australian Cotton Industry, the cotton ginning sector has had a significant erosion of technical capacity. With the lower yields due

to drought years the capacity of gin staff had been reduced. In more recent times a rapid expansion of yields and area has required the gins throughput (capacity) to be rapidly increased. There is a shortage of staff to service the gins within the industry. In the 2010 season, significant numbers of Korean workers were hosted to fill the gap. In an effort to create a long term strategy for this sector this project has been facilitating discussions with the assistance of CSIRO's Rene vanDerSluji to re-establish a Cotton Ginning Traineeship. A series of teleconferences have been facilitated by Mark Hickman to broker an arrangement between the vocational sector and the Australian Ginning Association. The teleconferences included representatives from the Cotton Ginning Association (Namoi, Auscott, and Olnmet), AACC and DEEDI.

Based on the ginning association feedback, the demand for the traineeship is strong and there are vocational resources that can be updated and aligned to the new training packages. The expensive aspect of this updating is the development of the training material. Despite the demand the vocational sector regard this training market is relatively small, but the industry considers the expertise at the gin operations as critical to ensure Australia delivers a quality product for export. Discussions with the Australian Ginning Association are underway and as an alternate strategy: a PRP has been lodged with CRDC by Rene to help establish an Australian ginning course.

1.9. Human Resources Module for the New Cotton myBMP program

This project recognised a need to improve the cotton industry Human Resources capability after being involved in several RPL assessments and conducting hands on sessions at the 2008 cotton Conference on labour management. Mark Hickman formed a working panel with James Houlahan (Grower service Manager Cotton Australia) and Louise Adcock (former BMP General Manager, Cotton Australia) to develop a new module focused on human resource management (HR) for the Cotton BMP program. Topics associated with attraction, retention and management of existing staff are covered and HR templates for NSW and Qld producers have been customised for the cotton industry. Many of the key messages captured from the labour management "hands on" session has been incorporated into the new module. Overall the module has been extremely well received by industry and is one of the most visited sites within the myBMP program.

Milestone 2. Leadership and co-development of capacity building programs

2.1. Agrifood Skills Australia (ASA) Engagement

Agrifood Skills Australia is an organisation that represents the interest of the agricultural sector at the federal level on matters that relate to vocational education and training national agenda. ASA continuously improve the content of the AHC 10 National training package that is used Australian wide to provide vocational qualifications in agriculture. This project has been instrumental in ensuring the skills required to operate a cotton business using modern techniques is represented in the training package. This constant review process with ASA has developed a healthy and constructive working relationship for the industry benefit. A report of a significant opportunity presented by ASA follows. Other engagements are reported under the activities of milestone 3.

i). 2009 Agrifood Industry Skills Council Annual conference

Mark Hickman was invited to the 2009 Agrifood Industry Skills Council Annual conference in Melbourne. The theme of the conference was "It's all about skills". Mark participated in the conference as a presenter and expert panellist in a workshop addressing staff retention in agricultural industries. The presentation focused on the Cotton Industry Case study of how the cotton industry is linking traditional extension methodology to the Vocational Education system. The event provided excellent networking and relationship building with like minded vocational practitioners from across Australia and commodity sectors. Invaluable contacts were made with continued discussions being held after the conference.

2.2. Gateway Schools for Agribusiness

The Gateway Schools to Agribusiness project, an initiative of Education Queensland, was established mid June 2008. The Gateway Schools strategy is to engage young people in industries associated with agribusiness by helping them make a successful transition from school into further education and employment in the sector. This project encourages the development of a pathway or "gateway" between schools, training (VET), Universities or higher education, industry and employment. This project has worked actively with The Gateway Manager John (Charlie) Martin to try and establish a Queensland school with a cotton connection. Mark Hickman has presented the Cotton Basic framework (a product of CRC 5.01.01) as a potential resource to the annual meeting of the Gateway schools. Goondiwindi and St George schools have expressed an interest in the Cotton Basic (Certificate II in Agriculture Cotton) program as part of an agribusiness program following a presentation. This interest will be further explored with the Macintyre Border Rivers Growers Association which is keen to revitalise their "Pushing the Boundaries" program, a local school / industry program. There is potential to utilise the Cotton Basic material in this format. The "Pushing the boundaries" project concept is under consideration as part of CRDC Capacity Building grower projects and the new 2011-2014 Professional Development Manager project for the industry.

2.3. NSW Parliamentary Inquiry Hurlstone High School

In late May 2009, Mark Hickman was selected as a member of a technical advisory panel for an Inquiry in the NSW School Hurlstone High School. The Inquiry chairman was Mal Peters (former NSW Farmers Association Chairman and current Northern Inland RDA chair). The advisory panel provided expert guidance on future models which the school could adopt. This invitation was extended on the basis of the innovative work underway in the cotton industry and the industry's vocational education and training programs. Chairman Mal Peters was particularly interested in the Queensland school pilot for Gateway Schools and the previous work undertaken in the cotton industry relating to Cotton Basics as a potential model that could assist Hurlstone High school broaden it's exposure to potential students and industry engagement.

2.4 Advancing the Cotton Industry through "Green Skills"

As the cotton industry has developed and implemented the former BMP and the myBMP program, this project has been investigating ways to develop programs that capture the industry "green credentials. In 2009 and 2010, the manager for NSW DET_ Industry Innovation and Program Manager for Industry Innovation met with the Mark Hickman (Professional Development Manager- Cotton) and Rohan Boehm (CRDC Human Capacity Program Manager) to gain an increased understanding of how the myBMP program and the NSW Green Skills program could collaborate. The discussions revealed funding was only available to NSW registered training organisations to develop and deliver energy efficiency skills training. In addition, agriculture within NSW is a priority in this funding. At the time numerous opportunities were identified such as the Irrigated Cotton Grains Irrigation Management workshop series and in particular, the Pump Evaluation Workshop. However limitations in both time and commitment of resources to other funding proposals meant there was no progress with the discussions. However, Green skill programs are a targeted program in the new CRC / CRDC project commencing in 2011.

Milestone 3. Promotion and advocacy of a culture for professional development.

3.1 Queensland Rural Skills and Demand Plan.

The Queensland Rural Skills and Demand Plan is a DEEDI document produced to capture the agricultural skilling needs of Queensland industries. These recommendations are forwarded to Skilling Queensland (Qld Department Education and Training (DET)) for consideration. DET has established an MOU with QDEEDI to consider the findings when allocating state training funding allocations.

The identification of the cotton industry needs and subsequent skilling plans provided to Queensland DET is coordinated by Mark Hickman using industry consultation and various industry training and skill reference panels / groups. One such group was an informal working group consisting of Robert Cairns (ex Cotton Australia), Gordon Baker (CA), Barbara Grey and Mark Hickman. This project has been effective in getting our industry message into DET. However the shift in state funding has been limited because the level of detail required by DET, eg number of Certificate IV enrolments in agriculture and apprenticeships, which will be utilised in the subsequent 12 months, is not easily captured by industry. In past years industry has provided information for the areas of skill development it anticipates will grow the industry. While the funding shift has been very limited the communication channels are now established.

3.2 Queensland Land and Water Management Plans Equivalent program

Mark Hickman's expertise has been utilised several times by Cotton Australia to support the case for the BMP program to be recognised as an equivalent to a Land and Water Management plan in Queensland. Initially, Dan Galligan (ex Cotton Australia policy manager) and later by Rob Cairns, (ex Cotton Australia policy manager), invited Mark to assist in discussions with Sarah Hindmarsh (Senior Policy Officer) in Queensland Department of Environment Resource Management (DERM). Mark provided technical advice to both organisations on potential professional development requirements of myBMP and Qld DERM auditors of Land and Water Management Plan (LWMP). The outcome was the establishment of a good dialogue around the professional development aspect of the agreement. Rob Cairns and Mark Hickman reviewed the potential use of Recognition of

Prior Learning as a methodology for ongoing professional development of cotton and DERM auditors. No firm commitments were made by either party. Instead it was agreed to keep the status quo of auditors' technical specialisations by maintaining an internal self regulation of auditors.

3.3 Spray Drift Steering Committee: Bill Gordon Project.

Mark Hickman was invited to join a Spray Drift Steering Group for Bill Gordon's CRDC / GRDC funded project. The steering panel consist of GRDC, CRDC program managers, growers' representative, GRDC panel members, Agribusiness representatives and ChemCert National. Mark's role on the panel was to provide technical input for vocational alignment of extension and program activities. These meetings were a good opportunity to establish contacts and start relationships with GRDC members in particular. Bill presented sound practice change data. The material that Bill has developed would provide an easy transition into a workshop series aligned to the vocational education system.

3.4 Science in the City

Mark Hickman participated in a DEEDI Crop and Food Science initiative Science in the City held in the Brisbane CBD where research and extension undertaken by the Crop and Food Science program of DEEDI was showcased. Mark displayed several myBMP Australian towels and led a conversation around the industry premium cotton initiative, in which the researchers and development/extension personnel, in particular the Irrigated Farming Systems Team in DEEDI, conducted myBMP activities that underpinned marketing of the towels. This event was only 3 hours and achieved a walk through the stand of 320 people. The Australian Towels gained lots of interaction. Mark also had the opportunity to explain the cotton story to DEEDI minister Hon. Tim Mulherin, the Associate DG Robert Setter and AgriScience Queensland General Manager- John Chapman. In terms of the general public there was much interest in the Australian Towels and in particular indications that people were willing to support this initiative and were keen to hear when the product was commercially available. This event provided significant PR for the cotton industry.

3.5 National Case study of the Cotton Industry for the National Quality Council Research.

The cotton industry was independently selected and showcased by the National Quality Council (NQC) as one of the leading industries to use skill sets to gain qualifications as part of a workforce development strategy. Researcher, Sue Foster, has developed 4 national case studies for the peak vocational education body called the National Quality Council. DEEDI activities feature as two case studies, Bundaberg Skills Formation Strategy (Greg Crossan), and the Professional Development activities of the Cotton Industry (Mark Hickman). The other two case studies were on Agrifood Skills Australia "Make it work" program in Narrabri NSW and the Dairy industry National Education Centre in Victoria.

The NQC review will be used as evidence of best practice in vocational education to influence the National funding agenda to include skill set funding as main stream income for training by RTOs. Currently, training funding is geared to straight qualifications rather than industry skill sets. This NQC report is significant and is a national acknowledgment for cotton industry activities in this space. The report demonstrates it's independence by

highlighting some of the challenges the industry faces for capacity building as well as the patchy uptake of some initiatives. A copy of the review is attached as an appendix.

3.6 Cotton CRC Extension Bid Community Program

A significant contribution was made by Mark Hickman in the Cotton CRC Extension bid application which was lodged on July 1st 2011 to the federal government. Mark co developed the lead Regional People program. This commenced late 2010 and has resulted in potentially a new suite of social science researcher engaging in the industry. The team that developed this program included Paula Jones CRC, Anthony Hogan (ANU) and Mark Hickman (DEEDI). The Regional People program is focused on the relationship between industry and community for workforce development, the empowering of communities to create proactive programs that meet their community and to significantly engage the indigenous population in regional industry employment. At the time of writing this final report the outcome of this bid was unknown. If successful, the new CRC will be called the CRC for Cotton Regions.

3.7 Agrifood Skills Australia

i). Influencing the Agrifood Skills Australia Environmental Plan

Mark Hickman has held numerous meetings and conversations with Agrifood Skills Australia (ASA) officers: Niel Jacobsen, Michael Claessens, David Greentree, Jane Brownbill and Arthur Blewitt (CEO). This dialogue has ensured ASA has linkages with the cotton industry allowing industry to provide strategic information to ASA, who then inform federal resourcing policy makers. Skill sets (also referred to as building block training) have been a major item addressed for workforce development in recent times by ASA and the cotton industry. In addition, ASA are seeking better alignment between vocational and tertiary systems. These sentiments, among others, have been captured in the last three ASA Environmental scans. In particular ASA regard it as a major strategy to embed the skilling agenda into industry and to effectively maintain the training currency to work closely with RDC's and CRC's to implement Best practice and the latest research. The ASA environmental scans are the blueprint for ASA activities in the subsequent 12 months. The current Environmental plan can be located at ASA website <http://www.agrifoodskills.net.au>. Mark Hickman has been able to position the industry to take full advantage of the ASA environmental scan.

ii). Queensland Rural Industry Reference Panel for Agrifood Skills Australia

In May 2009, ASA hosted a meeting in Brisbane to investigate the potential for forming a reference group for ASA in Queensland. It provided an opportunity for networking and establishing potential collaboration in the area of regional workforce development. Participants included representatives from Canegrowers, Queensland Farmers federation (QFF), DEEDI, Cotton CRC, Rural Skills Australia, CQ SFS, Growcom, AgForce and ASA.

This group agreed to act as an informal reference panel to ASA with a consensus that ASA is the appropriate organisation to provide the coordination for this group. This reference panel would be engaged in Queensland agrifood issues and is determined to be complementary to the established DEEDI Industry Advisory Group (IAG) which addresses strategic issues for Qld agriculture and advisors in the Queensland Education department. The reference panel is currently (2011) inactive; however this project remains part of this network if and when the need arises.

iii). Agrifood Skill Australia and Northern Inland Regional Development Board Regional Workforce Summit Narrabri.

A regional workforce summit was held in Narrabri on the 3rd July 2009 in collaboration with Agrifood Skills Australia and The Northern Regional Development Board. At the conceptual stage of the summit Mark Hickman was involved in the development of the summit purpose and program. A main focus of the summit was to bring together all industries, communities and key stakeholders from across the Narrabri shire to discuss local workforce issues and seek local solutions. This project provided the opportunity for Mark to participate as one of the cotton industry representatives in the 60 participants.

This summit created substantial interest both locally and at various government levels. Agrifood Skills Australia showcased the event at their annual conference as a way to embedding workforce development solutions locally. A project officer from the local community (Mr Russell Stewart) was funded through Agrifood Skills Australia, NSW State Development and Northern Inland Regional Development board to drive and develop grass root solutions. This concept has grown as a cutting edge program known as the North West Advisory Group of which the 'Make it Work initiative' is a major outcome. Mark Hickman is a member of this panel which includes representatives from a wide range of industries and local business from across the NW NSW area.

iv). Agrifood Skill Australia Forum for Primary Industry ITABS. DONE

At the request of Agrifood Skills Australia, Mark Hickman attended a national meeting for Industry Training Advisory Boards (ITABs) in Sydney. The purpose was to outline the innovative manner in which the Cotton Irrigated Farming system is engaging with the National Training package and, in particular, how industry R&D is being implemented into skills via extension programs. The meeting held robust discussions on the use of the training package in relation to this matter particularly in terms of endorsed and non endorsed components of the training. This was an excellent opportunity to highlight the current cotton industry activities and present a future engagement model for other industries to consider.

3.8 Rural Industry Training Advisory Board (RITAB)

To represent the Cotton Industry skilling needs particularly on behalf of the NSW producers this project has developed a working relationship with Melissa Wortman (Rural ITAB representative) ensuring expected training funding allocated to NSW agriculture is addressing the rural skilling needs of the Cotton Irrigated Farming System. An annual tabulation of industry intelligence from various sources is compiled by Melissa and submitted to NSW DET as priority areas for resource allocations. Mark Hickman provides annual industry comment for Melissa's consideration. A major outcome has been the EBPPP program being granted to the cotton industry through this relationship with the RITAB body. The EBPPP provided significant funding to the cotton industry for RPL assessments.

3.9 Australian Review of the Cotton Industry's Skills for Green Jobs.

Researchers Mike Raffety and Serena Yu from the Workforce Research Unit, Sydney University published a paper developed for the International Labour Organisation skills for Green jobs study for an international conference in Geneva. Several national case studies were independently selected as case studies to highlight how Australian employers are implementing green skills in the workplace. The activities of this project, in particular the Certified BMP Farm Manager, were selected as one of the Australian Case Studies. The paper was tabled in 2010 with the International Labour Organisation who funded the study. This is a major outcome for the Cotton CRC and CRDC investment, as it demonstrates how governments and industry can use RD&E investment to create green skills in the work place.

The paper created major press coverage and, on the July 10th 2010, the Queensland Courier Mail newspaper (a State based distribution) reported a story in the Career One section which outlined how DEEDI and the Cotton industry have been recognised both nationally and internationally as leaders in the area of green skill implementation for the workforce.

3.10 Human Capacity Review Benchmark

In June 2010, an Omnibus survey (qualitative) was conducted benchmarking current thoughts, attitudes, understanding and engagement with professional development activities in the Australian Cotton Industry. The research question being assessed is *“What skills do people need in the next ten years to have their business viable”*. The research was initiated and conducted by Mark Hickman and Rohan Boehm (CRDC) with assistance from regional cotton industry officers. A series of focus group meetings were attended by both producers and agribusiness people across Qld and NW NSW production regions. The main outcome for industry was a benchmark of insights and attitudes from grassroots practitioners and service providers regarding their engagement with professional development. Data is used as a reference point for future activities to guide investment. The report is attached as an Appendix. The results were also included in Mark Hickman’s Cotton Conference presentation in August on ‘Life Long Learning solutions for industry’.

3.11 Technical feedback to Cotton Australia Human Capacity technical Panel

On two occasions 2010 and 2011, this project has made formal presentations to the Cotton Australia Technical panel that reviews investments in industry Human Capacity programs and activities. On both occasions the activities of this project and other human capacity programs were formally outlined. The presentation provided opinions on the gaps and needs for future investment providing a great opportunity for industry to understand the Human Capacity program of CRDC and CRC and, in particular, the activities and spheres of influence of this project. Feedback on activities and programs were constructive, which highlights industry diversity in developing a national campaign for both the cotton businesses and individual needs. A significant outcome from the meeting was the need for industry to establish firm data on skilling and workforce needs for the present and future. At the project level these meetings provided critical industry feedback and support for project activities.

6. Outcomes etc : Please describe any:-

- a) Technical advances achieved (eg commercially significant developments, patents applied for or granted licenses, etc.);
- b) other information developed from research (eg discoveries in methodology, equipment design, etc.); and
- c) Required changes to the Intellectual Property register.

In relation to this project there has been no information or products developed that require documentation in this regard. While the project has conducted numerous novel and innovative approaches to development and delivery of skilling programs, there are no discoveries in that methodology - rather proof of concepts.

7. Conclusion

Project CRC 5.01.26 has had a significant influence on the human capacity and professional development programs that industry has embraced. Using skill sets to drive workforce development, aligning traditional extension programs to the outcomes of the vocational education and training sector and having a designated position that interacts with the state and national training agenda has resulted in the cotton industry being recognised as a leading industry in capacity building both nationally and internationally. This is based on evidence from the two independently selected and established reviews of the cotton industry programs. Programs have been developed from activities conducted or coordinated by this project over the last 3 years. The reviews were a National case study of the Cotton Industry use of skills sets to drive workforce development and industry qualifications (National Quality Council of Australia, peak Vocational body) and the Australian Review of the Cotton Industry's Skills for Green Jobs (Sydney University paper for the International Labour Organisation).

The project has provided numerous innovative products that are a legacy to the industry including:

- Development of agriculture's first best management accreditation of an individual: Certified BMP Farm Manager award, aka Diploma of Agriculture (Cotton).
- Development of four E Learning products that address irrigation management for overhead machines, training in staff management, and skills auditing guide for RPL assessments and online induction tool for harvest OH &S.
- Increased the human and technical capacity within the AACC and Tocal College which will benefit the industry in the long term.
- Identified an industry need based on intelligence from RPL assessments and development of a completely new myBMP module relating to Human Resource management. Industry has fully embraced this new module.

Having a designated person within industry who identifies industry subsidy opportunities as well as establishing mechanisms to provide industry intelligence to influence the national training agenda has created significant industry benefit. In particular, the cotton industry was one of the few agricultural industries to make the federally established Enterprise Based

Productivity Placement Program (EBPPP). The combination of this funding and state based Productivity Placement Programs (PPP) has resulted in an increased exposure for the industry in Recognition of Prior Learning (RPL) assessments and provided a significant economic saving to these businesses. It is estimated that 54 industry participants in the subsidised RPL program gave a combined saving of \$102,600 in fees they would normally have incurred for the same skill development.

The four key messages that have resulted from this project are:

1. Industry investment in a designated Professional Development Officer position has created skilling programs that are nationally and internationally recognised.
2. Focusing on skills to drive the industry workforce capacity has been acknowledged independently as a leading strategy
3. Aligning traditional extension strategies with alternative learning platforms and in particular aligning the outcomes with educational outcomes is a viable and innovative program.
4. Enabling change, requires investment in relationships outside of the cotton industry (eg: vocational sector) which are as valuable as to those cultivated within the industry.

8. Extension Opportunities

This project position is part of the Australian Cotton Industry Development and Delivery Team (D & D) and has regularly contributed over the past 3 years to the industry publications such as Spotlight or regional newsletters such as Cotton Tales. This will continue to be the case into the future. The project is a development program and, while the reported activities occurred for the period 2008-2011, the new project approved by CRDC for 2011-2014 will ensure it continues to establish more programs. In particular, having now established a series of models and a few working examples of how extension programs can be aligned to the vocational sector, it will form the platform for future development for capacity building programs. As RD&E dollars become limited and the drive for measureable outcomes increase, this alignment with educational outcomes will increase in importance of further investment.

An issue currently facing industry is the restriction in labour and technical resources available for the production of the crop. While industry has been acknowledged publicly for a series of programs and avenues available to build the internal skills of the existing staff, there is no overall cross organisational strategy that ties the industry together. The fundamental aspect that is lacking is an industry accepted workforce development strategy. A project (Nettle / Rafferty) starting in 2011 will address this issue and many of the CRC 5.01.26 project initiatives will be extended and enhanced. Engaging with this workforce framework project will be a key extension mechanism for Mark Hickman's new CRDC/ CRC project (2011-2014).

Publications

9. A. List the publications arising from the research project and/or a publication plan.

Hickman, M. and Adcock, L. (2008) Certified BMP Farm Manager : Recognising YOUR skills through BMP, CRC Information sheet , On farm- Training and Skills. 1 page .

Hickman, M. (2008) Vocational Extension - A New Cotton Era is Dawning, 14th Australian Cotton Conference, Broadwater QLD, Web proceedings
<http://www.australiancottonconference.com.au/index.php?url=/cottons/showpage/3/1/32>

Hickman, M. (2008), Investing in capacity: It's about people, Cotton Research and Development Corporation Industry magazine : Spotlight . Summer 2008 Edition. p24.

Hickman, M. (2008), Many degrees of BMP, Cotton Research and Development Corporation Industry magazine : Spotlight . Spring 2008 Edition. p19.

Hickman, M. (2009), Training \$\$ for Qld Producers, Cotton Research and Development Corporation Industry magazine : Spotlight . Autumn 2009 Edition. p10.

Hickman, M. (2009), E-Learning pilot to assess online skills value for cotton, Cotton Research and Development Corporation Industry magazine : Spotlight . Winter 2009 Edition. p3.

Hickman, M. (2009), NSW Govt supports BMP Farm Manager Award, Cotton Research and Development Corporation Industry magazine : Spotlight . Summer 2009 Edition. p16.

Hickman, M. & Boehm, R. (2010), Human capacity review: You never stop learning., June 2010 pp8.

Hickman, M. & Boehm, R. (2010), Underpinning Cotton's Future Through Lifelong Learning., 15th Australian Cotton Conference, Broadwater QLD, Web proceedings
<http://www.australiancottonconference.com.au/resources.php?ContentID=3&PresenterID=20>

Adcock, L., **Hickman, M.** & Houlahan , J., (2010) Human Resource myBMP Module , <https://www.mybmp.com.au>.

Hickman, M. & Schwager, K. (2010) Developing industry skills for our future, the CRC effort. Community Conversation newsletter edition 4, May 2010.
http://www.cottoncrc.org.au/content/Communities/Noticeboard/Community_Conversations_Newsletter.aspx.

B. Have you developed any online resources and what is the website address?

Mark Hickman has coordinated the development of several online resources. However the actual development of these resources resides with both the Australian Agricultural College Corporation and Tocal Agricultural College.

Manage Staff E learning Tool, Australian Agricultural College Corporation

Address: www.agcollege.edu.au

Centre Pivot –Lateral Move System Evaluation E learning Tool, Australian Agricultural College Corporation

Address: www.agcollege.edu.au

OH&S Cotton Harvest Induction Online Tool, Tocal Agricultural College

Address: www.mytocal.com.au

Skills Benchmarking Online Tool, Tocal Agricultural College

Address: www.mytocal.com.au

Part 4 – Final Report Executive Summary

During 2008-2011, the Australian Cotton industry faced numerous challenges when it experienced significant drought over a number of years, followed by crippling floods in late 2010, early 2011. These environmental aspects combined with a rapidly increasing demand from alternative regional industries for labour and a significant expansion of the industry regional footprint particularly in southern NSW. As a direct result of these challenges, the human capacity within cotton enterprises and agribusiness / service industries was significantly depleted. Industry had to do more with less to remain viable.

To assist industry in revitalising this capacity, industry invested in the Professional Development Manager position occupied by Mark Hickman (Qld DEEDI). The position had a significant influence on the human capacity and professional development programs that focused skill sets to drive workforce development rather than knowledge creation. Traditional extension programs were aligned to educational outcomes associated with the vocational education and training sector and a major effort was placed on building relationships with stakeholders that influence the state and national training agenda to ensure the cotton industry needs were addressed. Strategic programs created by this project resulted in the Cotton Industry being acknowledged in two independent reports as a leading industry nationally and internationally for capacity building programs. One review commissioned by the National Quality Council of Australia; (a peak vocational body) highlighted Cotton Industry use of skills sets to drive workforce development and industry qualifications. This was one of 4 case studies selected by the NQC to demonstrate to the Commonwealth government justification for significantly shifting the existing funding arrangements from a traditional qualification competition basis to a skill set basis. The second was conducted by Dr Mike Rafferty (Sydney University: for the International Labour Organisation United Nations) in an Australian review which investigated how the Cotton Industry was developing Skills for Green Jobs. A paper was delivered in Geneva 2010.

The project provided numerous innovative products that are industry legacies. One legacy is the creation, industry endorsement and subsequent implementation of agriculture's first best management practice accreditation of an individual. The industry award, Certified BMP Farm Manager, aka Diploma of Agriculture (specialise in Cotton) assesses and acknowledges the individual's management practices and established systems to achieve and operate a myBMP accredited farm. The second legacy is the E learning platforms and subsequent relationships established with AACC and Tocal College as a result of the Australian Flexible E learning Framework funding. This external industry funding that resulted in four online products for industry addressing OH & S, staff management, skills recognition and system evaluations of overhead irrigation systems. However, the experience provided invaluable learnings for the contextualisation, design and implementation of this alternative learning platform - learnings that will be value added to in future projects. The third legacy is how industry has also fully embraced a new human resources module that was initially created by and then co developed by Mark Hickman. The module is included in the in the myBMP package and is acknowledged as a leading module for grower engagement.

Having a designated Professional Development Manager within industry has identified financial training subsidy opportunities and has created an ability to influence the national skilling agenda through the provision of industry intelligence. In particular, the cotton industry was one of the few agricultural industries to make the federal Enterprise based Productivity Placement Program (EBPPP). The combination of this federal (EBPPP) and state based Productivity Placement Programs (PPP) funding has increased the exposure of industry to vocational assessments through the Recognition of Prior Learning (RPL) - an impact that has resulted in 54 people participating in the industry first RPL program.

In conclusion, the combination of close working relationships with industry and vocational stakeholders and the established strategies from this project's activity have provided foundations for future capacity building programs. Revitalising the labour pool and technical expertise available to the industry is a long term process. However, project CRC 5.01.26 (Professional Development Manager- Cotton) has made a meaningful industry contribution.

Appendix section

- 1) Foster, S. (2011) “ Cotton Industry Workforce capability case study”. National Quality Council National Skills review Report . 2011
(attached filename: *National Quality Council Cotton Workforce 2011 .pdf*)
- 2) Rafferty, M. & Yu , S. (2009) Skills for Green Jobs in Australia. International Labour Office, 2010 Conference, Geneva .
http://www.ilo.org/skills/inst/WCMS_144268/lang--en/index.htm
(attached filename: *Skills for Green Jobs in Australia 2010 M Rafferty.pdf*)
- 3) Hickman, M. & Boehm, R. (2010), Human capacity review: You never stop learning., June 2010 pp8. (attached filename: *Human Capacity Study June 2010-Final.pdf*)
- 4) Hickman, M. (2011) Project 5.01.26 Milestone Amendment document which outlines alignment between old and new milestones (attached filename: *2010 CRC Project Milestone Amendment Hickman.pdf*)