

Aligning National Competencies with the Cotton Industry's Best Management Guidelines for Strategic Training

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AAA FarmBi\$ is a joint Australian / State Government initiative



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**Cotton Research and
Development Corporation**

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Table of Contents:

	Page
Executive Summary	4
Introduction	5
Objectives	5
FarmBi\$ Objectives	5
Project Objectives	5
Project milestones	5
Methodology	6
Stage one	6
Stage Two	6
Stage Three	6
Stage Four	7
Results	7
Discussion	9
Implications for Queensland	10
Recommendations	11
Appendices	
Appendix One	12
Appendix Two	32

List of Tables and Figures:

Table One: Project Implications for Queensland	10
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Executive Summary:

In 1996, a set of guidelines called the “Australian Cotton Industry Best Management Program”, or Cotton BMP for short was developed. This program is a voluntary, self regulated approach to the protection of resources, associated with cotton production and environmental management. Cotton BMP is a cornerstone model for the industry and during it’s evolution, it has lead the way for other industries in terns of assessing environmental risk. Cotton BMP accreditation is awarded to the property not the individual. This lack of recognition for the individual within the BMP accreditation process has lead to the development of this project.

This project is a strategic step towards building on this successful model for Queensland cotton producers. The project investigates how the Cotton BMP Assessment manual aligns to competencies within the Australian Training Framework. The results clearly showed alignment at various levels to 19 training competencies from the Business Management, Rural Production and Land Conservation training packages.

A skills mapping report was produced and ten units of competencies from this report were selected to form a Diploma of Agriculture. The Diploma of Agriculture has given rise to the concept of a Certified BMP Farm Manager. To the Cotton Industry, this title represents acknowledgement for an individual’s skill set developed by successfully achieving BMP accreditation for their farm.

A series of assessment sheets were then developed for the purpose of conducting ‘Recognition of Prior Learning’ (RPL) interviews on BMP accredited properties. Four pilot properties were tested with all four participants being awarded the Diploma of Agriculture within the BMP context. This was completed under stringent selection criteria which showed proof of skills and was conducted by an external Registered Training Organisation (RTO). The second stage of the project was to investigate ways to use this information to build a training framework around the Cotton BMP program. Discussions with industry have commenced and the industry endorsement of the certified BMP Farm manager is the first step being investigated.

Overall this ‘Targeted Industry Initiative’ project has developed strategic information that will assist industry in developing both a training culture and increased adoption of RPL assessments. Both aspects will benefit farm managers and owners in Queensland and the rest of the cotton industry.

Key Outcomes

1. The project has made significant steps towards the industry developing a national training framework
2. It has developed a linkage between the cotton BMP document and the national training competencies which paves the way for future training to be aligned to both the industry’s environmental stewardship guidelines and units of competencies that are formal qualifications. That is, all courses in the future that are developed from the BMP documentation now have a mapped link to national training packages.
3. Value adds to BMP by potentially rewarding the individual and offering another incentive to undertake BMP accreditation
4. Creates an opportunity for recognition of prior learning to be adopted within the industry.

Introduction:

The cotton industry has a well established Cotton BMP program that currently accredits farms for environmental stewardship. However, producers on the farms that achieve this accreditation develop a personal skill set that is not currently acknowledged internally or externally, The following project addresses this deficiency to reward the individual and create a culture of training within the industry.

Stage one of the project commenced with the alignment of the Australian Cotton Industry Best Management Program with training competencies from the VET sector. Stage two involved an assessment process called recognition of prior learning (RPL) to identify industry and personal gaps. Finally, the project gathers the RPL intelligence to promote and foster the development of future industry training. The legacy of the project is to develop a training structure within the cotton industry that will foster a culture of training and assessment beyond the Queensland FarmBi\$ program.

This funded project commenced operation in January 2007 and was completed by December 2007

Objectives

FarmBi\$ objectives

The project addresses the following objectives from the Queensland FarmBi\$ program

“Primary producers and rural land managers that are self-reliant and are equipped to manage change and adjustment through a culture of ongoing learning and continuous improvement”.

“Enhance capability of primary producers to effectively manage change and risk and benefit from the adoption of innovation and best management techniques.”

Project objectives

The project’s main objective is to develop a training culture within the industry. This is addressed by developing mechanisms to promote assessments of current industry skills using the assessment process known as recognition of prior learning (RPL). A framework of how RPL interviews could be implemented within the industry has been developed to substantiate the successful industry environmental stewardship program Cotton BMP. The following milestones relate directly to the Queensland FarmBi\$ objectives listed above.

Project milestones:

Milestone: A report is produced outlining which national training competencies can be aligned to the documentation associated with the Cotton BMP process.

Milestone: Development of a gap analysis assessment tool for implementation on 3 pilot farms in Queensland.

Methodology

The project was divided into four stages to address the previous mentioned objectives and milestones. Whilst Cotton RDC had control over the project funds, Mark Hickman (National Cotton Training Coordinator) was responsible for the daily implementation of the project and subsequent methodology developed for the implementation.

Stage One

Identification of National Competencies that align to the Cotton BMP Manual

The project obtained the services of Leslie McKee, a Vocational Education and Training Consultant (AssentTECS) to work in consultation with Mark Hickman. Mark provided the technical and training knowledge associated with the Cotton BMP process. Leslie McKee provided a detailed knowledge of National Competencies and outlined potential industry alignment opportunities.

The identification of the national competencies was primarily focused on, AQF level 4 and above. Once identified, these competencies were mapped against the technical information contained in the Cotton BMP manual.

Stage Two

Development of Assessment Technique

The services of a Registered Training Organisation (TOCAL College) were contracted. They have vast experience with in-situ assessment of clients using the Recognition of Prior Learning process was engaged. Charlie Bell and Darren Bayley from TOCAL college in conjunction with Mark Hickman reviewed the competency mapping document developed by AssentTECS, to develop a set of RPL assessment sheets for the project. The competencies that were selected were based on Mark's technical input as to the skills set a farm manager should have in order to implement BMP. This resulted in 10 competency units being chosen. The rationale for selecting 10 competencies was based on the VET regulations for a Diploma of Agriculture qualification.

Developing a Training Gap Analysis

The assessment sheets and evidence required to satisfy a Diploma of Agriculture were directly related to the documentation required under the Cotton BMP accreditation. This modified RPL assessment is in effect, a training gap analysis of what is required for the alignment of the national competencies to the Cotton BMP guidelines. This gap analysis will assist industry in establishing future training programs to meet both industry and national competency requirements.

Stage three

Conducting the In Situ Assessments

Four Queensland Cotton producers from the Darling Downs undertook the RPL pilot interviews. All four producers had farms with current BMP accreditations. These producers were subjected to an RPL interview, using stringent assessment sheets that were tailored to a BMP context. These interviews were performed by Charlie Bell (Tocal) and Mark Hickman. Extensive proof of abilities, decision-making skills and competency was required.

Stage Four

Analysis and Report back to industry

Once the on farm assessments had been completed and reviewed, a discussion paper on the project outcomes was given to CRDC and industry leaders for consideration. (see App. 3) Recommendation made within this final report, will suggest ways that the industry can best integrate this knowledge into future training programs. Industry consultation will occur via a series of industry leader meetings to discuss the report's recommendations.

Results:

A report is produced outlining which national competencies can be aligned to the documentation associated with the Cotton BMP process.

Leslie Mackee (principal consultant: AssesntTECS) investigated the alignment of the Cotton BMP with various national training competencies. A summary copy of this, a 116 page 'mapping' document can be viewed under appendix 1 of this report. The mapping document focused primarily on VET management level units (AQF 4 +). These competencies were drawn from three national training packages listed below:

RTD02 Conservation and Land Management Training Package
RTE03 Rural Production Training Package
BSB01 Business Services Training Package

The mapping report indicated the information that is generated by a cotton producer when completing the Cotton BMP manual does align completely with 4 national competencies. Two are at level 5, one is at level 4 and one at level 3. In addition, there is substantial alignment with a further 9 competencies. The break down of these competencies are, four at level 5, and five at level 4. a further six units were partially or in some way aligned to the BMP manual. A total of 19 competency units were alignment from this independent assessment. The two main training packages focused on, were the Rural Production (RTE03) package, and the Conservation and Land Management (RTD02).

In relation to business services training package, it was noted that while AssentTECS mapping document did not align these individual units of competencies to the content of the BMP manual, there were certainly business units that are strongly associated with an environmental management system and hence, relevant to the cotton BMP program. Due to the activities and decisions a cotton producer would have to perform to achieve the BMP accreditation, the consultant indicated there would be a very strong case to show how the generalised skill sets would meet several business competency units. This highlights the ability of the mapping document to be further integrated and expanded as required.

Milestone: Development of a gap analysis assessment tool for implementation on 3 pilot farms in Queensland.

Assessment by Charlie Bell and Mark Hickman of the mapping document revealed a set of competencies listed in the report that could be collated into a Diploma of Agriculture. The selected competencies represent a stringent skill set deemed appropriate for a BMP farmer, while still satisfying the VET regulations. Thus, individuals awarded this particular Diploma of Agriculture are in full alignment to the Industry's guidelines for BMP. However, both the certification of the individual and the accreditation of the farm under the BMP program are independent of each other and voluntary. Overall this development is a significant result.

Currently the industry's BMP accreditation is awarded to the farm / property. Individuals that developed the documentation or implementation practices that are required to achieve this farm accreditation do not receive any formal acknowledgement under the current system. The diploma has provided this direct link between the individual's skill set, formal VET qualifications and implemented business practices under the BMP program. This development led to Mark Hickman creating a new industry qualification concept called "BMP Certified Farm Manager". This certification would only be available to producers that have been involved in the farm achieving BMP status in the industry.

To investigate this concept further, a set of assessment sheets for the on-farm pilot interviews was created. Appendix 2 outlines the assessment sheets that have been modified by both Charlie Bell and Mark Hickman. The assessment sheets are based on the Hortus Australia template (ASSESS). An agreement to use this ASSESS template has been issued to TOCAL College for all their institutes' RPL assessments. The ASSESS template collects and records evidence via several methods. Firstly, a series of questions designed to promote discussion is used. Secondly, physical evidence is sighted, samples recorded, experiences noted. Finally supporting documentation or studies within the related area is also noted. This approach is a holistic assessment of the person, rather than a simple 'tick and flick' approach.

The 10 units of competencies which are consolidated into the Diploma of Agriculture are listed below.

BSBSBM405A Monitor and manage business operations.
BSBMGT609A Manage risk
RTC5702A Develop and manage a chemical use strategy
RTC5701A Establish and maintain the enterprise OHS program
RTE5807A Manage staff
RTE5006A Plan and manage long-term weed, pest and –or disease
RTE5014A Manage agricultural crop production
RTE5516A Develop a whole farm plan
RTE5524A Develop and implement sustainable land use
RTE5606A Develop an irrigation and drainage management plan

Pilot RPL Farm Visits

Initially the project nominated that three farmers would be approached to undertake the pilot RPL interviews. However, in considering the project developments at the time and to ensure an adequate cross section of growers was piloted, a 4th RPL interview was included in the project. These growers were Stuart Higgins, (Jandowae), Brian Strand and Shaun Fleischfresser (Dalby) and Jason Sinclair (Condamine).



Picture 1: Charlie Bell (TOCAL College) recording evidence from Brian Strand

Interviews were conducted by Charlie Bell and Mark Hickman and each lasted approximately 4 hours in duration. During that period growers provided numerous pieces of BMP evidence to show how they met the stated competency. In some cases the growers needed to supply additional evidence at a later date following interview. However, once this

evidence was supplied to TOCAL College, a Diploma of Agriculture was recommended.

An outcome from some post interview discussions between Mark and Charlie resulted in a few modifications to the RPL interview process and content. In addition it was agreed that a training gap existed. Details on this gap are outlined in the discussion section of this report.



Picture 2: Stuart Higgins outlining to Charlie Bell his BMP record keeping system



Picture 3: Jason Sinclair points out to Mark Hickman the Riparian Management plan he has established

Industry meeting to develop a strategic training framework

At the completion of the pilot RPL interview stage of this project, Helen Dudgeon (Cotton Research and Development Corporation) hosted an industry meeting in Narrabri to review the findings of the FarmBi\$ project. At this meeting, the concept of a Certified BMP Farm manager was discussed with in-principle support from the attendees. Further details, were requested on the functional assessment and implementation of the concept. These aspects will be the subject of further industry discussions.

Secondly, this industry meeting discussed the advancement of developing a national training framework that captures all the cotton industry training activities. These activities include current grower short courses, tertiary and secondary activities, linkages to the VET programs and building on the current industry skill sets yet to be formally recognised. The meeting saw merit in the promotion of RPL assessments within the industry as a way of acknowledging the skills already possessed, with the extra industry benefit of identifying potential training requirements. The process of building this training framework has commenced following the completion of this meeting.

Discussion

Review of the RPL Assessment Interviews.

Initially, there were individual assessment sheets developed for each competency unit (10 in total). However, after conducting the 4 pilot assessments it was decided that the questions and evidence that was being collated was repetitive. A reduction in the number of templates is not undermining the process or reducing the number or quality of competencies addressed in the interview. Rather, it is stream lining the process by merging the assessment sheets into a total of 5 (see appendix 2). Many of the identified competencies allow natural grouping due to the subject matter being addressed.

The review of the interviews also identified a need to change a unit of competency level. The unit 'RTE 5807A Manage Staff' was deemed (based on its content and assessment) to be not a level 5 competency as listed in the training package rather it was much higher level. This

judgement was based on the content outlined in the unit specifications, evidence required and the practices conducted by a Diploma graduate in the field. Subsequently, discussions are underway with Agrifood Skills Industry Council in Canberra to seek alteration of this unit to better reflect the intent of the unit. This discovery was made as a direct result of the Cotton RPL interviews.

In addition, the interviews highlighted an opportunity for industry to develop some targeted training in the area of labour management. Of the four participants in the pilot program, this area was certainly the weakest area. Both Charlie and Mark recommend industry investigate this matter further.

Certified BMP Farm Manager

As previously mentioned there was in-principle support for this concept within the cotton industry. Provided industry endorses the concept fully then this qualification will hopefully stimulate the up take of RPL assessments within the industry. This will mean the uptake of RPL subsidies from Queensland FarmBi\$ will potentially increase. In addition as more RPL assessments occur this may lead to further training gaps being identified for the industry in relation to the BMP program. It could also stimulate more involvement in the BMP process by farmers. With ‘spill-over’ benefits being – more qualified farmers plus improvements to the environment.

The marketing of this VET qualification (Diploma of Agriculture) within the cotton industry would be under the concept name of a “Certified BMP Farm Manager”.

Since this would be a label the cotton industry would relate to and clearly show a BMP contention. Industry discussions are on-going in this matter.

Implications for Queensland

The below table indicates how the agreed performance indicators were met by the project and consequently the relationship to the three Target Industry Initiative objectives.

Table One : Project Implications for Queensland

TII Objectives / Project Outcomes	Performance indicator	How indicator has been met
Direct benefits to Qld. primary producers.	<p>1. Identification of linkages between National Competencies and the Cotton BMP documentation,</p> <p>2. More targeted training for producers in the future</p> <p>3. Industry recognition for producers that undertake training</p>	<p>1. A 116 page mapping report has been commissioned by and supplied to CRDC outlining how the industry’s BMP guidelines align to national training competencies. An executive summary of this report is attached as appendix 1.</p> <p>2. As a Direct result of 4 piloted RPL interviews conducted in QLD, a training gap was identified for industry. The area of labour management, in particular - attracting, recruiting and retaining staff was highlighted.</p> <p>3. Industry discussions are underway to endorse a proposed industry qualification referred to as Certified BMP Farm Manager (CBMPFM). The CBMPFM qualification corresponds to a Diploma of Agriculture from</p>

		the VET sector, based on aligned competencies identified in appendix one. There have been 4 Qld producers involved in the piloted work to develop CBMPFM. All four have received the VET acknowledgement via a Diploma of Agriculture.
Delivery of tangible education and training outcomes	Project will provide strategic information for future training development	Both the development and execution of RPL interviews associated with the CBMPFM and Diploma of Agriculture qualifications has provided industry with a framework for future training. The successful RPL interviews have confirmed the alignment of BMP to training competencies as well as identifying a training gap. Industry discussions have commenced on this matter
Sustainability after the project is completed	Information contributing towards an industry training framework, which will provide increased internal linkages for future training.	The model that has been developed by this project has provided industry with a case study that can be built on. In November 2007, a significant industry meeting was held by CRDC that discussed the concept and potential endorsements of CBMPFM qualification. In addition, the industry commenced discussion on developing an integrated training framework for the Cotton industry.

Recommendations

1. Industry discussions should continue towards the endorsement of the Diploma of Agriculture qualification that will be known within the cotton industry as a Certified BMP Farm Manager.
2. Future industry training should review the BMP competency mapping document for potential alignment.
3. Industry should consider the development of Labour Management training for cotton producers.
4. Industry should promote the option of RPL assessment within the industry. In addition industry should review intelligence gained from RPL interviews to assist in development of future training.
5. As the FarmBi\$ program is closing, Industry should consider the continual investment of strategic projects of this nature. However the project length should be expanded from 12 to a minimum of 24 months. This will allow more substantial projects to be developed.
6. Possible funding sources include: CRDC, Cotton Australia, Cotton CRC; NSW DPI; Qld DPI; DAFF; DEST. These sources will be actively pursued and benefits for each party, outlined by the program managers.

Appendix One : Extract from 116 page Mapping report



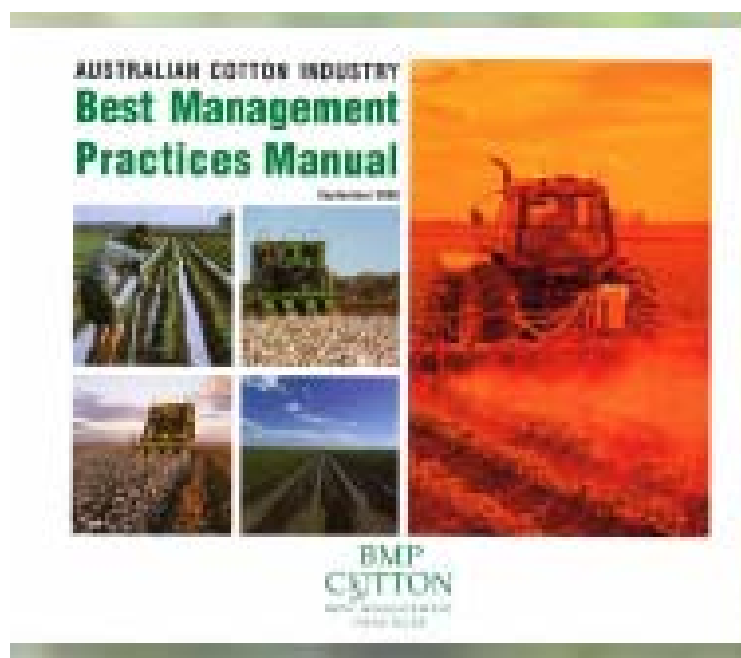
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MAPPING REPORT



Australian Cotton Industry 'BEST MANAGEMENT PRACTICES MANUAL'

Mapped against units of competency from:

- RTD02 Conservation and Land Management Training Package
- RTE03 Rural Production Training Package
- BSB01 Business Services Training Package



Queensland
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The report has been developed by Leslie Mackee (AssentTECS, Brisbane) under the coordination of Mark Hickman (National Cotton Training Coordinator, Department of Primary Industries and Fisheries, Cotton Catchment Communities CRC).

Disclaimer

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Contents

Introduction	9
Aim of the report	9
Process.....	9
Executive Summary of Findings.....	10
Summary table of units of competency	15
Mapping the Best Management Practices Program with relevant units of competency	20
APPLICATION OF PESTICIDES	20
Objective 1 Develop a pesticide application management plan	20
Objective 2 Establish good pre-season communication	21
2.1 Develop a farm map	
2.2 Contact neighbours pre-season	
2.3 Discuss application requirements with consultant pre-season	
2.4 Discuss application requirements with applicator pre-season	
2.5 Discuss application plans with workers pre-season	
Objective 3 Establish good in-season communication	23
3.1 Follow agreed arrangements for in-season communication with neighbours	
3.2 Maintain contact with neighbours	
3.3 Follow agreed arrangements for in-season communication with consultant	
3.4 Follow agreed arrangements for in-season communication with applicator	
3.5 Have someone on site observing each application	
3.6 Ensure the on-site observer is able to communicate with the pilot during the application	
3.7 Ensure workers are aware of applications	
Objective 4 Apply pesticides during appropriate weather conditions	25
4.1 Determine appropriate weather conditions for applying pesticides	
4.2 Monitor and record weather conditions	
4.3 Apply pesticides in appropriate conditions	
4.4 Use buffer zones on the downwind boundary of fields near sensitive areas	
Objective 5 Appropriate product selection and use	27
5.1 Use pesticides that take into account the risks associated with the site being treated	
5.2 Use trained applicators to apply pesticides	
5.3 Apply pesticides according to label directions	
5.4 Use band application early in the season where soil moisture conditions permit	
5.5 Use Integrated Pest Management	
Objective 6 Equipment selection and maintenance	30
6.1 Select nozzles with a low drift potential	
6.2 Calibrate groundrigs for each application	
6.3 Use equipment according to manufacturer's recommendations	
6.4 Maintain equipment in good working order	
Objective 7 Record keeping.....	31

STORAGE AND HANDLING OF PESTICIDES	32
PESTICIDE STORAGE	
Objective 1 An appropriate location for the storage facility	32
Objective 2 An appropriate building for the storage facility	34
2.1 Buildings and sheds	
2.2 Freight containers	
Objective 3 Spill containment	35
Objective 4 Good ventilation	36
Objective 5 Good security	37
Objective 6 Safe work procedures	38
6.1 Container labels and MSDS	
6.2 Work routines	
6.3 Keeping different chemicals separate	
6.4 Good housekeeping	
6.5 The quantity stored and the length of storage	
Objective 7 Establish emergency procedures	41
Objective 8 Appropriate signs	42
MIXING, LOADING AND APPLICATION	43
Objective 9 An appropriate mixing and loading site	43
Objective 10 Good mixing and loading systems and techniques	44
Objective 11 Worker safety during mixing, loading and application	45
11.1 Mixing and loading procedures	
11.2 Application procedures	
Objective 12 Equipment maintenance and cleaning	47
PESTICIDE WASTE	48
Objective 13 Minimise pesticide waste and dispose of any waste properly	48
13.1 Waste prevention	
13.2 Pesticide containers	
13.3 Surplus pesticide concentrates	
13.4 Pesticide formulations left over in the application tank	
13.5 Contaminated pesticide waste	
Objective 14 Safe transport of pesticides	50
INTEGRATED PEST MANAGEMENT	51
Objective 1 Manage the crop for early maturity	51
1.1 Choose appropriate varieties	
1.2 Planting window	
1.3 Avoid excessive nitrogen	
1.4 Use of plant growth regulators	
1.5 Final irrigation timing	

Objective 2 Regularly monitor fields for insects and damage	54
2.1 Check the crop 2-3 times per week during active crop growth	
2.2 Monitor early season plant growth	
2.3 Monitor fruit retention pre-flowering	
2.4 Use recommended insect pest thresholds	
2.5 Use the Lepton test kit	
Objective 3 Preserve beneficial insects	57
3.1 Food sprays and beneficial insect refuges	
3.2 Use the least disruptive insecticide option available	
Objective 4 Prevent the development of insect resistance	60
4.1 Adhere to the Insecticide Resistance Management Strategy	
4.2 Control over-wintering pupae by effective cultivation	
4.3 Regularly monitor all fields for insects and damage	
4.4 Use recommended pest and damage thresholds	
4.5 Monitor fruit retention pre-flowering	
4.6 Do not re-apply an application failure with an insecticide from the same chemical group	
4.7 Be aware of reported resistance levels	
Objective 5 Host and trap crops	67
5.1 Control weeds that host pests	
5.2 Be aware of crops that host pests	
5.3 Trap crops	
Objective 6 Area Wide Management	69
FARM DESIGN AND MANAGEMENT	70
IRRIGATED COTTON	
Objective 1 Minimise erosion, and control water on-farm.....	70
1.1 Limit furrow lengths in accordance with rainfall intensity, slope and soil type	
1.2 Laser level irrigated fields	
1.3 Tail drains should be no more than 0.25 metres below the bottom of the furrow	
1.4 Design culverts to control erosion in both the approach canal and downstream of the culvert	
1.5 Design tailwater return drains and tail drains with sufficiently flat gradients so that water travels at non-erosive velocities	
1.6 Recirculate all tailwater	
Objective 2 Minimise the impact of storms	73
2.1 Develop a farm stormwater management plan	
2.2 Retain at least 15 mm of run-off from the treated area	
2.3 Design canals and drains to hold the maximum amount of (storm) water possible before having to overflow	
2.4 Direct flow from overflow structures and blow out points away from watercourses and wetlands	
DRYLAND COTTON	75
Objective 3 Minimise run-off and erosion	75
3.1 Maintain ground cover	
3.2 Slow down run-off	
3.3 Opportunity cropping	

Objective 4 Control and clean up run-off on-farm	76
4.1 Drainage	
4.2 Buffer zones	
4.3 Temporary ponding	
IRRIGATED AND DRYLAND COTTON	77
Objective 5 Use buffer zones to catch drift from pesticide applications	77
FARM HYGIENE	78
Objective 1 Early detection and notification	78
Objective 2 Clean vehicles and machinery	
Objective 3 An integrated approach to managing disease, weeds and pests	80
Objective 4 Safe destruction of plants affected by Fusarium wilt	82
LAND & WATER MANAGEMENT	84
Objective 1 Assess the farm's resources	84
1.1 Develop a farm map	
1.2 Record resource and property information	
1.3 Review catchment plans	
1.4 Assess risk of landscape (catchment) scale issues	
Objective 2 Good soil management	86
Soil structure	86
2.1 Monitor soil structural condition	
2.2 Avoid traffic on wet soils	
2.3 Use implements that don't cause smearing or compaction	
2.4 Use minimum tillage and controlled traffic	
2.5 Avoid bed shoulder compaction	
2.6 Use crop rotations	
2.7 Use deep tillage as necessary	
2.8 Use soil conditioners as appropriate	
2.9 Increase soil organic matter	
2.10 Avoid sodic water	
2.11 Manage hard-setting soils	
Soil nutrition	90
2.12 Undertake soil and leaf tests	
2.13 Apply nutrients efficiently	
Salinity and sodicity	91
2.14 Monitor and measure soil and water salinity	
2.15 Use high quality water or adopt a conjunctive water use strategy	
2.16 Appropriate field designs	
2.17 Apply water efficiently and uniformly	
2.18 Maximise distribution and storage efficiency	
2.19 Use good seedbed design and plant seeds to avoid saline areas	
2.20 Use soil conditioners	
2.21 Improve soil organic matter	
2.22 Use deep tillage where necessary	
2.23 Minimise recharge and lower the water table where necessary	
Erosion	94

Objective 3 Efficient irrigation	97
Storage and distribution efficiency	97
3.1 Avoid constructing storages and channels on sites with highly permeable soils	
3.2 Proper design and construction of the storage and distribution system	
3.3 Carry out regular inspection and maintenance of the storage and distribution system and fix any detected leaks or inefficiencies	
3.4 Reduce evaporation from farm storages	99
Application efficiency	99
3.5 Irrigate according to crop needs	
3.6 Use soil water monitoring tools	
3.7 Monitor and measure water use, and calculate water use efficiency	
 Objective 4 Efficient furrow irrigation	 100
4.1 Aim for uniform applications	
4.2 Use appropriate application rates	
4.3 Optimise the duration of irrigation	
4.4 Use good field design	
 Objective 5 Efficient drip irrigation	 103
5.1 Plan the drip irrigation system	
5.2 Proper installation of the drip irrigation system	
5.3 Proper operation of the drip irrigation system	
 Objective 6 Efficient centre pivot and lateral move irrigation	 106
6.1 Plan the system	
6.2 Proper system design and installation	
6.3 Proper operation of the system	
 Objective 7 Good native vegetation management	 109
7.1 Obtain development consent if required	
7.2 Highlight areas of native vegetation on the farm map	
7.3 Describe and assess the condition of native vegetation	
7.4 Monitor the condition of native vegetation	
7.5 Protect native vegetation from weeds, pests and other negative impacts	
7.6 Retain mature trees and other important habitat features	
7.7 Re-vegetate where practical	
7.8 Connect areas of native vegetation if possible	
7.9 Identify native animals on the farm	
7.10 Avoid harming native animals	
 Objective 8 Good riparian management	 112
Riparian vegetation management	112
8.1 Retain and protect existing native riparian vegetation	
8.2 Leave dead and fallen trees, and trees with hollows, alone	
8.3 Obtain specialist advice on appropriate plant species and planting locations	
8.4 Consider connecting areas of remnant vegetation	
8.5 Develop a weed management plan	
Stock management	113
8.6 Develop a stock management plan for riparian areas	
8.7 Provide off-stream or purpose built in-stream watering points for stock	
8.8 Exclude or limit stock access to areas with steep or eroded banks, or with dispersible or highly erodable soils	
8.9 Exclude stock from areas being re-vegetated	

Water quality and stream bank stability	114
8.10 Maintain filter strips near major waterways, rivers and streams	
8.11 Identify and manage areas of bank instability and erosion	

1. *Introduction*

The Cotton Research & Development Corporation, Cotton Australia and the Australian Cotton Growers Research Association Incorporated, released the 'Best Management Practices Manual' in 2000. The second edition, (update 1) released in September 2002 forms the basis for this mapping project.

The development and production of the second edition of the Manual has been funded by Australian cotton growers and the Commonwealth Government through a project of the Cotton Research & Development Corporation and Cotton Australia.

An important objective of the Best Management Practices Program has been to prompt people to think about a range of issues relating to the interactions between cotton farming, the environment and the community. This project aims to identify units of competency that can be used to develop future targeted industry training courses and to highlight the possibility for producers to obtain nationally recognised qualifications through the adoption of the industry best management programs.

2. *Aim of the report*

The aim of this report is to provide documentation which details the relationship between units of competency, from the national training packages listed below, and the content of the Cotton Best Management Practices Manual (CBMPM).

Training packages reviewed as part of this project include:

- **RTD02** Conservation and Land Management Training Package
- **RTE03** Rural Production Training Package
- **BSB01** Business Services Training Package

3. *Process*

The process of collecting evidence to establish comparability of skill/knowledge between the CBMPM and nationally recognised units of competency commenced with an overall examination of the CBMPM content and the qualification frameworks of relevant national training packages.

In preparing this report, analysis of the Cotton Best Management Practices Manual has occurred at each of the following levels:

- **Section level e.g. INTEGRATED PEST MANAGEMENT,**
- **Objectives level e.g. Manage the crop for early maturity)** and
- Point level e.g. 1.1 Choose appropriate varieties

These skill and knowledge areas have then been linked to an element and performance criteria in a unit (or units) of competency.

Analysis has identified areas of the Cotton Best Management Practices Manual that can be aligned, either fully or partially, to specific units of competency. Each of these units turn belong to specific nationally recognised qualifications contained in the training packages listed above.

The table on pages 15 – 19 provides a list of all units of competency that appear in the mapping. The table provides the full unit descriptor which explains what competency standard covers.

On page 19 mapping of the CBMPM with the relevant unit, commences.

4. Executive Summary of Findings

The following table provides a summary of the extent to which each of the identified units of competency are addressed throughout the Best Management Practices Manual. The aim of the table is to provide a

For a detailed description of each of the units please refer to the table on pages 15 - 19

Unit Name & Code	Coverage	Comment
RTE5516A Develop a whole farm plan (Rural Production Training Package)	Element 2: PC 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8 Element 3: PC 3.1, 3.2 Element 4: PC 4.1, 4.2, 4.3, 4.4, 4.5 Element 5: PC 5.1	<i>This unit is substantially covered in the BMP Manual</i> <i>Element 1: Determine directions for the businesses-</i> <i>would automatically be covered by the property owner or manager. So while it has not been mapped to the BMP credit would be achieved through normal workplace practices.</i>
RTC4703A Plan and implement a chemical use program (Conservation and Land Management Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4, 1.5 Element 2: PC 2.2, 2.3, 2.4, 2.5 Element 3: PC 3.1, 3.2, 3.3 Element 4: PC 4.1, 4.2, 4.3 Element 5: PC 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7 Element 6: PC 6.1, 6.2 Element 7: 7.1	<i>This unit is substantially covered in the BMP Manual</i> <i>Element 8 which deals with 'Implement recording systems for chemical storage and use' has not been mapped as part of the BMP, however credit would be achieved through normal workplace practices</i>
RTC5702A Develop and manage a chemical use strategy (Conservation and Land Management Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4 Element 3: PC 3.3, 3.4	<i>This unit is only partially covered in the BMP Manual. It comprises 5 Elements. The following elements have not been mapped:</i> <i>Element 2. Develop a chemical use risk management strategy</i> <i>Element 4. Identify training and supervision needs and solutions for chemical use in the workplace</i> <i>Element 5. Monitor and evaluate the implementation of a chemical use strategy.</i>
RTC3704A Prepare and apply chemicals (Conservation and Land Management Training Package)	Element 2: PC 2.1, 2.2, 2.3, 2.4, 2.5 Element 4: PC 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7	<i>This unit has limited coverage in the BMP Manual.</i> <i>This unit is at Cert III level only 2 of 6 elements have been mapped</i>

Unit Name & Code	Coverage	Comment
RTC3705A Transport, handle and store chemicals (Conservation and Land Management Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4, 1.5 Element 2: PC 2.1, 2.2, 2.3, 2.4, 2.5 Element 3: PC 3.1, 3.2, 3.3	<i>This unit is completely covered in the BMP Manual.</i> This unit is at Cert III level
RTC4702A Minimise risks in the use of chemicals (Conservation and Land Management Training Package)	Element 2: PC 2.1, 2.2 Element 3: PC 3.5	<i>This unit has limited coverage in the BMP Manual.</i> Only partial mapping of 2 of 6 elements has been achieved
RTE5014A Manage agricultural crop production (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4, 1.6 Element 2: PC 2.4, 2.5 Element 3: PC 3.1, 3.5	<i>This unit is substantially covered in the BMP Manual.</i> <i>Element 4 which deals with 'Review production levels' should be covered by the property owner or manager. So while it has not been mapped to the BMP credit would be achieved through normal workplace practices.</i>
RTE4018A Supervise agricultural crop establishment (Rural Production Training Package)	Element 2: PC 2.3 Element 3: PC 3.1	<i>This unit has limited coverage in the BMP Manual.</i> Only partial mapping of 2 of 4 elements has been achieved
RTE4401A Control Weeds, pests and/or diseases in crops (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4, 1.5, 1.6 Element 2: PC 2.3, 2.4, 2.5 Element 3: PC 3.1, 3.2, 3.3 Element 4: PC 4.1, 4.2, 4.3, 4.4, 4.5, 4.6	<i>This unit is substantially covered in the BMP Manual.</i> <i>Element 5 which deals with 'Complete weed, pest and/or disease control operations' should be covered by the property owner or manager. So while it has not been mapped to the BMP credit would be achieved through normal workplace practices</i>
RTE5006A Plan and manage long-term weed, pest and/or disease control in crops (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4, 1.5, 1.6 Element 2: PC 2.1, 2.2, 2.3, 2.4, 2.5 Element 3: PC 3.1, 3.2, 3.3 Element 4: PC 4.1 Element 5: PC 5.1, 5.2, 5.3 Element 6: PC 6.1, 6.2, 6.3	<i>This unit is substantially covered in the BMP Manual.</i>

Unit Name & Code	Coverage	Comment
RTE5524A Develop and implement sustainable land use strategies (Rural Production Training Package)	Element 3: PC 3.3, 3.4, 3.5 Element 4: PC 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9 Element 5: PC 5.1, 5.2	<i>This unit is substantially covered in the BMP Manual. Element 1 which deals with 'Assess requirements for improved land use' and Element 2 which deals with 'Prepare to improve land use' should be covered by the property owner or manager. So while it has not been mapped to the BMP credit would be achieved through normal workplace practices.</i>
RTE4603A Implement an irrigation-related environmental protection program (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3 Element 2: PC 2.1, 2.2, 2.3, 2.4 Element 3: PC 3.1, 3.2, 3.3, 3.4	<i>This unit is substantially covered in the BMP Manual. Element 4 which deals with 'Implement and monitor procedures for maintaining environmental protection records' should be covered by the property owner or manager. So while it has not been mapped to the BMP credit would be achieved through normal workplace practices.</i>
RTE4511A Develop a soil use map for a property (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7 Element 2: PC 2.2, 2.3 Element 3: PC 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9	<i>This unit is completely covered in the BMP Manual.</i>
RTF5521A Monitor and manage soils (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3 Element 3: PC 3.1, 3.2, 3.3, 3.4	<i>This unit has some coverage Element 2 which deals with 'Apply information from soil testing to production and/or management plan' and Element 4 which deals with 'Monitor soil amendment strategies' have not been mapped but may be achieved through normal workplace practices.</i>
RTE5604A Develop an irrigation and drainage management plan (Rural Production Training Package)	Element 2: PC 2.1, 2.2, 2.3, 2.4, 2.5 Element 3: PC 3.1, 3.2, 3.3, 3.4, 3.5, 3.6 Element 4: PC 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7	<i>This unit is completely covered in the BMP Manual. Element 1 deals with 'Compile property background information' which the property owner or manager would have</i>

Unit Name & Code	Coverage	Comment
RTE5604A Develop an irrigation and drainage management plan cont. (Rural Production Training Package)	Element 5: PC 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7 Element 6: PC 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7	<i>This unit is completely covered in the BMP Manual. Element 1 deals with 'Compile property background information' which the property owner or manager would have</i>
RTE3605A Troubleshoot irrigation systems (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3, 1.4	<i>This unit has limited coverage in the BMP Manual. This unit is at Cert III level only 1 of 4 elements have been mapped</i>
RTE4605A Schedule irrigations (Rural Production Training Package)	Element 1: PC 1.1, 1.2 Element 2: PC 2.1, 2.2, 2.3 Element 3: PC 3.1, 3.2, 3.3, 3.4	<i>This unit is substantially covered in the BMP Manual. Element 4 which deals with 'Record irrigation and scheduling parameters' and Element 5 which deals with 'Plan for extremes of weather', should be covered by the property owner or manager through normal workplace practices.</i>
RTE4609A Implement, monitor and adjust irrigation schedules (Rural Production Training Package)	Element 1: PC 1.1, 1.2, 1.3 Element 4: PC 4.1, 4.2 Element 5: PC 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8	<i>This unit has some coverage in the BMP Manual. The following elements have not been mapped. 2 Check water supply and availability 3. Implement irrigation shifts 5. Monitor irrigation system process as specified by enterprise policy and procedures 6. Record irrigation information and activities as specified by enterprise policy. These tasks may be covered by the property owner or manager through normal workplace practices.</i>

In addition the RTC - Conservation and Land Management Training Package units and the RTE - Rural Production Training Package units listed in the table above, participation in the BMP would necessarily develop the 'business skills' of participants.

Analysis of the Rural Production Training Package revealed several 'business' units that should be considered in the overall mapping of the BMP. While the mapping of the BSB units, from the Business Services Industry Training Package, has not occurred at element and performance criteria level, their relevance should not be overlooked.

The following units have been identified as having significant application to the BMP program. They address performance related to environmental issues.

- **BSBCM413A Implement and monitor environmental policies**

This unit covers the implementation and monitoring of the organisation's environmental policies and procedures as an integral part of the organisation's business program. Those who work or who expect to work in a supervisory capacity would be advised to undertake this unit.

- **BSBMGT507A Manage environmental performance**

This unit covers the development, maintenance and evaluation of the organisation's environmental policies and procedures in regard to environmental sustainability as an integral part of business planning.

- **BSBMGT610A Manage environmental management systems**

This unit covers the scoping, establishment and review of the organisation's environmental management systems in regard to environmental sustainability as an integral part of business planning.

- **BSBFLM509A Promote continuous improvement**

Frontline management has an active role in managing the continuous improvement process in achieving the organisation's objectives. Their position closely associated with the creation and delivery of products and services, means that they play an important part in influencing the on-going development of the organisation. At this level, work will normally be carried out within complex and diverse methods and procedures which require the exercise of considerable discretion and judgement, using a range of problem solving and decision making strategies.

- **BSBMGT603A Review and develop business plans**

This unit covers those areas of business planning and system review undertaken by an operational manager and incorporates the development of various tactical and operational plans incorporating risk management plans.

- **BSBMGT609A Manage risk**

This unit covers the development, implementation and evaluation of a risk management plan for the organisation. It incorporates an assessment of all potential risks facing the organisation and the development of strategies and plans to mitigate all risk situations through elimination, isolation or protection. This unit provides a foundation for other Strategic Management units.

- **BSBSBM405A Monitor and manage business operations**

This unit is concerned with the operation of the business and with implementing the business plan. The strategies involve monitoring, managing and reviewing operational procedures. It is suitable for existing micro and small businesses or a department in a larger organisation.

Consideration should also be given to other 'general' business units which deal with the day to day operation of a business. These include task / skills such as managing finance, preparing budgets and financial plans and recruiting personnel. Units which cover general business management skills have been imported into the Rural Production Training Package (Volume 5) and contribute to a variety of qualifications at Certificate IV, Diploma and Advanced Diploma level qualifications. Managers participating in the BMP program would almost certainly have these skills and can therefore have them recognised as contributing to a relevant qualification.

The table below provides a summary description of the units of competency which are referenced in the mapping the Best Management Practices Program.

Unit Code & Name	Unit Descriptor
<ul style="list-style-type: none"> ▪ RTE5516A Develop a whole farm plan 	<p>This competency standard covers the process of developing a whole farm plan for a rural enterprise. It requires the ability to determine directions for the business, audit the natural resources of the property, monitor legal requirements impacting on the management of the property, and develop management strategies to address natural resource management issues. Developing a whole farm plan requires knowledge of SWOT analysis, sustainable land management practices, property planning processes and approaches, land capability, conservation management strategies, legal requirements and risk management</p>
<ul style="list-style-type: none"> ▪ RTC4703A Plan and implement a chemical use program 	<p>This competency standard covers the process of planning and implementing a program for the use of chemicals in a workplace. It involves using chemicals as well as supervising others in the use of chemicals concerned, and the ability to modify application requirements as needed. It involves decision making in regards to the risk control measures to be applied when using chemicals in different situations, monitoring safety procedures, and ensuring that others are trained sufficiently in the use of the chemical concerned. It involves the selection and management of chemical application systems.</p>
<ul style="list-style-type: none"> ▪ RTC5702A Develop and manage a chemical use strategy 	<p>This competency standard covers the process of developing, implementing and managing a chemical use strategy. High level skills include risk analysis, risk control, risk management, use of Integrated Pest Management, Integrated Resistance Management, Animal Health Management and communication are required. Extensive knowledge of equipment and its use, legislation, regulations and safety procedures associated with chemical use is also needed.</p>
<ul style="list-style-type: none"> ▪ RTC3704A Prepare and apply chemicals 	<p>This competency standard covers the process of preparing and applying chemicals for the control of weeds, pests and diseases. It requires knowledge of the chemicals related to the workplace, the hazards and risks involved in their use, and the specific safety procedures prescribed for working unsupervised within organisational guidelines. It requires the ability to handle and apply chemicals ensuring minimum risk to self, others and environment and accurately record their use.</p>

Unit Code & Name	Unit Descriptor
<ul style="list-style-type: none"> ▪ RTC3705A Transport, handle and store chemicals 	<p>This competency standard covers the process of transporting, handling and storing chemicals safely without supervision. It requires minimising risks, including avoiding spills and accidents, and following procedures, safety and environmental</p>

	regulations, and Occupational Health and Safety (OHS) requirements to protect the health and safety of everyone in the workplace when handling chemicals. It requires knowledge of the chemicals used in a particular environment and the hazards involved in their handling and storage
<ul style="list-style-type: none"> ▪ RTC4702A Minimise risks in the use of chemicals 	This competency standard covers the processes of developing, implementing and monitoring a risk control strategy in a workplace where chemicals are being handled and used. It requires knowledge of legislation and regulations surrounding chemical use, the ability to develop and implement procedures to ensure minimum risk to users, the environment and the produce, and the ability to carry out a risk assessment
<ul style="list-style-type: none"> ▪ RTE5014A Manage agricultural crop production 	This competency standard covers the work required to manage agricultural crop production. It requires the application of skills and knowledge to develop agricultural crop establishment, maintenance and harvesting plans. It also involves the implementation of strategies to ensure the sustainability of the land and an awareness of resource use, as well as the capacity to introduce specific control measures to deal with infestations.
<ul style="list-style-type: none"> ▪ RTE4018A Supervise agricultural crop establishment 	This competency standard covers the work involved in supervising the establishment of agricultural crops. It includes sourcing information for input to the plan, as well as preparing the plan itself, communicating it to the people who will sow the crop, and monitoring the planting operations as they happen. It requires the need to monitor and adjust the plan in response to changing situations, and to subsequently evaluate, and report on, the outcomes of the planting operation
<ul style="list-style-type: none"> ▪ RTE4401A Control Weeds, pests and/or diseases in crops 	This competency standard covers the process of planning for the control of weed, pests and/or disease, including first assessing the extent of the infestations impact on the crop. It includes implementing the control operations according to pre-determined strategies, and using contract or staff personnel. It requires the need to monitor and adjust the plan in response to changing situations, and to subsequently evaluate, and report on the outcomes of the weed, pest and/or disease control measures taken.
Unit Code & Name	Unit Descriptor
<ul style="list-style-type: none"> ▪ RTE5006A Plan and manage long-term weed, pest and/or disease control in crops 	This competency standard covers the process of planning for long-term weed, pest and/or disease control, and then managing the implementation of such a plan. It includes the need to provide input to planning processes that may be occurring elsewhere in the organisation, and to determine the scheduling for implementation. It requires the need to monitor and adjust the plan in response to changing situations, and to subsequently evaluate the outcomes of the weed, pest and/or disease control measures taken.

<ul style="list-style-type: none"> ▪ RTE5524A Develop and implement sustainable land use strategies 	<p>This competency standard covers the process of assessing land requirements and improving the land under production. It includes the requirements to apply a range of sustainable growing practices according to the industry's codes of practice and conduct, and consistent with State and Territory legislation. When achieved, the work in this standard leads to the long-term economic viability of land under production.</p>
<ul style="list-style-type: none"> ▪ RTE4603A Implement an irrigation-related environmental protection program 	<p>This competency standard covers the process of implementing procedures to reduce the impacts of irrigation and drainage systems on the environment, and responding to potential and actual environmental pollution events. It requires the ability to apply and comply with environmental requirements, provide and explain information on the irrigation and drainage environmental plan, explain and demonstrate enterprise environmental record systems and procedures, and calculate stormwater control requirements. Implementing an irrigation-related environmental protection program requires knowledge of environmental legislation, regulations and guidelines, environmental impacts of irrigation, using water from any ground or underground source, and OHS procedures.</p>
<ul style="list-style-type: none"> ▪ RTE4511A Develop a soil use map for a property 	<p>This competency standard covers the process of determining soil characteristics and developing soil maps to illustrate the characteristics of a property in order to identify any areas of concern, and to assist in making decisions about plants/crops, irrigation and drainage. This is usually without supervision but with general guidance on progress. It requires knowledge of soil testing, the environmental impact of irrigating and the ability to use soil and water testing techniques. The outcomes of this process will inform decisions relating to whole farm planning.</p>
<p>Unit Code & Name</p>	<p>Unit Descriptor</p>
<ul style="list-style-type: none"> ▪ RTF5521A Monitor and manage soils 	<p>This competency standard covers the process of monitoring and managing soils. It requires the ability to research information, prepare plans for crops/plants, collect soil and/or media samples, perform basic soil tests, interpret results from own or laboratory tests, and record and store information. It requires knowledge of soil types, soil physical properties, soil chemical properties, plant nutrition through soil management, soil conservation strategies and sustainable production techniques, basic soil field tests, soil sampling techniques, interpreting laboratory results, techniques to ameliorate soil properties, and record keeping.</p>
<ul style="list-style-type: none"> ▪ RTE5604A Develop an irrigation and 	<p>This competency standard covers the process of compiling information on a property, and using</p>

<p>drainage management plan</p>	<p>this information to develop an irrigation and drainage management plan (IDMP) with specifications for a new or up-graded irrigation and drainage system where this is needed. It requires the ability to compile and analyse complex information, interpret statistical data and measurements, develop plans and reports, and use a range of irrigation and information management software. Developing an irrigation and drainage management plan requires knowledge of measuring and monitoring procedures, soil/plant/water relationships, readily available water, water table and salinity, methods and techniques of irrigation, irrigation system options, and computerised irrigation systems.</p>
<ul style="list-style-type: none"> ▪ RTE3605A Troubleshoot irrigation systems 	<p>This competency standard covers the process of troubleshooting faults and blockages in irrigation systems. It requires the ability to read and apply system specifications, technical manuals and supply/spare parts inventories, operate, maintain and repair irrigation systems, and record and report maintenance activities. Troubleshooting faults and blockages in irrigation systems requires knowledge of characteristics and operation of replaceable components of irrigation systems, system malfunctions and their likely causes, isolation procedures and OHS and environmental guidelines.</p>

Unit Code & Name	Unit Descriptor
<ul style="list-style-type: none"> ▪ RTE4605A Schedule irrigations 	<p>This competency standard covers the process of determining the timing and amount of each irrigation to meet crop or plant needs and environmental requirements. It requires the ability to use and maintain in-field equipment that monitors the plant environment, incorporate data from monitoring sources into scheduling systems, monitor crop/plant water use, assess efficacy of irrigation, record irrigation and scheduling parameters, and plan for extremes of weather.</p> <p>Scheduling irrigation requires knowledge of inter-relationship between plant, soil and the aerial environments in the determination of water budgets, plant responses to moisture stress, possible adverse impacts on the crop and environment from inefficient scheduling or unpredictable weather effects, recognition of moisture stress effects, physical soil characteristics, and weather forecasting.</p>
<ul style="list-style-type: none"> ▪ RTE4609A Implement, monitor and adjust irrigation schedules 	<p>This competency standard covers the process of implementing watering shifts, monitoring factors that influence water requirements and adjusting the irrigation schedule to accommodate changes in those factors, without supervision but with general guidance on progress. It requires the ability to use enterprise monitoring equipment, access irrigation data, plot and read graphic data, measure and interpret environmental data, estimate water availability for plants/crops, and read and apply map data to property features.</p> <p>Implementing, monitoring and adjusting irrigation schedules requires a knowledge of crop and plant health, weather patterns, irrigation monitoring procedures, soil water retention testing techniques, monitoring irrigation surface runoff and infiltration due to soil type and terrain, water quality monitoring methods and techniques, and water authority standards and procedures.</p>

Appendix Two: RPL Assessment Sheets
BSBSBM405A Monitor and manage business operations
(Cotton BMP Manager)

This unit is concerned with the operation of the business and with implementing the business plan. The strategies involve monitoring, managing and reviewing operational procedures

<p>A ANSWER</p>	<p>Can you answer questions such as these?</p> <ol style="list-style-type: none"> 1. How do you develop operational strategies from your business plan? 2. What business information and records do you use to manage operations? 3. How is this information managed? 4. What do you implement operational strategies? 5. How do you monitor business performance? 6. How do you maintain professional networks? 7. How often do you review your business plan, strategies and operational plans? 8. How do is this done?
<p>S SHOW</p>	<p>Can you show or demonstrate this particular unit to the assessor? At the time of your workplace visit the assessor may want to see you...</p> <ul style="list-style-type: none"> • Sight office • Sight record keeping systems
<p>S SAMPLES</p>	<p>Can you provide samples of your work in this unit? At the time of your workplace visit please provide samples for the assessor such as:</p> <ul style="list-style-type: none"> • Business plans, • Business reviews and monitoring reports. • Financial analysis • Production plans • Field management plans • Production records • Benchmarking reports • Crop monitoring records • Climate records
<p>E EXPERIENCE</p>	<p>What is your experience in this unit?</p> <p>Please prepare a dot point summary of relevant experience in this unit. This could include details of your work such as:</p> <ul style="list-style-type: none"> • Developing operational strategies • Implementing operational strategies • Monitoring business performance • Maintaining networks • Reviewing business operations

<p>S SUPPORT</p>	<p><i>Can you get support from others to help verify your competency?</i></p> <ul style="list-style-type: none"> • References from team leaders or line managers, verifying your experience and good practice in managing business operations, will help to validate your application. These references should address relevant performance criteria for this unit of competency. • Authentication of your evidence samples eg signed by your line manager will be important if other contact with your line manager is not possible.
<p>S STUDIES</p>	<p><i>Have you done any formal or informal training in this unit?</i></p> <ul style="list-style-type: none"> • If you have undertaken relevant studies, the subject outlines and copies of your results should be made available. (eg TAFE or other training organisation's subjects) • Your personal profile should list key seminars and workshops or other informal study activities that have assisted you to acquire this competency.

Crop and Pest Management for BMP Accredited Farm Managers

This ASSESS Sheet addresses the following Units of Competence:

<p>RTE5014A: Manage crop production</p> <p>This unit covers planning, implementing and managing crop production.</p>	<p>RTE5006A: Plan and manage long-term weed, pest and / or disease control in crops</p> <p>This unit covers identifying current and future weed, pest and disease problems in crops and planning their control management for the long-term.</p>
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<p>A ANSWERS</p>	<p><i>Can you answer questions such as these?</i></p> <ol style="list-style-type: none"> 1. How do you develop your production targets and field plans? 2. What are your most significant pests, diseases and weeds. 3. How do these affect short and long term crop planning? 4. What test results, production records and other information do you use? 5. What characteristics do you consider when evaluating a alternative crop or variety? 6. Outline strategies employed to reduce or eradicate weeds, insects and disease infestations. 7. How do you ensure optimum timing of cultural operations? 8. How do you determine economic threshold levels for pest controls? 9. What budgetary constraints impact upon your planning? 10. What crop management strategies do you use to improve environmental sustainability? (eg avoid soil degradation, reduce weeds pests and diseases, avoid resistance) 11. What evidence do you have about the relative performance of your enterprises vs. those from other comparable properties (eg Benchmarking)? 12. How do you monitor new developments and use these improve your management? 13. How do you monitor irrigation, drainage and other systems? 14. What integrated pest management strategies do you use? 15. What strategies do you use to minimise the use of chemicals? 16. What procedures do you follow to ensure the safe and effective use of chemicals? 17. What benchmarks do you use to check the efficiency of your control program? 18. What would you do if you had a pest control failure? <p><i>Your assessor will use the above questions to initiate discussion during your assessment interview. Your responses will help confirm that you have the required breadth and depth of knowledge related to this unit.</i></p>

S

SHOW

Can you show or demonstrate this particular unit to the assessor? At the time of your workplace visit your assessor may want you to...

- Observe refuge areas for transgenic cotton production
- Roundup Ready signage and management protocols
- Sight evidence of good farm hygiene
- Sight farm chemical store
- Sight MSDS's, labels etc
- Sight safety systems
- Clean down schedules and wash-down bay
- "Come clean go clean" procedures
- Software used in pest management
- Sight field equipment and machinery
- Sight irrigation equipment, moisture and weather monitoring equipment
- Tour farm, sight and discuss field preparation etc
- Sight crops

S

SAMPLES

Can you provide samples of your work in this unit? At the time of your workplace visit please provide samples for the assessor such as:

- Pesticide Application Management Plan.
- Farm plan showing Roundup ready and Bollguard areas.
- Bollguard Shortcourse Statement of Attainment.
- Roundup Ready Statement of Attainment.
- IPM Shortcourse Statement of Attainment.
- Relevant OHS policies and procedures.
- Legislative requirements for the control of pests, diseases and weeds.
- Diaries (records of paddock treatments etc).
- Pest, disease and weed monitoring records.
- Records of chemical applications and results.
- Records of application and the outcome of nutrient applications.
- Records or data related to the selection of chemical groupings to avoid resistance in weeds.
- A copy of the weed / pest / disease control plan.
- Historical production records, gross margins and current field plans.
- Soil test, tissue test results.
- Analyses of production data eg benchmarking.
- Irrigation and moisture monitoring records
- Analyses of new products, technologies, crops / crop varieties.
- Staff work plans
- Soils surveys and maps.
- Defoliation, picking and harvest records

Please note:

The above are examples of the products and materials that would assist you to confirm your competency. They are listed as ideas to trigger your collation of evidence. Not all will be relevant to your situation.

<p>E EXPERIENCE</p>	<p><i>What is your experience in this unit?</i></p> <p>Experience in managing agricultural crop production is essential. Please prepare a dot point summary of relevant related activities in which you have been involved. The list must include details of any work or study related to managing agricultural crop production.</p>
<p>S SUPPORT</p>	<p><i>Can you get support from others to help verify your competency?</i></p> <p>It will be important for your assessor to discuss and confirm your experience related to this unit with an appropriate observer. Your assessor will specifically refer to the performance criteria stipulated in this unit of competency.</p>
<p>S STUDIES</p>	<p><i>Have you done any formal or informal training in this unit?</i></p> <ul style="list-style-type: none"> • If you have undertaken relevant studies, the subject outlines and copies of your results should be made available. (eg TAFE subjects, Ag College units, etc) • Your personal profile should list key seminars, workshops, conferences and other informal study activities that have assisted you to acquire this competency. Relevant programs would include those related to managing agricultural crop production.

Farm and Irrigation Planning for BMP Accredited Farm Managers

This ASSESS Sheet addresses the following Units of Competencies:

<p>RTE5516A: Develop a whole farm plan</p> <p>This unit covers accurately assessing the physical and natural resources on the farm and planning consistent with the business plan are developed for the prevention and remedy of any degradation.</p>	<p>RTE5604A: Develop an irrigation and drainage management plan</p> <p>This unit covers planning and designing cotton farm irrigation to maximise sustainable productive outputs within farm planning goals.</p>	<p>RTE5524A: Develop and implement sustainable land use strategies</p> <p>This unit covers using knowledge of physical features of a property to make informed decisions on land use and implement strategies to protect existing land.</p>
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<div style="font-size: 48px; font-weight: bold; margin-bottom: 5px;">A</div> <div style="font-weight: bold; margin-top: 0;">ANSWERS</div>	<p><i>Can you answer questions such as these?</i></p> <ol style="list-style-type: none"> 1. What is the value of a farm plan and how is this integrated into your farm management? 2. Who are the key stakeholders who should contribute to the development of a whole farm plan? 3. What information did you use to analyse your key farm resources ie water quality, soil structure, soil fertility etc? 4. What are the existing restrictions on your land use and what legislation/regulations did you need to consider in developing your plans? 5. How do you evaluate any new innovations and incorporate them into the farm plan? 6. What main issued did you consider when planning the farm layout and irrigation and drainage system? 7. What natural resources may be at risk on your property and what steps would do you take to protect them? 8. How do you identify sensitive areas? 9. What is the security of your water supply? 10. Is water quality an issue on your property? 11. Do you have variations of soil type and how did soil types influence the design of your system? 12. How do you correct soil problems? 13. What measures do you employ to reduce siltation? 14. What systems are in place to manage stormwater? 15. Why did you choose to adopt your current irrigation design? 16. How did you match your production objectives with the availability of water? 17. Have you made any changes, modification or improvements to your farm layout or irrigation over the past 5 - 10 years 18. What operational changes have you implemented as a result of your plans? 19. What are the potential risks to your farm's natural resources? 20. How often are plans reviewed and revised? 21. Have you undertaken any benchmarking of your irrigation system? 22. What changes have you made as a result of benchmarking 23. How do you prioritise planned changes to farm improvements / structures? <p><i>Your assessor will use the above questions to initiate discussion during your assessment interview. Your responses will help confirm that you have the required breadth and depth of knowledge related to this unit.</i></p>
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<p>S</p> <p>SHOW</p>	<p>Can you show or demonstrate this particular unit to the assessor? At the time of the workplace visit your assessor may want you to...</p> <ul style="list-style-type: none"> • Conduct a farm tour and identify the key features from your whole farm plan. • Explain how the long-term directions and purposes of the business were established. • Sight property maps to illustrate locality, property boundaries, topography, infrastructure, natural resources, irrigation system layout and proposed new system and drainage. • Discuss the physical characteristics of the property's soil and a soil map of the property. • Summarise and discuss land capability, natural property features and infrastructure, soil degradation and areas at risk, native vegetation, endangered species and other natural resource issues. • Overview the property improvement plans and the areas they address e.g. land degradation, water supply, weed and pest control, etc. • Sight information collected on infrastructure, topography, strengths and weaknesses of the property and local planning issues. • Sight information collected on natural resources e.g. soil surveys, soil erosion, water resources, ground water, salinity and climatic characteristics. • Discuss enterprise cropping and planting e.g. suitable soil and water, irrigation, water budgets, current yields, benchmark yields, targets and crop rotation. • Discuss existing irrigation and drainage systems e.g. evaluation of current system, benchmark systems, scheduling procedures, drainage management and areas for improvement. • Demonstrate ideas for an irrigation and drainage management plan with specifications for a new or up-graded system. • Show examples of changes in management practices to achieve a more a sustainable environment
<p>S</p> <p>SAMPLES</p>	<p>Can you provide samples of your work in this unit? At the time of your workplace visit please provide samples for the assessor such as:</p> <ul style="list-style-type: none"> • BMP Land and Water Module assessment sheet • Irrigation Drainage Management Plan • Stormwater management plan • Riparian Zone management plan • Whole farm plan – farm maps. (incl. sensitive areas) • Soils surveys and maps • Soil test results • Pesticide Application Management Plan • Inventories of physical and natural resources. • Rehabilitation plans for degraded natural resources. • Records of new and remedial works carried out. • Property improvement plans. • Approvals and permits as relevant. • Capital development plan related to the installation of your system. • Budgets (water and financial). • Excavation records • Water storage records, scheduling plans, photos. • Cropping records • Field records, water use records. • Use of moisture meters and other sensors. • OHS documents. <p><i>Please note: The above are examples of the products and materials that would assist you to confirm your competency. They are listed as ideas to trigger your collation of evidence. Not all will be relevant to your situation.</i></p>

<p>E EXPERIENCE</p>	<p><i>What is your experience in this unit?</i></p> <p>Experience in developing a whole farm plan is essential. Please prepare a dot point summary of relevant related activities in which you have been involved. The list must include details of any work or study related to developing a whole farm plan.</p>
<p>S SUPPORT</p>	<p><i>Can you get support from others to help verify your competency?</i></p> <p>It will be important for your assessor to discuss and confirm your experience related to this unit with an appropriate observer. Your assessor will specifically refer to the performance criteria stipulated in this unit of competency.</p>
<p>S STUDIES</p>	<p><i>Have you done any formal or informal training in this unit?</i></p> <ul style="list-style-type: none"> • If you have undertaken relevant studies, the subject outlines and copies of your results should be made available. (eg TAFE subjects, Ag College units, etc) • Your personal profile should list key seminars, workshops, conferences and other informal study activities that have assisted you to acquire this competency. Relevant programs would include those related to developing a whole farm plan.

Risk Management for BMP Accredited Farm Managers

This ASSESS sheet addresses the following Units of Competence:

<p>BSBMGT609A: Manage risk This Units covers the development, implementation and review of risk management plans for the farm business. It include assessment of risks, development of action plans to control or eliminate risks</p>	<p>RTC5701A: Establish and maintain the enterprise OHS program This unit covers the process of establishing and maintaining the enterprise Occupational Health and Safety (OHS) program.</p>	<p>RTC5702A: Develop and manage a chemical use strategy This unit covers the process of developing, implementing and managing a chemical use strategy. High level skills including risk analysis, risk control, risk management, use of Integrated Pest Management, Integrated Resistance Management, and communication are required.</p>
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<p style="text-align: center;">A</p> <p style="text-align: center;">ANSWERS</p>	<p><i>Can you answer questions such as these?</i></p> <ol style="list-style-type: none"> 1. What are the major internal and external risks directly affecting your farm and business? 2. How do you identify, evaluate and prioritise risks on your farm? 3. How do you identify and deal with potential OHS risks? 4. What is the procedure for implementation of OHS in the workplace? 5. How do you monitor and evaluate Pesticide use and OHS compliance in the workplace? 6. How did you identify and evaluate need for chemical use? 7. What chemical use strategies have you developed and managed? 8. What risk factors and control measures were considered in the development of this chemical use strategy? 9. How do you integrate IPM and resistance management principles in chemical use risk management? 10. How do meteorological factors impact on the effectiveness of chemical strategies? 11. How do you manage empty containers? 12. How do you use BMP to assist in management of chemical use? 13. What Legislation is relevant to your risk management systems? 14. How is risk management integrated into broader farm planning and management activities? 15. How do you provide staff training in all the different areas of risk management? 16. How do you ensure compliance with policy/processes related to risk management plan? 17. How frequently do you review and revise all the components of your risk management plans?
<p style="text-align: center;">S</p> <p style="text-align: center;">SHOW</p>	<p><i>Can you show or demonstrate this particular unit to the assessor? At the time of your workplace visit the assessor may want to</i></p> <ul style="list-style-type: none"> • Inspect chemical store and application equipment. • Observe safety equipment. • Sight signage. • Sight PPE. • Crops and weed/disease/pest control operations • Weather monitoring equipment and facilities • Sight documentation and records relating to risk management • Discuss how risks are identified and evaluated

<p style="font-size: 48pt; text-align: center;">S</p> <p style="text-align: center;">SAMPLES</p>	<p><i>Can you provide samples of your work in this unit? At the time of your workplace visit please provide samples for the assessor such as:</i></p> <ul style="list-style-type: none"> • Pesticide Application Management Plan • Cotton Pesticide Management Guidelines publications • Safe Work Method Statements or Standard Operating Procedures • OH&S induction documentation and procedures • Records of staff plant tickets, certifications and qualifications • Pesticide application records • MSDS's and chemical labels • Chemical Storage policies and inventory • Plans and maps used to manage field applications • Risk management strategy for chemical use. • Information on procedures and precautions in the management and use of chemicals that you have distributed to relevant staff. • Records of monitoring and evaluation of chemical use strategy. • Relevant legislative / organisational compliance reports. • Staff induction records • Vehicle and equipment log books • OHS or other risk audits conducted. • Reports of near misses / safety. • Accident and injury records • Records or minutes of OH&S meeting • Records of work undertaken to implement OHS changes. • Records of analysis if market risks • Price risk management strategies • Records of analysis of climatic risks • Records of weed, disease and pest management planning • Records of plans and actions taken to manage risk • Correspondence with consultants with appropriate expertise • Specialised risk investigation and advice documentation • Maintained risk register with incident recording and statistical analysis • Records of staff or management meetings or correspondence addressing risks
<p style="font-size: 48pt; text-align: center;">E</p> <p style="text-align: center;">EXPERIENCE</p>	<p><i>What is your experience in this unit?</i></p> <p>To assist your assessor to gain an understanding of your work relevant to this unit, please:</p> <ul style="list-style-type: none"> • prepare a summary of your experience in the training, monitoring and mentoring of individuals in your organisation as part of a strategy to manage risk. • prepare details of risk analyses and remedial recommendations that you have used to mitigate a risk in your operation. Your notes should outline how your procedures complied with statutory and organisational policies.
<p style="font-size: 48pt; text-align: center;">S</p> <p style="text-align: center;">SUPPORT</p>	<p><i>Can you get support from others to help verify your competency?</i></p> <p>References will be essential if a line manager or other observer is not available to talk to the assessor. To be useful, a reference should specifically address some or all of the performance criteria list in this unit competency.</p>

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STUDIES

Have you done any formal or informal training in this unit?

- If you have undertaken relevant studies, the subject outlines and copies of your results should be made available. (eg University , TAFE subjects, Business College units)
- Your personal profile should list key seminars, workshops, conferences and other informal study activities that have assisted you to acquire this competency. Please include any in-house training and support.

RTE5807A: Manage staff (Cotton BMP Manager)

This unit covers the selection, induction and management of staff members to ensure effective personal and professional behaviour, includes termination of employment where necessary.

<p>S SAMPLES</p>	<p>Can you provide samples of your work in this unit? At the time of your workplace visit please provide samples for the assessor such as:</p> <ul style="list-style-type: none"> • Staffing policy guidelines. • Recruitment advertisements. • Positions descriptions. • Induction checklists. • Training plans. • OHS policies and procedures. • Records of staff meetings • Employment contracts. • Performance reviews. <p><i>Please note: The above are examples of the products and materials that would assist you to confirm your competency. They are listed as ideas to trigger your collation of evidence. Not all will be relevant to your situation.</i></p>
<p>E EXPERIENCE</p>	<p>What is your experience in this unit?</p> <p>Experience in managing staff is essential. Please prepare a dot point summary of relevant related activities in which you have been involved. The list must include details of any work or study related to managing staff.</p>
<p>S SUPPORT</p>	<p>Can you get support from others to help verify your competency?</p> <p>It will be important for your assessor to discuss and confirm your experience related to this unit with an appropriate observer. Your assessor will specifically refer to the performance criteria stipulated in this unit of competency.</p>
<p>S STUDIES</p>	<p>Have you done any formal or informal training in this unit?</p> <ul style="list-style-type: none"> • If you have undertaken relevant studies, the subject outlines and copies of your results should be made available. (eg TAFE subjects, Ag College units) • Your personal profile should list key seminars, workshops, conferences and other informal study activities that have assisted you to acquire this competency. Relevant programs would include those related to managing staff.

Appendix 3 – Milestone 4

Briefing paper for the Cotton Industry BMP Committee – December 2007

“Certified BMP Farm Manager” Industry Qualification

Background to the project

In August 2006, CRDC were awarded funding for a Queensland FarmBi\$ Targeted Industry Initiative project titled “Aligning National Competencies with the Cotton Industry's Best management Guidelines for Strategic Training”. The project administration was coordinated by Helen Dugdale, CRDC, and the on ground implementation and development was done by Mark Hickman. The completion date for this project is December 2007.

The project focused on the following objectives:

1. Assessing the alignment of the Cotton Industry BMP guidelines against the national training competencies from the Vocational Education and Training (VET) sector.
2. Develop a process and set of assessment resources that could be used to conduct RPL (Recognition of Prior Learning) interviews with farm managers/ owner of farms that are industry accredited BMP properties
3. Conduct a series of in field assessments using the above information and resources.
4. Review these piloted assessments activities, with the goal of providing information and concepts for industry to develop a strategic framework to develop a training culture within the industry. In other words – to identify training gaps in the industry and to give BMP another attractive incentive for it to be undertaken

As you would be aware, the accreditation of BMP is awarded to the farm, not the individual. However, when people undertake the BMP accreditation process they develop certain skills. In that they develop strategies to address best management practices and implement monitoring programs. These skills have been observed over the years but not actually documented and acted upon, hence the idea for the FarmBi\$ project was conceived. In that, Mark saw a need to recognize individual effort and at the same time offer another incentive for growers to participate in BMP. This is a win-win-win situation, the farm benefits, the manager benefits, the environment benefits and the industry benefits.

I have developed in conjunction with TOCAL College a series of interview questions using the method known as Recognition of Prior Learning (RPL) assessments. The evidence (answers) provided by the grower are all based on documentation and demonstrated practices they would have used to gain the BMP accreditation for the farm. Individuals that successfully participated in the stringent RPL process are awarded a Diploma of Agriculture. This is an Australia-wide recognised qualification that gives personal recognition for a BMP process.

Outcomes of the project:

This has been an extremely worthwhile undertaking for very little funds. The benefits to the industry have been very well accepted, with much media interest.

A 116 page document has been developed that shows how the worksheets within the BMP workbook relate to nationally recognised training competencies from within Vocational Education and Training (VET) sector. These competencies are targeted at the management level, Certificate IV, Diploma, and are drawn from three national training packages:

RTD02 Conservation and Land Management Training Package
RTE03 Rural Production Training Package
BSB01 Business Services Training Package

During August 2007, four (4) farm managers / owners of BMP Accredited farms were interviewed for 4 hours each using the RPL assessment sheets. These pilot cases were very successful as all four participants have been awarded a Diploma of Agriculture.

Purpose of the briefing note:

To provide background information to endorse a new industry qualification that is marketed as a “Certified BMP Farm Manager.” Where industry would have a BMP accreditation for a farm and potentially an accreditation for an individual.

I feel the qualification is valid because industry now has a methodology to award the individual for BMP practices and knowledge (as described above). The award also meets the BMP guidelines and qualifications within the VET sector.

Points to note:

- The award would only be given to farm managers or owners that have been directly involved in a property achieving BMP accreditation on a farm.
- The award is attached to the individual (like a school certificate or degree, it is theirs for life).
- This award is acknowledgment by industry to someone that has reached and practices a high standard required on a BMP accreditation farm.
- Benefits to the individual: Firstly they have a nationally recognized qualification from the VET sector (Diploma of Agriculture). Secondly, within the cotton industry, this Certified BMP Farm Manager would have a marketable and competitive skill.
- Benefit to the industry: This award would “value add” to BMP and may engage more people to achieve BMP accreditation. Whilst it would also reward the already existing BMP accredited farmers, if they choose to be assessed.
- Benefit to industry: External bodies to the cotton Industry, would see this award as a demonstration of how the industry is increasing the educational level and acknowledgment of current skill sets that relate directly to BMP practice.
- The assessment of BMP at the farm and individual level is independent of each other and is completely voluntary.
- Assessment would be conducted by a trained assessor of RPL interviews. At this stage of the program assessors may be either TOCAL college employees or people certified by TOCAL to perform duties on their behalf. Already one consultant has this endorsement. However more can be trained if the demand requires.
- Undertaking the RPL assessment that TOCAL and I have developed is financially subsidised (65 %) by both Queensland and Federal FarmBi\$ (NSW) As an indication, the current out of pocket cost if TOCAL college was to assess the individual would be between \$840.

I would be grateful if this committee could discuss the support and/or objections of an industry endorsed certified BMP Farm Manager qualification

I would appreciate if feedback and collective thoughts be provided to me as a written response. This will allow me to respond to your questions and concerns for future discussions. Like always I am available to discuss the matter individually or with the whole committee. Thank you for your attention to this matter.

Mark Hickman

National Cotton Training Coordinator
Cotton CRC Subprogram Leader (Specialist Extension)
Principal Development Extension Officer