6 Monthly Report - April 14, 2009

Project Number: 1.04.14
Project Title: Sustainable cotton in the Burdekin
Project Leader: Paul Grundy

Team Members:

Team Member	Type	Organisation
1.04.14 , TBA Field Assist	Team Member	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
1.04.14 , TBA Tech Officer	Team Member	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
Colson, Emma	Team Member	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
George, Lynda	Administrator	DIISR
Grundy, Paul	Project Leader	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
Harris, Graham	Administrator	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
Kamel, Helen	Team Member	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
Murray, Katrina	Team Member	The State of Queensland acting through the Department of Employment, Economic Development and Innovation
Noonan, Peter	Team Member	SunWater
Vanderbyl, Tom	Team Member	SunWater
Wilson, Lewis	Administrator	CSIRO Plant Industry
Yeates, Stephen	Project Leader	CSIRO Plant Industry

Tasks/Milestones/Reviews:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Develop a communication and crisis	A communication and crisis management	12/2007

	managment plan	plan will be developed and negotiated with all project stakeholders. Year 1 A dynamic communication strategy developed for the project in conjunction with collaborating stakeholders. A crisis management network/chain of command identified and implemented. The strategy for communication and crisis management will be reviewed annually and adjusted accordingly as the industry develops.

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Nov 2007 Update
A draft communication plan has been developed through the NORCOM team and is currently being finalised. Paul Grundy has completed media training and several other NORCOM committee members will complete media training courtesy of Monsanto in the next month. A final communication plan will soon be complete with key personnel for various issues identified and agreed.
May 2008 Update
A project communications plan has been developed for the life of the project, which specifies project communication activities.
Under the auspices of NORCOM, an industry communications plan has been drafted and agreed on by industry members. This plan nominates key staff from QDPI&F, Monsanto and Cotton Australia as contact points for industry quieries or emerging issues. As part of this plan, communications is a permanent agenda item for each NORCOM meeting, with changes and actions taken whereever appropriate to reflect the processes of industry evolvement.

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Initially a desk top analysis combining existing knowledge (soil tests etc) and meetings with growers. 2. As knowledge increases experiments will be conducted to examine solutions to cotton/cane farming systems constraints.	Examination of Cotton/Cane farming system issues Year 1. Collation of existing information regarding crop nutrition following cane, cane management practices and their timing. Interpretation of the impact of this information on cotton farming.	12/2008

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Nov 2007 Update
A collation of information on local practices, soil types etc has been commenced. Specific grower workshops will be conducted in 2008 to flesh out these issues.

May 2008:
Dialogue has been established with Future Cane Researchers and BSES Staff in the Burdekin to commence taking crop integration issues forward as a R&D effort. These researchers will be part of R&D planning for experiments in 2008/09 beginning to look at cotton and cane integration issues such as nutrition after cane. Some of this R&D will likely become a collaborative effort with QDPI&F Future Cane staff.
December 2008: Priorities for farming systems research have been defined and appropriate R&D responses are being implemented. These issues have been identified through workshops and interviews with growers, consultation with Future Cane Agronomist Researchers and outcomes from recently conducted initial R&D efforts. Nutrition both after cane and within crop during the wet season, crop rotations and soil constraints have been identified as key aspects that will have significant bearing on the success or otherwise of cotton farming in the Burdekin. To address these issues collaborative research (Mike Hanks - Future Cane QDPI&F) has been commenced looking at the use of soybeans as an alternate source of Nitrogen for cotton production. In the Burdekin climate, soybeans can fix up to 240 units of N per ha within 3 months of planting which may then have significant advantage going into the wet season as gradual decompostion of soybean residues may be more effective in providing a slow release form of nitrogen compared to up front large applications of fertiliser that were found to be inadequate for 2008 commercial cotton crops. The use of a break crop may also have advantages in helping to rennovate soil health after long term cane production. Two experiments are being conducted in 2009 to make initial assessments of the potential of this strategy to address a key cropping constraint. Secondly, the farming system haps identified with regard to crop rotations, tillage systems etc will be part of a new R&D proposal by Steve Yeates submitted to the CRDC in September 2008. If funded, this project will greatly compliment the exisiting CRC Burdekin project and fast track solutions to the farming systems problems identified.

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Review the communication and crisis managment plan	The QDPI&F communication plan was reviewed and deemed adequate November 2008.	12/2009

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

December 2008: The QDPI&F communication plan was reviewed and deemed adequate November 2008. The 6 monthly NORCOM meeting was held in November during which industry communications were discussed. Activities for the next 12 months include establishing a local grower association, placing a significant exhibit at the Burdekin annual show and taking a more proactive stance with community engagement through local schools.
December 2009:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Conduct regular extension activities within the Burdekin and develop information for broader industry dissemination. Dialogue with Cotton Australia to assist with broader community engagement. Implement a grower mentoring program that exposes Burdekin growers to leading industry growers from CQ and other areas.	Grower Extension and Community Engagement Facilitate regular targeted local meetings and field days throughout the project to educate potential grower and participate with Cotton Australia to communicate with broader community and peak groups. Invite existing industry growers to the Burdekin throughout the life of the project to share experiences with local growers with a view to providing a network of	05/2010

	mentors. This milestone will link with the communication plan outlined at milestone No. 1	

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

December 2007:
An extension program has been implemented and a calendar of events for 2008 is currently being collated with research partners (Monsanto, CSD etc). An agronomy training day was held on 7th November and was attended by the growers who will plant cotton in 2008. This workshop covered a range of basic issues from planting considerations to pest management and was facilitated by Paul Grundy, Steve Yeates, John Marshall and Graham Boulton. Broader cotton information sessions have been also held in the Burdekin during October. These were attended by about 50 growers.
As the season begins a program of field days will commence with a meeting every month that will be open to anyone in the region with an interest in cotton as well as the various industry stake holders.

May 2008:
An extension program has been successfully implemented during the 2008 season. Various field days and training opportunities for local growers have been conducted by project staff Paul Grundy & Steve Yeates. The program commenced with a field day at the QDPI&F research station that was advertised and open to the public and was attended by about 45 people representing a broad cross-section of agribusiness and growers. The agenda for this day was to explain the purpose of the CRC research investment in the region and to answer general cotton questions from participants. This field day has been followed by three specific field days covering various research agronomic issues such as Pix Application, Round Up Ready Flex technology, nutrition after cane and the variety trials. Each have been well attended by growers and agribusiness.
An industry bus tour was conducted on the 8th May for all local growers, various cotton industry visitors and local cane representatives from BSES, Future Cane and CSR. This tour provided a cross-section of commercial cotton cropping and R&D activity in the region. The extension program will conclude with a picking field day on 18th June.
Meetings have also been had with Burdekin Shire Mayor & Councillors, Cane Growers Directors, Burdekin Productivity Services & CSR staff to develop constructive dialogue about cotton activities in the region and develop collaborative frame works moving various issued forward. These meetings have been partly successful in beginning to diffuse concerns over spray drift and crop competition.
Meetings will soon be held with other cropping stakeholders to discuss Silver Leaf Whitefly area wide management in the Burdekin and the threat perceived by local horticulture that cotton may pose to the local melon cropping.

December 2008:
Regular extension activities will be held again in 2009 as the season commences. An Agronomy workshop was held in August with growers to examine the findings of the R&D conducted during 2008 with a view to putting in place as rapidly as possible key findings to improve production (ie nutrition, pix management etc)
May 2009:
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Conduct research to test best bet resistance management strategies under local conditions that account for Spodoptera and	Research and develop suitable Bt resistance management strategy tailored to the Burdekin farming system and pest	05/2010

	potential planting window difficulties.	ecology Experiments conducted in years 1-3 to examine strategy options such as Spodoptera NPV's, Magnet, refuges etc with view to developing a RMS strategy.

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Nov 2007 Update
A sampling program will be commenced during 2008 to determine the rate of survival of Spodoptera under commercial cotton crops in the Burdekin. This information will begin to provide an insight to the ecology of Spodoptera on Bollgard. Samples will also be sent to Sharon Downes for susceptibility benchmarking. A small quantity of Spodoptera NPV is also likely to be made available for testing this season from AgBiotech. An NPV may be an ideal population regulating tool for Spodoptera in cotton.

May 2008:
Several hundred Spodoptera pupae from local cotton crops have been sent to Dr Sharon Downes at ACRI to be incorporated into her program for benchmarking Bt susceptibility. These individuals are mostly Bollgard survivors. A small amount of Spodoptera NPV was available from AgBiotech in late April. An opportunity to test this on a field population occurred in early May. Results suggest that the efficacy of this formulation was variable and low, however it must be recognised that this batch was the first prototype run and that QA checks on the formulation had indicated prior to dispatch g that the Pib counts were potentially abnormal. As this product is in the very early development stages, little can be read into these results. Improved formulations are expected to be available next season.
Survival of Spodoptera under commercial crops was not examined. This was not possible due to a very high work load with other project milestones and the unexpected advent of large commercial areas of cotton cropping for the 2008 season.
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Identify and develop tail water sampling and benchmarking methodology. 2. Identify appropriate crop inputs. 3. Collect and analyse tail water samples taken from cotton/cane farming systems trial plots for chemicals, nutrients and turbidity. 4. Develop management recommendations	Collect data and benchmark tail water quality with view to developing a local BMP system Year 1. Sampling methodologies developed and equipment purchased and prepared. Years 2 & 3 Sampling commenced on larger scale plantings anticipated in project years 2&3. Samples analysed for key contaminants. Year 3 Data compiled into final report with management recommendations.	05/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Nov 2007 Update
Appropriate methodologies for this research have been identified and equipment is currently being procured. An experiment will be conducted this season to perfect methodology and to make an early start on this milestone. A field with stubble treatments will set up and tailwater coming off respective treatments monitored over the season. This should provide preliminary data that will enable to conduct of more comprehensive studies as committed in 2009 and 2010.

May 2008:
The very early onset of the wet season in 2008 caught our grower co-operator by surprise for the stubble treatment, tail water experiment. This experiment in the end could not be planted due to early rain that continued well past the end of the commercial planting window for Bollgard in the Burdekin.
Instead two later sown fields were chosen for monitoring for the 2008 season, one on a loam soil type the other on a heavy clay. Regular sampling of tail water has been conducted on these fields for analysis of nutrients, pesticides and turbidity. These samples have been collected according to protocols set out by the analysing laboratory run by Qld Health. Sampling is ongoing and results will be used to inform a more intensive and targeted tailwater R&D effort for 2009.
Dec 2008
Protocls for tailwater sampling have been developed for the 2009 season. Equipment that will enable the most precise measurement of tailwater volumes leaving fileds have been identified and are being purchased. Two fields (barrata clay and sandly loam) will be set up with MACE meters and autosamplers this season to measure tailwater volumes and nutrient. turbidity and pesticide losses. Both irrigation and rainfall events will be recorded (baring extreme rain events that lead to flooding) with the aim of quantifying total losses over the life of a cotton crop. Sample processing will be done in conjunction with the James Cook University's centre for fresh water ecology and Qld health laboratories.

May 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Task	What Know-How (New Ideas), Confidential Information, Copyright, Patents or Provisional Patents, Registered Design, Trade Secrets or Trademarks have come from this project to date?	Please up-date every time a Six Monthly Report is completed.	05/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

May: 2009
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Task	How do you intend to communicate the	Please up-date every time a Six Monthly	05/2010

	results or findings of your research to other researchers/growers/industry in the next six months? What assistance will you need?	Report is completed.

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

December 2007:
Information is being deseminated locally via regular grower days and to the industry via NORCOM email lists and publications in Australian Cotton Grower.
May 2008:
Information and project results are being disseminated continually though the regular extension program being conducted as part of the project in the region. When the results from the 2008 season are complete, results will be circulated more broadly to industry via NORCOM, Australian Cotton Grower and other targeted publications.
December 2008:
Information and project results are being disseminated rapidly and continually though the regular extension program being conducted as part of the project in the region.Results have also been circulated more broadly to industry via NORCOM, the Australian Cotton Grower magazine and cotton industry meetings.
May 2009:
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Task	Grower Consultant Ginner or Grower Group In-Kind: Are you conducting part of your project on a cotton farm or in conjunction with an in-kind contribution from a consultant, ginner or Grower Group? Please supply group name - Number of persons involved per week and the number of hours per week involved.	Please up-date every time a Six Monthly Report is completed.	05/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

December 2007:
Several growers are providing inkind support to the project by providing field sites. These sites will be valued at $3000/hectare which is the approximate gross margin for cotton in the area plus another $3000 per site for their time inputs. Administrators should note that these figures are value based estimates and not real figures. Inkinds are as follows
Steve Hazelton (Burdekin Grower) Stubble and tail water trial site 20ha value ((20*$3000+($3000)) = $63,000
Lyndsay Hall (Burdekin Grower) Pix and Plant Populations trial site 5ha value ((5*$3000+($3000)) = $18000
Other Cash based inkinds include
CSD - 15 bags of seed ($100 per bag) = $1500
Monsanto - Tech Fee Relief for trial sites (270/ha) = $6750

May 2008:

The inkind support for the project is the same as the above mentioned inputs as these inputs commenced in December and are continuing as part of the 2008 trials that will conclude in July 2008. The trial site for Steve Hazelton had to be abandoned due to an inability to plant due to wet conditions. This should be removed from the inkinds for 2007/08.
December 2008:
Several growers are providing inkind support to the project by providing field sites. These sites will be valued at $3000/hectare which is the approximate costings for cotton production in the area plus another $3000 per site for their time inputs. Administrators should note that these figures are value based estimates and not real figures. Inkinds are as follows
Jan Lafrenz (Burdekin Grower) Soybean legume trial and tailwater site 10ha value ((10*$3000+($3000)) = $33,000
Lyndsay Hall (Burdekin Grower) Variety trial and tailwater site 10 ha ((10*$3000+($3000)) = $33000
Tom Lewis (Burdekin Grower) Soybean legume trial 5 ha (5*3000+(3000)= $18000
Other Cash based inkinds include
CSD - 7 bags of seed ($100 per bag) = $700
Monsanto - Tech Fee Relief for research station trial sites (/ha) = $800

May 2009:
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Task	Were there any major highlights in your work over the past six months?	Please up-date every time a Six Monthly Report is completed.	05/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

December 2007:
All experiments for 2008 have been planned are in the process of being implements. NORCOM met in October 2007 to discuss industry development and R&D strategy for 2008. NORCOM will meet again in March 2008. At least 900 hectares will be sown in the Burdekin by growers this season. Approximately 500 hectares of this area will be grown by 2 growers who have purchased properties in the region. Several other growers are in the process of assessing properties in the region for future production.

Interest in cotton in the Burdekin has rapidly increased. Approximately 40-50 people attended cotton information days conducted in October by project staff and partners. Industry development has the potential to run well ahead of the R&D program in the next 2 years which may present some risks.

May 2008:
2008 has been an exceptional season for Burdekin cotton R&D and industry development. This year has been characterised by one of the wettest summers in 2 decades with over 1 metre of rainfall and 42 rain days occurring during January and February. The long term average is closer to 450mm for this period and only 19 rain days. These conditions were ideal for the main experiment conducted by the project examining the impact of low radiation, warm nights and high humidity on plant development and partitioning. Two different forms of shedding were recorded in response to conditions and extensive measurements were made on many aspects of crop development and partitioning during this period. Results from 2008 whilst still incomplete appear to have provided very valuable data as to effect of these conditions on crop development and potential yield.
The intensity of the wet season on the 12 commercial crops also provided a valuable cross-section of observations that will greatly shape and define the farming systems and agronomy R&D over the coming seasons. Nutrition has been observed as a universal challenge in all cotton crops planted commercially after late harvested cane crops. Basic

experiments to examine systems approaches to manage these issues will be commenced for the 2009 season.
The extension program conducted during 2008 has succeeded in getting new growers thinking about agronomic issues for cotton in the Burdekin. Many growers are starting to consider broader farming systems solutions for their enterprises that include cotton as part of a cropping mix rather than a 6 month break crop from cane.
The main highlight for 2008, is that despite one of the wettest seasons for over 20 years many cotton crops within the region appear to have reasonable yield potential. This has occurred despite having limited information on varieties, nutrition after cane, Pix management, sowing rates for 30 inch row spacing's coupled with 12 growers inexperienced with growing cotton or growing cotton in a tropical environment. When viewed within that context we await picking results for 2008.

December 2008:
Whilst only 12 months of research has been completed, the extraordinary wet season conditions experienced in north Queensland this year provided a rigorous first test of a range of wet season scenarios and importantly demonstrated how well a cotton crop can recover and compensate for deleterious effects. The data suggest that the worrying scenario of the late occurring wet season that extends throughout March and into early April will have obvious consequences for yield potential as demonstrated by the 5.5-7 bale/ha yields of December 1 sowings. Whilst low, such yields do suggest that total crop failure is unlikely for a well managed crop and that potential may exist to take forward selling positions of around the 5-6 bale/ha mark. The repeatability of this result in alternate years and for different soil types will require further experimentation but is at the least encouraging given that these plots endured 52 wet days during flowering and boll filling a scenario with a probability of occurring once a decade when using the usual planting window. The incidence of fruit shedding which was a primary concern for wet season cotton production may instead be a potentially useful crop response to low radiation conditions that allows plants to conserve carbon and redirect it towards the development of later bolls when conditions for photosynthesis improve. The challenge that shedding presents during extended wet periods is managing a crop so as to minimise rank growth whilst maintaining acceptable vigour so that when sunny conditions return a crop can rapidly secure compensatory fruit set and yield potential. Nutrition, pix usage, sowing density and varietal characteristics will all influence how crop vigour is managed during a wetter than average season and will be the focus of experimentation in 2009.

Looking towards 2009, a number of growers have indicated their willingness to again grow cotton with early indications suggesting acreage will increase to around 1000 ha. Whilst the commercial yields this season were on the low side (6.8b/ha district average), the results are encouraging given that this season was both much wetter than average and grower experience was minimal. The high quality of the lint produced across all farms in 2008 (60% of bales produced received a premium) suggest that bale discounts for cotton produced in the Burdekin this region may be infrequent compared to many other Queensland production areas.

May 2009:
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Where a need is identified from Objective 2, experiments will be established in commercial scale areas.	Experiments to evaluate and begin solving cotton/cane issues Years 2 & 3 Conduct experiments	05/2010

		targeting cotton/cane farming system constraints as identified in year 1. Report findings to industry and CRC.	

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

December 2008: Nutrition after cane has been identified as a major constraint to cotton production in the Burdekin. In response to this challenge R&D has been commenced to investigate the potential for using soybeans to rennovate soil and provide a cheap and effective source nitrogen. This research is being conducted in conjunction with QDPI future cane agronomists.
May 2009:
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Collate, analyse findings from project activities and compile into a user-friendly report for circulation to industry	Develop Information Package regarding findings in format for industry dissemination High quality document developed based on project findings written for industry audience.	06/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Milestone	Field experiments conducted in each year of project to examine climate impacts on plant physiology and yield. Experiments conducted on two soil types, barrata clay and sodic duplex in the Delta and Upper Burdekin areas. 2. Data analysed after each season and experimental methodology refined to ensure the capture of effective information to allow yield and quality projections in relation to climate to be made.	Identify impacts of local climate variables on plant physiology. Years 1-3 Experiments completed to assess the impact of low radiation, high night temperatures and rainfall on cotton growth and yield and quality is quantified. Years 2-3 The OZCOT model is modified and validated. Year 3 Climatic risk analysis studies completed. Identify suitable variety traits.	06/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Nov 2007 Update
The impact of radiation and rainfall on crop growth and retention experiment has been commenced. The treatments are 4 planting dates spanning 1 November to 10 January with 5 varieties. This experiment will provide information on crop performance under local conditions and complete part of the picture on yield potential in the region.

Arrangements for the conduct of experiments that will locally validate PIX usage, plant populations are in place for 2008.

May 2008:
Several key experiments are being conducted during the 2008 season. The impact of radiation, humidity and rainfall on crop growth and retention experiment is nearing completion. This experiment utilised 4 sowing dates and 5 varieties to provide a cross-section of data and comparisons. The 5 varieties were chosen to represent particular traits that may or may not be advantageous in the Burdekin climate. Weather conditions during this experiment were ideal for the collection of data on the impacts of low radiation and rainfall on crop shedding and boll formation. Treatments are in the process of being characterised and assessed for yield.
A Pix validation trial was successfully implemented on farm during 2008. This experiment aimed to test the relevance of the NORPAK model for Pix application previously developed in the Ord in the Burdekin environment. This trial will be picked in June and the results used to design a more specific locally tailored experiment in 2009.
A sowing density trial for 30 inch row configuration cotton is being conducted. This experiment aims to examine the impact of within row plant density on yield and retention when grown on 30 inch row spacing in the Burdekin climate. This row spacing is a standard practice in the region as it allows for easier rotation of cotton with cane, corn and pulse crops and is not common within the cotton industry.
A basic nutrition trial was conducted on farm with a partly failed cotton crop due to the extended wet season resulting in poor crop fertiliser access and de-nitrification. The aim of this experiment was to see if a cotton crop could be partly recovered with the application of easy N. Results from this trial were mixed and the grower opted to remove the cotton to make way for other cropping but demonstrated significant crop re-cooperative ability within the local climate.

December 2008:
Several experiments will be commenced in December 2008. The crop physiology/climate interaction will be repeated similar to 2008. Experiments will also be conducted on Pix practices, time to flowering manipulation (controlled cotton slashing), variety traits, legume nutrition and row spacing configurations.

May 2009:
December 2009:
May 2010:

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Task	Submit final report within 3 months of completion date		06/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Type	Description	Performance Indicator	Date to Finish (mm/yyyy)
Review			06/2010

Have you achieved this milestone? If yes what are the results and if no or partially complete please give details. Please also provide details of any problems encountered and how you have addressed these problems?

Publications:

Type	Title	Authors	Status	Thesis Type	Date
Journal Article - Non Refereed	Who is growing cotton in the Burdekin?	Grundy, P, Braden, B	Published		21/08/2008
Journal Article - Non Refereed	Is a sustainable cotton industry possible in the Burdekin?	Grundy, P, Yeates, S	Published		21/08/2008