





## ***Part 3.3 – Final Reports***

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### ***Background***

The project was established in response to grower support to promote the adoption of new technologies into sound management practices in the Balonne rivers irrigation area St George to Dirranbandi. As part of the Cotton CRC extension program it involved the development of a framework of regional trials/demonstrations (in liaison with researchers) as part of a group adoption process to facilitate better communication between farmers, advisers and researchers from government and agribusiness.

The Industry Development Extension Officer would co-ordinate demonstration trials, take a role in information transfer with the region's grower associations and assist grower direct and respond to gaps in the current research base as well as adapt existing technology to local needs.

The adoption of new technologies, AWM, IPM and BMP play a large role in meeting the cotton industry's objectives of maintaining and promoting the most sustainable and profitable practices, for benefit of the industry as a whole and the communities/areas where cotton is grown.

Many growers conduct on-farm trials and demonstrations to fine tune management. The extension officer takes a role as an intermediary enabling this on farm trial and demonstration work to continue on a coordinated basis as well as ensuring the latest research is incorporated into these trials.

### ***Objectives***

Steve Ginns resigned from the position in March 2005. Essential regional project communication and newsletters were maintained for the balance of the year by the NRM Extension, Officer Veronica Chapman and the RWUE Extension Officer Sarah Knights.

- *Develop a partnership with the St George & Dirranbandi Cotton Grower Associations and evaluate regional needs and priorities;*
  - A research and technical group has been formed to develop local regional needs and priorities.
  - The project met these objectives through my regular attendance of CGA meetings where I discuss trial findings and report on new research.
- *Establish a liaison with Cotton Consultants of Australia;*
  - I have established a positive working relationship with the local cotton consultants and agronomists by attending CCA meetings and keeping in close contact with consultants,
  - . This relationship will enabled me to call on them for support and guidance during the season to fulfil research priorities.



- *Water management*
  - Collaborated with the Rural Water Use Efficiency Initiative project to develop optimum water use strategies for the region;
  - Through out the project we have assisted Sarah Hood (RWUEI) with field work, data analysis and presentations.
  - Several HydroLOGIC, ESD and cottonLOGIC workshops have been held to deliver basic principles of the LOGIC programs to irrigators.
- *Pest management* - demonstrate and develop Integrated Pest Management for both conventional and transgenic cotton;
  - Collaborated with Mark Hickman (IPM short course trainer) to successfully deliver IPM short courses in Dirranbandi and St George.
  - Co-ordinated egg collection program during the season resulted in a large number of eggs being delivered to ACRI for resistance monitoring - Growers and consultants were kept informed on new pest management issues via the Balonne cotton tales.
  - Area wide management meetings have been well attended during the season.
- *Farming systems* - extrapolate and adopt the results of the CRC farming systems experiments in the St George-Dirranbandi area;
  - Promoting whole farm management, possible winter crop rotation options and sustainable cotton production through farm walks and articles in Balonne cotton tales.
- *Best Management Practices* - participate in the implementation of Best Management Practices.
  - Participated in the formulation of the water BMP at both St George and Dirranabandi CGA's
  - Promoting and practicing good farm hygiene to minimise spread of Fusarium and other diseases.
  - Collaborated with the RWUE project to develop and promote efficient water use.
- *Develop successful on-farm research* – a role of an extension officer is as an intermediary for on-farm research which has been co-ordinated by the extension officer and included in a cotton trial and yearbook.

## **Methodology**

The extension program was based on the establishment of demonstration trials and the coordination and facilitation of grower groups in collaboration with growers and consultants. The project was supported evaluations and a range of publications including the Cotton Tales newsletters and District Trial & Yearbooks.

Two broad scale evaluations carried out during 03/04 justified the success of the methodology used by this project. The evaluation of the usefulness and effectiveness of Balonne Cotton Tales showed the range of industry stake holders that receive Balonne Cotton Tales, how useful they find the publication, what information they find most beneficial, how easy they are to read and if the frequency of distribution was appropriate.

The second evaluation aimed, to establish the effectiveness of an end of season meeting that delivered research and extension results and to determine the most effective time, place and format for cotton research and extension meetings in the St George and Dirranbandi area. On a whole, attendees of this meeting found it very beneficial and the timing and content of cotton research and extension meetings has been redefined



## ***Conclusions***

- Greater awareness of the plant's ability to compensate for early season damage;
- Awareness of beneficial/predator insects and the roles they can play;
- Greater understanding/knowledge of the role they (growers) can have in pest management/control decisions - the ability to be able to question their consultant's decisions;
- Greater communication between growers and consultants.
- Ability to be able to perform their own on-farm research which can give meaningful results.

## ***Outcomes***

As part of the CRC National Cotton Extension Team, all activities are aimed at addressing the mission of the CRDC as follows:

### **Environmental**

- Collaboration on the WUE initiative;
- Identifying and promoting IPM options.
- Promoting riparian guidelines
- Promoting adoption of BMP

### **Economic**

- Working collaboratively with local CGA in establishing protocols to reduce the chance of introduction of Fusarium Wilt.
- Transferring technology that contributes to more profitable cotton production.

### **Social**

- Contributes to the transfer and adoption of technology Strong working relationship with local cotton grower associations.
- Strong working relationship with the indigenous community.
- Developing a strong working relationship with local consultants and agronomists.

## ***Further Activities***

The future role of this IDO extension project will be negotiated and determined with the implementation of the 2005 Extension and education Review recommendations.

## ***Publications***

- Cotton Tales
- Regional bi-monthly reports to Australian Cotton Grower Magazine

## ***Impact on the Cotton Industry***

Strong partnership was established with the regional grower associations at St. George and Dirranbandi, the CCA and Cotton Australia. Linkages were established with the Maranoa Balonne Catchment management association to share technical information resources and to provide input into regional catchment management plans.



AWM grower groups were formed potentially leading to the wider adoption of IPM strategies and the achievement of the associated benefits to the industry and to the community and the environment.

## ***Part 4 – Final Report Executive Summary***

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This project provided for the employment of the Cotton Industry Development Extension Officers Stephen Ginns, in the St. George-Dirranbandi irrigation area. The officer role was take the products of research to the field for familiarisation, to promote adaptation into individual farming systems and enhance adoption in the local region. The focus has been on major industry problems, including water and insect pest management and insect pest resistance management, and local priorities negotiated with the growers association. Much of the work involved on-farm trials and/or demonstrations. The results of these trials/demonstrations have been disseminated to all growers in the region via small group meetings, field days and publications, particularly the Cotton Tales newsletters and the District Trial Books.

A strong partnership has been established with the regional cotton grower associations at St George and Dirranbandi, the CCA and Cotton Australia. Linkages have been established with the Maranoa Balonne Catchment management association to share technical information resources and to provide input into regional catchment management plans.

An AWM grower group is well established at St George and has lead to the wider adoption of IPM strategies and achievement of the associated benefits to the industry, community and the environment.

The awarenesss of Fusarium and Black Root Rot has been established and Fusarium and Black Root Rot disease management protocols have been established in the region and disease management trials have been conducted.

The Industry Development Extension Officer is a member of the Cotton CRC industry extension team and maintains close ties with CRC, CRDC and departmental extension and research officers in Queensland and New South Wales.

Steve Ginns resigned from the position in March 2005. Essential regional project communication and newsletters were maintained for the balance of the year by the NRM Extension, Officer Veronica Chapman and the RWUE Extension Officer Sarah Knights.

Priority issues were:

- Insect Pest Management
- Farming Systems
- Water Use Efficiency and Deep Drainage Management
- Disease and Weed Management.
- Environmental Management for Salinity and Sodicity