



January, August & Final Reports

REPORTS

Part 1 - Summary Details

Please use your TAB key to complete part 1 & 2.

CRDC Project Number: CRC13C

January Report: Due 29-Jan-01
August Report: Due 03-Aug-01
Final Report: Due within 3 months of project completion

Project Title: Trainee Cotton Industry Development Officer -
Narrabri

Project Commencement Date: 07/00 **Project Completion Date:** 06/02

Research Program: Technology Transfer and Extension

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Final Report

Project code CRC13C

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Part 3 – Final Report Format

1. Outline the background to the project.

2. List the project objectives and the extent to which these have been achieved.

Training in all aspects of cotton production with particular attention given to the following disciplines.

- Integrated pest management
- Plant physiology and nutrition
- Soil and irrigation management
- Establishing effective growers groups and networks.

Integrated Pest Management (IPM)

Training in IPM has been through the cotton production course, IPM short course, working with IPM and Area Wide Management (AWM) Groups in the Lower Namoi and Border Rivers regions. Practical experience in IPM research has been gained by working with Cotton CRC research staff, Martin Dillon, Sarah Mansfield, Mary Whitehouse, Robert Mensah, Lewis Wilson, Julie Ferguson, and members of the extension team. Time spent with Border Rivers and Lower Namoi growers and consultants has allowed me to have a thorough understanding of the current practices and problems associated with IPM and AWM.

Plant physiology

Training in plant physiology has been through the cotton course as well as setting up and running plant compensation trials (tipping out and fruiting factor) in the Border Rivers region in the 2001 – 2002 season. Plant monitoring for fibre quality trials in cooperation with Dave Kelly and Greg Constable has also increased understanding of cotton physiology.

Soil and irrigation management

Training in soil and irrigation management systems has been through the cotton course as well as working with the Water Use Efficiency (WUE) Officer Olivia Whiteoak in the Border Rivers Region. Knowledge of the current issues in soil and irrigation management was gained through attending various research seminars such as the Cotton CRC and CCA reviews.

Working with groups and establishing networks

This object has been achieved by working for 11 months with the Border Rivers AWM groups. Theoretical experience was through the Rural Extension Centre (REC) at the University of Queensland at Gatton, participating in the Group Facilitation course and the Train Small Groups (Certificate IV) at Toowoomba. I was also able to observe groups in action in the Upper and Lower Namoi, Macquarie and Darling Downs regions.

Establishing networks has been through attending regional and national cotton meetings, the cotton production course, working with groups in the Border Rivers regions and a very effective network within the cotton extension team.

3. How has your research addressed the Corporations three outputs: Sustainability, profitability and international competitiveness, and/or people and community?

4. Detail the methodology and justify the methodology used.

Training in the project objectives has been in the done through the following areas.

UNE – Cotton CRC Cotton Production Course (ongoing)

The cotton production course covers areas of integrated pest management, plant physiology, soils, nutrition and irrigation. The course content provides a thorough coverage of all aspect of cotton production as well as providing a source of networking with other industry members from around Australia. The cotton course also has a section on communication and extension that give experience in public speaking and presenting.

Group Facilitation Course

This REC course covers all areas about working with groups, techniques, management, group dynamics and making people work together. The course is also and effective networking opportunity with people from other extension areas.

Train Small Groups (Certificate IV)

This course is effective in providing training in areas of adult education. Extension of research is a form of education and this training is indispensable for being an effective extension officer.

Publications

Compiling research material into publications not only provides an effective way of learning that material but also gives experience in writing scientific material into extension material. Publications I assisted on include aphid and weed management documents for ENTopak and WEEDpak and numerous COTTONTALES for the Border Rivers Region.

Interim Industry Development Officer – Border Rivers

Working in the Border Rivers region as the IDO provided on the job training in trial work, WUE, AWM, and all other aspects of cotton production.

Trial Work

Trial work with early season plant compensation trials and fruiting factor trials provided experience with plant physiology, trial techniques and experience in working with growers.

Water Use Efficiency

Whilst the IDO in Goondiwindi, some of the time was allocated to assisting the WUE officer. This gave me experience in WUE research and irrigation practices. I was a judge in the WUE grower competition, which was also an effective learning experience.

Grower Groups

In Goondiwindi I was the facilitator for 5 Area Wide Management / Grower information groups. These groups are successful and provided me with experience in working with groups and maintaining good relationships with growers and groups.

5. Discuss the results, and include an analysis of research outcomes compared with objectives.

I believe that the outcomes have been very successful compared to the objectives. By working with grower groups in the Border Rivers region, I have a good understanding of cotton industry issues and grower practices. The formal training in the Cotton Production course and the other extension courses has given me a good technical background in production and extension. By participating in various industry updates and conferences I was able to gain understanding of the current research and problems within the cotton industry. Maintaining a network of contacts within the cotton industry allows me to keep up to date on issues within the industry as well as a broad source of information to call upon.

6. Detail a plan for the activities or other steps that may be taken; in future trainee IDO projects.

Aspects of the IDO training that are essential.

- **UNE Cotton Production Course.** This course thoroughly covers all aspects of cotton production in a format that encourages learning in production and extension. The residentials are excellent for networking with members of the Australian cotton industry.
- **Visiting regional areas.** During the training period I visited various grower groups and activities at Breeza, Moree, Cecil Plains, Trangie as well as 11 months in Goondiwindi. This provided a broad view of issues and production styles around NSW and Queensland.
- **Area Wide Management.** Observation of how area wide management groups and IDO's interact is an essential. I was able to see working groups in Breeza, Dalby and several in Goondiwindi before I was working on my own. This provided a good insight into how different groups interacted and worked together and techniques that are used when working with groups.
- **Publications.** Working within the Weeds focus group to help plan and produce various sections of WEEDpak was an excellent learning experience. Co-authoring the Aphids documents with Lewis Wilson was a valuable learning experience in both writing skills and Integrated Pest Management.
- **Rural Extension Centre.** The rural extension centre at UQ Gatton provides several courses in extension. The group facilitation course provided training in dealing with groups and techniques that are used as well as evaluation of groups.

Suggestions for future trainee or any extension programs. (Some of these ideas have already been set in place by the National Cotton Extension Coordinator, but were not in place for at the start of this project).

- **Formal introduction into the industry.** Including industry organisations and linkages, current and future major issues, setup and running of the extension program.
- **Mentor program.** A trainee should be placed with or connected to a current IDO, who can ensure that all aspects of the extension work have been covered in the training. At least a few months of the trainee period should be spent in a region

with an experienced working extension officer so that the trainee can see first hand the work that is involved. Including trials and area wide managements groups.

➤ **Goals.** A flexible program needs to be outlined so that future trainees can make sure that at some stage they cover all the activities that are needed as an extension officer. There are many things that a trainee needs to cover during the training period and a set of goals for the trainee would assist them in assuring that they cover all the things they need to cover. A mentor would then assist the trainee to achieve those goals.

7. List the publications arising from the research project.

Spora, A (2001 – 2001) Border Rivers Cottontales No.s 6 – 25. September – June.

Wilson, Lewis and Spora, Annie (2001) *Aphids in Cotton*, ENTOpak Research Review No. 10, Australian Cotton CRC, Narrabri.

Wilson, Lewis and Spora, Annie (2001) *Strategies to Manage Aphids in Cotton*, ENTOpak Research Review No. 11, Australian Cotton CRC, Narrabri.

Johnson, Stephen and Spora Annie (2002) 'Herbicide and Formulations', Chapter 4 in *WEEDpak* and in *Cotton Pest Management Guide 2002 – 2003*. Australian Cotton CRC, Narrabri.

Spora, Annie and Johnson, Stephen (2002) 'Farm Hygiene in Integrated Weed Management' Chapter 5 in *WEEDpak*, Australian Cotton CRC, Narrabri.

Part 4 – Final Report Plain English Summary

Provide a half to one page Plain English Summary of your research that is not commercial in confidence, and that can be published on the World Wide Web.