



Australian Government

**Cotton Research and
Development Corporation**

Annual, Progress and Final Reports

Part 1 - Summary Details

REPORTS

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

CRDC Project Number: **DAQ135**

Annual Report: ☐ Due 30-September

Progress Report: ☒ Due 31-January

Final Report: ☐ Due 30-September

(or within 3 months of completion of project)

Project Title: CQ time of planting trials 2004/05

Project Commencement Date: 09 /2004 **Project Completion Date:** 06 / 2005

Research Program: 4 Farming Systems

Part 2 – Contact Details

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Flow Chart for Reporting Procedure to CRDC

Start of Project
(normally 1st July)

1. Continuing Project Progress Report

- *Due end of January.*
- If project is only 6 mths old, then Part 3.1.1. Otherwise, Part 3.1.2.
- This report advises funding bodies about progress of project for the previous 6 months.
- *Budgetary information submitted* with this report, ONLY IF:-
 - An increase or decrease in budget for the next year is required.
- Email copy of report and post 50 hard copies.

2. Annual Report

- *Due end of September* (12 months after starting).
- The *main* report to be provided during life of project.
- Providing feedback to CRDC on achievement of objectives and milestones, any highlights and future objectives.
- Email copy of report only.

Project finishes
(normally 3 year duration
and ends 30th June)

3. Final Report

- *Due 3 months* after completion of project (normally end of September).
- *Travel reports are due within 2 months* after the travel has been taken.
- Postgraduates are to submit a hard copy of their Thesis and email the Plain English Summary.
- Provides information on achievement of objectives and milestones for the whole project and future research possibilities.
- Email copy of report and post 3 hard copies to CRDC.

Part 3.1 – Continuing Project Progress Reports (due end of January)

Part 3.1.1 – First Progress Report

1. Is the project on schedule?

Background

At a July 2004 meeting of the CHCG&IA Research and Technical Subcommittee it was resolved that DPI&F research staff develop a strategy to meet the regional R&D needs of the Emerald area, as identified in a discussion paper by Mr. Hamish Millar.

Following discussions with local industry, staff and researchers from the Cotton CRC (Mr. Guy Roth, Drs. Greg Constable and Ian Rochester), CSD (Mr. John Marshall) and other QDPI staff, general agreement was reached that a practical way of addressing the regional R&D needs, as identified above, is to begin with a preliminary assessment of cotton phenology and yield response in the form of a one-season pilot planting-time trial.

Objectives of the trial

- Evaluate importance of time of planting in determining crop growth, development and yield potential in CQ.
- Investigate the impact of different planting times on cotton yields.
- Provide baseline data to assess importance of planting time in relation to other factors such as nutrition, irrigation and other management practices within the context of the whole cotton cropping system.
- Assist in definition of agronomic and environmental boundaries for a follow-on production system based research project.

Varieties and technology requirements

A BOLLGARD II + Roundup Ready variety – 289BR was used for all plantings (control and test dates). Cotton seed was provided free of charge by CSD. Bollgard licence fees were deemed payable by Monsanto Australia Ltd. Trial areas were included in the total Bollgard II allocation for each farm in the trial. Monsanto Australia (Mr. Stewart Addison) waived the refuge requirement for the late plantings (November, December and January) of Bollgard II. However, a pre-defoliation pyrethroid spray on the late plantings has been identified as an option for resistance management purposes.

Field design and layout

As Table 1 below shows, there were 2-5 planting dates – a control date (15 Oct) and 4 test dates (15 Sep, 15 Nov, 15 Dec and 15 Jan). The January date was included to see how far planting can be pushed out if rain in December makes tillage and planting operations difficult.

Table 1. Trial collaborators, areas planted and field design:

Grower	Date and area (ha) allocated				
	28 Sep	15 Oct	15 Nov	15 Dec	15 Jan
Galea	4	4	4	4	4
Walters		10	5		
Wilson		8	9.5	3.5	

Each grower was required to plant one block of cotton on 15 October and another block on one (or more) of the other dates. Block size was a minimum of 3.5 ha. All blocks on one farm to be in the same paddock.

Trial progress to date

Cool weather in the middle of September resulted in the scheduled planting being delayed (Galea) or aborted (Wilson). All other scheduled plantings were done within the prescribed time frame (Table 1).

Crop checking and management is being done by the relevant farm consultant. All agronomic and crop management practices applied to the trial crops have been made consistent with historical practice relevant to the particular field or farm unit with a view toward enabling yield comparisons with previous cotton crops grown in that unit.

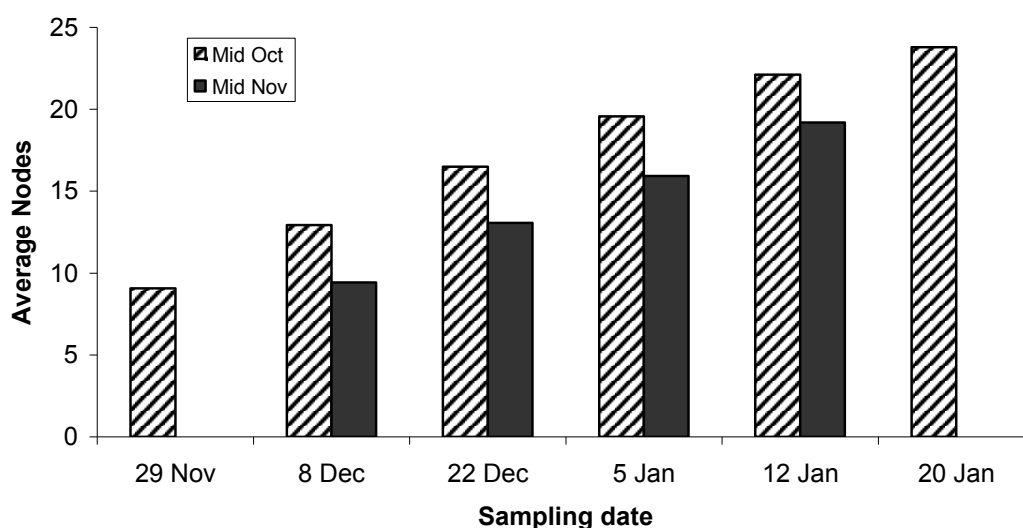


Fig. 1. Growth characteristics of October and November planted trial crops

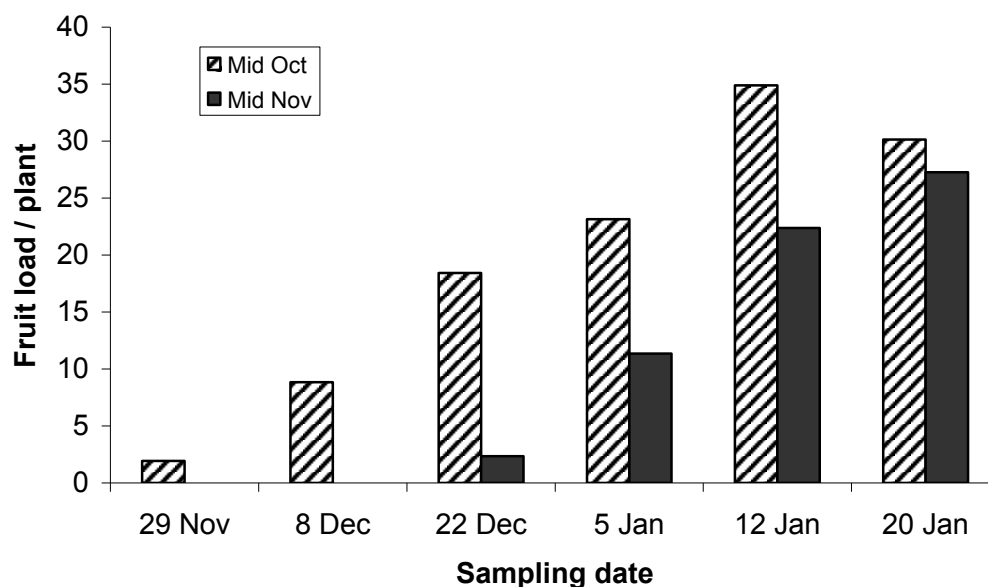


Fig. 2. Fruiting characteristic of October and November planted trial crops

All trial crops are growing well and generally problem free. Growth and fruiting characteristics for the October and November planted crops are summarised in Figures 1 and 2 above.

To date, trial crops have not been unduly affected by insect problems. Some plantings have been treated for mirid and cotton jassid infestations. Silverleaf whitefly (SLW) activity is evident on cotton crops throughout the irrigation area but population density has been slower to build up than in the previous season. However, November and December planted trial crops are certain to attract heavy SLW pressure after the middle of February 05 if the present (mid-January) trend in population density continues, albeit subject to environmental factors.

2. Detail and justify any variations to the original project proposal that have occurred or you anticipate occurring this current financial year. (Eg Variations to outcomes or objectives, project time-line, budgets, or personnel).

November, December and January planted blocks are highly likely to attract higher whitefly and aphid pressure. Additional insecticide sprays over and above scheduled sprays (1 additional whitefly IGR and 1 aphid spray) may be required.

CRDC has agreed to underwrite extraordinary insect management costs, if necessary, up to a maximum of \$10,000. Such costs are applicable only to the “late” planting dates of 15 November, 15 December and 15 January. As indicated in Table 1 above, the total area under these late plantings is 30 hectares. This extraordinary pest management support is expected to take the form of 1 Buprofezin (Applaud IGR) spray @ \$170 and 1 Pegasus @ \$80 (total of \$250/ha) on 30 hectares (Nov – Jan plantings only). The normal crop protection costs related to all trial plantings, including 1 Admiral (Pyriproxifen) spray and other insecticides as required, will be borne by the trial collaborators.

Trial collaborators have agreed to take full responsibility for negative production outcomes, including poor yields or financial penalties associated with low fibre quality in late planted crops. There will be no financial compensation for negative production outcomes or other forms of financial assistance except for extraordinary insect management costs as indicated above.

Financial assistance to cover extraordinary insect management costs, if warranted, will be apportioned among collaborators at the end of the trial on the basis of cropping area. Details of this process will be determined at an end of season meeting with growers and project staff.

Funds for this purpose can be channelled through the existing Emerald Cotton Industry Development project (DAQ 100C).

3. At this early stage are there any highlights that you believe the Corporation should be informed about?

No

4. Detail and justify any variations to the original project proposal that you anticipate for the coming financial year (July to June). (Eg Variations to outcomes or objectives, project time-line, budgets, or personnel).

No