

FINREP95

**COTTON RESEARCH AND DEVELOPMENT CORPORATION**

# **FINAL REPORT**

**"Operational Costs for Cotton Experiments"**

**DAN 73C**

**July 1992 to June 1995**

**Mr Russell Martin, Australian Cotton Research Institute, Narrabri (067-991500)**



**NSW Agriculture**

*A final report prepared for the Cotton Research and Development Corporation*

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## **REPORT SUMMARY**

This project was initiated in 1992/93 to ensure that the quality of field research was maintained at the Australian Cotton Research Institute. Reduced budgets and the increasing field costs of experimental cotton was a concern for research staff who had little control over budget allocations. There was increasing potential for the quality of field trials to be jeopardised.

This project required an initial 'seed' grant by CRDC but once initiated only required limited contributions with lint sales being used to offset field costs. In 1994/95, changed treasury regulations altered the financial management of the project, but NSW Agriculture provided short term funds to ensure the effectiveness of the project.

Condensing all operational costs for experimental cotton through this project improved the management of the cotton crop by allowing coordinated applications of insecticide spays, improved irrigation management, rationalisation of experimental area and increasing the number of trials per hectare. More important, coordination of harvest and reduced buffer area improved yields from 3.0 bales/ha to over 5.0 bales/ha. This increase in yield, and accompanying lint sales, significantly reduced the costs of the project.

An important benefit of this project was to reduce the funding competition between the various areas at the station. This resulted in important infrastructure improvements being undertaken during the period including the expansion of the recirculation dam, landforming 12 ha of land previously unsuitable for research and improving the reliability and efficiency of the domestic bore.

This project has supported a wide range of cotton programs based at Narrabri covering all CRDC funded projects during this period. It has ensured that the best management practices are adopted for the experimental areas and that the quality of field research complements the high research standards maintained by the research group.

## **FULL REPORT**

### **Introduction**

The aim of the project was to ensure the continued viability of cotton research into the area of agronomy, entomology and pathology.

In the past NSW Agriculture has provided most of the funds to grow cotton experiments at the Australian Cotton Research Institute. However, Treasury no longer provided sufficient funds to adequately cover the high cost of cotton production. To ensure the long term viability and continuity of the cotton research program at Narrabri it was necessary to eliminate the annual uncertainty of funding.

Revenue raised from the experimental cotton blocks was credited to CRDC, thereby greatly reducing the total project costs.

### **Objectives**

The project ensured that the research programs undertaken by NSW Agriculture at Narrabri were maintained at a high standard.

### **Results**

CRDC support for this project ensured the continuity of research projects. Funds allocated were used to support research aimed at improving the general management of cotton. Specifically, this project support work being conducted by Dr S Allen, Mr G Charles, Dr N Forrester, Dr N Hulugalle, Dr S Putcha, Mr Phil Wright and Dr R Mensah.

The cotton industry has benefited from the practical research programs that have been operated from this centre. Greater understanding of crop agronomy has helped growers increase yields and the entomological studies of insect resistance have ensured a viable cotton industry.

### **Discussion**

The fundamental quality of field trials is dependent upon the management system which supports them. Reduced budget allocations had the potential to limit the expenditure on variable costs associated with the production of experimental cotton, and to restrict the number and/or quality of trials established at the Institute. At an average cost of \$1360/ha, this represents a significant proportion of the Institutes running costs.

Each year NSW Agriculture established approximately 25 ha of experimental cotton at the Australian Cotton Research Institute. However, during the term of this project there were significant reductions in water allocation throughout the irrigated areas of northern NSW. The continuing dry period resulted in projects being centralised back to the Institute in an attempt to secure some guarantee of water allocation. This short term fluctuation in requirement could not have been achieved without the support of this project.

Condensing all operational costs for experimental cotton through this project improved the management of the cotton crop by allowing coordinated applications of insecticide sprays, improved irrigation management, rationalisation of experimental area and increasing the number of trials per hectare. More important, coordination of harvest and reduced buffer area improved yields from 3.0 bales/ha to over 5.0 bales/ha. This increase in yield, and accompanying lint sales, significantly reduced the costs of the project.

Besides the direct support for operational costs, the project had significant secondary benefits. Suitable research land at the Institute was scarce, and NSW Agriculture provided special funds to improve an additional 12 ha of land to ensure future requirements are more easily met. Improvements were also made to the supply of irrigation water. Upgraded water recirculation system and the enhancement to the irrigation bore provided sufficient capacity to ensure trials were not adversely affected. It is unlikely that these special projects would have been undertaken if NSW Agriculture was required to meet the operational costs of experimental cotton.

This project has supported a wide range of cotton programs based at Narrabri covering all CRDC funded projects during this period. It has ensured that the best management practices are adopted for the experimental areas and that the quality of field research complements the high research standards maintained by the research group.

**Appendix**

Budget

<b>Item</b>	<b>1994/95</b>	<b>1995/96</b>	<b>1994/95</b>
<b>STAFF</b>			
Salaries			
Other costs			
Payroll tax			
Worker's insur			
Super. contrib.			
<b>TOTAL STAFF COSTS</b>			
<b>TRAVEL</b>			
<b>TOTAL TRAVEL</b>			
<b>OPERATING</b>			
Farm costs	61,200	7,200	7,200
<b>TOTAL OPERATING</b>	61,200	7,200	7,200
<b>CAPITAL</b>			
<b>TOTAL CAPITAL</b>			
<b>TOTAL REQUESTED</b>	61200	7,200	7,200
<b>INCOME RETURNED TO CRDC</b>	24,415	21,000	