

Chapter 1 - Introduction

1.1. Background

Although commercial cotton production was practised in northern Australia in the past, the industry was not sustained. The failure of the previous attempt at the Ord River Irrigation Area (ORIA) of Western Australia, due to uncontrollable insect problems and the cessation of cotton farming in the Bowen region of Queensland at about the same time for economic reasons, should serve as cautionary reminders for future attempts.

In recent years there has been increased interest in growing cotton in northern Australia. Research and development and, in some cases, test farming has been undertaken by different organisations (research and commercial) at several locations across northern Australia. The potential availability of land and water combined with new knowledge and production technology has stimulated this activity.

In 1998, at the time when the previous Australian Cotton CRC was preparing for refunding, cotton research, development and/or test farming activity was being undertaken near Broome, the Fitzroy River and at the ORIA in WA, at Katherine and Douglas-Daly in the NT, and near Richmond and Bowen in northern Queensland. This work involved the participation of several research and commercial organisations: AgWA, CSIRO, Northern Territory Department of Primary Industry and Fisheries, Twynam Cotton, Queensland Cotton, Western Agricultural Industries, Ord River District Cooperative and local farmers. It was clear that a future Cotton CRC had a role in coordinating and focusing these activities toward sustainable development objectives.

With the commencement of the new Australian Cotton CRC in July 1999, a new program, 'Growth into northern Australia' was established with strong linkages to the other Cotton CRC programs in established growing areas. Australian Cotton CRC programs are:

- Growth into Northern Australia.
- Innovative Technologies.
- Sustainable Farming Systems.
- Education, Technology Transfer.
- Cotton Textile Research.

In its first year the Cotton CRC established five initial projects to focus on the collection of baseline data on agronomy, pest and weed ecology in four target regions (Broome, the ORIA, Katherine and Richmond). The fifth project was the basis for this scoping report. The projects were:

- Northern Australian cotton disease survey.
- A baseline study of insects of cotton in far north Queensland (Richmond).
- Insect dynamics of the cotton ecosystems in the NT (Katherine).

- Integrated pest management systems for sustainable transgenic cotton production in the West Kimberley (Broome).
- Viable and environmentally responsible cotton production systems for northern Australia: Scoping studies and research liaison/coordination officer (Darwin).

A comprehensive research program was already well advanced at the ORIA with projects funded by AgWA, CSIRO, and Cotton Research and Development Corporation. This work is also part of the Cotton CRC's Program 1.

1.2. Program 1. Growth into Northern Australia: philosophy and general structure.

The published philosophy of the Australian Cotton CRC is to assist to develop region-specific production systems, which are economically viable, but minimise chemical inputs and environmental impacts. Recognising the fragility and conservation values of northern environments, the Cotton CRC will collaborate with other agencies to characterise the significant biodiversity of natural environments in each region and ensure conservation of native fauna and flora is accommodated in development and management plans.

The Australian Cotton CRC's philosophy for northern Australia incorporates the following:

- Cotton CRC is NOT an advocate for cotton production in northern Australia.
- Cotton CRC has a strategic research focus and a significant role in coordination.
- Government/community will decide on development.
- Research will focus on viable and environmentally compatible cotton production systems specific to new regions. Production systems will not be simply transplanted from south-eastern Australia and must be demonstrably sustainable through research.
- Develop solutions to specific regional environmental problems prior to promoting commercial activity.
- Production should be based on Integrated Crop Management (ICM) and a systems focus, with research teams reflecting this objective.
- Commercial partners should be willing to commit to R&D prior to commercial development.
- Collaboration with other agencies relevant to cotton development issues is essential.

The northern Australian program is lead by, Mr GR Strickland (Agriculture WA) and Dr MP Bange (CSIRO). A Northern Committee, comprising representatives from all Cotton CRC participants involved in Program 1 (CSIRO, AgWA, QDPI, NTDPI, Qld



Cotton, CSD, WAI, Twynam Cotton) reviews R&D needs and advises the Cotton CRC management committee on priorities for research. To provide a coordinated northern effort, the Cotton CRC established northern liaison/coordination officer based in Darwin. This scientist participates in the Northern Committee and had the task of producing this document.

1.3. General aims of the scoping study

The scoping study was instigated in 1999, with work commencing in early 2000, to provide a reference document to assist with research planning in northern Australia. The scoping study has the following aim:

To detail the status of current and past research activities and important environmental and production issues faced by each region in northern Australia that are relevant to cotton production.

The specific methodology is described in chapter 2 of this study.

1.4. Definition of the study region

The study region is defined as the area north of the Broken River Catchment 21°S in the east to Wallall Downs 20°S in the west Kimberley (Map 1.1). Focus is on regions where R&D is in place or planned with the Cotton CRC partners.

Map 1.1: Definition of Scoping Study region (north of the line), and current Cotton CRC research areas.

