

## EXECUTIVE SUMMARY

This document reports the findings from a survey of drip irrigated cotton growers and equipment manufacturers conducted during May-June, 2000. The survey included 26 face-to-face interviews and three telephone interviews with growers as well as interviews with the major manufacturers, consultants and installers within the industry. The main findings were:

- The performance of drip irrigation within the cotton industry is not limited by soil type or regional characteristics. Commercial systems have been developed which will work effectively on a wide range of soil types across the full spectrum of industry climatic conditions.
- The components available for SDI in the cotton industry are generally appropriate and effective if installed properly.
- Drip systems are not inherently more efficient at water application than surface or spray systems. Badly managed drip systems may result in lower efficiencies and higher deep drainage losses than other standard systems.
- Drip systems should only be considered after serious attempts have been made to optimise existing systems. On economic grounds, investment in improved surface irrigation performance or adoption of low pressure overhead spray systems will generally provide better returns.
- The key economic drivers for adoption are comparative performance and water valuation.
- Pure economics may not be the key adoption driver – agronomic, environmental site specific and life style issues may well be more important.
- The design, installation and management of drip irrigation systems is inherently more complex than other application systems. Hence, widespread adoption will require additional training and support of both industry professionals and growers.
- Cotton SDI users can generally learn a lot about drip performance from other industries – particularly in relation to installation and management issues.
- A major barrier to the implementation of effective SDI systems in the industry is the level of training and experience of dealers and installers.

Key recommendations arising from the surveys are:

- There is a need for industry development and promotion of standards and guidelines on best management practices for SDI installation and management;
- An effort is required to develop appropriate training and certification processes for users of SDI systems in cotton;
- CRDC should initiate and/or actively support processes to facilitate registration of agricultural chemicals for use in SDI systems;
- There is a need to continue and/or expand research and development in the cotton industry regarding:
  - SDI design (emitter discharge, emitter spacing and depth, lateral configuration, germination issues) for specific soil types;
  - the identification of appropriate management practices to minimise deep drainage;
  - optimised fertiliser application quantities/times and yields on these systems; and
  - the long term sustainability including pupae control in no-rotation, no-till SDI cotton systems, particularly on hardsetting red soils.
- Economic evaluation of drip installations should include the whole of system life costs and include valid comparisons with optimised alternative application systems.

