

FINAL REPORT

CRDC Project Number: **DAQ98**

Project Title: Improving pesticide application performance.

Research Program: Insect Management

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EXECUTIVE SUMMARY

More than 2000 cotton industry personnel (including growers, spray operators, consultants and spray contractors) participated in spray application workshops conducted throughout all cotton growing areas. The workshops were organised at a local level and dealt with a range of topics including setup for endosulfan; nozzle selection and setup; drift management; weather conditions and spray targeting.

Most CRC Extension Team members attended one of the 2-3 day spray application workshops to build their skills in this area and to allow them to deal with sonic spray issues in their own local areas. The Extension Team is a primary contact source at the local district level and a number of IDO's subsequently conducted their spray application workshops.

Key indicators of the success of the project include:

The workshops dealing with setup for endosulfan had to change the thinking of the whole industry in relation to the droplet size being used for insecticide application. For years the push had been to use small droplets but overnight the industry had to embrace the concept of "medium" spray quality.

- Since the start of the project there has only been 8 samples with endosulfan concentrations above the export tolerance for beef (down from 229 in 1998/99) (National Residue Survey 1995-2002)
- The incidence of samples with reportable endosulfan residues has dropped from 21% to 1.2%.

The project confirmed the continued superior performance of flat fan nozzles (in relation to newer ingestion active insecticides). These nozzles help to overcome some of the off target losses associated with drift and evaporation compared to hollow cone nozzles.

- Use of flat fan nozzles for insecticide application is becoming the norm. More than 85% of ground applications are carried out using flat fan nozzles. (Cotton benchmark Survey 2001)
- Sales of hollow cone nozzles have decreased with an increase of flat fan types of featured during the workshops including drift reducing types (as proscribed on the endosulfan label), conventional flat fan s and twin jet types.

The issue of weather- conditions and spraying was a focus at most workshops. Growers and applicators are more aware of the issues and monitoring conditions as part of all spray operations.

- Records are kept for 100% of spray applications. With 75% of respondents using the SprayLog. (Cotton benchmark Survey 2001)
- More than 6000 copies of the SprayLog record book have been distributed in the last three year.