DUAL HERBICIDE SPRAY APPLICATION TECHNOLOGY IN SUGAR CANE

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THE INTRODUCTION of the Queensland Reef Protection Legislation in 2010 regulated the use of photosystem II-inhibiting (PS II) herbicides (atrazine, diuron, hexazinone and ametryn) in sugarcane. The emphasis is now on extension and technical methodologies to help growers adopt management practices that reduce the risk of PS II herbicides in runoff.

Many growers saw a need to review herbicide application technology in light of the regulations and the new herbicides being registered in sugarcane. In 2011, a number of spray drift management workshops were offered to growers in the Wet Tropics region of Far North Queensland. These were very well attended. Approximately 180 growers attended four workshops.

Growers immediately saw the advantages of low drift and air inclusion spray nozzle technology. Growers asked if a relatively inexpensive spray system could be developed where chemicals such as glyphosate could be applied to the inter row without shields or hoods.

A number of prototypes were developed by Allan Blair from Department of Agriculture, Fisheries and Forestry (DAFF). After some early testing and refinement at growers' properties in Tully and Innisfail the dual herbicide spray bar was ready for field trials.

Replicated trials were carried out in 2013 to investigate if there was any phytotoxic effect on sugarcane from the application of glyphosate to the inter row without a hood or shield. A 540 g/L active constituent formulation of glyphosate was applied at 5 L/ha to the inter row with the dual herbicide sprayer. No significant differences between the standard spray plots and dual herbicide glyphosate plots were detected.

The poster will display the trial results, show photographs of trial areas treated with the sprayer as well as drawings of the spray bar. A permit application to use the spray bar for non-shielded application of glyphosate has been submitted to APVMA.