



### Weedseeker® selective spraying technology

The cane industry is at the forefront of innovation when it comes to developing or adapting technology to benefit growers and the environment. Recently BSES Limited has been collaborating with Mackay grower, Rod Lamb, in a project funded through Reef Rescue to modify the Weedseeker® selective spraying system for in-crop use in sugarcane.

Currently a blanket spray approach is the most common method used to control weeds in the inter-row, using either

knockdown or residual herbicides. With the advent of Reef Rescue funding, the use of shielded sprayers in combination with glyphosate has become a more common method for inter-row weed control. Weedseeker® systems are commonly used in broadacre applications with sensors fitted to broadacre boom sprays. This project aims to adapt this system so that it works successfully in an inter-row shielded spraying system.

Weedseeker® selective spraying technology uses weed sensing technology to detect weeds and fire herbicide on detection which greatly reduces the volume

of chemical needed to spray a field. Light emitting diodes emit infra-red and visible red light which is projected downwards. Light reflected back is captured and analysed to see if it matches the light spectrum of green plants.

If the reflected light is identified as being from a green plant then the spray nozzle; located behind the sensor, fires a small amount of herbicide as it passes over the plant.

Using the Weedseeker® in other crops has resulted in a reduction of up to 80% of herbicide applied. "Adapting to use this

Reef Rescue is funded through the federal government's 'Caring for our Country' program.



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technology for the cane industry will potentially result in substantial savings for the grower greatly reducing the volume of herbicide applied to their fields. The Weedseeker® will also prove beneficial to the environment, minimising the potential for herbicide run off leaving the farm,” said Phil Ross from AgriServ.

The Weedseeker® technology has been adapted for the cane industry by attaching sensors to spray shields or hoods which are commonly used to reduce spray drift allowing the in-crop use of non-selective systemic herbicides such as glyphosate. With herbicide being applied directly onto the plant and the majority of what is sprayed being directly absorbed by the plant, farm run off of the chemical sprayed using the Weedseeker® technology will be minimised to almost a negligible amount.

Currently the last few modifications are being made to adapt this technology to the cane industry. “We have had to change a number of things to adapt the Weedseeker® from broad acre agriculture to the Cane industry. We aim to start field trials in the next few weeks and it should be ready to demonstrate to other growers soon after that, all going well,” said Mr Ross from AgriServ.

Field trials will be conducted to assess at what level of weed pressure the technology is economically viable. If the weed pressure is high the nozzles will be firing non – stop making the Weedseeker® no more effective than current hooded sprayers.



## Reef Catchments

Reef Catchments is the regional NRM body who oversees the Reef Rescue program in the Mackay Whitsunday Isaac region on behalf of the federal government.

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If you are interested in finding out more about Weedseeker® spraying technology contact Phil Ross from AgriServ.  
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