

The SRA research spray hood with two tanks and side nozzles.



## Looking for new weed management systems

*Weed management is one of the important factors that contributes to a successful farm management plan. With continued scrutiny on diuron, how do some of the alternative herbicides stack up in the Wet Tropics?*  
**By Phil Ross**

Paul Rossi farms in the Aloomba area just south of Cairns. He came along to the recent SRA herbicide trial farm walk looking for ideas on how to improve his weed control strategy.

"I farm on a 1.8 m single system and find that in our humid climate, trash breaks down pretty quickly. By out-of-hand stage weed seedlings are often germinating through the broken-down trash," he said.

"I spray my inter-rows with glyphosate using a spray hood to control hard-to-kill weeds like Guinea grass, Vasey grass, sour grass and Navua sedge. I follow this up with a residual/knockdown mix using Irvin legs at out-of-hand during November or December. Sometimes I'll need to go again in January or February, using a small inter-row tractor if vines are a problem. I'm looking at ways to avoid that third spray.

"I'm modifying my spray hood with a second spray circuit and side nozzles so that if necessary I can treat the rows at the same time I use glyphosate on the inter-row.

"I'm also interested in seeing what options I have for a late applied spray to give me longer control after out-of-hand, especially for varieties like Q208<sup>®</sup> which take a while to close in. This is even more important when you have increased your row spacing."

Two trials at Aloomba and one at Tully have compared some alternative options to diuron and have also compared two dual tank spray systems; the QDAF dual tank sprayer and a spray hood fitted with side nozzles.



**Above:** Aloomba farmer Paul Rossi with SRA Weed Agronomist Emilie Fillols.



**Above:** The QDAF dual spray leg.

## Wet Tropics growers check out herbicide trials

### Pre-emergent

Growers from Tully to Gordonvale, and far northern Advisors recently had the opportunity to have a look at SRA's pre-emergent herbicide trials in ratoons on Greg Clarke's farm at Aloomba (near Gordonvale, just south of Cairns) and on Harkam Singh Mavi's farm at Midgenoo (near Tully). The main weeds on the Aloomba site are spiny spider flower, Guinea grass, awnless barnyard grass, blue top and pink convolvulus, while the main weeds at Tully included Guinea grass seedlings, bluetop and square weed. The trials included the below treatments:

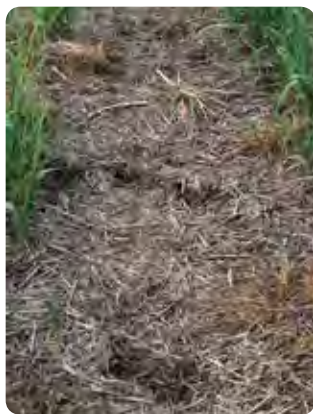
Product	Active	Product rate (kg or L/ha)	Water rate (L/ha)	Weed control 6 weeks after spray
Barrage + paraquat	diuron/hexazinone	4	300	Excellent
Barrage	diuron/hexazinone	0.9	300	Good
Flame + paraquat	imazapic	0.4	300	Very good
Balance + paraquat	isoxaflutole	0.2	300	Very good
Clincher Plus	metolachlor	2.7	300	Poor
Bobcat i-MAXX	imazapic/hexazinone	3.8	400	Very good
AmiTron	amicarbazone	1.4	300	Very good

**Note:** AmiTron is currently going through APVMA evaluation for registration in Australia.

Six to ten weeks after spraying, most of the residuals being tested were still holding back weed germination. Some vines and Guinea grass seedlings were just starting to come through in some plots. Clincher Plus is not performing well in the Wet Tropics. Weed assessments are continuing to check the length of control of each treatment and the weed spectrum controlled.



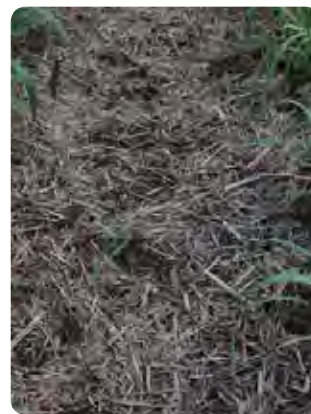
**Above:** Control plot with no herbicide applied.



**Above:** Barrage at 4 L/ha (reference treatment).



**Above:** AmiTron – a potential new herbicide active.



**Above:** Balance.



**Above:** Flame.



**Above:** Bobcat i-MAXX.



**Above:** Clincher Plus.

*AmiTron, a potentially new herbicide with the active ingredient amicarbazone, is currently not approved for use in Australia. An application is currently with the APVMA for registration for sugarcane.*





Checking out the post-emergent trial on Rob Rossi's farm.

### Post-emergent

Mulgrave growers also had the opportunity to look at SRA's post-emergent herbicide trials on Bob Rossi's farm at Aloomba (near Gordonvale, just south of Cairns). This trial is looking at various post-emergent herbicide treatments in ratoons to manage Guinea grass stools. In addition to testing a number of herbicides, this trial is also comparing a number of different spray rig configurations.

While spot spraying of Guinea grass in ratoons is a common practice, many growers have asked about the best way to control heavy infestations of Guinea grass, where spot spraying is too time-consuming. As Guinea grass and sugarcane are both grasses, care must be taken to select herbicides that kill or suppress Guinea grass, while minimising phototoxic effects on the cane. This trial is also looking at ways to reduce the amount of residual herbicide by testing two spray rig configurations that combine banded spraying of residuals on rows and knockdowns in the inter-row.

Treatment number	Product	Active	Product rate (kg or L/ha)	Water rate (L/ha)
T1 Banded spray over row – applied early	Rattler + Wetspray 1000	Asulam (400 g/L)	8.5 200 mL/100 L	400
T1 Inter-row sprayed with hood – applied later	Weedmaster Argo + LI700	Glyphosate (540 g/L)	5 300 mL/100 L	100
T2 Irvin leg – sprayed inter-row and base of row	Diurex 900 WG + Daconate + Activator	Diuron (900 g/kg) MSMA (720 g/L)	0.5 3 x 125 mL/100 L	350
T3 Irvin leg – sprayed inter-row and base of row	Balance + Shirquat + Activator	Isoxaflutole (750 g/kg) paraquat (250 g/L)	0.1 1.2 x 125 mL/100 L	350
T4 Irvin legs – sprayed inter-row and base of row	Balance + Daconate + Activator	Isoxaflutole (750 g/kg) MSMA (720 g/L)	0.1 3 x 125 mL/100 L	350
T5 Hood side nozzles to base of row	Balance + Daconate + Activator	Isoxaflutole (750 g/L) MSMA (720 g/L)	0.1 3 x 125 mL/100 L	350
T5 Under hood nozzle – spray to inter-row	Weedmaster Argo + LI700	Glyphosate (540 g/L)	5 300 mL/100 L	100
T6 Dual spray bar centre nozzle to inter-row	Weedmaster Argo + LI700	Glyphosate (540 g/L)	5 300 mL/100 L	100
T6 Dual spray bar side nozzles to base of row	Balance + Daconate + Activator	Isoxaflutole (750 g/kg) MSMA (720 g/L)	0.1 3 x 125 mL/100 L	350

This trial was last sprayed on September 17 and although the Guinea grass stools have more or less yellowed off depending on the treatments, it was too early to know if they will die. In a similar trial last year, glyphosate sprayed to the inter-row combined with a mix of Balance and Daconate to the rows and Balance and Daconate sprayed with the Irvin leg gave the best result. Best results were achieved with the hooded sprayer with side nozzles. However, even though the Balance and Daconate mix gave the best result in this trial for Guinea grass in the row, only about 50 percent of Guinea grass stools died. The rest recovered and continued to grow. The current trial at Aloomba will continue to be monitored to see if the Guinea grass kill is better this year.



**Treatment 1:** Rattler banded over the rows followed by glyphosate through a spray hood to the inter-rows. Very little phytotoxicity on cane. Guinea grass growth is only slowed.



**Treatment 5:** Balance + Daconate onto row through side nozzles and glyphosate to inter-rows through shield. Some phytotoxicity to the cane. Strong yellowing of Guinea grass in the row, apparent control in the inter-row (to be confirmed in a few months).



**Treatment 6:** Balance + Daconate to the row through side nozzles and glyphosate to inter-row using the QDAF dual sprayer. Minor phytotoxicity to the cane, light yellowing of Guinea grass in the row.



**Treatment 2:** Diurex + Daconate applied through Irvin leg. Minor phytotoxicity to cane. Light yellowing of Guinea grass. Unsprayed plot in background.



**Treatment 3:** Balance + Shirquat applied through Irvin leg. Moderate phytotoxicity to cane. Unsprayed plot in background. Moderate yellowing of Guinea grass.



**Treatment 4:** Balance + Daconate applied through Irvin legs. Moderate phytotoxicity to cane. Strong yellowing of Guinea grass.

*Ongoing assessments will include assessing Guinea grass stool death, phytotoxicity to the cane and yield comparisons at the 2016 harvest.*

**For more information on these trials contact Emilie Fillols (0438 711 613) or Phil Ross (0477 318 897).**