2015

Looking for new weed management systems

Ross, P

http://hdl.handle.net/11079/15450

Downloaded from Sugar Research Australia Ltd eLibrary
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® 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.
**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:

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

*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.

*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.*
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.

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


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

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.

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).