

## Spot-spraying post-emergent strategies for perennial grasses

Evaluation of spot-spraying strategies for Guinea and Hamil grass was carried out during 2016 at East Barron, Mossman, Gordonvale and Innisfail; as part of SRA Research Project 2014050 *Developing an alternative herbicide management strategy to replace PSII herbicides in the Wet Tropics area*. Historically, spot-spraying relied mainly on herbicides containing diuron plus hexazinone, such as Velpar® K4™ DF® (no longer available, but replaced by Barrage and Bobcat® combi WG). Mixes evaluated were chosen based on feedback from growers who were trialling different spot-spray mixes with the aim of moving away from diuron-based herbicides.

### Alternative spot-spraying mixes tested

Products	Active ingredient	Rate	Estimated cost/100 L spray volume
Barrage + BS 1000	diuron/hexazinone + wetter	1 kg/100 L 500 mL/100 L	\$21
*Balance® + Daconate® + Agral	isoxaflutole + MSMA + wetter	50 g/100 L 1 L/100 L 100 mL/100 L	\$27
*Bobcat® i-maxx + Activator®	imazapic/hexazinone + wetter	1 L/100 L 125 mL/100 L	\$22
Rattler® 400 + *Diurex® 900 + Wetspray® 1000	asulam + diuron + wetter	2 L/100 L 500 g/100 L 200 mL/100 L	\$44
*Weedmaster® Argo®	glyphosate	1.35 L/100 L	\$10

\* off-label mix ingredient

- All the spot-spray mixes successfully killed established Guinea grass stools.
- Volume of spray applied is critical:
  - > Up to 200 mL for 30 cm high stools and up to 1 litre for stools one meter high
  - > Lower volumes caused a burn-off of foliage but stools regrew, requiring additional spot-spraying
  - > A Spray Turbo 400 handgun with a 2.5 mm ceramic jet delivering up to 5 L/minute at 2.5 bar was effective.
- Over-spray onto cane foliage will cause crop injury
  - > Glyphosate will kill cane and is not recommended for spot-spraying in-crop
  - > Bobcat i-maxx (imazapic/hexazinone) showed the most phytotoxicity of the other mixes.



**Barrage® + Activator®**

**Balance® + Daconate® + Agral**



**Bobcat® i-maxx + Activator®**

**Weedmaster® Argo®**



**Rattler® + Diurex® + Wetspray® 1000**