Awnless barnyard grass management: Flame application parameters

Background

In early 2007, the first population of glyphosate resistant awnless barnyard grass (*Echinochloa colona*) was confirmed in northern NSW. The paddock had a long history of winter cropping together with a heavy reliance on glyphosate in the summer fallow. This commercial experience, together with recent QPIF modeling outcomes, highlights that we are approaching a very dangerous situation due to the overuse of glyphosate.

Barnyard grass is typified by multiple germinations during the spring/summer. This characteristic frequently results in the need for multiple fallow sprays. An effective residual herbicide could allow a reduction in fallow sprays and consequently reduce the selection pressure on glyphosate. Flame[®] (imazapic 240 g/L) was chosen for this study as it can provide very effective residual control of a range of grasses and broadleaf weeds, however variability in performance has often been an issue.

Project aims

1. To investigate the impact of application volume and droplet size on Flame efficacy and reliability

2. To examine whether application timing just prior to rainfall has any impact on Flame reliability

Results in a nutshell

Barnyard grass control:

- *High levels of initial control were obtained across 3 of the 4 trials*

- *Poor initial control levels where Flame applied 10-14 days after 25 mm rain event*

- *Good levels of control at 57-84 days after application in all trials*

- *Nozzle type (droplet size) had little impact on level of control*

- *Varying application volume from 50-100 L/ha had little impact on control*

- *No benefit observed by delaying application to shortly prior to a rain event*

Overall:

- ***Application PRIOR to weed germination appeared more important than application parameters***

- ***Useful tool in high barnyard grass situations but no silver bullet***

- ***Also consider in early spring between summer crop harvest and long fallow winter cereal crop***
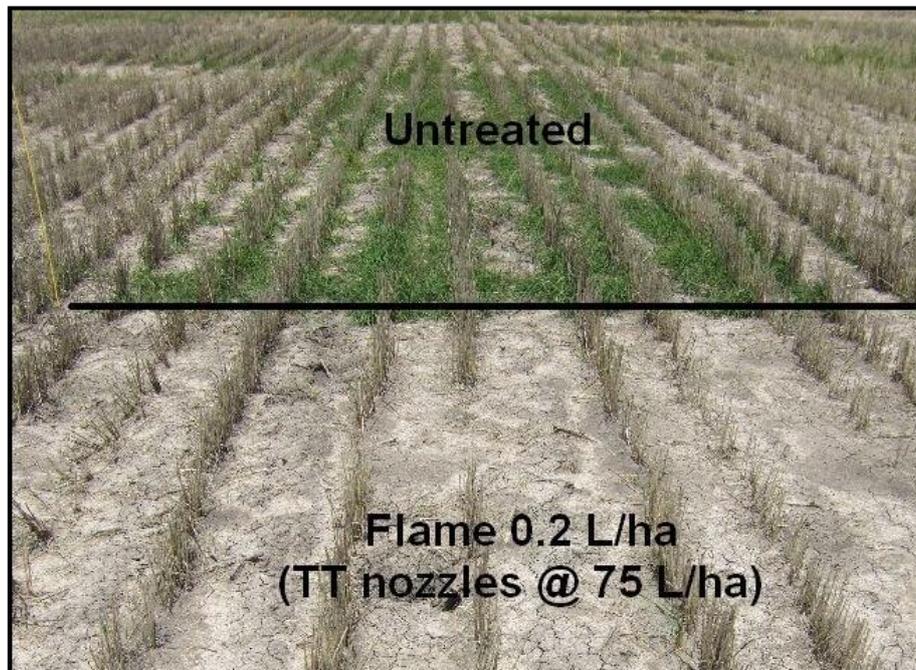
Bullarah 1, 3 Jan 2008, 41 days after application