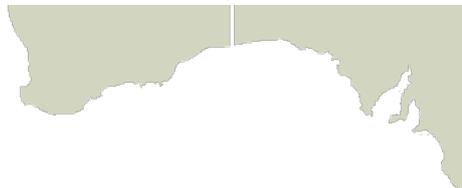


Rhizoctonia control improved by liquid banding of fungicides

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Background

Rhizoctonia bare patch caused by the fungus *Rhizoctonia solani* AG8 continues to be a devastating disease of wheat and barley in Australia, causing reductions in grain yield which can cost the industry up to \$77 million per annum.

We have investigated whether liquid banding of fungicides can result in significant yield responses in wheat and barley trials. Liquid systems offer more targeted delivery of fungicide to the soil profile, are precision agriculture compatible and eliminate exposure to dust from the active ingredients.

Methods

SARDI/UniSA and DAFWA have conducted 30 fungicide efficacy trials across sites in SA and WA from 2011-2013. Trials have been sown to wheat and barley using knife points and have evaluated liquid banding of coded products developed by Syngenta and Bayer CropScience.

Key treatments have included:

- Vibrance™ (360 mL/100 kg) and EverGol® Prime (80 mL/100 kg) seed treatments
- Coded product banded in-furrow 2-3 cm below seed +/- seed treatment
- Coded product banded in-furrow 2-3 cm below seed + surface band

Key messages

- Seed treatments increased yield by 80-100 kg/ha on average. Few significant responses were observed (5/28 trials = 18%).
- Banding in-furrow only (medium/high rates) or in-furrow (low rate) with a seed treatment increased yield by 160-200 kg/ha on average. About half the responses were significant (36/67 trials = 54%).
- The most consistent responses across seasons were seen when fungicides were applied as a split application with ½ the recommended rate banded in-furrow and ½ banded on the surface. Yield increases averaged around 200-300 kg/ha, with most responses being significant (18/26 trials = 70%).
- APVMA is currently reviewing submissions from Syngenta and Bayer CropScience to enable label registration for liquid banding of the coded products to control *Rhizoctonia* (some leaf diseases also). If approved, registration should be granted by 2015.
- Permits have been approved for large scale evaluation of liquid banding fungicides in 2014 (contact Syngenta or Bayer CropScience for location details).

- In field trials, liquid banding of fungicides has reduced *Rhizoctonia* patch incidence and severity but not eliminated patches all together. The fungicides will still need to be used as part of an integrated management program.

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