

Leaf Rust in Barley 2011 Individual Trial Results



Trial: RD1116

Location: "Peter's Farms", ~18 km west of Allora, Qld

Planting date: 8/6/2011

Plot size: 10 x 4m on 25cm row spacings

Trial design: Randomised complete block with four replicates

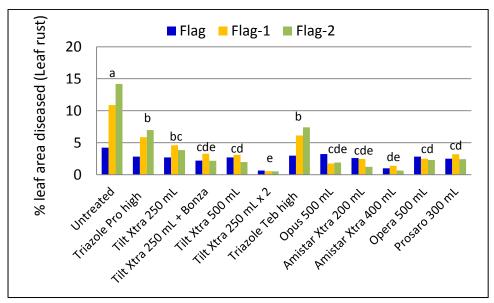
Spray parameters: AIXR110015 at 70 L/ha (300 kPa and 10.1 km/hr)

Variety: Commander

		Crop stage	Leaf rust level
Spray timing 1:	26/8/2011	~GS43 (early boot)	Trace
Spray timing 2:	6/9/2011	~GS51 (early head emergence)	Trace

Leaf rust comments:

At Timing 1, leaf rust was found at trace levels only. There was little progression of leaf rust between the two spray application timings with levels < 1% on Flag-2 at timing 2. The graph below shows the level of leaf rust diseased leaf area on the 3^{rd} of October (38DAT1, 27DAT2).



Letters of comparison are for the mean of the top 3 leaves, p=0.05. Treatments sharing the same letter are not significantly different

Key messages - leaf rust disease severity:

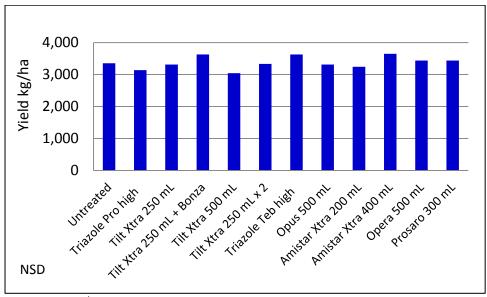
- Disease levels were low to moderate with significant suppression from all fungicides
- Timing 1 applications were made ~2-3 weeks prior to 'more rapid' disease build-up
- Tilt Xtra 250 mL x 2 applications and Amistar Xtra 400 mL provided the most effective leaf rust control
- Triazole Teb and Triazole Pro (both at the high label rate) provided significantly lower levels of leaf rust suppression than all fungicides other than Tilt Xtra 250 mL



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Yield:



Harvested 10th November, cv 12%

Grain quality:

Grain analysis showed no significant differences in test weight, protein, retention or screenings. Mean test weight 60 kg/hL, mean protein 10%, mean retention 98%, screenings <2%

Key messages - yield and grain quality:

- There was no significant impact from any fungicide treatment on yield
- There was no significant impact from any fungicide treatment on grain quality

Conclusion:

Clear differences were apparent between fungicides in efficacy on leaf rust. The most effective control was achieved by two applications of Tilt Xtra 250 mL, 11 days apart with the most effective single application Amistar Xtra 400 mL. Leaf rust at this site developed slowly during late August and early September but was widespread by early October. The absence of significant yield benefit was disappointing, however this site was poorly managed for wild oats. It is expected that wild oats had more impact on yield in this trial than leaf rust.

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