

## Summit Impact in Furrow® in Wheat

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**Aim:** To evaluate the common fungicide options in wheat.

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**Location: Munglinup & Toodyay**

### Background:

A new strain of Stripe Rust (*Puccinia striiformis*) was discovered in Western Australia for the first time in 2002 in wheat and growers were faced with limited control options. Until now, very few W.A. wheat varieties have had resistance to the disease. There are some fungicide options available to growers to assist in the control of stripe rust as well as other common cereal diseases such as take-all, leaf rust, powdery mildew, scald and septoria tritici, when applied in furrow. This trial aims to test the efficacy of the major cereal fungicide options in wheat as well as test the efficacy of Impact in furrow® when it is not applied to fertiliser correctly.

### Trial Details:

#### Munglinup

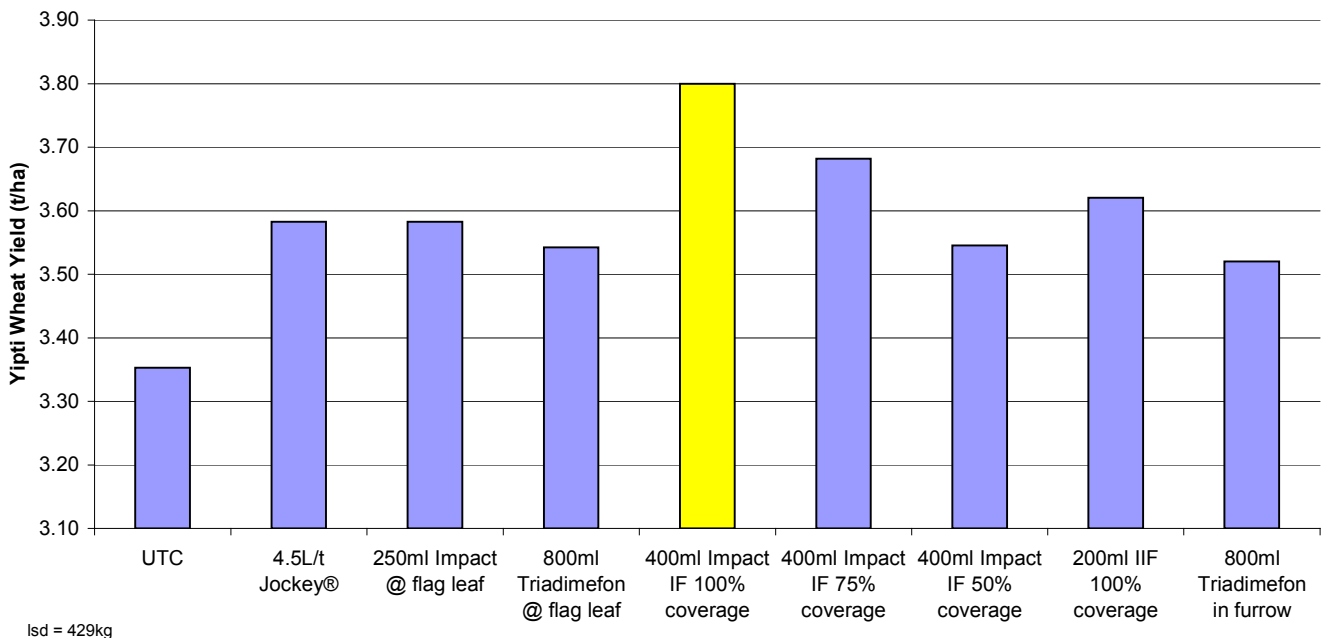
Plot size and replication	2.2 * 20m, 3 reps Randomised Complete Block
Soil type	Sand
Sowing date	24 <sup>th</sup> May 2003
Conditions at sowing	Moist
Machinery	Harrington Point with Gumbo Boot
Seeding rate	70kg Yipti Wheat
Fertiliser	100kg MAPSZC® + Basal 60kg N with UREA. 100kg Gypsum across all treatments
Herbicides and Insecticides	SpraySeed 2 L/ha Trifluralin 1.5 L/ha Logran 35 g/ha Chlorpyrifos 1 L/ha SpraySeed 2 L/ha MCPA 500 1.2 L/ha
Paddock History	2002 = Canola, 2001 = Wheat, 2000= Lupin

## Toodyay

Plot size and replication	2.2 * 20m, 3 reps Randomised Complete Block
Soil type	Loamy Sand
Sowing date	10 <sup>th</sup> June 2003
Conditions at sowing	Moist
Machinery	Harrington Point with Gumbo Boot
Seeding rate	100kg Arrino Wheat
Fertiliser	100kg MAPSZC® + Basal 60kg N with UREA. 100kg Gypsum across all treatments
Herbicides and Insecticides	Trifluralin 2 L/ha Chlorpyrifos 1 L/ha Buctril MA 1.4 L/ha Ally 3 g/ha Logran 15 g/ha Hasten 0.5 % v/v
Paddock History	2002 = Lupin, 2001 = Wheat, 2000 = Canola

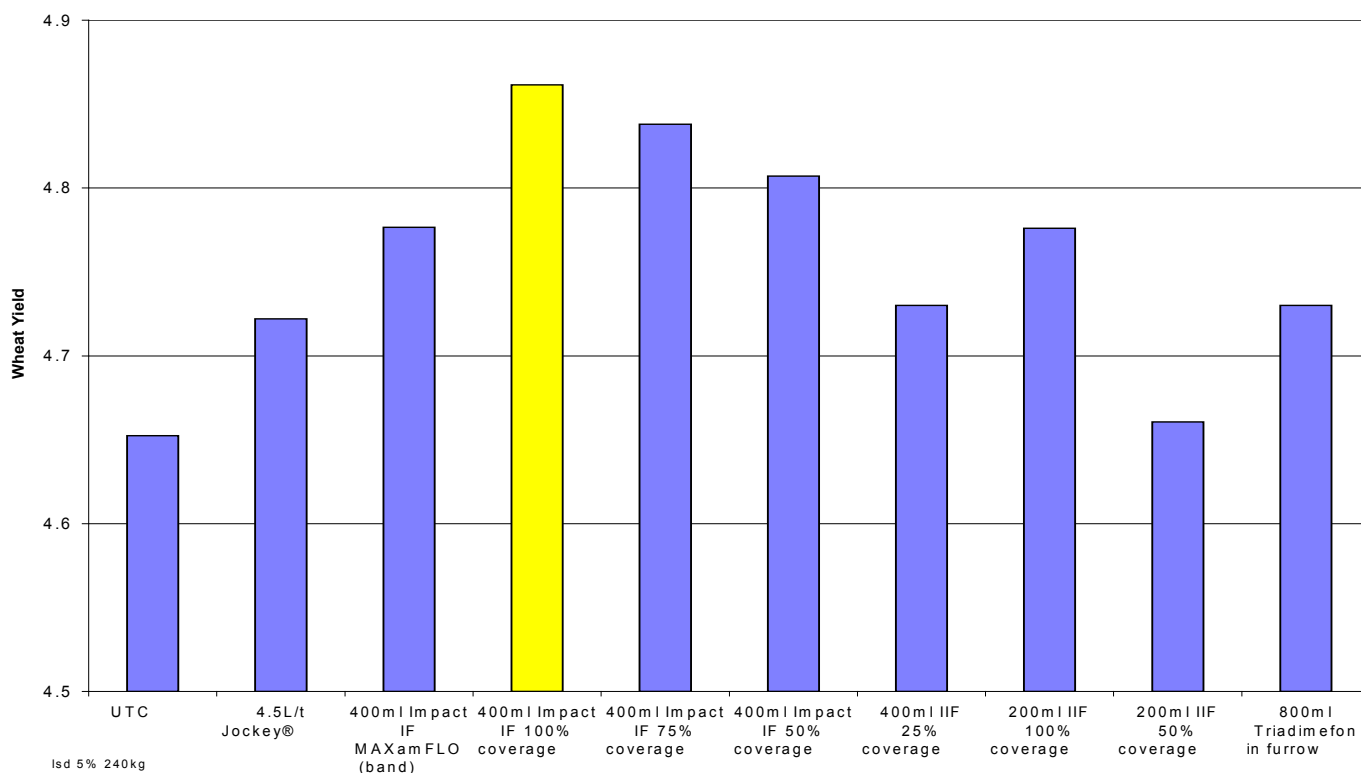
## Results:

### Summit Fungicide Trial, Munglinup 2003



**Figure 1. Wheat grain yield (kg/ha) response to various fungicide options at Munglinup.**

### Summit Fungicide in Wheat, Toodyay 2003



**Figure 2. Wheat grain yield (kg/ha) response to various fungicide options at Toodyay.**

Impact in Furrow® applied at 400ml/ha produced the highest grain yield at both Munglinup and Toodyay. At Munglinup, 400ml Impact in Furrow produced 3.8t/ha, which was significantly (Isd = 5%) more grain yield than the untreated control (Figure 1). At Toodyay, 400ml Impact in Furrow produced nearly 4.9t/ha, which was 210kg more than the untreated control (Figure 2).

At both sites, all treatments gave improved grain yield responses over the untreated control. At Munglinup, Triadimefon applied onto fertiliser, was equally effective applied as a foliar spray onto the flag leaf. When applied at full label rates, the seed treatment Jockey® (fluquinconazole), produced slightly more grain yield than the triadimefon treatments at both sites but less than the 200ml rate of Impact in furrow® applied as 100% fertiliser coverage (Figures 1&2).

At both sites, and with different wheat varieties, there was a decline in yield when Impact® was used in furrow and fertiliser coverage was less than 100%. At Munglinup, Impact® applied onto 50% of the fertiliser granules resulted in a 250kg/ha decline in yield from the 100% coverage at the full rate of Impact® (Figure 1). The half rate of

Impact® applied on 100% of the fertiliser granules resulted in more grain yield than the full rate of Impact® applied onto 50% of granules (Figure 1). This same trend was evident at Toodyay (Figure 2). Appropriate application of Impact to fertiliser is very important to maximising its effectiveness on root and leaf diseases.

**Summary:**

- Impact in Furrow® increased wheat grain yield from the untreated control at both Munglinup and Toodyay (up to a \$80/ha return assuming wheat at \$180/t farm gate)
- At Munglinup and Toodyay, 100% coverage of fertiliser with Impact® was essential. (up to \$45/ha cost for poor fertilizer coverage)
- Impact in Furrow® was more effective than seed dressings that offer equivalent protection from cereal diseases at the full 400ml rate and equally as effective at the 200ml rate at both sites.
- Impact in Furrow® was more effective at either full or half rates than triadimefon applied on fertiliser.