B4 Sowing Time x Plant Population, HMRZ (Wagga Wagga), NSW

Aim: To investigate effects of sowing date on the grain yield of four faba bean cultivars.
To investigate effects of fungicides on yield, both fertilizer augmented and foliar applied.

Treatments

Varieties:	Farah, PBA Rana, AF3001 and AF3063
Sowing dates:	7th May and 10th June 2011.
Fungicides:	1. Impact®In-Furrow (on Fert) 2. Standard fungicide sprays throughout season 3. Impact®In-Furrow PLUS 1 or 2 Strategic crop sprays
Plant populations:	Targeted 30 plants/m^2.
Plot Size:	12m x 1.8m
Row Spacing/Stubble:	30 cm into standing light stubble.
Fertiliser:	Legume Starter @ 115 kg/ha at sowing
Fungicide Product	Penncozeb and Bravo® foliar fungicides to prevent chocolate spot 22nd July (early sowing only); 13th September and 6th October 2011 (All)

Fungicides are more effectively used as protectants rather than as a cure to infection. The "Control" fungicide treatments in this experiment was the industry "standard" designed to prevent chocolate spot infection from establishing by routinely spraying with foliar fungicides. This was compared with Impact®In-Furrow, designed to protect the seedlings from these diseases. In the third regime, Impact®In-Furrow was used in conjunction with two strategic foliar applications.

Results and Interpretations:

The major yield affect on in this trial was sowing time – see Figure B4.1. On average, yield declined by 29kg/day when sowing was delayed from 7 May to 10 June (34 days). Average yield for 7 May sowing was 3.5 t/ha; the 10 June 2.5 t/ha.

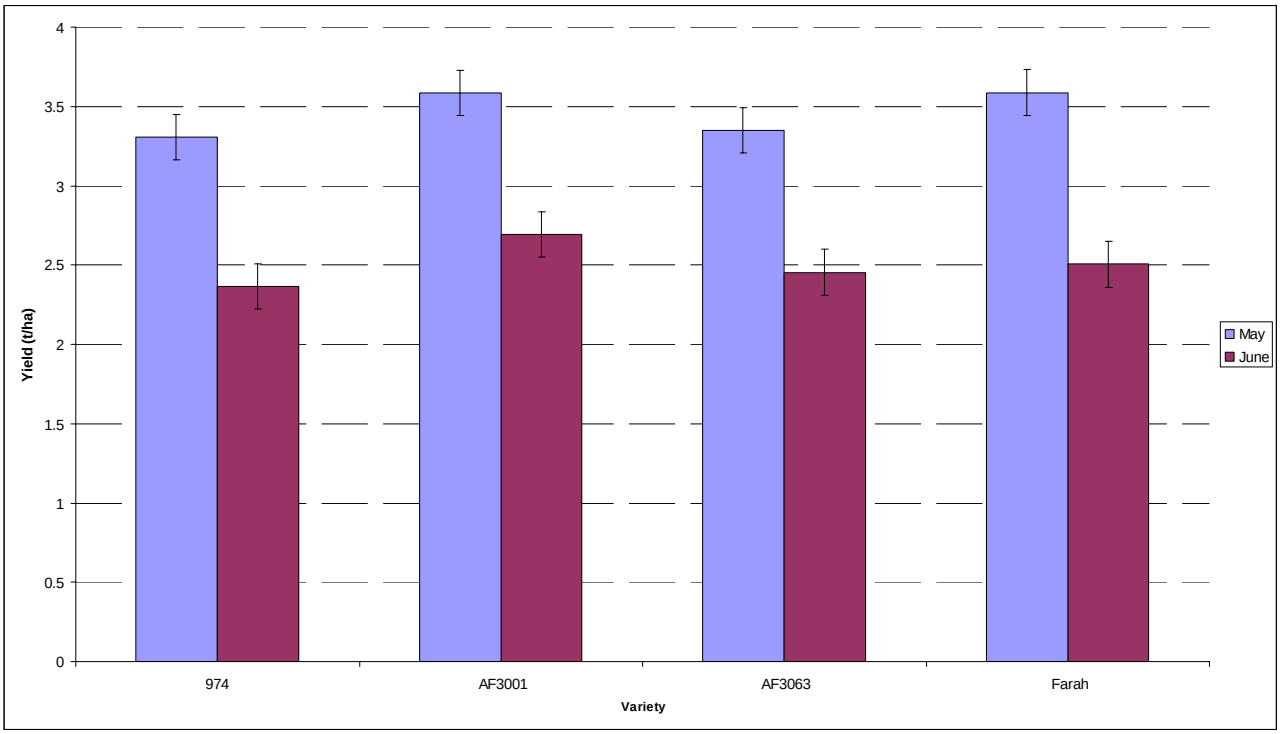

Figure B4.1. Effect of sowing time and variety on grain yield of faba bean at Wagga in 2011

The three fungicide regimes had little or no affect on faba bean yield at any sowing date this season. This is a direct reflection of the dry growing conditions which limited disease incidence. There

was one significant yield reduction at the May sowing time – the "control" treatment with AF3063. This result was unexpected and reasons unclear.

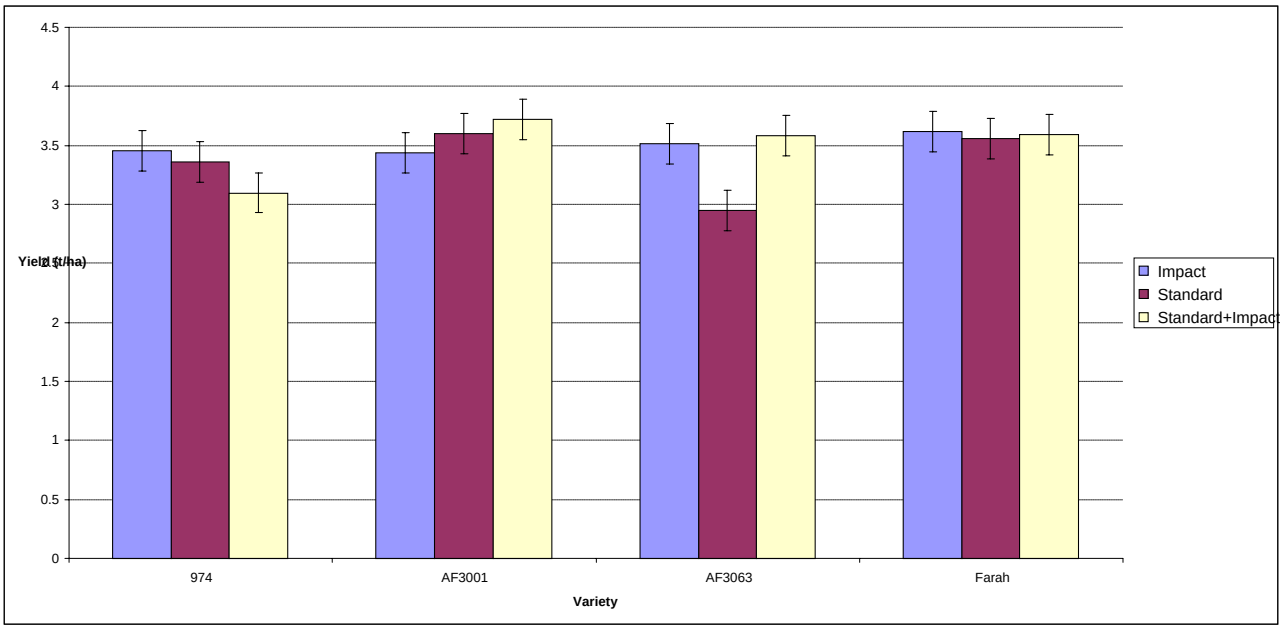

Figure B4.2. Fungicide effects on faba bean varieties from 7 May sowing at Wagga in 2011

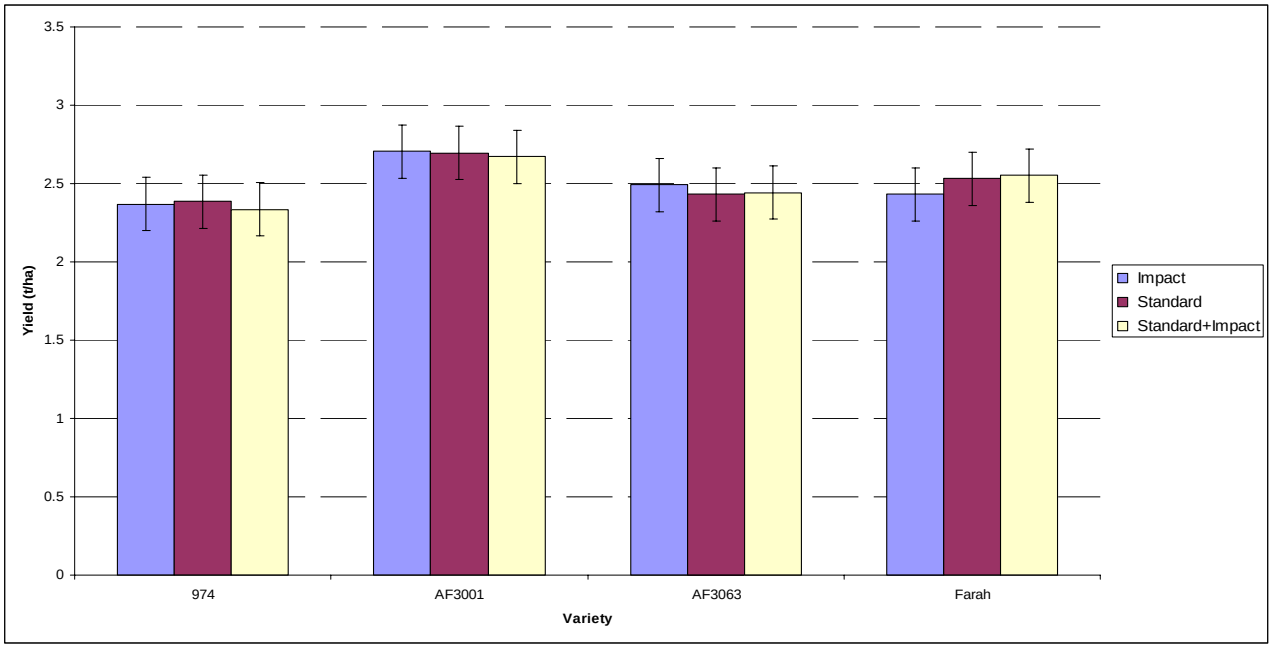

Figure B4.3. Fungicide effects on faba bean varieties from 10 June sowing at Wagga in 2011

Key Findings and Comments

- Large yield reductions occurred from delaying sowing from 7 May to 10 June (34 days).
- There was no significant yield difference between varieties.
- There was little disease pressure.
- The merit of protecting faba seedlings with in furrow fungicide application requires further evaluation over a wider range of season, particularly wetter winters