



Optimising
Irrigated Grains

IRRIGATED GRAINS TRIAL 2020: FABA BEAN AGRONOMY



TRIAL OPERATIONS

- April 8th** Pre-irrigation 1.5 Ml/ha
(Flood treatment only)
- April 17th** Knockdown, Glyphosate
(1.5 l/ha) + Goal (75 ml/ha)
- May 8th** Terrain (180 g/ha) +
Gramoxone (1.8 l/ha)
- July 2nd** Clethodim (500ml/ha) +
Factor (180 g/ha)
- August 6th** Fungicide
Chlorothalonil (1.5 l/ha)
- Sept 8th** Fungicide
Chlorothalonil (1.5 l/ha)

Spring Irrigation

Flood Irrigation
September 8th 0.9 Ml/ha

Sprinkler Irrigation
September 1st 25 mm
September 10th 20 mm

OPTIMUM PLANT POPULATIONS OF FABA BEANS GROWN UNDER OVERHEAD AND FLOOD IRRIGATION

These trials evaluate the plant population of faba beans grown at different plant populations under flood and overhead irrigation.

The individual objectives are as follows:

- Evaluating the influence of faba bean three different plant populations on dry matter production and grain yield under flood and overhead irrigation.
- To compare the economics of faba beans grown under flood versus overhead irrigation sown at the same time.
- To examine the influence of plant population on disease levels and pod set under two different systems of irrigation.
- To examine whether cultivar susceptibility to disease interacts with the plant population under these two irrigation systems.

VARIETY AND POPULATION

Variety	Sowing Rates (kg/ha)			
	10 seeds/m ²	18 seeds/m ²	24 seeds/m ²	36 seeds/m ²
Amberley	63	113	151	226
Farah	62	112	149	223

Notes:

Dry matter cuts taken early August from the Flood irrigated trial showed a trend that higher seed rates was reflected in higher crop biomass present. This trend was repeated at cuts taken in early September. This relationship is not apparent in the Sprinkler irrigated trial. Biomass is much higher in the flood irrigated trial compared with the rainfed/sprinkler trial.





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- May 8th** Terrain (180 g/ha) + Gramoxone (1.8 l/ha)
PBA - Samira sown at 200 kg/ha targeting 25 pl/m²
Farah sown at 194 kg/ha targeting 25 pl/m²
- July 2nd** Clethodim (500ml/ha) + Factor (180 g/ha)
- August 6th** Fungicide treatments applied.
- Sept 6th** Fungicide treatments applied (flowering).

Spring Irrigation

Flood Irrigation
September 8th 0.9 MI/ha

DISEASE MANAGEMENT STRATEGIES FOR FABA BEANS GROWN UNDER IRRIGATION

This trial is comparing two fungicide strategies using older 'cheap' and newer 'expensive' fungicides on an older and newer released variety. A 'nil fungicide' or control treatment is included.

Strategy	Timing and Product		
	Vegetative	Early Flower	Late Flower
Cheap	Tebuconazole	Chlorothalonil	Chlorothalonil
Expensive	Veritas	Aviator	Veritas

Notes:

To date there has been little disease observed in any plots.





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April 17th Knockdown, Glyphosate (1.5 l/ha) +Goal (75 ml/ha)
May 8th Terrain (180 g/ha) + Gramoxone (1.8 l/ha)
July 2nd Clethodim (500ml/ha) + Factor (180 g/ha)
August 6th Fungicide chlorothalonil applied (1.5l/ha).
August 17th 1st PGR applied.
Sept 6th Fungicide treatments applied (flowering).

Spring Irrigation

September 8th 0.9 ML/ha

INFLUENCE OF PLANT GROWTH REGULATION ON FABA BEAN YIELD AND PROFITABILITY

To evaluate the effect of PGR application on crop height, lodging and brackling reduction, yield and profitability of irrigated faba beans.

The individual objectives are as follows:

- To evaluate the ability of PGRs to reduce crop height and brackling in the long stemmed cultivar PBA Bendoc.
- To examine whether PGRs need to be sequenced in order to have a significant effect in faba beans.
- To understand if plant population has a greater impact on reducing height and lodging than PGRs in irrigated PBA Bendoc

	Sowing Rates (kg/ha)		
Variety	12 seeds/m ²	24 seeds/m ²	36 seeds/m ²
PBA Bendoc	73	146	220

Notes:

As of early September, no response is readily observed in plant height.

