

Faba Bean, Sowing Date, HRZ South West (Lake Bolac), Victoria

Authors

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Aim

To evaluate the adaptability of flowering time and yield of various faba bean varieties.

Treatments

Varieties: See Table 2.

Sowing dates: See Table 1.

Table 1. Other Site details

Lake Bolac	
Sowing dates	23 April, 8 May, 23 May
Stubble	Burnt
Plant density (plant/m ²)	25
Row spacing (cm)	20
Fertiliser (kg/ha) ¹	60

¹ MAP (9.2, 20.2, 0, 2.7)

Results and Interpretation

- Key messages: In 2019 at Lake Bolac, faba bean grain yield was reduced by 15% when the crop emerged on June 12 compared to May 23. PBA Zahra and PBA Nasma had larger seed sizes than PBA Samira and PBA Marne.
- The flowering dates for PBA Zahra, PBA Samira, PBA Marne and PBA Nasma differed by three weeks when the crops emerged on May 23, but only differed by one week when they emerged on June 12 (Figure 1). Varieties differed in their response to thermal time and photoperiod (Tables 2 and 3).
- PBA Zahra and PBA Samira developed at similar rates for crop emergence dates of May 23, June 1 and June 12 (Figure 1).

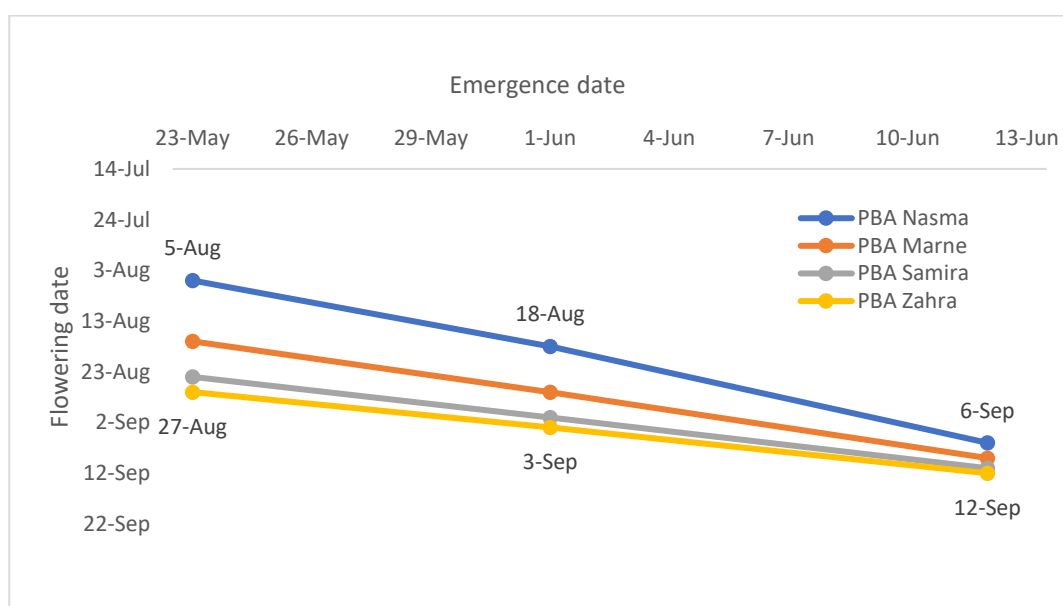


Figure 1. Effect of crop emergence date on the flowering date of four faba bean varieties at Lake Bolac in 2019.

Table 2. Days to flower for four varieties of faba bean at Lake Bolac in 2019.

Variety	Sowing date			Emergence date		
	23-Apr	8-May	22-May	23-May	1-Jun	12-Jun
PBA Nasma	104	102	107	74	78	86
PBA Marne	116	111	110	86	87	89
PBA Samira	123	116	112	93	92	91
PBA Zahra	126	118	113	96	94	92

Table 3. Thermal time to flower (degree-days, °D) for four varieties of faba bean at Lake Bolac in 2019.

Variety	Sowing date			Emergence date		
	23-Apr	8-May	22-May	23-May	1-Jun	12-Jun
PBA Nasma	935	880	885	632	639	691
PBA Marne	1018	948	907	715	708	713
PBA Samira	1076	986	922	772	745	727
PBA Zahra	1095	1003	932	792	763	738

Table 4. Grain yield (t/ha) of faba beans at Lake Bolac, Victoria, with three emergence dates (E) and four varieties (V).

Variety (V)	Emergence date (E)			Mean (E)
	23 May	1 June	12 June	
PBA Zahra	4.1	3.7	3.0	3.6
PBA Samira	3.4	3.3	3.1	3.2
PBA Marne	3.1	3.0	2.5	2.9
PBA Nasma	3.5	3.3	3.2	3.3
Mean (E)	3.5	3.3	2.9	
Factor	Emergence date (E)		Variety (V)	Emergence x Variety (ExV)
LSD	0.3		0.3	n.s.
P-value	0.004		<0.001	0.214

Table 5. Hundred grain weight (g/100 seeds) of faba beans at Lake Bolac, Victoria, with three emergence dates (E) and four varieties (V).

Variety (V)	Emergence date (E)			Mean (E)
	23 May	1 June	12 June	
PBA Zahra	73.8	76.3	76.0	75.4
PBA Samira	69.2	68.8	69.0	69.0
PBA Marne	69.1	69.2	67.5	68.6
PBA Nasma	74.8	69.6	69.6	71.3
Mean (E)	71.7	71	70.5	
Factor	Emergence date (E)		Variety (V)	Emergence x Variety (ExV)
LSD	n.s.		1.8	3.1
P-value	0.413		<0.001	0.024