

Faba Bean, Potassium Nutrition, MRZ South East (Coomandook), South Australia
Faba Bean, Potassium Nutrition, HRZ Eyre Peninsula (Strawberry Hill), South Australia

Authors

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Aim

To evaluate the effects of timing of potassium application on growth and vigor of faba bean.

Treatments

Six potassium strategies

Treatments	Time of application
Nil	K is not applied
K applied once	At seeding
K applied once at increased rate	At seeding double, the normal rate
K applied twice	At seeding and flowering
K applied thrice	At seeding, before and after flowering
K applied once at flowering	At flowering

Table 2. Trial site details

	Coomandook	Strawberry Hill
Variety	PBA Marne	PBA Marne
Sowing date	22 May	31 May
Sowing density (plants/m ²)	24	24
Row spacing	21 cm	25 cm
Fertiliser (kg/ha) ¹	30 units of K (Sulphate of Potash)	30 units of K (Sulphate of Potash)

¹MAP (9.2, 20.2, 0, 2.7) + Zn (2.5)

Results and Interpretation

- Key Messages: Potassium applied to faba bean at sowing and/or at flowering had no effect on plant height, biomass or grain yield.

- Plant height and biomass: Plant heights were measured during the growing season prior to flowering, at mid-flowering, and at crop maturity. Height of the lowest pod was also measured at crop maturity. However, there were no differences in plant height or height at which the lowest pod is formed in response to potassium treatments at Coomandook and Strawberry Hill, 2019. At Strawberry Hill, faba bean plant height averaged 30 cm prior to flowering, 93.5 cm at mid-flowering, and 93.6 cm at crop maturity. Average height of the lowest pod was 36.3 cm. Whilst, at Coomandook, faba bean plant height averaged 31.6 cm prior to flowering, 48.8 cm at mid-flowering, and 81.2 cm at crop maturity. Average height of the lowest pod was 31.2 cm.

- Biomass: Biomass production was measured during the growing season prior to flowering, at mid-flowering, and at crop maturity. There were no differences in biomass production in response to potassium treatments at Coomandook and Strawberry Hill, 2019. At Coomandook, biomass production averaged 1.42 t/ha prior to flowering, 2.52 t/ha at mid-flowering, and 6.65 t/ha at crop maturity. Whilst, at Strawberry Hill, biomass production averaged 1.12 t/ha prior to flowering, 5.14 t/ha at mid-flowering, and 7.73 t/ha at crop maturity.

- Grain yield: There were no differences in grain yield between potassium treatments at Coomandook and Strawberry Hill, 2019. Mean grain yield was 2.81 t/ha at Coomandook and 3.38 t/ha at Strawberry Hill.

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