Variety Specific AGRONOMY Packages

Lupin Row Space, Merriwagga

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There was no significant difference in yield of any of the lupin varieties between 15 cm and 60 cm row spacing in this trial, which was severely drought affected.

There was a difference in yield between varieties, and also yield between narrowleaf and broadleaf lupins.

2007

The trial

The aim was to observe and measure the influence on yield of two row spacings (15 cm and 60 cm) in three narrowleaf and three broadleaf (albus) lupin varieties.

Site details

Location: Merriwagga CWFS research site.

Soil type: red sandy loam overlying calcareous subsoil.

Rainfall: average annual 370 mm, growing season Apr-Oct 220 mm.

Management

The paddock was a 30 month fallow (mainly herbicide), with one cultivation in January 2005.

The trial was sown on 7 May, with seeding rate targeting 35 plants/m^2, varying between varieties and type of lupin. Granulock 15 (60 kg/ha) was banded with the seed, and 1.2 L/ha TriflurX® + 2 L/ha Roundup PowerMAX™was incorporated by sowing (IBS). 200 ml/ha Brodal® Options was applied post-emergent to control mustard weed.

Treatments

Three varieties of narrowleaf lupins (*Lupinus angustifolius*) and three varieties of broadleaf lupins (*Lupinus albus*) were sown at 15 cm and 60 cm row spacings.

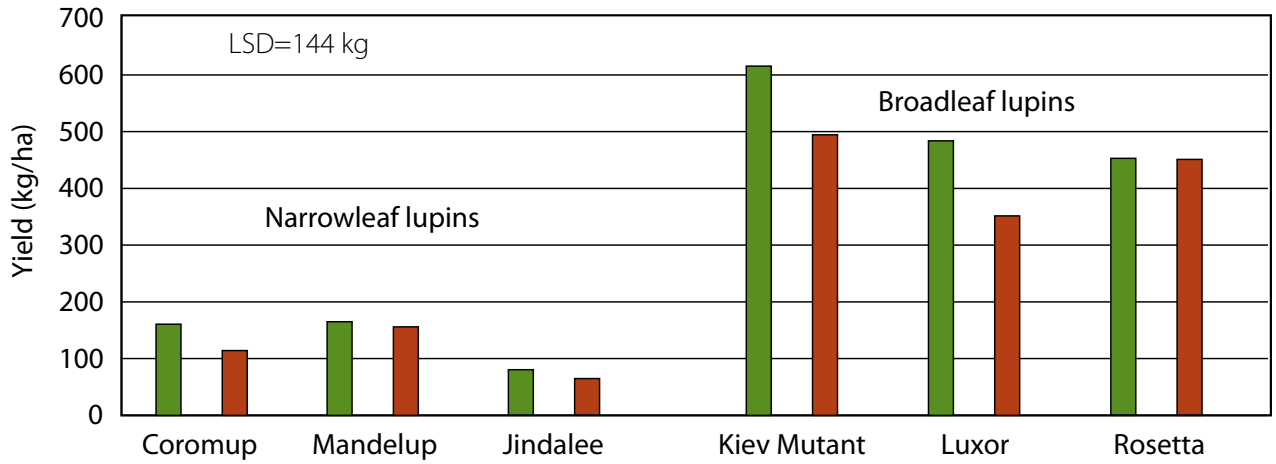
Narrowleaf lupins	Coromup
	Mandelup
	Jindalee
Broadleaf lupins	Luxor
	Rosetta
	Kiev Mutant

Seasonal review

A good early start allowed timely sowing, unfortunately by August conditions became extremely dry. In total only 96 mm fell between April and October. This trial survived on stored subsoil moisture.

Results

The yield results are presented in the figure below.



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Interpretation of results

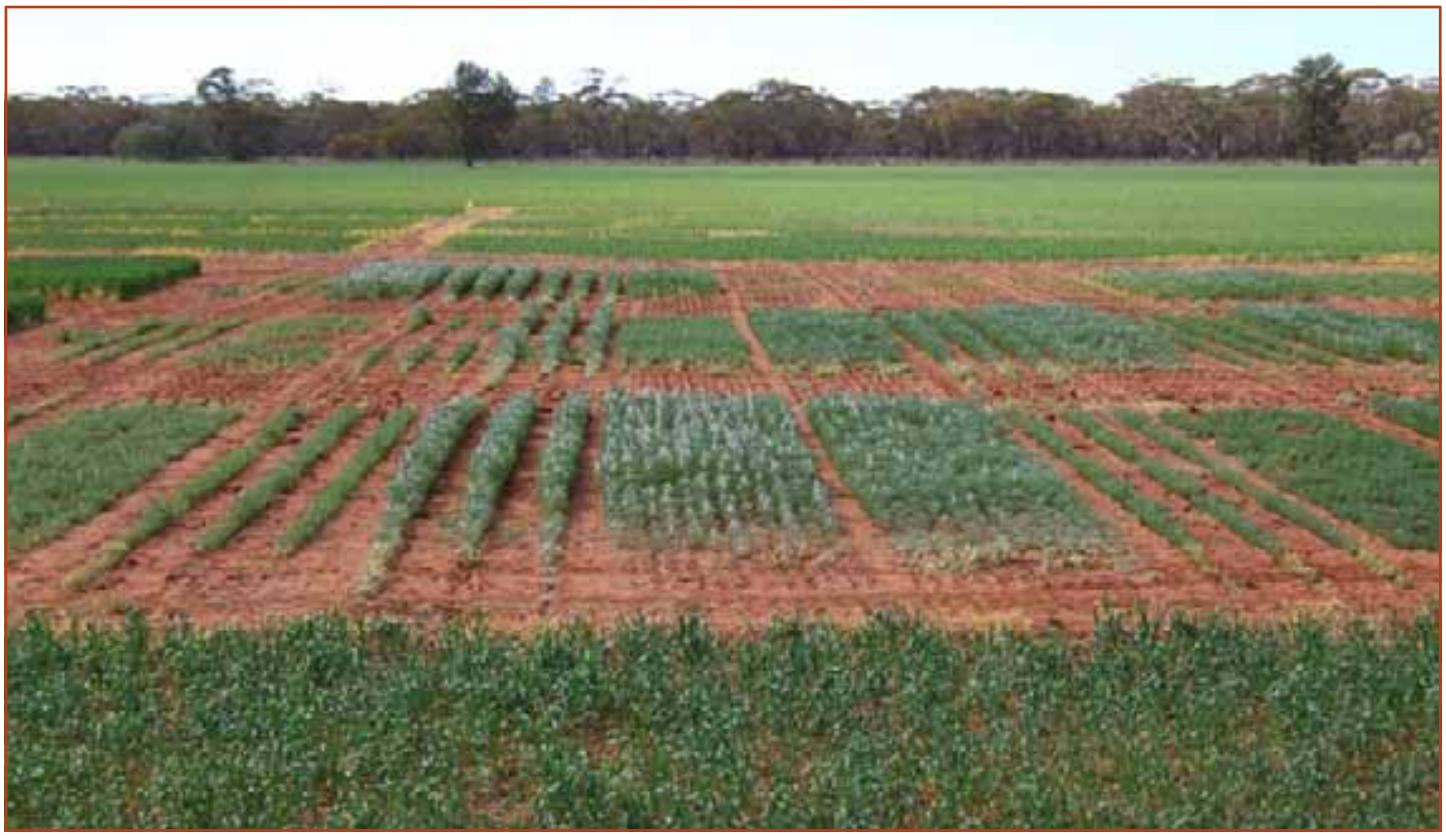
Statistically, no variety showed any significant difference in yield between the two row spacings.

Wider rows in this trial delayed flowering by at least five days in all varieties.

It was evident however that the varieties Kiev Mutant and Luxor preferred the narrow rows, although the difference was not statistically significant. Observations within the trial suggested that these two varieties were faster to flower, which may have allowed the 15 cm row spacing treatments to finish quicker before the dry conditions became too extreme.

All narrow-leaf varieties were affected by free limestone, whilst the broad-leaf varieties seemed more tolerant. This was the major reason for the lower yield in the narrowleaf lupins.

There were some plots affected by an allelopathic effect from camel melons, but those plots weren't included in the analysis.



The lupin row spacing trial at Merriwagga in mid August.

Photo: Barry Haskins

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Further information: available from the project team agronomists at NSW DPI Wagga Wagga, Condobolin, Parkes, Hillston, Temora, Cowra and Moulamein.

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