

## Advanced lupin variety evaluation

Ashley Corbett, Technical Officer, VIDA, Mallee Research Station, Walpeup

### SUMMARY

Moonah was the highest yielding named variety in Mallee lupin comparisons in 2000. Moonah has consistently outclassed Merrit and is now the preferred variety for the Mallee. Walan2141 produced excellent yields, has sound agronomic traits and will be evaluated further to determine its suitability as a variety for the Mallee.

The aim of this trial was to evaluate and develop improved lupin varieties for the Victorian Mallee.

### METHODS

The Sea Lake advanced lupin variety trial was one of four comparisons located in the Mallee region in 2000. The site was sown on April 20th and harvested November 29th. Varieties were compared at each site in (8 row x 15m) plots replicated 3 times.

### RESULTS

Grain yields at Sea Lake averaged 2.2 t/ha, marginally higher than most commercial lupin crops and similar to the Patchewollock, Hopetoun and Walpeup comparisons. Sea Lake yields and Mallee averages are presented in Table 1.

**Table 1. Lupin variety grain yield, Sea Lake and Mallee averages 2000.**

Variety	Sea Lake (t/ha)	Mallee average (% Merrit)	Variety	Sea Lake (t/ha)	Mallee average (% Merrit)
Belara	2.09	107	Walan2083	2.20	105
Danja	2.24	102	Walan2095	2.11	108
Jindalee	1.92	80	Walan2098	2.43	116
Kalya	2.55	104	Walan2100	2.09	101
Merrit	2.29	100	Walan2101	2.04	105
Moonah	2.38	116	Walan2118	2.19	119
Quilinock	2.24	106	Walan2128	2.57	113
Wonga	2.19	99	Walan2132	2.18	108
Tanjil	2.26	100	Walan2136	2.38	111
Walan2012	2.22	103	Walan2141	2.64	133
Walan2048	2.14	109	Walan2145	2.12	106
Walan2053	2.03	101	284AA38	2.59	118
Walan2069	1.98	95	88S078-074-18	2.06	104
Walan2072	2.05	99	90L476-3-18	2.05	94
<b>LSD (p=0.05)</b>	<b>0.28</b>			<b>0.28</b>	
<b>CV (%)</b>	<b>7.3</b>			<b>7.3</b>	

### INTERPRETATION

The above average yields achieved by lupins in Mallee trials in 2000 were attributable to early sowing and favourable conditions for most of the year. Yields were however retarded in September by warm temperatures and a lack of rainfall during the crucial pod fill period with the season suiting early to mid flowering varieties. Moonah was the best performing named variety averaging 116% of Merrit across Mallee sites. Kalya yielded well at the Sea Lake site but is susceptible to drought stress and shattering. The most promising of the potential new varieties was Walan2141, averaging 133% of Merrit over the four Mallee sites. Walan2128 and 284AA38 also performed well at Sea Lake. The new release Jindalee yielded poorly due to late maturity and is not recommended for the Mallee.

### COMMERCIAL PRACTICE

Moonah continues to perform well in the Mallee and is the preferred variety for the area. Moonah is higher yielding, has greater harvest height and improved disease resistance over the predominant variety Merrit. Sowing between 100kg/ha and 125kg/ha of good quality seed to achieve plant densities of 60 plants/m<sup>2</sup> will also improve the profitability of lupins in the Mallee.