

# Goonumbla Management trial: NSW DPI Field pea sowing rate

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## Key Messages

For the newer semi-leafless varieties Kaspera and Moonlight, the recommended plant population is around 35 plants/m<sup>2</sup> for early sowings to 50 plants/m<sup>2</sup> for late sowing. ■ For the other semi-leafless varieties, 40 plants/m<sup>2</sup> is recommended for early sowing and 60 plants/m<sup>2</sup> for later sowings.

Site: North Parkes Mine  
 Soil type: red grey clay loam, 5.2 pH(cac12); 47 P mg/kg (Colwell)  
 Paddock history: 04 - wheat; 03 - canola; 02 - wheat; 01 - canola  
 Cultivations: Direct Drilled  
 Date sown: 8 June 2005  
 Fertiliser: 130 kg/ha Legume Starter at sowing  
 Herbicide: Treflan + Roundup 5<sup>th</sup> May  
 Spinnaker 300ml PSPE  
 Insecticide: 50 mL/ha Fastac (27 July)  
 Harvest date: 14 November 2005

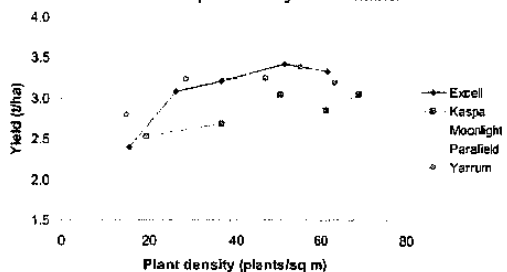
Rainfall (mm):

J	F	M	A	M	J	J	A	S	O	N	D	Total
28	77	8	0	1	72	44	26	79	63	120	20	538

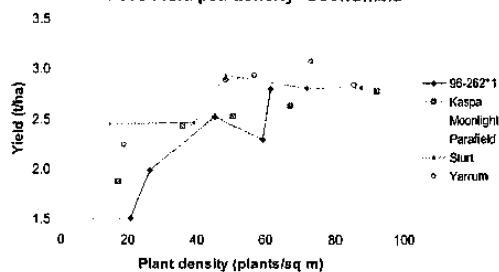
In-crop rainfall: 344 mm

## Results

2004 Field pea density- Goonumbla



2005 Field pea density- Goonumbla



Variety	Target Density (pl/m <sup>2</sup> )	Achieved Density (pl/m <sup>2</sup> )	Yield (t/ha)
96-262*1	16	21	1.51
96-262*1	32	26	1.99
96-262*1	48	45	2.53
96-262*1	64	59	2.30
96-262*1	80	61	2.80
Kaspa	16	17	1.87
Kaspa	32	36	2.43
Kaspa	48	51	2.53
Kaspa	64	67	2.63
Kaspa	80	92	2.78
Moonlight	16	14	1.74
Moonlight	32	29	2.19
Moonlight	48	52	2.31
Moonlight	64	61	2.49
Moonlight	80	81	2.57
Parafield	16	15	2.47
Parafield	32	43	2.55
Parafield	48	49	2.81
Parafield	64	62	2.48
Parafield	80	95	2.67
Start	16	15	2.46
Start	32	39	2.47
Start	48	49	2.94
Start	64	72	2.81
Start	80	87	2.81
Yarrum	16	19	2.24
Yarrum	32	49	2.89
Yarrum	48	57	2.93
Yarrum	64	73	3.08
Yarrum	80	85	2.84
LSD			0.4

These trials were run in 2004 and 2005 as part of a Southern and Central trial program and other district results are available. Plant populations of 16, 32, 48, 64 and 80 plants/m<sup>2</sup> were targeted with a range of conventional and semi-plant types. The trend pattern in yield response of particular varieties to density is very similar between 2004 and 2005, although the extent of variation differs, reflecting the differences between the seasons. Both trials were sown late, however the 2005 trials had a much longer softer finish. Targeted plant densities were difficult to achieve in both years highlighting the importance of calculating the seeding rate by using germination percentages and seed size.

The yield response curve for the tall conventional varieties such as Parafield, is relatively flat, showing their ability to compensate for lower plant populations. There were no significant differences between Parafield plant densities in the 2005 trial. The ideal plant population for these varieties ranges from 30 plants/m<sup>2</sup> for early sowing to 40 plants/m<sup>2</sup> for late sowing.

For the newer semi-leafless varieties Kaspa and Moonlight, the recommended plant population is around 35 plants/m<sup>2</sup> for early sowings to 50 plants/m<sup>2</sup> for late sowing. Yield from densities of 16 plants/m<sup>2</sup> in these varieties are significantly lower in the 2005 trial and benchmarking of commercial crops indicates that yield will not be sufficient to cover costs at these populations.

For the other semi-leafless varieties, 40 plants/m<sup>2</sup> is recommended for early sowing and 60 plants/m<sup>2</sup> for later sowings.

### Acknowledgements

The NVT trials were conducted as part of the National Variety Testing Program. Scott Boyd (NSW DPI) was responsible for the sowing and harvesting of the trials. Trial data was taken from the ACAS website ([www.acasnvt.com.au](http://www.acasnvt.com.au)) and from the Winter Crop Variety Sowing Guide 2006. The field pea management trials were conducted by NSW DPI, with thanks to Scott Boyd and Eric Armstrong (NSW DPI). Thanks also to the co-operators for hosting the trials, their assistance is greatly appreciated.



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