U3 Row Spacing, HRZ Southern (Lake Bolac), Victoria

Aim

To investigate the impact of row spacing and stubble management on a range of lupin varieties.

Experimental Treatments

Varieties:	01A012R-67, Jenabillup, Jindalee, Mandelup.
Row Spacings/Stubble:	18 cm row spacing, slashed stubble (sl18), 18 cm row spacing, burnt stubble (B18), 36 cm row spacing, inter-row, slashed stubble (sl36), 36 cm row spacing, inter-row, burnt stubble (B36).

Note: Stubble treatments were sown as independent trials.

Other Details

Stubble	
Sowing date:	20 May.
Fertiliser:	MAP + Zn @ 100 kg/ha at sowing.
Plant Density:	60 plants/m^2.

Results and Interpretation

- Key Message: The new line 01A012R-67 had grain yields equivalent or higher than all other varieties compared.

Figure U3.1. The interaction effect of row spacing and variety on grain yield (t/ha) of lupins in slashed and burnt stubble at Rupanyup in 2011.

Row Spacing (m)	**01A012R-67**	**Jenabillup**	**Jindalee**	**Mandelup**	*Average*
		BURNT			
0.18	3.82	3.20	3.26	3.91	*3.55*
0.36	3.73	3.36	3.20	3.59	*3.47*
Average	*3.77*	*3.28*	*3.23*	*3.75*	*3.51*
		SLASHED			
0.18	3.22	2.19	2.47	2.88	*2.69*
0.36	3.24	2.40	2.81	3.39	*2.96*
Average	*3.23*	*2.29*	*2.64*	*3.14*	*2.82*

Slashed stubble trial: lsd(P<0.05)rsxvar = 0.52; lsd(P<0.05)gen = 0.15; lsd(P<0.05)rowspace = ns.
Burnt stubble trial: lsd(P<0.10) rsxvar = 0.76; lsd(P<0.05)gen = 0.19; lsd(P<0.05)rowspace = ns.

- Grain Yield – Grain yields in 2011 were relatively high, ranging from 3.2 to 3.9t/ha on the burnt stubble and 2.2 to 3.4t/ha on the slashed stubble (Table U3.1). Overall grain yield in the burnt stubble trial averaged 20% more than the slashed stubble trial. There were no major effects of row spacing on grain yield. Mandelup and 01A012R-67 had the highest yields, 15-30% greater than Jenabillup and Jindalee (Table U3.1).

Key Findings and Comments

Similar to other pulse crops growing conditions in 2011 were excellent for lupins, due to extreme rainfall events during the summer of 2010/11 which resulted in soil profiles at or near field capacity at sowing. In addition, temperatures were mild in the in the flowering and podding periods with few frost or high temperatures, so yield potential was high. Stubble retention appeared to reduce grain yields in lupins, which is inconsistent with other pulses. It is unclear why this may have occurred. The new line 01A012R-67 had grain yields equivalent or higher than all other varieties compared.