

L10 Varieties (Traits), HRZ South West (Rokewood), Victoria

Aim

To investigate the adaptability of a range of lentil varieties and breeding lines to the high rainfall zone

Treatments

Varieties: See Table 1 below.

Other Details

Sowing Date	26 April
Stubble (height cm)	Standing (20)
Row Spacing (cm)	36
Plant Density (plant/m²)	120
Fertiliser (kg/ha)¹	100

1. MAP (9.2, 20.2, 0, 2.7) + Zn (2.5)

Results and Interpretation

- Key Message: Lentils produced profitable yields in the HRZ, but production risks are high and crops such as faba beans, peas and lupins remain a more reliable option. Careful selection of soil types not susceptible to waterlogging is required for successful lentil production
- Similar to previous trials in the HRZ in 2013 and 2014 growth of lentils was generally slow and lacked vigour. At times throughout the season the lentil plants were red or yellow in colour, possibly due to wet and cold conditions. In the HRZ, due to cold conditions, it is essential to sow lentils in early May to achieve some early growth and maximise potential biomass and yield. Resistant ryegrass was an issue in parts of the trial and potentially limited yield. The population of ryegrass was scored and used as a covariate in the grain yield assessment. Yields ranged between 0.33 and 1.22 t/ha, which could provide returns up to \$500/ha based on the 2016 grain prices at \$700/t (fixed management costs of \$330/ha) (Table 1). Production risks, particularly related to waterlogging and acidic soils are high and crops such as faba beans, peas and lupins remain a more reliable option.

Table 1. Vigour, Grain yield and Estimated Gross return (\$/ha) of lentils at the Rokewood in 2016. *Gross return based on costs of \$330/ha and grain price of \$700/t.*

Variety	Vigour (1-9; 16 Nov)	Grain Yield (t/ha)	Gross Return \$/ha
PBA Ace	7	1.22	482
PBA HurricaneXT	6	1.03	384
CIPAL1301	6	1.00	349
PBA Jumbo2	5	0.98	349
CIPAL0901	5	0.70	146
PBA Greenfield	5	0.58	97
CIPAL0719	4	0.57	83
PBA Flash	3	0.57	76
PBA Bolt	5	0.45	20
PBA Giant	6	0.34	-92
<i>LSD (P<0.05)</i>	1	0.5	
CV%	4.0	21.0	