

Trial 3

Evaluation of lentil varieties for the southern Mallee

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In Victoria lentil production increased to approximately 15,000 hectares in 1996. Lentils are a relatively new crop in the southern Mallee with production expanding as farmers gain experience in growing lentils. Results from experimental trials and crops in the southern Mallee in 1995 and 1996 have shown that lentils are a pulse crop with great potential. Yields of over 2t/ha have been achieved by farmers in the Birchip area.

Aim: To assess the potential of lentils in the Birchip area and compare the grain yield of commercial lentil varieties at Birchip.

Results: Table 1. Summary of lentil yield trials conducted by Agriculture Victoria in the southern Mallee in 1995 and 1996. * indicates that results are only from 1996 trials.

Variety	Birchip		Rosebery		Mean yield (1995-96)	
	1995	1996	1995	1996	t/ha	% Digger
<i>Red lentils</i>						
Aldinga	1.67	1.82	1.16	1.66	1.58	91
Cobber	1.47	2.07	1.21	2.13	1.72	99
Digger	1.65	1.94	1.48	1.79	1.72	100
Northfield	1.56	1.87	1.04	1.69	1.54	89
ILL51	-	1.86	-	1.75	1.81*	97*
ILL7180	-	1.69	-	2.00	1.85*	100*
<i>Green lentils</i>						
Laird	0.77	1.05	1.15	0.51	0.87	51
Matilda	1.70	1.68	1.34	1.46	1.55	90
CV (%)	22.5	6.8	13.9	9.6		
LSD (0.05)	0.45	0.19	0.27	0.25		

Interpretation: 1996 was characterised by a wet winter, frosts in spring and a dry finish. In some areas there was localised waterlogging in lentil crops and flower loss due to frost. Cobber was the highest yielding variety in trials at Birchip and Rosebery in 1996. These results contrast with those of 1995 where Aldinga, Digger and Matilda were higher yielding than Cobber. This indicates that the relative yield of varieties will differ between years and shows the importance of conducting trials over a number of years. When results from 1995 and 1996 are combined Digger and Cobber have been the highest yielding red lentil varieties and Matilda the highest yielding green variety tested in the southern Mallee. ILL51 and ILL7180 have been selected at VIDA for high yield in the Wimmera. Both have a seed type and growth characteristics which are similar to Digger. In the Wimmera ILL51 yielded 7% and ILL7180 12% more than Digger in 1996. In the southern mallee ILL51 and ILL7180 had mean yields similar to Digger. However ILL7180 yielded 12% higher than Digger at Rosebery but 13% below Digger at Birchip. These variable results cannot be explained and ILL7180 will be further tested in the Wimmera and Mallee in 1997.

The average yield of Cobber and Digger over two years in the southern Mallee is 1.72t/ha. With production costs of \$180/ha and a price of \$400/t the gross margin for these varieties is \$508/ha. Therefore lentils are an economically viable crop for the southern Mallee. However yield will vary between seasons and good farm practises will be necessary to maximise yield and seed quality. Currently, there is a strong demand for Australia's high quality lentils.