

## Chickpea Herbicide Tolerance

**Summary:** Lasseter chickpeas had the highest yield compared to Desavic and Tyson (which were similar), which in turn were better than the Kabuli type, Kaniva. There were no effects of the herbicides on yield.

**Aim:** To determine the differences in tolerances between the four most commonly grown chickpea varieties - Desi types: Lasseter, Desavic, Tyson; and the Kabuli type: Kaniva.

**Methods:** Chickpeas were sown with 110kg/ha of Grain Legume Zinc on June 3, 1997. Post sowing pre-emergent sprays applied immediately post sowing on a dry soil. Early post emergent sprays applied on August 20 (damp soil, no frosts). Replicated (three) block design.

### Results:

There were few if any weeds at the site and the trial was a herbicide tolerance trial rather than a weed control experiment.

	Status	Cost \$/ha	Yield (t/ha)			
			Lasseter	Desavic	Tyson	Kaniva
Control			0.23	0.12	0.14	0.08
<i>post sowing pre-emergent</i>						
Simazine 1.4L	NR	8.50	0.25	0.17	0.17	0.11
Lexone 130g + Diuron 0.8L	NR	16.60	0.20	0.10	0.11	0.08
Simazine 1.0L + Diuron 0.6L	NR	11.10	0.22	0.10	0.11	0.08
Lexone 280g	R	28.00	0.24	0.10	0.13	0.09
<i>early post emergent</i>						
Broadstrike 25g	R	15.50	0.16	0.12	0.12	0.09
Tough 2L	R	67.60	0.23	0.11	0.14	0.09
<b>Significant Difference</b>			<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>

**Interpretation:** There was a significant difference in yield between varieties at the site, with the yields of Lasseter being significantly better than Desavic and Tyson (which were similar), and Kaniva which was the lowest. There was no significant effect of herbicide choice on yield, although for all varieties the Simazine at 1.4L/ha treatment had the highest yield. Broadstrike caused transient crop yellowing but the crops recovered after about three weeks. Overall the yields were very disappointing.

### Commercial Practice:

- Simazine - not registered, but commonly used with a fair amount of safety for the control of a large number of broad-leaf weeds (and silvergrass). It is advisable, when using Simazine, to sow chickpeas relatively deep (5 to 8cm) on lighter soils to avoid damage.
- Simazine plus Diuron - not registered. This treatment has shown promise and the BCG will do more work with this mix in 1998
- Lexone - registered. Lexone tends to run out of activity towards the end of the season, and whiphistle control will be only marginal
- Broadstrike - not registered and yield penalties have been observed in years with a wet winter and dry spring. If it is cold and wet at the time of spraying weed control is generally poor. Excellent weed control at the site this year.
- Tough - registered on chickpeas. Needs to be used when conditions are damp. Tough has a limited weed spectrum - white iron weed, fumitory, deadnettle, toadrush, capeweed, milk thistle and prickly lettuce, amsinckia, vetch (results on vetch are variable).