Trial 5
Lentil Herbicide Tolerance Trial
Sponsored by IAMA

Aim: to determine whether there are differences in herbicide tolerances between the four most commonly grown lentil varieties - Digger, Cobber, Northfield and Matilda

Results:

	status	cost	yield t/ha			
		$/ha	Digger	Northfield	Cobber	Matilda
Control			1.64	1.92	1.91	1.71
post sowing pre-emergent						
Simazine 1.5L	NR	8.25	1.71	1.64	1.68	1.78
Simazine 1L + Lexone 180g	NR	20.60	1.71	1.49	1.53	1.52
Lexone 280g	NR	23.50	1.53	1.55	1.74	1.64
Diuron 1.5L	NR	12.00	2.04	1.86	1.96	2.05
early post emergent						
Broadstrike 25g (no wetter)	NR	12.50	1.54	1.98	1.87	1.87
Broadstrike 25g + 0.5% uptake oil	NR	15.50	1.68	1.93	2.06	1.64
Brodal (no wetter) 0.125L	NR	16.00	1.89	1.74	1.86	1.83
Significant difference in yield			**NS**	**P<0.05 LSD=0.32**	**NS**	**NS**

Interpretation: The Simazine and Lexone (either alone or in combination) treatments had the lowest yields and these were significantly lower for Northfield lentils. In 1995 the lentil herbicide trial only investigated herbicide effects on Digger lentils, the effect of Simazine in 1995 was much more pronounced in that year because the site was located on sand. However, the 1996 site was on a clay loam and some damage still occurred. Diuron looks very good (as it did in 1995).

Industry practice:

Pre-emergent

- Trifluralin is not totally safe, especially on heavy soils when wheel tracking can occur
  - maximum rate on heavy soils is 750ml, applied a minimum of 7 days before sowing
  - do not sow into the Trifluralin band
- Metribuzin - regarded as the industry standard - Lexone was registered for lentils in 1996. More work is required in terms of crop and variety tolerance. If using Lexone make sure seed is not sown shallow (not less than 5cm depth). Late rains can stimulate late whipthistle germinations.
- Simazine - not totally safe, especially on sandy, sandy loam and heavy clay soils.
- Diuron - looks good but needs more work

Early Post Emergent

- Broadstrike - can cause crop yellowing, especially when used in cold and wet conditions. Useful for bedstraw and crucifer weed control.
- Brodal - can cause blotching of leaves and stem but crop appears to grow out of it. Brodal has to be used early because cruciferous weeds need to be small.