C6 Sowing Time, LRZ Southern Mallee (Curyo), Victoria

Aim

To investigate the adaptability of a range of chickpea varieties and variety mixes to varying sowing dates.

Treatments

Varieties:	Genesis090, Genesis079, Genesis114, Genesis509, PBASlasher, Almaz, CICA0604, CICA0857.
Sowing dates:	4 May (Early), 27 May (Mid), 22 June (Late).

Other Details

Row Spacings/Stubble:	30 cm row spacing, inter-row, standing stubble.
Fertiliser:	MAP + Zn @ 40 kg/ha at sowing.
Plant Density:	30 plants/m^2.

Results and Interpretation

- Key Message: Earlier sowing in the Mallee is critical to maximising grain yield in chickpeas.

- Plant establishment – Establishment for all chickpea varieties was poor in 2011, primarily due to a mouse plague. Generally densities ranged between 10 and 25 plants/m^2 (data not shown).

- Mouse Damage – Significant mouse damage was observed across the trial and each plot was scored for damage on a percentage scale. Mouse damage was used as a covariate in the grain yield analysis.

- Grain Yield – Similar to lentils grain yields were excellent, despite the poor establishment, ranging between 1.5 and 2.6 t/ha (Fig C6.1). There was no interaction between sowing date and variety, however the main effects were significant. Generally, the June 22 sowing date resulted in lowest yield, while there was no difference between the May 4 and May 27 sowing dates. PBA Slasher, Genesis090 and CICA0604 had the highest average grain yields across the 3 sowing dates. Only Geneisis509 had significantly lower grain yield.

- Grain Weight – Similar to grain yield, grain weights were excellent in 2011. Sowing date generally had minimal effect on grain weight in 2011 (Fig C6.1), with the only noticeable trend in Genesis079, were grain weight increased as sowing was delayed.

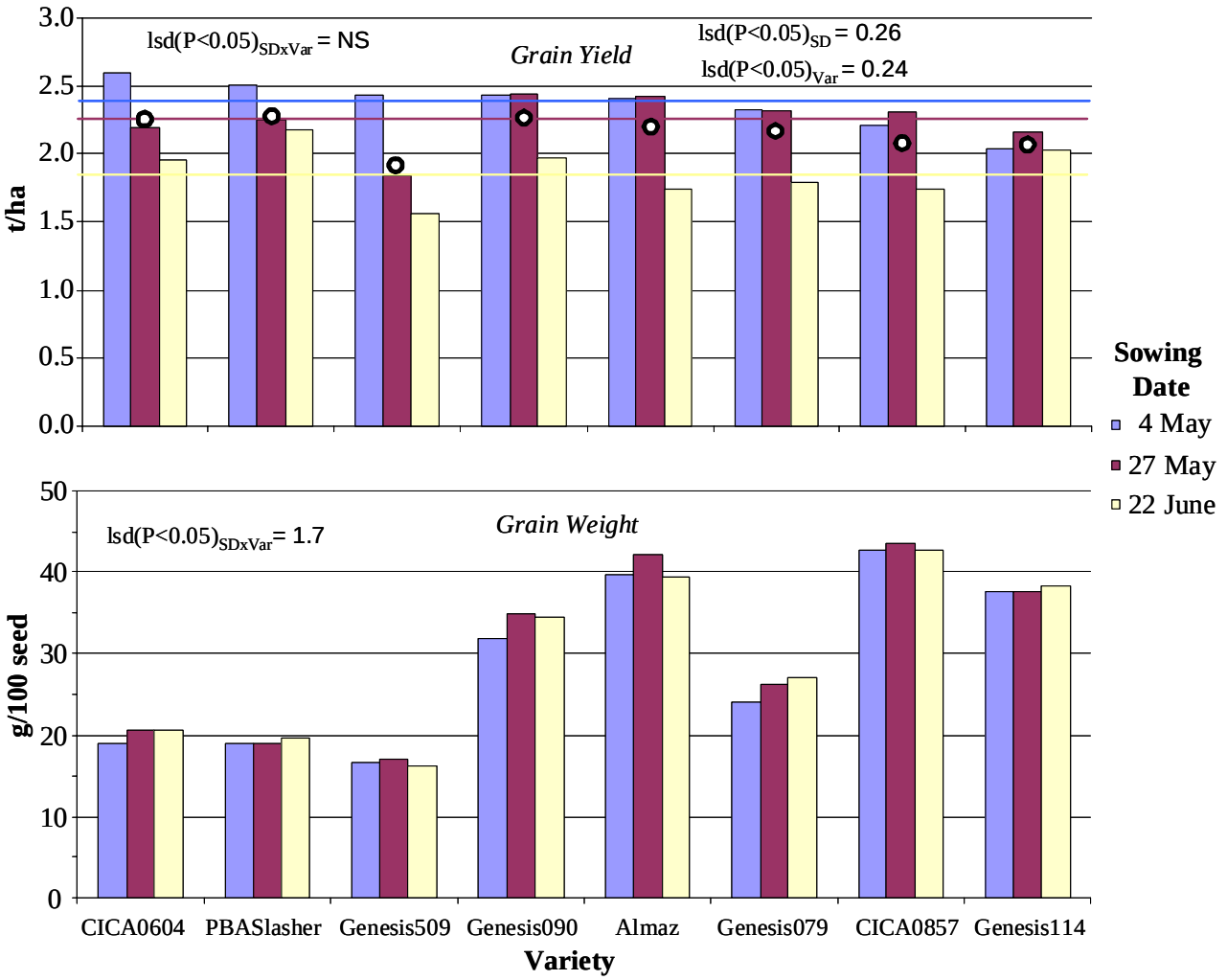

Figure C6.1. The effect of the interaction between sowing date and chickpea variety on grain yield and grain weight at Curyo in 2011. Mean sowing date grain yield indicated by horizontal lines; mean variety grain yield indicated by circles.

Key Findings and Comments

Due to extreme rainfall events during the summer of 2010/11, soil profiles were at or near field capacity at sowing in 2011. Early growth at Curyo was restricted due to a dry period during May and June, however this does not appear to have had any significant impact on grain yield. Unfortunately, the mouse plague at sowing had a significant impact on establishment, despite multiple application of mouse bait (ie. the site was baited 6 times from late April through to the end of June). Fortunately, due to mild temperatures and sufficient rainfall during the main growth periods excellent grain yields were achieved. The results again highlighted that earlier sowing in the Mallee is critical to maximising grain yield in chickpeas. In mild seasonal conditions the Kabulis types are like to be far more profitable due to the higher prices received to the larger sized grain.