

## **L6 Sowing Time, H-MRZ Wagga Wagga, NSW**

### **Aim**

To maximise yield of new lentil varieties through the identification of optimum variety and sowing dates.

### **Treatments**

Varieties: Boomer, Nipper, PBA Blitz, PBA Flash, CIPAL0801, CIPAL0802, CIPAL0803 and CIPAL0901

Sowing dates: 10th May (Early), 14<sup>th</sup> June (Late)

Row spacing: 300mm

Fertiliser: Legume Starter @ 115 kg/ha at sowing banded below the seed

Plant population: 120pl/m<sup>2</sup> target

Herbicides: Pre-sowing Glyphosate application @ 2.0 l/ha and Stomp® at 2.0 l/ha. PSPE Sencor @ 200ml/ha.

### **Results and Interpretation**

In the 2012 season, lentil variety choice significantly influenced grain yield, Figure 1, while sowing time and variety by sowing time effects were not significant, Figure 2. The two emerging PBA lentil varieties CIPAL0803 and CIPAL0901 yielded higher than current commercial varieties, with CIPAL0803 significantly higher yielding than all commercial varieties. The yields achieved would suggest lentil production within the southern NSW cropping zone could be highly profitable.

While yields generally trended lower with delayed sowing time, yield effects were not significant in any variety. Spring growth conditions and water supply were favourable for continued spring growth and in this season later sown crops were able to fulfil most of the plants yield potential.



Management significantly affects plot emergence and subsequent growth

For many years at Wagga, we have experienced emergence problems, patchy uneven growth and low yields across our lentil trials, often attributing much of this to an unfavourable southern NSW environment, and in particular our acidic soils. However, we altered some of our management practices in 2012 and this resulted in significantly better emergence, establishment and even growth across our trials -

The sowing boots were modified to separate seed and fertiliser within the sowing row, placing fertiliser approximately 20mm below the seed. This minimised fertiliser toxicity.

We increased sowing depth from 25mm to 40mm. This assisted separation of seed and herbicide.

Row spacing was increased from 200mm to 300mm to adopt more of an industry practice and conform to most growers' machinery.

Herbicide damage from Metribuzin was reduced by reducing post sowing rate of from maximum to minimum label rates.

Overall, these changes resulted in improved emergence, more even and vigorous crop growth, less variable trials and higher yields. Identifying roles of each factor in improving crop establishment and growth could guide direction for future agronomy investigations. Weed control during the preceding years becomes even more paramount for lentils.

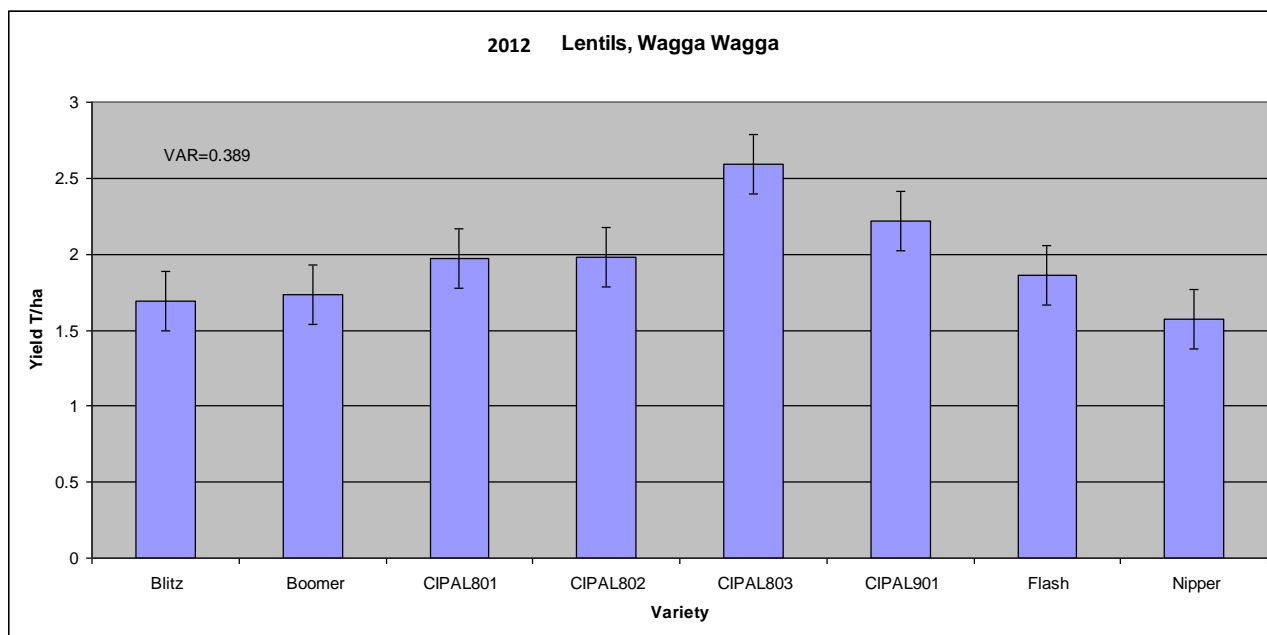


Figure 1. Effect of variety on grain yield (t/ha) of 8 lentil varieties, Wagga Wagga 2012

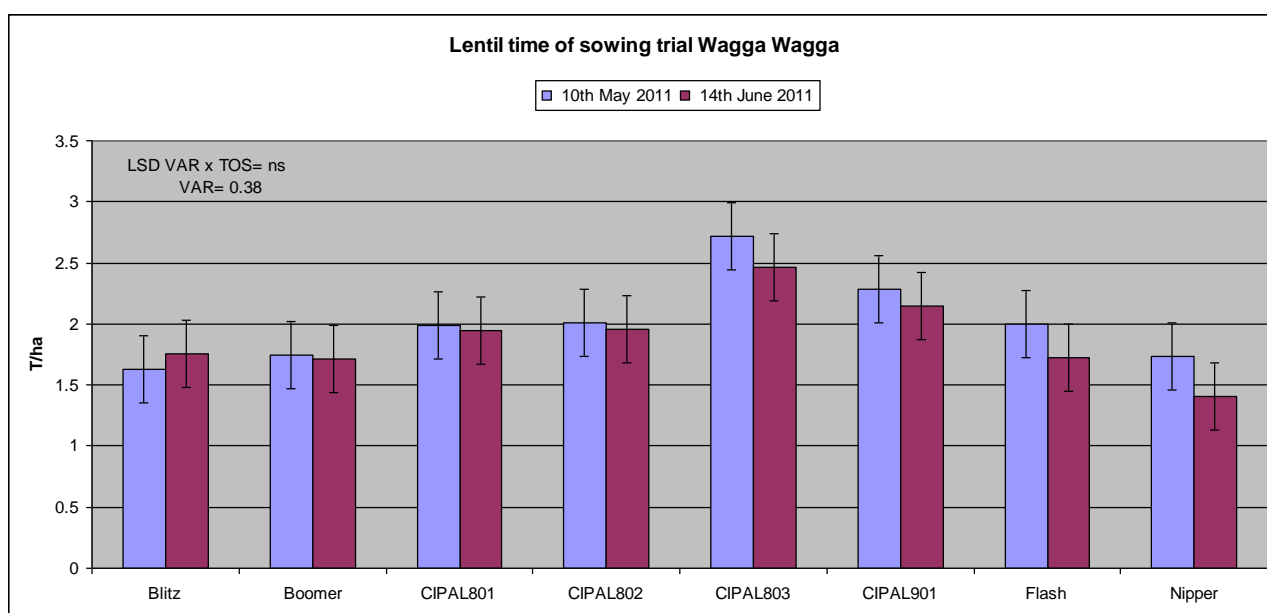


Figure 2. Effect of sowing date on grain yield (t/ha) of 8 lentil varieties, Wagga Wagga 2012 at two times of sowing.

**Key Findings and Comments**

CIPAL0803 and CIPAL0901 out yielded all commercial varieties.

The favourable 2012 growing season conditions facilitated high yields at both sowing times.

Established human consumption markets and yields over two tonnes per hectare suggest that lentil production could be profitable in southern NSW cropping zone

This trial should be repeated in future seasons in order to compare and validate the 2011 findings across variable growing seasons.

Lentils are more sensitive to commonly used herbicides and considerable care must be taken.