

## **C6 Delayed Sowing Varieties, MRZ (Rupanyup), Victoria**

To investigate the impact of delayed sowing on grain yield and quality (compared with varieties in C2)

### **Treatments**

Varieties: See result tables below

### **Other Details**

|  |                 |
|--|-----------------|
| <b>Sowing Date</b>                         | 16 May, 15 June |
| <b>Stubble (height cm)</b>                 | Standing (30)   |
| <b>Row Spacing (cm)</b>                    | 36              |
| <b>Plant Density (plant/m<sup>2</sup>)</b> | 35              |
| <b>Fertiliser (kg/ha)<sup>1</sup></b>      | 80              |

1. MAP (9.2, 20.2, 0, 2.7) + Zn (2.5)

### **Results and Interpretation**

- Key Messages: Early sowing generally showed the highest grain yields although there was large variation in yield stability between varieties. Several potential new breeding lines showed high yields and good stability across the sowing dates.
- Plant Growth and Disease: Establishment and growth throughout the season was excellent due to good opening rains and warm conditions following sowing. This vigorous early and rapid canopy development lead to conditions conducive for disease when combined with the high rainfall experienced from July onwards, particularly for early sown treatments. Continued rainfall, in the absence of major frost and heat events resulted in very high biomass production, but in some cases flowering and pod set was less than expected due to the cool conditions, particularly for early sown treatments.
- Grain yields were generally higher when sown May 16 (average = 3.07 t/ha) compared with June 15 (average = 2.58 t/ha), despite the increased biomass and extremely high disease pressure. Relative ranking of varieties differed at each sowing date, with CICA1541 highest yielding sown May 16 and CICA1352 highest yielding sown June 15. The three highest yielding varieties sown May 16 all showed yield declines of approximately 30% sown June 15. CICA1552 had the highest average yield and good stability across the dates of 3.22 t/ha (3.36 t/ha vs 3.08 t/ha). There was also good stability noted for several other breeding lines in the trial, with significant improvement over Genesis090.

Table 1. Grain Yield (t/ha) of chickpeas at Rupanyup in 2016 sown May 16 and June 14. *Note: data for 14 May is from the fortnightly fungicide treatment of the disease management trial where minimal disease symptoms that had no effect on yield were observed.*

| Variety            | Grain Yield (t/ha) |             | Average     |
|--------------------|--------------------|-------------|-------------|
|                    | May 16             | June 15     |             |
| <u>CICA1541</u>    | 3.59               | 2.58        | 3.08        |
| <u>PBA Slasher</u> | 3.44               | 2.22        | 2.83        |
| PBA Monarch        | 3.42               | 2.41        | 2.91        |
| CICA1454           | 3.36               | 2.90        | 3.13        |
| CICA1552           | 3.36               | 3.08        | 3.22        |
| <u>Ambar</u>       | 3.32               | 2.67        | 3.00        |
| CICA1551           | 3.23               | 2.94        | 3.09        |
| CICA1452           | 3.22               | 2.30        | 2.76        |
| CICA1352           | 3.19               | 3.14        | 3.17        |
| Genesis090         | 3.12               | 2.29        | 2.71        |
| Almaz              | 3.08               | 2.82        | 2.95        |
| <u>Neelam</u>      | 3.04               | 2.85        | 2.94        |
| <u>PBA Maiden</u>  | 2.99               | 2.52        | 2.76        |
| <u>Sonali</u>      | 2.90               | 2.39        | 2.64        |
| CICA1156           | 2.79               | 3.02        | 2.91        |
| <u>PBA Striker</u> | 2.64               | 2.25        | 2.44        |
| <u>Howzat</u>      | 2.63               | 1.55        | 2.09        |
| <u>CICA1442</u>    | 2.52               | 2.62        | 2.57        |
| Kalkee             | 2.41               | 2.54        | 2.47        |
| <i>Average</i>     | <i>3.07</i>        | <i>2.58</i> | <i>2.82</i> |
| LSD(P<0.05)        | 0.65               | 0.79        |             |
| CV                 | 14.9               | 18.4        |             |