

### **C3 Disease Management (Novel), MRZ Wimmera (Rupanyup), Victoria**

#### **Aim**

To evaluate potential new foliar fungicide spray strategies and varieties for management of aschochyta blight in chickpeas

#### **Treatments**

Varieties: Genesis090, Howzat, Kalkee, PBA Slasher

Fungicide Strategies:

Fungicide	Application Rate (gai/ha)	Timing
Nil		
Mancozeb	1500	8 Node & flowering
Prothioconazole + Bixafen	90 + 45	8 node & flowering
Chlorothalonil	1440	Fortnightly from 6 node <sup>1</sup>

P-Pickel T® fungicide seed treatment was applied to all treatments except the 'Nil' at 200ml/100kg seed (360 g/L Thiram and 200 g/L Thiabendazole)

1. A total of 7 applications were used

*Trials was inoculated with aschochyta on July 18 and Aug 4 at Rupanyup and 21 July at Curyo using spore suspension*

***\*\*Some of the treatments in this research contain unregistered fungicides, application rates and timings and were undertaken for experimental purposes only. The results within this document do not constitute a recommendation for that particular use by the author or author's organisation.***

#### **Other Details**

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

#### **Results and Interpretation**

- Key Message: Overall no fungicide treatment other than the fortnightly treatment of chlorothalonil did an adequate job in minimise disease and associated yield loss in the high rainfall season of 2016.
- Plant Growth and Disease Symptoms: Please see please chickpea trial for comments on plant growth and initial disease detection.

In all varieties, aschochyta blight symptoms were significantly reduced by a fortnightly application of chlorothalonil. However, the level of disease in chickpeas sprayed with Mancozeb and New-1 at 8 node and flowering stages was the same as the nil treatment. The New-1 fungicide also caused some low level 'necrosis' on the leaves after application. The Desi type chickpeas, Howzat and PBA Slasher generally showed the worst symptoms, with low levels of disease even recorded in the fortnightly treatments.

- Grain Yield: There was a slight significant interaction between variety and fungicide application for grain yield. For PBA Slasher and Howzat, there appeared to be a slight improvement in yields from the 'Prothioconazole + Bixafen' treatment compared with the control, but yield loss compared to the fortnight treatment was still 45% and 65%, respectively. Overall no fungicide treatment other than the fortnightly treatment of chlorothalonil did an adequate job in minimise disease and associated yield loss in the high rainfall season of 2016.

Table1. Effect of various foliar fungicide strategies on A. Visual disease score recorded on 11 October (0=no symptom; 10=complete infestation) and B. Grain yield of chick pea varieties at Rupanyup, Vic in 2016.

A.

Fungicide	Rate	Timing	Genesis090	Howzat	Kalkee	PBA Slasher	Average
Nil			4.0	8.0	4.3	6.0	5.6
Mancozeb	1500	8 Node & flowering	3.7	7.3	4.3	6.3	5.4
Prothioconazole + Bixafen	90 + 45	8 node & flowering	4.3	7.0	4.7	5.3	5.3
Chlorothalonil	1440	Fortnightly from 6 node <sup>1</sup>	1.0	2.0	1.3	2.0	1.6
<i>Average</i>			3.3	6.1	3.7	4.9	4.5

LSD(P<0.05)<sub>fungicide</sub> = 0.6, <sub>variety</sub> = 0.6, <sub>fungicidexvariety</sub> = 1.3; CV = 4

B.

Fungicide	Rate	Timing	Genesis090	Howzat	Kalkee	PBA Slasher	Average
Nil			2.39	0.68	1.60	1.68	1.59
Mancozeb	1500	8 Node & flowering	2.05	0.59	1.23	1.64	1.38
Prothioconazole + Bixafen	90 + 45	8 node & flowering	1.98	0.95	1.65	1.81	1.60
Chlorothalonil	1440	Fortnightly from 6 node <sup>1</sup>	3.38	2.73	2.74	3.25	3.03
<i>Average</i>			2.45	1.24	1.81	2.10	1.90

LSD(P<0.05)<sub>fungicide</sub> = 0.22, <sub>variety</sub> = 0.22, LSD(P<0.10)<sub>fungicidexvariety</sub> = 0.43; CV = 5