

SAGI statistical analysis (Predicted values for Yield and 100 seed weight)

The following statistical analysis of key harvest assessments has been carried out by SAGI. This analysis uses spatial statistical analysis to refine predicted values for key assessment values.

Table 1: Harvest Traits for the Treatments

Cultivar	DiseaseManagement	Grain Yield (t/ha)	100 Grain Weight (g)
Genisis090	Cheap	3.64 ± 0.22 -	31.69 ± 0.62 - b
PBAMonarch	Cheap	2.34 ± 0.22 -	36.3 ± 0.69 - c
Genisis090	Expensive	3.94 ± 0.22 -	32.17 ± 0.61 - b
PBAMonarch	Expensive	3.19 ± 0.22 -	40.29 ± 0.62 - d
Genisis090	Untreated	2.21 ± 0.22 -	24.49 ± 0.62 - a
PBAMonarch	Untreated	1.39 ± 0.22 -	33.74 ± 0.62 - bc

Note: values expressed as mean ± standard error of prediction
- no subscripts relevant for this response

A summary of the experiment statistics is below:

Table 2: Key statistics for each response analysed

Statistic	Grain Yield (t/ha)	100 Grain Weight (g)
LSD	0.500	1.700
Mean	2.800	33.100
Cultivar_p-value	0.011	0.001
DiseaseManagement_p-value	0.000	0.000
Interaction_p-value	0.294	0.006
CV	35.722	15.479

Coonawarra SA

Irrigated trials conducted at the Coonawarra irrigated research centre 2021 were managed by SARDI

Trial 1. Disease Management Strategies for Chickpeas Grown Under Overhead Irrigation

Location: Coonawarra S.A

FAR Code: FAR CP21-08-1

Sown: 18 October 2021

Cultivar: PBA Maiden

Harvested: 1st February 2022

Rotation position: Forage Rape (2021), Barley (2020), Ryegrass Pasture (2019)

Soil Management: Fallowed for 2 weeks prior to sowing

Irrigation: Centre Pivot, 3.5 ML/ha

GSR: October- January 96 mm, Total available water 446 mm

Key Messages:

- There was no disease infection observed at any point in the growing season
- With no disease pressure, there was no yield response to fungicide application with yields averaging 1.69t/ha from this spring sown chickpea trial.

Table 1. Fungicide strategies applied to the trial.

Released: 27 Sept 2022

The GRDC Optimising Irrigated Grains Project is a collaborative project including the following project partners:



Strategy	Treatment mL/ha		
	4-6 Node (30 Nov)	Pre-Flower (14 Dec)	Mid-Flower (6 Jan)
1. Untreated	-	-	-
2. Cheap	Chlorothalonil 720 @ 1l/ha	Chlorothalonil 720 @ 1l/ha	Chlorothalonil 720 @ 1l/ha
3. Recommended	Mancozeb 750 @ 2kg/ha	Mancozeb 750 @ 2kg/ha	Veritas @ 1l/ha
4. Expensive	Carbendazim 500 @ 500ml/ha	Carbendazim 500 @ 500ml/ha	Veritas @ 1l/ha
5. Teb + Aviator	Veritas @ 1l/ha	Aviator Xpro 600ml/ha	-
6. Teb + Veritas	Veritas @ 1l/ha	Aviator Xpro 600ml/ha	Veritas @ 1l/ha

Table 2. Influence of fungicide strategy on grain yield and grain weight under different fungicide strategies.

Treatment	Grain Yield and Quality	
	Grain Yield t/ha	100 Grain Weight g
1. Untreated	1.64 -	19.99 -
2. Cheap	1.76 -	19.06 -
3. Recommended	1.81 -	19.51 -
4. Expensive	1.66 -	20.33 -
5. Teb + Aviator	1.62 -	19.58 -
6. Teb + Veritas	1.68 -	19.34 -
Mean	1.69	19.64
LSD	ns	ns
P val	0.743	0.890

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Table 1: Harvest Traits for the Treatments

DiseaseManagement	Grain Yield (t/ha)	100 Grain Weight (g)
DM1	1.65 ± 0.1 -	20.04 ± 0.78 -
DM2	1.83 ± 0.1 -	18.96 ± 0.77 -
DM3	1.74 ± 0.09 -	19.45 ± 0.77 -
DM4	1.67 ± 0.1 -	20.36 ± 0.78 -
DM5	1.67 ± 0.1 -	19.77 ± 0.78 -
DM6	1.63 ± 0.1 -	19.34 ± 0.78 -

Note: values expressed as mean ± standard error of prediction
 - no subscripts relevant for this response

A summary of the experiment statistics is below:

Table 2: Key statistics for each response analysed

Statistic	Grain Yield (t/ha)	100 Grain Weight (g)
LSD	0.270	2.338
Mean	1.700	19.700
DiseaseManagement_p-value	0.681	0.816
CV	11.931	7.436

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