

Trangie

Trangie site attributes

2023

Rainfall

Table 5: Monthly rainfall in 2023 and long-term average (LTA, 1878–2023), total annual and growing season (GSR, April–October) rainfall at Trangie (Silo PPD).

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	GSR
2023	42	52	36	55	4	36	26	10	3	18	63	67	412	152
LTA	56	52	47	39	40	42	37	34	34	47	45	46	519	273

Soil characteristics

Sampled May 2023		Soil depth (cm)			
Characteristic	Unit	0–10	10–30	30–60	60–90
pH (CaCl ₂)		4.7	5.0	5.9	6.2
pH (water)		5.8	6.1	7.1	7.4
Organic Carbon	%	0.9	0.4	0.3	0.2
Electrical conductivity (1:5 water)	dS/m	0.07	0.05	0.03	0.03
Phosphorus (Colwell)	mg/kg	34	12	<5	<5
Sulphur (KCl4O)	mg/kg	5	4	<1	3
Chloride	mg/kg	<10	<10	<10	<10
Nitrate N	mg/kg	17.0	13.0	3.3	1.7
Ammonium N	mg/kg	1.2	<0.6	2.6	1.2
Cation exchange capacity (CEC)	meq/100 g	5.7	6.0	8.9	15.5
Exc. calcium	%	3.7	4.2	5.4	8.7
Exc. magnesium	%	1.0	1.1	2.9	6.2
Exc. potassium	%	1.00	0.75	0.54	0.47
Exc. sodium	%	<0.02	<0.02	0.04	0.17
Soil colour		brown	brown	orange/yellow	orange/yellow
Soil texture		clay	clay	clay	clay

Crop sequence and key management dates

Crop sequence			Site management 2023		
Year	Crop	Cultivar	Activity	Date	Comments
2022			Sowing	9 May	Main sowing: all species
2021				7 June	Late sowing: faba beans, lupins, vetch
2020			Harvest	18 October	Field peas, vetch
				1 November	Chickpeas, faba beans, lentils
				15 November	Lupin, canola, wheat

Chickpea disease management

Trangie 2023

Background

The trial was set up to evaluate different fungicide management strategies for two chickpea varieties with contrasting ascochyta blight resistance. PBA Drummond^ϕ is rated Very Susceptible (VS) and CBA Captain^ϕ is rated Moderately Susceptible (MS).

The Nil (untreated) and Complete fungicide treatments were the same for the two varieties, but the Budget and Reactive treatments were designed to apply more fungicide to the VS rated PBA Drummond^ϕ than the MS rated CBA Captain^ϕ.

Key findings

- Due to extremely low and inconsequential level of ascochyta blight, only the Nil and Complete fungicide treatments are reported here.
- CBA Captain^ϕ yielded 0.49 t/ha more than PBA Drummond^ϕ.
- Despite very low rainfall, grain yield of CBA Captain^ϕ averaged a respectable 1.79 t/ha, with much of the yield due to accessing deep stored soil water following a very wet 2022.

Trial details

Table 14: Trial management details for chickpea disease management trial at Trangie in 2023.

Management	2023
Sowing date	9 May
Starter fertiliser	MAP @ 75 kg/ha
Harvest date	9 November
Target plant population	40 plants/m ²
Varieties	CBA Captain ^ϕ – moderately susceptible (MS) to ascochyta blight PBA Drummond ^ϕ – very susceptible (VS) to chocolate spot

Table 15: Fungicide treatments applied to chickpeas at Trangie in 2023.

Fungicide treatment	Date applied	Fungicide applied
Nil	Nil	
Complete	21 June	Mancozeb 750 @ 1.5 kg/ha
	20 July	Mancozeb 750 @ 1.5 kg/ha
	17 August	Mancozeb 750 @ 1.5 kg/ha
	7 September	Chlorothalonil 720 @ 1.0 L/ha

Results

Grain yield

Table 16: Grain yield of two chickpea varieties and two fungicide treatments at Trangie in 2023.

Fungicide treatment	Grain yield (t/ha)		
	CBA Captain	PBA Drummond	Mean (fungicide)
Nil	1.84	1.24	1.54
Complete	1.75	1.31	1.53
Mean (variety)	1.79	1.30	
I.s.d. ($P < 0.05$) variety	0.06		
I.s.d. ($P < 0.05$) fungicide	n.s.		
I.s.d. ($P < 0.05$) variety × fungicide	n.s.		

n.s. = not significantly different



Chickpea disease management trial at Trangie from above, 18 October 2023