Veratin Verigrow

Veratin VERIGROW 12% N Good Soil Rate Trial - Replicated

Katanning

2023

TC2023-025 Veratin VERIGROW 12% N Good Soil Trial

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Veratin Verigrow – 12% N Good Soil Trial – Replicated Katanning

Abstract

This trial was conducted on the TrialCo Research Farm 5 km north of Katanning to backup previous data that proves that the yield of 60 units of Nitrogen in forms of Flexi-N and Urea is comparable to Veratin Verigrow product. This trial examines the product on a good soil type.

The trial was established as a randomized complete block of 5 treatments and 4 replicates in a double bank with each plot 12 m long by 2 m wide.

The trial was sown to wheat on the 14th of June 2023 at a rate of 96 kg/Ha to a depth of 3cm.

Glyphosate 450 at 3.0 L/ha + Goal 240 at 100 mL/ha + AMS at 1% v/v + Wetter 1000 at 0.25% v/v was applied a knockdown, paraquat 250 @ 1.5 L/ha + Trifluralin @ 2 L/ha + Mateno @ 1.0 L/ha was applied pre-seeding. Chlorpyrifos 500EC @ 1 L/ha was applied PSPE.

All data collected was statistically analysed through a t-test two sample assuming equal variances at a confidence limit of 95%. All statistically significant differences contained within this report are referred to as being statistically different. Any other references to results are only referring to trial outcomes and are not significantly different.

The highest yielding treatment was treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS @ 4.58 ton/ha, closely followed by treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS @ 4.48 ton/ha. There were no significant differences between any of the treatments in terms of yield.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS recorded the highest protein @ 12.03% closely followed by treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS @ 11.68%. Both treatments recorded proteins significantly higher than the remaining 3 treatments.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS recorded the highest screenings @ 9.07% which was significantly higher than treatments 1, 2 and 3.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS, recorded the highest vigour assessment @ 116.25. Treatment 4 recorded a significantly higher vigour assessment than treatments 1, 2 and 3. Treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS, recorded the second highest vigour assessment which was significantly higher than treatment 1, the control.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS, recorded the highest NDVI assessment @ 0.34. There were no significant differences between any of the treatments in terms of NDVI assessments.

Veratin Verigrow – 12% N Good Soil Trial – Replicated Katanning

Trial Aim

To backup previous data that proves that the yield of 60 units of Nitrogen in forms of Flexi-N and Urea is comparable to Veratin Verigrow product. This trial examines the product on a good soil type.

Site Details

Location	Katanning	TrialCo Research Farm
GPS (101)	-33.64021 117.50827	

Trial Design

Randomised complete block (replicate 1 in treatment order)			
Number replicates	4	**Number treatments**	5
Plot length (m)	12	**Plot width (m)**	2
Trial depth (m)	24	**Trial width (m)**	20

Sowing Details

Sowing Date	14/06/2023		
Crop / CV	Wheat	**Sowing rate (kg/ha)**	96
Sowing width (m)	1.60	**Sowing depth (cm)**	3.0
Tyne row width (cm)	25.4	**Tynes per plot**	7
Seeding Fertiliser	MAP	**Fertiliser Rate (kg/ha)**	80

Trial Maintenance

Date	Product	Rate		Timing/Notes
10/06/2023	Glyphosate 450	3	L/ha	Knockdown
	Goal 240	100	mL/ha	
	Wetter 1000	0.25	% v/v	
	AMS	1	% v/v	
14/06/2023	Paraquat	1.5	L/ha	Pre-Seeding
	Trifluralin	2	L/ha	
	Mateno	1	L/ha	
	Uniform	400	mL/ha	In Furrow
	Impact	200	mL/ha	
	Cruiser 350FS	200	mL/ha	
	Chlorpyrifos 500EC	1	L/ha	PSPE
10/07/2023	Velocity	800	mL/ha	Post-Emergent
	Axial Xtra	400	mL/ha	
	Hasten	1	% v/v	
10/07/2023	Velocity	800	mL/ha	Post-Emergent
	Axial Xtra	400	mL/ha	
	Hasten	1	% v/v	
8/09/2023	Amistar Extra	400	mL/ha	Post-Emergent
	Trojan	30	mL/ha	
	Chlorpyrifos 500EC	150	mL/ha	

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Treatment List

TRT No	Treatment Name	Rate	Rate Unit	Application Timing
1	Control		N/A	
2	VERIGROW 12% N	50	L/ha	Banded
3	VERIGROW 12% N	50	L/ha	Banded
	VERIGROW 12% N	100	L/ha	6 WAS
4	Flexi-N	40	L/ha	Banded
	Flexi-N	100	L/ha	6 WAS
5	Urea	36.7	kg/ha	Top dressed
	Urea	91.7	kg/ha	6 WAS

Trial Layout

B	5 301	4 302	1 303	3 304	2 305	4 401	1 402	5 403	3 404	2 405	**B**
B	1 101	2 102	3 103	4 104	5 105	4 201	2 202	3 203	1 204	5 205	**B**

Product Information

Product	Active ingredient	Formulation
Verigrow – VERIGROW 12% N		

Results and Discussion

Assessment 1: Results and Analysis of Variance for Vigour 2/08/2023

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Vigour 2/08/2023 100 = UTC	P=0.05
1	Control	N/A			100.00	a
2	VERIGROW 12% N	50	L/ha	Banded	108.75	b
3	VERIGROW 12% N	50	L/ha	Banded	107.50	b
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	116.25	c
	Flexi-N	100	L/ha	6 WAS		
5	Urea	36.7	kg/ha	Topdressed	115.00	bc
	Urea	91.7	kg/ha	6 WAS		

All plots were assessed for vigour 49 days after sowing on the 2nd August 2023.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS, recorded the highest vigour assessment @ 116.25. Treatment 4 recorded a significantly higher vigour assessment than treatments 1, 2 and 3. Treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS, recorded the second highest vigour assessment which was significantly higher than treatment 1, the control.

All treatments recorded significantly higher vigour assessment recordings than the control treatment.

Assessment 2: Results and Analysis of Variance for NDVI 2/08/2023

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	NDVI Reading 2/08/2023 Trimble Greenseeker	P=0.05
1	Control	N/A			0.27	a
2	VERIGROW 12% N	50	L/ha	Banded	0.28	a
3	VERIGROW 12% N	50	L/ha	Banded	0.28	a
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	0.34	b
	Flexi-N	100	L/ha	6 WAS		
5	Urea	36.7	kg/ha	Topdressed	0.29	a
	Urea	91.7	kg/ha	6 WAS		

All plots were assessed for NDVI, 49 days after sowing on the 2nd August 2023.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS, recorded the highest NDVI assessment @ 0.34. There were no significant differences between any of the treatments in terms of NDVI assessments.

Treatment 1, the control, recorded the lowest NDVI assessment between all the treatments @ 0.27.

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Assessment 3: Results and Analysis of Variance for Yield and Grain Quality 1/12/2023

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Yield 1/12/2023 ton/ha	P=0.05
1	Control	N/A			4.17	a
2	VERIGROW 12% N	50	L/ha	Banded	4.23	a
3	VERIGROW 12% N	50	L/ha	Banded	4.47	a
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	4.48	a
	Flexi-N	100	L/ha	6 WAS		
5	Urea	36.7	kg/ha	Topdressed	4.58	a
	Urea	91.7	kg/ha	6 WAS		

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Protein 1/12/2023 %	P=0.05
1	Control	N/A			9.40%	a
2	VERIGROW 12% N	50	L/ha	Banded	9.23%	a
3	VERIGROW 12% N	50	L/ha	Banded	9.55%	a
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	12.03%	b
	Flexi-N	100	L/ha	6 WAS		
5	Urea	36.7	kg/ha	Topdressed	11.68%	b
	Urea	91.7	kg/ha	6 WAS		

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Moisture 1/12/2023 %	P=0.05
1	Control	N/A			10.63%	a
2	VERIGROW 12% N	50	L/ha	Banded	10.48%	a
3	VERIGROW 12% N	50	L/ha	Banded	10.63%	a
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	10.43%	a
	Flexi-N	100	L/ha	6 WAS		
5	Urea	36.7	kg/ha	Topdressed	10.40%	a
	Urea	91.7	kg/ha	6 WAS		

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Spec Weight 1/12/2023 kg/hL	P=0.05
1	Control	N/A			75.08	a
2	VERIGROW 12% N	50	L/ha	Banded	75.07	a
3	VERIGROW 12% N	50	L/ha	Banded	75.14	a
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	73.21	a
	Flexi-N	100	L/ha	6 WAS		

5	Urea	36.7	kg/ha	Topdressed	72.84	a
	Urea	91.7	kg/ha	6 WAS		

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Screenings 1/12/2023 %	P=0.05
1	Control	N/A			5.87%	a
2	VERIGROW 12% N	50	L/ha	Banded	5.82%	a
3	VERIGROW 12% N	50	L/ha	Banded	6.53%	a
	VERIGROW 12% N	100	L/ha	6 WAS		
4	Flexi-N	40	L/ha	Banded	9.07%	b
	Flexi-N	100	L/ha	6 WAS		
5	Urea	36.7	kg/ha	Topdressed	8.21%	ab
	Urea	91.7	kg/ha	6 WAS		

All plots were assessed for yield and grain quality 170 days after sowing on the 1st December 2023.

The highest yielding treatment was treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS @ 4.58 ton/ha, closely followed by treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS @ 4.48 ton/ha. The lowest yielding treatment was treatment 1, the control @ 4.17 ton/ha. There were no significant differences between any of the treatments in terms of yield.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS recorded the highest protein @ 12.03% closely followed by treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS @ 11.68%. Both treatments recorded proteins significantly higher than the remaining 3 treatments.

There were no significant differences between any of the treatments in terms of Moisture or Spec weight. Treatment 3, 50 L/ha VERIGROW 12% N banded + 100 L/ha VERIGROW 12% N 6 WAS, recorded the highest spec weight @ 75.14.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS recorded the highest screenings @ 9.07% which was significantly higher than treatments 1, 2 and 3. Treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS recorded the second highest screenings @ 8.21%.

Conclusion

The highest yielding treatment was treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS @ 4.58 ton/ha, closely followed by treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS @ 4.48 ton/ha. There were no significant differences between any of the treatments in terms of yield.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS recorded the highest protein @ 12.03% closely followed by treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS @ 11.68%. Both treatments recorded proteins significantly higher than the remaining 3 treatments.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS recorded the highest screenings @ 9.07% which was significantly higher than treatments 1, 2 and 3.

Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS, recorded the highest vigour assessment @ 116.25. Treatment 4 recorded a significantly higher vigour assessment than treatments 1, 2 and 3. Treatment 5, 36.7 kg/ha urea banded + 91.7 kg/ha urea 6 WAS, recorded the second highest vigour assessment which was significantly higher than treatment 1, the control.

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Treatment 4, 40 L/ha Flexi-N Banded + 100 L/HA Flexi-N 6 WAS, recorded the highest NDVI assessment @ 0.34. There were no significant differences between any of the treatments in terms of NDVI assessments.

Treatment Application Details

Not applicable

Replicated Data

Table A1. Vigour data 94 DA-S

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Vigour 49 DA-S 2/08/2023 Plot	100 = UTC
1	Control	N/A			101	100
					204	100
					303	100
					402	100
2	VERIGROW 12% N	50	L/ha	Banded	102	110
					202	105
					305	115
					405	105
3	VERIGROW 12% N	50	L/ha	Banded	103	110
	VERIGROW 12% N	100	L/ha	6 WAS	203	105
					304	110
					404	105
4	Flexi-N	40	L/ha	Banded	104	115
	Flexi-N	100	L/ha	6 WAS	201	115
					302	115
					401	120
5	Urea	36.7	L/ha	Topdressed	105	115
	Urea	91.7	L/ha	6 WAS	205	115
					301	120
					403	110

Table A2. NDVI data 49 DA-S

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	NDVI Reading 49 DA-S 2/08/2023 Plot	Trimble Greenseeker
1	Control	N/A			101	0.26
					204	0.27
					303	0.28
					402	0.25
2	VERIGROW 12% N	50	L/ha	Banded	102	0.26
					202	0.27
					305	0.31
					405	0.29
3	VERIGROW 12% N	50	L/ha	Banded	103	0.28
	VERIGROW 12% N	100	L/ha	6 WAS	203	0.32
					304	0.27
					404	0.26
4	Flexi-N	40	L/ha	Banded	104	0.33
	Flexi-N	100	L/ha	6 WAS	201	0.34
					302	0.32
					401	0.36
5	Urea	36.7	L/ha	Topdressed	105	0.28
	Urea	91.7	L/ha	6 WAS	205	0.32
					301	0.28
					403	0.29

Table A3. Harvest and grain quality data

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Yield 1/12/2023 Plot	Yield 1/12/2023 ton/ha
1	Control	N/A			101	3.78
					204	3.95
					303	4.66
					402	4.29
2	VERIGROW 12% N	50	L/ha	Banded	102	3.96
					202	3.89
					305	4.44
					405	4.64
3	VERIGROW 12% N	50	L/ha	Banded	103	4.16
	VERIGROW 12% N	100	L/ha	6 WAS	203	4.27
					304	4.96
					404	4.50
4	Flexi-N	40	L/ha	Banded	104	4.48
	Flexi-N	100	L/ha	6 WAS	201	4.35
					302	4.40
					401	4.69
5	Urea	36.7	L/ha	Topdressed	105	3.98
	Urea	91.7	L/ha	6 WAS	205	4.11
					301	5.16
					403	5.06

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Protein 1/12/2023 Plot	Protein 1/12/2023 %
1	Control	N/A			101	9.60%
					204	9.30%
					303	9.60%
					402	9.10%
2	VERIGROW 12% N	50	L/ha	Banded	102	9.10%
					202	10.00%
					305	9.50%
					405	8.30%
3	VERIGROW 12% N	50	L/ha	Banded	103	10.20%
	VERIGROW 12% N	100	L/ha	6 WAS	203	9.00%
					304	9.60%
					404	9.40%
4	Flexi-N	40	L/ha	Banded	104	11.30%
	Flexi-N	100	L/ha	6 WAS	201	11.40%
					302	12.00%
					401	13.40%

5	Urea	36.7	L/ha	Topdressed	105	12.40%
	Urea	91.7	L/ha	6 WAS	205	10.20%
					301	11.10%
					403	13.00%

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Moisture 1/12/2023 Plot	%
1	Control	N/A			101	10.50%
					204	10.70%
					303	10.70%
					402	10.60%
2	VERIGROW 12% N	50	L/ha	Banded	102	10.30%
					202	10.60%
					305	10.50%
					405	10.50%
3	VERIGROW 12% N	50	L/ha	Banded	103	10.70%
	VERIGROW 12% N	100	L/ha	6 WAS	203	10.60%
					304	10.60%
					404	10.60%
4	Flexi-N	40	L/ha	Banded	104	10.50%
	Flexi-N	100	L/ha	6 WAS	201	10.50%
					302	10.40%
					401	10.30%
5	Urea	36.7	L/ha	Topdressed	105	10.30%
	Urea	91.7	L/ha	6 WAS	205	10.40%
					301	10.60%
					403	10.30%

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Spec Weight 1/12/2023 Plot	kg/hL
1	Control	N/A			101	74.44
					204	75.82
					303	74.42
					402	75.62
2	VERIGROW 12% N	50	L/ha	Banded	102	76.24
					202	73.98
					305	74.14
					405	75.92
3	VERIGROW 12% N	50	L/ha	Banded	103	76.42
	VERIGROW 12% N	100	L/ha	6 WAS	203	76.42
					304	75.52
					404	72.20
4	Flexi-N	40	L/ha	Banded	104	72.22
	Flexi-N	100	L/ha	6 WAS	201	75.36
					302	73.64
					401	71.62
5	Urea	36.7	L/ha	Topdressed	105	68.42
	Urea	91.7	L/ha	6 WAS	205	75.64

					301	74.68
					403	72.62

TRT No	Treatment Name	Rate	Rate Unit	Application Timing	Screenings 1/12/2023 Plot	%
1	Control	N/A			101	7.17%
					204	6.65%
					303	5.83%
					402	3.83%
2	VERIGROW 12% N	50	L/ha	Banded	102	6.79%
					202	7.06%
					305	6.04%
					405	3.37%
3	VERIGROW 12% N	50	L/ha	Banded	103	5.99%
	VERIGROW 12% N	100	L/ha	6 WAS	203	6.18%
					304	8.08%
					404	5.87%
4	Flexi-N	40	L/ha	Banded	104	8.53%
	Flexi-N	100	L/ha	6 WAS	201	9.39%
					302	7.85%
					401	10.50%
5	Urea	36.7	L/ha	Topdressed	105	10.64%
	Urea	91.7	L/ha	6 WAS	205	6.43%
					301	7.63%
					403	8.12%

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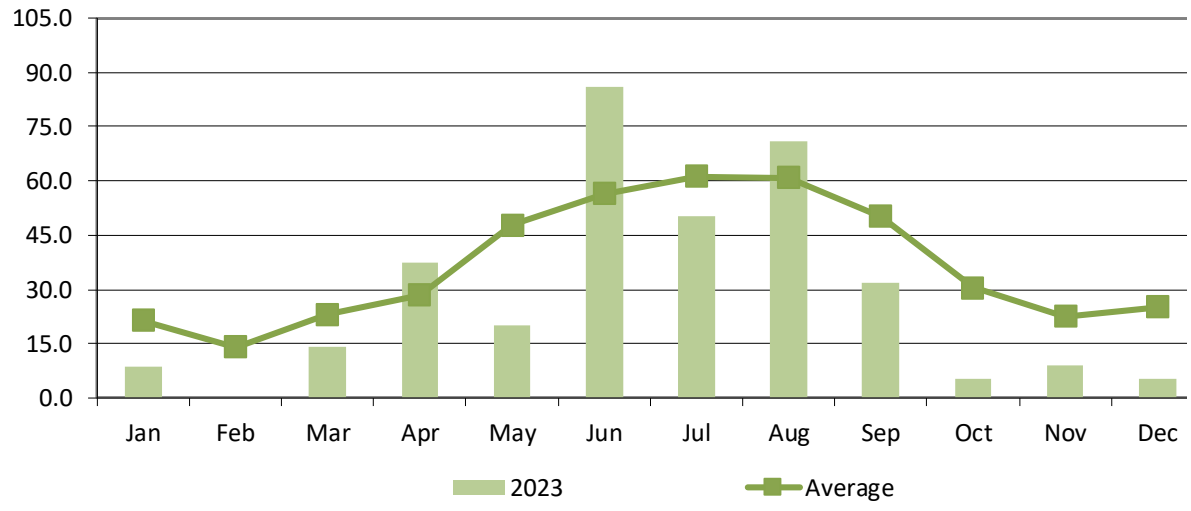
Weather Data

DPIRD Station Katanning KA004
2023 Daily Rainfall (mm)

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	8.2	0.0	44.0	0.2	0.0	0.2	0.0	0.0	0.0
2	0.0	0.0	0.0	3.0	0.2	0.4	0.2	0.0	1.4	1.6	0.0	0.0
3	0.0	0.0	1.8	0.2	0.0	0.2	0.6	35.6	9.2	1.8	0.0	0.0
4	0.0	0.0	0.0	0.2	0.2	0.2	10.4	0.6	1.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.2	0.4	5.6	4.2	0.2	0.2	0.0	0.0	0.0
6	0.0	0.0	0.0	0.2	0.0	6.8	1.4	0.2	2.6	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	4.4	0.6	0.0	0.2	0.8	0.0	0.0	0.0
8	0.0	0.0	0.0	3.2	0.0	0.2	0.2	0.4	0.0	0.0	0.0	0.0
9	0.0	0.0	0.4	2.2	0.0	0.2	0.0	11.4	0.0	0.0	0.0	0.0
10	2.2	0.0	0.0	0.2	1.8	1.2	0.4	0.2	0.2	0.0	0.0	0.0
11	2.2	0.0	0.0	3.6	0.2	2.2	0.2	2.4	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.2	0.0	0.2	0.4	0.8	0.2	0.0	0.0	0.0
13	0.0	0.0	0.0	0.2	1.4	0.2	3.0	1.2	0.2	0.0	0.2	0.0
14	0.0	0.0	0.0	8.8	0.2	1.2	0.6	0.4	10.2	0.0	8.6	0.0
15	0.0	0.0	0.0	0.6	0.0	0.0	0.6	1.6	1.6	0.0	0.0	0.0
16	0.0	0.0	0.0	0.8	0.2	0.0	0.2	13.6	0.8	0.0	0.0	0.0
17	0.0	0.0	0.6	0.0	0.2	1.2	0.0	0.2	2.4	0.0	0.0	0.0
18	0.0	0.0	0.2	1.0	0.0	0.4	0.0	0.2	0.2	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.2	0.0	10.4	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.2	4.4	1.2	0.2	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.2	5.8	0.4	0.2	0.0	0.0	0.0	0.0
22	1.4	0.0	0.0	0.0	0.0	1.0	0.4	0.2	0.0	0.0	0.0	0.0
23	2.8	0.0	0.0	0.0	0.0	4.4	0.2	0.0	0.2	2.0	0.0	0.0
24	0.0	0.0	0.2	2.4	2.0	0.6	0.2	0.2	0.0	0.0	0.0	0.0
25	0.0	0.0	0.8	0.2	0.2	1.8	0.0	0.2	0.2	0.0	0.0	0.0
26	0.0	0.0	6.2	1.0	0.0	1.8	11.8	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	4.0	0.8	0.0	0.4	2.4	0.2	0.2	0.0	0.2	0.0
28	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0		0.0	0.2	0.0	0.2	0.4	0.2	0.0	0.0	0.0	1.0
30	0.0		0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	4.2
31	0.0		0.0		8.0		0.2	0.0		0.0		0.0
2023	**8.6**	**0.0**	**14.2**	**37.4**	**20.0**	**86.2**	**50.4**	**70.8**	**31.8**	**5.4**	**9.0**	**5.2**
				2023 GSR Apr-Oct: 302.0								
Cum.	**8.6**	**8.6**	**22.8**	**60.2**	**80.2**	**166.4**	**216.8**	**287.6**	**319.4**	**324.8**	**333.8**	**339.0**
Average	**21.4**	**14.1**	**23.1**	**28.4**	**47.8**	**56.4**	**61.2**	**60.9**	**50.1**	**30.5**	**22.5**	**25.2**
				Ave GSR Apr-Oct: 335.3								
Cum.	**21.4**	**35.5**	**58.6**	**87.0**	**134.8**	**191.2**	**252.4**	**313.3**	**363.4**	**393.9**	**416.4**	**441.6**

2023 Monthly Rainfall vs Long Term Average (mm)



Veratin Verigrow – 12% N Good Soil Trial – Replicated Katanning

DPIRD Station Katanning KA004

2023 Daily Temperature (°C)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Date	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
1	7.9	26.3	12.4	24.4	13.6	29.7	13.8	16.8	6.7	19.1	10.5	14.6	0.8	12.9	4.1	19.9	6.6	21.6	4.6	19.2	5.6	28.0	14.0	32.9
2	5.9	26.5	8.3	27.2	14.3	32.1	11.8	22.7	3.2	20.4	6.6	14.9	1.0	14.9	9.6	16.1	7.9	16.4	6.6	14.1	8.7	26.4	10.9	33.2
3	13.9	26.5	13.8	29.2	14.1	32.3	11.7	23.8	7.7	23.9	3.9	13.8	5.9	13.0	4.8	10.7	5.9	11.5	4.6	16.3	10.1	27.2	12.4	29.2
4	12.9	30.1	11.9	33.9	11.2	26.5	10.8	22.0	8.2	20.3	4.6	16.1	5.0	12.0	0.5	12.0	4.3	15.9	2.9	19.3	11.5	29.9	11.1	27.3
5	12.0	33.2	17.0	36.1	8.2	24.0	8.4	22.1	6.7	17.8	8.5	11.9	5.6	11.6	-1.1	13.7	6.5	16.9	6.0	22.5	9.8	35.2	8.0	25.8
6	12.9	31.3	16.1	31.6	7.9	22.6	9.8	22.9	6.6	17.4	4.2	8.9	4.3	13.2	0.4	17.5	7.1	12.9	9.7	30.1	13.8	27.1	10.9	31.7
7	10.4	24.2	14.4	26.2	7.1	24.1	10.2	20.5	9.2	16.6	3.7	11.8	7.1	15.2	4.4	20.0	-0.9	14.3	6.4	32.9	13.1	26.0	11.3	24.7
8	7.3	29.5	16.2	26.4	8.3	28.4	11.4	15.1	9.2	20.5	6.5	15.9	7.7	14.2	12.6	15.6	1.2	19.1	11.1	31.5	4.3	30.0	9.6	22.5
9	12.1	32.0	8.4	28.9	13.4	29.1	12.2	18.9	9.7	24.0	4.1	15.6	8.0	15.9	2.7	14.1	8.3	20.6	9.8	25.6	11.2	23.2	4.5	23.5
10	15.3	36.9	12.3	30.6	11.8	27.2	10.5	22.0	11.4	17.0	10.2	16.5	7.6	15.8	0.9	10.3	5.8	19.4	11.3	19.7	2.0	23.5	7.6	26.9
11	15.4	29.2	7.7	26.4	9.5	29.2	10.9	20.3	5.1	17.3	8.1	12.2	8.7	15.8	3.8	15.5	5.4	21.2	1.1	18.8	9.1	23.3	6.7	29.5
12	11.9	31.8	10.3	27.1	9.2	32.8	12.3	22.5	3.2	19.7	4.6	14.4	10.8	17.6	4.5	12.0	7.9	21.0	1.2	21.9	10.0	18.2	12.5	32.2
13	10.4	31.2	11.3	34.0	13.9	30.7	10.7	22.2	9.6	18.9	8.8	16.1	10.1	14.8	7.1	15.2	8.5	15.6	3.8	27.1	11.4	20.6	9.4	31.3
14	12.3	22.9	12.6	30.1	12.4	30.2	5.7	14.9	5.7	16.1	9.7	13.5	6.7	11.9	5.1	16.3	5.1	16.4	6.5	27.7	12.6	21.5	11.8	26.0
15	9.8	31.5	12.0	26.1	9.8	32.5	6.7	19.2	5.8	20.2	7.8	16.3	-1.6	12.0	9.7	15.3	10.8	18.4	8.9	26.9	12.7	21.5	6.6	27.1
16	13.7	24.2	7.8	28.2	11.0	29.3	11.4	20.6	8.9	20.8	9.5	13.4	2.0	14.2	7.0	12.5	8.8	17.8	8.1	32.5	10.9	23.4	7.5	32.1
17	5.5	22.5	9.4	29.8	12.1	20.9	10.1	22.0	6.4	22.4	3.3	11.5	5.8	14.9	5.5	15.0	3.0	16.4	7.4	36.1	7.0	25.5	12.2	24.9
18	8.5	25.7	12.4	34.7	7.4	24.0	6.9	18.4	7.8	22.7	3.5	13.0	8.3	15.2	5.6	13.8	4.0	16.2	12.0	22.9	8.9	30.7	7.9	24.0
19	12.0	29.4	15.6	31.5	8.8	26.0	3.4	19.8	4.6	20.7	0.6	13.0	6.7	9.6	3.5	15.8	9.6	17.9	10.3	22.6	8.7	30.1	10.2	27.7
20	12.8	31.9	14.5	27.1	11.1	31.2	4.6	22.0	1.8	18.3	5.4	9.8	1.8	13.9	3.9	15.0	9.4	17.0	6.0	24.6	10.5	27.8	12.7	29.3
21	14.0	33.9	16.1	36.2	15.0	29.6	3.6	25.4	3.1	18.9	4.7	10.6	6.2	14.4	6.0	14.9	6.5	23.1	7.4	28.8	12.2	29.1	13.8	25.0
22	14.7	27.6	12.2	32.6	16.2	26.7	7.1	26.5	8.0	20.1	3.3	12.9	2.4	14.5	1.3	13.2	8.7	28.5	10.1	24.0	11.6	31.7	14.2	30.9
23	14.2	36.4	14.1	22.6	16.4	27.6	7.4	27.7	5.7	22.9	3.5	10.3	-0.6	16.0	5.9	15.6	12.3	19.0	6.3	17.8	12.3	32.3	13.4	26.1
24	14.4	31.8	5.6	25.5	16.6	26.7	9.7	15.7	9.7	16.1	4.6	11.9	0.4	16.2	6.3	16.5	6.2	19.4	0.7	21.1	11.3	35.5	10.5	28.6
25	12.4	26.4	6.5	27.6	16.6	20.9	5.1	13.8	5.0	14.4	2.7	10.6	3.6	13.4	2.8	22.3	3.0	21.0	6.9	28.1	13.0	28.8	10.7	37.5
26	7.4	31.9	13.5	31.0	14.2	16.7	10.3	19.6	8.2	15.9	1.8	11.1	8.8	11.9	4.9	19.2	2.4	23.9	11.0	23.1	13.3	24.8	14.2	32.1
27	9.5	23.6	14.3	30.3	8.1	20.7	11.3	16.6	0.2	16.5	1.0	12.4	7.7	12.7	6.2	18.9	3.2	27.9	3.1	20.5	12.7	25.9	13.3	26.0
28	6.1	27.2	16.3	26.2	6.5	22.0	3.2	15.0	5.2	18.4	5.4	13.0	6.1	14.7	8.0	18.4	10.8	29.1	0.2	22.6	10.1	27.8	13.2	19.7
29	11.3	32.0			6.8	22.9	4.6	18.7	3.2	19.8	3.9	12.2	9.0	15.3	2.9	15.9	7.1	24.9	5.2	22.6	11.0	27.6	11.6	22.6
30	12.0	35.0			10.9	25.3	4.7	20.9	8.9	22.7	3.4	12.1	5.6	14.3	0.2	15.1	7.7	19.7	1.5	19.8	11.0	29.5	12.8	28.1
31	12.8	27.3			13.9	20.9			12.8	16.2			2.1	15.6	2.8	22.1			3.0	22.7			14.5	26.5

2023 vs Long Term Average Monthly Temperature (°C)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	Min	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
2023	11.3	29.4	12.3	29.3	11.5	26.5	8.7	20.3	6.7	19.2	5.3	13.0	5.3	14.1	4.6	15.8	6.4	19.4	6.2	24.0	10.3	27.1	11.0	27.9
Ave	13.6	30.1	14.1	29.7	13.1	27.0	11.1	23.3	8.6	19.2	6.9	16.2	6.0	14.8	5.9	15.4	6.2	17.6	7.7	21.9	10.1	26.2	11.8	28.8