

SUM23.22: SOP Tolerance

SUM22.23: P is Key

SUM22.24: N Products



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TRIAL DETAILS

Property:	Gary Lang, Wickopin
Plot Dimensions:	2.06m x 12, 6 treatments + 5 treatments 5 treatments x 4 reps = 78 plots
Soil Type:	Sandy Loam
Crop:	Calibre Wheat, sown 23/05/2023

Table 1. Fertilizer applications & treatments.

Treatment	Establishment Fertilizer Banded (kg/ha)	3 Leaf (kg/ha)	Mid Tilling (kg/ha)	
1	K0	45 MAPCuZn, 36 Urea, 40 MAXam	60 UAN	130 UAN
2	K25 (SOP 60)	45 MAPCuZn, 55 Urea, 60 SOP	60 UAN	130 UAN
3	K50 (SOP 120)	45 MAPCuZn, 55 Urea, 120 SOP	60 UAN	130 UAN
4	K75 (SOP 180)	45 MAPCuZn, 55 Urea, 180 SOP	60 UAN	130 UAN
5	K100 (SOP 240)	45 MAPCuZn, 55 Urea, 240 SOP	60 UAN	130 UAN
6	Soil Rec'd	45 MAPCuZn, 55 Urea, 85 SOP	60 UAN	130 UAN
1	P0	60 SOP, 65 Urea	60 UAN	130 UAN
2	P4	16 MAPCuZn, 60 SOP, 60 Urea	60 UAN	130 UAN
3	P8	34 MAPCuZn, 60 SOP, 55 Urea	60 UAN	130 UAN
4	P12	52 MAPCuZn, 60 SOP, 50 Urea	60 UAN	130 UAN
5	P16	70 MAPCuZn, 60 SOP, 45 Urea	60 UAN	130 UAN
6	P20	92 MAPCuZn, 60 SOP, 40 Urea	60 UAN	130 UAN
1	Urea	45 MAPCuZn, 60 SOP, 44 Urea	55 Urea	92 Urea
2	Urea Glaze	45 MAPCuZn, 60 SOP, 44 Urea Glaze	55 Urea Glaze	92 Urea Glaze
3	Urea Plus	45 MAPCuZn, 60 SOP, 44 Urea	60 UAN	114 Urea+
4	UAN	45 MAPCuZn, 60 SOP, 44 Urea	60 UAN	100 UAN
5	MAXamFLO	45 MAPCuZn, 60 SOP, 44 Urea	90 MAXamFLO	150 MAXamFLO

SOIL TEST RESULTS

Table 2. Soil nutrient analysis

Depth cm	pH [CaCl ₂]	P Col mg/kg	PBI	K Col mg/kg	EC S/m	S mg/kg	Org C %	NO ₃ ⁻ mg/kg	NH ₄ ⁺ mg/kg	Cu mg/kg	Zn mg/kg	Mn mg/kg
0-10	5.3	29	35	96	0.08	16	1.2	6	2	0.4	0.7	2.2
10-20	5.2	9	106	98	0.03	13	0.4	1	1			

RAINFALL

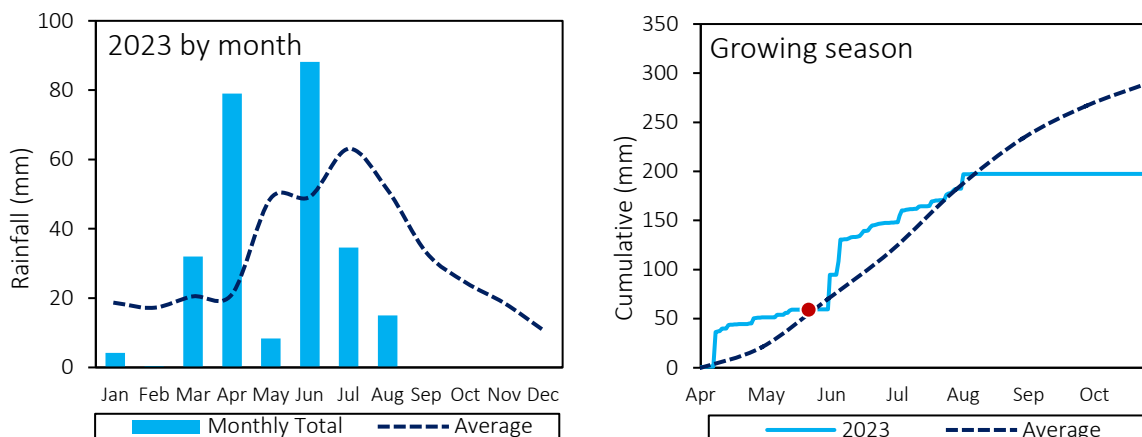


Figure 1. 2023 monthly rainfall data from Wickopin North DPIRD weather station (11km SW) to 13/07/2022. 30-year average rainfall data is from Wickopin BOM Station (12km SW).

Emergence

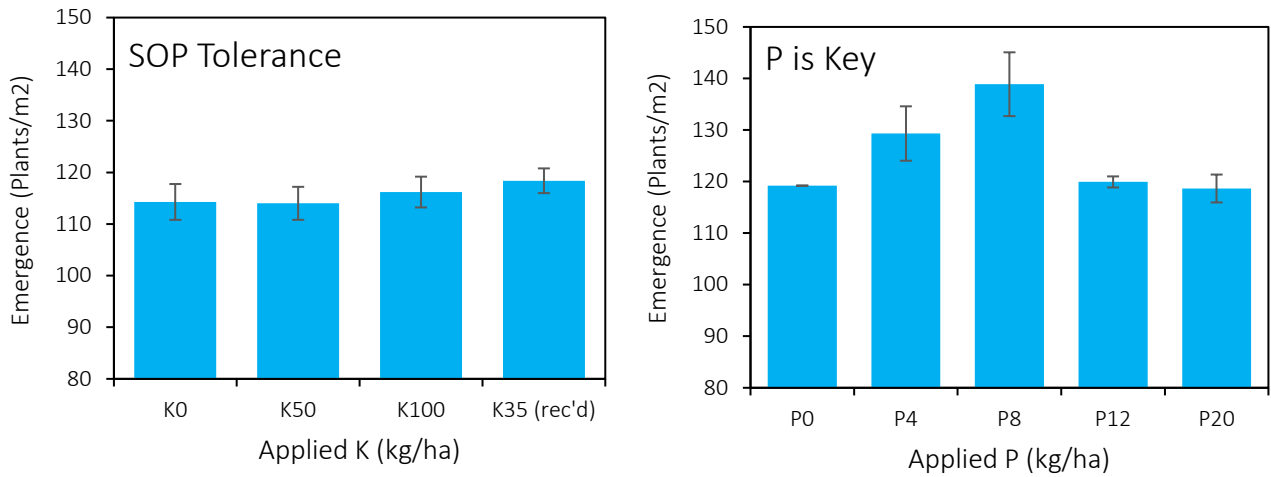


Figure 2. Emergence recorded on the 05/07/2023 at the three leaf stage show no differences in emergence with increasing SOP rates. In the P trial emergence was greatest where 8kg P/ha was applied, followed by 4kg P/ha and lower where 0, 12 & 20 kg P/ha was applied. The N Source trial averaged 126plants/m².

Biomass

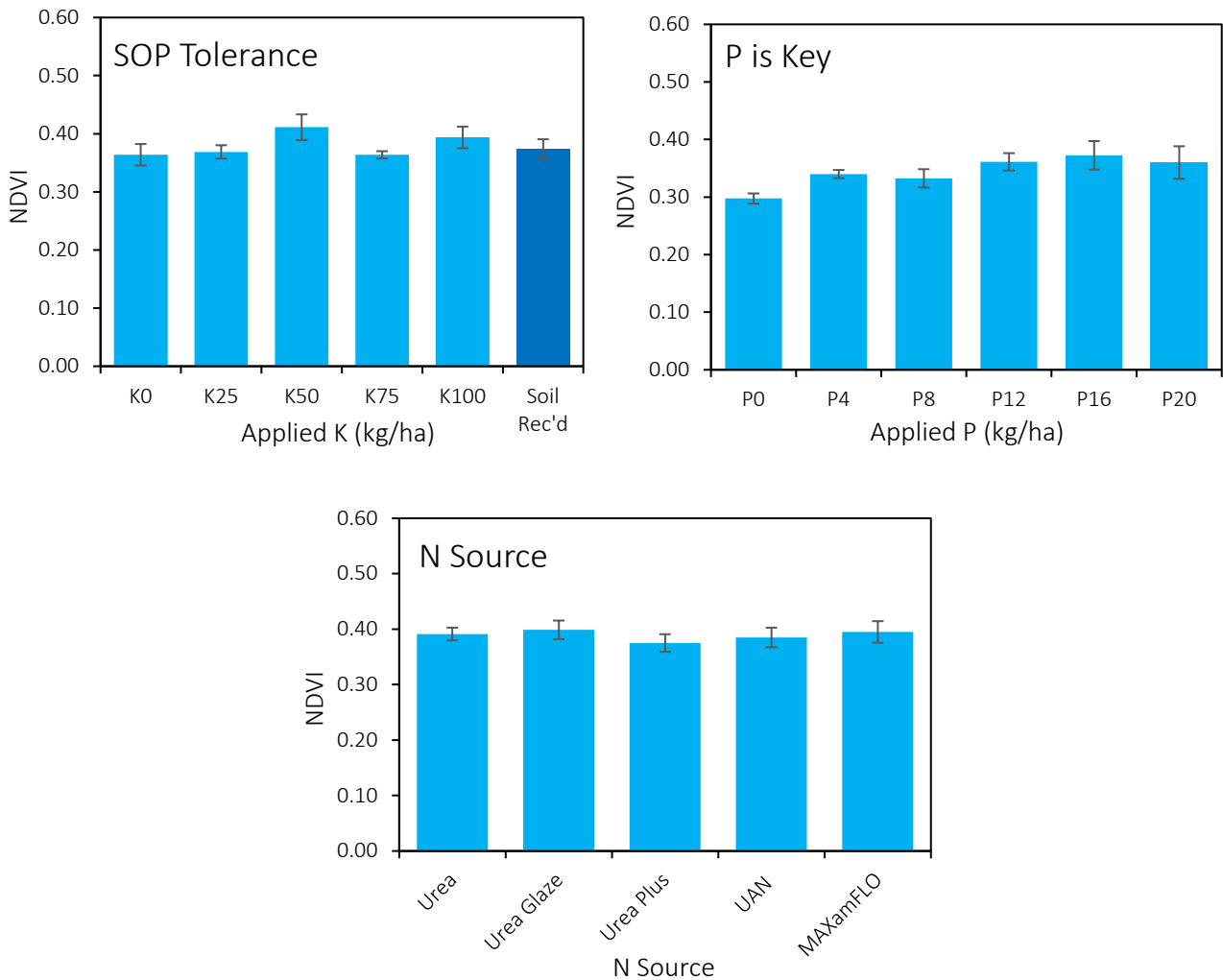


Figure 3. Wheat shoot biomass readings from 01/08/2023 at mid tillering show marginal differences between SOP rates, a slight increase with increasing P rates and no difference between the N sources. A higher NDVI value indicates greater plant biomass and density.

LAYOUT

FENCELINE

To Wickepin-Corrigin Road -->

	Buffer			Buffer			2.45m
SUM23.22 SOP Tolerance	301	4	K75 (SOP 180)	101	1	K0	2.45m
	302	1	K0	102	2	K25 (SOP 60)	2.45m
	303	2	K25 (SOP 60)	103	3	K50 (SOP 120)	2.45m
	304	6	Soil Rec'd	104	4	K75 (SOP 180)	2.45m
	305	3	K50 (SOP 120)	105	5	K100 (SOP 240)	2.45m
	306	5	K100 (SOP 240)	106	6	Soil Rec'd	2.45m
	401	3	K50 (SOP 120)	201	2	K25 (SOP 60)	2.45m
	402	6	Soil Rec'd	202	4	K75 (SOP 180)	2.45m
	403	1	K0	203	5	K100 (SOP 240)	2.45m
	404	5	K100 (SOP 240)	204	1	K0	2.45m
	405	4	K75 (SOP 180)	205	6	Soil Rec'd	2.45m
	406	2	K25 (SOP 60)	206	3	K50 (SOP 120)	2.45m
SUM23.23 P is Key	301	6	P20	101	1	P0	2.45m
	302	2	P4	102	2	P4	2.45m
	303	1	P0	103	3	P8	2.45m
	304	3	P8	104	4	P12	2.45m
	305	4	P12	105	5	P16	2.45m
	306	5	P16	106	6	P20	2.45m
	401	4	P12	201	5	P16	2.45m
	402	1	P0	202	3	P8	2.45m
	403	3	P8	203	4	P12	2.45m
	404	6	P20	204	6	P20	2.45m
	405	2	P4	205	1	P0	2.45m
	406	5	P16	206	2	P4	2.45m
SUM23.24 N Products	301	2	Urea Glaze	101	1	Urea	2.45m
	302	4	UAN	102	2	Urea Glaze	2.45m
	303	1	Urea	103	3	Urea Plus	2.45m
	304	5	MAXamFLO	104	4	UAN	2.45m
	305	3	Urea Plus	105	5	MAXamFLO	2.45m
	401	3	Urea Plus	201	4	UAN	2.45m
	402	1	Urea	202	5	MAXamFLO	2.45m
	403	4	UAN	203	2	Urea Glaze	2.45m
	404	5	MAXamFLO	204	1	Urea	2.45m
	405	2	Urea Glaze	205	3	Urea Plus	2.45m
	Buffer			Buffer			2.45m
							88.2m
	12m			12m			Trial Area 0.21ha
				24m			Spray Area 0.24ha

