



***Loveland***

***AGRI PRODUCTS***  
***Get Growing***

**WHEAT**  
**Potassium Long Term Trial**  
**Munglinup 2017**

**WA 17-S01**

# Trial Design



- Plot size – 10m x 1.75m x 4 replicates
- Treatments Applied: as per protocol

<b>Seeding Date</b>	<b>10<sup>th</sup> May 2017</b>
<b>Site</b>	Munglinup - WA
<b>Variety</b>	Scepter at 80 kg/ha
<b>Protocol</b>	<b>Pre Sow:</b> Sakura 118g + Trifluralin 2 lt
<b>GSP</b>	<b>Sowing fert:</b> As per protocol + 50 kg/ha Urea banded <b>Top Dress fert:</b> MOP Top dressed 14/06/15 – 4-5 leaf. LoKomotive applied to Full Flag Leaf, 7/08/17

# Soil Test Data



Paddock : Site	Depth cm	pH CaCl2 4B1	EC dS/m 3A1	Organic						K mg/kg (Colwell) 18A1	S mg/kg (KCl40) 10D1
				C	NO3 N	NH4 N	P	PBI			
				%	mg/kg(KCl)	mg/kg(KCl)	mg/kg (Colwell)				
				6G1	7C1c	7C1a	9B2	9I2a			
1- Potassium : A0-10	0-10cm	5.3	0.077	1.68	14	4	20	27	71	9	
2- Potassium : B 10-20	10-20cm	5.3	0.041	2.17	6	2	9	48	113	10	
Average					10	3	14	37	92	9	

Paddock: Site	Depth cm	Cu	Zn	Mn	Fe	B	Cl	Al
		mg/kg (DTPA)	mg/kg (DTPA)	mg/kg (DTPA)	mg/kg (DTPA)	mg/kg (CaCl2)	mg/kg	mg/kg (CaCl2)
		12A1	12A1	12A1	12A1	12C2		
1- Potassium : A0-10	0-10cm	0.7	77.73	2.2	71.01	0.48	20.4	1.1
2- Potassium : B 10-20	10-20cm	0.28	118.374	0.8	40.68	0.38	17.1	1

# Trial Protocol

Treatment #	Treatment	Applied Rate kg/ha	Units P: K
T1	Untreated	-	
T2	Crop Build 14 Trace	110	15 P, 0 K
T3	K-Start 10 Trace	115	15 P, 11 K
T4	Crop Build 14 Trace + MOP banded	110 + 23	15 P, 11 K
T5	K Start 10 Trace + MOP (3-4 leaf)	115 + 30	15 P, 26 K
T6	K Start 10 + Basis XC	115 + 2lt	15 P, 11 K
T7	K Start 10 Trace + Lokomotive (Flag leaf)	115 + 5lt	15 P, 12.5 K
T8	K Start 10 Trace + MOP (3-4 lf)	115 + 82	15 P, 53 K
T9	Crop Build 14 + MOP (3-4 lf)	110 + 52	15 P, 26 K
T10	K Start 10 Trace + MOP banded + Lokomotive (Flag leaf)	115 + 30 + 5	15 P, 27.5 K
T11	MAP + MOP banded	68 + 23	15 P, 11 K

## NOTE

- **Crop Build 14** – 14-14-0
- **K Start 10** – 12-13-10
- **Lokomotive** - 3-0-27
- **MOP** – 0-0-50

# Wheat yield

Treatment	Rate kg/ha	Yield T/ha
Untreated	-	2.713
CropBuild 14 Trace	110	4.15 c
K-Start 10 Trace	115	4.12 c
Crop Build 14 Trace + MOP banded	110 + 23	4.12 c
K Start 10 Trace + MOP (3-4 leaf)	115 + 30	4.25 abc
K Start 10 + Basis XC	115 + 2lt	4.18 bc
K Start 10 Trace + Lokomotive (Flag)	115 + 5lt	4.48 a
K Start 10 Trace + MOP (3-4 lf)	115 + 82	4.28 abc
Crop Build 14 + MOP (3-4 lf)	110 + 52	4.45 ab
K Start 10 Trace + MOP banded + Lokomotive (Flag)	115 + 30 + 5	4.48 a
MAP + MOP banded	68 + 23	4.37 abc
<b>LSD (P=0.05)</b>		<b>0.2758</b>
<b>CV</b>		<b>3.73</b>

# Wheat yield

Treatment	Rate kg/ha	Yield T/ha
Untreated	-	2.713
CropBuild 14 Trace	110	4.15 c
Crop Build 14 Trace + MOP banded	110 + 23	4.12 c
Crop Build 14 + MOP (3-4 lf)	110 + 52	4.45 ab
MAP + MOP banded	68 + 23	4.37 abc
<b>LSD (P=0.05)</b>		<b>0.2758</b>
<b>CV</b>		<b>3.73</b>

# Wheat yield

Treatment	Rate kg/ha	Yield T/ha
Untreated	-	2.713
K-Start 10 Trace	115	4.12 c
K Start 10 Trace + MOP (3-4 leaf)	115 + 30	4.25 abc
K Start 10 + Basis XC	115 + 2lt	4.18 bc
K Start 10 Trace + Lokomotive (Flag)	115 + 5lt	4.48 a
K Start 10 Trace + MOP (3-4 lf)	115 + 82	4.28 abc
K Start 10 Trace + MOP banded + Lokomotive (Flag)	115 + 30 + 5	4.48 a
MAP + MOP banded	68 + 23	4.37 abc
<b>LSD (P=0.05)</b>		<b>0.2758</b>
<b>CV</b>		<b>3.73</b>



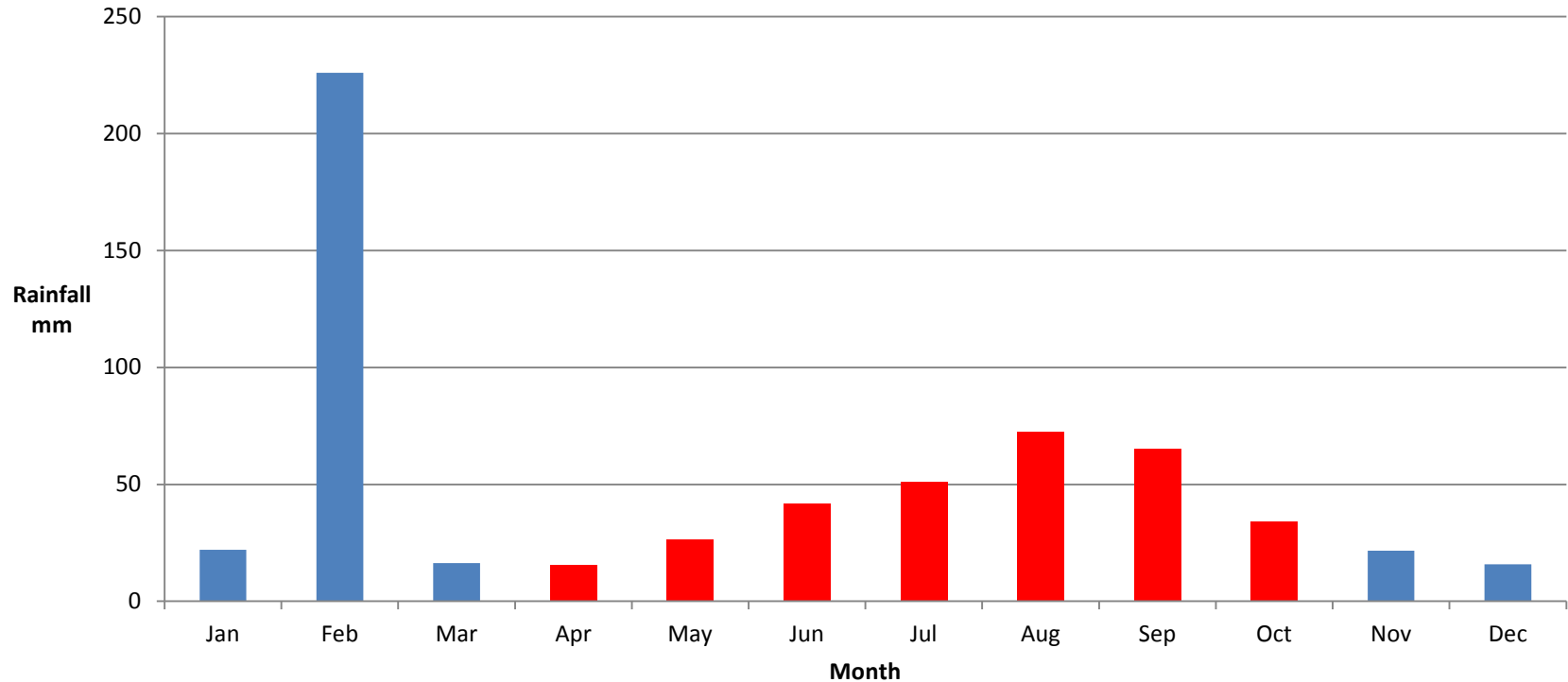
# NDVI and Vigour

Treatment	Rate kg/ha	7-8-17 NDVI 0-1	24-8-17 NDVI 0-1	24-8-17 Vigour 1-10
Untreated	-	0.477	0.453	4.3 c
Crop Build 14 Trace	110	0.690 a	0.570 c	8.0 b
K-Start 10 Trace	115	0.697 a	0.577 bc	8.0 b
Crop Build 14 Trace + MOP banded	110 + 23	0.703 a	0.573 c	8.3 ab
K Start 10 Trace + MOP (3-4 leaf)	115 + 30	0.700 a	0.590 abc	9.0 a
K Start 10 + Basis XC	115 + 2lt	0.713 a	0.613 a	8.7 ab
K Start 10 Trace + Lokomotive (flag)	115 + 5lt	0.700 a	0.603 a	9.0 a
K Start 10 Trace + MOP (3-4 lf)	115 + 82	0.697 a	0.600 ab	8.7 ab
Crop Build 14 + MOP (3-4 lf)	110 + 52	0.710 a	0.613 a	8.7 ab
K Start 10 Trace + MOP banded + Lokomotive (Flag)	115 + 30 + 5	0.723 a	0.607 a	8.3 ab
MAP + MOP banded	68 + 23	0.703 a	0.600 ab	8.7 ab
<b>LSD (P=0.05)</b>		<b>0.0352</b>	<b>0.0245</b>	<b>0.95</b>
<b>CV</b>		<b>2.92</b>	<b>2.4</b>	<b>6.85</b>



# RAINFALL DATA – 2017

## Munglinup WA (BOM data)



- **Total for Year 2017 : 608.4 mm**
- **Total for GSR (April-October) – 306.6**

# Conclusions

---

- Nil fertiliser in this trial yielded 2.713 T
- Crop Build 14 (4.15 T) and K Trace (4.12 T) both had a significant increase in yield over Nil fert
- K Trace + LoKomotive yielded 4.48 T which was a 360kg increase over K Trace (4.12 T)
- K Trace + MOP (4.28 T) was an increase over K Trace (4.12 T) of 160 kg/ha
- K Trace + MOP + LoKomotive yielded 4.48 T which was a 200 kg/ha increase over K Trace + MOP