



**Loveland**

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

**Lentil**  
**Nutrition options Manangatang**

**KA16\_0628**

# Trial Design

- Treatments replicated 4 times on a randomised design
- Plot size – 12m x 1.25m
- Treatments Applied: At seeding and Foliar 24/8
- Previous crop Lupins

Seeding Date		Friday 20 <sup>th</sup> April 2016
Site	Manangatang Victoria	
Variety	Hurricane (Lentil), 40 kg/ha + P pickle T 200ml/T	
Protocol	<p><b>Pre Sow:</b> Roundup CT@ 1lt/ha + Trifluralin @ 1.8 lt/ha + Emerge 100ml/ha + Inoculant (tea bagged) IF</p> <p><b>PSPE</b> Pyrinex Super 500ml/ha</p> <p><b>Post Emergent:</b> Intervix @ 750 ml +Hasten @ 500 ml/100 Lt ,3<sup>rd</sup> june</p> <p><b>Post Emergent:</b> Prosaro+ BS1000 @ 0.25%, 28<sup>th</sup> July</p> <p><b>Post Emergent:</b> Barrack 1lt + Dimethoate 150ml 16/09, Barrack 1lt + Dimethoate 250ml + Trojan 30ml 13/10.</p>	
GSP	<b>Sowing fertiliser:</b> Superfect@ 100 kg/ha	

# Soil Test Data



SOIL 0-10 cm – 3rd June	
pH (CaCl <sub>2</sub> )	8.05
eCEC cmol +/kg	0.12
Calcium (Amm-acet) cmol +/kg	3619.6
Magnesium (Amm-acet) cmol +/kg	502.8
Exch. Sodium %	1.56
PBI	47.3
Nitrate nitrogen (KCL) mg/kg	7.6
Ammonium nitrogen (KCl) mg/kg	4.0
Phosphorus (Colwell) mg/kg	5
Potassium (Amm-acet) cmol+/kg	366
Sulfate-S (KCl40) mg/kg	4.2
Copper (DTPA) mg/kg	0.54
Zinc (DTPA) mg/kg	0.25

SOIL 10-60 cm	3 <sup>rd</sup> June
NO <sub>3</sub> Nitrate mg/kg	8.9
NH <sub>3</sub> Ammonium mg/kg	3.0
Available N kg/ha	89.3
<b>SOIL 0-10 cm</b>	
Date of Sampling	16 Sept
Colwell P mg/kg	89.00

# Trial Protocol

Treatment #	Treatment	Applied Rate
T1	Untreated	
T2	Nutrisync D	365ml/ha
T3	Gibberellic (Gibb) Acid	20gm/ha
T4	Gibb Acid + Nutrisync D	20gm/ha + 365/ha
T5	Trace Element (TE) Seed Coat	5lt/T
T6	T E Seed Coat + Nutrisync D	5lt/T + 365ml/ha
T7	T E Seed Coat + Gibb acid	5lt/T + 20gm/ha
T8	T E Seed Coat + Gibb acid + Nutrisync D	5lt/T + 20gm/ha + 365ml/ha

Trace element (TE seed coat = Pulse coat

# Lentil Yield and Quality



Treatment	Applied Rate	Grain Yield t/ha	NDVI %
Untreated		4.33	0.61
Nutrisync D	365ml	4.32	
Gibberellic (Gibb) Acid	20gm	4.14	
Gibb Acid + Nutrisync D	20gm + 365	4.22	
Trace Element (TE) Seed Coat	5lt/T	4.45	0.65
T E Seed Coat + Nutrisync D	5lt/T + 365ml	4.35	
T E Seed Coat + Gibb acid	5lt/T + 20gm	4.23	
T E Seed Coat + Gibb acid + Nutrisync D	5lt/T + 20gm + 365ml	4.42	

**LSD (P=0.05) = 0.302      CV = 4.76**

# Lentil Yield and Quality



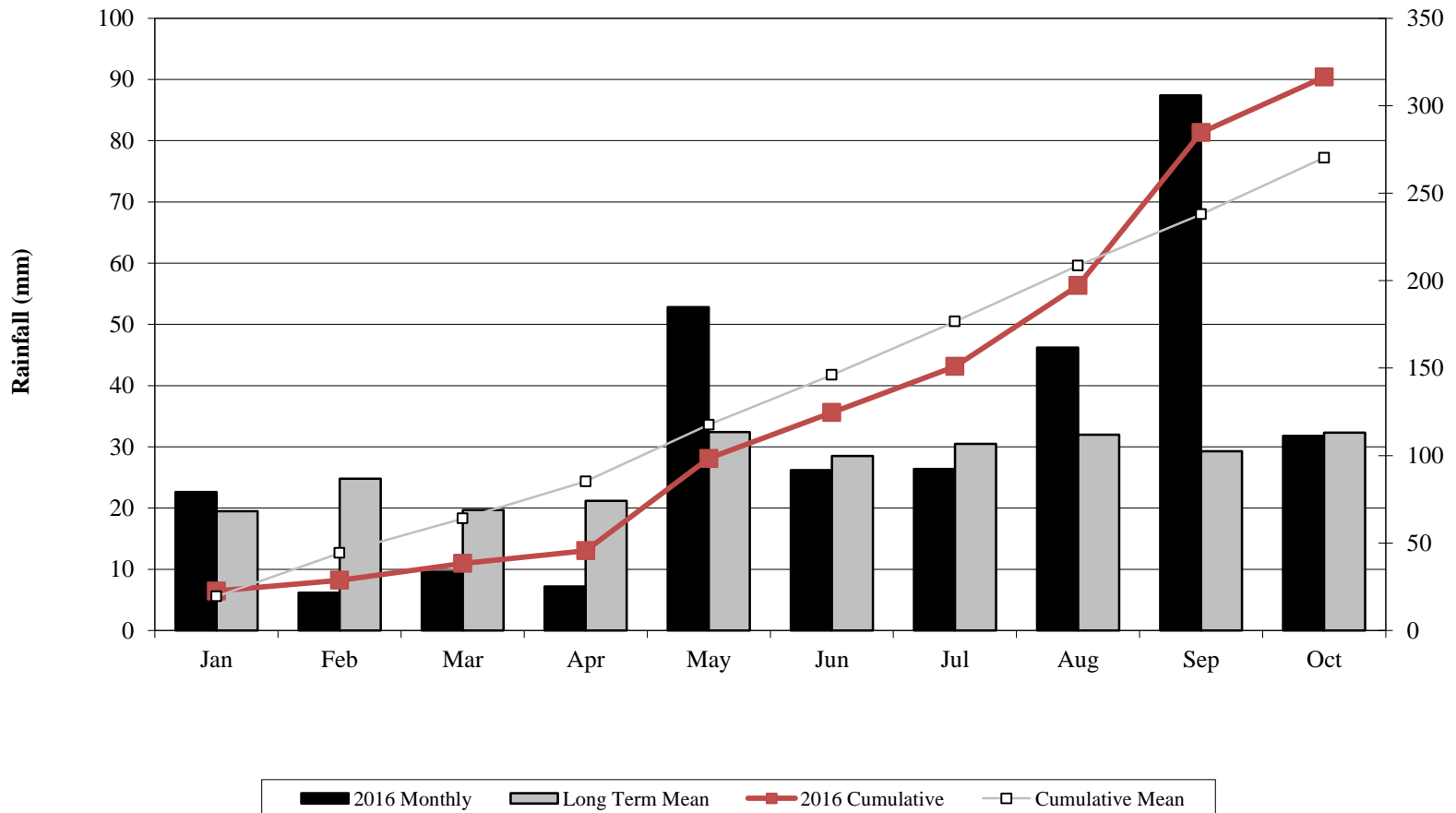
Treatment	Applied Rate	Grain Yield t/ha	% UTC
Trace Element (TE) Seed Coat	5lt/T	4.45	103
T E Seed Coat + Gibb acid + Nutrisync D	5lt/T + 20gm + 365ml	4.42	102
T E Seed Coat + Nutrisync D	5lt/T + 365ml	4.35	100.5
Untreated		4.33	100
Nutrisync D	365ml	4.32	99.8
T E Seed Coat + Gibb acid	5lt/T + 20gm	4.23	98
Gibb Acid + Nutrisync D	20gm + 365	4.22	97
Gibberellic (Gibb) Acid	20gm	4.14	96

TE Seed coat = Pulse seed coat

**LSD (P=0.05) = 0.302      CV = 4.76**

# Rainfall Data - Manangatang

2016 vs Long Term (LT) Mean Rainfall



# Conclusions

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- Trace element Seed treatment appears to be worth further investigation