



Loveland

AGRI PRODUCTS
Get Growing

Cummins Pulse Nutrition Trial

LANDMARK

Cummins Ag Services

LOV16

Trial Design



Location:	Cummins (Minhard)	
Plot Size:	8m x 1.5m	
Replicates:	3	
Sowing Date:	4/05/2016	
	Beans	Lentils
Sowing Rates:	Samira 12 plants/m ² BASF Nodulator Granular Inoculant	Hurricane 120 plants/m ² BASF Nodulator Granular Inoculant
Fertiliser:	80kg/ha DAP	80kg/ha DAP
Herbicides:	Double Knockdown 1.2 Triflur + 1 Propyzamide + 0.5 Diuron + 1 Lorsban 500 Select + 180 Factor + 1% Hasten 2L Chlorothalonil + 150 Tebuconazole + 3L Signature ZMC 1.5L Chlorothalonil + 0.5 Spinflo + 3L Signature ZMC + 300 Piramor 2L Chlorothalonil + 0.5 Spinflo 1.2L Chlorothalonil + 0.5 Spinflo + 30 Trojan Desiccated 1.5L Spray.Seed + 25g Sharpen + 1% MSO	Double Knockdown 1.2 Triflur + 1 Propyzamide + 0.5 Diuron + 1 Lorsban 500 Select + 180 Factor + 1% Hasten 150ml Brodal 2L Chlorothalonil + 0.5 Spinflo + 300 Piramor 1.5L Chlorothalonil + 0.5 Spinflo + 3L Signature ZMC + 300 Piramor 2L Chlorothalonil + 0.5 Spinflo 1.2L Chlorothalonil + 0.5 Spinflo + 30 Trojan Desiccated 1.5L Spray.Seed + 25g Sharpen + 1% MSO

Soil Test & Rainfall Data



SOIL 0-10 cm	
pH (CaCl ₂)	6.5
DGT P	42
PBI	36

Monthly Rainfall (mm)	Cummins
January	1
February	74
March	8
April	32
May	89
June	78
July	74
August	31
September	64
October	36
November	4
December	24
Total	515
2016 GSR	404
Mean	425

Trial Protocol (both crops)



	Seeding	Foliar
1	Untreated Control	
2	3L Foundation LM - In Furrow	
3	10L Black label Zn - In Furrow	
4	Awaken ST on Seed	
5	K Seeding (48 SOP 20K)	
6	K Seeding	5L Lokomotive (start flowering)
7	K Seeding + 4L Calbud	5L Lokomotive (start flowering)
8		5L Lokomotive x 2 (start flowering + 3 weeks)
9		365ml Nutrisync D (start flowering)
10		5L Lokomotive + 365ml Nutrisync D + 4L Calbud x 2 (Start flowering + 3 weeks)

Yield



Lentils	Seeding	Foliar	Yield (T/Ha)	% of Untreated
4	Awaken ST on Seed		3.27	128%
9		Nutrisync D	2.98	116%
7	K Seeding + Calbud	Lokomotive	2.74	107%
2	Foundation LM - In Furrow		2.69	105%
5	K Seeding (48 SOP 20K)		2.67	104%
6	K Seeding	Lokomotive	2.65	104%
3	Blacklabel Zn - In Furrow		2.62	102%
8		Lokomotive x2	2.60	102%
10		Lokomotive + Nutrisync D + Calbud x 2	2.58	101%
1	Untreated Control		2.56	100%
Mean			2.73	
LSD 0.05			ns	
CV			11.9	
Faba Beans	Seeding	Foliar	Yield (T/Ha)	% of Untreated
9		Nutrisync D	5.53	103%
4	Awaken ST on Seed		5.49	102%
8		Lokomotive x2	5.45	102%
3	Blacklabel Zn - In Furrow		5.39	101%
7	K Seeding + Calbud	Lokomotive	5.37	100%
1	Untreated Control		5.36	100%
6	K Seeding	Lokomotive	5.36	100%
5	K Seeding (48 SOP 20K)		5.35	100%
2	Foundation LM - In Furrow		5.14	96%
10		Lokomotive + Nutrisync D + Calbud x 2	5.02	94%
Mean			5.35	
LSD 0.05			ns	
CV			4.7	

PHOTOS



Untreated

Foundation LM

PHOTOS



Untreated

Foundation LM

PHOTOS



Conclusions

- No significant differences but interesting that Nutrisync D and Awaken ST were top 2 treatments for both crops
- Awaken ST returned a 700kg (28%) increase over the control treatment when applied to Lentils, and 130kg (2%) increase when applied to Faba beans as a seed treatment.
- Nutrisync D when applied to Lentils increased yield compared to control by 400kg (16%) and 140kg (3%) when applied to faba beans.
- Both results were not statistically significant for yield but both are economically promising treatments