



NPK compound vs blend

CSBP

ACKNOWLEDGEMENTS: Thomas, East Arrino

Purpose: To compare the effectiveness of a compound vs a blended NPK fertilizer

Location: East Arrino

Soil Type: Red Brown Sandplain

Rotation: 2015: pasture; 2014: pasture; 2013: wheat (2.0 t/ha) with 90 kg/ha Agras Extra + 40 kg/ha urea.

Growing Season Rainfall (April- October 2015): 346mm

Soil Test Results:

Depth (cm)	pH	EC	OC	Nit N	Amm N	P	PBI	K	S
0-10	5.2	0.06	0.8	16	3	10	30	36	6
10-20	4.7	0.2	0.6	4	1	3	23	19	5
20-30	5.6	0.02	0.2	2	1	2	28	17	4

BACKGROUND SUMMARY

Many people perceive that putting fertilizer with the same nutrient analysis on crops will result in similar yields. This trial is to demonstrate the yield differences in using a blended NPK fertiliser as compared to a compound NPK fertiliser.

TRIAL DESIGN

Seeding 19 May 74 kg/ha Mace wheat

Fertiliser: 23 Jun 80 kg/ha urea (Farmer)
9 Aug 80 L/ha Flexi-N (basal)

Pesticides: 19 May 2 L/ha Roundup, 2 L/ha Treflan, 118 g/ha Sakura
19 Jul 800ml Velocity, 400ml LVE, 300ml Prosaro, 1% oil
9 Aug 300 ml/ha Prosaro + 150 ml/ha alphacypermethrin

Harvest: 15 Nov

RESULTS/STATISTICS

Trt	Treatment						19-Jul		30-Aug	Harvest
	Banded (L/ha)	Banded (kg/ha)	9-Aug (L/ha)	N*	P	K	K (%)	K Uptake (mg/plant)	NDVI Rating	Yield (t/ha)
1	70 Flexi-N	72 Agstar Extra	80 Flexi-N	110	10	0	2.4	11.5	4.7	2.90

2	83 Flexi-N	44 MAP + 27 MoP	80 Flexi-N	110	10	13	2.8	12.9	4.1	2.99	
3	70 Flexi-N	100 K-Till Extra Plus	80 Flexi-N	110	10	13	2.7	13.9	7.3	3.16	
							Prob	<0.001	0.071	0.025	<0.001
							LSD	0.11	2.01	2.3	0.126

OBSERVATION/ DISCUSSION/ MEASUREMENTS

Plant tests indicated marginal potassium (K) supply but there were no obvious visual responses.

An independent analysis of NDVI imagery showed that K-Till Extra Plus was more effective than the MAP/MoP blend, and this was supported by significant yield differences.

K-Till Extra Plus out yielded the MAP/MoP blend by 170 kg/ha.

Grain quality was not affected by treatment – proteins were about 11.4%, hectolitre weights 80 kg/hL and screenings 4%.