

Trial Name:

Lime versus Fertiliser Comparison Trial

Trial Number:

45MIG13

Researcher:

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Organization:

Mingenew-Irwin Group

Why do the trial?

To investigate the effect of substituting compound fertiliser with lime sand and post seeding nitrogen in wheat.

Crop management

Grower and Location:

MIG Main Trial Site, Horwoods, Mingeneu

Soil Type:

Yellow Sand

Soil test results:

Depth	PH	EC	Organic Carbon	Ammonium CaCl	Nitrate Nitrogen	Phosphorus Colwell	Potassium Colwell	Sulphur	Aluminium (CaCl ₂)
(cm)	(H ₂ O)	(dS/m)	(%)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
0-10	6.2	0.042	0.58	<1	13	17	48	4.5	0.34
10-20	5.0	0.021	0.21	1	5	16	34	4.6	3.90

Total Annual Rainfall:

GSR (Apr-Oct):

283.3 mm

Paddock History:

2012

2011

2010

2009

2008

Lupins

wheat

Lupins

wheat

lupins

Paddock Average Yield:

3.40 kg/ha

Plot size:

2.0m x 20m

Seeding Date:

21st May 2013

Seeding Rate:

90 Kg/ha (Wyalkatchem)

Seeding Machinery:

DAFWA Small plot cone seeder, Knife points and press wheel

Plant Counts:

1st August

Vigor Ratings:

Paddock Inputs

Fertiliser

Pre:

As per treatments

Post:

50 kg/ha NS41,

Herbicide

Pre:

1.2L/ha SpraySeed + 2.0L/ha Trifluralin

Post:

1.0 L/ha Decision + 1.0% Hasten

670 ml/ha Velocity + 1.0% Hasten

Insecticide:

Pre:

200ml Talstar + 100ml Dominex

Key Messages

Table 1.

Variety	Yield t/ha	Plants p/m ²	Protein %	Weight kg/hl	Screenings %	Retuns \$/ha
100 kg/ha Agstar Extra + 60 kg/ha NS61 at tillering	2.63a	114	12.9	79.7	1.70	APW2 \$ 810
100 kg/ha Agstar Extra + 2.0t/ha Lime	2.50ab	100	11.9	80.0	2.08	APW2 \$ 770
50 kg/ha NS61 at Tillering + 2.0 t/ha Lime sand	2.48ab	126	13.1	80.2	1.49	APW2 \$ 763
100 kg/ha Agstar Extra	2.38b	110	11.5	80.3	2.05	APW2 \$ 733
0 kg/ha Agstar Extra + 2.0 t/ha Lime sand	2.38b	93	11.8	80.0	2.01	APW2 \$733
50 kg/ha Agstar Extra + 2.0t/ha Lime	2.37b	109	11.7	80.0	1.95	APW2 \$730
cv%	2.6	6	3	0.4		
l.s.d.	0.231	33.4	0.33%	0.5383		

Price Notes:

All prices EPR delivered Geraldton, not including delivery and handling charges and GST exclusive. Refer to appendix 3

Comments:

- A high application of compound fertiliser and post nitrogen produced the highest yield but it was not significantly higher than the other treatments
- Applications of lime at 2 t/ha applications are as good as fertiliser applications (100 kg/ha Agstar) but not better than high levels of compound combined with post nitrogen at this site.
- Even though plants per m² vary between treatments the variation is not significant
- Lime has been applied to this paddock previously

Acknowledgements:

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