

Summit Product Demo on High pH soils

Aim: To evaluate fertiliser strategies for wheat on high pH soils.

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Company: SUMMIT FERTILIZERS

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Location: Munkinbudin



Background:

High pH soils can cause the availability of nutrients such as zinc, manganese and copper to be substantially lowered. Zinc deficiencies are very common in high pH (>6) soils. In the Eastern states, where high pH soils are common, up to 5kg/ha Zinc is used every season.

Liquid phosphorous has been shown to be effective on the calcareous soils of the Eyre Peninsula in South Australia. These soils have very high pH (>9) and effectively lock up both P and Zinc. Phosphorous deficiencies are also common on high pH soils. To maximise effectiveness, zinc is best applied as a fully compounded granular fertilizer. This demo aims to evaluate liquid phosphorous as VigourFLO with granular compound MAP, Vigour® and Summit's new product, ZincStar.

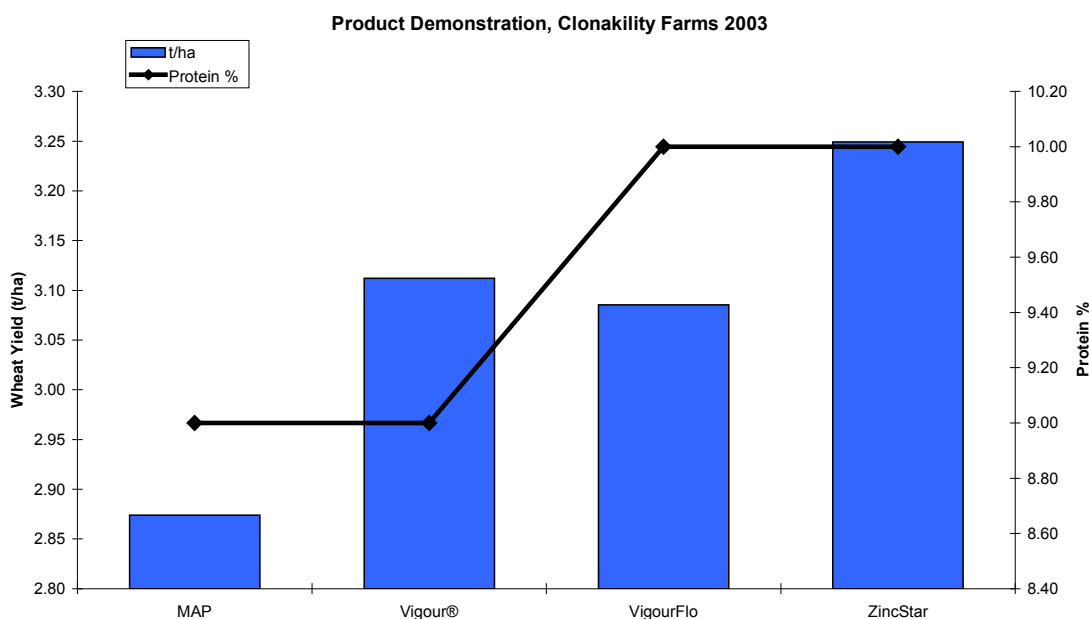
Trial Details:

Plot size and replication	3m * 500m, 2 reps (harvested with plot header 1.8m * 20m strips)						
Soil type	Heavy Red Clay						
Sowing date	14 th May 2003						
Conditions at sowing	Semi Moist						
Machinery	Ausplow E-Series Multi stream DBS @ 12"						
Seeding rate	Calingiri @ 65kg						
Fertiliser	12kg Phosphorus with all products. Nitrogen was Basal to 20kg with UAN applied post						
Herbicides and Insecticides	Roundup P/Max	1.5	L/ha	Trifluralin	2	L/ha	
Paddock History	2002 =Wheat, 2001 = Pasture, 2000= Peas						

Soil Test results:

Depth (cm)	P (ppm)	K (ppm)	Cu (ppm)	Zn (ppm)	S (ppm)	PRI	pH
0 – 10							

Results:



At the same rate of Phosphorous, there was a significant response to Zincstar at this site. Zincstar applied at 55kg (12kg P / ha & 275g Zn / ha) produced significantly more grain than MAP applied at 50kg (12kg P / ha). Zincstar also produced more grain yield than the equivalent amount of P applied in Vigour®. This may have been due to more zinc applied in the ZincStar treatment. Zincstar is a MAP fertilizer and at the high rate, supplied 70g Zn / ha more than the equivalent Vigour® treatment.

Summary:

- **Liquid fertilizer did not significantly increase yield at this site**
- **Increasing rate of zinc on high pH soils gave a significant yield increase**
- **Summit Zincstar applied at 55kg produced 400kg/ha more grain yield over the equivalent rate of MAP**