



In-furrow Liquid Lime Demonstration

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Aim

To assess the effect of different rates of CalSap® applied in-furrow on an acidic sand over gravel.

Background

CalSap® is a liquid lime product being used to remediate acidification in the mid soil (10-20cm). It can be easily applied in banded liquid fertiliser treatments, potentially neutralising some of the acidity associated with these fertilisers. The paddock where this demonstration was conducted is acidic and exhibited the lower pH in the mid soil. It was also used because it was part of the Liebe Group's Main Trial Site. This demonstration was designed and implemented by the farmer to address his assumptions about what this product is able to do for amelioration of mid soil acidity and the rates required to achieve this.

Trial Details

Property	Fitzsimons Property, east Buntine
Plot size & replication	800m x 18.5m not replicated
Soil type	Sand over gravel
Soil pH (CaCl₂)	0-10cm: 4.5 10-20cm: 4.1 20-40cm: 4.7
EC (dS/m)	0-10cm: 0.117
Sowing date	03/05/2014
Seeding rate	50 kg/ha Calingiri
Paddock rotation	2011: wheat, 2012: wheat, 2013: lupin
Fertiliser	03/05/2014: 30 kg/ha DAPSCZ, 5.3 L/ha CalSap®, 1% Sulphate of Ammonia 05/06/2014: 40 L/ha UAN 09/07/2014: 30 L/ha UAN
Herbicides	03/05/2014: 1.8 L/ha Trifluralin, 1.5 L/ha Gramoxone, 275 g/ha Diuron, 0.3% LI 700 05/06/2014: 350 mL/ha Paragon, 50 mL/ha Alpha Cypermethrin, 30 g/ha Lontrel, 4 g/ha Metsulfuron
Growing Season Rainfall	180mm

Results

Table 1: Yield, quality and grade of Calingiri sown at east Buntine.

Treatment	Yield (t/ha)	Protein (%)	Hectolitre Weight (kg/hL)	Screenings (%)	Grade
5.0 L/ha CalSap®	1.87	11.1	83.27	0.35	ANW1
No Treatment	1.71	12.9	81.26	0.68	ANW2
5.3 L/ha CalSap®	1.73	11.1	83.15	0.37	ANW1
9.0 L/ha CalSap®	1.76	12.9	82.63	0.65	ANW2
No Treatment	1.80	11.2	83.95	0.33	ANW1
8.8 L/ha CalSap®	1.78	11.9	82.48	0.46	ANW2
5.0 L/ha CalSap®	1.78	11.6	83.53	0.33	ANW2

Table 2: End of season pH results (10-20cm).

Treatment	pH (CaCl ₂) at 10-20cm
5.0 L/ha CalSap®	4.3
No Treatment	4.3
5.3 L/ha CalSap®	4.4
9.0 L/ha CalSap®	4.1
No Treatment	4.3
8.8 L/ha CalSap®	4.2
5.0 L/ha CalSap®	4.2

Comments

The mid soil (10-20cm) pH levels were sampled from in-furrow. Results varied across the demonstration and should therefore be treated with caution as the variation in pH (CaCl_2), yield and quality may be due to natural paddock variation or other factors. This site was subjected to wind damage prior to harvest, introducing more variability across the large plots further reducing the reliability of the yield results.

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