

Liquid lime versus dry lime

Background

Many farmers on Kangaroo Island apply lime to their paddocks to maintain or increase their soil pH. A new product on the market is liquid lime which is being advertised as being faster and more effective than bulk lime. We are putting it to the test!

Due to the smaller micron size of partials, liquid lime should react more quickly within the soil profile than dry bulk lime. Dry lime particles can be up to 1000 micron in size and liquid lime can be around 5 micron. The pH reductions after dry lime applications

can take up to twelve months, whereas liquid lime has been advertised as showing results in as little as four weeks.

What was done

In the first week of June 2008, soil samples were taken in a small paddock on the Bucks' property at Gosse. Once the results confirmed the soil was acidic, a trial plot was established to compare the effect of liquid lime and dry lime applications on the pH.

Liquid lime	Buffer zone	Little Sahara Limesand @ 3.5 t/ha
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FIGURE 1
Trial plot layout

Liming applications were applied on 7 July 2008. The 20 L of liquid lime was diluted by 5 parts water to 1 part liquid lime and was applied by a small spray unit on a quad bike with 06-08 mm nozzles used. The lime sand was applied with a Marshall super spreader the same afternoon at a rate of 3.5 t/ha. Soil samples were taken at both dry and liquid lime areas 5 weeks and 20 weeks (5 months) after application. There will be further soil tests conducted at 12, 18 and 24 months after application to show the long term effects.

Results

At this stage of the trial there are insufficient data to draw conclusions on the effectiveness of liquid lime versus dry lime applications in reducing soil pH. Figure 2 shows the results collected so far in this trial. As can be seen from this figure there has not been a significant increase in pH in the liquid lime plot over a short period of time as suggested by the label on the drum. Results from this graph show that the pH levels have decreased over time. This could be due to inaccuracy of soil samples taken.

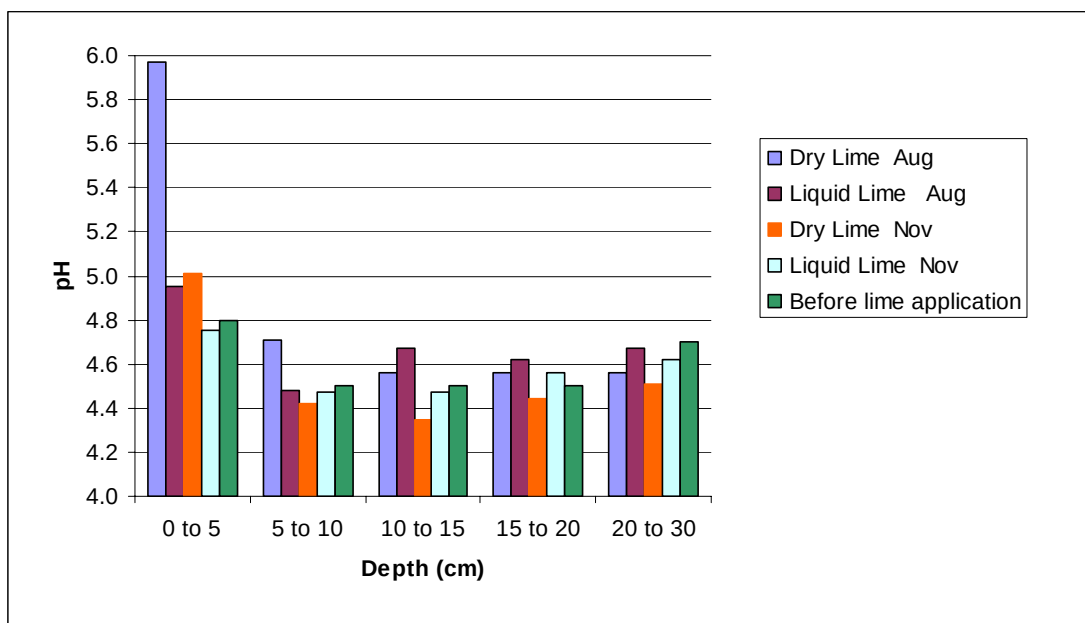


FIGURE 2
Liquid lime and dry lime: soil pH at various depths

For further information contact

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Funding/Sponsors

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Take Home Message

- pH soil trials take time to show true results