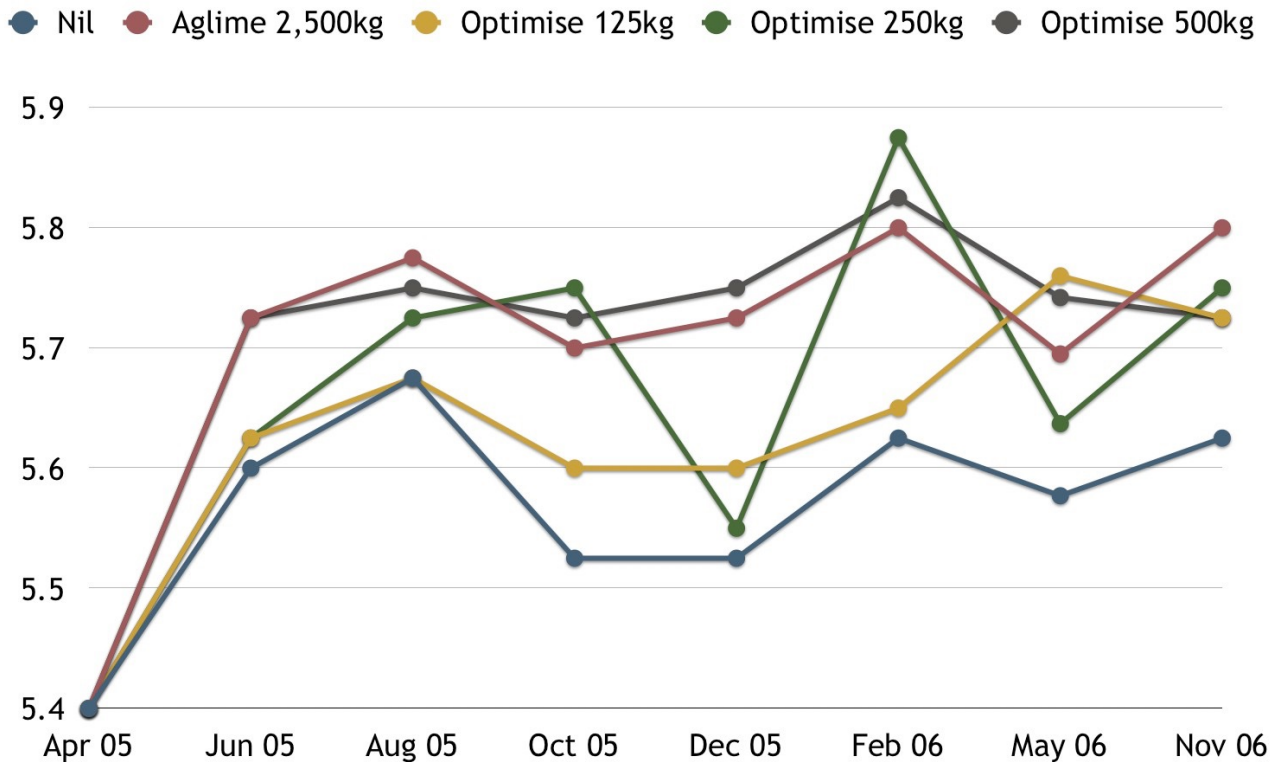


OPTIMISE TRIAL WITH DR B MCKENZIE, LINCOLN UNIVERSITY

Mean pH Response Over Time



The effect that lime has on soils is markedly affected by the fineness of the particles, and the hardness of the rock used. Brady (1974) said that the finer the particles of lime, the more rapidly they go into solution and the more rapid will be the rate of reaction. The results presented here do at least partially support this. Soil pH changes did not appear until 14 October, about 6 months after application. However, to obtain a similar shift in soil pH as that which occurred with 2.5 t of ag-lime/ha required only 250 to 500 kg of Optimise fine lime/ha was needed. Agricultural lime usually consists of a range of particle sizes and can be derived from rock of varying hardness which can affect reactivity. Any comparison between agricultural lime and Optimise fine lime will be affected by the quality of agricultural lime used as the control.

This trial demonstrates the equivalent effect of Optimise compared to ag-lime at varying rates under controlled plot design (i.e. accurately hand applied with minimal environmental disturbances). Site, soil and weather events show a blended effect on test results. This trial shows that a nil application caused a rise in pH also.

The impact on pH by applying Optimise at 250kg/ha shows an equivalent response to 2.5T of ag-lime - despite other biological factors affecting the results from all trial plots.