

Hill country trial - This trial show the effect of applying Optimise at 250kg/ha and 500kg/ha on pH over a 27 month period.

Introduction

Previous trial work on Glenfoyle by Peter Espie and Rex Dolby has shown a good lime reponse. The trial also shown that lime would significantly reduce available aluminum levels. However, because of the volumes involved, the application of aglime in many cases is cost prohibitive. If Optimise can be effective at lower application rates, then the economics of lime application become be more favorable.

Objective

Trial Optimise to see if relatively low applications rates and measure response by means of soil tests. / To determine the effectiveness of Optimise on the soil, in particular soil pH, aluminum levels and calcium.

Environment

Glenfoyle is near Wanaka on the Tarrus side of Luggate. The trial area is at an altitude of 790m on Blackstone Hill soils. The site faces south-west on a 23 degree slope. Pasture is native grassland that has previously been oversown with pasture grasses and white clover and topdressed.

Treatments

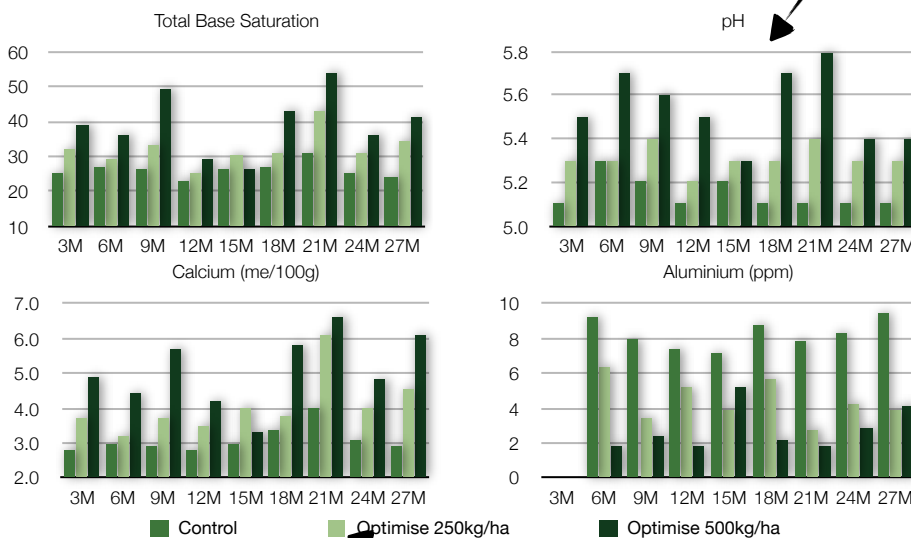
The trial consists of control plots and treatments as follows:

- Control: Nil application
- Treatment 1: Optimise pelletised ultra-fine lime at 250kg/ha
- Treatment 2: Optimise pelletised ultra-fine lime at 500kg/ha

Randomised trial plots are replicated 4 times. Plots measure 5m x 2m (ie 10m²) and are spaced 1m apart from each other.

Results

Results from soil test every 3 months (charted below) show a significant impact on soil pH and soluble aluminium levels.



The average increase in pH by the application of 250kg/ha and 500kg/ha was 0.2 and 0.4 respectively. This lift in pH remained consistent over the 27 month period of the trial demonstrating how fine particle applications of lime can be effective over a extended periods of time.

Inversely the Aluminium levels declined with the increasing rate of Optimise

Base saturation and calcium levels also increased by the application of Optimise at 250kg/ha and 500kg/ha respectively. These changes remained consistent over the 27 month period of the trial.