

## Lime it or Lose it!!

CWFS 00019: Soil acidity and pH management for Central West Farming Districts. Newsletter, no: 1.

### Soil acidification: a serious issue with long term consequences for our region.

2014 marked the 1<sup>st</sup> year of the CWFS, GRDC funded project: “Soil acidity and pH management for Central West Farming Districts”. This project has one overarching goal: to assist growers and their advisors in addressing soil acidification via the application of agricultural lime.

#### How are we doing this?

- First, we are identifying the current status of soil acidification around the CWFS region; via,
  - Identifying changes in soil pH over time at sites sampled under a previous GRDC funded soil acidity project (2000).
  - Identifying soil pH at new locations around the CWFS district.
- Leaving a project legacy; via, involving local youth in the project and providing a web based library of project information on the CWFS web site.
- Raising the profile of promoting the current status soil pH via all CWFS extension activities – over 700 persons contacted in 2014.
- Involving local persons from the agricultural industry in steering the project.
- Working closely with project partners from: WA, SA and Vic.
- Informing and involving local farmers in project activities.

#### In 2014 what did we find?

Historic sites: 4 out of 5 sites sampled demonstrated an increase in acidification in the 0-10cm section of the soil profile with pH values less than 5.5. This means that the pH value was low enough to impact negatively upon plant growth. Subsurface acidification was also evident at identified sites as seen in Table 1.

**Table 1. Historic sites revisited; current pH status.**

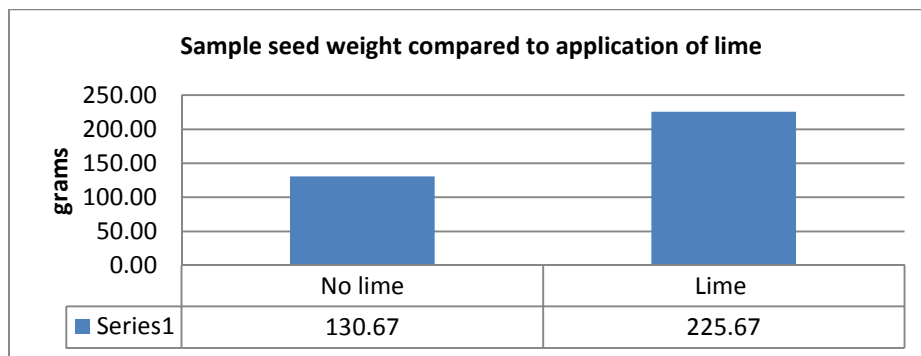
	Nyngan pH (CaCl <sub>2</sub> )	Wirrinya pH (CaCl <sub>2</sub> ) - new	Ungarie pH (CaCl <sub>2</sub> )	Condo West pH (CaCl <sub>2</sub> ) - Historic	Tottenham pH (CaCl <sub>2</sub> )
Current land use	Permanent perennial pasture	Cropping	Pasture phase of a pasture cropping rotation	Cropping	Cropping
Historic pH: 0-10cm.	4.8	4.9	5.2	4.8	5.2
Current pH: 0 to 10.	5.7	4.4	4.6	4.5	5.0
Current pH: 10 to 30.	5.6	5.3	5.3	4.5	6.4
Current pH: 30 to 60.	6.5	6.2	6.6	5.3	6.6
Current pH.: 60 to 90.	7.2	7.2	7.6	7.0	7.1

New sites (2014): 5 out of the 6 sites demonstrated a pH of less than 5 within the 0-10cm section of the soil profile within identified sampling points. Again, this is significant enough to impact negatively upon plant growth. Table 2.

**Table 2. "New sites" current pH status.**

Location	Depth	pH (CaCl) range
Alectown	0-10	5.2 to 5.5
	10-30	5.2 to 5.9
Gunning Gap	0-10	4.4 to 4.5
	10-30	5.8 to 5.9
Lake Cargelligo	0-10	4.8 to 5.5
	10-30	6.2 to 7.6
Ungarie	0-10	4.9 to 5.6
	10-30	4.8 to 6.2
Tullamore	0-10	4.7 to 5.2
	10-30	5.7 to 6.1

Farmer led trial (2014): The outcomes of one farmer established lime trial was investigated with results clearly showing the benefits of Agricultural Lime upon yield, Graph 1.



**Graph 1. Comparison of total sample seed weight between limed and un limed strips.**

### **In 2015 what is planned?**

Sampling will continue at both historic and new sites to identify changes to, and the current status of, soil pH. One new farmer led Lime trial will be monitored over the 2015 growing season to identify the outcomes of applying lime and on farm Lime trials have been established at Tottenham and Wurrinya. Planning for both in-paddock and formal workshops is underway to provide education for farmers on how to easily identify the pH within their own paddock and the what, where, why and how of soil acidification and application of Agricultural Lime.

### **How can we help?**

If you want further information or are interested in organising either an in-paddock workshop or a formal workshop presentation, please call Nick on 0437 612 140 and we can help you get things started.

At the end of the day, if you don't Lime it you're going to Lose it.