

## CURRENT PROJECTS

**Tackling Soil Acidity** – in collaboration with NSW DPI, the Morven trial site aims to investigate the impact of liming rates and incorporation methods to ameliorate subsurface acidity in local soils. HLN has established 32 long-term monitoring sites to monitor soil acidification. Funded by the National Landcare Program and Grassland Society of NSW.

**MLA PDS – Managing soil acidity in permanent pastures** – investigating liming techniques in existing perennial pastures at Holbrook, Rosewood and Mannus, NSW through farmer-led producer demonstration sites. Funded by MLA.

**FutureSOILS** – in partnership with NSW DPI, ANU, FarmLink, Central West Farming Systems and Incitec Pivot. Developing a decision-support tool that predicts changes in pH down the soil profile. Investigating farm management scenarios through advanced machine learning, validated via a farm-scale trial site at Burrumbuttock, NSW. Funded by the National Landcare Program.

**Soil Innovation Accelerator program** – building a more efficient/economic soil sampling process for farmers. Funded by the Soil CRC.

## KEY PRIORITY AREAS FOR 2022

**Improving soil sampling and testing services for better decision making on farm.** Developing a whole-of-service strategy for soil testing that will include improved sampling techniques and data visualisation to match decision-making needs.

**Strategies for liming in pasture systems.** Establishing local best management practices for top-dressed lime applications in permanent pastures.

**Impact of liming on pasture yield** and composition, soil biology and soil carbon.

**Economic impact of soil sampling and lime application techniques** on farm systems.

## BECOME A MEMBER

Membership to HLN gives you:

- Access to our soil testing services including the opportunity to receive any discounts offered.
- Current and scientifically backed soil management advice via our website and publications.
- Invitations to attend all field days, workshops and presentations from highly regarded guest speakers.

*Contact us today!*



*Thanks to our supporters*



## CONTACT

Holbrook Landcare Network  
128 Albury Street Holbrook NSW 2644

(02) 6036 3181

[www.holbrooklandcare.org.au](http://www.holbrooklandcare.org.au)

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Effective *Acid Soil Management*  
for the  
Holbrook Landcare Network Region

## 2022 PRODUCER SUPPORT STRATEGY

Acid soils are common in high rainfall, productive soils throughout south-eastern Australia. Subsurface (5–20cm) soil acidity particularly is often undetected by traditional soil testing methods and ineffectively treated by traditional “rule of thumb” liming techniques.

New research has identified that a mind-shift is needed across Industry in the detection and treatment of soil acidity.

Holbrook Landcare Network (HLN) aims to help producers understand the problem of soil acidity and its productive, environmental and economic impact on their farming systems. HLN also aims to assist landholders to effectively monitor and manage acid soils on farm using the latest science.



Core areas of

# Soil Acidity Investigation

TARGETED TO THE HLN REGION

## Characterise the threat

- Which soils?
- Where in the HLN region?
- Which farm systems?
- pH stratification down our soil profiles
- Rates of acidification

## Monitoring

- Depth of sampling
- Sampling to account for spatial variation – grid vs. zonal
- Accuracy vs. expense – finding that sweet spot
- Sampling in relation to other soil constraints

### Holistic farm monitoring (BMP)

- Frequency and timing
- Across farm
- Cost effective
- Sampling based on what you are going to do with the data

## Understand the impact

### Economic

- Economic loss
- Return on investment for amelioration
- Comparison 'do nothing' vs. traditional approach vs. latest recommendations

### Production

- Crop and pasture yield
- Pasture composition (legumes, perennials, weeds)
- Livestock health
- Soil fertility
- N-fixing rhizobia

### Environment

- Soil biology and function
- Soil carbon storage



## Amelioration/management

- Liming techniques that match the depth and severity of soil acidity
- Calculating liming rates - adjusting for quality
- pH trigger for application
- Frequency and timing of application
- What else besides liming? For example, planting acid tolerant species

### Permanent pastures (BMP)

- Paddock prioritisation
- Topdressed lime with no incorporation
- Trafficable vs. non-trafficable regions (hills/rocks)

### Cropping/pasture improvement phase (BMP)

- Pasture prioritisation
- Lime incorporation methods

