

HydroCal®

Liquid Calcium Carbonate

Liquid lime to adjust pH and deliver calcium nutrition. Micronized calcium carbonate. HydroCal's rapid reactivity corrects acid soils and calcium deficiencies. Can be used in most water run systems.

29% Calcium, 73% Calcium Carbonate, 74% Calcium Carbonate Equivalent

- HydroCal liquid lime is micronized through special wet milling technology
- Ultra fine grade for immediate availability
- Apply through center pivot, solid set or hand line
- Spray apply. Reach your target pH in weeks with reduced application rates and lower input cost
- Safe to handle, non-caustic, will not burn

MICRONA™ - Prilled Lime

Adjust pH and provide calcium nutrition.

Calcium helps release critical nutrients, improves soil structure, and root development. Increases soil microbial activity.

33% Calcium, 82% Calcium Carbonate, 0.6% Magnesium Carbonate, 88% Calcium Carbonate Equivalent

- Flexible application
- Feed stock is high quality, super-fine ground, fast reaction
- Minimum binders – dissolves easily
- Uniform – blends and handles well
- Lower application rates, precision applied
- Safe to handle, non-caustic, will not burn

MICRONA™ Prill - Gypsum

Calcium nutrition without pH adjustment.

Gypsum adds essential calcium and sulfur to soil. Helps leach out harmful salts, improves soil structure.

92% Calcium Sulfate Dihydrate, 21% Calcium, 17% Sulfur

- Flexible application
- Feed stock is high quality, super-fine ground, fast dissolution.
- Minimum binders – dissolves easily
- Uniform – blends and handles well
- Lower application rates, precision applied
- Safe to handle, non-caustic, will not burn

Notes:



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MICRONA™ - Prilled Lime
MICRONA™ Prill - Gypsum



Canola Production

Management of soil pH is an important consideration for canola production in the Inland Northwest. Not only do acidic soil conditions reduce yield and quality, but they will also increase the incidence and severity of clubroot.

Features and Benefits

- Manage calcium and pH in one application
- Predictable, cost effective soil pH management
- Proven acid neutralization through the soil profile in no-till and minimum tillage cropping systems
- Increases resistance to stress and disease pressure
- Improves crop quality
- Safe to handle, non-caustic



Oilseed Production Field Trial

Inland Northwest Canola Field Trial research in canola production has confirmed that management of soil pH above 5.5 will increase yield and quality¹. Additionally, maintaining a soil pH above 6.5 will greatly reduce the incidence and severity of clubroot in canola fields².

Trial Purpose:

This research plot shows that liming is an economically viable option by increasing yield in canola and raising soil pH in an effective and predictable manner. MICRONA™ products increase soil pH levels and add calcium to soils, improving soil tilth and delivering a positive ROI in the Palouse region.

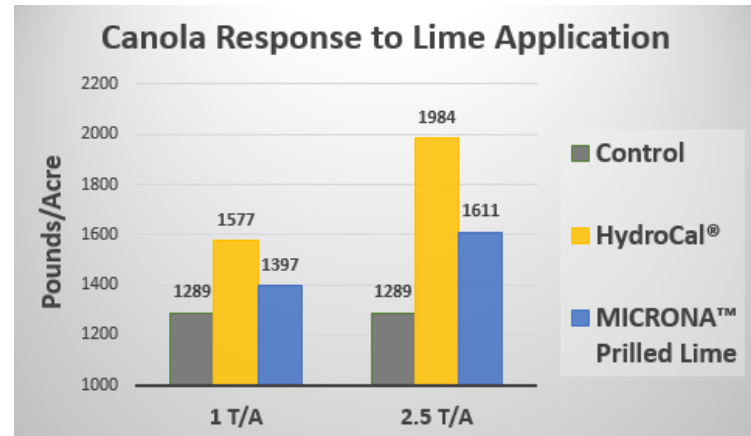
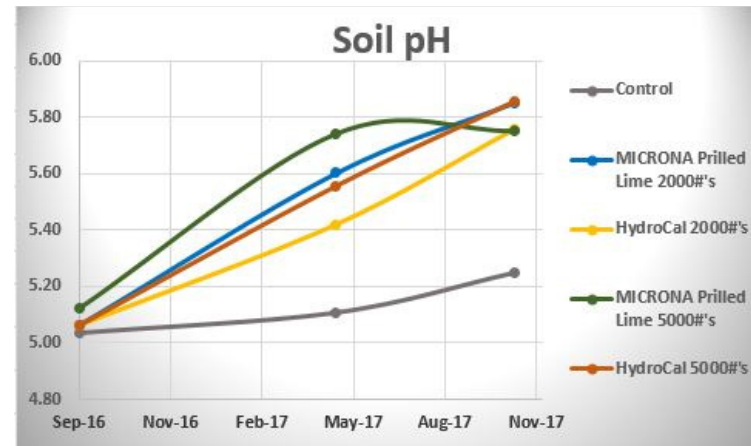
Trial Results:

- **Increased soil pH**
- **Affordable application**
- **Increased yield**
- **Positive ROI**

¹ Angus, J. 2011 - The Remarkable Improvements in Australian Mixed Farming; The University of Western Australia

²Daniel et al. 2016 - Daniel, C., Hommes, M., and Koller, M. 2016 - plant Protection in Organic Production of Brassica Vegetables and Oilseed Rape.

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	Yield @ 1 T/A	% Increase	Yield @ 2.5 T/A	% Increase
HydroCal®	1577	22.3	1984	53.9
MICRONA™ Prilled Lime	1397	8.31	1611	24.94

Trial Management:

Randomized, replicated complete block design. Three products, four replications with controls. Application was made in the fall post-harvest, preceding the onset of fall rains for a multi-cropping trial over several years. The field was planted spring canola for 2018. Dataset generated by Columbia River Carbonates.