

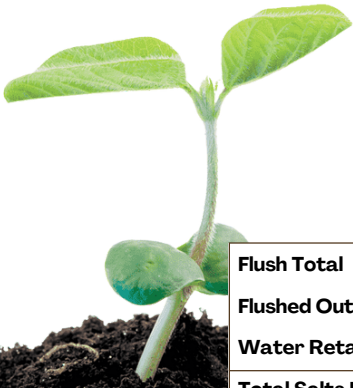
TAKE ROOT WITH

Calcine[®]


www.ericksoncustomoperations.com

WHAT IS CALCINE®?

Calcine® is an enriched acidifying agent that is specifically formulated to control and manage saline soil conditions when applied to soil. Calcine® can stop deterioration of soil structure as it mobilizes salt out of affected soil. This occurs through leaching or carrying salts down through the soil away from roots, ultimately reducing salt build-up and improving soil aeration, infiltration, percolation, and drainage.



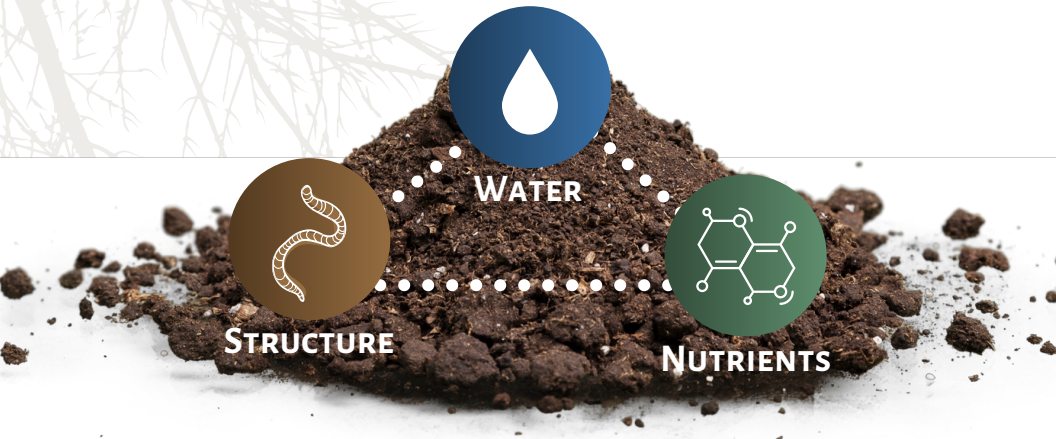
A laboratory study showed that Calcine® treated soil released up to 45 percent more salts than untreated soil when flushed with water.

	Control	1/4 Gal/Ac	1/2 Gal/Ac
Flush Total	200 ml	200 ml	200 ml
Flushed Out Water	198 ml	123 ml	101 ml
Water Retained	2 ml	77 ml	99 ml
Total Salts Removed	960 ppm	1200 ppm	1400 ml





Pictured above are four bean plants pulled ten days post-emergence. The two to the left represent an untreated field. The two to the right represent the field with soil readied by Calcine® application. By preparing the soil for optimum root health, sprouting crops are able to put out a better established root system more quickly, which translates into a fuller and more mature set of first leaves, and ultimately sets crops up to thrive from the beginning.



Calcine® increases crop productivity by supporting three main components of soil health: structure, water, and nutrients.



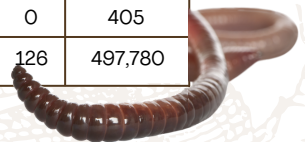


SOIL STRUCTURE

On the farm and in the lab, Calcine[®]-treated soils have enhanced permeability and improved infiltration. These changes encourage the earthworm population to grow. U.S. farms often have very low worm populations in their soils- a common symptom of poor soil health. By applying Calcine[®], producers strengthen earthworm populations, leading to improved soil structure, increased nutrient cycling, and ultimately higher plant productivity.

A field study on sodic soils in Arizona, wherein one set of plots was treated with Calcine[®] and the other set left untreated. The results clearly demonstrate earthworm establishment on Calcine[®]-treated fields.

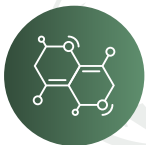
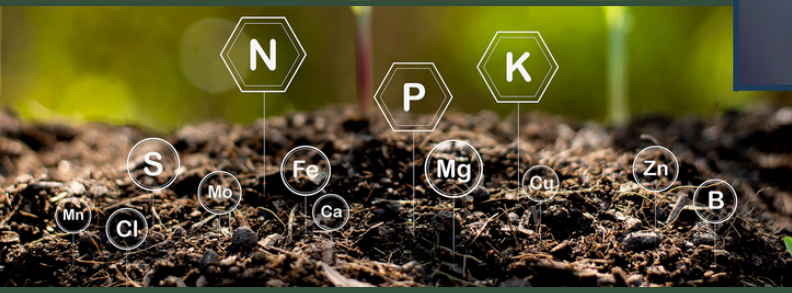
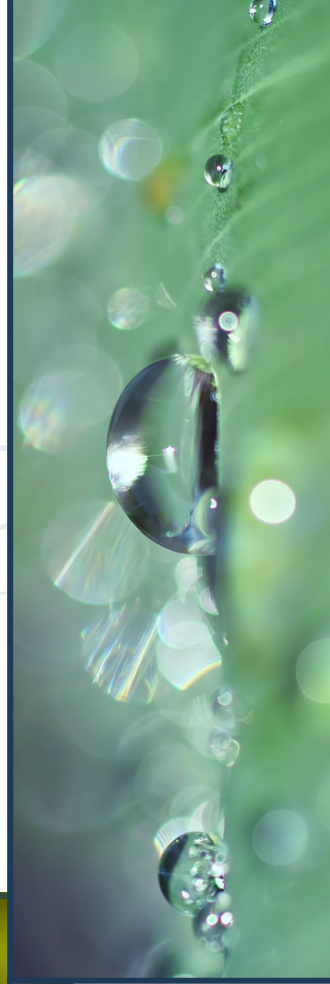
	# of Earthworms per Square Meter							AVG/Acre
Untreated Control	1	0	0	0	0	0	0	405
Calcine[®]-Treated	117	135	144	94	162	72	117	497,780





WATER-HOLDING CAPACITY

Soils, whether dryland or irrigated, accumulate salts from various sources, such as manure, fertilizers, ponding, and evaporation, which reduces water-holding capacity and creates run-off of needed moisture and nutrients. On affected farms plant performance declines and bottom-line margins tighten. Calcine® improves soil structure, which increases soil water-holding capacity and permeability. A laboratory study showed soil treated with Calcine® retained 40 percent more water than untreated soil. That additional water, retained from spring snow melt, a rain soaking in rather than becoming run-off, or irrigation, can mean the difference between a crop failure and a harvest.



NUTRIENT-HOLDING CAPACITY

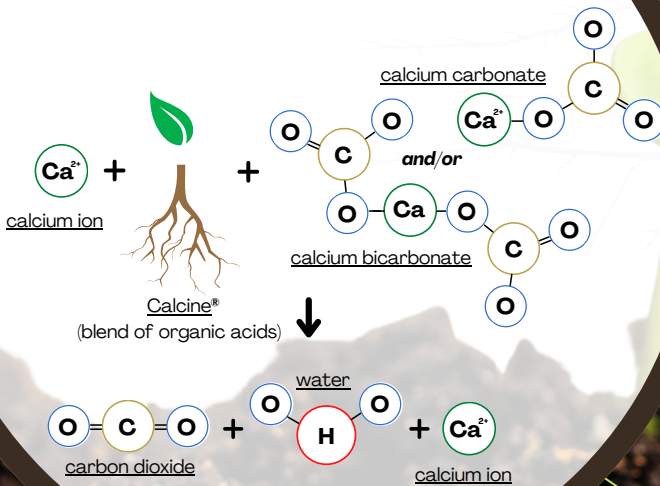
Salts eliminated through Calcine® application can be replaced by higher value nutrients such as calcium, which improves soil fertility, structure, and permeability. Calcine® application also increases soil organic matter and improves nutrient efficiency (particularly nitrogen) by strengthening earthworm populations.



OUR TECHNOLOGY

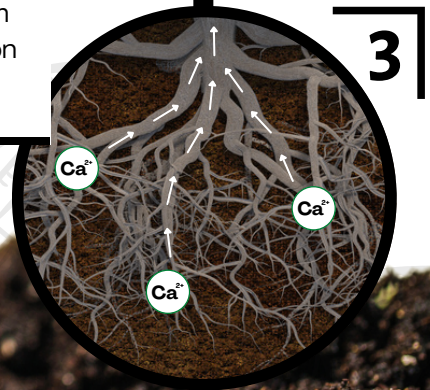
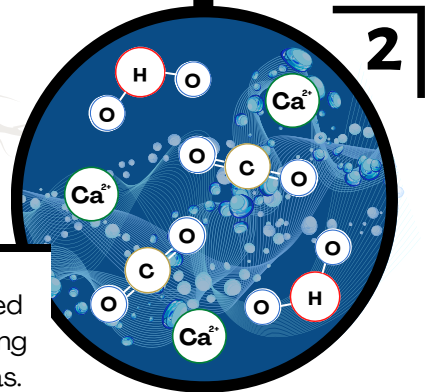
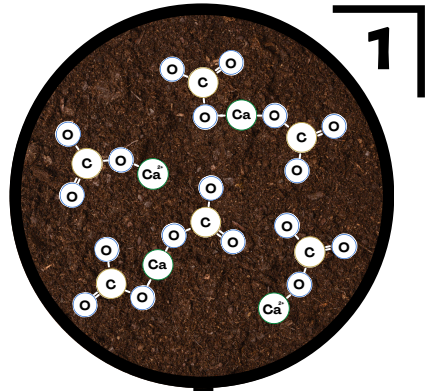
Carbonates and bicarbonates in the water have a high affinity for calcium and magnesium. This chemical attraction results in the formation of insoluble salts and prevents calcium from being available to the soil and the plants.¹ Once in soil water, Calcine[®] solubilizes calcium carbonate and calcium bicarbonate, with the reaction releasing calcium ions, water, and carbon dioxide.²

ACIDIFICATION OF WATER



Calcine[®] formulation is enriched with a unique sequestering agent (chelator) that “binds” with calcium ions to prevent their involvement with carbonates and bicarbonates. Sequestering of calcium ions adds to the efficiency of applied calcium compounds as well as facilitates root uptake of calcium by the plant.

This recycled source of calcium is now free to replace sodium on soil particle exchange sites, the key step in reclaiming sodic soils.³



“We’ve taken areas that haven’t produced a crop in almost 20 years and are starting to get crops to grow back in those areas.

We’ve got a number of areas where, in the last 3 years we’ve taken fields from no production to basically full production today.”



Tom Vander Heiden
Certified Crop Adviser



“

As you can see, we have some vegetation growing here right now, it was black. The headlands were black, and nothing was growing, even weeds had a tough time. Between the drain tile and Calcine®, you see now that we have vegetation. Four years ago, we started with it. The first year we didn't see much. Just like anything else, it takes time.

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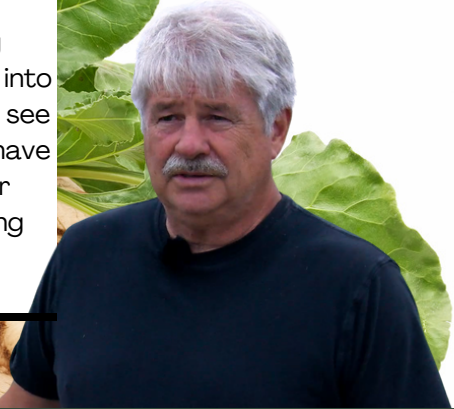
Johnson Bros Farm
Red River Valley



“

Our experience is that normally along roadsides salt put out on roads migrates into our fields. Using satellite imagery we can see exactly where Calcine® was applied. We have more growth in those areas. This is our second year into it and we are becoming believers.

”

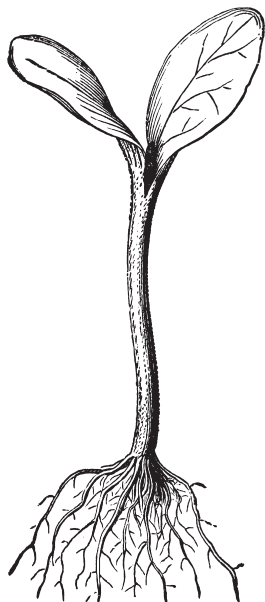


AWG Farms
Minnesota



Soil health is vital to your return on crop/growing investments.

Recovery of those less-than-productive acres are important to maximize your return on ALL your input cost. Calcine[®] was designed to assist producers in recovering these acres while increasing your operations ROI.



SOIL PROBLEMS

1. Soluble Salts exceeding 3.0?
2. Chloride showing higher than 200 lbs. per Acre?
3. Sodium in excess of 150 ppm per Acre?
4. Sulfur greater than 120 lbs. per Acre?
5. Nitrates in excess of 35 lbs. in top six inches?
6. pH in excess of 8.0?
7. Calcium Base Saturation in excess of 80% or lower than 65%?
8. Or if your land is less productive.

If these look familiar, learn more about Calcine[®] at
www.ericksoncustomoperations.com



FREQUENTLY ASKED QUESTIONS

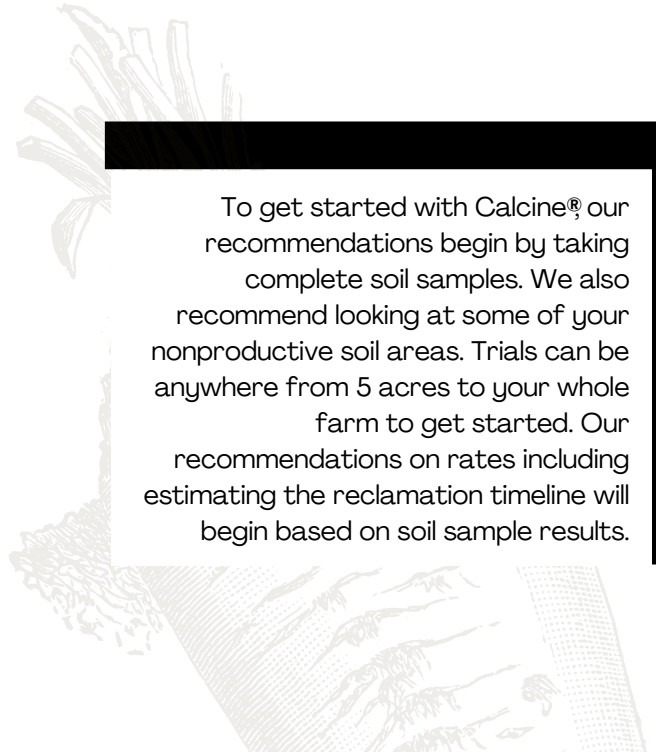
How can Calcine[®] be applied?

Calcine[®] can be applied in multiple ways. It can be sprayed on with herbicides on a post or pre-emerge application. It can be applied in-row with planting, i.e. starter fertilizers or liquid applied air seeders. It can go through center pivot irrigation or any ground or ariel spray equipment. Spray rates while adding water, can be as low as 10 gals/acre and as high as 20 gals/acre. The more water the better! Calcine[®] is best used in higher volumes of water, as it is water activated.

What rates should Calcine[®] be applied?

The rates of Calcine[®] are based on soil sample results. Calcine[®] is a reclamation product being used up to a 3-to-5-year application program. The first year can be as high as 1 gal/acre or as low as 1/2 gal/acre. During the reclamation process, the second year & beyond can cut the application rate by 50% after the initial year. Other rates include going in-row with planters & air seeders at 1 pint/acre.





What is the most productive way to get started?

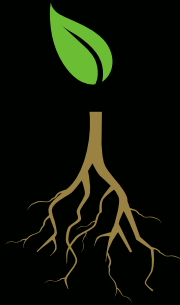
To get started with Calcine® our recommendations begin by taking complete soil samples. We also recommend looking at some of your nonproductive soil areas. Trials can be anywhere from 5 acres to your whole farm to get started. Our recommendations on rates including estimating the reclamation timeline will begin based on soil sample results.

What kind of ROI should producers expect?

We have had many trials conducted with Calcine®. We have seen soil health come back, typically 3 to 1, up to 5 to 1 ROI, depending on crops raised that season and the price of those crops.

My farm is organic. Can I use your product?

Yes. Protos-32® is specifically formulated for the organic industry to deliver the same benefits Calcine® does in conventional farms.



CREATING HEALTHIER SOILS

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Midwest Distributor

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