



# GSR CALCIUM

## CORRECTING THE CAUSE

RATHER THAN REACTING TO THE SYMPTOMS

### POOR WATER PENETRATION

Water availability is the greatest threat to global food production. Available calcium creates pore space which allows increased water absorption and holding capacity.

### SALINITY

Excess salts increase erosion and create dead spots in fields. They may also increase weed pressure. Salts from irrigation water and fertilizers may be remediated with available calcium.

### COMPACTION

The depth of the aerobic zone directly influences your fertilizer usage, biological activity, and crop health. Compaction is the #1 limiting factor to successful agricultural production.

## ABOUT GSR DORMANT CALCIUM

Genesis Soil Rite Dormant Calcium (GSR) is a fast-acting available calcium that goes to work immediately on your soil. Compaction due to excess magnesium, potassium, sodium, and sulfates can be corrected with available calcium. However, the calcium in most traditional calcium products is unavailable. Many of these products require a long breakdown period and biological activity to produce available calcium.

GSR Dormant Calcium eliminates the wait by providing your soil available calcium when it needs it. GSR Calcium is “heavier” or more dense than traditional calcium products on the market. Upon application, GSR Calcium infiltrates the soil profile establishing pore space and allowing oxygen to enter the soil. With proper gas exchange the soil can now breathe, converting anaerobic unhealthy soil into aerobic healthy soil. Healthy soil that improves your nutrient cycling, water holding capacity, and farm profitability.

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**GSR CALCIUM - A BREATH OF FRESH AIR FOR YOUR SOIL**

## HOW GSR CALCIUM WORKS

All calcium products are not created equal. Limestone ( $\text{CaCO}_3$ ), Gypsum ( $\text{CaSO}_4$ ), Calcium Chloride ( $\text{CaCl}$ ), and Calcium Nitrate ( $\text{CaNO}_3$ ) are all “calcium” products in that they contain a measurable amount of calcium. However, each product reacts very differently in the soil. Calcium is 40 times more electrical than copper. It is this electrical power we seek for soil remediation. Due to its reactivity, determining the availability of calcium in traditional Ag products is challenging. Calcium availability is dependent upon two factors: bond strength and surface chemistry.

GSR Calcium harnesses the electrical power of calcium, by reducing the bond strength in limestone ( $\text{CaCO}_3$ ). Through a proprietary manufacturing process, we weaken the Ca-O bond in limestone. Once broken, the carbonate ( $\text{CO}_3$ ) portion of the limestone is rearranged for product stabilization. This process of de-ionization and re-ionization has been meticulously formulated to yield a fast-acting calcium product, which upon solubilization, releases the available calcium required to remediate soil. Genesis Soil Rite Dormant Calcium is truly a one of a kind calcium product that gives your soil exactly what it desires, a “breath of fresh air”.

### BENEFITS

- Decrease Soil Compaction
- Improve Water Penetration
- Reduce Erosion
- Improve Soil Structure
- Increase Calcium Availability
- Deepen the Aerobic Zone
- Increase Biological Activity
- Accelerate Nutrient Cycling
- Increase Fertilizer Efficiency
- Salinity Reduction
- Low Shipping Cost
- Easy to Apply
- Approved for Organic Production with Most Certifying Agencies

### APPLICATION RATES

GSR Dormant Calcium is a dry water-soluble flowable powder. GSR Calcium is designed to eliminate high dollar packaging and shipping costs. Simply, a high energy low volume product which works on a grams per acre rate. Why pay for baggage when you only need what works!

### GENERAL APPLICATION RATES

**90 grams GSR Dormant Calcium per acre**

For optimum efficacy, GSR Dormant Calcium is formulated for DIRECT soil contact. No-Till and excessive crop residue may reduce results. GSR Dormant Calcium may NOT be tank mixed with pesticides and high salt fertilizers. Please consult the product label and the Soil Works staff for recommendations.

## GSR CALCIUM TRIALS

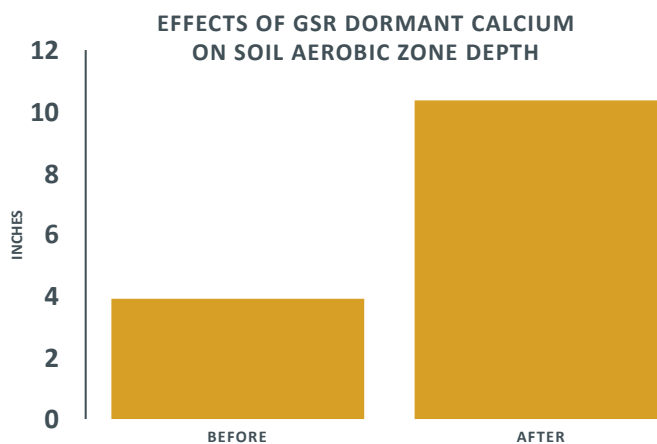


Figure 1: GSR Dormant Calcium was applied at the recommended application rate on 8 different trials in 2016. Aerobic zone depth was collected using a penetrometer measuring the aerobic zone to a depth of 300 psi. Data was collected before and after application of GSR Dormant Calcium. A total of 36 samples were collected. The before and after results are approximately 29 days apart.