

Agricultural Gypsum

A natural, mined material containing calcium and sulfate sulfur, acceptable for use in organic growing and commercial agriculture, adding to compost or in soil mixes.

PREMIUM PRODUCT

Bridgewell Agriculture supplies quality, high analysis, natural gypsum from mining operations in the western U.S. The gypsum ore is ground to a consistency that enables growers and farmers to apply the material using conventional broadcast spreaders. An inexpensive source of calcium and sulfur, gypsum counteracts sodium and causes clay particles to bind together enabling better water percolation.

ENVIRONMENTALLY FRIENDLY

Agricultural gypsum from Bridgewell Agriculture is acceptable for use in conventional agriculture as well as in organic growing. Agricultural gypsum is low in heavy metals and is not an industrial by product.

EASY TO APPLY

Agricultural gypsum from Bridgewell Agriculture can be applied through conventional fertilizer equipment. The ore is ground to a consistency that provides for even application. Use in commercial agricultural applications like orchards, vineyards, potato and forage ground or blended into compost or soil mixes.

PACKAGING, DELIVERY AND PERSONALIZED SERVICE

Available in bulk truckloads, 50lb and 40lb bags. Bulk truckloads are delivered using rear discharging trailers. Our personalized service guarantees prompt delivery so the gypsum gets there when you need it.

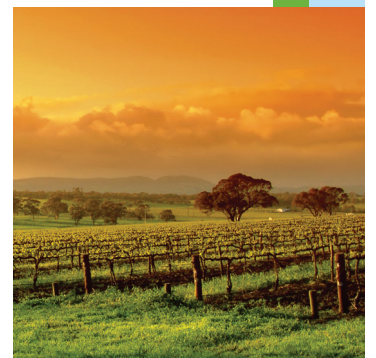
BENEFITS:

- Inexpensive source of calcium and sulfate sulfur
- Doesn't effect soil pH
- Counteracts sodium in soil
- Softens clay soils
- Apply using broadcast spreaders
- Acceptable for use in organic growing



OTHER PRODUCTS:

- Archipelago™ bat guano
- Azomite trace mineral®
- Calphos™
- PAR4® 1-0-2 kelp meal
- PAR4® 2-14-0 Nitrogen & Phosphate fertilizer
- PAR4® Greensand
- PAR4® 9-3-7 granulated multi-purpose fertilizer
- PAR4® 13-0-0 granulated natural nitrogen fertilizer
- PAR4® 9-3-1 high nitrogen bat guano



See back for more information.



BRIDGEWELL
AGRICULTURE

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Agricultural Gypsum — Typical Analysis

Gypsum Equivalent	100%	Screen Analysis	
Minimum Guarantee		8 mesh screen	86.5%
Calcium (Ca)	23.2%	16 mesh screen	73.8%
Sulfur (S)	18.6%	20 mesh screen	69.3%
Agricultural Gypsum derives its gypsum equivalent from calcium sulfate dihydrate and calcium sulfate.		50 mesh screen	49.1%
		100 mesh screen	31.8%
		200 mesh screen	19.2%
		Bulk density 87-92 lbs./cubic foot	

Determining Calcium Sulfate Requirements® by Dr. Brent Rouppet, Ph.D., Soil Scientist

By using the following information from your soil and water laboratory analyses, calcium sulfate requirements can be determined so nutrient deficiencies, toxic ion concentrations and soil compaction and/or water infiltration problems can be rectified.

Soil analyses:

- ECe (electrical conductivity of soil extract)
 - If less than 0.60 ds/m (decisiemens per meter), then calcium sulfate is needed to help with water infiltration problems.
 - If greater than 2.00 decisiemens per meter, then calcium sulfate is needed to help with high salt problems.
- Sodium and magnesium both contribute to soil deflocculation (loss of soil structure). It is necessary for there to be 8 times as much exchangeable calcium in the soil as magnesium. If not, the addition of calcium sulfate is required to help flocculate the soil.
- Sodium alone is the most harmful element there is in regard to plant health and crop production. There needs to be 16 times more exchangeable calcium in the soil than sodium; if not, then additional calcium sulfate must be added.
- ESP (exchangeable sodium percentage) and SAR (sodium absorption ratio). If either of these soil tests is above "5", then calcium sulfate must be added to help with problems associated with high sodium.
- In order for soil analyses to be complete and accurate, they should also include the amounts of "exchangeable cations" present in the soil. The exchangeable cations are calcium, magnesium, sodium and potassium. The following amounts are required for healthy plant growth plus good soil structure.

Exchangeable Cations

Cations	Percentages	PPM
Calcium	greater than 80%	greater than 2000
Magnesium	less than 10%	less than 400
Sodium	less than 5%	less than 150
Potassium	greater than 5%	greater than 150

When there is less than 80% or 2000-ppm calcium, the addition of calcium sulfate is required. When there is more than 10% or 400-ppm magnesium, the addition of calcium sulfate is required. When there is more than 5% or 150-ppm sodium, the addition of calcium sulfate is required to help with the problems.

- Chloride, an anion, is toxic to crops in higher amounts. When there is greater than 10 milliequivalents per liter present in the soil, calcium sulfate must be added to help with the associated salt problems and to help flush the chloride below the root zone.
- Boron is also toxic to crops when present in higher amounts in the soil. Anytime there is greater than 1.5 ppm present, calcium sulfate must be added to help leach the boron below the root zone.

Basic Calculation For Soil Calcium Sulfate Requirement:

CEC (from soil analysis) ____ ; x 200 (a constant);
x ____ % of exchangeable Ca less than the required
80% ____ ; x 5 (a constant) = _____
pounds of high-quality calcium sulfate required
per acre

Example: CEC = 10; 60% exchangeable Ca.

$$10 \times 200 \times .2 \times 5 = \mathbf{2,000 \text{ lbs high-quality calcium sulfate/acre needed}}$$



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