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Solutions

Enriched yields

USG AGRICULTURAL GYPSUM PRODUCTS

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USG Industrial & Specialty Solutions

USG Agricultural Gypsum Products are an excellent source of calcium and sulfur that positively affects crops and soils in an environmentally safe and non-toxic manner. USG agricultural gypsum products improve heavy soil structure and stimulate microbe activity in soil and mushroom compost. In addition, agricultural gypsum conserves the nitrogen of manures while reducing odors.

What is agricultural gypsum?

Agricultural gypsum ($CaSO_4 \cdot 2H_2O$) is an excellent source of readily available calcium and sulfate sulfur and is typically composed of 21 percent calcium (Ca) and 16 percent sulfur (S). Gypsum has a relatively high solubility in the soil and is approximately 150 times more soluble than agricultural limestone (calcium carbonate) which will help to ensure that calcium and sulfur are readily available to the plant.

Calcium and sulfur benefits

- Gypsum does not buffer the pH of soil or manures when applied.
- Under conditions where there is excess sodium in the soil, gypsum is used to leach the sodium out of the root zone over a period of time.
- Gypsum is especially recommended as a source of calcium and sulfur for peanuts, potatoes, tomatoes, legumes, blueberries and cotton.

Gypsum's effect on some crops is particularly striking. If calcium is lacking in soils where peanuts are grown, cracked and unfilled pods and low grades and yields may be the result. Gypsum is also the preferred source of calcium for peanuts because of its quick availability of calcium for the plant versus agricultural limestone. On cotton, the quickly available calcium may improve seed germination. Gypsum use in tomato production can also help to prevent blossom end rot. Gypsum is an excellent source of calcium for legumes and for crops that grow best in relatively low pH soils such as blueberries and Christmas trees.

In areas where sulfur deficiency occurs, USG agricultural gypsum products supply the form of sulfate sulfur that is most quickly utilized by plants. Soils that were once relatively high in sulfur due to depositions of emissions from coal-fired electrical generation plants may now be showing sulfur deficiencies as sulfur dioxide emissions are being cleaned from the flue gas in order to meet clean air requirements.

Conserves nitrogen in manure

Manure gives off nitrogen in the form of ammonia which may be quickly lost when manure is stored. This loss may be reduced by applying gypsum on manure which then can be utilized as a fertilizer source. To help mitigate the loss of nitrogen in livestock barns, spread gypsum after cleaning and onto the manure after it is removed. Similar nitrogen savings may be achieved in poultry houses by adding gypsum to the litter or dropping pits.

USG Agricultural Gypsum Products

USG Ben Franklin™ Brand Agricultural Gypsum – Regular Grind – for general agricultural and horticultural purposes

USG Ben Franklin™ Agricultural Gypsum – Coarse Grind – for general agricultural and horticultural purposes

USG Ben Franklin™ No. 1 Agricultural Gypsum – bulk agricultural gypsum for agricultural and environmental remediation purposes

USG Ben Franklin™ Aquacal™ Gypsum – solution grade gypsum for use in irrigation systems

USG EcoGypsum™ – bulk synthetic gypsum for agricultural purposes

USG 500 Landplaster – bulk agricultural gypsum for agricultural and environmental remediation purposes

Note All USG Ben Franklin Agricultural Gypsum products and USG 500 Landplaster are certified as organic by the Organic Materials Review Institute (OMRI®).

Improves soil structure

Soils in good structure have desirable physical properties. They contain pore spaces between soil particles which serve as reservoirs for soil moisture and permit satisfactory aeration and at the same time permit quick removal of excess water. When aeration and drainage are good, seed germination is stimulated; root growth and total crop yields may be increased.

It is important that the soil surface be maintained in an open, granular condition to permit rain to enter the soil and to prevent surface runoff. Where crusting occurs, water stands on the surface of the soil if the land is flat or low and may result in poor seedling emergence. If rainfall runs off sloping land, soil erosion may occur. Soil crusts may be loosened by applying gypsum which can improve aeration and drainage by helping to keep the soil loose. Studies have shown that gypsum applied to certain clay soils may improve soil structure and increase the rate of water penetration.

Application

USG agricultural gypsum products can be easily applied with a band or broadcast spreader or with irrigation equipment equipped to handle soluble and suspension fertilizers. Please contact your local agronomist, horticulturalist, or USDA Cooperative Extension Agent for gypsum use rates for your particular application.

For additional information on USG agricultural gypsum products, visit usg.com, contact your local USG sales representative or call 1-800-621-9523. To learn more about agricultural gypsum benefits, see the *Technical Bibliography* on page 4.

Enriching agriculture. USG Ben Franklin™ Agricultural Gypsum.

USG Industrial & Specialty Solutions

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Safety First!
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read applicable SDSs and literature before specification and installation.

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