Quest Products
Finding New Ways to Improve the Treatment of Trees and Plants.

Main Event

GRO CAL MGB

with UTE Uptake Enhancement Technology

GRO-CAL MGB with UTE was formulated for the spoon feeding of tees/greens and fairways where additional calcium is required to maintain healthy turf due to intense play, soil deficiencies or intensive management.

Calcium is a macro nourishment element that plants consume a lot of. It is a compound of the cell wall structure. It is frequently found in soil in a compound form that plants cannot use. Calcium does not transport well in plants from root to shoots. For this reason, it is necessary to apply supplemental calcium fertilization. After nitrogen and potassium, calcium is the next most consumed requirement of plants.

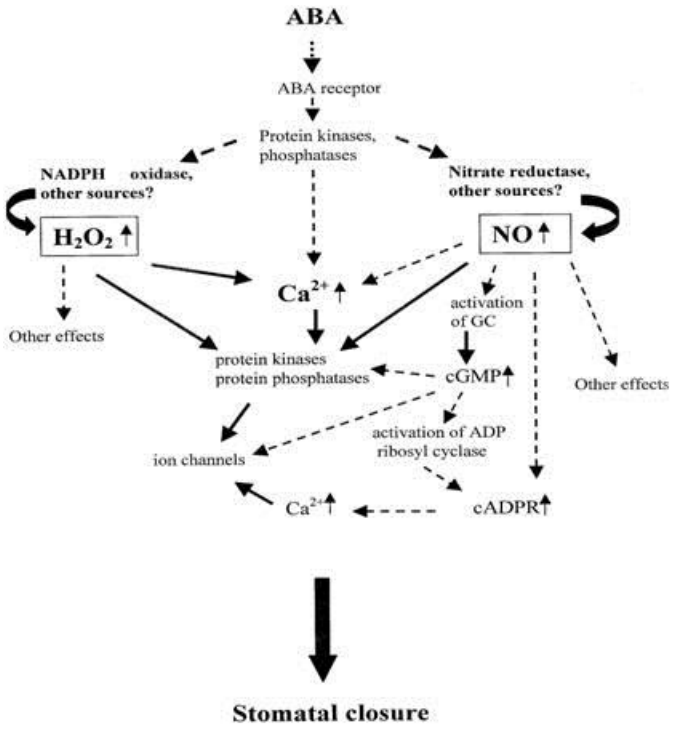
Calcium is essential for:

- Promoting plant metabolic process and nutrient uptake
- Strengthening cell wall structure with calcium pectate
- Protects reduces plant heat stress
  - Directly increasing stomata function
  - Induction of heat shock proteins
- Reduces disease pathogen disease attack and severity

GRO-CAL calcium is derived from 2 forms of calcium, calcium nitrate and calcium chloride.

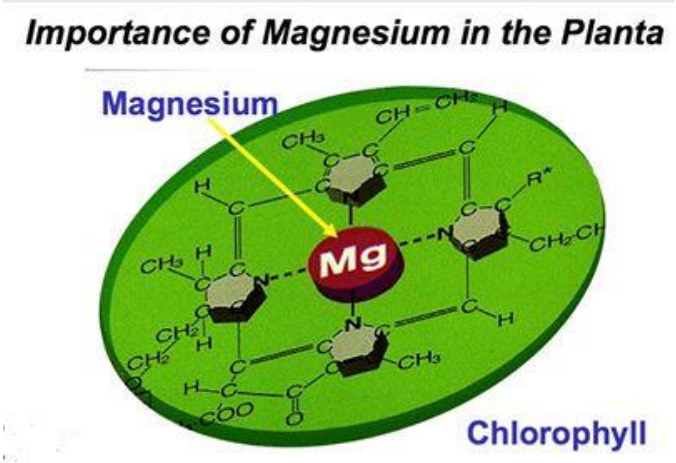
Calcium nitrate which is immediately available to the plant through the water phase of absorption through both foliar and root structure. Nitrogen in nitrate form is plants' preferred form of nitrogen. It helps plants absorb other nutrients in addition to calcium. Particularly in clay soils, ammonium may trap the nitrogen in the soil, thus rendering it unavailable to the plant. Nitrate, on the other hand, does not absorb into the soil. It remains in the root area in a form that is easy to absorb and in this way allows the plant to quickly meet its nutrients demand. The positive effect of the combination of these two elements does not leave the soil salty. The effect of the nitrogen in nitrate form on the roots is such that the water-soluble calcium is more easily absorbed and thus better provides the plant with its calcium requirements.

Soil Benefit of Calcium Nitrate
In addition to being nutrition for plants, calcium nitrate has a amelioration effect on the soil. It facilitates the transformation of minerals in clay soil to a form more easily used by plants. In irrigated soils with less calcium or a lot of sodium, the clay layer can become compact. As a result, water and oxygen activity is reduced and the development of the plant is adversely affected. Calcium forces separation of the clay layer and gives soil more porosity.



Calcium chloride is the second source of calcium in **GRO CAL MGB**. The calcium chloride form is more absorbed by the foliar parts of the plant. The calcium combined with the chlorine ion has been proven to directly increase drought resistance of various turfgrass plants when used at low concentration levels.

GRO-CAL MGB contains Magnesium in an available plant sustained chelated form. Magnesium is the center of the chlorophyll molecule that gives turfgrass its green color and is vital for the plant functions of: photo-synthesis, enzyme production, lipids, carbohydrate production, phosphorous utilization and conversion to ATP and ADP that occur in the Kerbs Cycle.

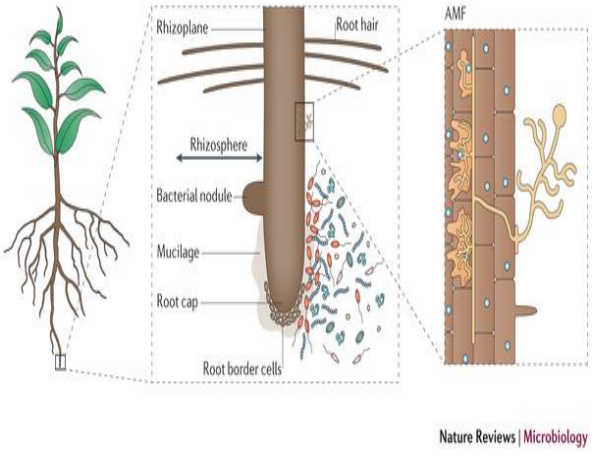


GRO-CAL contains Boron (B) as well in a plant available form which is essential for production and transport of various sugars, carbohydrates and assimilation of nitrogen phosphorous and potassium by the plant.

Uptake Enhancement Technology -UTE

UTE is proprietary technology developed by Quest through years of testing with hundreds of trials on various plant species determining how to achieve better foliar and soil uptake of plant nutrients. This technology has been proven to increase plant uptake, metabolism and assimilation of nutrients in both foliar and soil application methods. UTE increases biological activity in and around the root hair and has been found to increase beneficial bacteria and soil VAM while yielding adjuvant type foliar spray property benefits of wetting absorption and increased uptake.

(Vesicular Arbuscular Mycorrhiza) in the rhizosphere.



Application	Rate	Comments
COOL SEASON TURF Tees, greens& approaches, lawn, landscape turf and sports turf.	3 oz. to 6 oz. . per 1,000 sq/ft.	During periods of active growth, apply every 14 days to 21days in a minimum of 3 gallons of water/ 1,000 sq. ft.
Horticulture Use: General nursery and greenhouse plant application	Water ratio application: 1 qt. to 100 gallons of solution	Spray apply with good coverage to point of runoff every 7 to 14 days for best results.

KEEP OUT OF REACH OF CHILDREN
CAUTION - MAY CAUSE IRRITATION

PRECAUTIONARY STATEMENTS: Avoid prolonged or repeated contact with eyes, skin and clothing. Chemical goggles or a full-face shield should be worn. To protect skin, wear appropriate protective equipment, such as rubber or plastic aprons, rubber gloves and boots. Avoid breathing mist or vapor. Keep containers closed. Wash thoroughly after handling. May cause gastrointestinal distress, if swallowed.

HANDLING AND STORAGE: Minimize skin exposure. Store mini-bulks and smaller containers out of sun in an area of moderate temperature. Do not re-use containers. Avoid containers, piping or fittings made of copper-containing alloys or galvanized metal. Dispose of containers in accordance with local regulations and requirements.

FIRST AID: In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention if irritation occurs. In case of skin contact, flush skin with water. If irritation occurs, seek immediate medical attention. Remove and wash contaminated clothing before reuse. If swallowed, give large amounts of water and induce vomiting by touching the back of the throat with finger unless unconscious. Seek immediate medical attention.

TECHNICAL DATA INFORMATION

Guaranteed Analysis
Total Nitrogen (N)..... 7.00%
1.50% Urea Nitrogen
5.50% Nitrate Nitrogen
Calcium (Ca)..... 11.25%
11.25 Chelated (Ca)
Magnesium (Mg)..... 2.50%
Boron (B)..... .... 0.07%
Chlorine (CL) Maximum amount 0.40%

CONDITIONS OF SALE: This product conforms to the chemical description on the label thereof and is reasonably fit for the purposes stated on such label only when used in accordance with directions under normal use conditions. Follow directions carefully. In no case shall the seller be liable for consequential, special or indirect damages such as loss of profits or values resulting from the use or handling of this product.

Manufactured by:

Quest Products
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