GROW MORE

PRODUCT INFORMATION

GROW ORGANITE

SOIL RESTORATION & FERTILIZER

Slow Release Nitrogen and Phosphate

Grow Organite is mineralized by natural occurring soil microbes to provide a staged release of nutrients. 20% of nitrogen and phosphate is immediately available with the balance slowly available over a 6 to 8 week period. The low salt index formulation was developed to supplement standard soil fertility programs.

Soil Restoration

Grow Organite contains many active ingredients, including humic acid organic acids, carbohydrates, amino acids and precursors to growth factors that increase the microbial activity in the rhizosphere. These microbes are active in solublization and uptake of mineral nutrients required by the crop. This stimulated root development, helps build stable soil aggregates to improve soil structure and tilt.

Directions

Apply as broadcast, starter fertilizer, side dress or pre-plant. Apply when soil moisture is adequate. Suggested rates are approximate or use as needed.

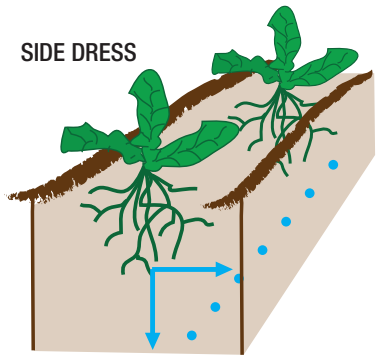
Row Crops Broadcast Application: up to 100-400 Lbs./Acre (100-400 Kg/HA)

Side Dress Application: up to 200 Lbs./Acre (200 Kg/HA) place as 3 x 3, 3 inches from side and 3 inches (7-8 cm) below plant.

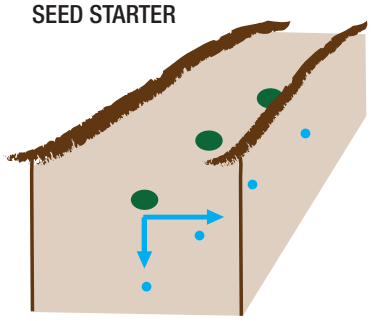
Seed Starter: Placement 2 to 4 inches below seed (5 to 10 cm), apply up to 150 to 200 Lbs./Acre (150 to 200 Kg/HA)

Trees and Vines: Apply as broadcast twice a year spring and fall or two weeks prior to bloom and mid season.

Soil Restoration, Pasture, Forage: Broadcast up to 100 to 400 Lbs./Acre (100-400 Kg/HA)



3"X 3"
Side Placement



2"X 4"
Place Below Seed

CAUTION:
KEEP OUT OF REACH OF CHILDREN.

Information regarding the contents and levels of metals in this product is available on the internet at http://www.aapfco.org/metals.htm

5-3-0

SPECIFICATIONS

Total Nitrogen (N)	5.0%
1.0% Water Soluble Nitrogen	
4.0% Water Insoluble Nitrogen	
Total Phosphate (P_2O_5)	3.0%
Calcium (Ca)	3.0%
Iron (Fe)	2.5%
Sulfur (S)	1.7%
Magnesiun (Mg)	0.55%
Zinc (Zn)	0.07%
Manganese (Mn)	0.05%
Copper (Cu)	0.44 grams/Kg
Boron (B)	0.03 grams/Kg
Chloride (Cl)	0.11%
Sodium (S)	0.77 grams/Kg
Humic Acid	7.0%
Total Organic Matter	40.0%
Carbon to Nitrogen: Ratio C:N	6 : 1
pH	7.4

SPECIAL FEATURES

- Provides a Staged Release of Nutrients
- Low Salt Index Formulation
- Helps Build Stable Soil aggregates to improve soil structure and tilt.

AVAILABLE PRODUCT

- Coarse Granule 1.2-1.6 mm

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SOIL RESTORATION & FERTILIZER

Why is Slow Release Important?

The organic nitrogen in Grow Organite offers advantageous efficiency over inorganic ammonium, nitrate and urea nitrogen sources. When inorganic urea and ammonium forms of nitrogen are deposited on moist soil they undergo a series of chemical conversions to ammonia. A portion of the ammonia gas escapes to the atmosphere rather than becoming a plant nutrient. Nitrate nitrogen does not absorb strongly to soil particles, and is readily leached below the root zone.

Organic Nitrogen - being derived from proteins, amino acids including nitrogen found within living organisms must be mineralized by soil microbes, this provides a slow but continuous supply of nitrogen which is taken up by the plant rather than lost to the atmosphere or ground water. Under warm condition (77 to 95ºF) the slow release portion of Grow Organite Nitrogen (75% Slow Release N) can be expected to provide nitrogen release for up to 8 weeks or longer.

Organic Phosphorous: Organic bound phosphorous has been synthesized by microorganisms during the creation of Grow Organite and exists as 1) inositol phosphates or phosphate esters of a sugar like compound, 2) nucleic acids, 3) phospholipids. Phosphorous held in organic form is mineralized by the same general process that releases nitrogen, and is stable over both acidic and alkaline pH. Inorganic phosphorous is immediately available but subject to rapid fixation or absorption of phosphate ions on soil particles. Grow Organite's organic bound phosphorous is released by mineralization thereby improving phosphorous availability to plants by reducing the tendency of the mineral fraction of the soli to fix phosphorous.

Why is Carbon the Key Ingredient in Soil Restoration?

Carbon / Nitrogen Ratio:
The C/N ratio of organic fertilizer is important for two reasons:

1) Intense competition among soil microorganisms and plants for available soil nitrogen occurs when fertilizers having a high C/N ratio are applied to soil. Microbes use carbon to build cells and the nitrogen to synthesize protein.

2) The C/N ratio of fertilizers helps determine their rate of mineralization and rate at which Nitrogen is made available to plants. If organic fertilizer has a C/N greater than 20:1 (low nitrogen) soil microbes cannot obtain enough nitrogen and cause a loss of plant available nitrogen (deficiency) called immobilization. Grow Organite with the advantageous low C/N ratio of 6:1 has a high nitrogen content, high enough for soil microbe needs plus excess organic nitrogen for conversion (mineralization) to plant available slow release nitrogen. Up to 20 weeks without excessive top growth.

	C/N Ratio
Grow Organite	6:1
Alfalfa Meal	13:1
Sheep Manure	17:1
Poultry Manure	18:1
Horse Manure	50:1
Grass Clippings from Fertilized Lawn	31:1
Small grain corn stalks	80:1
Sawdust, Woodchips	400:1

SPECIAL FEATURES

The **organic nitrogen** in Grow Organite offers advantageous efficiency over inorganic ammonium, nitrate and urea nitrogen sources. When inorganic urea and ammonium forms of nitrogen are deposited on moist soil they undergo a series of chemical conversions to ammonia. A portion of the ammonia gas escapes to the atmosphere rather than becoming a plant nutrient. Nitrate nitrogen does not absorb strongly to soil particles, and is readily leached below the root zone. Organic Nitrogen - being derived from proteins, amino acids including nitrogen found within living organisms must be mineralized by soil microbes, this provides a slow but continuous supply of nitrogen which is taken up by the plant rather than lost to the atmosphere or ground water. Under warm condition (77 to 95°F) the slow release portion of Grow Organite Nitrogen (75% Slow Release N) can be expected to provide nitrogen release for up to 6 weeks or longer.

CARBON/NITROGEN RATIO:

The C/N ratio of organic fertilizer is important for two reasons:

1) Intense competition among soil microorganisms and plants for available soil nitrogen occurs when fertilizers having a high C/N ratio are applied to soil. Microbes use carbon to build cells and the nitrogen to synthesize protein.

2) The C/N ratio of fertilizers helps determine their rate of mineralization and rate at which Nitrogen is made available to plants. If organic fertilizer has a C/N greater that 20:1 (low nitrogen) soil microbes cannot obtain enough nitrogen and cause a loss of plant available nitrogen (deficiency) called immobilization. Grow Organite with the advantageous low C/N ratio of 4:1 has a high nitrogen content, high enough for soil microbe needs plus excess organic nitrogen for conversion (mineralization) to plant available slow release nitrogen. Up to 6 weeks without excessive top growth.

	C/N Ratio
Grow Organite	4:1
Sewage Sludge	12:1
Alfalfa Meal	13:1
Sheep Manure	17:1
Poultry Manure	18:1
Horse Manure	50:1

	C/N Ratio
Grass Clippings from Fertilized Lawn	31:1
Small grain corn stalks	80:1
Sawdust, Woodchips	400:1

"Non-Staining Iron - Through the biological process of creating Grow Organite , organic acids such as oxalic, citric, tartaric and H+ ions (hydrogen) helps solublize iron and produce organic complexes (chelate). Grow Organite iron does not stain concrete and walks, and the biologically chelated iron releases gradually providing a dark greening effect that lasts up to 6 weeks."

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A Symbol of Quality

GROW MORE®

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