

Biostimulant

Root Inoculant

Soil Eco System Stimulator

Contains

Ingredient	Analysis (per 0.25 POUNDS)
RUTOPIA BIO+M only Live Spores of Endo & Ectomycorrhizal Fungi	Includes Glomus Mosseae, Gigaspora margarita, Pisolithus Tinctorius, Glomus brasilianum, Glomus deserticola, Glomus Clarum, Glomus etunicatum, Glomus intraradices. Approx. 56 million/per
RUTOPIA BIO and +M Nitrogen Fixing Bacteria	50 Million/each
Phosphorus Solubilizing Bacteria	Approx 50 Million/each
Growth Promoting Bacteria Anti-fungal Bacteria Bt Plant Protecting	Approx 50 Million/each Approx 100 Million/each Approx 80 Billion
Soluble Sea Kelp Extract	1.8% Ascophyllum nodosum
Soluble Yucca Extract	1.8% Yucca Schidigera
Minerals	Magnesium, Calcium, Zinc, Iron, Manganese, and Copper
Beneficial Fungus Other	Trichoderma Fungi, Plant Proteins, Biotin, Folic Acid, Vitamins- B6, B7, B12, C, A, D, E & K and 15 essential Amino Acids

RUTOPIA BIO is a unique scientifically produced biostimulant built in sugars. The formulation contains natural sugars, sugar plant extracts, beneficial bacteria, humectants, UV inhibitors, surfactants, trichoderma, beneficial microbes, naturally occurring vitamins, amino acids, humic substances, langbeinite, enzymes, sea kelp extract, and proprietary additives.

RUTOPIA BIO increases root permeability and the water holding capacity of soil allowing the plant to better utilize both available nutrients and moisture. **Promotes cell division, stimulates photosynthesis, and delays senescence.** The root colonizing bacteria enhances root growth and bolsters the plant's natural defense against stress conditions such as drought, temperature extremes, frost damage, insect pressure and disease. The nitrogen-fixing bacterium enables atmospheric nitrogen to be utilized by the plant, likewise the phosphorus solubilizing bacteria increases phosphorus availability for plant up take, this will increase plant yields and production. **Specific bacteria included in RUTOPIA BIO helps promote beneficials in the soil that can prohibit the growth of nematode populations.**

TRICHODERMA is a unique addition to a biostimulant. This beneficial fungi is used to prevent disease causing fungi in the soil and at the plant roots. Trichoderma contains spores, which grow around the plants roots depriving pathogenic fungi nutrients and living space. **The spores of trichoderma produce antibiotics, which destroy the spores of pathogenic fungi thus helping to prevent diseases such as fairy ring.**

RUTOPIA BIO+M TURF and PLANT INOCULANT with highly selective strains of ecto and endomycorrhizae fungi will quickly colonize the roots of plants to provide the best possible conditions for the roots to become associated with mycorrhiza. **The mycorrhizal fungi are nature's own way of improving plant survival by promoting enormous root growth both in mass and length.** This will contribute naturally to water absorption, nutrient uptake, increased yields and production, general plant growth, reduction in transplant losses, decrease in plant diseases, and improved plant tolerance to heat and stress.

RUTOPIA BIO and **RUTOPIA BIO+M** as a biostimulant helps deliver needed nutrients to the roots of plants in times of stress and when in stress plants can not on it's own produce certain elements. Both **RUTOPIA BIO** and **RUTOPIA BIO+M** supplements these elements by making them available in the soil for plant up take. **The product utilizes organic means of replenishing needed nutrients into the soil, while enabling the plant to uptake applied products more efficiently decreasing the amount of applied nitrate rich fertilizers, pesticides, and fungicides.**

RUTOPIA Bio and RUTOPIA BIO+M™ HAS NO APPLICATION RESTRICTIONS
See Label for Complete Application Instructions

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