

# ROCKY MOUNTAIN BIO PRODUCTS

## Products & Solutions

Rocky Mountain Bio Products represents the highest quality organic products on today's market for plant establishment and growth. With a variety of product lines from fertilizers to tackifiers, we have quality products with a wide range of uses.

### Biosol - All Purpose Long-Lasting Natural Organic Fertilizer

Biosol is a fermented plant-based organic fertilizer and soil amendment. Biosol Forte (7-2-1) and Biosol (6-1-1) are complex multi-nutrient fertilizers high in organic matter, chitin and dry mycelium. The high chitin content in Biosol (approximately 5 –15%) is a vital substance for supporting healthy soil and plant life by reducing soil-borne pathogens and diseases. Dry mycelium, the beneficial proteins contained in Biosol, will be available during multiple growing seasons to enhance soil life and establish a better soil structure.



### Menefee Humate - All Natural Trace Mineral

Humate is a high carbon and humic acid based granular soil conditioner that acts as an organic chelator and microbial stimulator. It has a unique carbon matrix incorporating a high concentration of trace minerals and organic acids, specifically humic acid, improving the plant's ability to take in vital nutrients. Menefee Humate has the highest guaranteed level of combined humic acid, organic matter and carbon available on the market. Humate will significantly improve poor soils and water holding capacity when used in conjunction with a balanced fertilization program.



### Mycorrhizae

MycoApply's endo and ectomycorrhizae options consist of specifically selected species of fungi and bacteria in multiple formulations designed for a wide variety of uses. Mycorrhizae fungi release powerful enzymes into the soil that dissolve hard-to-capture nutrients, such as organic nitrogen, phosphorus, iron and other "tightly bound" soil nutrients. These beneficial fungi build a natural microbial system that greatly enhances plant growth, yields, vigor and tolerance of environmental extremes.



### PermaMatrix - Biotic Soil Amendment

Manufactured in the United States, PermaMatrix is an alternative to traditional compost blankets and is used to re-introduce depleted organics and micro-organisms to highly disturbed and nutritionally deficient soils. PermaMatrix is used on depleted soils to establish biological function that is required to support vegetated solutions.



All of these products are beneficial for soil structure, soil life, soil health, plant growth and plant health. Our products are specified and used by many DOT's, National Park Services, municipalities, landscapers, homeowners and organic farmers.

# ROCKY MOUNTAIN BIO PRODUCTS

## Biosol Products & Solutions



### Biosol Product Details

Biosol Forte (7-2-1) and Biosol (6-1-1) are natural, all-purpose fertilizers and soil amendments. Biosol is composed of over 75% organic matter, chitin and dry mycelium. This long-lasting organic fertilizer will help supercharge the existing bacteria and fungi in the soil. Unlike many natural fertilizers, Biosol is easy to transport and use and will not burn seed or existing vegetation.

#### Functions of Biosol:

- Holds soil particles together, stabilizing soil and reducing the risk of soil erosion
- Stimulates micro-organism activity in the soil with stable long-lasting nutrients
- Improves plant health
- Suppresses pathogenic nematodes and soil-borne pathogens
- Increases the soil's water holding capacity
- Safe to be used in wetlands, creek restoration and water sensitive areas



Before Biosol



After Biosol



Before Biosol



After Biosol

# ROCKY MOUNTAIN BIO PRODUCTS

## Menefee Humate Products & Solutions



### Menefee Humate Product Details

Menefee Humate is a natural trace mineral and soil conditioner that is high in organic matter containing organic acids, fresh water carbon and micronutrients. Granular humate will last 90 or more days in the soil and will stimulate microbial activity in soil. Humate is composed of over 85% organic matter and has a negative ion charge.

#### Functions of Humate:

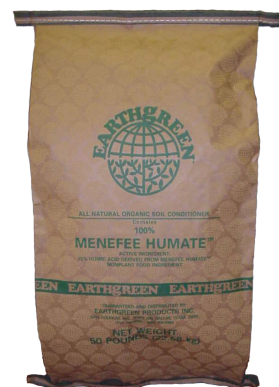
- Retains water and nitrogen longer
- Helps clay soil platelets stand up so water, nutrients and roots will penetrate easier and deeper into the soil
- Creates a gentle acid that will help leach out the bound-up nutrients such as iron and calcium to make it easier for plant roots to absorb those nutrients
- Improves a plant's ability to take in nutrients by acting as a slow release chelator and microbial stimulator
- Improves poor soils when used in conjunction with a balanced fertilization program
- Improves the effect of fertilizers
- Enhances root development
- Improves soil structure, availability and uptake of nutrients
- Establishes a desirable environment for microorganism development

#### Longevity & Application Rates:

- Breakdown is dependent on soil temperature and moisture.
- In reclamation projects with poor soils or in arid regions, Humate may last 2-3 years with an application rate of 20-30 pounds/1,000 square foot.
- In irrigated turf projects, granular Humate will last 90 days with an application rate of 5-10 pounds/1,000 square foot.

#### SeaMate - Water-Soluble Humic Acid

- SeaMate is a balanced seaweed, N-P-K, trace mineral, carbon and humic acid based water-soluble powder. It can be used as a stand alone product, or as an ingredient in balanced fertility programs as a foliar nutrient spray or soil drench for plant growth and development.



# ROCKY MOUNTAIN BIO PRODUCTS

## Mycorrhizae Products & Solutions



### Mycorrhizae Product Details

About 95% of the world's plant species form a mycorrhizae relationship with endomycorrhizal and ectomycorrhizal fungi. Mycorrhizae colonize roots and extend into the surrounding soil, forming an essential link between the plant and soil. This root fungus greatly increases the root's surface area and the plant's ability to absorb water and nutrients.

#### Functions of Mycorrhizal Fungi:

- Releases powerful enzymes into the soil that unlock hard-to-capture nutrients
- Builds a natural microbial system which greatly enhances plant growth and yields
- Increases a plant's drought tolerance of environmental extremes
- Forms an intricate web that captures nutrients and water regular roots can't reach
- Reduces the use of fertilizers and water and the cost of plant maintenance and replacement
- Increases plant quality & health

#### Types of Mycorrhizal Fungi:

- **Endomycorrhizal (Endo) Fungi** - Grasses, Flowers, Trees & Legumes
  - Minimum of 1 million propagules/acre should be in soil
  - Colonize at a moderate to quick speed when in contact with plant roots
- **Ectomycorrhizal (Ecto) Fungi** - Conifer & Pine Trees (Excluding Redwoods & Cedars)
  - Higher application rates, approximately 1.4 billion propagules/acre
  - Higher quantity of mycorrhizae needed to colonize with a plant root

#### Why MycoApply Mycorrhizae?

- Quality and consistent production of fungi with research to support the product.
- Multiple formulations designed for a wide variety of uses.
- A multiple species product is better at nutrient retrieval, disease suppression and managing a variety of plants and environmental stresses.



# ROCKY MOUNTAIN BIO PRODUCTS

## PermaMatrix Products & Solutions



### PermaMatrix Product Details

PermaMatrix is 100% organic biotic soil amendment that begins the process of turning poor, unhealthy dirt into healthy productive soil. It improves nutrient availability to the plant by combining a unique blend of biochar, that retains water and provides habitat for soil microbes, mycorrhizae, minerals and clean organics. This living soil amendment produces stronger, faster growing plants.

#### Functions of PermaMatrix:

- Ideal alternative to traditional compost blankets
- Re-introduces depleted organics, missing micro-organisms and mycorrhizal fungi to highly disturbed and nutritionally deficient soils.
- Prevents erosion, stabilizes bare ground and promotes vegetation growth
- Enhances biological function in unproductive soils

#### Application Rates:

- Applied easily through hydroseeders
- Can be spread over existing soils or added to a premium potting soil mix
- Approved for use in wetlands and streambanks
- 4,000 pounds per acre
- 100 pounds per 1,000 square feet



Before PermaMatrix



After PermaMatrix

# ROCKY MOUNTAIN BIO PRODUCTS

## StarTak Products & Solutions



### StarTak Product Details

StarTak 600 is a high-performance organic slope stabilizer and erosion control product. StarTak is one of the most cost-effective, environmentally safe tackifiers on the market. Manufactured from 100% all natural agricultural product, StarTak 600 is safe for the environment and personnel.

#### Functions of StarTak:

- Controls erosion during seed germination and plant establishment
- Reduces runoff and soil loss in heavy cumulative rain events
- Temporary slope stabilizer during construction
- Post-fire slope stabilizer/revegetation tackifier
- Hydroseeding tackifier
- Straw/hay overspray binder
- Dust control agent

#### Application Rates:

- **As a slope stabilizer:**

• 3:1 slopes or greater	4:1 slopes or less
• 250 lbs./acre	175 lbs./acre
• 3,000 gal. water	3,000 gal. water
• 400 lbs. hydraulic mulch/acre	400 lbs. hydraulic mulch/acre
- **For hydroseeding applications:**

• 3:1 slopes or greater	4:1 slopes or less
• 65-90 lbs./acre	40-65 lbs./acre
• (if not hydromulched)	(if not hydromulched)
• 3,000 gal. water	3,000 gal. water
• 400 lbs. hydraulic mulch/acre	400 lbs. hydraulic mulch/acre
- **For hydromulching applications:**

• 3:1 slopes or greater	4:1 slopes or less
• 65-90 lbs./acre	40-65 lbs./acre
• 3,000 gal. water	3,000 gal. water
• 2,000 lbs. hydraulic mulch/acre*	2,000 lbs. hydraulic mulch/acre*
- **As a straw/hay tackifier:**
  - 75-100 lbs./acre
  - 2,500 gal. water
  - 400 lbs. hydraulic mulch/acre

\*1,600 lbs. hydraulic mulch/acre if area hydroseeded using 400 lbs. hydraulic mulch/acre as a tracer.

