



# Menefee Humate®

## *A Natural Mineral, Carbon, and Humic Acid Based Soil Conditioner*

Humate is a natural trace mineral, 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, which improves the plant's ability to take in vital nutrients. Menefee Humate has the highest guaranteed level of combined humic acid, organic matter and available carbon on the market.



Listed by the Organic Materials Review Institute (OMRI) for use in production of organic food and fiber.

### Guaranteed Product Analysis:

Organic Matter .....	>85%
Humic Acids .....	>50.00%
Nitrogen (N) .....	1.00%
Potassium (K <sub>2</sub> O) .....	<0.10%
Phosphate (P <sub>2</sub> O <sub>5</sub> ) .....	<0.10%
Calcium (Ca) .....	1.04%
Sulfur (S) .....	0.18%
Magnesium (Mg) .....	0.14%
Iron (Fe) .....	0.30%
Manganese (Mn) .....	0.0004%
Copper (Cu) .....	0.0002%
pH .....	3.4

Menefee Humate will significantly improve poor soils when used in conjunction with a balanced fertilization program. Humic acid increases the water holding capacity of soils; unlocks soil nutrients; breaks up unproductive clay soils; improves soil structure, stress resistance and the effect of fertilizers; enhances root development, seed germination & survival; and promotes residue (thatch) decomposition. Humate will also increase the uptake of proteins and minerals by plants while establishing a desirable environment for microorganism development.



### How Does Menefee Humate Work?

Humates provide an available long chain carbon material to the soil structure. Carbon is a basic element for all life forms. This carbon matrix promotes enhanced soil microbial activity for both indigenous bacteria and fungi, including those added to the soil, especially mycorrhizae. This aids in the formation of a balanced soil structure for proper plant development. It also aids in decomposition of residual plant material, particularly thatch.

Humates also provide a full spectrum of organic acids that are essential to plant development, specifically humic and fulvic acids. These act as organic chelators which enhance the uptake and utilization of vital plant nutrients contained in both organic and conventional fertilizers. Due to their negative ionic characteristics, these organic acids increase the cation exchange capacity (CEC) of the soil, which enhances the transfer of nutrients through cell membranes of plant root materials.

## Application Guidelines

### **Agriculture Applications:**

100-250 lbs. per acre (110 to 275 kg per hectare) per year applied as a broadcast, pre-plant or side-dress application during crop's normal soil treatment cycle in conjunction with normal fertilization programs.

For optimum results, Menefee Humate should be incorporated in the furrow row at planting.

### **Turfgrass Applications:**

**Greens:** Apply monthly during primary turfgrass growth season at 2.5 lbs. per 1,000 ft<sup>2</sup> (1.1 kg. per 100 m<sup>2</sup>) per application in 6 – 8 applications. Include with top dressing and normal fertilization programs.

**Tees and Fairways:** Apply monthly at 2.5 lbs. per 1,000 ft<sup>2</sup> (1.1 kg per 100 m<sup>2</sup>) for at least 4 applications. Include with normal fertilization programs.

**Construction and Seed Bed Preparations:** Include at a 1.0% weight to weight inclusion rate with sand, bedding and planting media.

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**When used properly, Menefee Humate will not burn plant material and is not toxic.**

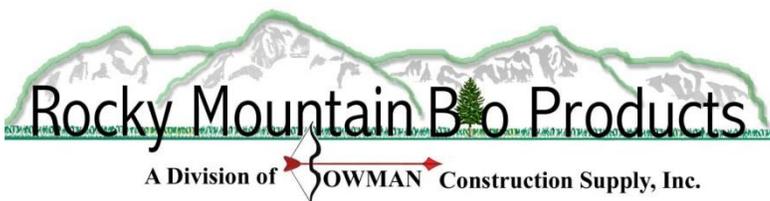
**Menefee Humate works best when minimum daily soil temperatures reach 55° F.**

**Menefee Humate is pathogen free and will significantly improve poor soils when used in combination with a balanced fertilization program.**



The following is a list of benefits from published literature on humic acid:

- Unlocks soil nutrients
- Improves effect of fertilizers
- Enhances root development
- Improves soil structure
- Enhances seed germination & survival
- Improves resistance to stress
- Enhance uniformity of stand
- Promotes residue (thatch) decomposition
- Achieves environmentally beneficial results



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