



- Seaweed Supplements
- Soil Conditioners
- Soil Remediation
- Specialty NPK Blends
- Micronutrients
- Soil Moisture Management
- Combination Products
- Pond & Lake Management

### Benefits of Use:

- Rapid response from foliar uptake
- Increased nutrient uptake from organic acids
- Increased turf vigor
- Improved color
- Optimizes natural root development
- Reduces severity of take-all patch in young bentgrass

### Problems Addressed:

- Manganese deficiency in alkaline or highly leached sandy soils
- Manganese deficiency symptoms including chlorosis
- Take-all patch in newly established bentgrass

### Guaranteed Analysis:

Iron (Fe).....	0.50%
0.50% Chelated Iron (Fe)	
Manganese (Mn).....	5.00%
5.00% Chelated Manganese (Mn)	
Combined Sulfur (S).....	3.20%

### Derived From:

Ferrous Citrate, Manganese Citrate.  
This product also contains organic acids and seaweed extracts.

### Physical Characteristics:

10.47 lbs./gal., pH 1.45

### Container Sizes & Model Numbers:

2.5 Gallon Jug	Model #57201
30 Gallon Drum	Model #57202
275 Gallon Tote	Model #57203



Manganese Plus (0-0-0-5) with SeaXtra is a formulation of manganese and iron chelated with a proprietary combination of organic acids which stabilize micronutrient elements and enhance their uptake. Manganese is involved in the synthesis of chlorophyll, in oxidation-reduction reactions, and as a cofactor in various enzyme systems. The function of manganese is closely related to iron in plants. It is most commonly deficient in alkaline or highly leached sandy soils. Deficiency symptoms include interveinal chlorosis with veins remaining green, and distinct necrotic spots on leaves. Manganese Plus is designed for foliar application to correct and prevent manganese deficiencies in turfgrasses and ornamental plants. It may also be used to reduce the severity of take-all patch in bentgrass.

### Application Instructions:

Manganese Plus (0-0-0-5) can be applied through fertigation, soil drench, conventional or foliar spray. It can be applied alone or tank mixed with other products. Shake well before using.

### Turf:

Apply 3 oz. of Manganese Plus diluted in 1 gallon of water per 1,000 sq. ft. (1 gallons in 40 gallons of water per acre) every two weeks or as needed. To maximize performance, the rates may be split into weekly applications.

### Evergreens, Deciduous Shrubs, Trees and Palms:

**Foliar Application:** Mix 1 to 2 gallons of Manganese Plus in 100 gallons of water and spray foliage to the point of runoff. Best results will occur when applied to actively growing foliage during periods of high humidity and low plant stress (early mornings, late afternoons and cloudy days are preferable to hot, dry conditions).

**Soil Drench:** Mix 4 to 5 gallons of Manganese Plus in 100 gallons of water and drench around the base of each plant within the dripline. Approximately 1 to 2 gallons of finished solution will be adequate for most ornamentals.

### Take-all Patch Suppression:

University studies show that an application of 2 lbs. of Mn per acre in the spring or fall will suppress take-all patch by as much as 70%. To achieve this rate apply 12 oz. of Manganese Plus in 2 gallons of water per 1,000 sq. ft. (4 gallons of Manganese Plus in 80 gallons of water per acre). Water into the root zone following the application.

### Note:

6 oz. of Manganese Plus per 1,000 sq. ft. per month will provide the monthly maintenance rate of SeaXtra Seaweed Extract. Higher application rates will provide additional SeaXtra benefits.

### Compatibility:

Perform a standard "jar test" to check compatibility with other products before mixing.

### Handling and Storage:

In its concentrated form, Manganese Plus is very acidic. Care and safety should be taken during handling. Gloves, goggles and protective clothing should be worn. Store between 40°-120° F. Avoid direct heat or fire. Decomposition may occur at high temperatures. Avoid freezing. Keep out of reach of children. Refer to product SDS for additional safety instructions.