

Technical Bulletin

RSA Ruffin-Redy[®] Mn

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Introduction

Ruffin-Redy[®] Mn can be used to correct manganese deficiencies in soils and plants. Yellowing of the interveinal areas of the leaves and veins that remain dark green (pictures at right) are typical symptoms of manganese deficiency. These symptoms are often confused with other deficiencies.

Function of Manganese in Plants

There are a number of functions or processes that manganese is a part of in plants including:

- reducing Fe^{+++} to Fe^{++}
- synthesis of chlorophyll and functions in photosynthesis and nitrate assimilation.
- activating enzymes essential for assimilation of carbon dioxide in photosynthesis
- formulation of riboflavin, ascorbic acid, and carotene.

Benefits of Ruffin-Redy[®] Mn

Ruffin-Redy[®] Mn is fully chelated with citric acid and EDTA acid. Benefits include:

- low use rates
- compatible with liquid fertilizers containing polyphosphates
- unique formulation derived from manganese chloride for improved product characteristics.



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Crops Labeled

Berries: blueberry, raspberry, strawberry

Nut Crops: almonds and other nut crops

Grain and Other crops: alfalfa, barley, canola, corn, hops, lentils, mint, sorghum, soybeans, sweet corn, wheat, and cotton

Vegetables: broccoli, cabbage, cauliflower, carrots, celery, lettuce, onions, peas, peppers, potatoes,

Tree and Fruit Crops: apple, citrus, grapes, peaches, plum and other tree fruits

Use Rates and Timing

Ruffin-Redy[®] Mn is most often recommended at 1 to 3 quarts per acre. It may be used for foliar or soil applications. However, foliar applications should only be used when local experience supports this use. Ruffin-Redy[®] Mn can be applied alone or in combination with liquid fertilizer for pre-plant, starter or side dress applications. For most effective treatment of row crops, make soil applications in a band at planting or as a side-dressing shortly after planting.

Contents

Manganese (Mn).....	5.0%
5% chelated manganese	
Arsenic (As).....	<5 ppm
Cadmium (Cd).....	<5 ppm
Lead (Pb).....	<5 ppm

Chelating agents: citric acid and EDTA.

Derived from manganese chloride.

Technical Specifications

Product class	fertilizer
Formulation	liquid
Weight/ gallon	10.0 pounds
Specific gravity	1.2
pH	7.4 to 7.6
Solubility in water	miscible
Appearance	pink to pale brown
Odor	slight ammonia
Min. storage temp.	32°F
Container size	bulk 270 gallon mini-bulks 2 x 2.5 gallon package

This bulletin provides some technical information and is not intended to give complete information for all applications. Always read and follow label directions.

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