



TILL-IT®

5% MANGANESE EDTA

4-0-4



WILBUR-ELLIS®
Ideas to Grow With™

GUARANTEED ANALYSIS

Total Nitrogen (N).....	4.00%
4.00% Ammoniacal Nitrogen	
Soluble Potash (K ₂ O).....	4.00%
Manganese (Mn)	5.00%
5.00% Chelated Manganese	

DERIVED FROM: Ammonium Hydroxide, Potassium Hydroxide and Manganese EDTA.

DO NOT STORE BELOW 25 DEGREES FAHRENHEIT

For chemical spills, leaks, fire or exposure,
call CHEMTREC: (800) 424-9300.

Information regarding the contents and levels of metals in this product is available
on the Internet at <http://www.aapfco.org/metals.htm>

KEEP OUT OF REACH OF CHILDREN PRECAUTION

Do not ingest. Avoid contact with skin, eyes or clothing.
Avoid breathing dust, vapor or mist.

FIRST AID

In all cases, call a poison control center or doctor for further treatment advice.

IF SWALLOWED, call a poison control center or doctor immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told by a poison control center or doctor. Do not give anything to an unconscious person. **IF ON SKIN**, take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **IF INHALED**, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration. **IF IN EYES**, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

Store in a safe manner. TILL-IT® 5% MANGANESE EDTA may be stored in mild steel (short-term), stainless steel, plastic, fiberglass, polyolefin, polyethylene, or tanks treated with rubber, glass or epoxy. Dispose of unused product and empty containers in accordance with federal, state and local regulations.

GENERAL INFORMATION

TILL-IT 5% MANGANESE EDTA is highly effective under adverse soil conditions unlike inorganic manganese compounds which are tied-up and unavailable to plants. These adverse soil conditions include: high pH (alkaline), high salinity, clay adsorption, high plant magnesium, calcium or iron, poorly drained soils, low organic matter, and low soil temperatures. TILL-IT EDTA products are water soluble and move well in the soil solution. TILL-IT EDTA products may be applied separately or in combination with fertilizers or pesticides. TILL-IT 5% MANGANESE EDTA is designed primarily for foliar applications to prevent or correct manganese deficiencies in a wide range of agronomic and ornamental plants. Its use is suggested as a supplement to a regular, balanced fertilizer program to enhance yields and improve quality. Application of TILL-IT 5% MANGANESE EDTA is a means of obtaining a quick response to needed elements. Foliar applications of TILL-IT 5% MANGANESE EDTA may be particularly beneficial during periods of peak nutrient demand, for crops grown on soils having poor nutrient availability or to crops suffering from a weakened root system. TILL-IT 5% MANGANESE EDTA should be used as part of a comprehensive Total Nutrition System® for optimizing plant growth, development, yield and quality.

FUNCTION OF MANGANESE IN THE PLANT

Manganese assists the plant with nitrogen metabolism, is involved in breakdown of carbohydrates, is essential for the assimilation of carbon dioxide in photosynthesis, and functions in the formation of riboflavin, ascorbic acid, and carotene in plants. Typical annual requirements of manganese by the plant are 0.5-1.1 pounds per acre depending upon crop and yield. The highest use period of manganese by plants is in the first 40 days of development.

DIRECTIONS FOR USE

TILL-IT 5% MANGANESE EDTA is recommended for the following crops and most other vegetables, field, row, nut, and fruit crops:

alfalfa	carrots	grasses	peaches	safflower
almonds	celery	hops	peanuts	soybeans
apples	cherries	lettuce	pears	spinach
apricots	citrus	melons	peas	strawberries
artichokes	cole crops	milo	pecans	sugarbeets
asparagus	corn	mint	peppers	sugar cane
avocado	cotton	nectarines	pineapples	sweet corn
barley	cranberries	nursery stock	plum	tomatoes
beans (all)	cucumbers	oats	plums	turfgrasses
boysenberries	cucurbits	olives	pomegranates	walnuts
brassicacs	figs	onions	potatoes	watermelons
broccoli	garlic	ornamentals	prunes	wheat
Brussels sprouts	grapes	pasture/range grasses	rice	

General Application Recommendations for Tree Fruit and Nut Crops
PRE-BLOOM APPLICATIONS: Ground: Application of TILL-IT 5% MANGANESE EDTA may be made with oil dormant/delayed dormant or with existing fungicide program pre-bloom up to 1½ quarts per 100 gallons of water. **Air:** Aerial applications of TILL-IT 5% MANGANESE EDTA may be made with oil dormant/delayed dormant or with existing fungicide program pre-bloom up to 1½ quarts per acre with sufficient water for thorough coverage. **Caution:** Combined application rates of EDTA chelates may not exceed 1½ quarts per 100 gallons of water by ground application and 1½ quarts per acre with sufficient water for thorough coverage by air.

POST-BLOOM COVER SPRAY APPLICATIONS: Ground: Apply TILL-IT 5% MANGANESE EDTA up to 1 quart per 100 gallons of water with existing spray program. **Air:** Apply 1 quart per acre with sufficient water for thorough coverage. Repeat applications as required by air or ground with existing spray program. **Caution:** Combined application rates of EDTA chelates may not exceed 1½ quarts per 100 gallons of water by ground and 1 quart per acre with sufficient water for thorough coverage by air.

POST-HARVEST AND BEFORE LEAF DROP: Ground: Apply up to 2 quarts of TILL-IT 5% MANGANESE EDTA per 100 gallons of water up to 6 quarts per acre. **Air:** Apply up to 1 gallon per acre with sufficient water for thorough coverage. Correction may not be evident until next growing season. **Caution:** Combined application rates of EDTA chelates may not exceed 1½ gallons per acre with sufficient water for thorough coverage by air or ground application.

SOIL APPLICATIONS: Foliar applications of EDTA products for deciduous and evergreen trees are preferred over soil applications. Apply 1-3 gallons per acre with pesticides, fertilizers, or irrigation water (emitters, drip, or overhead) during active growing season. Correction may not be evident for several weeks.

Specific Recommendations for Tree Fruit and Nut Crops

ALMONDS: Pre-Bloom Applications: Apply up to 1½ quarts per 100 gallons by ground application or 1½ quarts per acre with oil dormant/delayed dormant or up to pink bud with existing spray program. For post-bloom cover sprays, post-harvest recommendations and soil applications, please consult general recommendations in above text.

APPLES AND PEARS: Pre-Bloom Applications: Apply up to 1 quart per 100 gallons of water by ground application or up to 1½ quarts per acre by air with oil dormant/delayed dormant or up to green tip with existing spray program. For post-bloom cover sprays, post-harvest recommendations and soil applications, please consult general recommendations.

APRICOTS, PEACHES, AND NECTARINES: Pre-Bloom Applications: Apply up to 1 quart per 100 gallons of water by ground application or up to 1½ quarts per acre with sufficient water for thorough coverage by air with oil dormant/delayed dormant or up to pink bud or early red bud with existing spray program. For post-bloom cover sprays, post-harvest recommendations and soil applications, please consult general recommendations.

PLUMS: Pre-Bloom Applications: Apply up to 1 quart per 100 gallons of water by ground application or up to 1½ quarts per acre with sufficient water for thorough coverage by air with oil dormant/delayed dormant up to green cluster with existing fungicide program. **Post-Bloom Cover Sprays/Post-Harvest Cover Sprays:** TILL-IT 5% MANGANESE EDTA should not be applied to plums as a post-bloom or post-harvest cover spray. **Soil Applications:** Please consult general recommendations. Before application please consult with local pest control advisor for varieties extremely sensitive to phytotoxicity from foliar applications of combined products.

CITRUS: Pre-Bloom Applications: Apply up to 1½ quarts per 100 gallons of water by ground or up to 1½ quarts per acre with sufficient water for thorough coverage by air prior to bloom with existing spray program. For post-bloom recommendations and soil applications, please consult general recommendations.

GRAPES: Pre-Bloom Applications: Apply up to 1½ quarts per 100 gallons of water by ground or up to 1½ quarts per acre with sufficient water for thorough coverage with existing spray program from bud swell to 5% bloom. For cover spray and soil recommendations, please consult general recommendations. **Table Grapes:** Do not apply TILL-IT 5% MANGANESE EDTA as a post-bloom cover spray to table grapes.

General Recommendations for Row, Field and Vegetable Crops

Application of TILL-IT 5% MANGANESE EDTA is preferred shortly before or after emergence. Split applications are preferred over a single application. **Soil:** Apply with pesticide, fertilizer, or irrigation water (drip, overhead, or emitter) at 1-6 quarts per acre. TILL-IT 5% MANGANESE EDTA may be applied preplant (as near as possible to planting), during planting (close to seed) or post-emergence as a broadcast, layby, shanked, or banded application. **Foliar:** Apply up to 1 quart per acre per application with existing spray program soon after emergence. Continue applications as required. Foliar applications of TILL-IT 5% MANGANESE EDTA are preferred over soil applications due to the low stability constant of manganese EDTA compounds.

Specific Recommendations for Row, Field and Vegetable Crops

BEANS: Foliar: Apply up to 2 quarts per acre with sufficient water for thorough coverage early after emergence. Repeat applications as required. **Soil:** Please consult general recommendations.

SORGHUM AND MILO: Foliar: Apply up to 2 quarts per acre early after emergence. Repeat applications as required. **Soil:** Please consult general recommendations.

CEREAL GRAINS: Foliar: Apply up to 1 quart per acre with sufficient water for thorough coverage with the first pesticide spray program. Repeat applications as required. **Soil:** Please consult general recommendations.

STRAWBERRIES: Apply up to 1 quart per acre with sufficient water for thorough coverage with existing spray program. Preferred applications are shortly after emergence or transplant. Continue applications as required. **Soil:** Please consult general recommendations.

GREENHOUSE OR FIELD GROWN ORNAMENTALS AND FLOWERS: Soil: Apply to the soil as often as required as directed under general recommendations. **Foliar:** TILL-IT 5% MANGANESE EDTA is not recommended for foliar application to greenhouse or field grown ornamentals and flowers.

TURFGRASSES: Apply on a regular basis with existing spray program up to 2 quarts per acre. **Soil:** Please consult general recommendations.

VEGETABLE CROPS: Foliar: Apply up to 1 quart per acre with sufficient water for thorough coverage with existing spray program soon after emergence. Repeat applications as required. **Soil:** Please consult general recommendations.

FIELD AND SWEET CORN: Foliar: Apply up to 2 quarts per acre with sufficient water for thorough coverage with existing crop protection program soon after emergence. Repeat applications as required. **Soil:** Please consult general recommendations.

COTTON: Foliar: Apply up to 2 quarts per acre with sufficient water for thorough coverage with crop protection program soon after emergence. Repeat applications as required. **Soil:** Please consult general recommendations.

POTATOES: Foliar: Apply up to 2 quarts per acre with sufficient water for thorough coverage. Preferred applications are shortly after emergence and/or up to 100% bloom with current crop protection program or overhead irrigation water. Repeat applications post-bloom as required. **Soil:** Please consult general recommendations.

RICE: Foliar: Apply up to 2 quarts per acre with sufficient water for thorough coverage. Apply post-emergence on drained field or after emergence out of the water with current crop protection program. Repeat as required. **Soil:** Apply broadcast, banded, or shanked with fertilizer or preplant fertilizer at 1-3 gallons per acre.

TOMATOES: Foliar: Apply up to 2 quarts per acre with sufficient water for thorough coverage. Preferred applications are shortly after emergence or transplant. Repeat applications as required with current crop protection treatment. **Soil:** Please consult general recommendations for soil application.

FERTILIZER IMPREGNATION: TILL-IT 5% MANGANESE EDTA may be used to coat dry fertilizers to maximize distribution uniformity of the desired micronutrients. Rates as high as 2½ gallons per ton may be used depending on the dry fertilizer to be coated, blender and prevailing environmental conditions.

COMPATIBILITY

FERTILIZER COMPATIBILITY: TILL-IT 5% MANGANESE EDTA is compatible with most slightly acidic to moderately alkaline fertilizers (pH range of 3.0-11.0). TILL-IT 5% MANGANESE EDTA is not compatible with acid-based fertilizers such as combinations of phosphoric, sulfuric, and urea-phosphoric acid solutions.

PESTICIDE COMPATIBILITY: TILL-IT 5% MANGANESE EDTA is compatible with most pesticides including: insecticides, herbicides, fungicides, acaricides, and other foliar nutrients. TILL-IT 5% MANGANESE EDTA may be incorporated into an existing spray program. Please add TILL-IT 5% MANGANESE EDTA before adding the pesticide to the spray solution. Always jar test new combinations for compatibility prior to field mixing.

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using the product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of the product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of many different factors including, without limitation, manner of use or application, weather, combination with other products, or crop conditions. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Manufacturer and Seller harmless from any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label. EXCEPT FOR THIS WARRANTY, THE PRODUCT IS FURNISHED "AS-IS" AND NEITHER SELLER NOR MANUFACTURER MAKES ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE SELECTION, PURCHASE OR USE OF THIS PRODUCT; SELLER AND MANUFACTURER SPECIFICALLY DISCLAIM ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Buyer and User accept all risks arising from any use of this product, including without limitation uses contrary to label instructions, under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or Manufacturer.

To the extent permitted by law, neither Manufacturer nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE BUYER OR USER, AND THE EXCLUSIVE LIABILITY OF MANUFACTURER AND SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF MANUFACTURER OR SELLER, THE REPLACEMENT OF THE PRODUCT.

These Conditions of Sale and Limitation of Warranty and Liability shall be interpreted in accordance with the laws of the State of California, excluding its conflicts of laws rules, and may not be amended by any oral or written agreement.

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Manufactured by: WILBUR-ELLIS COMPANY LLC
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NET CONTENTS: 2.5 GALLONS (9.46 Liters)

WEIGHT PER GALLON: 10.3 POUNDS at 68°F