

# ACTINOVATE®

## SP

BIOLOGICAL FUNGICIDE/BACTERICIDE

**ACTIVE INGREDIENT:**

*Streptomyces lydicus* WYEC 108\* .....00.0371%

OTHER INGREDIENTS:.....99.9629%

TOTAL .....100.0000%

\*End-use product contains not less than  $1 \times 10^7$  colony forming units per gram

*Streptomyces lydicus* WYEC 108

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**  
**CAUTION**

See back panel for additional precautionary statements and directions for use.

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals. CAUTION.**

Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

**Personal Protective Equipment (PPE):**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Mixer/loaders and applicators must wear a dust/mist-filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

US Patent Number: 5,403,584

EPA Reg. No.: 73314-1

EPA Establishment No.: 73314-TX-001

**Manufactured by:**

Natural Industries, Inc.

12320 Cutten Road

Houston, Texas 77066

Questions? (888) 261-4731



Net Contents: 18 oz (510 g)

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **User Safety Recommendations**

##### **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. If gloves are worn, wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

#### **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of one (1) hour or until solution has dried.

Exception: If the product is soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter treated area if there is no contact with anything that has been treated.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, wear:

- Coveralls
- Chemical-resistant gloves (made of any waterproof material)
- Shoes plus socks

#### **Non-Agricultural Use Requirements**

The requirements in this box apply to uses of the product that are NOT within the scope of the Worker Protection

Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

#### **PRODUCT INFORMATION:**

Actinovate SP is a biological fungicide for the suppression/control of plant diseases such as root rot and damping-off fungi; turf diseases such as brown patch, summer patch, dollar spot; and the suppression/control of foliar fungal pathogens. When used as a soil drench or as a seed treatment, soil borne fungi suppressed/controlled include *Fusarium*, *Rhizoctonia*, *Pythium*, *Phytophthora*, *Phytophthora*, *Omnivorum* (Cotton Root Rot), *Armillaria*, *Sclerotinia*, *Verticillium*, and *Gaeumannomyces graminis*. The active ingredient in Actinovate SP colonizes the root system and protects it from harmful fungi. When used as a foliar spray, Actinovate SP effectively suppresses/controls foliar diseases such as Powdery and Downy Mildew, *Botrytis*, *Monilinia*, *Anthraco*, Greasy Spot, *Sclerotinia*, *Alternaria*, and *Erwinia*.

When applied to the soil, Actinovate SP also breaks down minerals and micronutrients making them more available to plants resulting in increased size and vitality. Plants treated with Actinovate SP as a soil drench will become hardier, more vigorous and will have a robust and protected root system.

#### **INTEGRATED PEST MANAGEMENT (IPM):**

Integrate Actinovate SP into an overall disease and pest management strategy whenever fungicide use is necessary. Follow practices known to reduce disease

development. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

#### **USE RATE DETERMINATION:**

Carefully read and follow all label directions, use rates, and restrictions. For best results, apply Actinovate SP prior to or in the early stages of disease development. For proper foliar application, determine the number of [acres] [square feet] to be treated, the specified label use rate, and select the appropriate gallonage to give thorough and uniform coverage of all plant parts to be protected. For proper soil application, determine the number of [acres] [square feet] to be treated, the specified label use rate, and select the appropriate gallonage to give good saturation of the soil in order for the product to establish itself on the root system. For best results, apply product solution to damp soil. Maintaining moist soil after application will enable the product to perform as expected. Prepare only the amount of spray or soil drench solution to treat the measured area. Accurate spray equipment calibration is essential prior to use.

#### **PREHARVEST INTERVAL:**

Actinovate SP can be applied up to and including the day of harvest.

#### **APPLICATION DIRECTIONS:**

##### **Compatibility:**

Actinovate SP is completely soluble and does not require agitation to keep suspended in a solution. Actinovate SP is compatible with most chemical fungicides, insecticides and fertilizers. If tank mixes are desired, observe the most restrictive directions, precautions and limitations on labeling of all products used. Actinovate SP can be tank mixed or dry mixed with all chemical fungicides,

insecticides, and fertilizers unless otherwise restricted. Consult manufacturer for compatibility questions. Do not apply soil fumigants to areas treated with Actinovate SP. If fumigants must be applied to the soil, all fumigant active ingredient must be completely dissipated prior to applying Actinovate SP.

#### **Application Uses:**

Actinovate® Soluble is a biological fungicide for use as a soil application (drench and in-furrow), seed treatment, cutting or bare rooted transplant dip, ornamental bulb crop soak or dusting treatment, and foliar application for ornamentals, all greenhouse and nursery crops, landscape plants including tree seedlings for transplanting to the field.

#### **GREENHOUSE & NURSERY SOIL APPLICATION**

*For indoor and outdoor applications including field stock and field grown cut flowers*

For preventative suppression/control of *Pythium*, *Rhizoctonia*, *Phytophthora*, *Fusarium*, *Verticillium* and *Sclerotinia* on greenhouse, nursery, landscape and interiorscape crops.

**Soil Drench:** Mix 4-6 oz. of Actinovate SP in 100 gallons of water to create solution. Apply solution as a drench to plants/growing media at a rate of 1 gallon per cubic foot of growing media (this equates to enough solution to saturate soil without creating run-off) or until soil in pot (or root ball of plant) is completely saturated just prior to run off.

*For smaller quantities: Use 1 teaspoon of Actinovate SP per 2 gallons of water to create solution and apply as above.*

**Application to Soil At Blending:** Anytime prior to planting incorporate Actinovate Soluble into potting soil as a spray during blending. Use 1.5 - 4.0 oz of Actinovate Soluble in an appropriate amount of water per yard of soil

Actinovate SP can be applied through low pressure watering nozzles such as fan nozzles, through overhead boom type sprayers or sprinklers, hydroponics systems, injectors, flood benches or other drench watering systems. Actinovate SP is compatible with most chemical fungicides, insecticides, and fertilizers as well as other biological products. See the Compatibility section for additional details.

#### **Cutting or Bare Rooted Transplant Dip:**

Dip cuttings or transplants in Actinovate SP dry powder or in a solution of 6-18-oz Actinovate SP and 50 gallons water. Let soak for up to three hours prior to planting. Plant treated cuttings or transplants in potting mix or soil in the usual manner.

#### **GREENHOUSE & NURSERY FOLIAR SPRAYS**

*For indoor and outdoor applications including field stock and field grown cut flowers*

For preventative suppression/control of Powdery Mildew, Downy Mildew, *Botrytis*, *Sclerotinia*, *Xanthomonas*, *Pseudomonas*, and *Alternaria* on greenhouse and nursery plants, apply 6-12 oz Actinovate SP per acre. Dissolve Actinovate SP in 50-100 gallons of water and apply to foliage and blossoms every 7 to 14 days depending on disease pressure. Crop size, spray equipment, and local practices will determine the volume of water needed. Spray to wet, but do not allow run-off.

*For smaller quantities: Use 1 teaspoon of Actinovate SP per gallon of water as a dilution and apply as above.*

Actinovate SP can be applied using hand-held backpack or ground spray equipment. Clean application equipment before use of this product and use prepared sprays within 4 hours of preparation. For best results, use a non-ionic spreader-sticker in conjunction with application. Consult

manufacturer or sales representative for specific suggestions.

**Ornamental Bulb Crops (Including corms, rhizomes, tubers, and seeds):**

Soak: Soak bulbs in solution of Actinovate SP at 6-18 oz. per 100 lbs. of bulbs. Dilute in enough water to completely cover bulbs. Thoroughly cover all surfaces of bulbs with solution for 1 hour prior to planting.

Soil Drench: Apply to soil through irrigation or as an in-furrow seed spray in 10-200 gallons of water at a rate of 6-12 oz. of Actinovate SP per acre.

Dusting: Prior to planting or shipping, evenly dust bulbs at a rate of 2-6 oz. of Actinovate SP per 100 lbs. of bulbs.

**GREENHOUSE VEGETABLES AND HERBS**

For suppression of *Pythium*, *Phytophthora*, *Rhizoctonia*, *Verticillium*, *Fusarium*, *Sclerotinia*, *Botrytis*, *Alternaria*, *Anthraxnose*, *Xanthomonas*, *Pseudomonas*, Powdery Mildew and Downy Mildew on all greenhouse vegetable and herb crops.

Soil Drench: Use 4-6 oz of Actinovate SP in 100 gallons of water to create solution. Apply solution as a drench to plants/growing media at a rate of 1 gallon per cubic foot of growing media (this equates to enough solution to saturate soil without creating run-off).

Application to Soil At Blending: Anytime prior to planting incorporate Actinovate Soluble into potting soil as a spray during blending. Use 1.5-4 oz of Actinovate Soluble in an appropriate amount of water per yard of soil

Hydroponics systems: Use 0.5-1.5 oz. per 1,000 square feet of growing area.

Foliar Spray: Apply 6-12 oz Actinovate SP per acre. Dissolve Actinovate SP in 50-100 gallons of water and apply to foliage and blossoms every 7 to 14 days depending on disease pressure. Crop size, spray

equipment, and local practices will determine the volume of water needed. Spray to wet, but do not allow run-off.

For smaller areas or quantities: Use the dilution rate of 1 teaspoon of Actinovate SP per gallon of water as a dilution and apply to plants as above.

For amount of product to use in a given area, use 1-2 teaspoons (4-8 grams) dissolved in an appropriate amount of water per 1,000 sq ft of growing area.

Actinovate SP can be applied using hand-held backpack or ground spray equipment. Clean application equipment before use of this product and use prepared sprays within 4 hours of preparation. For best results, use a non-ionic spreader-sticker in conjunction with application. Consult manufacturer or sales representative for specific suggestions.

**TURF GRASS AND LANDSCAPE APPLICATIONS**

For the prevention, suppression and aiding in control of landscape foliar and soil diseases (Powdery and Downy Mildew, *Botrytis*, *Rhizoctonia*, *Fusarium*, *Verticillium*, *Pythium*, and *Phytophthora*), and turf grass diseases (Brown Patch, Take-all Patch, *Pythium* blight, Dollar Spot, Powdery Mildew, Rusts, and Molds).

**Application Uses:**

Actinovate SP can be applied to turf grass including uses on golf courses, sod farms, home lawns, home landscapes, office buildings, apartment complexes, cemeteries, sports fields and other such sites.

Actinovate SP can also be applied to outdoor ornamental plants used for landscaping around homes, buildings, golf courses, sports fields, and cemeteries.

**APPLICATION INSTRUCTIONS:**

**GOLF COURSE TEES, GREENS AND FAIRWAYS, COMMERCIAL AND RESIDENTIAL LAWNS, SOD**

**FARMS, ATHLETIC FIELDS PARKS, CEMETERIES AND SIMILAR SITES:**

**Soil Drench Application:** Mix Actinovate SP with appropriate amount of water (2-4 gallons per 1000 sq. ft.). Water in immediately after application with sprinklers for 3-6 minutes.

Apply at a rate of 54-oz of Actinovate SP per acre for initial application or problem areas when soil temperatures are above 45°F.

Apply maintenance applications of 18 oz. per acre every 4 to 8 weeks through season or until soil temperatures reach 45°F or less.

A soil surfactant is recommended to best move the solution to the root zone of the turf. Consult manufacturer for product recommendations.

**Foliar Disease Spray Application:** Mix Actinovate SP with appropriate amount of water (50-150 gallons per acre). Apply in early morning or evening on wet turf.

**For smaller quantities:** For initial application or problem area use 1.25-oz of Actinovate SP in 5 gallons of water per 1,000 sq. ft. of turf grass. For maintenance application use 0.5-oz of Actinovate SP in 5 gallons of water per 1,000 sq. ft. of turf.

See application chart below for more detailed application instructions.

<b>APPLICATION CHART FOR GOLF COURSE, (FAIRWAYS, ROUGHS, GREENS, TEES), COMMERCIAL, LAWNS RESIDENTIAL LAWNS, CEMETERIES, PARKS (AND SIMILAR SITES) ATHLETIC FIELDS, SOD FARMS, SEED PRODUCTION, AND OTHER TURF</b>			
Actinovate SP has no Pre-Harvest Interval. Under moderate to severe disease pressure, increase rates and reduce spray intervals or use in a tank mix or rotational program with other registered fungicides.			
<b>Turf &amp; grass type</b>	<b>Disease</b>	<b>Rate</b>	<b>Application Instructions</b>
Bluegrass, Bentgrass, Bermuda grass, (Common & Hybrid) Dichondra, Fescue, Orchard grass, Poa Annuua, St. Augustine, Ryegrass, Zoysia, Mixtures and other grasses or ornamental turf	Brown patch ( <i>Rhizoctonia solani</i> ) Take All Patch ( <i>Gaeumannomyces graminis</i> ) Dollar Spot ( <i>Lanzia</i> spp. <i>Moellerodiscus</i> spp. (formerly <i>Sclerotinia homeocarpa</i> ) Powdery Mildew ( <i>Erysiphe graminis</i> ) Rust ( <i>Puccinia</i> spp.) Anthracnose ( <i>Colletotrichum graminicola</i> ) Grey Leaf Spot ( <i>Pyricularia grisea</i> ) Slime Molds ( <i>Mucilaga</i> and <i>Physarum</i> ) Gray snow mold ( <i>Typhula</i> spp.)	18-54 oz/acre (12-36 grams per 1,000 sq. ft.)	<b>Drench Applications:</b> Mix 18-54 oz. Actinovate SP with appropriate amount of water (100-150 gallons per acre). Consider use of a soil surfactant to best move the solution to the root zone of the turf. Consult manufacturer for product suggestions. <i>Initial Application or Problem Areas:</i> Apply at a rate of 54 oz. of Actinovate SP per acre of turf grass when soil temperatures are above 45°F. <i>Maintenance:</i> Apply at a rate of 18 oz. of Actinovate SP per acre of turf grass every 7-24 days through season or until soil temperatures reach 45°F or less.  <b>Spray Applications:</b> Mix 18-54 oz. of Actinovate SP with appropriate amount of water (50-150 gallons per acre of turf grass). Apply at <i>initial application</i> or <i>maintenance rates</i> as above in early morning or evening on wet turf. Water in immediately after application with sprinklers for 3-6 minutes. Consider use of a soil surfactant to best move the solution to the root zone of the turf. Consult manufacturer for product suggestions. Continue applications at 7-24 day intervals through season or until soil temperatures fall to 45°F or lower.

	<b>Pink snow mold</b> ( <i>Microdochium nivale</i> )		
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**LANDSCAPE (ORNAMENTALS, VEGETABLE GARDENS, GARDEN FRUIT TREES) AND INTERIORSCAPES**

For the prevention, suppression and aiding in control of diseases (Powdery and Downy Mildew, *Botrytis*, *Rhizoctonia*, *Fusarium*, *Verticillium*, *Pythium*, and *Phytophthora*), and turf grass diseases (Brown Patch, Take-all Patch, *Pythium* blight, Dollar Spot, Powdery Mildew, Rusts, and Molds).

**For Root Diseases in Transplants, Installations and**

**Established Plants:** Dissolve 1-2 teaspoons per 2 gallons of water to create a solution. Apply solution to soil around plants root system until soil is saturated without creating a run-off. Apply to plant before, during or after transplant.

**For Foliar Diseases:** Dissolve 1-2 teaspoons per 2 gallons of water and apply in order to acquire thorough uniform coverage. See application chart below for more detailed application instructions.

<b>APPLICATION CHART FOR SOIL DRENCH &amp; FOLIAR SPRAY ON LANDSCAPE &amp; INTERIORSCAPES</b>				
Actinovate Soluble has no Pre-Harvest Interval. Under moderate to severe disease pressure, increase rates and reduce spray intervals or use Actinovate Soluble in a tank mix or rotational program with other registered fungicides.				
<b>Crops</b>	<b>Foliar Disease</b>	<b>Soil Diseases</b>	<b>Rate</b>	<b>Application Instructions</b>
<b>Interiorscape plants and trees</b>  <b>Outdoor landscape ornamental plants, fruit trees, and vegetable gardens</b>	<b>Black spot of rose</b> <i>Diplocarpon rosea</i> <b>Botrytis</b> <i>Botrytis cinerea</i> <b>Downy Mildew</b> <i>Peronospora</i> spp. <b>Leaf spots</b> <i>Alternaria</i> spp. <b>Powdery mildew</b> <i>Erysiphe</i> spp. <i>Oidium</i> spp. <i>Podosphaera</i> spp. <i>Sphaerotheca</i> spp. <b>Phytophthora spp.</b> <b>Rust</b> <i>Puccinia</i> spp. <b>Fireblight</b> <i>Erwinia</i>	<i>Pythium</i> spp. <b>Phytophthora spp.</b> <i>Fusarium</i> spp. <b>Rhizoctonia spp.</b> <b>Thelieviopsis</b> <b>Verticillium</b> <b>Sclerotinia</b>	3-12 oz/100 gal (1-2 tsp /2 gal)	<b>Foliar Spray:</b> Apply Actinovate Soluble at rates ranging from 3-12 oz of product in 100 gallons of water per acre. Make applications on a 3- to 14-day schedule. Begin applications when conditions favor disease development prior to the onset of disease. When conditions favor severe disease development shorten the spray interval or use a higher rate. Spray plants thoroughly wet to run off.  <b>Soil Application:</b> Apply Actinovate Soluble at rates ranging from 4-6 oz of product in 100 gallons of water. Apply as a soil drench to base of plant and/or root ball until soil is saturated without run-off. Reapply every 4-12 weeks depending on disease pressure.

## CHEMIGATION

### General Requirements:

- Apply Actinovate SP at 1-12 oz per 10-200 gallons of water, depending on desired application.
- Apply Actinovate SP only through 1) overhead boom and mist-type systems, 2) sprinklers such as impact or micro-sprinklers, central pivot, lateral move, end tow, side wheel roll, traveler, solid set, or hand-move systems, 3) pressurized drench (flood) or drip (trickle) systems, 4) micro irrigation such as spaghetti tube or individual tube irrigation, 5) hand-held calibrated irrigation equipment such as hand-held wand with injector, and 6) ebb and flow systems. Do not apply this product through any other type of irrigation system.
  - Plant injury or lack of effectiveness can result from non-uniform distribution of treated water.
  - If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
  - Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
  - A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### Requirements for Chemigation Systems

#### Connected to Public Water Systems:

- 1) Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an

average of at least 25 individuals daily at least 60 days out of the year.

- 2) Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- 4) The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with



pesticides and capable of being fitted with a system interlock.

- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.
- 8) Continuous agitation is not required in pesticide supply tanks unless tank mixing with other products or fluid fertilizers that require it.
- 9) Application of the product may be made continuously for the duration of the water application or can be applied at the end or after the water application.
- 10) To mix in supply tank, fill tank half way with water and add product. Stir until completely dissolved. Fill tank with remaining amount of water.
- 11) Use product with 10-200 gallons of water per acre. Use enough water so as not to create excessive leaching or run off.

#### **Sprinkler Chemigation Requirements:**

- 1) The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- 2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- 4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5) The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.
- 8) Continuous agitation is not required in pesticide supply tanks unless tank mixing with other products or fluid fertilizers that require it.
- 9) Application of the product may be made continuously for the duration of the water application or can be applied at the end or after the water application.
- 10) To mix in supply tank, fill tank half way with water and add product. Stir until completely dissolved. Fill tank with remaining amount of water.
- 11) Use product with 10-200 gallons of water per acre. Use enough water so as not to create excessive leaching or run off.

#### **Drip Chemigation Requirements:**

- 1) The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to

- prevent water source contamination from back flow.
- 2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
  - 3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - 4) The system must contain functional inter-locking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
  - 5) The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  - 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
  - 7) Use of a supply tank is recommended. Continuous agitation is not required in pesticide supply tanks unless tank mixing with other products or fluid fertilizers that require it.
  - 8) Application of the product may be made continuously for the duration of the water application or can be applied at the end or after the water application.

- 9) To mix in supply tank, fill tank half way with water and add product. Stir until completely dissolved. Fill tank with remaining amount of water.
- 10) Use product with 10-200 gallons of water per acre. Use enough water so as not to create excessive leaching or run off.

#### **Flood Chemigation Requirements:**

- 1) Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from back flow if water flow stops.
- 2) Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
  - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
  - c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  - d. The system must contain functional interlocking controls to automatically shut off

the pesticide injection pump when the water pump motor stops.

e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

- 3) Use of a supply tank is recommended. Continuous agitation is not required in pesticide supply tanks unless tank mixing with other products or fluid fertilizers that require it.
- 4) Application of the product may be made continuously for the duration of the water application or can be applied at the end or after the water application.
- 5) To mix in supply tank, fill tank half way with water and add product. Stir until completely dissolved. Fill tank with remaining amount of water.
- 6) Use product with 10-200 gallons of water per acre. Use enough water so as not to create excessive leaching or run off.

#### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage and disposal.

**Pesticide Storage:** Store in a dry, cool place out of direct sunlight and away from heat sources. Keep from overheating or freezing. Optimum storage temperature is 40°F to 85°F.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments by industry).

**Container Handling:** Non-refillable container. Do not reuse or refill this container.

Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration.

#### **LIMITED WARRANTY/DISCLAIMER**

Seller warrants that this product complies with the specifications expressed on this label. To the extent consistent with applicable law, Seller makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose. To the extent consistent with applicable law, Seller's liability for default, breach or failure under this law shall be limited to the amount of the purchase price. To the extent consistent with applicable law, Seller shall have no liability for consequential damages.

Best if Used by: