



ZeroTol[®] 2.0

SPECIMEN LABEL

EPA REGISTRATION NO. 70299-12

ACTIVE INGREDIENTS:

Hydrogen Peroxide..... 27.1%
 Peroxyacetic Acid..... 2.0%

OTHER INGREDIENTS:..... 70.9%

TOTAL:..... 100.0%

KEEP OUT OF REACH OF CHILDREN DANGER – PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

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 eye.
- Call a poison control center or doctor for treatment advice.

If on skin or clothing

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15–20 minutes.
- Call a poison control center or doctor for treatment advice.

If swallowed

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

If inhaled

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER

For information on ZeroTol 2.0 (this pesticide product), (including general health concerns or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 8:00 AM to 12:00 PM Pacific Standard Time. In the event of a medical emergency, call your poison control center at 1-800-222-1222.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

CORROSIVE: Causes irreversible eye damage. Harmful if absorbed through skin. Causes skin burns. May be fatal if swallowed. Harmful if inhaled. Do not breathe vapor. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles or face shield) and rubber gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Handlers who may be exposed to the undiluted product through mixing, loading, application, or other tasks must wear: coveralls over long-sleeved shirt and long pants, rubber gloves, chemical resistant footwear plus socks, and protective eyewear (goggles or face shield). Handlers who may be exposed to the dilute through application or other tasks must wear: long-sleeved shirt and long pants, and shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

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 remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. 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 disposing of equipment washwaters or rinsate. Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption. This product is highly toxic to bees and other beneficial insects exposed to direct contact on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not apply this product or allow it to drift to crops where beneficials are part of an Integrated Pest Management strategy. This pesticide is toxic to birds who eat treated seed exposed on soil surface. Treated seed exposed on soil surface may be hazardous to birds, wildlife, fish and aquatic invertebrates. Cover or collect seeds spilled during loading.

PHYSICAL AND CHEMICAL HAZARDS

Corrosive. Strong oxidizing agent. Do not use in undiluted form. Mix only with water in accordance with label instructions. Never bring undiluted product in contact with other pesticides, cleaners or oxidative agents.

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), notification to workers, and Restricted-Entry Interval (REI). The requirements in this box only apply to the uses of this product that are covered by the Worker Protection Standard.

For enclosed environments:

There is a Restricted Entry Interval (REI) of one (1) hour for this product when applied via fogging or spraying to growing plants, surfaces, equipment, structures and non-porous surfaces in enclosed glass-houses and greenhouses. PPE required for early entry to 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, is coveralls worn over long-sleeved shirt and pants, waterproof gloves and shoes plus socks.

There is a Restricted Entry Interval (REI) of zero (0) hours for pre-plant dip, seed treatment, soil drench, mop, sponge, dip, soak, rinse or other non-spraying application methods when used in enclosed environments such as glasshouses and greenhouses.

For field applications:

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

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this 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

ZeroTol 2.0 is a liquid bactericide/fungicide used to treat and control plant pathogens on indoor, greenhouse, and outdoor-grown: ornamental plants, flowering plants, bedding plants, nursery stock, landscape plants, turf, and all agricultural crops including food crops.

Use ZeroTol 2.0 as a preventative treatment for suppressing the following plant pathogens and diseases: *Alternaria* – *Anthraco*se – *Aphanomyces* – Black Spot – *Botrytis* (grey mold) – Downy Mildew – *Erwinia*, *Fusarium* (root rot) – Leaf Spot – *Phytophthora* (blights, rots) – *Plasmopara* – Powdery Mildew – *Pseudomonas* – *Pythium* – *Rhizoctonia* – Rust – Scab – Smut – *Thielaviopsis* – *Uncinula* (powdery mildew) – *Xanthomonas* – Wilts & Blights – *Ralstonia solanacearum* (brown rot, bacterial wilt) – *Sclerotinia sclerotiorum* (white mold) – *Tobacco mosaic virus*.

Use ZeroTol 2.0 to treat/control plant pathogens on bedding plants, flowering plants, roses, poinsettia, ornamentals, nursery stock, trees, turf, cut flowers, bulbs, cuttings, seedlings, seeds and seedbeds.

ZeroTol 2.0 may be used on the following indoor or field-grown crops, including but not limited to: tomato, cucumber, herbs, hops, tobacco and other crops. Apply ZeroTol 2.0 up to and including the day of harvest.

Apply ZeroTol 2.0 to treat/control bacteria, fungi and algae on greenhouse structures, benches, pots, watering systems, evaporative coolers, storage rooms, ventilation equipment, floors and other equipment.

APPLICATION METHODS

Ground: This product can be applied by commonly used ground equipment, such as hose-end, pressurized, greenhouse and handheld sprayers. Use proper spray pressure, gallonage per acre, nozzles, nozzle spacing and ground speed.

Chemigation: This product can be applied through sprinkler (center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set or hand move) or drip-type irrigation systems. Refer to the **Chemigation** section of this label for additional directions and precautions.

Solution Preparation:

ZeroTol 2.0 works best when diluted with water containing low levels of organic or inorganic materials. Measuring total suspended solids and EC (Electrical Conductivity) can help in determining concentration of organic and inorganic content in the water. Thoroughly rinse out mixing tank with water before mixing. ZeroTol 2.0 will readily mix with clean, water and does not require agitation.

ZeroTol 2.0 is formulated with minimal surfactant for plants having waxy or hairy surfaces. In order to increase the effectiveness of ZeroTol 2.0, additional non-ionic surfactant may be added, for treatment of plants with difficult to reach surfaces, or for plants having waxy or hairy surfaces. Only non-ionic surfactants are compatible with ZeroTol 2.0.

ZeroTol 2.0 works by contact with the plants and materials being treated. It is important to ensure that all surfaces are thoroughly wetted. ZeroTol 2.0 does not produce any visible residue, distinct odor or deleterious effects to plants when used in accordance with label directions.

ZeroTol 2.0 is a strong oxidizing agent and may react with residues of metal-based fungicides or supplements. Do not apply ZeroTol 2.0 as a foliar spray immediately following foliar applications of metal-based products. Allow at least 48-72 hrs. after application of metal-based products before applying ZeroTol 2.0 as a foliar spray. Check the label of the metal-based product prior to application for specific instructions for use with other fungicide products.

Note: Use spray solution the same day it is prepared, do not store and reuse mixed spray solution.

Compatibility:

ZeroTol 2.0 is compatible as a direct injection or tank-mix with many commonly used pesticides, fertilizers, adjuvants and non-ionic surfactants but has not been fully evaluated with all of these. Do not direct inject or tank mix ZeroTol 2.0 in to the irrigation system or in the spray tank with pesticides, surfactants or fertilizers before conducting a compatibility test to show it is physically compatible, effective and noninjurious under your use conditions. Do not tank mix ZeroTol 2.0 with copper or other pesticides containing metals at a dilution rate stronger than 1:100. Consult your BioSafe Systems technical representative for specific instructions.

To ensure compatibility, evaluate them prior to use as follows: Using a suitable container, add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by liquid flowables and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

Consult specific product labels for additional information or restrictions concerning tank mixing. Observe the most restrictive limitations and precautions of the labeling of all products used in mixtures.

Plant Sensitivity Testing:

For foliar applications, only use ZeroTol 2.0 at labeled dilutions. Solutions more concentrated than described on this label may result in leaf necrosis for some plants. ZeroTol 2.0 has been designed to provide a balanced source of the active ingredient directly to the plant surface. ZeroTol 2.0 has been used and tested on many varieties of plant material; however, the nature of the target plant, environmental conditions, plant vigor, and the use of other pesticides can all affect plant sensitivity. The safety of ZeroTol 2.0 has not been determined on all plants and crops. Plants grown in greenhouses vary greatly from those grown under field conditions. Determine if ZeroTol 2.0 can be safely used prior to application. Before treating large numbers of plants, test ZeroTol 2.0 or tank mixes of ZeroTol 2.0 and other pesticides or fertilizers at labeled rates on a separate set of plants and observe for symptoms of sensitivity prior to use. Symptoms on foliage include yellow or brown spotting, "burned" tips and/or yellow or brown scorching along the leaf edges.

When using ZeroTol 2.0 for control of organisms living on the plant tissue (such as Downy and Powdery Mildew), treatment may result in lesions on plant tissue. ZeroTol 2.0 will oxidize parasitic organisms living in plant tissue that are not always visible to the naked eye. Resulting oxidative effects may include spotting, or drying of the plant tissue where organisms inhabited tissue.

Read the entire label before using this product. Use only according to label directions. Do not use ZeroTol 2.0 above labeled rates.

USE RATES AND DIRECTIONS

INDOOR AND OUTDOOR-GROWN CROPS

PREHARVEST INTERVAL: PHI = Zero (0) Days. ZeroTol 2.0 can be sprayed up to and including the day of harvest.

Use ZeroTol 2.0 to treat plant diseases on indoor and outdoor grown crops through soil drench, irrigation, fog and foliar applications. For specific foliar applications refer to **Application Rates and Directions Chart**.

Aerosol/Fog Treatments For Control of Foliar Diseases in Crops*

ZeroTol 2.0 can be applied as an aerosol/fog using approved commercial cold or thermo fogging equipment. Use a rate of 5.0-16.0 fl. oz. of ZeroTol 2.0 per 10,000 sq. ft. of greenhouse area mixed in 0.5-1.0 gallon of water. Ensure even distribution of applied fog in the greenhouse to be treated. Always test by fogging a few plants first at these concentrations and ensure no injury to plants before using on a large scale. For crops that are in bloom and/or have low tolerance to ZeroTol 2.0, do not exceed solution concentration of 1:50 (2.56 fl. oz. of ZeroTol 2.0 per 1.0 gallon of water per 10,000 sq. ft.). Repeat applications once every 5-7 days as needed until complete control of disease is achieved. Use an approved and compatible dispersal agent to minimize evaporation of applied aerosol and better deposition on plant surface.

Foliar Spray Treatments

ZeroTol 2.0 works immediately on contact with any plant surface for control of plant diseases – see **Application Rates and Directions Chart**.

Good coverage and wetting of the foliage is required. Do not spray ZeroTol 2.0 during conditions of intense heat, drought or poor plant vigor.

Curative Application Rates:

1. For best results, apply at first sign of disease. Spray diseased plants using a 1:100 dilution rate, or 128 fl. oz. of ZeroTol 2.0 per 100 gallons of water. Ensure adequate coverage of upper and lower foliage, stems, branches and stalks.
2. Spray or mist plants in morning or evening. Apply 50-500 gallons of spray solution per treated acre or 11.5-115 gallons per 10,000 sq. ft., ensuring adequate coverage of upper and lower foliage, stems, branches and stalks. Final spray solution volume will depend on crop type, canopy size and/or growth stage.
3. Maintain a 3-10 day spray schedule until control is achieved. Under heavy disease pressure or when conditions are favorable for rapid disease development; spray intervals can be shortened to 3-5 days.
4. Concentrations up to 1:40 (2.5% v/v) can be used as a rescue treatment on berries (excluding strawberries), citrus crops, cucurbit crops and fruiting vegetables, after testing to ensure the rate is safe on plants. Do not apply 1:40 rate while crops are in bloom. Always test for phytotoxicity by spraying on few plants before using on a large scale.

Preventative Application Rates:

1. Begin applications early when plants are small. Use ZeroTol 2.0 at a dilution rate of 1:200-1:400 (64-32 fl. oz. per 100 gallons of water).
2. Spray or mist plants in morning or evening. Apply 50-500 gallons of spray solution per treated acre or 11.5-115 gallons per 10,000 sq. ft., ensuring adequate coverage of upper and lower foliage, stems, branches and stalks. Final spray solution volume will depend on crop type, canopy size and/or growth stage.
3. Maintain a 5-10 day spray schedule.

Electrostatic Spray Applications:

For electrostatic sprayers, use the 1:100-1:300 curative rate applied in 10-25 gallons of spray solution per treated acre or 2.3-5.7 gallons per 10,000 sq. ft. Follow spray equipment manufacturer's instructions for final spray volume to obtain adequate coverage.

Application Rates and Directions Chart

ZeroTol 2.0 can be used on the following crops, including but not limited to:

Crops	Disease	Application Rates
Cane Berries/ Small Fruits Including, but not limited to: Blackberries Blueberries Raspberries	Alternaria Angular Leaf Spot Botrytis Crown Rot Downy Mildew Mummy Berry Disease Leaf Blight Powdery Mildew	Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage. Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development. Rescue: 1:40 dilution. Use a 1:40 dilution rate under severe disease pressure or as a rescue treatment. Test for phytotoxicity prior to using this rate. Apply during the dormant stage to reduce pathogens. DO NOT apply 1:40 rate to blooming crops.
Citrus Crops Including, but not limited to: Citrus Hybrids Grapefruit Kumquat Lemon Limes Orange Tangerine	Alternaria Anthracnose Brown Rot Phytophthora Powdery Mildew Rust Scab Citrus Canker	Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage. Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development. Citrus Canker: Spray entire tree including trunk, branches, leaf canopy. Spray all areas where branches have been pruned, grafted or have become damaged or have apparent lesions or breaks in bark. Make applications immediately after pruning. For Soil Borne Pathogens see Soil Drench Treatments . Rescue: 1:40 dilution. Use dilution rate under severe disease pressure or as a rescue treatment. Test for phytotoxicity prior to using this rate. DO NOT apply 1:40 rate to blooming crops.
Cucurbit Crops Including, but not limited to: Cucumber Melons	Alternaria Anthracnose Belly Rot Downy Mildew Gummy Stem Blight Leaf Spot Powdery Mildew	Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage. Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development. Rescue: 1:40 dilution. Use dilution rate under severe disease pressure or as a rescue treatment. Test for phytotoxicity prior to using this rate. DO NOT apply 1:40 rate to blooming crops.

Crops	Disease	Application Rates
Fruiting Vegetables Including, but not limited to: Eggplant Peppers Tomatoes Tomatillos	Anthracnose Alternaria Late Blight Bacterial Wilt Bacterial Leaf Spot Bacterial Speck Botrytis - Gray Mold Cladosporium Mold Powdery Mildew Fusarium Pythium Rhizoctonia	<p>Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage.</p> <p>Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development.</p> <p>For Soil Borne Pathogens see Soil Drench Treatments.</p> <p>Rescue: 1:40 dilution. Use dilution rate under severe disease pressure or as a rescue treatment. Test for phytotoxicity prior to using this rate. DO NOT apply 1:40 rate to blooming crops.</p>
Herbs & Spices Including, but not limited to: Basil Chives Cilantro Coriander Dill Medicinal Mint Oregano Parsley Rosemary Sage Other Miscellaneous Herbs	Anthracnose Downy Mildew Powdery Mildew Pythium Rot	<p>Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage.</p> <p>Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development.</p> <p>For Soil Borne Pathogens see Soil Drench Treatments.</p>
Hemp	Anthracnose Bacterial Leaf Spot Botrytis Blight/Gray Mold Downy Mildew Fungal Leaf Spot Powdery Mildew Rust Fusarium Wilt	<p>Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage.</p> <p>Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development.</p> <p>Rescue: 1:40 dilution. Apply under severe disease pressure or as a rescue treatment. Test for phytotoxicity prior to using this rate. DO NOT apply 1:40 rate to blooming crops.</p> <p>For Soil Borne Pathogens see Soil Drench Treatments.</p>
Leafy Vegetables Including, but not limited to: Lettuce Microgreens	Brown Rot Botrytis Downy Mildew Early Blight Late Blight Phytophthora Powdery Mildew Rust	<p>Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage.</p> <p>Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development.</p> <p>For Soil Borne Pathogens see Soil Drench Treatments or Hydroponic Application instructions.</p>
Other Miscellaneous Crops: Including, but not limited to: Tobacco Hops	Anthracnose Alternaria Leaf Spot- (Brown Mold) Angular Leaf Spot Frogeye Leaf Spot Botrytis - Gray Mold Downy Mildew Powdery Mildew Blue Mold	<p>Preventative: 1:200-1:400 dilution. Start preventative sprays early when conditions favor disease development. Spray on a 5-10 day schedule with thorough coverage.</p> <p>Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development.</p> <p>Rescue: 1:40 dilution. Use dilution rate under severe disease pressure or as a rescue treatment. Test for phytotoxicity prior to using this rate. DO NOT apply 1:40 rate to blooming crops.</p>
Strawberries	Alternaria Angular Leaf Spot Botrytis Crown Rot Downy Mildew Mummy Berry Disease Leaf Blight Powdery Mildew Fruit Rot	<p>Preventative: 1:200-1:400 dilution. Begin preventative applications prior to disease development and continue throughout the season, maintaining a 5-10 day spray schedule.</p> <p>Curative: 1:100 dilution. Use curative rate at first sign/symptom of infection, following 3-5 day spray intervals until control is achieved, or use when conditions favor rapid disease development.</p>

Soil Drench Treatments

ZeroTol 2.0 is effective for the control of soil-borne plant diseases such as *Pythium*, *Phytophthora*, *Rhizoctonia*, *Thielaviopsis* or *Fusarium*. Use as a soil drench at the time of seeding or transplanting, as well as a periodic drench throughout the plant's life. Use ZeroTol 2.0 on potting soil and growing mediums prior to planting.

1. Use a dilution of 1:100-1:500 (12.8-64 fl. oz. of ZeroTol 2.0 per 50 gallons of water) on potting soil and growing mediums prior to planting.
2. Use a rate of 1:200-1:500 when plants are present.
3. Apply to soil or growing media to the point of saturation.
4. Wait fifteen minutes before planting or watering.
5. Apply every 5-7 days as a preventive treatment.

Boom Irrigation Treatments

When using boom irrigation, inject ZeroTol 2.0 as a continuous application at a dilution rate of 1:2,500-1:5,000.

Pre-harvest Clean-up Sprays for Spoilage and Decay Causing Organisms

Use ZeroTol 2.0 as a foliar spray for control of spoilage and decay causing organisms prior to harvest. Use a 1% (1:100) solution. Ensure good coverage and wetting of the food crop. For increased coverage, adhesion and penetration of spray, use a compatible non-ionic wetting agent/surfactant spreader/sticker.

Seed Treatments

Use ZeroTol 2.0 as a surface seed treatment to reduce disease causing fungi and bacterial pathogens on or in seeds.

1. Use ZeroTol 2.0 a dilution of 1:100 (64 fl. oz. per 50 gallons of water.)
2. Immerse seeds and let soak for at least two minutes; remove and allow to drain. Do not rinse. Plant seed according to seed package directions.

ORNAMENTALS, BEDDING PLANTS, FLOWERING PLANTS, SHRUBS, AND TREES GROWN IN GREENHOUSES

Use ZeroTol 2.0 as a liquid bactericide/fungicide used to treat and control plant pathogens on ornamentals, bedding plants, flowering plants, shrubs, and trees grown in greenhouses.

Foliar Spray Treatments

ZeroTol 2.0 works immediately on contact with any plant surfaces for the control/suppression of fungi and bacteria such as *Botrytis*, Downy Mildew, Powdery Mildew, *Xanthomonas*. To ensure that this contact fungicide is effective, thorough coverage and wetting of the foliage is necessary.

Initial (Curative) Application Rates:

1. For best results, apply at first sign of disease. Use ZeroTol 2.0 at a dilution rate of 1:100 (1¼ fl. oz. per gallon of clean water). Do not store and reuse mixed spray solution, prepare a fresh solution daily.
2. Prior to treating large numbers of plants, spray a small group of test plants and observe for signs of phytotoxicity.
3. Spray, mist or fog plants in early morning or late evening. Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks to ensure full contact with plant and flower tissue.
4. Apply 50-500 gallons of spray solution per treated acre or 11.5-115 gallons of spray solution per 10,000 sq. ft.
5. Maintain a 3-10 day spray schedule until control is achieved. Under heavy disease pressure or when conditions are favorable for rapid disease development; spray intervals can be shortened to 3-5 days until control is achieved.

Preventative Application Rates:

1. Use ZeroTol 2.0 at a dilution rate of 1:200-1:400 (½ to ⅔ fl. oz. per gallon of clean water).
2. Spray, mist or fog plants. Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks.
3. Apply 50-500 gallons of spray solution per treated acre or 11.5-115 gallons of spray solution per 10,000 sq. ft.
4. Spray every 5-10 days as a preventative treatment.
5. At the first sign of disease spray daily with a 1¼ fl. oz. per gallon of water for three consecutive days and then resume preventative treatment.

Aerosol/Fog Treatments For Control of Foliar Diseases*

ZeroTol 2.0 can be applied as an aerosol/fog using approved commercial cold or thermo fogging equipment. Use a rate of 5.0-16.0 fl. oz. of ZeroTol 2.0 per 10,000 sq. ft. of greenhouse area mixed in 0.5-1.0 gallon of water. Ensure even distribution of applied fog. Always test by fogging on few plants first at these concentrations and ensure no injury to plants before using on large scale. For crops that are in bloom and/or have low tolerance to ZeroTol 2.0, do not exceed solution concentration of 1:50 (2.56 fl. oz. of ZeroTol 2.0 per 1.0 gallon of water per 10,000 sq. ft.). Repeat applications once every 5-7 days as needed until complete control of disease is achieved. Use an approved and compatible dispersal agent to minimize evaporation of applied aerosol and better deposition on plant surface.

Soil Or Media Drench Treatments

ZeroTol 2.0 is effective for the control/suppression of soil borne plant diseases such as *Pythium*, *Phytophthora*, *Rhizoctonia*, *Thielaviopsis* or *Fusarium*. Use as a soil drench at the time of seeding or transplanting, as well as a periodic drench throughout the plant's life. ZeroTol 2.0 can also be used on potting soil and growing mediums prior to planting.

1. Use ZeroTol 2.0 at a dilution rate of 1:100 (1¼ fl. oz. per gallon of clean water).
2. Apply to soil or growing media to the point of saturation.
3. Wait fifteen minutes before planting or watering.
4. Apply every 5-7 days as a preventative treatment.

For Mist Propagation of Cuttings And Plugs

Inject ZeroTol 2.0 into misting systems to control/suppress algae, fungi and bacterial disease from becoming established on plant material. Inject ZeroTol 2.0 using a 1:1,000 dilution rate, for four to ten days on a consecutive basis. Reduce concentration to 1:5,000 and maintain continuous application throughout propagation cycle. At the first sign of disease, increase the concentration of ZeroTol 2.0 to 1:1,000.

As A Pre-Plant Dip Treatment

Use ZeroTol 2.0 for the control/suppression of damping-off, root and stem rot diseases such as *Pythium*, *Phytophthora*, *Rhizoctonia*, *Fusarium*, *Penicillium*,* or *Thielaviopsis* on ornamental and nursery plants, seed beds, seeds, seedlings, bulbs, or cuttings.

1. Use ZeroTol 2.0 at a dilution rate of 1:100 (64 fl. oz. per 50 gallons of water).
2. Immerse plants or cuttings. Remove and allow to drain. Do not rinse.

HYDROPONIC APPLICATIONS*

For control of root diseases: *Pythium* (Root Rot and Damping off), *Phytophthora* (Blight) *Fusarium* (Wilt), *Verticillium* (Wilt), *Rhizoctonia* (Root Rot/Bottom Rot), *Thielaviopsis* (Root Rot) in hydroponic systems.

Nutrient/Reservoir Tank

Use ZeroTol 2.0 at a dilution rate of 1:2,000-1:10,000 (0.128-0.64 fl. oz. per 10 gallons of water). Use lower rates (1:5,000 or less) for seedlings and/or plants with sensitive root systems. Recharge as needed when fresh water is added, or at least once every 5-7 days.

Media Drench

Use ZeroTol 2.0 at a dilution rate of 1:1,500-1:2,000 (0.085-0.064 fl. oz. per gallon of water). Apply to soil or growing media to the point of saturation. Repeat once every 7-10 days as needed.

Foliar Spray

For control of foliar diseases: Powdery Mildew, Downy Mildew, Botrytis Grey Mold, Leaf Spots and Blights (Bacterial and Fungal), Stem Blight(s).

Use ZeroTol 2.0 at a dilution rate of 1:100-1:500 (1.28-0.256 fl. oz. per gallon of water). Start sprays at first sign/symptoms of diseases and maintain 5-7 day spray interval until complete control is achieved. Use higher rates (1:40-1:100) only when disease pressure is high and/or conditions are favorable for rapid disease development. Always test for phytotoxicity by spraying a few plants before using on a large scale.

Aerosol/Fog Treatments For Control of Foliar Diseases in Crops

ZeroTol 2.0 can be applied as an aerosol/fog using approved commercial

cold or thermo fogging equipment. Use a rate of 5.0-16.0 fl. oz. of ZeroTol 2.0 per 10,000 sq. ft. of greenhouse area mixed in 0.5-1.0 gallon of water. Ensure even distribution of applied fog in the greenhouse to be treated. Always test by fogging a few plants first at these concentrations and ensure no injury to plants before using on a large scale. For crops that are in bloom and/or have low tolerance to ZeroTol 2.0, do not exceed solution concentration of 1:50 (2.56 fl. oz. of ZeroTol 2.0 per 1.0 gallon of water per 10,000 sq. ft.). Repeat applications once every 5-7 days as needed until complete control of disease is achieved. Use an approved and compatible dispersal agent to minimize evaporation of applied aerosol and better deposition on plant surface.

NOTE: When using ZeroTol 2.0 on hydroponic growing systems as a foliar treatment, follow the label directions for foliar treatments. Use ZeroTol 2.0 as a water treatment only after a water sample has been submitted to BioSafe Systems for analysis and special direction is provided for dosing recommendations. Inert growing media in a hydroponic growing system provide special conditions that the grower needs to adjust for due to the unbuffered water conditions. Water pH, EC and supplements such as fertilizer, biological loading and minor elements are factors that need to be considered before determining correct water treatment rates.

For Cut Flowers

Use ZeroTol 2.0 to prevent *Botrytis*, Downy Mildew and Powdery Mildew on flowers in cold storage or in transit. Use a dilution of 1:500 or ¼ fl. oz. per gallon of clean water. Spray flowers after grading and prior to storage or shipment. Repeat weekly for flowers in storage.

FOR GREENHOUSE SURFACES AND EQUIPMENT

Use ZeroTol 2.0 to suppress/control bacteria, fungi and slime forming algae on greenhouse glazing, plastic, benches, walkways, floors, walls, fan blades, ventilation ducts, watering systems, coolers, storage rooms, and equipment.

1. Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
2. Use a dilution of 1:100, or 1½ fl. oz. per gallon of clean water on pre-cleaned surfaces. Use a dilution of 1:50 or 2½ fl. oz. of ZeroTol 2.0 per gallon of clean water if surfaces have not been pre-cleaned with water to remove organic deposits. Additional surfactant may be used.
3. Apply solution with mop, sponge, power sprayer or fogger to thoroughly wet all surfaces.
4. Scrub off heavy growths of algae and fungi following application. Use a solution of ZeroTol 2.0 to wash away dead growth.
5. Reapply as often as needed for control.

Foaming Applications*

Apply ZeroTol 2.0 as a foam treatment to enhance contact on porous surfaces and irregular surfaces, where contact is difficult to maintain with spray treatments. Use a dilution of 1:50-1:100, or 2½-1¼ fl. oz. of ZeroTol 2.0 per gallon of clean water. Use the 1:50 dilution rate if surfaces to be treated have not been pre-cleaned with water to remove organic deposits. Add a surfactant foaming agent to the spray tank that contains the diluted ZeroTol 2.0 spray solution. Follow all mixing instructions on the label. Apply foam until the surface treated is completely covered. Allow foam-treated surface to air dry. Do not rinse.

TREATMENT OF CLEAN, HARD, NON-POROUS SURFACES

Use ZeroTol 2.0 to suppress/control bacteria, fungi and slime-forming algae on the following surfaces:

Surface	Use Rate	Instructions
Pots, Flats, Trays	1:50-1:100 or 2½-1¼ fl. oz. per gallon of clean water.	Spray until runoff. Add additional surfactant if needed. Allow surfaces to remain wet for 10 minutes.
Cutting Tools	1:50-1:100 or 2½-1¼ fl. oz. per gallon of clean water. Tobacco Mosaic Virus control: 1:50-1:100 or 2½-1¼ fl. oz. per gallon of clean water.	Soak tools to ensure complete coverage. Add additional surfactant if needed. Allow surfaces to remain wet for 10 minutes. Use ZeroTol 2.0 to prevent the spread of Tobacco Mosaic Virus on cutting tools. Allow surfaces to remain wet for 1 minute.
Benches and Work Areas	Pre-cleaned surfaces: 1:100 or 1¼ fl. oz. per gallon of clean water. Unclean surfaces: 1:50 or 2½ fl. oz. per gallon of clean water if surfaces have not been pre-cleaned with water to remove organic deposits.	Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt. Add additional surfactant if needed. Allow surfaces to remain wet for 10 minutes.
Foot Bath Mats Foot pads and walk-through trays	1:100-1:170 or 1¼-¾ fl. oz. per gallon of water.	Apply ZeroTol 2.0 to prevent the tracking and spread of dirt and microorganisms. Make a solution of ZeroTol 2.0 per gallon of water and fill foot bath mat, foot pad or walk-through tray to capacity. Allow treated surface to remain wet with solution for 10 minutes. Change solution as needed.
Evaporative Coolers	Contaminated surfaces: 1:25-1:100 or 5-1¼ fl. oz. per gallon of clean water. Add a foaming agent to the spray tank that contains the diluted solution.* Cooler water shock treatment: 1:100 or 1¼ fl. oz. for every gallon of cooler water. Cooler water continuous treatment: 1:200-1:500 or ⅔-¼ fl. oz. per gallon of cooler water.	Apply foam solution until the surface treated is completely covered. Turn off coolers for 20 minutes to allow foam to work. Allow foam-treated surfaces to air dry. Do not rinse. Treat cooler water weekly as a preventative shock treatment. Continuously inject ZeroTol 2.0 to prevent algae and slime contamination.
Irrigation Systems Flooded floors, flooded benches, recycled water systems, capillary mats, humidification and misting systems	Contaminated water: 1:500 Clean water: 1:10,000	Treat contaminated water with a dilution of 1:500 or ¼ fl. oz. for every gallon of water. Treat clean water with a dilution of 1:10,000 or one gallon of ZeroTol 2.0 per 10,000 gallons of water.

FOLIAR SPRAY TREATMENT IN FIELD NURSERIES

ZeroTol 2.0 works immediately on contact with any plant surface for control/suppression of disease. Apply ZeroTol 2.0 to nursery stock such as: woody ornamentals, bedding plants, flowering plants, roses, container plants, azaleas, rhododendrons, conifers, and shade trees. Good coverage and wetting of the foliage is necessary.

Initial (Curative) Application Rates:

1. Use ZeroTol 2.0 at a dilution rate of 1:100 (1¼ fl. oz. per gallon of clean water). Do not store and reuse mixed spray solution, prepare a fresh solution daily.
2. Spray plants and trees, including applications through irrigation or chemigation systems.
3. Apply in 50-500 gallons of water per acre (11.5-115 gallons per 10,000 sq. ft.). Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks to ensure full contact with plant and flower tissue.
4. Maintain a 3-10 day spray schedule until control is achieved. Under heavy disease pressure or when conditions are favorable for rapid disease development; spray intervals can be shortened to 3-5 days until control is achieved.

Preventative Application Rates:

1. Use ZeroTol 2.0 at a dilution rate of 1:200-1:400 (⅓-⅔ fl. oz. per gallon of clean water).
2. Spray, mist or fog plants and trees, including applications through irrigation or chemigation systems.
3. Apply in 50-500 gallons of water per acre (11.5-115 gallons per 10,000 sq. ft.). Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks.
4. Spray every 5-10 days as a preventative treatment.
5. At the first sign of disease spray daily with a dilution of 1:100 (1¼ fl. oz. per gallon of water) for three consecutive days and then resume preventative treatment.

For Bareroot Nursery Stock

Use ZeroTol 2.0 to prevent *Botrytis* on budwood and nursery stock in storage. Use ZeroTol 2.0 at a dilution rate of 1:100 (1¼ fl. oz. per gallon of water). Dip plants or spray until dripping wet. Repeat weekly if necessary.

For Seed Bed Treatment

Use ZeroTol 2.0 for the control/suppression of disease as follows:

1. Prior to sowing seed, use ZeroTol 2.0 at a dilution rate of 1:100-1:200 (1.3-0.64 fl. oz. per gallon of clean water). Thoroughly wet or drench the seedbed, to the point of saturation, with 60-100 gallons of dilute solution per 1000 square feet. Let sit for one hour then immediately seed soil.
2. After seeds have germinated, use ZeroTol 2.0 at a dilution rate of 1:100-1:200 (1.3-0.64 fl. oz. per gallon of clean water). Lightly spray or irrigate the soil and seedlings until thoroughly wetted. Retreat once per week until seed is well established.

For Soil Treatment, Pre-Inoculation With Beneficial Organisms

Use ZeroTol 2.0 to reduce the number of plant pathogenic organisms in the soil. Use ZeroTol 2.0 at a dilution rate of 1:100-1:200 (1.3-0.64 fl. oz. per gallon of clean water). Pre-treat soil by thoroughly wetting or drenching with ZeroTol 2.0, wait one day following treatment before inoculating the soil with beneficial organisms.

TREATMENT OF WATER USED FOR PESTICIDE SPRAY SOLUTIONS

Use ZeroTol 2.0 as a bactericide/microbiocide to treat and suppress algae, bacteria and fungi in water collected from open or closed sources including but not limited to wells, ditches, canals, reservoirs, and ponds, used for pesticide spray solutions and mixtures. Add ZeroTol 2.0 at a dilution rate of 1:300-1:1,000 (42.6-12.8 fl. oz. per 100 gallons of water) to water in spray or mix tank. Mix and allow a contact time of 3-5 minutes **before adding other pesticides to spray solution.**

Tank Mixing Instructions

1. **Before adding other pesticides to the spray solution**, mix ZeroTol 2.0 first and allow a contact time of 3-5 minutes.

2. When used with Conventional Bactericides/Fungicides/ Insecticides/Miticides: Use ZeroTol 2.0 at a dilution rate of 1:500-1:1,000 (0.2-0.1%; 0.26-0.13 fl. oz. per gallon or 26-13 fl. oz. per 100 gallons of water). This rate range can be used with pesticides with or without metal ion(s).

3. When used with Organic (Biorational/Botanical/Biological) Bactericides/ Fungicides/ Insecticides: Use ZeroTol 2.0 at a dilution rate of 1:1,000 (0.1% v/v; 0.13 fl. oz. per gallon or 13 fl. oz. per 100 gallons of water). Spray Tank Water treatment can be used on Bio-rational/Botanical based Bactericides/Fungicides/Insecticides/Miticides (Ex. Neem Oil, Sulfur, Plant Extracts etc.), Bacillus based Bio-Fungicides (spore containing or spent fermented media), Bt based Bio-Insecticides, Copper based Bactericides/Fungicides **Do not use ZeroTol 2.0 with Mycoinsecticides (*Beauveria*, *Metarhizium*, *Isaria* based) or with other biological active ingredients not listed above.**

4. When used with Micro-Foliar Fertilizers: Use ZeroTol 2.0 at a dilution rate of 1:500-1:1,000 (0.2-0.1%; 0.26-0.13 fl. oz. per gallon or 26-13 fl. oz. per 100 gallons of water).

TREATMENT OF WATER DRAWN FROM OPEN AND CLOSED WATER SOURCES USED FOR DUST ABATEMENT

Use ZeroTol 2.0 at the following rates to suppress/control slime-forming bacteria, algae and fungi/oomycetes in water drawn from open and closed water sources such as wells, streams, ponds, reservoirs, irrigation canals, irrigation water and drainage ditches used to control dust on unpaved gravel and dirt roads.

- Bacteria: 15.6-128 fl. oz. per 1,000 gallons of water (1:8200-1:1000 dilution)
- Algae: 38.8-160 fl. oz. per 1,000 gallons of water (1:3300-1:800 dilution)
- Fungi/oomycetes: 52.3-160 fl. oz. per 1,000 gallons of water (1:2450-1:800 dilution)

Prepare the mixture at least 3-5 minutes prior to application for dust abatement. Apply to the road surface using a water truck (or tractor or spraying device) with equipped with a watering system. Prepared solution must be used day of treatment, and new solution should be prepared for each treatment.

TURF TREATMENT

Use on well-established lawns, athletic fields, golf course fairways, greens and tees of Bentgrass, Bluegrass, Bermudagrass, Fescue, Ryegrass, St. Augustine grass and their mixtures to control/suppress algae, bacterial and fungal diseases, and the odors and conditions that these organisms may cause.

1. Use ZeroTol 2.0 to treat/prevent the bacterial/fungal conditions caused by Anthracnose, Brown Patch, Dollar Spot, Copper Spot, Summer Patch, Strip Smut, Take-All Patch, Leaf Spot, *Fusarium*, Fairy Ring, Pink Snow Mold, *Pythium*, *Phytophthora*, *Rhizoctonia*.
2. Average treatment rates involve treating approximately 1,000 square feet (sq. ft.) of turf area with 5 gallons of diluted solution. Add a spreader surfactant for best results. Optimum treatment time is early morning or late afternoon.
3. For best results, apply immediately after grass has been cut. Applications can be made during wet or rainy weather.
4. Inject ZeroTol 2.0 through automatic irrigation systems in turf areas. Refer to Chemigation Directions for Use for specific instructions on using this product through irrigation systems.

Curative Rate:

Apply ZeroTol 2.0 at a dilution rate of 1:50 (2.56 fl. oz. per gallon) and use 2-5 gallons of mix solution per 1,000 sq. ft. Curative control will require consecutive treatments to eradicate disease. Apply treatment until disease is controlled. Once control is achieved, follow directions for preventative rate. Combine with a systemic fungicide for residual suppression.

- For increased coverage, adhesion and penetration of spray, use a compatible non-ionic wetting agent/spreader/sticker.

Preventative Rate:

Apply ZeroTol 2.0 at a dilution rate of 1:100 (1.28 fl. oz. per gallon) and use 2-5 gallons of mix solution per 1,000 sq. ft. Reapply as disease

pressure warrants. This product may be tank mixed with compatible residual fungicides.

- For increased coverage, adhesion and penetration of spray, use a compatible non-ionic wetting agent/spreader/sticker.
- For soil-borne diseases, drench the soil to saturate the root systems in the areas affected, and use 5-10 gallons per 1,000 sq. ft.
- **For Pink Snow Mold:** spray in early fall to reduce the number of dormant spores. Treat throughout the winter. May be applied to frozen ground.
- For heavy algae growth, apply a dilution rate of 1:50 (2.56 fl. oz. per gallon) and use 2-5 gallons of mix solution per 1,000 sq. ft.

ARTIFICIAL TURF TREATMENT*

Use ZeroTol 2.0 for the prevention and control of algae, fungi, moss, slime molds and their spores.

Application Directions

1. Make a liquid solution of ZeroTol 2.0 at a dilution rate of 1.25 fl. oz. per gallon of water.
2. Spray evenly over area to be treated.
3. Allow treated area to remain wet for five minutes.
4. Allow to dry thoroughly before use.
5. Repeat treatment as needed.

CHEMIGATION:

General Requirements -

1. Apply this product only through a drip system or sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, flood (basin), furrow, border drip (trickle) or drip-type irrigation systems. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.
4. 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.
5. 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 as needed.
6. Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.
7. Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign must face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.
8. All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

Specific 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, backflow 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 must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the 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 pump.
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.

Specific Requirements for Sprinkler Chemigation -

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 backflow.
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 filled with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Flood (Basin), Furrow and Border Chemigation -

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 backflow if water flow stops.
2. The 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 backflow.
- 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 filled with a system interlock.

Specific Requirements for Drip (Trickle) Chemigation -

1. The system must contain a functional check valve, a vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
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 filled with a system interlock.

Application Instructions -

1. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water until no scale or pesticide residues are present. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
2. Determine the treatment rates as indicated in the directions for use and make proper dilutions.
3. Prepare a solution in the chemical tank by filling the tank with the required amount of water and then adding product as required. ZeroTol 2.0 may be direct injected from the original container. The product will immediately go into solution without any agitation.
4. ZeroTol 2.0 may be applied in conjunction with other pesticides or fertilizers. For injection of ZeroTol 2.0 with metal-based fungicides and biological based pesticides consult your BioSafe Systems technical representative for specific instructions.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container in a cool, dry well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose of all excess treated seed by burying seed away from bodies of water. Dispose of seed packaging or containers in accordance with local requirements. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

Non-refillable containers equal to or less than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

Non-refillable containers greater than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

For refillable containers: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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 this 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 this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of BIOSAFE SYSTEMS LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold BIOSAFE SYSTEMS LLC and Seller harmless for any claims relating to such factors, to the extent consistent with applicable law.

BIOSAFE SYSTEMS LLC warrants that this product conforms to the *chemical* description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above when used in accordance with directions under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of the product contrary to label instructions, or under

abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or BIOSAFE SYSTEMS LLC, and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BIOSAFE SYSTEMS LLC MAKES NO WARRANTIES OF MERCHANTABILITY FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESSED OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, in no event shall BIOSAFE SYSTEMS LLC or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF BIOSAFE SYSTEMS LLC 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 THE PRODUCT OR, AT THE ELECTION OF BIOSAFE SYSTEMS LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

BIOSAFE SYSTEMS LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of BIOSAFE SYSTEMS LLC.



For additional information on ZeroTol® 2.0, call us toll-free at 1.888.273.3088 or visit BioSafeSystems.com.

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