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2024-05-02

BIOSAFE SYSTEMS, LLC

StorOx

COMMERCIAL (AGRICULTURAL)

Bactericide/Fungicide for Potato, Sweet Potato Storage Treatment, Greenhouse Tomatoes and  
Post-Harvest Treatment of Fruits and Vegetables, Disinfection

Solution

REGISTRATION NO. 27432 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENT: Hydrogen Peroxide 27%

READ THE LABEL BEFORE USING  
KEEP OUT OF REACH OF CHILDREN



WARNING - POISON  
DANGER – CORROSIVE TO EYES  
WARNING – SKIN IRRITANT

NET CONTENTS: 1-1050 L

BioSafe Systems, LLC  
22 Meadow Street  
East Hartford (CT) 06108  
1 860 290-8890

**DIRECTIONS FOR USE:** StorOx works best when diluted with water containing low level of organic or inorganic materials and with water having a neutral pH. Thoroughly rinse out spray tank with water before mixing concentrate. StorOx will readily mix with clean, neutral water and does not require agitation.

StorOx works by surface contact with the plant being treated. It is important to make sure all the surfaces are thoroughly wetted. StorOx does not produce any visible residue, distinct odour, or deleterious effect to the potato or sweet potato tuber when used in accordance with label directions.

On potatoes there are two methods for treatment. One is an application as a spray treatment for newly harvested potatoes before storage, as follows:

Crop	Disease	Dilution Rate	Application rate	Directions
Potato	Fusarium Tuber Rot Bacterial Soft Rot Silver Scurf	1:100	100 mL of StorOx per 10 L water	Spray diluted solution on tuber to runoff to achieve full and even coverage. Use 4.15-8.30 L water per tonne of potatoes.

Additional applications to post-harvested potatoes in storage are to be made daily, as a direct injection into humidification water, according to the directions in the table below. Apply the diluted product for at least 20 minutes per day, based on a humidification airflow rate of 0.6 cfm. BioSafe test strips should be placed periodically around the tubers to determine if a longer application period is needed.

Crop	Disease	Dilution Rate	Application rate	Direction
Potato	Fusarium Tuber Rot Bacterial Soft Rot Silver Scurf	1:100	100 mL of StorOx per 10 L water	Inject concentrate into makeup water in humidification of post-harvest potatoes or sweet potatoes in storage

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than BioSafe Systems LLC. under the User Requested Minor Use Label Expansion program. For these uses, BioSafe Systems LLC. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

On sweet potatoes there are two methods for treatment. One is an application as a spray treatment for newly harvested sweet potatoes before storage, as follows:

Crop	Disease	Dilution Rate	Application rate	Directions
Sweet Potato	Bacterial Soft Rot	1:100	100 mL of StorOx per 10 L water	Spray diluted solution on tuber to runoff to achieve full and even coverage. Use 4.15-8.30 L water per tonne of sweet potatoes

Additional applications to post-harvested sweet potatoes in storage are to be made daily, as a direct injection into humidification water, according to the directions in the table below. Apply the diluted product for at least 20 minutes per day, based on a humidification airflow rate of 0.6 cfm. BioSafe test strips should be placed periodically around the tubers to determine if a longer application period is needed.

Crop	Disease	Dilution Rate	Application rate	Direction
Sweet Potato	Bacterial Soft Rot	1:100	100 mL of StorOx per 10 L water	Inject concentrate into makeup water in humidification of post-harvest potatoes or sweet potatoes in storage

#### GREENHOUSE TOMATOES

**Foliar spray treatments for tomatoes grown in commercial greenhouses or in other similar sites - StorOx works immediately on contact with any plant surface for control of plant diseases. Good coverage and wetting of the foliage is required.**

For the suppression of Botrytis Grey Mould on Greenhouse Tomatoes.

Target Pests	Application Rates	Application Timing
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Botrytis Grey Mould	Dilute 100 mL product in 10 L of water  Apply 300-950 L of diluted product per hectare	Spray when disease first appears or when conditions are favourable for disease development.  Apply diluted spray to the point of run-off to achieve full and even coverage.  Under severe disease conditions, reduce spray intervals and use stronger dilution rates.  Pre-Harvest Interval = 0 days
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### **POST-HARVEST TREATMENT OF FRUITS AND VEGETABLES:**

StorOx can be used to reduce the growth of certain bacterial and fungal plant pathogens that cause post harvest spoilage and decay on fruits and vegetables. Product can be added directly to the wash water used for cleaning of fruits and vegetables or if applied as a fog, can be injected directly into the water used for fogging of fruits and vegetables.

Because of the large diversity of fruits and vegetables that may be treated, StorOx cannot be tested on every species and varieties covered under these recommendations for post-harvest applications. To ensure compatibility with the treated material, it is recommended that small scale tests be performed to assess any possible phytotoxicity or other unintended side effects before applying large scale treatments.

### **APPLICATION TO WASH WATER USED FOR CLEANING OF FRUITS AND VEGETABLES:**

Use StorOx for the treatment of wash waters used for cleaning of fruits and vegetables. Mix StorOx with water at a rate of 1.0% v/v i.e., (1.0 Liter of StorOx to 99.0 Liters of water; equivalent to 0.3% hydrogen peroxide (active ingredient in StorOx)). The fruits and vegetables can be submerged in the resulting solution for a minimum contact time of 45 seconds and up to 5.0 minutes, followed by adequate draining and drying as required to ensure no residual moisture is present on the surface of the produce prior to packing and/or storage. Ensure that sufficient StorOx concentrations are maintained during the wash process (equivalent to 0.3% hydrogen peroxide). Hydrogen peroxide degradation increases with higher levels of organic matter in the wash water. Make fresh solutions when water has visible turbidity due to organic and inorganic particles introduced over time in the wash water (e.g. >10 NTU (Nephelometric Turbidity units) as measured using a turbidimeter).

### **APPLICATION TO WATER USED FOR FOGGING OF FRUITS AND VEGETABLES:**

Mix or inject StorOx concentrate with water used for fogging at a rate of 1.0-2.0% v/v i.e., 1.0-2.0 Liters of StorOx to 98.0-99.0 Liters of water. For fruits and vegetables that might be sensitive to higher concentrations of StorOx, do not exceed 1.0% v/v concentration. Fog until even and sufficient distribution is achieved on the produce surface and the contact time of at least 10 seconds with the applied fog solution. Allow produce surface to air dry with no residual moisture prior to packing and/or storage.

## **PACKINGHOUSE & CROP STORAGE FACILITY DISINFECTION**

StorOx is effective against plant pathogenic bacteria such as *Clavibacter michiganensis* ssp. *sepedonicus* (Bacterial Ring Rot).

For pre-cleaned surfaces: Use a rate of 10 mL per 1 litre of water for inanimate environmental hard non-porous surfaces that are lightly soiled or have been pre-rinsed to remove gross contamination. Allow to remain wet for 10 minutes, and then remove solution with a clean, wet mop, cloth, or wet vacuum pickup.

For uncleaned surfaces: For heavily soiled, inanimate environmental hard, non-porous surfaces, use a rate of 20 mL per 1 litre of water. Apply solution with mop, cloth, sponge, brush, scrubber, or coarse spray device or by soaking so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes then remove solution and entrapped soil with a clean, wet mop, cloth, or wet vacuum pickup. Prepare a fresh solution daily or when it becomes soiled or diluted.

## **EQUIPMENT DISINFECTION**

StorOx may be used to disinfect bins, packing crates, ladders, power tools, hand tools, gloves, rubber boots, pruning shears or other hard, non-porous equipment that may transfer food spoilage organisms.

- Before disinfection move the equipment into an area with an impervious surface and with controlled drainage. Ensure that no disinfection solution will be released into the environment. (Usually the storage facility that is also being disinfected).
- Remove gross contamination with a cleaner or other suitable detergent and rinse with water.
- Apply StorOx at a rate of 1:100 (10 mL per 1 litre) as a general coarse spray.
- Allow StorOx to contact surface for at least 10 minutes.
- Allow to air dry. Do not rinse.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

## **TANK MIXING**

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact BioSafe Systems, LLC at 1-888-273-3088 for information before applying any tank mix that is not specifically recommended on this label.

## **COMPATIBILITY**

StorOx has not been tested with all potential tank-mix partner products. Conduct a jar test before mixing StorOx with a fertilizer, a supplement, or with registered pest control products to determine compatibility before use. Mix each component in the correct proportions, and shake or stir vigorously. If any adverse reactions occur in the jar, products should be considered incompatible. StorOx may have a deleterious effect on biological based pesticides, especially those biopesticides containing living organisms. Be sure to consult all biopesticide product labels to ensure compatibility before tank mixing these products with StorOx.

Solutions are corrosive to materials that are easily oxidized such as natural rubber, copper, galvanized and black iron pipe. Test solutions on surfaces prior to use.

## **PLANT SENSITIVITY TESTING:**

Use StorOx at labelled dilution rates. This product has been tested for phytotoxicity and is safe to use on a variety of crops; however, it is not possible to test all crop varieties grown under all growing conditions or all growth stages with this product to ensure no phytotoxic effects to the target crop throughout its life cycle. Plants grown in greenhouses vary greatly from those grown under field conditions, as such should be tested for phytotoxicity separate from field grown crops. Periods of intense plant stress may increase phytotoxic sensitivity to pesticide applications. It is recommended to determine if StorOx can be used safely and non-injurious to target crop under your use conditions prior to application by conducting a phytotoxicity test.

**PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN. CORROSIVE** to the eye. Causes skin and mucous membrane irritation. May be fatal if inhaled. Harmful if swallowed. Strictly observe all precautions for handling and using pesticides. **DO NOT** get in eyes, on skin or on clothing. **DO NOT** inhale/breathe vapors or sprays. StorOx is a strong oxidizing agent. StorOx has been demonstrated to be corrosive to metal surfaces. Rinse all application equipment thoroughly with water after use. Metal fasteners and surfaces that come into contact with diluted StorOx, as a result of the daily applications, may also become corroded. Ship and store away from food, fertilizer, feed and seed.

Wear goggles or a face shield, coveralls over a long-sleeved shirt and long pants, boots, chemical-resistant gloves and NIOSH-approved respiratory protection during mixing, loading, application, cleanup and repair activities.

Do not enter or allow worker entry into treated areas until residue is dry.

Ensure that hydrogen peroxide air concentrations in the workplace do not exceed the exposure levels established by occupational health and safety authorities in your jurisdiction. If values are unknown, or exceed these levels, wear NIOSH-approved respiratory protection.

Do not enter treated storage bins until the hydrogen peroxide air concentrations are below exposure levels established by occupational health and safety authorities in your jurisdiction. If values are unknown, or exceed these levels, wear NIOSH-approved respiratory protection.

**ENVIRONMENTAL PRECAUTIONS:**

Greenhouse use: Toxic to bees and other beneficial insects. May harm bees and other beneficial insects, including those used in greenhouse production. Do not apply when bees or other beneficial insects are foraging in the treatment area.

TOXIC to aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds or other waters. Do not cause or permit this product to enter surface water or ground water through spillage, storm water runoff, waste disposal, cleaning of equipment or by any other means.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

**FIRST AID:**

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

Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** This product is corrosive and severely irritating to the eyes, skin and mucous membrane. No specific antidote is available. Treat symptomatically.

**DISPOSAL:** Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple-or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial/territorial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial/territorial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for clean-up of spills.

**STORAGE:** Store in original container in a cool, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. This may increase the degradation of the product, which will decrease product effectiveness. Since StorOx is a strong oxidizing agent, contact with combustibles may cause fire. Keep containers tightly closed. Store this product away from food or feed.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.