

# BIOSAFE SYSTEMS, LLC

## StorOx

### AGRICULTURAL

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

Solution

REGISTRATION NO. 27432 PEST CONTROL PRODUCTS ACT

GUARANTEE: 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  
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**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. StorOx may be used in conjunction with a growth inhibitor.

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

**NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:**

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than BioSafe Systems Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion Program. BioSafe Systems Inc. itself makes no representation or warranty with respect to product performance (efficacy) and crop tolerance (phytotoxicity) of this product when used on the crops listed below. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold BioSafe Systems Inc. harmless from any claims based on efficacy or phytotoxicity in connection with the uses described below.

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. StorOx may be used in conjunction with a growth inhibitor.

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
Botrytis Grey Mould	Dilute 100 mL product in 10 L of water	Spray when disease first appears or when conditions are favourable for disease

	Apply 300-950 L of diluted product per hectare	<p>development.</p> <p>Apply diluted spray to the point of run-off to achieve full and even coverage.</p> <p>Under severe disease conditions, reduce spray intervals and use stronger dilution rates</p> <p>Pre-Harvest Interval = 0 days</p>
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Plant Sensitivity Testing:

For foliar applications, be sure to use StorOx at labeled dilutions as solutions more concentrated can result in leaf necrosis for some crops (i.e., do not use dilutions stronger than 1:100 for foliar treatments). StorOx has been designed to provide a balanced source of the active ingredient directly to the plant surface. StorOx 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 to StorOx. Therefore, before treating large numbers of plants, test StorOx on a few plants for sensitivity.

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.

Before tank mixing StorOx with other fertilizers, fungicides, or bactericides, conduct a compatibility test for each combination. Make a test solution and shake or stir vigorously. Excessive bubbling and/or pressure are an indication of incompatibility.

## **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 Litre of StorOx to 99.0 Litres 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 Litres of StorOx to 98.0-99.0 Litres 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.

**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 vapours 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.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at: [www.croplife.ca](http://www.croplife.ca).

#### ENVIRONMENTAL HAZARDS:

This product may be highly toxic to bees and other beneficial insects exposed to direct contact. Do not apply this product or allow it to drift onto tomatoes while bees are actively visiting 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.

#### FIRST AID:

**IF SWALLOWED:** Call a poison control centre 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 centre 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 centre 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 centre 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 centre 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. 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 requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial 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.

**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. The user assumes the risk to persons or property that arises from any such use of the product.