

Sanitation - Food Crops

Standard Operating Procedure

FRUIT, VEGETABLE AND HERB CROPS

FIELD AND HYDROPONIC CLEANING AND SANITATION

GLOVED HAND DIP DISINFECTION

KleenGrow™

Gloved Hand Dip

Step 1 Prepare a solution of **KleenGrow™** by diluting **2.0 fl oz/gal, (20 mL/L)** or **1200ppm**. *1200 ppm is necessary for virus control.* Pour the solution into a clean plastic container or special reservoir. Cover when not in use.

Step 2 Test the strength of the dip solution **daily** using **QAC Test Strips** to ensure that the dip contains a **minimum of 600 ppm** of active disinfectant at all times. Add more **KleenGrow™** concentrate as necessary, to maintain between 600 and 1200 ppm.

Step 3 Change the solution weekly or when solution becomes dirty.

Record the ppm level of the **KleenGrow™** solution and when it is changed.

Example of Recording:

KleenGrow™ Record for Hand Dip Solution

Date	Changed Solution	Checked PPM	PPM Level	Initial-Responsible Person
Example				
12/1/18	✓	✓	1200	JM
12/2/18		✓	1000	JM
12/3/18		✓	900	MB
12/4/18		✓	800	MB
12/5/18		✓	600	JM
12/6/18	✓	✓	1200	JM

Sanitation - Food Crops

Standard Operating Procedure

FRUIT, VEGETABLE AND HERB CROPS

FIELD AND HYDROPONIC CLEANING AND SANITATION

FOOTBATH AND ENTRY WAY SANITIZER

KleenGrow™

Footbaths

Step 1 Prepare a solution of **KleenGrow** at a dilution of **2.0 fl oz/gal (20 ml/L)** or **1200 ppm**. Pour into a footbath trough or onto a footbath mat. Fill the trough to a depth of ½ -1 inch and the foot mat to the top of the ribs.

Step 2 Maintain this depth of liquid during use by adding more **KleenGrow** solution, then testing for ppm level.

Test the strength of the **KleenGrow** solution **twice daily** by using the LaMotte QAC test strips to check the ppm level. When the ppm level drops below 600 ppm add fresh solution so the ppm level is back up to 1200.

CLEANING FOOTBATHS

Periodically use **STRIP-IT PRO** or **HORTI-KLOR** at a use dilution of **2.5 fl oz/gal (20 ml/L)** to clean footbath trough or mat to remove plant material and soil. Spray or dip into detergent solution, brush, then rinse thoroughly with clean water.

Entry Way Sanitizer

Step 1 Install the Dosatron Entry Way Sanitizer at all greenhouse doors. The area must be covered and have an available electric, water and air source. Follow installation instructions.

Step 2 Place a drum of **KleenGrow** under the Entry Way Sanitizer.

Step 3 Using the correct dilution tip, set dilution to **1.0 fl. oz/gal (8 ml/L)** or 600 ppm. Follow directions for setting timer and distance (see foamer instructions).

MAINTENANCE

Clean and check Entry Way Sanitizer tubing and fittings monthly. Using LaMotte QAC Test strips check the ppm level of the **KleenGrow** foam regularly. The **KleenGrow** foam should read 600 ppm when fresh.

Example of Recording:

KleenGrow™ Record for Footbath/Entryway Solution

Date	Changed Solution	Checked PPM	PPM Level	Initial-Responsible Person
Example				
12/1/18	✓	✓	1200	JM
12/2/18		✓	1000	JM
12/3/18		✓	900	MB
12/4/18		✓	800	MB
12/5/18		✓	600	JM
12/6/18	✓	✓	1200	JM

Sanitation - Food Crops

Standard Operating Procedure

FRUIT, VEGETABLE AND HERB CROPS

FIELD AND HYDROPONIC CLEANING AND SANITATION

CLEANING AND SANITATION OF COOLER, EQUIPMENT, CARTS

HORTI-KLOR™ and KleenGrow™

Coolers and Condenser

Step 1 Turn off the power to the cooling unit and remove condenser filters and drain pan.

Step 2 Using **HORTI-KLOR** at a use dilution of **2.5 fl oz/gal (20 ml/L)** of water, foam the entire cooler, including cooling units (cover electrical motors and connections with plastic bags) from bottom to top. Foam the filters from the cooling unit including drain pan. Let sit on surface for 2-3 minutes to allow product to penetrate build up. **Wear recommended protective clothing, gloves and goggles.**

Step 3 Rinse all surfaces thoroughly with potable water using high-pressure nozzle or pressure washer. Replace filters and drain pan in the cooling unit.

Step 4 Spray cooler, including the cooling unit and filters, with a **1.0 fl oz/gal (8 ml/L) KleenGrow** solution. Turn on power to cooling unit.

MAINTENANCE

Pour a **0.5 fl. oz/gal (4 ml/L) KleenGrow** solution in drip tray and **repeat on monthly** basis to reduce chances of botrytis and mildew contamination in the cooler.

Equipment and Carts

Step 1 Using **HORTI-KLOR** at a use dilution of **2.5 fl oz/gal (20 ml/L)** of water and foam or spray equipment or cart. Let sit on surface for 2-3 minutes to allow product to penetrate build up. **Wear recommended protective clothing, gloves and goggles.**

Step 2 Rinse all surfaces thoroughly with potable water using high-pressure nozzle or pressure washer.

Step 3 Spray surface with a **1.0 fl oz/gal (8 ml/L) KleenGrow** solution and let air-dry.

A weekly sanitation program using **HORTI-KLOR** followed by **KleenGrow** followed by daily disinfecting with **KleenGrow** is recommended.

Sanitation - Food Crops

Standard Operating Procedure

FRUIT, VEGETABLE AND HERB CROPS

PACKING HOUSE CLEANING AND SANITATION **HORTI-KLOR™** and **KleenGrow™**

The Pace 49 ACBD –*Always Clean Before Disinfecting* program should be used for cleaning packing areas and equipment. Equipment cleaning application depends on the type of equipment. For equipment that is waterproof the entire area can be sanitized. For non-waterproof equipment spray bottles or pump-up sprayers must be used.

CLEAN PACKING AREA AND BREAK ROOM AREA DAILY AT THE END OF THE WORKDAY

Packing House and Break Room– Foam and Spray Cleaning and Sanitizing for Water-Proof Equipment

Step 1 Using **HORTI-KLOR** at a use dilution of **2.5 fl oz/gal (20 ml/L)** of water, foam or spray the entire processing area including floors, conveyers and work/sorting stations. Let stay on surface for 2-3 minutes before rinsing.

*For the break room, mix the **HORTI-KLOR** solution in a mop bucket and mop floors. Rinse if needed. Do not follow with **KleenGrow**.*

Step 2 Rinse all surfaces thoroughly with potable water washer.

Step 3 Spray all pre-cleaned surfaces with a **1.0 fl oz/gal (8 ml/L)** **KleenGrow** solution and allow to air-dry.

- **No-Product Contact Area:** After spraying the **KleenGrow** solution on all surfaces of packing and processing equipment *DO NOT RINSE*. Allow to air dry or use a clean rag, wipe off excess.
- **Product Contact Area:** After spraying the **KleenGrow** solution on all surfaces of packing and processing equipment where product comes in contact with the surface WIPE or Spray RINSE **KleenGrow** treated area with portable water.

Packing House – Spray Bottle or Pump Up Sprayer for Non Water-Proof Equipment

SPRAY BOTTLES OR PUMP-UP SPRAYER

Fill labeled 32 oz spray bottles or 1-2 gallon pump-up sprayers with **2.5 oz per gal (20 ml/L)** of **HORTI-KLOR** and **1.0 oz per gal (8.0 ml/L)** of **KleenGrow**. A mixing station maybe used for ease and better accuracy.

Step 1 Spray **HORTI-KLOR** on all surfaces of packing and processing equipment as well as wash stations. Wipe off excess solution with clean rag.

Step 2 Rinse off **HORTI-KLOR** using a 32 oz WATER spray bottle or 1-2 gallon sprayer. Immediately wipe off excess with clean rag.

Step 3 Spray all pre-cleaned surfaces with a **1.0 fl oz/gal (8 ml/L)** **KleenGrow** solution and allow to air-dry.

- **No-Product Contact Area:** After spraying the **KleenGrow** solution on all surfaces of packing and processing equipment *DO NOT RINSE*. Allow to air dry or use a clean rag, wipe off excess.
- **Product Contact Area:** After spraying the **KleenGrow** solution on all surfaces of packing and processing equipment where product comes in contact with the surface WIPE or Spray RINSE **KleenGrow** treated area with portable water.

Sanitation - Food Crops

Standard Operating Procedure

FRUIT, VEGETABLE AND HERB CROPS

FIELD AND HYDROPONIC CLEANING AND SANITATION

TRANSPORTATION TRUCK FOG DISINFECTING **KleenGrow™**

Hand Held Compressed Air Mist/Fogger

Step 1 Remove all product and excess material from inside trailer/shipping container.

Step 2 Make a **KleenGrow** solution in a 5-gallon pail mixing **4 ml/L (0.5 fl. oz/gal)**.

Step 3 Using a hand held compressed air assisted mist/fogger, apply the **KleenGrow** solution to the pre- cleaned inside surfaces of the truck trailer.

Attach the compressed air line to the mist/fogger and insert solution tube into the diluted solution of **KleenGrow**. Standing 5 ft. away from wall opposite the door, turn on air and quickly fog walls and ceiling as you back out of the trailer.

Automatic Mist/Fogger

Follow Step 1 and 2 in the above Hand Held Mist/Fogger directions.

Place the automatic fogger in center of truck and close truck door. Turn on air for 5 seconds. A dry fog will penetrate throughout the truck. Wait 5 seconds then open truck door.