GERANIUM CONTAMINATION

Recommended Clean-up Procedures

Xanthomonas hortorum pv. pelargonii (Xhp)

1. Quarantine the affected area and minimize traffic to only necessary and trained personnel.
2. Treat potentially infected seed geraniums the same as vegetative geraniums.
3. To ensure other plants are not exposed, remove all symptomatic and potentially infected plants at the end of the day to limit exposure after clean-up. Maintain an inventory of disposed products. To prevent spread of the disease, place the plants into trash bags before removing them from the greenhouse. Then, completely and immediately remove plants from the property. Make sure plants and pots are discarded together to ensure no leaves or other remnants remain on-site.
4. Plants can become infected by splashing water. Dispose of geraniums in a six foot radius around the infected plants. In case of boom irrigation in propagation, dispose of all plants and trays that might have been contaminated during this process. Cleaning before sanitizing is crucial. Products like GreenClean® Alkaline Cleaner or Horti-Klor® can be used at label rates if plants are not present, and products like Strip-It Pro™ or GreenClean® Acid Cleaner can be used if plants remain in the greenhouse.
5. If affected plants are grown overhead, treat all geraniums/pelargoniums underneath as a potential risk. If drip irrigated, remove drippers from plants not being dumped and flush the drip lines with Green-Shield® II at a rate of a half gallon (64 fl oz) per 100 gallons of water or Physan 20™ at a rate of 100 oz/100 gallons of water. Also, spray the exterior of drip lines and drippers.
6. After removing the infected plants, spray the plants and greenhouse area with ZeroTol® 2.0 at a rate of 1:250. X3® can also be used. Spray everything in the house, including plants, benches, and floors. In case of subsequent overhead irrigation, spray ZeroTol® 2.0 after each irrigation for two weeks after the elimination of symptomatic plants. Additionally, use KleenGrow™, MicroBLOC®, Triathlon®, Green-Shield® II or Physan 20™ (same rates as listed above) on floors and benches. Keep in mind, it can burn geraniums. Disinfect all hoses, wands, nozzles, etc. Do not use Clorox® bleach as the vapors harm plants in the greenhouse.
7. There are no known chemical controls for bacterial blight of geranium, however chemistries in the FRAC Group M1 (copper containing pesticides) such as Phyton 27®, Phyton 35®, Camelot® O, and Kocide® 3000-O, Kalmor® and Junction® can be used as bacterial suppressants. Spray Phyton 27® at a rate of 35 oz/100 gallons a day after the initial ZeroTol® 2.0 application and again two weeks later to help kill any bacteria on the adjacent plants' leaf surface. Postiva™, a broad-spectrum fungicide powered by ADEPIDYN® technology (pydiflumetofen) and difenoconazole in FRAC Groups 7 and 3 can also serve as a bacterial disease suppressant.
8. Restrict entry to the affected area to only trained personnel. Be careful when working in the affected area. Handle the plants as little as possible and avoid cleaning debris or removing flower buds. Do not work with any other geraniums after working in the area. Disinfect hands, gloves, tools, and etc., after any handling of the affected geranium crop. Monitor the crop for signs of further infection. Keep Xhp ImmunoStrip® quick test kits on-site to test suspect plants in the future. Obtain kits from Agdia (574-264-2615).
9. After planting or shipping rooted cuttings, completely disinfect the propagation area three times with Green-Shield® II or Physan 20™ for three consecutive days; disinfect walls, inside roof, benches, hoses, wands, nozzles, and floors, as well as anything that may be harboring bacteria. Remove all plant debris from the premises in garbage bags.
10. At the end of the season, remove ALL geraniums and pelargoniums from the premises. Then, completely disinfect the house three times with Green-Shield® II or Physan 20™ over a one week period, including walls, inside roof, benches, and floors, as well as anything that may be harboring bacteria. Remove all plant debris from the premises. Heat the house up to above 90° F for as long as possible (i.e. two or three months) before the next crop.

Always consult the product label for complete use and application information.

The recommendations in this document are being provided for information purposes only. Users are solely responsible for growing plants under clean cultural conditions and preventing spread of the disease. All liability with respect to actions taken or not taken based on the contents of this site are hereby expressly disclaimed by Syngenta.

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