

Advanced Master Gardener Training

Hosta Diseases

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Hosta Diseases Hosta Virus X

- Cause: *Hosta virus X* (HVX)
- Host: Hosta
 - ‘Gold Edger’
 - ‘Gold Standard’
 - ‘Golden Tiara’
 - ‘Striptease’
 - ‘Sum and Substance’
- Favorable environment: None

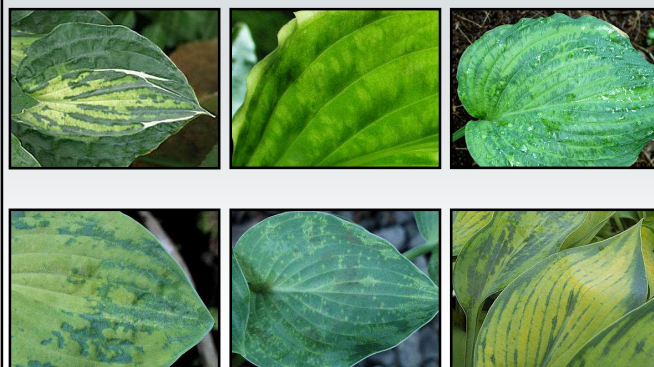
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Hosta Diseases Hosta Virus X

- Transmission: Mechanical
 - Shovels
 - Knives
 - String edgers
 - Lawnmowers

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Hosta Diseases Hosta Virus X

- Control
 - Buy hostas from a reputable source
 - Inspect hostas for symptoms
 - Test hostas prior to purchase
 - Keep new and established hostas separated
 - Remove diseased plants and plant debris
 - Burn (where allowed)
 - Deep bury
 - Hot compost

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Hosta Diseases Hosta Virus X

- Control
 - Disinfest contaminated materials
 - 1% Sodium dodecyl sulfate (sodium lauryl sulfate) + 1% Alconox® (2½ Tbsp + 2¾ Tbsp/gal)
 - Trisodium phosphate (14 dry oz/gal)
 - 20% low fat dry milk (Carnation®) + 0.1% polysorbate 20 (9½ cups + ¾ tsp/gal)
 - Alcohol dip followed by flaming
 - DO NOT use chemical controls on plants

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Hosta Diseases Tobacco Rattle

- **Cause:** *Tobacco rattle virus* (TRV)
- **Hosts**
 - Herbaceous ornamentals
 - Astilbe, bleeding heart, columbine, coral bells, daffodils, epimedium, gladiolus, hosta, hyacinth, marigold, peony, tulip, vinca
 - Vegetables
 - Beans, beet, pepper, potato, spinach
- **Favorable environment:** None

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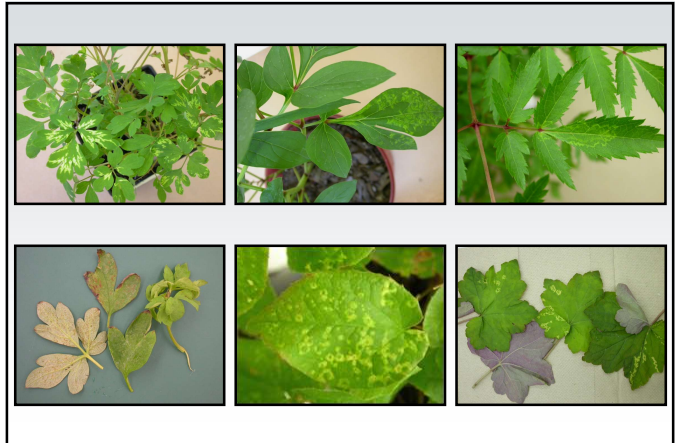
Hosta Diseases Tobacco Rattle

- **Transmission**
 - Stubby-root nematodes
 - *Trichodorus* spp.
 - *Paratrichodorus* spp.
 - Mechanical
 - Grafting
 - Seed

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Hosta Diseases Tobacco Rattle

- **Control**
 - DO NOT buy symptomatic plants
 - Grow non-susceptible plants
 - Annual phlox, carnation, devil's trumpet (downy thorn-apple), sweet William, zinnia, zombie cucumber
 - Remove and destroy infected plants
 - Burn (where allowed)
 - Deep bury
 - Hot compost

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Hosta Diseases Tobacco Rattle

- **Control**
 - Disinfest contaminated materials
 - 1% Sodium dodecyl sulfate (sodium lauryl sulfate) + 1% Alconox® (2½ Tbsp + 2¾ Tbsp/gal)
 - Trisodium phosphate (14 dry oz/gal)
 - 20% low fat dry milk (Carnation®) + 0.1% polysorbate 20 (9½ cups + ¾ tsp/gal)
 - Alcohol dip followed by flaming

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Hosta Diseases Tobacco Rattle

- **Control**
 - DO NOT use chemical controls on plants
 - DO NOT attempt to control stubby-root nematodes

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Hosta Diseases Foliar Nematode

- **Cause:** *Aphelenchoides* spp.
- **Hosts**
 - Many types of herbaceous plants
 - Landscape plants
 - Hosta, begonia, coral bells, miterwort
 - Houseplants
 - African violets, ferns, chrysanthemum
- **Favorable environment:** Wet weather

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Hosta Diseases Foliar Nematode

- **Control**
 - Inspect plants prior to purchase
 - Avoid overhead watering
 - Remove symptomatic plants and plant debris
 - Burn (where allowed)
 - Deep bury (landfill)
 - Hot compost

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Hosta Diseases Foliar Nematode

- **Control**
 - Disinfest contaminated materials (70% alcohol, disinfectants, 10% bleach)
 - Hot water treatments (10 minutes at 125°F)
 - DO NOT use nematicides

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Hosta Diseases Southern Blight

- Pathogen: *Sclerotium rolfsii*
- Hosts
 - Hosta
 - Many bedding plants
 - Many herbaceous annuals and perennials
 - Some woody ornamentals
- Favorable environment: Warm, wet weather

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Hosta Diseases Southern Blight

- Control
 - DO NOT buy infected/infested plants
 - Avoid cocoa mulch (?)
 - Remove infected plants, mulch and soil
 - Double bag and landfill
 - Disinfect contaminated materials
(70% alcohol, disinfectants, 10% bleach)

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Hosta Diseases Southern Blight

- Control
 - Amend soil with organic matter (?)
 - Use fungicides for control
 - Contract with a professional pesticide applicator
 - Azoxystrobin, flutolanil, flutolanil + thiophanate-methyl, PCNB, tebuconazole, triadimefon
 - Alternate active ingredients (FRAC codes)
 - Apply at 14 – 28 day intervals
 - Pray for a really, really, REALLY cold winter

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Hosta Diseases Root/Crown Rots

- Pathogens

– <i>Pythium</i> spp.	– <i>Phytophthora</i> spp.
– <i>Rhizoctonia solani</i>	– <i>Fusarium</i> spp.
– <i>Cylindrocarpon</i> spp.	– <i>Thielaviopsis</i> spp.
- Hosts
 - Hosta
 - Any herbaceous plant
- Favorable environment: Cool, wet soils

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Hosta Diseases Root/Crown Rots

- **Control**
 - Moderate soil moisture
 - Grow plants in well-drained sites
 - Use a potting mix with adequate drainage
 - Improve drainage in poorly drained soils
 - Add organic matter to improve drainage
 - Use raised beds
 - DO NOT overwater
 - DO NOT overmulch

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Hosta Diseases Root/Crown Rots

- **Control**
 - Pretest soils/mulches/composts
 - Use a soil-less potting mix or a pasteurized potting mix for containerized plants
 - DO NOT move contaminated soil or plants
 - Disinfest contaminated materials (70% alcohol, disinfectants, 10% bleach)

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Hosta Diseases Root/Crown Rots

- **Control**
 - Use fungicides to prevent infections
 - Contract with a professional pesticide applicator
 - Etridiazole, metalaxyl, mefenoxam, fosetyl-Al, PCNB, thiophanate-methyl, fludioxonil
 - Alternate active ingredients (FRAC codes)
 - Use granular formulations if possible
 - Use during periods of wet weather

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Hosta Diseases Root/Crown Rots

- **Control**
 - Use biopesticides to prevent infections
 - *Trichoderma*, *Gliocladium*
 - Use for potted plants
 - Exercise caution when combining with chemical fungicides

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Hosta Diseases Sun Scald/Sunburn

- **Causes**
 - Excessive light
 - Excessive heat
 - Insufficient rain
- **Hosts**
 - Hosta
 - Other shade-loving plants

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Hosta Diseases
Sun Scald/Sunburn

- **Management**
 - Site plants appropriately
 - Provide adequate shade
 - Water adequately
 - Mulch appropriately

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Hosta Diseases
Where to Go for Help

**Plant Disease Diagnostics Clinic
Department of Plant Pathology
University of Wisconsin-Madison
1630 Linden Drive
Madison, WI 53706-1598
(608) 262-2863
pddc@wisc.edu
<https://pddc.wisc.edu>
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