

Talks for the General Public

Orchid Diseases

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Orchid Diseases Black Rot

• Pathogens

- *Phytophthora cactorum*
- *Pythium ultimum*

• Favorable environment

- Excessive moisture
- Cool temperatures



Orchid Diseases Black Rot

• Control

- Avoid symptomatic plants
- Isolate new plants from established plants
- Decontaminate pots, work surfaces, tools (70% alcohol, disinfectants, bleach)
- Use a proper potting mix
- DO NOT use garden soils

Orchid Diseases Black Rot

• Control

- DO NOT overwater
- Limit water splash
- Promote good air circulation
- Remove diseased plant material and debris

Orchid Diseases Black Rot

• Control

- Use fungicides to prevent infections
 - Poultices (?)
 - Copper sulfate + lime
 - Cinnamon
 - Spray treatments
 - Metalaxyl/mefenoxam, fosetyl-Al, etridiazole
 - Mancozeb, captan
 - Alternate active ingredients (FRAC codes)
 - Apply according to label instructions

Orchid Diseases

Leaf Spots/Brights

- Pathogens
 - *Phyllosticta* spp.
 - *Guignardia* spp.
 - *Colletotrichum* spp.
 - *Diplodia* spp.
 - *Cercospora* spp.
 - *Uredo* spp.
 - *Septoria* spp.
 - *Pseudomonas* spp.
- Favorable environment
 - Excessive moisture
 - High humidity



Orchid Diseases

Leaf Spots/Brights

- Control
 - Avoid symptomatic plants
 - Isolate new plants from established plants
 - DO NOT get water on leaves
 - DO NOT overwater
 - Promote good air circulation
 - Remove diseased plant material and debris (where possible)

Orchid Diseases

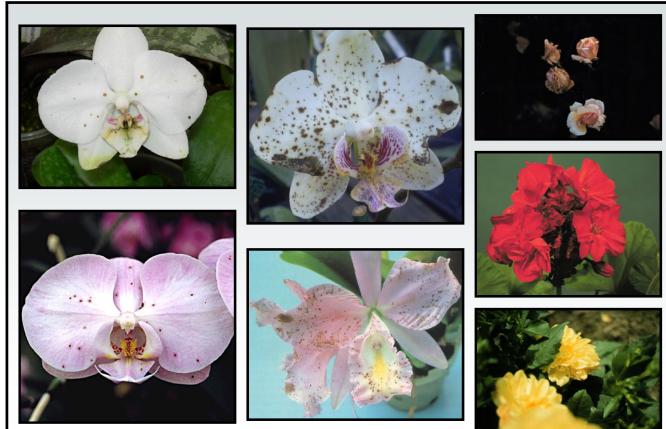
Leaf Spots/Brights

- Control
 - Use fungicides to prevent infections
 - Chlorothalonil, copper, mancozeb, thiophanate-methyl, fludioxonil, captan, ferbam
 - Apply to protect new leaves
 - 7-14 day application interval
 - Alternate active ingredients (FRAC codes)
 - Apply during periods of high moisture

Orchid Diseases

Botrytis Blight/Gray Mold

- Pathogen: *Botrytis cinerea*
- Favorable environment
 - Excessive moisture
 - High humidity



Orchid Diseases

Botrytis Blight/Gray Mold

- Control

- Isolate new plants from established plants
- DO NOT get water on flowers
- DO NOT overwater
- Promote good air circulation
- Remove diseased plant material and debris

Orchid Diseases

Botrytis Blight/Gray Mold

- Control

- Use fungicides to prevent infections
 - Chlorothalonil, copper, fludioxonil, iprodione, mancozeb, maneb, thiophanate-methyl, triflumizole, vinclozolin
 - 7-14 day application interval
 - Alternate active ingredients (FRAC codes)
 - Apply during periods of high moisture
 - Apply when “perfect” flowers are desired

Orchid Diseases

Viruses

- Pathogens

- *Odontoglossum ringspot virus* (ORSV)
- *Cymbidium mosaic virus* (CymMV)
- *Tobacco mosaic virus* (TMV)
- *Cucumber mosaic virus* (CMV)
- *Impatiens necrotic spot virus* (INSV)
- *Tomato spotted wilt virus* (TSWV)
- Others

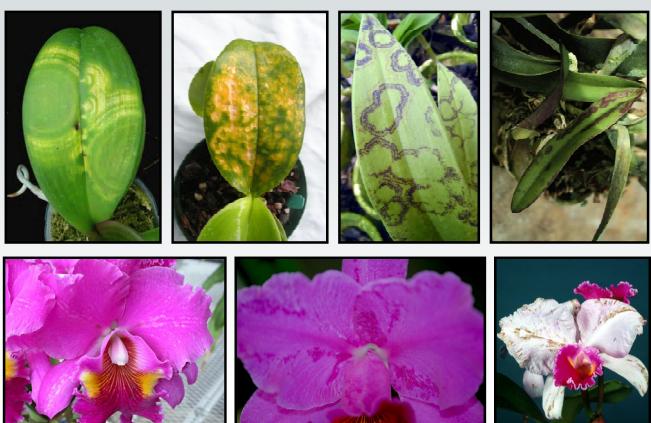
Orchid Diseases

Viruses

- Favorable environment: None

- Transmission

- Touch: TMV
- Mechanical: ORSV, CymMV
- Aphid: CMV
- Thrips: INSV, TSWV



Orchid Diseases

Viruses

- Control

- Avoid symptomatic plants
- Isolate new plants from established plants
- Request testing of plants prior to purchase
 - Enzyme-Linked Immunosorbent Assay (ELISA)
 - Dip-stick tests
 - Polymerase Chain Reaction (PCR)
- Discard infected plants

Orchid Diseases

Viruses

- **Control**

- Dinfest 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

Orchid 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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