

St. Augustine Orchid Society



Established in 2006 for Growing Orchids in North Florida

Orchid Pests and Diseases - Orchid Viruses



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Information assembled by Sue Bottom



Orchid Viruses

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Symptoms: Chlorotic and necrotic spots, streaks, lines and rings in the leaves. Flowers may show necrotic spots and streaks as well as color break. The virus, if present, is present in all parts of the plant.



Treatment: There is no treatment for a virused plant. Destroy the plant to prevent it from infecting other plants. If the plant is valuable, isolate it completely from other plants and follow precautions to prevent infecting other plants.

Prevention: Strictly adhere to good sanitation practices:



Use Sterile Cutting Tools – Viruses are spread by transmitting the plant sap from one plant to another via mechanical means. The primary means by which viruses are spread from plant to plant is by improperly sterilized cutting tools. There are two ways to keep cutting tools sterilized, either use sterile single edged razor blades that are discarded after each and every use or use a hot flame to sterilize cutting tools after using the tools on a given plant. The cutting tool should be sterilized for 15 to 20 seconds with a hot flame on each side.



Controls During Repotting – Viruses can be spread whenever there is mechanical transmission of sap from an infected plant to another plant, even by leaves rubbing against one another. Observe these additional controls:

- Latex Gloves. Wear latex gloves when handling a given plant and discard those gloves when you are done handling the plant. Your bare hands can come into contact with plant sap containing the virus and infect the next plant.
- Newspaper on the Potting Surface. Keep the potting surface sterile. Keep a stack of newspapers handy and when repotting, place newspaper under the potting area. Upon completion, wrap up the newspaper, gloves and other detritus and discard them before touching the next plant.

Disinfect Your Pots Prior to Reuse – Make sure your pots are sterile:

- Disinfection of Plastic Pots. Plastic pots can be disinfected by first washing them with soap to remove residual organic matter, then soaking them for an hour in a 20% bleach solution, then soaking them for an hour in Physan mixed per label instructions.
- Disinfection of Clay Pots. Clay pots are porous and cannot be sterilized against viruses by using bleach and Physan alone. Follow the normal disinfection routine for plastic pots above and then bake them in an oven at 400F for two hours to kill any residual virus.

Controls During Routine Activities – Viruses can be spread whenever there is mechanical transmission of sap from an infected plant to another plant, even by leaves rubbing against one another. Observe these additional controls:

- Cutting Inflorescences. Use a sterile tool to cut each inflorescence from the plant. The easiest way to do this is to use a sterile, single edged razor blade to remove the inflorescence and discard it after each use (or bake in a 350F oven for an hour). If you use shears, you should flame sterilize them between each inflorescence.
- Removing Inflorescences by Hand. Don't do it! A virus, if present, can be unknowingly transmitted to your hand and you can infect the next plant when you touch it or remove the next dead flower bud by hand. Instead, use a sterile razor blade and discard it after each use.

Read More:

What is an Orchid Virus (Ross & Liz Maidment, Aranbeem Orchids)

Cymbidium Orchid Viruses (Joshua White, Cymbidium Orchid Society of Victory)

Orchid Viruses (Loren Batchman, Orchids)

Transmission, Movement and Inactivation of CymMV and ORSV (University of Hawaii, Plant Disease)

Virus in Cattleyas (Sue Bottom)

Early Subtle Signs of Virus (Sue Bottom)

Color Break in Orchids (McMillan and Vendrame)

Common Virus Diseases of Orchids (University of Illinois at Urbana-Champaign)

Orchid Virus Diseases in Taiwan and their Control Strategies (Dr. Ching-An Chang)

Ornamentals Infected by Brevipalpus Mite-Transmitted Viruses (Kitajima, et al)

Orchid Fleck Virus in Phals (Bratsch, et al, U of Minnesota)

Virus testing an (entire) orchid collection for CymMV & ORSV (Ancient Energy Orchids)

Virus Testing - Do You Really Want to Know? (Sue Bottom)

A two step method for orchid virus disinfection of repotting tools (Ancient Energy Orchids)

The Relationship Between Insects and Plant Virus (Raymond Cloyd)

Viral Diseases of Orchids (Dr. Calum Wilson, U of Tasmania)

How to Test for Virus, tbottom14

Contact Agdia for ImmunoStrips and testing services.

Images of Orchid Problems



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