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Fact Sheet: N°1–2015

Ornamental Plant Pathogens

VIRUS IN ORCHIDS

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TCSV chlorotic spots symptoms in Phalaenopsis species. Photo credit: E. Vanessa Campoverde

1. Pathogen

NEW PEST

Tomato Chlorotic Spot Virus

Tomato Clorotic Spot Virus (TCSV) is a Tospovirus belonging to the virus family Bunyaviridae.

2. Vector

TCSV is transmitted from plant to plant by insects: thrips. The suspected species are:

Frankliniella schultzei and *F. occidentalis.*

3. Ornamental Host Families

To date, TCSV has been detected in Phalaenopsis and Epidendrum orchids. Other host families include:

Apocynaceae, Asteraceae, Balsaminaceae, Fabaceae, Gentianaceae and Solanaceae.

4. Symptoms

Predominate symptom on Phalaenopsis is a circular chlorotic spot on the leaves. Other leaf symptoms include:

mosaic patterns, leaf necrosis and distortion, vein clearing and mottling.

5. Detection and Diagnosis

Virus suspect plants should be submitted to the plant diagnostic lab for confirmation with serological or molecular tests. Contact your local UF/IFAS Extension office for more information.

6. Control/Management

Prevention is the most important strategy for virus control.Remember: Viruses cannot be controlled with pesticides.

- Scout orchids carefully for symptoms.
- Avoid potential introduction of virus infected plant material.
- Control the vector: Practice strategies for controlling thrips.
- Sanitation, weed management and avoid suspicious looking plants.

7. Literature

- Londoño, A., Capobianco, H., Zhang, S., and Polston, J. (2012). *First record of Tomato chlorotic spot virus in the USA.* Tropical Plant Pathology, 37(5), 333-338.
- Polston J., Wood E., Palmateer A.J., and Zhang S. (2013). *Tomato Chlorotic Spot Virus.* Publication #PP306. Gainesville University of Florida Institute of Food and Agricultural Sciences.
- Webster, C.G. et al., 2015. *Emergence of Groundnut ringspot virus and Tomato chlorotic spot virus in Vegetables in Florida and the Southeastern United States.* Phytopathology, 105 (3), 388-398.

Did you know?

That an orchid may not show symptoms but still be infected with one or more viruses!

Key words: orchid, TCSV, tospovirus, Florida, ornamental, disease, pathogen

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