

PEST ALERT: Chrysanthemum White Rust

First find of Chrysanthemum White Rust in Virginia

Chrysanthemum White Rust (CWR), caused by the fungus *Puccinia horiana*, was found at a Fairfax County retail nursery on September 24th, 2009 by a Virginia Department of Agriculture and Consumer Services (VDACS) nursery inspector. Of approximately 171 chrysanthemums in the infected display block, 57 plants showed visible symptoms. All chrysanthemums that displayed symptoms at the nursery were shipped in from out of state. VDACS and APHIS-PPQ laboratories confirmed the samples were positive for CWR on September 28th and the retail nursery began eradication protocols the same day under direction of VDACS. All plants associated with the symptomatic plant block were destroyed. This is the first report of this plant disease in the Commonwealth of Virginia.

This disease originated in eastern Asia and has since spread throughout Europe, Africa, Australia, Central America and South America. There have been sporadic outbreaks in the past few decades in the United States and Canada, but so far the disease has been eradicated.

What risk does CWR pose?

CWR is a quarantined plant pathogen that poses a potential trade barrier to growers of chrysanthemums in Virginia if introduced. The disease also poses a risk of increasing management costs if introduced into the Commonwealth, as control of this pathogen requires weekly fungicide applications. For these reasons VDACS plans to continue monitoring and eradication efforts to keep this pathogen out of the Commonwealth. CWR has the potential to quickly spread in nurseries and greenhouses and can cause serious crop loss.

What does CWR look like?

The first symptoms of CWR are small light green to yellow spots on the upper leaf surface. Subsequently, pinkish pustules, which later turn white, develop on the lower leaf surface. Pustules can also develop on flowers. Signs of the fungus usually develop first on younger leaves and flowers. (Refer to images of CWR below.) If you see chrysanthemums with these symptoms or signs, report them to VDACS or your local Virginia Cooperative Extension agent (<http://www.ext.vt.edu/offices/index.html>).

CWR-Susceptible hosts and favorable environmental conditions

CWR-susceptible hosts include pot mums, cut mums, and garden mums (*Chrysanthemum morifolium*=*Dendranthema grandiflorum*); Nippon daisy (*Nipponanthemum nipponicum*) and giantdaisy (*Leucanthemella serotina*=*Chrysanthemum serotinum*). Cool, wet weather favors development of CWR.

Actions to prevent CWR in the greenhouse and nursery

Purchase disease-free propagation material. Ensure good air circulation low humidity and adequate plant spacing to promote foliar drying. Scout susceptible plants on a regular basis. Do not handle imported flowers near mum production areas, even if they appear disease-free. Cuttings may show no symptoms, yet be infected. If you are in a location where CWR has been identified, a preventative fungicide spray program should be implemented. The following fungicides are recommended for use in a preventative spray program in nurseries and greenhouses: Heritage (azoxystrobin), Daconil Ultrex (chlorothalonil), Cygnus (kresoxim-methyl), Dithane 75 DF (mancozeb) and Strike (triadimefon). Follow label rates, application recommendations and precautions.

Where do I send suspect CWR samples?

Commercial samples should be forwarded to the VDACS Plant Pathology Lab at 600 North 5th Street, Richmond, VA 23219. Homeowner samples should be sent to the Virginia Tech Plant Disease Clinic through your local Virginia Cooperative Extension office (<http://www.ext.vt.edu/offices/index.html>) with a completed diagnostic form. Double-bag plant samples in ziplock bags.

Who do I contact for additional information?

Contact your local Virginia Cooperative Extension office (<http://www.ext.vt.edu/offices/index.html>) for current information on disease management options. Regulatory and commercial diagnostic questions should be directed to the VDACS Plant Pathology Laboratory 804-371-5086.

Chrysanthemum White Rust Images

