

Plant Health Update- from the VDACS Plant Pathology Laboratory

Prepared for: January/February 2010 Virginia Nursery and Landscape Association Newsletter

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In 2009, staff in the Office of Plant and Pest Services (OPPS) at the Virginia Department of Agriculture and Consumer Services (VDACS) conducted surveys for plant diseases that pose economic, regulatory and plant health concerns to Virginia's nursery and landscape industries. Two of the diseases targeted in the surveys were Ramorum blight (Sudden Oak Death - SOD) caused by *Phytophthora ramorum* and Chrysanthemum White Rust (CWR) caused by *Puccinia horiana*.

Ramorum Blights

VDACS nursery inspectors surveyed containerized and field grown high-risk host genera such as *Rhododendron*, *Camellia*, *Pieris*, *Kalmia* and *Viburnum* for *P. ramorum*-like symptoms during annual nursery inspections at wholesale, retail and production sites. In addition, urban streams and nursery runoff water was collected and tested. Symptomatic plant and water samples from across the state were analyzed using culture, ELISA and DNA technology at VDACS' Plant Pathology Laboratory; all samples tested negative for *Phytophthora ramorum*, which is good news for Virginia as nine other Eastern states had positive detections of *P. ramorum* on ornamental nursery stock in 2009. *P. ramorum* poses potential health threats to major forest tree species and could cause trade barriers to the movement of host plant material if introduced into the Virginia landscape. VDACS plans to continue the *P. ramorum* survey in 2010. In addition, nurseries are encouraged to self-monitor for *P. ramorum*-like symptoms on high-risk host plants, especially on incoming containerized stock. Suspect plant material should be sent to the VDACS Plant Pathology Laboratory at 600 N. 5th Street, Room 229, Richmond, VA 23219. Foliage samples should be sent double-bagged in zip lock plastic bags, labeled with nursery name and contact information, and mailed in sturdy envelopes or crushproof boxes. Please call the VDACS' Plant Pathology Laboratory at (804) 371-5086 if you would like more guidance on submitting diagnostic samples.

Chrysanthemum White Rust (CWR)

During nursery inspections conducted in 2009, thousands of mums across Virginia were surveyed for CWR. On September 24th, 2009, a VDACS nursery inspector found CWR on chrysanthemums at a retail nursery. VDACS and USDA Animal and Plant Health Inspection Service (APHIS) laboratories confirmed the samples as positive for CWR on September 28th. This was the first officially confirmed report of this plant disease in Virginia. VDACS conducted trace forward investigations which lead to CWR finds at three additional retail nursery sites. All symptomatic plants and those associated with the symptomatic plants were destroyed. Like Ramorum blight, CWR is a USDA quarantined plant pathogen that poses a potential trade barrier to Virginia growers of host plant material. The disease also poses a risk of increased management costs if introduced into the Commonwealth, as control of this pathogen requires weekly fungicide applications. VDACS will continue monitoring efforts for CWR in 2010.

Additional Information on these Diseases:

Ramorum blight

http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/resources.shtml

Chrysanthemum white rust (CWR)

http://www.aphis.usda.gov/plant_health/plant_pest_info/cwr/index.shtml



Fig 1: Rhododendron leaves displaying *P. ramorum*-like symptoms. Note lesions on mid-rib., leaf tip and/or petiole. Several species of *Phytophthora* cause these types of symptoms. Symptoms may develop anytime during the year. Suspect leaf samples should be sent for diagnostic testing at the VDACS plant pathology laboratory at 600 N. 5th Street, Richmond, VA 23219.



Fig 2: CWR “pustules” on chrysanthemum leaves. Be on the look out for these signs in the fall of 2010. Call 804-371-5086 to report suspect plants



Fig 3: Microscopic view of teliospores from CWR pustules. Teliospores develop basidiospores during high humidity which cause new infections to surrounding plants.