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BEST MANAGEMENT PRACTICES (BMP): **Boxwood Blight, *Calonectria pseudonaviculata*,** **In Nursery Production**

IF YOU SUSPECT INFECTION MAY BE PRESENT IN YOUR BOXWOOD, SARCOCOCCA OR PACHYSANDRA STOCK, CONTACT THE PLANT PROTECTION & WEED MANAGEMENT SECTION.

GOAL: Prevent the introduction and spread of *C. pseudonaviculata* within your nursery operation and the landscape.

RATIONALE: Implementing a BMP- based system of plant care has been demonstrated to eliminate the pathogen from the production cycle.

Pathogen Exclusion

- **KNOW YOUR SUPPLIER!!** Ask questions regarding the status of boxwood blight at the point of purchase. Determine when, and if, protective fungicides were applied to your order prior to shipment. Fungicide use may mask disease symptom expression.
- **PERFORM VISUAL INSPECTIONS** of all incoming host plants, regardless of origin, for disease symptoms prior to introduction into your nursery.
- **KEEP NEW PLANTS GROUPED TOGETHER AND ISOLATED** at least 3 meters away from other nursery stock for a minimum of 30 days to monitor for disease symptoms.
- **AVOID PRUNING OR FUNGICIDE** application for a period of 30 days after the arrival of each shipment. This will allow time for expression of symptoms on infected, but asymptomatic plants, depending on weather conditions.

Nursery Layout

- **CREATE A THREE METER SPACE OR THREE METER PHYSICAL BARRIER** between blocks of host plants (boxwood, pachysandra, and sarcococca).
- **MAXIMIZE SPACE** between individual plant containers.
- **KEEP PLANTS FROM THE SAME SOURCE ISOLATED TOGETHER.**
- **PLACE PLANTS ON CONCRETE PADS, OR WEED BARRIER** over gravel, to allow for clean-up of fallen leaves. Containers placed directly on the soil surface allow leaf debris to become embedded in soil and difficult to remove.
- **CREATE A REMOTE DISPOSAL SITE** where periodic burying or burning infected plants is feasible. Make sure any water run-off from this area does not enter the nursery. Prevent fallen leaves and other plant debris from leaving the disposal site.

Water Management

- **AVOID OVERHEAD WATERING AND OVERWATERING** which encourage fungal development and spread. Prolonged periods of high humidity (i.e. overnight), leaf wetness, and standing accumulations of water provide optimum conditions for pathogen growth. Water early in the day to minimize periods of leaf wetness.
- **AVOID WATER RUN-OFF** to the walking and/or driving areas in your nursery, and any accumulation of standing water.
- Protect your **IRRIGATION WATER** source from contamination by run-off.
- **IF REUSING WATER**, collect run-off in a safe location (pond) and treat pond at least once each year.

Plant Care

- Utilize new **STERILE POTTING MEDIA**. No media or plant containers should be reused without sterilization.
- **PRUNE SYSTEMATICALLY**. Work should progress within a block or variety until finished, before moving to the next block. Remember to sanitize equipment when moving between blocks and varieties. Always prune healthy stock first and questionable plants last.
- **PRUNE WHEN PLANTS ARE DRY**. Low humidity during pruning can assist in lowering infection transmission from plant to plant.
- **LEAF LITTER AND PLANT DEBRIS REMOVAL & DESTRUCTION** eliminates an important source of infection.
- **CONTACT MDA** if you see any questionable host plants.

Record Keeping

- **MAINTAIN RECORDS** for a minimum of twelve months, including:
 - **MOVEMENT OF HOST PLANTS** both sent and received. Note quantities, varieties, shipper name, sources and destinations.
 - **PROPAGATION TECHNIQUES, PRUNING, WATER/FERTILIZER REGIMEN(S)** for each host plant variety or source.
 - **PESTICIDES USED** including date, active ingredient, quantity applied, concentration, and method of application.

Sanitation, Handling, and Disposal

- All tools and other **EQUIPMENT SHOULD BE STERILIZED AFTER EACH USE**. Effective products include 70% alcohol (Isopropyl or ethanol) or over the counter sprays such as Lysol disinfectant spray. For information on alternative sanitation methods, use the following link:
http://www.ct.gov/caes/lib/caes/documents/special_features/boxwood_blight/list_of_sanitizers_for_cps_02-03-14.pdf
- **NO DISPOSAL ACTIVITIES IN RAIN OR SNOW**. Periods of low humidity are ideal for moving host plants safely.
- **BURNING** is the preferred method of disposal of infected or suspect material
- **BURIAL** is acceptable at a depth of 24 inches and covered with 2 inches of soil (clean soil from a source other than where infected boxwoods were found).
- **VEHICLES, WORK SURFACES, AND EQUIPMENT SANITIZATION** should be conducted when handling or moving host plants from different sources or to another location.

Vehicle Movement

- **PREVENT OR RESTRICT** movement of outside vehicles at your nursery.
- **DESIGNATE A RECEIVING AREA** for loading and unloading of shipments; clean and treat the area frequently.
- **LIMIT** customer movement to nursery – owned vehicles and guides.
- **NO FOOT TRAFFIC** by customers/visitors in host plant blocks.

Employee Awareness

- **EDUCATE** nursery personnel to recognize the disease symptoms and to understand best management practices. See www.boxwoodblight.org

IF YOU SUSPECT INFECTION BY BOXWOOD BLIGHT, NOTIFY MDA PRIOR TO ANY MOVEMENT OR DISPOSAL ACTIVITIES OF INFECTED OR SUSPECT HOST PLANTS