

## **Box Blight Best Management Practices - Historical Gardens**

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Boxwood blight or box blight is a new disease to the U.S. This disease was first found in North Carolina in October 2011 and more recently in eight other states (CT, MA, MD, NY, OR, PA, RI, VA) and British Columbia of Canada. This disease is very destructive and already has devastated one nursery. There is a growing concern over the impact of this disease on the historical gardens and other establishments in Virginia. The following discusses the box blight pathogen biology and how historic garden managers may put this knowledge into practice for avoidance and mitigation of this disease.

Box blight is favored by moist and warm weather conditions (64 to 77°F). Thus, it will begin in the spring, go dormancy during hot summer then return in the fall when temperature cools down. The box blight pathogen spreads primarily through infected plant materials. It also may stick to and spread through contaminated delivery trucks, tools, vehicles, boots, shoes and other personal belongings. Compared to rusts and other diseases transmitted primarily by air movement, there are a lot of more tools and practices that garden managers can use to control box blight. Specifically, there are three major lines of defense against this disease.

### **A. Propagating boxwood locally using plant materials on-site**

1. Locate propagation in an isolated area. Limit access to essential personnel only. Use footbaths at the entrances to the area.
2. Clean, then disinfest all work surfaces prior to and after each propagation task. These include benches, walls, floors, trays, tools, etc.
3. Select mother plants from carefully inspected, healthy-looking materials. Selected mother plants should not have received any fungicides for at least 4 weeks.
4. Surface-sterilize all cuttings before rooting them. Disinfestants could be bleach, hydrogen peroxide or quaternary ammonia.
5. Use only new flats, containers, fresh potting mix or sterilized media for propagation.
6. Disinfest all tools before starting each cultivar.
7. Ensure that propagators are clean. They should wear disposable nitrile exam gloves. They also should change the gloves every cultivar.
8. Watch for symptomatic liners. Remove them on their first detection.

### **B. Purchasing other plant materials from production facilities free of box blight**

1. Stay tuned with the development of box blight. Avoid buying plants from infested areas. Carefully select vendors based on the previous purchase experience. Stay away from those heavily relying upon fungicide protection. Delivery trucks may carry infected plants. They also could be contaminated from previous infected shipments. Every delivery increases the risk of box blight introduction.

2. Ask for inclusion of the most recent fungicide treatment information in the shipment package. This information should include fungicide name, application rate and time.
3. Inspect incoming plants at delivery. If box blight contamination is suspected, immediately report to the Virginia Department of Agriculture and Consumer Services (VDACS). The contact number is 804-371-5086 or send a sample to the Disease Clinic via your county extension office. <http://www.ext.vt.edu/offices/index.html>

### **C. Management of existing boxwood plantings**

1. Avoid overhead irrigation as rain splash is a major mechanism for local spread of the box blight pathogen.
2. Prune boxwood bushes during hot summer when the pathogen is inactive, improving air movement and reducing the moisture required for pathogen reproduction and plant infection while mitigating the risk of unintended pathogen dissemination.
3. Periodically inspect boxwood plantings for signs and symptoms of box blight. If found or suspected, immediately contact VDACS and send a sample to the Disease Clinic for verification.
4. In event of box blight detection, there are several fungicides labeled for landscape use that provide effective control of box blight. These include Cygnus, Cleary 3336, Daconil, Dithane, and Pageant. Chemical protection should be used as the last resort and the instruction on the label must be followed strictly.