Boxwood Blight in the Landscape

What Is It?

Boxwood blight (also called "box blight" in Europe), caused by the fungal pathogen *Calonectria pseudonaviculata* (syn. *Cylindrocladium buxicola*)), was found for the first time in the United States in North Carolina, Virginia and Connecticut in 2011. Boxwood blight was first reported in the United Kingdom in the early to mid 1990's and had spread through Europe and New Zealand by 1998. The origin of the pathogen is unknown. The first symptoms begin as leaf spots followed by rapid browning and leaf drop starting on the lower branches and moving upward in the canopy. The pathogen does not attack the roots, so larger plants may produce new leaves during the growing season, but may lose ornamental value as defoliation becomes severe. Repeated defoliation and dieback from stem cankers has killed small rooted cuttings in nursery propagation. The causal fungus can remain alive in fallen leaves which can then serve as the source of infection for subsequent years.

What Does It Look Like?

The fungal pathogen infects leaves and branches of boxwoods, causing light or dark brown leaf spots with a dark border, defoliation and dieback. Infected branches develop long blackish-brown streaks on stems. In warm, humid conditions the fungus produces clusters of white spores visible to the naked eye on the underside of leaves and on stems. The fungus does not infect roots; thus, plants may re-grow even after a severe infection. However, repeated defoliation and dieback can predispose plants to other diseases, such as Volutella blight, resulting in decline and eventual death. The key symptoms that differentiate Boxwood Blight from other boxwood diseases, such as Volutella Blight and Macrophoma Leaf Spot, are numerous narrow black cankers (black streaks) that develop on the green stems.

Although boxwoods are not typically killed directly by *C. pseudonaviculatum*, rapid defoliation renders boxwoods unmarketable and gardens unsightly. The pathogen thrives in humid environments, which are typically present in production nurseries and propagation houses and our southern climate.

		
Stem Lesions	***Tissue Damage***	***Infected Plants in the Landscape***

How Do I Keep From Getting It?

All known species and varieties of boxwoods (*Buxus* spp.) are susceptible to Boxwood Blight. There are differences among cultivars with English boxwood (*B. sempervirens* var. *suffruticosa*) and American boxwood (*B. sempervirens*) the most susceptible to the disease. The pathogen spreads by wind-driven rain or splashing water over short distances and is most infective during conditions of high humidity. Long distance spread of this disease occurs via movement of infected plants, infested plant debris, soil or equipment. Spores may also spread by insects or birds. The pathogen has been found to survive in leaf debris placed either on the soil surface or buried in the soil for up to 5 years.

Know where your plants are coming from – only buy form Certified Nurseries and ask for Inspection Certificates. Examine newly purchased plants and cuttings carefully for symptoms and closely monitor them for symptom development. Isolate new plant material from other nursery stock for at least three weeks. There are no known *curative* fungicides. A spray program can be used to *suppress* the disease and keep it from spreading.

Once introduced, limiting movement of this sticky, contagious fungus is VERY difficult and will ONLY be accomplished by ALWAYS following good sanitation practices, including:

- disinfecting pruners and other tools frequently within and between different blocks of plants, especially between different field locations or landscapes in counties suspected to have box blight;
- wearing clean disposable booties or washing off debris and dirt entirely from soles of shoes between job sites and wearing clean tyveks or laundering clothes between different locations
- burning or burying box-blight infected plants on-site (composting is not recommended); and
- NEVER discarding boxwood waste material where it could contaminate other boxwood plants.

The best way to sanitize tools is to dip them for **TEN SECONDS** into a sanitizer product and then allowing the tools to dry.

What Do I Do If I Get It?

If you suspect that you have Boxwood Blight, please send a sample to the ACES Plant Diagnostic Lab for confirmation. **All plants infected with box blight should be destroyed, as the chance of further spreading this fungus is highly probable.** Remove and bag all plant parts, sealing the bag and removing from the area. Do not compost any infected materials. Also, clean up and remove all leaf litter and debris from the area.

Resources –

Alabama Cooperative Extension System: http://www.aces.edu
Alabama Cooperative Extension System Plant Diagnostic Lab: http://www.aces.edu/dept/plantdiagnosticlab/
AmericanHort Boxwood Blight website: www.boxwoodblight.org
Virginia Tech University Boxwood Blight website: http://www.ext.vt.edu/topics/agriculture/commercial-horticulture/boxwood-blight/
Connecticut Agricultural Experiment Station: http://www.ct.gov/caes/site/default.asp
University of Maryland Boxwood Blight: https://extension.umd.edu/hgic/invasives/boxwood-blight
North Carolina State University boxwood blight links page: http://go.ncsu.edu/boxwood_blight_links

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