Look Out for Boxwood Blight on Holiday Greens

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Boxwood blight or "box blight", a serious fungal disease of boxwood caused by the fungal pathogen *Calonectria pseudonaviculata* (syn. = *Cylindrocladium pseudonaviculatum* and *C. buxicola*) has been detected on boxwood wreaths in Michigan (MDARD Press Release on December 11th 2018) (Fig. 1).

This fungus causes a devastating disease of boxwood (Fig. 2) and other plants in the Buxaceae family, that has resulted in the death and destruction of 1000's of susceptible boxwood plants in the US. Boxwood blight has now been reported in 29 US states (Fig. 3). Prior to 2018, Michigan was free of this disease, but unfortunately in 2018 and 2019, there were several reports of this disease at multiple locations (Fig. 4) on both boxwood and *Pachysandra* from a landscaping firm, a homeowner's yard and on holiday wreaths sold in retail outlets.

When purchasing boxwood greenery, try and source plant material from nurseries that participate in the "Boxwood Blight Cleanliness Program"(https://www.mnla.org/story/boxwood_blight_cleanliness_program_and_compliance_agreement_production_nurseries), a voluntary program developed by MDARD that requires nurseries to undergo a certification process based on strategies designed to reduce the likelihood of boxwood blight.

When you receive your plant materials, take a closer look at the foliage and stems. If you notice round, tan leaf spots with darker borders and potentially a yellow halo on the leaves, and black, elongated, streaking lesions on the stem, this may indicate that boxwood blight is present (Fig. 5). Sometimes, the underside of the leaves will have a white frosty appearance caused by the formation of upright bundles of fungal spores.

Even though the materials used in wreaths and greens won't necessarily come into direct contact with the ground. Infected wreaths displayed outdoors close to boxwood plants can pose a risk, especially when water is present. The rainwater can move the fungal spores from the wreath to any nearby boxwood. Additionally, the spores can persist in the soil for many years. Wreaths displayed indoors pose little risk to the outside environment, so if you would like to display a boxwood wreath it may be best to bring it indoors for the holiday season this year.

Once present, boxwood blight is difficult to eradicate. After detection, our best chance of managing this disease is to quickly remove and destroy the affected plant material. This can mean removal of infected plant materials, boxwood wreath, a container plant, or even an infected hedge and any associated plant debris on the ground. If you suspect you have infected boxwood it is best to contact the Diagnostic Services Lab (https://pestid.msu.edu/) at MSU. They will be able to assist with diagnosis of the disease and provide best practice recommendations for the disposal of the infected material. They may also ask you some questions to help us trace forward and trace back the diseased material; to identify where it has come from and where it may have been sent too. This "tracing" of material is one of the best ways we have of reducing the risk of disease spread. If material is infected it is best to burn, or double-bag and dispose of infected plant material in the trash.

Fig. 1 Wreaths affected with boxwood blight found in a Michigan store. Close inspection of the wreath revealed leaf spots and stem lesions typical of boxwood blight. Photo credit: MDARD

Fig. 2 Diseased boxwood showing leaf necrosis and defoliation. Photo Credit: Mary Ann Hansen, Virginia Polytechnic Institute and State University, Bugwood.org

Note the fungus that causes boxwood blight only affects plants in the Buxaceae family, so wreaths made out of evergreens such as fir, spruce, pine and cedar will not contain the disease.

Suspect plants and plant material can be examined by MSU Diagnostic Services, alternatively burn, or double-bag and dispose of plant material in the trash.

For more information on this disease see the downloadable factsheet from MSU extension (https://www.canr.msu.edu/home_gardening/uploads/files/2019_msue_fact sheet_boxwood_blight_final.pdf) or view the materials available from the Virginia Cooperative Extension website (https://ext.vt.edu/agriculture/commercial-horticulture/boxwood-blight.html).

References

Michigan Department of Agriculture and Rural Development press release on boxwood blight (https://www.michigan.gov/mdard/0,4610,7-125-1572_3628-485223--,00.html)

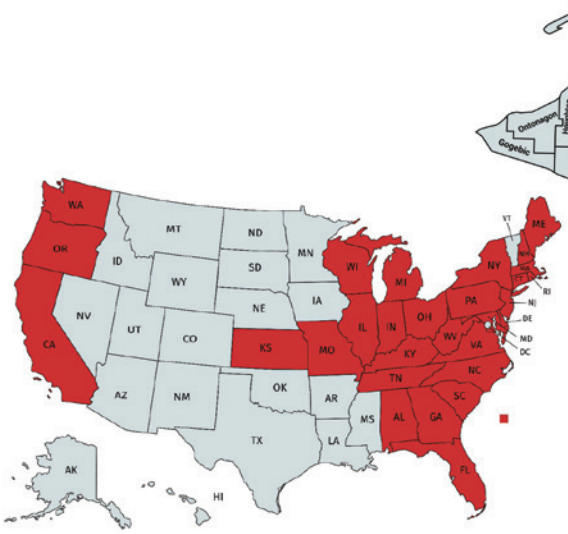

Fig. 3 Locations where boxwood blight has been detected in the US. Credit: Elizabeth Dorman, MDARD.

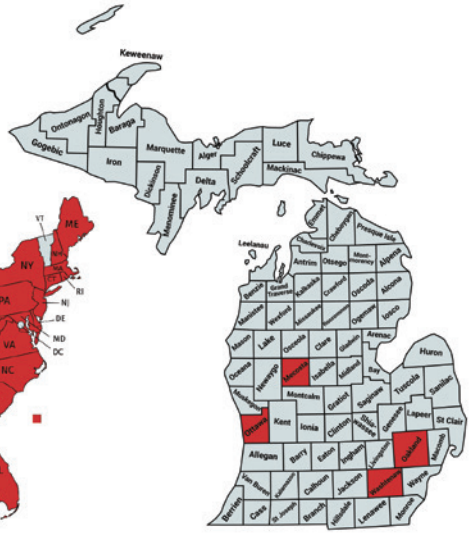

Fig. 4 Counties where boxwood blight has been detected in Michigan. Credit: Elizabeth Dorman, MDARD.

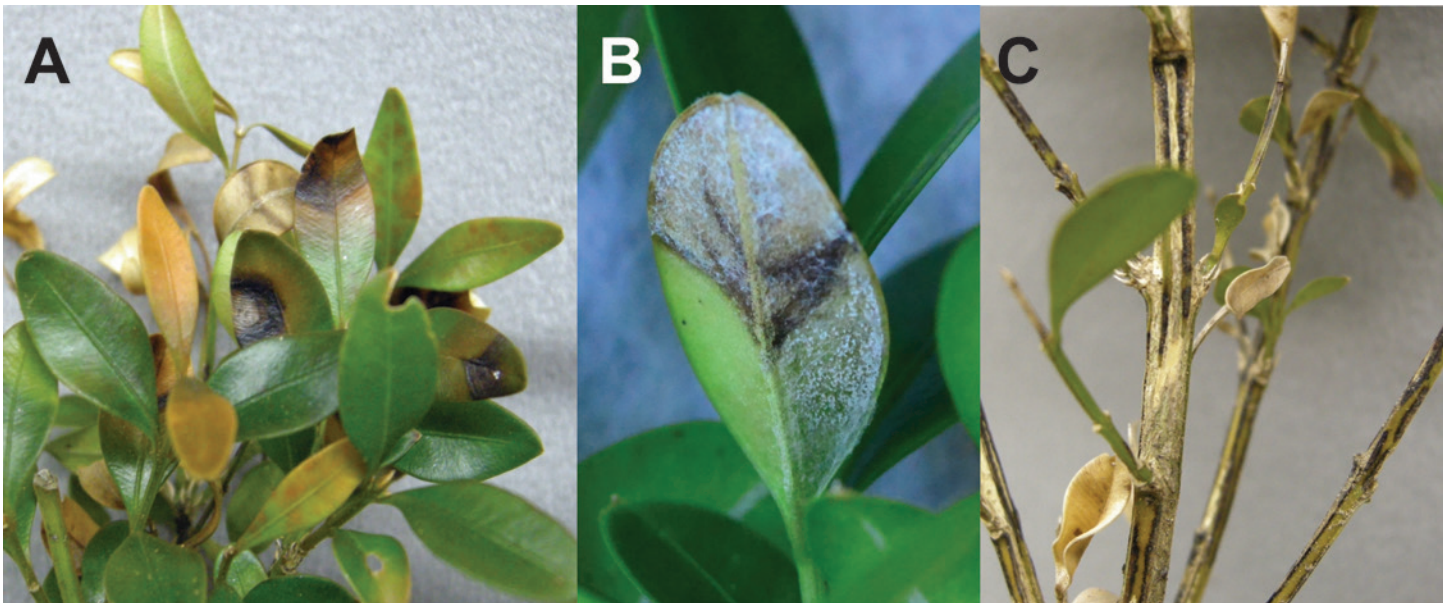

Fig. 5. Leaf and stem lesions to look for. You can see leaf spots on the upper side of the leaf (A) and the white spore masses on the underside of the leaf (B) and the blackened area on the stem (C). Photo Credits: Mary Ann Hansen, Virginia Polytechnic Institute and State University, Bugwood.org (A & B), David L. Clement, University of Maryland, Bugwood.org (C).