



United States  
Department of  
Agriculture

National Institute  
of Food  
and Agriculture

[www.nifa.usda.gov](http://www.nifa.usda.gov)  
@USDA\_NIFA

Discover USDA highlights at  
[www.medium.com/usda-results](http://www.medium.com/usda-results)



## FACT SHEET

# BOXWOOD BLIGHT

**IMAGINE THIS SCENE: YOU ARE OUTSIDE OF YOUR HOME ADMIRING A HEALTHY AND VIBRANT PLANTING OF** boxwood that is a central part of your landscape. You notice a few leaves with brown spots, but nothing that appears overly abnormal. Over the next few weeks, the weather turns cool and rainy. When you look at the plants again you see that the few brown leaves have exploded into a rapidly moving blight that has consumed much of the plant. By the end of the summer your boxwood plants are dead. What has happened? And, more importantly, why has this happened?

Boxwood plantings have increasingly shown such symptoms, which are caused by a fungal pathogen that was recently detected in North America, *Cylindrocladium buxicola* (also known as *Calonectria pseudo-naviculata*), the cause of boxwood blight.

Boxwood blight, first found in the United Kingdom in 1994, had spread throughout the country in just six years. It was subsequently found in continental Europe. In 2011, boxwood blight was detected in Connecticut and North Carolina. Since that time, it has been reported in several other states as well as in British Columbia. It is likely that the pathogen was accidentally introduced, but we don't know where it came from. Boxwood is widely planted and the American nursery industry has a substantial investment in the plant species.

Although some variation in susceptibility exists, boxwood blight occurs on all species of *Buxus* (including commonly planted species, *Buxus sempervirens*) and Japanese Spurge (*Pachysandra terminalis*). Symptoms of blight are found on all above ground parts and appear as light or dark brown leaf spots and black stem cankers. Defoliation may occur rapidly with this disease.

The pathogen may complete a life cycle in less than a week under favorable environmental conditions. Water from irriga-

tion, rain, and even dew plays an important part of the severity of the disease. Pathogen spores are easily spread by rain, irrigation water, and even contaminated tools and equipment. The pathogen can also survive in fallen, infected leaves and be easily moved by human activity as well as wind and water. This ease of movement and the pathogen's ability to spread is a major concern to the nursery industry.

Boxwoods are a popular landscape plants that are often used as hedges or even topiaries. Boxwoods are low maintenance shrubs that tolerate a wide range of environmental conditions and the plant's popularity reflects its economic value to the nursery industry as well as for home owners who use boxwood to increase the aesthetic value of their landscape. According to the 2009 Hort Specialties Census, more than 13 million boxwood plants were sold in the United States in 2009 with total sales of \$103 million, ranking the plant second among woody ornamentals. It is grown by nearly 2,000 operations, ranking it first. About 22 million boxwood plants are in production, more than any other species, with an estimated value of \$170 million.

While boxwood is not a food or feed crop, it is an important part of the agricultural productivity of the United States. The discovery of Boxwood blight for the first time



Boxwood blight image courtesy of NCSU

in 2011 illustrates the need to monitor plant materials coming into the United States for pests and diseases. This also clearly shows that this nation must have the necessary diagnostics and scouting in place to ensure that any new discoveries of this or any other plant disease or pest can be stopped before it becomes economically important.

The diagnostic capacity of the National Plant Diagnostic Network is critical to the rapid diagnostics of this disease. Early detection is crucial to the rapid response needed to mitigate the economic impact this disease has and will continue to have on the green industry in the United States.