Springfield, NJ
Colts Neck, NJ
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Field Guide To Boxwood Blight

Boxwood Blight Identification Guide

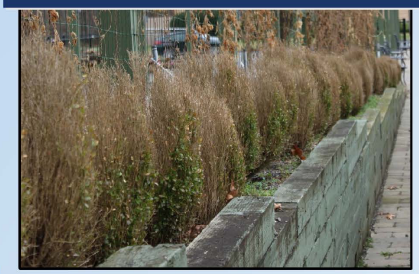
INITIAL SYMPTOMS

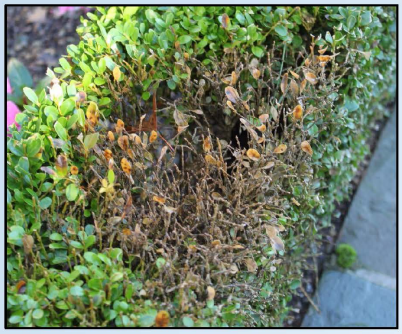

Dark leaf spots (left) and spores of the boxwood blight fungus (*Calonectria pseudonaviculata)* on lower leaf surfaces (right).

Zonate leaf lesions.

Black stem lesions.

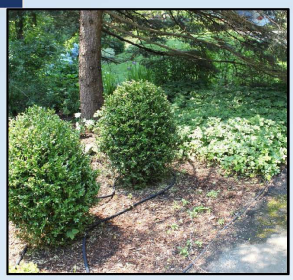
LANDSCAPE AND NURSERY SYMPTOMS



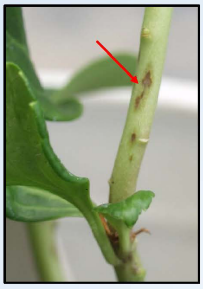


Foliar and stem symptoms result in severe defoliation leading to decline and death of boxwood plants. Boxwood blight affects all species of boxwood, pachysandra, and sarcococca.

All photos from CAES.
Funding from FY2013 Farm Bill, USDA-APHIS.




Infected boxwood and pachysandra in the landscape (left) and leaf spots on pachysandra (right).




Stem lesions on pachysandra (left) and fungal spores on lower surface of pachysandra leaves (right).

For more information:
www.ct.gov/caes/boxwoodblight
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CAES
The Connecticut Agricultural Experiment Station
Putting Science to Work for Society since 1875

Leaf spot may be the most obvious sign of infection

Stems may show significant damage

Typically starts at the bottom of the plant and moves up

Amount of defoliation and leaf drop varies. Some leaf retention seems to be more likely than total loss of leaves.

Damage may be patches in the middle of seemingly healthy plants, especially hedges.

- Damage typically starts at the base of the plant and moves upward.
- Leaf spot will be the most obvious clue.
- Once infected, if the weather remains conducive to growth, damage to the plant can occur very rapidly.
- Complete loss of leaves down to bare stem does not always happen. Dead leaves can stay on the plant..
- There is no treatment to rid the infected plant of the fungus.

Removing Diseased Plants

Removal of Diseased Boxwood and Leaf Litter

A) It is best to do cleanup on sunny dry days when sporulation is lessened. Consider using fungicides in advance of cleanup (spray in and around plant(s) to be removed as well as those that stay).

B) Remove the plant top/foliage first while taking care not to spread leaf litter. If possible place a garbage bag over the plant prior to removal.

C) Remove leaf litter from soil surface by vacuuming, raking, or sweeping. If leaf debris has been incorporated into the soil, removing soil to a depth of 8" to 12" may help eliminate fungal inoculum of the pathogen. Diseased boxwood, leaf debris, and soil should be double bagged and removed to the landfill or buried 2' deep in soil away from boxwood plantings.

Do not compost boxwood debris or plant material

Boxwood Resistance

Disease Resistance

Highly Susceptible To Boxwood Blight
- B. sempervirens 'Suffruticosa'
- B. sinica var. insularis 'Justin Brouwers'

Susceptible
- B. sempervirens 'American'
- B. sempervirens 'Marginata'
- B sempervirens 'Elegantissima'
- Buxus X 'Glencoe' (Chicagoland Green)

Moderately Susceptible
- B. sempervirens 'Vardar Valley'
- B. microphylla var. japonica 'Baby Gem'
- B. microphylla var. japonica 'Baby Jade'
- Buxus X 'Green Mountain'
- Buxus X 'Green Velvet'

Moderately Resistant
- B. microphylla 'Winter Gem'
- B. microphylla 'Faulkner'
- B. sempervirens 'Dee Runk'
- B. sempervirens 'Fastigiata'
- Buxus 'Green Gem'

Most Resistant
(recommended for new plantings)
- B. microphylla 'Golden Dream'
- B. sinica var. insularis 'Nana'
- B. sinica var. insularis 'Franklin's Gem'
- B. microphylla var. japonica 'Green Beauty'

Substiture Plants For Boxwood

Substitutes For Boxwood

Deer Resistant Substitutes

- Osmanthus cultivars such as 'Goshiki', 'Gulf Tide'
- Andromeda (Pieris) dwarf and upright varieties
- Ilex glabra cultivars include 'Compacta' and 'Shamrock'
- Cephalotaxus cultivars include 'Fastigiata', 'Prostrata' and 'Duke Gardens'
- Japanese falsecypress (Chamaecyparis pisifera) cultivars such as 'Golden Mop', 'Filifera Aurea'
- Skimmia
- Prunus laurocerasus 'Otto Luyken'
- Barberry cultivars include 'Crimson Pygmy', 'Royal Burgundy', 'Rose Glow'
- Juniper cultivars include 'Sea Green', 'Old Gold', 'Mint Julep', 'Gold Star'
- Hybrid Mountain laurel varieties
- Nandina 'Domestica', 'Gulf Stream' 'Firepower
- Leucothoe cultivars such as fontanesiana, axillaris

Non Deer Resistant Substitutes

- Taxus cultivars such as Densiformis, Hatfield, Hicksi, Repandens
- Japanese Holly (Ilex crenata) cultivars such as 'Compacta,' 'Green Luster,' 'Hoogendorn,' 'Helleri,' 'Steeds', and 'Chesapeake'
- Evergreen azaleas (Rhododendron sp.)
- Euonymus cultivars such as Silver King, Golden, Manhattan
- Ilex x meserveae cultivars include 'Blue Maid', 'Blue Princess', 'Blue Prince', 'China Girl, 'China Boy'

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Fungicides

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For professional applicators in Indiana*, effective products include a rotation of Daconil® (chlorothalonil) or Medallion® (fludioxonil). Other fungicides include Heritage® (azoxystrobin), Pageant® (pyraclostrobinand boscalid), Compass® (trifloxystrobin), Torque® (tebuconazole), and Cleary's 3336® (thiophanate- methyl), Spectrol 90WDG (Chlorothalonil). Fung-onil (Bonide); Ortho and Max Garden Disease Control or Ortho Diseease B Gon (Scotts) are included in at least one fungicide list. (Sources: Purdue University in Indiana, Virginia Cooperative Extension, saundersbrothers.com)