

# Suggested Plant Species for Sites with a History of Phytophthora Root or Crown Rot

From the North Carolina Cooperative Extension Service



*Phytophthora is one genus within the group of "fungus-like" organisms known as oomycetes. Phytophthora species are capable of infecting a wide range of trees, shrubs, and bedding plants. Most plant-pathogenic species of Phytophthora cause root and crown rots and are able to persist for numerous years in soil.*

Chemical management of these diseases usually is impractical or not economical in landscapes. The following cultural management practices are recommended when Phytophthora root or crown rot has been diagnosed in a landscape.

- ◇ Remove severely affected plants.
- ◇ Prepare the site to ensure good drainage and organic matter content by adding pine bark to soil, raising beds, or planting on berms.
- ◇ Inspect all planting material and set only healthy plants into the landscape.
- ◇ Avoid overwatering and over-fertilization.
- ◇ Select plant species that are tolerant to Phytophthora when replacing plants lost to this pathogen.

Due to the large number of Phytophthora species and their wide host ranges, it is very difficult to make general recommendations about replacement plants for the landscape. The lists presented here were compiled based on published reports, Plant Disease and Insect Clinic records from North Carolina and neighboring states, and the expert opinion of many plant pathologists.

Disclaimer: Many resistant or tolerant plants may be susceptible to attack by Phytophthora in wet, poorly drained sites. Good general horticultural practices should be used, as well as the cultural management options listed above. Also note that many of these plants are susceptible to other pests or pathogens that may be present in the soil and attack roots, such as Pythium spp., Rhizoctonia spp., Sclerotium rolfsii, Thielaviopsis basicola, or root-feeding nematodes.

*The authors wish to thank the participants at the 17th Ornamentals Workshop in Kanuga (Hendersonville, North Carolina, September 2010) for their input into this publication.*

*(Continued on page 2)*



NEW GARDEN  
LANDSCAPING & NURSERY

newgarden.com  
email:info@newgarden.com

**New Garden Village**  
5572 Garden Village Way  
Greensboro, NC 27410  
phone: 336-665-0291

**New Garden Gazebo**  
3811 Lawndale Dr.  
Greensboro, NC 27455  
phone: 336-288-8893

**Phytophthora root rot symptoms in the landscape often include loss of older foliage, general decline in vigor and new growth, branch dieback, and wilting.**



New Garden Landscaping & Nursery  
"Where your imagination takes root"

# Plant Species for Sites with a History of Phytophthora cont.

(Continued from page 1)

Annuals Tolerant or Resistant to *Phytophthora* species:

Scientific Name	Common Name
Ageratum sp.	Ageratum
Tagetes spp.	Marigold
Tithonia diversifolia	Tree Marigold
Tithonia rotundifolia	Mexican Sunflower
Lobularia sp.	Alyssum
Brassica sp.	Ornamental Cabbage, Kale
Ipomoea batatas	Sweet Potato Vine
Ipomoea sp.	Morning Glory
Pelargonium x hortorum	Geranium
Portulaca	Moss-rose
Angelonia angustifolia	Angelonia
Lantana sp.	Lantana
Verbena bonariensis	Purpletop Vervain

Woody Shrubs & Trees Tolerant or Resistant to *Phytophthora* species:

Scientific Name	Common Name
Ilex chinensis	Chinese Hollies
Ilex verticillata	Winterberry
Ilex vomitoria	Yaupon
Ilex x burfordii	Burford Holly
Betula nigra	River Birch
Calycanthus sp.	Sweetshrub, Spicebush
Chimonanthus praecox	Wintersweet
Abelia x grandiflora	Abelia
Metasequoia glyptostroboides	Dawn Redwood
Taxodium distichum	Baldcypress
Gleditsia triacanthos	Honey Locust
Ginkgo boliba	Ginkgo
Ribes spp.	Currants, Gooseberry
Liquidambar styraciflua	Sweetgum

(Continued on page 3)



New Garden Landscaping & Nursery

"Where your imagination takes root"

# Plant Species for Sites with a History of Phytophthora cont.

(Continued from page 2)

Woody Shrubs & Trees Tolerant or Resistant to *Phytophthora* species cont:

Scientific Name	Common Name
Magnolia spp.	Magnolias
Nyssa sylvatica	Black Gum
Rosa spp.	Roses
Salix spp.	Willows

Herbaceous Perennial Plants or Resistant to *Phytophthora* species:

Scientific Name	Common Name
Amaryllia/Hippeastrum spp.	Amaryllis
Narcissus spp.	Narcissus/Daffodil
Lycoris radiata	Spider Lily
Zephyranthes spp.	Rain Lily
Amsonia spp.	Bluestar
Aster Spp.	Aster
Dahlia spp.	Dahlia
Echinacea purpurea	Purple Coneflower
Gazania sp.	Gazania
Gaillardia sp.	Blanketflower
Rudbeckia hirta	Black-eyed Susan
Iberis sempervirens	Candytuft
Pachysandra spp.	Pachysandra
Canna spp.	Canna Lily
Lychnis spp.	Lychnis
Carex spp.	Ornamental Sedges
Geranium sanguineum	Cranesbill
Ajuga reptans	Bugleweed
Mentha spp.	Mints
Monarda spp.	Bee Balm
(multiple)	Ornamental Grasses
Phlox subulata	Moss Phlox
Anemone spp.	Anemone
Trillium spp.	Trillium
(multiple)	Ferns



New Garden Landscaping & Nursery

"Where your imagination takes root"