

The Eastern American Black Walnut (*Juglans nigra*).

Black walnuts make wonderful shade trees and are highly valued for their tasty yet hard to crack nuts and high quality lumber. But as garden companions, they are ... complicated.

Why Black Walnuts are so difficult in our gardens.

Black walnuts contain a chemical called “juglone”, which can inhibit the growth of or actually be toxic to other plants. When the juglone makes contact with other plants via roots or fallen nut hulls (husks), effects can be observed almost immediately. Symptoms of black walnut toxicity include leaf yellowing, wilting, stunted growth, and eventual death. This walnut toxicity can extend an unbelievable 50–60ft, and up to 80ft, out from the trunk and continues to increase in area as the tree matures.

Toxicity is also intensified by poor drainage and heavy compacted soil. All walnuts produce some juglone, as do other trees in the walnut family: bitternut and shagbark, hickory and pecan. However, the amount of juglone produced is insignificant compared to the black walnut and the effect on other plants is minimal, if any.

Plant sensitivity to Juglone.

Several universities have been working on compiling a thorough list of juglone-sensitive plants. Many factors can

affect toxicity and it is important to remember that what might grow under one walnut tree might not grow under another. Juglone toxicity can also remain in the soil for years after a tree is removed, especially if the roots are not removed along with the tree.

Where to add new plants.

The best way to avoid problems is to position new plants as far away from the walnut tree as possible. If planting closer can't be avoided, create raised beds to improve drainage which lessens the effects of juglone. You can also add screening to the planting holes to decrease contact with tree roots. And remember to clean your beds and be careful that nuts and debris from the black walnut tree don't accumulate.

Composting Black Walnut leaves.

Research has shown that juglone can degrade in a compost pile in 2-4 weeks; however it should never be used around sensitive plants. If you do want to compost the leaves, consider keeping them in a separate pile.

Plants known to be sensitive to Juglone

Shrubs

- Chokeberry
- Hydrangea
- Mountain Laurel
- Ninebark
- Potentilla
- Lilac
- Rhododendron
- Azalea
- Yews

Perennials

- Columbine
- Coral Bells
- Wild Indigo (Baptisia)
- Lilies
- Peony (Some varieties)

Annuals

- Petunias

Trees

- Sugar Maple
- Birch
- Apple Trees
- Norway Spruce
- Pines (some, inc. Mountain)
- White Basswood

Edibles

- Asparagus
- Blackberry
- Blueberry
- Cabbage
- Eggplant
- Peppers
- Potatoes
- Rhubarb
- Tomatoes

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Plants with a known tolerance of Juglone

Trees & Shrubs

- American Holly
- Catalpa
- Dogwood
- Forsythia
- Fragrant Sumac
- Hibiscus
- Japanese Maple
- Juniper
- Mock Orange
- Paw Paw
- Redbud
- River Birch
- Sugar Maple

Bulbs

- Crocus
- Hyacinth
- Spanish Bluebell
- Snowdrop
- Narcissus (Daffodil Var.)
- Tulips (some)

Annuals

- Begonia (fibrous, tuberous)
- Calendula
- Impatiens
- Morning Glory
- Pansy
- Viola
- Zinnia

Edibles

- Grape
- Prunus family (including cherry, peach, plum)

Perennials/Vines

- Anemone
- Aster
- Astilbe
- Bee Balm / Monarda family
- Bellflower

- Black Eyed Susan
- Bleeding Heart
- Bugleweed
- Cardinal Flower (Lobelia)
- Clematis (vine)
- Coneflower
- Cranesbill/Geranium
- Creeping Phlox
- Daylily
- Dutchman's Breeches
- Dutchman's Pipe (vine)
- Ferns (many)
- Goatsbeard
- Goldenrod
- Hollyhock
- Honeysuckle (vine)
- Hosta (some)
- Jack-in-the-Pulpit
- Jacob's Ladder
- Joe Pye Weed
- Lamb's Ear
- Lily-of-the-Valley
- Mayapple
- Primrose
- Sedges
- Siberian Iris
- Sneezeweed
- Solomon's Seal
- Spiderwort
- Sunflower (perennial)
- Sweet Woodruff
- Trillium
- Turtlehead
- Violet
- Virginia Creeper
- Yarrow

Embracing the Black Walnut.

The nuts, hulls, bark, and wood are all parts of the tree that humans use. They have many health benefits and healing properties. Black walnut wood is a highly prized hardwood. The nuts inside the hulls are delicious: *“Black walnuts are the un-walnut. They taste of the earth: musty, bittersweet and thick. They come storming into your taste buds. If they had a soundtrack, it'd be “The Imperial March (Darth Vader's Theme).”*

– MIKE PETRUCELLI.

“Remove the hulls immediately after harvesting the nuts, by stomping them on a hard surface, and then store the washed and dried walnuts—cool and dry place. You can bake them into cakes and breads, and mix them into soups and sauces. Or you can pulverize them to make black walnut butter, a staple in the fall pantry.”

– GARDEN & GUN.

