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Black walnut Tolerant Plants

Tolerant trees and shrubs

- arborvitae, American
- ash, white
- barberry
- beech, American
- birch, black; 'Heritage' river
- buckeye, Ohio
- catalpa
- cherry, black
- crabapple
- dogwood, flowering
- elderberry
- elm, American
- forsythia
- fringetree
- globeflower
- hawthorn
- hemlock, Canadian
- hibiscus
- hickory
- holly, American
- honeylocust
- honeysuckle, amur; tatarian
- hydrangea
- lilac
- locust, black
- maple, red; sugar; black; Japanese
- ninebark
- oak, white; red; scarlet
- red cedar, eastern
- redbud, eastern
- serviceberry
- spruce, Norway
- sumac
- sycamore
- tulip tree
- viburnums (some species)
- witchhazel

Tolerant vines, ground covers and flowers

- anemone
- aster
- astilbe
- bee balm
- begonia
- bittersweet
- calendula
- clematis (virginsbower)
- coral bells
- creeper, Virginia
- daffodil
- daisy, shasta
- daylily
- evening primrose
- fern
- geraniums, hardy
- goldenrod
- grape, wild
- hollyhock
- hosta
- iris, siberian
- jack-in-the-pulpit
- lamb's ear
- lirioppe
- lobelia
- may apple
- morning glory
- phlox
- primrose
- raspberry, black
- rose, wild
- rudbeckia
- scilla
- sedum
- speedwell
- spiderwort
- St. John's wort
- sunflower
- trillium
- tulip
- violet
- wisteria
- yarrow

Tolerant grasses

Tall fescue and Kentucky bluegrass grow well near black walnut except during drought conditions when soil moisture is low. When moisture is adequate these grasses may grow better under walnut trees than in other parts of the lawn, possibly because the soil may be more basic. Soil under black walnuts tends to be alkaline, with the pH often 0.7 points higher than beyond the roots, thus influencing the growth of many different plants.

Plants damaged by juglone

- apple
- azalea
- birch, white
- blackberry
- blueberry
- chrysanthemum
- crocus, autumn
- forget-me-not
- grape, domestic
- lily-of-the-valley
- linden
- mountain laurel
- peony
- pine
- potato
- rhododendron
- thyme
- tomato

Black walnut and allelopathy

Though grown primarily for its wood and nuts, black walnuts are often found growing on landscape sites where they serve primarily as shade trees. When certain other landscape plants are planted near or under this shade tree they tend to yellow, wilt, and die. This decline occurs because the walnut tree produces a non-toxic, colorless, chemical called hydrojuglone. Hydrojuglone is found in leaves, stems, fruit hulls, inner bark and roots. When exposed to air or soil compounds, hydrojuglone is oxidized into the allelochemical juglone, which is highly toxic.

Several related trees such as English walnut, hickories and pecan also produce juglone, but in smaller amounts compared to black walnut. Juglone is one of many plant-produced chemicals that can harm other plants in a process known as allelopathy. (Additional common landscape trees with allelopathic properties: sugar maple, tree-of-heaven, hackberries, southern waxmyrtle, American sycamore, cottonwood, black cherry, red oak, black locust, sassafras, and American elm.)

Reducing allelopathic effects

* Regularly clean up all fallen leaves and fruit from the black walnut tree, keeping debris away from desired landscape plants.

* Compost plant debris to degrade any toxins present in the compost pile, and to detoxify the compost. If composting is impractical, do not use any part of the walnut tree as compost or mulch for other plants.

* Maintain high organic matter levels in the soil because organic matter encourages healthy soil microbial populations that can metabolize toxins.

* Plant tolerant trees, shrubs, vines, ground covers, flowers and grasses under walnut trees, or in areas that might contain walnut roots.