

# NUT TREES

## HUMBER NURSERIES 'GREEN THUMB GUIDE'



The growing of nut trees in Ontario has become popular in recent years. The four nut tree crops with the most promise are: (a) the Heartnut, a type of Japanese walnut; (b) the Carpathian strain of Persian Walnut; (c) the Chinese chestnut; and (d) selected varieties of Hazelnut or Filbert. Depending on where the planting is to be located, the Northern Pecan, the Hardy Almond and Chinese-American Sweet Chestnut hybrids may also work.

As a crop, nut trees have several advantages. The trees can conceivably be used as timber when they grow older and are thinned. Nut trees can be planted in the corners of oddly shaped lots or on sloping land where erosion problems are a concern. Once established, nut trees require minimal pruning since size control does not carry the same importance as it does with fruit trees. Nuts can also be handled more roughly than other fruit and are not readily perishable. Fewer sprays are required for nut trees and heavy rains or hail do not damage nuts.

The native nut species, including Black Walnut, American Hazelnut, Butternut and Shagbark Hickory are widely adaptable to the Ontario climate. Other nut trees, such as Heartnut, Carpathian Walnut, Hazelnut hybrids and Chinese Chestnut, are less adaptable but can be grown in Southern Ontario. In general, nut trees require full sun and a long growing season. They prefer rich, moist, well-drained soil.

### HEARTNUT

*Juglans ailantifolia* var. *cordiformis* (12 m) Zone 5

Heartnut is a variant of Japanese Walnut with a smooth-textured shell and a kernel which extracts easily. The Heartnut is self-fruitful but will produce a larger crop if cross-pollinated with a Carpathian Walnut, Butternut, or other Heartnut.

The Heartnut should begin to bear two or three years after planting and a mature tree may produce from one to six bushels of hulled nuts. Shake and pick up nuts before frost shatters the foliage (which will blanket the ground). The dehusked, cleaned heartnuts will cure in about one week at room temperature indoors. They are easiest to crack one month after maturing.

### EDIBLE CHESTNUTS

*Castanea* spp.

Few American Sweet Chestnut trees (*Castanea dentata*) remain since the introduction of the chestnut bark disease or blight. The American chestnut was revered not only for its timber, but also for its small high-quality nut.

The Chinese Chestnut (*Castanea mollissima*) has generally been accepted as a blight-resistant nut substitute for the native species. Hardy to Zone 5, it is a rounded tree reaching about 4 – 5 m. Chestnuts demand acidic, coarse-textured (sandy or gravelly) soils, which are well drained. They respond well to watering in dry periods and a well-balanced fertilizer, which is applied early in the spring.



Male and female chestnut flowers appear on the same tree but chestnuts rarely self-pollinate. Plantings of 2 or more seedlings or cultivars are necessary for bountiful nut production.

Chestnuts should be gathered as soon as they fall from the burs. Nuts may not fall free from the bur, in which case the burs should be harvested by shaking. Once allowed to dry, the bur will open and the nuts can be separated. Chestnuts will cure in a few days at room temperature with good ventilation. The curing process enhances flavour. Store at temperatures near freezing in a humid environment.

## CARPATHIAN (PERSIAN) WALNUT *Juglans regia* (15 m) Zone 5

Sometimes also known as English Walnut, this is the most familiar in the marketplace. Carpathian Walnuts are as cold tolerant as most apple cultivars and are successfully grown in most apple-growing regions of Ontario. Although self-fruitful, a more bountiful crop will result with two or more selections.

Nuts mature in late September or early October when the husk dries, splits open and the nut falls to the ground. Partially split husks can be encouraged to drop their nuts by vigorous shaking. Nuts should be gathered and dried on a screen where there is good air circulation to avoid molds. A mature tree may yield up to 90 kg of hulled nuts.



## BLACK WALNUT

*Juglans nigra* (20 m) Zone 3

The nuts of the Black Walnut are greatly esteemed by some because of their characteristic flavour. They are excellent when used in baking or in ice cream. The tree's timber is highly prized for fine furniture making. The shell of the nut can also be used for a variety of industrial purposes involving metal polishing. In growing Black Walnut for timber, limb removal to a height of 7 to 10 m is desirable. The Black Walnut is self-fruitful, but more bountiful crops result when cross-pollinated with other walnuts.

The Black Walnut should be hulled as soon as the husk softens. Unlike the Carpathian Walnut, the hull is persistent and could spoil the kernel if left on. Hulling is easiest when yellow to partially brown. Dry nuts on racks where there is good air circulation to avoid molds. When dry, the nuts will crack easier (about a month).

Black Walnut secretes juglone from its root system, thus preventing many vegetable garden species, fruit trees and other ornamental plants from being successfully grown anywhere near the tree (12 to 15 m, further for mature specimens.) See the end of this guide for a list of plants which are seemingly tolerant of juglone.



## BUTTERNUT

*Juglans cinerea* (15 m) Zone 4

Butternut produces fine quality edible nuts, which are sweet and can be eaten fresh. The shells can be extremely tough and difficult to crack. The tree is self-fruitful and a mature specimen may yield several bushels of hulled nuts. Butternut has the same toxic effect on companion plants as Black Walnut.





### **SHAGBARK HICKORY**

*Carya ovata* (20 m) Zone 4

The most recognizable, widespread and valuable of the hickories is the Shagbark. It has characteristically rough bark, which appears to be peeled away from the trunk on mature trees. The wood of hickories is highly prized for toughness and durability.

The hickory is self-fruitful but benefits from cross-pollination in mixed plantings. The nut of the Shagbark Hickory has a sweet and pleasant taste, but the shell is not easily cracked nor is the kernel easily extracted.



### **NORTHERN PECAN**

*Carya illinoensis* (30 m) Zone 6

Pecan is the largest and one of the least hardy of the hickories but considered the best for its nuts. It requires a long hot Pecans are self-fruitful but will benefit greatly from cross-pollination in mixed plantings. They are relatively weak-wooded and poorly angled crotches should be corrected when training the tree. (see Green Thumb Guide to Fruit Trees GT 125-8)

### **ALMOND**

*Prunus dulcis* (3 – 4 m)

The Almond tree is about as hardy as a peach but is more resistant to insects and diseases and has a longer life expectancy. Late spring frosts can affect almond crops in all but the most favoured peach-growing areas of Ontario. The trees look similar to peach in growth habit and the nut looks like a smooth peach pit. Almonds will benefit from cross-pollination.



### **MAIDENHAIR TREE**

*Ginkgo biloba* (18 m) Zone 3

One of the most interesting of trees (botanically, it is a conifer), the Ginkgo was native in this country around the time of the last ice age.

Trees are either male or female and fruit production usually does not occur until around 20 years of age. The fleshy covering on the seed is messy and malodorous but the seed is considered a delicacy in the Orient. Extract from Ginkgo is widely used as an herbal remedy and is reputed to be an aid to memory. The tree is an ancient long-lived survivor that is not bothered by insect or disease problems.

## HAZELNUT (FILBERT)

*Corylus spp.* (5 m) Zone 5

The native Hazelnut (*Corylus americana*) is hardy throughout Southern Ontario but lacks nut size and production characteristics suitable for most gardeners. European Hazelnut (*C. avellana*) has the production characteristics but is less hardy.

Hazelnuts (or Filberts) produce nuts on one year old wood making it necessary to encourage new shoot growth by pruning out older wood on a continual basis. Like Chestnuts, Filberts require cross-pollination and two or more varieties should be planted close together.

Hazelnuts mature in September and October and the nuts usually drop cleanly to the ground although sometimes clusters drop without dehiscing the nut. Clusters should be broken up and the nuts placed on screens to dry. Poorly filled or insect damaged nuts will float when placed in a tank of water while fresh green nuts will sink. Dry nuts for several days where there is good air circulation and store them just above freezing in a humid environment.



## PLANTS SEEMINGLY TOLERANT TO JUGLONE

### Specific Names

#### Name

*Anemone apennia*  
*Arisaema triphyllum*  
*Athyrium*  
*Cyclamen*  
*Epimedium*  
*Erythronium*  
*Gentiana asclepiadea*  
*Gentiana septemfida*  
*Helleborus*  
*Heuchera*  
*Hosta*  
*Iris*  
*Lilium*  
*Matteuccia struthiopteris*  
*Myosotis alpestris*  
*Narcissus*  
*Ophiopogon*  
*Poa*  
*Podophyllum emdi*  
*Polygonatum verticillatum*  
*Polystichum*  
*Primula*  
*Ranunculus ficaria*  
*Solanum aviculare*

### Common

Anemone  
Jack-in-the-pulpit  
Lady fern  
Cyclamen  
Epimedium  
Dog's-tooth-violet  
Gentian  
  
Hellebore  
Alumroot  
Plaintain-lily  
Iris  
Lilies  
Ostrich fern  
Forget-me-not  
Narcissus  
Lily turf  
Blue grasses  
May-apple  
Solomon's seal  
Christmas fern  
Primroses  
Pilewort  
Nightshade

### Specific Names

#### Name

*Thalictrum*  
*Tricyrtis hirta*  
*Trifolium repens*  
*Trillium*  
*Uvularia*  
*Vinca minor*  
*Carya*  
*Euonymus alatus*  
*Forsythia*  
*Juniperus virginiana*  
*Lonicera*  
*Parthenocissus quinquefolia*  
*Philadelphus*  
*Quercus*  
*Rhus radicans*  
*Rubus occidentalis*  
*Syringa*  
*Viburnum*  
*Vitis*

### Common

Meadow-rue  
Toad lily  
White clover  
Trillium  
Bellwort, Wild Oats  
Periwinkle  
Hickory  
Burning bush  
Forsythia  
Red cedar  
Honeysuckle  
Virginia creeper  
Mock orange  
Oak  
Poison ivy  
Black raspberry  
Lilacs  
Viburnum  
Grape  
Lima bean  
Snap bean  
Beet  
Sweet corn  
Onion  
Parsnip

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Ontario's Largest Garden Centre

8386 Hwy 50, Brampton, Ontario L6T 0A5

Ph: 416-798-TREE (8733) Ph: 905-794-0555 Fax: 905-794-1311

[www.humburnurseries.com](http://www.humburnurseries.com) [humber@gardencentre.com](mailto:humber@gardencentre.com)

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