

**Black Walnut (*Juglans nigra*)**  
**By Ken Mudge**

If the idea of growing temperate nut trees as part of a forest farming system appeals to you, then the Eastern Black Walnut (*Juglans nigra*) should be high on your list of candidate species. LH MacDaniels, a pioneer of North American nut culture provided a ringing endorsement for nut trees in general in his 1981 extension bulletin, *Nut Culture In North America*

"Planting nut trees is particularly appropriate because of the loss in recent years of the American elm to the Dutch elm disease and the decline of the white ash and hard maple in some areas. Fence rows and other areas now growing up to weeds and brush if planted to appropriate nut trees would contribute substantially to future food supply, erosion control, wildlife refuges, and in the case of black walnut, to a valuable timber resource...planting of nut trees for noncommercial purposes should be encouraged . . . . Whenever a shade tree is planted it might as well be a nut tree of one of the better varieties."

Regarding black walnuts in particular they should be of interest to woodlot owners in the North East because they not only produce a highly regarded nut crop that is both tasty and nutritious, but also, in due time the tree can be harvested for its high quality timber which is among the two or three most valuable timber species in the North East. Although nut production does not reach commercial levels until the tree is about 20 years old, trees will begin bearing a harvestable crop by about 8 years of age, or even sooner if it is a selected (grafted variety). Disadvantages include the fact that black walnut "toxicity" can inhibit the growth of some other species, such as tomato, growing in the vicinity of its root system, and black walnut is susceptible to Fusarium and Nectria canker disease in some areas.

Black walnut occurs widely within the Northeast, as a common species within the Oak-Hickory forest type. It is found on better sites characterized by deep, well drained soils of neutral pH. It is typically found on cooler north or northeast facing slopes and in forest valleys where soil moisture is high but not flooded or poorly drained. Successful planting of black walnut trees depends on finding soils similar to those where it is found naturally.

New trees can be established from high quality seed from northern sources, available from selected wild trees locally or from one of the following companies.

FW Schumacher Seed Company  
36 Spring Hill Rd. Sandwich, MA 02563-1023  
Phone 508-888-0659

Sheffield Seed Co.  
269 Auburn Road, Route 34  
Locke, New York 13092  
Phone: 315-497-1058 Email: [seed@sheffields.com](mailto:seed@sheffields.com)  
Website: [www.sheffields.com](http://www.sheffields.com)

The very best quality black walnut can be assured by planting clonal (grafted) varieties selected for superior yield of nuts, earliness of bearing, disease resistance and cracking quality. Some of the most popular varieties include the old standard, Thomas, as well as others like Emma K, Kwik Krop, and several Purdue University selections including Purdue # 1.

Two commercial sources of grafted walnut cultivars in New York are:

John Gordon Nursery  
1385 Campbell Blvd, Amherst, NY 14228-1403  
Phone: 716-691-9371

Website: <http://www.geocities.com/nuttreegordon/OKgordon.htm>

Grimo Nut Nursery  
979 Lakeshore Rd., R.R. 3  
Niagara-on-the-Lake, Ontario, Canada LOS 1J0  
Phone: 905-935-6887  
Website: <http://www.grimonut.com>

Additional black walnut cultivars are described at the Purdue University New Crops website (<http://www.hort.purdue.edu/newcrop/proceedings1990/V1-327.html#Table%201>), but commercial sources of grafted nursery stock may not be easy to find. For the ambitious forest farmer there is always the option of grafting selected cultivars on seedlings planted on your site or even onto wild walnut trees (top working). The extension bulletin, *Nut Culture in North America* by LH MacDaniels, 1981 describes appropriate grafting methods, and the Northern Nut Growers Association (NNGA) maintains a "Scion swap" list of other (mostly) amateur nut growers with scion wood to exchange, as well as a list of experts for each of the temperate nut species. Seeds, seedlings, or grafted nursery trees should be planted in full sun, so in the case of forest farming in an established wood lot that means either planning to manage and harvest wild nut trees within an existing forest canopy, or else planting (seed, seedlings, or grafted nursery stock) on the perimeter of your wood lot or gaps where shading will not inhibit tree growth and nut production.

Once walnut trees are established on your site or existing young wild trees are identified they can be managed either primarily for nut or timber production or both, although the latter is a compromise between the two management styles. In the case of existing wild walnut trees within a woodlot or forest site, "release" thinning and stand improvement to improve light interception by your nut trees is one way to increase productivity. In the case of newly planted trees in open gaps within or on the perimeter of your woodlot there are several different management options. If you want to encourage optimal nut production, the trees should be planted at a fairly wide spacing, beginning at approximately 20 x 20' and eventually, over the next 20 to 35 years as the canopy closes, thinned to as much as 40 x 40'. Pruning to encourage relatively low forking of the main trunk will promote a broad spreading crown to maximize nut production and ease of harvesting. Optimal management for timber production, on the other hand, involves spacing and pruning to develop a tall straight bole (butt log) that is "clean" (free of branches and knots) to maximize timber value. This is done by closer spacing (10' to 15' centers) of the trees so that self shading will inhibit lateral branch production and pruning any branches that do arise before they reach 2 inches in diameter, up to a height of 12 to 16 feet or more. This tends to delay canopy development and increase the difficulty of harvesting nuts. The "nut / timber" compromise involves an intermediate spacing and clear pruning of the main trunk up to about 9 to 12 feet. If you have any intentions of your self or your heirs harvesting black walnut trees for timber avoid at all cost things that will reduce the value of a harvested log for veneer or lumber. This includes low forking, branches, knots (from pruning large branches), frost cracks, insect or woodpecker damage, and especially any sort of metal in the tree (nails, fencing staples, barbed wire, etc.) Weed control by mulching, cultivation or herbicides is very important during the first several years of establishment, and fertilization will be beneficial as well. Detailed recommendations can be found in the extension publication by Walter Bienke, Purdue University Coop Extension, Black Walnut Plantation Management, FNR 119 (<http://www.ces.purdue.edu/extmedia/FNR/FNR-119.html>).

Marketing of black walnuts can either be done locally (farmers markets, etc.) or through the single major commercial buyer of black walnut, Hammond Nut Company (<http://black-walnuts.com/hulling.asp>) which lists locations throughout the eastern and Midwestern US where they will purchase walnuts. No sites are listed for NY State, but several are listed for PA.