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# virginia home food production



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## FACT SHEET

DEPARTMENT OF HORTICULTURE

BLACKSBURG, VIRGINIA MH 337

Reprinted January 1981

### NUT TREES FOR HOME PLANTING

Nut trees are excellent multipurpose plants for the home landscape. They provide shade, and serve as background plants for the house. They may also provide a supply of home-grown nuts for the family.

#### Species and Varieties

Several species will produce nuts in Virginia if hardy varieties are selected. The species to choose from are black walnut, hardy Carpathian-type Persian or English walnut, Chinese chestnut, pecan, and filbert. With the exception of filbert, all will become large trees to 50 feet tall, and will require 6 or 8 years to reach bearing age. Filberts reach a height of about 12 feet and may start bearing when they are 5 or 6 years old.

Nut trees do not come true to name from seed; therefore, only grafted or budded named varieties are recommended for the home planting. Seedling trees may be satisfactory as specimens for the landscape, but usually will produce smaller nuts or lower quality than those of named varieties.

The black walnut is one of the most dependable nut trees for Virginia. The unique flavor and aroma of this nut makes it a favorite in cooking. The best varieties are Sparrow, Elmer Myers, Emma K, Stambaugh, Farrington, Vandersloot, and Beck. All varieties are self-fruitful; therefore, only one tree is needed for nuts to set. A growing season of about

150 frost-free days is needed to secure well-filled nuts.

The Carpathian Persian walnut is a hardy type of English walnut which can be grown in Virginia. The Hansen and Colby varieties are self-fruitful. Helmle and McKinster are also recommended but are self-unfruitful, and at least 2 different varieties must be planted to provide cross-pollination. Carpathian walnuts need a growing season of about 160 days.

Chinese chestnuts are resistant to the blight that killed the American species many years ago. The trees are about as hardy as peaches and can be grown wherever peaches succeed. The best varieties are Orrin, Crane, Nanking, Abundance, and Meiling. Two different varieties must be planted to provide cross-pollination.

Pecan varieties are classified as southern paper-shell, or hardy northern types. The southern pecans require a long growing season of about 210 days to allow the kernel to attain plump size and fill the nut. They should be planted only in southeastern Virginia. Stuart, Desirable, and Western Schley are the recommended varieties. At least one tree of each variety should be planted to provide cross-pollination.

The hardy northern pecans have smaller nuts with thicker shell and require a shorter growing season of about 180 days

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, and September 30, 1977, in cooperation with the U.S. Department of Agriculture, W. R. Van Dresser, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061; M. C. Harding, Sr., Administrator, 1890 Extension Program, Virginia State University, Petersburg, Virginia 23803.

to produce edible nuts. They are adapted to the Piedmont and Mountain sections of the state. The recommended varieties are divided into 2 groups: (I) Peruque, Major, and Giles; (II) Colby and Posey. At least one variety from each group should be planted to ensure cross-pollination.

Filberts grow satisfactorily in the northern and western sections of Virginia. They are less desirable in the southeastern area where the winters are too mild, and the summer too hot. The best varieties are Potomac, Bixby, Buchanan, and Winkler. The Winkler seems to be self-fruitful. If the others are selected, at least two varieties should be planted to provide cross-pollination.

Almonds are not sufficiently hardy to be grown successfully in Virginia. They bloom early in the spring and the flowers are usually killed by frost. The so-called hardy almonds, such as Hall, have not been very productive, and the nuts are of poor quality and difficult to shell.

Cultural Requirements - Many nurseries offer seedling nut trees. These usually are not as productive, and the nuts may be smaller and more difficult to shell than named varieties. It is best to buy from nurseries specializing in nut trees which are reliable sources of the best named varieties.

Site and Soil - Nut trees should be planted on an elevated site to reduce the possibility of damage by spring frost. However, avoid windy sites which may reduce pollination in the spring, and cause premature dropping of nuts in the fall.

Nut trees need a deep, fertile, well-drained soil to promote vigorous growth and productivity. Do not plant on poorly drained heavy clay soils, or in shallow soil underlaid with an impervious subsoil.

Spacing of Nut Trees - Nut trees require rather wide spacing to allow for vigorous productive growth, and attractive, unrestricted form in the landscape. Chinese chestnuts should be spaced about 40 feet apart, pecans and walnuts 50 feet apart, and filberts about 15 feet apart.

Planting Nut Trees - The best time to plant nut trees is about one month before the average date of the last spring frost. The trees should be dormant. Keep the roots moist at all times after the trees are received from the garden center or nursery.

Dig holes which are large enough to allow all roots to be extended to their full length. Except for filberts, nut trees have a long tap root. Therefore, a deep hole is needed. The trees should be set slightly deeper than they grew in the nursery, and the top roots covered with about 4 inches of soil.

Place fertile top soil around the roots and bounce the tree up and down to eliminate air pockets. Fill the hole about three-fourths full and firm down compactly.

Add several gallons of water. After it is absorbed, fill the hole to ground level. Leave a slight depression around the tree to hold water which should be applied at weekly intervals until the tree becomes re-established.

After planting, scatter a cupful of 5-10-5 fertilizer in a circle extending out 3 feet from the trunk. Apply a 2 inch mulch of fresh shredded bark or wood chips, sphagnum peat moss, or fresh sawdust around the tree to conserve soil moisture and help reduce weed growth.

Nut trees must be pruned heavily at planting time to reduce the need for water until the root system becomes re-established. Cut all

branches back at least half their length to a strong lateral bud. Be sure to leave several good buds on each stem.

Fertilizing Nut Trees - Nut trees growing on deep fertile soil will make satisfactory growth with little or no additional fertilizer. Trees making weak growth on poor soil should receive 2 pounds of 5-10-5, or 1 pound of 10-10-10 fertilizer for each inch of trunk diameter measured 3 feet above the ground. Scatter the fertilizer in a band around the tree starting about 2 feet from the trunk and extending out several feet beyond the end of the branches. The fertilizer should be applied about one month before the average date of the last spring frost in your area.

Pruning Nut Trees - Nut trees must be carefully trained during the first few years to develop a strong framework of branches. This will ensure long life and good production of nuts. Remove branches with weak, narrow-angled crotches. Dead and damaged branches should be removed, or cut back to healthy wood.

After strong main branches have been established, very little pruning is required during most of the life of nut trees. Continue to remove damaged branches, as well as those which cross or grow close together.

Disease and Insect Control - Most species of nut trees in a home planting are not seriously damaged by insects or diseases. The trees are so large that it is impractical for most home owners to attempt to spray them. If serious problems develop, contact your local extension agent who can suggest control

procedures which should be followed.

Black Walnut Damage to Other Plants - Black walnut roots produce a substance which will cause the death of certain other plants growing nearby. This substance is a bactericide named juglone. It is produced only by black walnuts and not by other species such as the Persian or Carpathian.

The damage is caused when the roots of susceptible plants come in contact with the roots of black walnuts. Some of the plants which are damaged or killed are potato, tomato, azalea, rhododendron, mountain laurel, and blueberry. These plants should be located at least 20 feet beyond the end of the branches of black walnut trees.

Other plants which may be damaged if growing near black walnuts are ajuga, forget-me-not, lily-of-the-valley, peony, thyme, blackberry, apple, pine, and sassafras. Grass grows very well near black walnut trees except during periods of drought when the soil moisture supply is low.

Harvesting Nut Crops - As the harvest season approaches, the ground under nut trees should be cleared of weeds, trash, and prematurely dropped nuts. If the trees are growing in a lawn, the grass should be mowed relatively short. Nuts should be picked up every other day as they fall to avoid discoloration in rainy weather.

Black walnuts should have the hulls removed as soon as they are harvested. This may be done by tramping on them with heavy soled shoes, or by running them through a corn sheller. Spread the hulled walnuts in thin layers in a cool, airy place to dry and cure for about 4 or 5 weeks. Curing is complete when the kernel can be broken with a sharp snap.

Storing of Nuts - Nuts should be stored in a cool place, preferably in a refrigerator if they are to be kept for an extended period of time. This will delay the time when the oil in the kernels may become rancid and unpalatable.

Chestnuts are quite perishable because they contain less than one percent oil, and about 40 percent water. They should be stored in a refrigerator in containers which limit, but do not completely restrict, ventilation. Moisture control is necessary because wet chestnuts may mold, and dry nuts are inedible.

If the chestnut trees were not sprayed, weevils may be present. They may be controlled in chestnuts by a hot water treatment. Sort the nuts into 3 sizes - large, medium, and small - and put each size separately in a cloth bag. Put the nuts in water at a temperature of 120°F, on your thermometer. Remove the smaller nuts after 25 minutes; the medium sized nuts after 34 minutes; and the large nuts after 45 minutes. Do not allow the temperature to go above 120°, because overheating destroys eating and keeping qualities and prevents germination of the seeds. Immediately after the treatment, spread the nuts in a thin layer in a open shed to dry and cure for 2 or 3 days.