WALNUT NOTES

Black Walnut Cultivars

Cultivars are the products of vegetative propagation of a clone, of selection of a race, or of controlled breeding worthy of a separate name. More than 400 black walnut cultivars have been named in the past century, most for increased nut yield or quality. Walnut growers interested in producing nuts might achieve better yields by planting cultivar seedlings instead of bed-run nursery seedlings if a cultivar can be found to match their needs. Cultivars for timber, a recent development associated with rising prices for veneer logs, are also described in this Note.

Cultivars for Nuts

The more popular cultivars currently being commercially propagated and grown for nuts are listed below with permission! States and provinces in parentheses indicate the cultivar's place of origin.

BURNS (Ontario), small, thin-shelled nut that has an exceptionally high kernel percent. All kernels can be recovered on the first crack, mostly as halves.

EDRAS (Iowa) has high kernel weight and exceptional total kernel percent. The high percentage of kernels recovered at first crack indicates good cracking quality. Above-average survival in plantings.

EL-TOM (Ohio), a cross between Thomas and Elmer Myers, is characterized by a thin shell, high kernel percent, and light kernel color.

EMMA K (Illinois) has a thin shell and cracks out a high percentage of kernels. This cultivar bears heavily in southern Ontario, but not all the nuts fill well in heavy crop years. Nut flavor is reputed to be excellent, but the cultivar has not yet been extensively tested. The tree has a spreading crown.

GRUNDY (Iowa) ranks high in all kernel traits: total weight, first-crack percentage, and total percentage. Below-average survival in plantings. Poor producer in Kentucky so may not be a good selection in warmer climates.

HARE (Illinois) produces a large smooth nut. The good shell structure allows a high first-crack and total kernel percentage. Easily propagated by budding and seems well adapted to Illinois and Missouri conditions.

[1]*Scionwood of many cultivars can be purchased from the Nebraska Nut Growers Association, Box 4644, Lincoln, Nebraska 68504.*

HARNEY (Kentucky) ranks high in all kernel characteristics, but survival in all plantings has been below average.

HOMELAND (Virginia) matures early, producing large kernels that tend to be slightly shriveled.

MINTLE (Iowa) is a small nut with exceptional total kernel percentage. Reputed to have the best flavor of all black walnuts; can be stored at room temperature for 2 years without becoming rancid. Survives exceptionally well in plantings.

MONTEREY (Pennsylvania) has large kernels and high kernel percent; easily propagated by budding and grafting. Survives well in plantations.

MYERS (Ohio) is a standard cultivar noted for its very thin shell and good cracking qualities. Exceptional total-kernel and first-crack kernel percentages and a high recovery of quarters. Resistant to anthracnose and apparently adapted to southern growing conditions, but needs to be on a good site and well cared for. At more northern locations, kernels tend to be shriveled and bearing is often erratic.

OHIO (Ohio) dates from 1915 and is well known for its fine cracking qualities. Moderately resistant to anthracnose, but highly susceptible to husk maggot.

PINECREST (Pennsylvania) produces large kernels and a high percentage of kernels. Readily propagated by budding and grafting.

SNYDER (New York) has plump, medium-color nuts that have earned good nut evaluation test scores when grown in New York and Ohio.

SPARROW (Illinois) cracks well with exceptional total kernel percent. Excellent nut flavor and good color; very resistant to anthracnose. The nut is small unless the tree is well grown and on a good site.

STAMBAUGH (Illinois) is a large-kerneled cultivar that bears at an early age. Susceptible to anthracnose leaf spot infection.

STABLER (Maryland) cracks exceptionally well. Some of the nuts develop with a single lobe. Very susceptible to husk maggot.

THOMAS (Pennsylvania) has become a well-known black walnut cultivar since its discovery in 1881. Bears at an early age, and the large nuts crack well with large kernels and taste good. After many years of objective testing, Professor MacDaniels (1974) concluded that, " . . . (no) one variety is consistently better than Thomas." But Thomas does not perform consistently from year to year or over a range of locations. Poor selection for the

Midwest. The most frequent criticism is that the nuts do not fill well, especially on trees more than 5 years old. Nuts may develop poorly because of early defoliation induced by anthracnose.

TODD (Ohio) bears a large nut with a smooth shell and good cracking quality. High kernel yield and kernel percent. Does not always fill well in Northern States.

VANDERSLOOT (Pennsylvania) is outstanding for its large nut size, kernel weight, and its good cracking quality. Resistant to anthracnose leaf spot.

VICTORIA (Kentucky) has lower nut evaluation scores than other thin-shelled cultivars. Vigorous tree, resistant to leaf spot.

Cultivars for Timber

In addition, the Purdue Research Foundation of Purdue University has developed the following nine cultivars from selections made for good form, rapid height, and diameter growth, primarily for faster timber production.

PURDUE 1 bears abundant crops each year with nut set on lateral shoots, a rare occurrence in black walnut. Only negative features: some susceptibility to anthracnose and a slightly earlier than normal leafing date.

PURDUE 2 has rapid growth, but below-average straightness. Leafs out a week later than average, a desirable trait. Good choice if a nut crop is not necessary.

PURDUE 3 combines rapid growth and good straightness with very late leafing and good anthracnose resistance. Good all-around tree even though the nut crop is light and erratic from year to year.

KNOX 1 is noted for rapid growth, heavy annual nut crops, and good anthracnose resistance, but is below average in straightness. Susceptible to late spring frosts because it leafs out nearly a week earlier than average.

LAWRENCE 1 has very rapid growth, good straightness, and excellent anthracnose resistance. Its nut crop is abundant but tends toward alternate-year bearing.

LAWRENCE 2 doesn't grow as fast as some of the other patents, but it is uniquely suited to plantation culture. Extremely straight and fairly short with a large diameter and relatively little taper so very firmly anchored and not susceptible to wind damage. Very good anthracnose resistance, outstanding annual nut-bearer.

TIPPECANOE 1 is the fastest growing of all the patented trees. It has good straightness but is somewhat susceptible to anthracnose and produces very few nuts.

FAYETTE 1 is fast-growing, has average straightness, and abundant but alternate-year nut-bearing characteristics. Most outstanding feature: unusually strong anthracnose resistance.

FAYETTE 2 was patented for its nut production. Otherwise, it has a relatively slow growth rate and very poor straightness. It has good anthracnose resistance and is very late to leaf out. Produces nuts in great abundance each year by age 3 or 4; clusters on spur-type lateral shoots contain up to six nuts.

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Funk, David T. 1979. Black walnuts for nuts and timber. In: Jaynes, R. A., ed. Nut tree culture in North America. Hamden, CT Northern Nut Growers Association, Inc: 51-73.

Beineke, Walter F. 1984. Characteristics of Purdue University's patented black walnut trees. FNR-105. West Lafayette, IN: Purdue University Cooperative Extension Service. 3 p.