

Growing Nut Trees in Minnesota¹

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Part III. Black Walnut, Hickory and Hazelnut

DURING the past fifty years or longer interest has been increasing relative to locating nut trees bearing nuts of superior size and quality. The earliest named variety on record seems to be the Hales "Paper Shell" Hickory which originated in Pennsylvania in 1870. The Thomas variety of Black Walnut has been propagated since about 1880. At the present time there are many propagated varieties of Black Walnut and Hickory which can be grown in southern Minnesota. Some of these are far superior to native seedlings, some are not sufficiently hardy to be of value here, and many others have not been tested.

Black Walnut Varieties

Testing of Black Walnut varieties in Minnesota began in 1918 when nursery grown trees of the Thomas, Ohio, Ten Eyck, Stabler and Miller varieties were planted at University Farm, St. Paul. Soon afterward trees of these varieties were distributed and planted in several other locations. In 1933 the varieties previously established at University Farm were grafted on seedling trees at the Fruit Breeding Farm. Other varieties have been added from time to time. Since 1939 persistent efforts in top working have resulted in establishment of the varieties Thomas, Ohio, Stambaugh, Smith, Cochrane and Myers at the Southeast Experiment Station, Waseca.

Records of performance and description of the varieties tested are as follows:

Allen. Origin Michigan. Tested since 1942. A promising variety which merits wider testing. Tree vigorous, an early bearer. Husks resemble Ohio but are somewhat smaller, pointed both ends, surface roughened. Nuts of medium size, pointed both ends, shell thin. Cracks very easily. Quality very good.

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28-yr.-old topworked Black Walnut Trees at University of Minnesota Fruit Breeding Farm, Excelsior. Thomas, left; Ohio, right

Clark. Origin Minnesota 1934. Tested since 1940. Tree medium in vigor, subject to winter injury. Not productive. Husks medium to small, rounded. Nuts of medium size, nearly round, do not crack well. Quality only fair. (May not be true to name although cionwood obtained from originator.)

Cochrane. Origin Wisconsin 1940. Tested since 1948. Grafted trees bore in third season. Husks rounded oval, surface slightly roughened. Nuts rounded, surface smoothly furrowed, shell thin, cracks very easily. Quality very good.

Huber. Origin Wisconsin 1929. Tested since 1948. Grafted trees bore in third season. Husks rounded oval, somewhat compressed, pointed, surface slightly roughened. Nuts of medium size, rounded, pointed on basal end, surface smoothly furrowed, shell thin, cracks very easily. Quality very good.

Krause. Origin Iowa 1940. Tested since 1948. Has produced no nuts yet, but grafts are vigorous and hardy.

Mintle. Origin Iowa 1930. Tested since 1935. Tree of medium vigor, head moderately dense, sometimes winter injured. A shy bearer here. Husks flattened, medium to below in size. Does not crack well, and quality here has been only fair.

Monterey. Origin Pennsylvania 1931. Tested since 1935. Moderately vigorous, but not hardy here. Winter injured nearly every year. Unproductive.

Myers. Origin Ohio 1926. Tested since 1948. Grafted trees bore in third year. Husks oval, somewhat pointed and compressed, surface roughened and pebbly. Nuts of medium size, surface smoothly furrowed, ridged where halves of shell join. Shell thin, cracks easily. Quality very good.

Ohio. Origin Ohio 1915. Tested since 1918. Vigorous, head rounded upright and fairly dense. Hardy, no winter injury in thirty-three years. Bears light to moderate crops annually. Nuts single or sometimes in clusters of two or three. Husks very large, three inches or more in length, very thick, oval, pointed on both ends. Nuts medium to large, pointed both ends, crack fairly well. Quality good but not equal to Thomas. A better ornamental than Thomas.

Robwer. Origin Iowa 1926. Tested since 1931. Moderately vigorous and a regular, heavy bearer. Nuts of medium size, do not crack readily. Winter killed in 1943. Apparently not hardy here.

Schwartz. Tested since 1934. Vigorous, with a fairly dense head, some

times winter injured. Bears regularly, nuts in clusters of two or three, husks of medium size, pointed both ends. Nuts of medium size, crack fairly well, quality fair.

Smith. Tested since 1934. Tree vigorous and spreading, hardy and productive. Nuts borne in clusters of three or four: husks of medium size, somewhat flattened. Nuts of medium size, crack fairly well, quality good.

Stabler. Origin Maryland 1915. Tested since 1934. Not hardy in Minnesota and a poor producer here. Husks medium to large, borne singly. Nuts often poorly filled.

Stambaugh. Origin Illinois 1926. Tested since 1934. Moderately vigorous and hardy. Head rounded and fairly dense. Tends to be a shy bearer here. Nuts borne singly or sometimes in clusters of two or three. Husks of medium size, rounded. Nuts medium to rather small in size. Crack easily and quality good.

Ten Eyck. Origin New Jersey 1915. Tested since 1918. Vigorous, with fairly dense head, but branches sometimes split from trunk in high winds. Severely winter injured at times. Bears irregularly, often heavily. Nuts borne in clusters of two or three, mature early. Husks medium in size, rounded, surface nearly smooth. Nuts of medium size, crack fairly well, quality fair.

Thomas. Origin Pennsylvania about 1880. Tested since 1918. A spreading, somewhat open to straggly tree. Injured in some winters (1925-6, 1942-3, 1947-8) but not in the very severe winter of 1935-6. A regular bearer of light to moderately heavy crops. Nuts borne singly or in clusters of two or three. Husks large, usually rounded, with roughened, pebbly surface. Nuts large, surface rough, crack easily to yield many quarters or halves. Produces some three-cornered (tri-cotyledenous) nuts which do not crack well. Cracking and edible qualities excellent, best of the older varieties. A valuable variety here even if not fully hardy.

A rating of these varieties based on their performance and quality is as follows:

Best: Thomas, Ohio, Stambaugh, Smith, Schwartz.

Fair: Ten Eyck, Mintle.

Poor: Stabler, Clark, Monterey, Rohwer.

Not fully tested, but very promising: Allen, Cochrane, Huber, Myers, Krause.

Hickories and Hybrids

So far only one of the several varieties of Hickories and Hybrids has borne nuts. This was a grafted tree of the Fairbanks Hybrid at Waseca. A tree of the oldest propagated variety, Hales Paper Shell, planted at Waseca in 1921, grew very slowly for several years, but recently has been more vigorous. It has not borne during thirty years. Because hickory trees are so difficult to transplant nearly all testing since 1939 has been by top-working on seedling shagbark or bitternut trees. Following is a list of varieties under test with the date in parentheses when testing began.

Shagbark Hickory Varieties.

Anthony (1939), Billeau (1947), Hagan (1947), Hales (1921), Last (1948), Lingenfelter (1942), Marquette (1948), Miller (1947), Schinnerling (1947), Wilcox (1947).

Shagbark X Bitternut Hybrids.

Beaver (1939), Fairbanks (1939), Stratford (1948).

Hicans (Hickory X Pecan Hybrids)

Burlington (1939), Gerardi (1944), Pleas (1945), Rockville (1941), Wright (1944).

All these varieties, with the exception of the Hicans Pleas, Rockville and Wright seem to be hardy enough to endure winters in southern Minnesota. Comparisons of productivity and quality have not been made as yet.

Butternuts

No attempts have been made here to test propagated varieties of Butternuts because the trees are so subject to sunscald injury and are not as durable as Black Walnuts or Hickories. Some of the propagated varieties which the late Prof. J. A. Nielson of Michigan believed most promising for northern localities are Aitkin, Buckley and Deming.

Hazelnuts and Filberts

There seems to be little interest locally in varieties of the native Hazel, perhaps because of frequent injury from insects and diseases. None of the Filbert varieties tested have been hardy enough to survive for more than a year or two. The Winkler, Rush and Hardin varieties of the native species, have been tested for several years at the Fruit Breeding Farm. The nuts are superior in size to that of most seedlings but often mature late. Further testing is needed to determine their value here.

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