Chestnut Varieties

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"The greatest single advance the horticultural industry can make during the next hundred years will be the improvement of its varieties." This statement was made some 25 years ago at an annual convention of the National Pecan Growers Association, by Dr. U. P. Hedrick, Director of the New York Agricultural Experiment Station.

If you doubt the accuracy of this conclusion, take a look about you. How long would you stay in business with the same varieties of fruits or vegetables which your father grew?

Interest in chestnut varieties has increased considerably during recent years. The material contained in this article is intended to summarize the more recent variety information related to this crop. The observations are based on the authors experience, and those of many growers, breeders and propagators in various parts of the country.

Abundance

The Abundance chestnut was developed in the early 1930's from seeds imported from China by Carroll D. Bush of Grapeview, Washington. Scions from a number of seedlings were grafted on a European chestnut. The first branch to bear appeared to offer considerable promise and was named Abundance.

In 1941, Mr. Bush sold trees to such easterners and in such widely remote places as O. Filman, Aldershot, Ontario; Fayette Etter, Lemasters, Pa.; and E. C. Rice, Absher, Ky. That year, the Department of Agriculture also purchased a few trees for its use at Beltsville, Md. Mr. Etter was several years ahead of all others in establishing Abundance in the East as he obtained scions of it in 1938 or 1939. From him and his trees, the variety was soon spread to the plantings of H. F. Stoke, Roanoke, Va., and Dr. J. Russell Smith, Swarthmore, Pa. A little later, it was established at Oklahoma City, Oklahoma, by A. G. Hirschi. Insofar as reports have been received, all are good. Here are the verdicts:

Mr. Stoke: "I have never seen a nut that cleans better or that is better to eat. The nuts do no split when ripening."

Dr. Smith: "Abundance does well in Massachusetts."

Mr. Hirschi: "For us in Oklahoma, it appears to be one of the best yet introduced in the United States. It has so far withstood our difficult climate where there are late spring frosts and also in early fall and severe dry spells any time of year."

Mt. Etter has had more experience with Abundance than all other easterners combined. He has grafted some 600 trees without a failure. (He does not issue a catalog.) He says it is a regular bearer, not overbearing one year and failing or partially so the next. One tree grafted in 1940, began bearing the next.

It increased yearly with one exception when its yield fell from 8 pounds in 1944 to 5 pounds in 1945. The range was from 1/4 pound in 1941 to 25 pounds in 1948. Its total for the 8 seasons was 70 1/4 pounds.

The nuts of Abundance ripen and fall free from the bur in two or three week's time. They are attractive in appearance as they are practically without down over the surface and uniform in size. There are usually three in a bur with those in the middle rarely being objectionally small. It is easily grafted and unites readily with almost any stock although Chinese of close relationship is most desirable.

Carr

The Carr chestnut originated as one of two seedlings sent by the Department of Agriculture to the late R. D. Carr, Magnolia, N. C., in 1915. Sample nuts so favorably impressed the Department in 1930 that it was immediately named in his honor although its propagation was not begun until 1932 when it was first grafted by Mr. Stoke. Incidentally, this is believed to be the first instance of Chinese chestnut grafting in this country.

Later the Carr became available from several nurseries. It was a strong grower but its scions so often failed to be permanent that it was eventually abandoned. Grafted tops break off at some time from a few weeks to several years after being grafted. It is now carried by a few nurserymen. Carr nuts are small in comparison with most of the later introductions, but in both sweetness and cleaning quality, the variety is about all one could desire.

Colby (Illinois 31-4)

In 1931, Dr. A. S. Colby of the Department of Horticulture, University of Illinois, Urbana, began hybridizing the chestnut, by applying Chinese pollen to certain varieties of the European species grown by the family of the late E. A. Riehl, Godfrey, Illinois. From the resulting seedlings, his No. 4, a Fuller X **Castanea mollissima,** produced what Mr. Stoke, who has grown it for 16 years, regards as the "most out-standing chestnut that has ever come to" his attention. The tree is remarkable for its beauty and vigor and the nut is large and handsome.

With Mr. Stoke, it has been practically free from blight and he is using his ingenuity to keep it so. However, Dr. Colby writes that the parent tree, was clean until the spring of 1948 when it became diseased and had to be cut. It is here called "Colby" for the first time and while Dr. Colby did not give his full approval, he did not say it should not be done.

Conard

This was first listed in the 1948 fall catalog of J. Russell Smith, proprietor of the Sunny Ridge Nursery on Blue Ridge Mountain in northern Virginia. He writes: "Dr. H. S. Conard is a Philadelphia quaker, who became the Professor of Botany at Grinnell College, Grinnell, Iowa. He had two chestnut trees which withstood the terrific Armistice Day blizzard of 1940 when the thermometer dropped to 20 degrees below zero after a warm sunny afternoon.

Several persons were frozen to death and many apple trees were killed. The chestnut trees came through in good shape."

"I think of it as the Blizzard Strain but do not recommend it for any place except the extreme North as it probably is not equal to other varieties. It is Chinese and bears reasonably well."

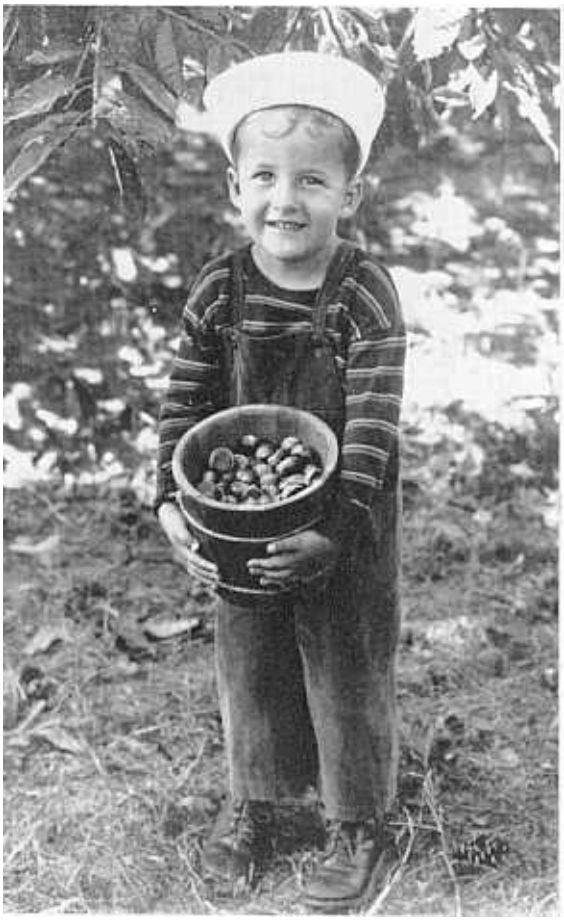
On December 4, 1948, Dr. Conard wrote: "My chestnut trees came from the Division of Plant Exploration and Introduction, some 20 years ago. They are on the grounds of Grinnell College and do not properly belong to me but no one else knows or cares anything about them."

"I cannot say when the first crops came in. The trees bear every year and the nuts are ripe before frost. There are no other Chinese chestnuts within 50 miles. I once sent specimens to Washington and was told that they were inferior to other introductions. I hardly know when they ripen as squirrels cut them off while they are still in the bur. I have sent scions and sample nuts to Dr. Smith, and Snyder Brothers of Center Point, Iowa."

This variety probably should not be passed up too lightly as we have yet to see a pure Chinese chestnut that was not good to eat at some stage of maturity. One that proves hardy under such conditions as Dr. Smith describes may prove useful in outlying districts.

Hemming

This variety originated as one of nineteen trees sent by the Department of Agriculture to the Eastern Shore Nurseries at Easton, Maryland. Mr. Ernest Hemming, for whom this nut was named is senior partner of this concern.



Mike Hemming, like his Dad, believes that the Hemming variety is a fine chestnut.

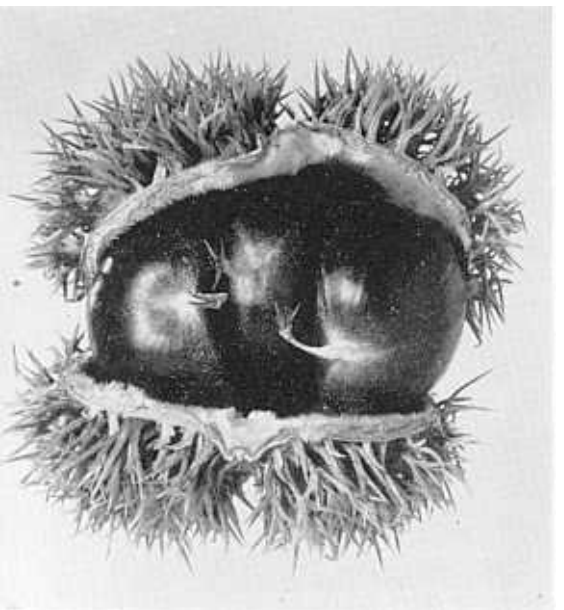
The nuts of Hemming are of fine quality and have superb mahogany color. Its chief faults lie in its variable size and the tendency of the nuts to split open when ripe.

Hobson

Hobson originated as one of two seedlings sent by the Department to Mr. Jas. Hobson of Jasper, Ga. It has much to commend it as it is easy to graft, and it is precocious, prolific, annual in bearing, and the nuts are very sweet. The cleaning quality also is very good but the nuts are rather too small to meet the requirements of harvesting and marketing. The variety lost favor and is now not grown for sale by many nurserymen although it has much in it's favor for home use. It is probably entitled to a better break than it is receiving."

Kuling, Meiling, and Nanking

These three varieties were all derived from seed shipped by Peter Liu from Chekiang Province, China, early in 1935.



Milford chestnuts in the bur.

The seed from Mr. Liu was not particularly impressive either as to size of nut or flavor; but some of the resulting seedling trees have turned out surprisingly well. Several trees grown at Albany, Ga., at the U. S. Pecan Field Station, began bearing three years later or in 1938. Seeds from these were planted at once and began bearing in 1941. The tree named as the parent Kuling has since borne a total of 151 pounds; the one called Meiling, 196 pounds; and the Nanking 205 pounds. The Kuling was the only one of the three that bore a crop in 1942.

Since 1943, none of the three has had a crop failure. Nanking has had slightly the largest nuts as its crops have run from 30 to 43 per pound as compared with 35 to 43 for Kuling and 38 to 43 for Meiling. Scions of each have been placed in the hands of nurserymen and all three have become available through commercial sources.

Milford

This variety has been known for a number of years but it has been grafted very little. The parent tree stands in the midst of a rather crowded planting owned by Mr. Frank B. Austin, Milford, Delaware. Scions have been sent to several nurserymen, but not all have reported. It is considered worthy of further attention.

Stoke (Stoke Hybrid)

This variety appears to be the result of a natural cross between the Chinese and Japanese chestnuts. The original tree is from a chance nut picked up on

the grounds of the Plant Exploration and Introduction garden at Glenndale, Maryland. The tree was grown by Mr. Stoke whose attention was soon attracted by its early bearing and early maturing. In southwestern Virginia, the nuts frequently begin to ripen during the third week of August. In appearance the nuts greatly resemble pure Japanese. It bears well but the nuts lack good palatibility.

Zimmerman

This originated as a 1930 selection made by the late Dr. G. A. Zimmerman, Linglestown, Pa., from a number of seedlings grown from seed imported by him directly from China. Since the death of Dr. Zimmerman, the identity of the parent tree has been lost. However, the variety has been continued by nurserymen and about as many trees have been sold of Zimmerman as of any other one sort. It is easier to graft than some others and while the nuts are a little small, it is a good staple variety.

Potential Varieties

To originate a variety is not difficult, nor is there danger of having too many varieties brought out. To have a large number of varieties on trial about the country at one time is the quickest and surest way to find out which is best. Don't wait for nurserymen or state and federal experts to say what you should propagate. Try your own hand at grafting. Work over your poorest trees with scions from your best. You should have a test row or a few trees in which you can graft every promising variety that you can obtain.

COSTS AND RETURNS FROM PEACH PRODUCTION

By E. M. Morrison, 1948

Utah Agr. Expt. Sta. Bul. 334. 32 p.

A survey was made of 103 farms to determine the cost of producing peaches in 1947. The average acreage of the farms studied was 33.5 with 5.4 acres in peaches. Total investment per farm was $23,659 of which $4,591, or 19 percent, was invested in the peach enterprise.

Yields varied from 72 to 344 bushels per acre with an average for all farms of 177. High yields per acre were found to be very important in reducing the production costs per bushel. The records were sorted into three groups of the highest, middle, and lowest third on the basis of net returns per acre. The highest one-third produced 243 bushels per acre at a profit of $114.21 per acre. The middle third produced 157 bushels per acre and received enough return to pay expenses but leave no profit. The lowest third produced 112 bushels per acre at a net loss of $94.08.

The desirability of efficiency of production is emphasized but relatively little attention is given to the importance of the site, soil and variety factors.

—W. P. J.