of the U. S. Department of Agriculture for propagation, evaluation, and potential introduction. The variety, tested as Good C-7, was named Orrin in honor of Mr. Good.

Characteristics

The nuts of Crane chestnut are dark-cherry red, and are almost completely glabrous, in contrast to those of Nanking, which have a small patch of pubescence at the stylar end. Nuts of the two varieties are comparable in size and color, and could be combined for marketing. Well grown nuts will average about 32 per pound. Edibility is excellent when the nuts are well-cured, and their keeping quality is superior to that of all current varieties.

The Crane variety flowers in midseason at the same time as Nanking, and the two varieties cross-pollinate. There is a tendency for the pollen of Crane to mature slightly before its pistil becomes receptive. Grafted trees of Crane characteristically start to bear the second year after planting, and may have some nuts the first year. Crane is introduced because of its early bearing habit, the superior keeping quality of its nuts, and the possibility of its serving as a pollinator and companion variety for Nanking.

An attractive dark-mahogany glabrous sheen, a slightly pubescent tip, and a light-colored seed scar make the nuts of the Orrin variety distinctive. Well grown nuts average 32 per pound, and are comparable in size with those of Nanking but are earlier maturing. The middle nut of the three in a bur is uniformly thick and not wedge-shaped. Keeping quality is superior to that of all other varieties except Crane. The variety is blight-resistant, and grafted trees are early producers. Orrin is being introduced because of its superior keeping quality, its slightly later flowering habit, and its early-maturing character. This short season development indicates potential adaptation in more northern areas.

Potential Value of New Varieties

Crane and Orrin start bearing nuts the second year after planting, a characteristic that will greatly increase early production in orchards. These varieties also start bearing the year after they are topworked into large trees. This makes it possible to quickly convert established seedings in orchards into uniformly productive trees. The varieties should be grafted or topworked on only pure Chinese chestnut understock, because there is some evidence that graft union trouble may be caused by the use of hybrid or mixed understocks.

Buds of Chinese chestnut varieties frequently start growth in early spring after a long warm spell. Embryonic staminate and pistillate flowers that produce the current year's nuts are present in buds, and if they are killed by a late spring frost crop failure will result. Thus, the slightly later flowering date of Orrin and its slower response to early warm spells than other varieties could give it some advantage, especially in northern areas.

Scionwood has been released to nurserymen, and grafted trees should be available in the spring of 1964.

Blackwalnuts in Pennsylvania

The nut species most widely grown in Pennsylvania is the blackwalnut. W. S. Clarke, Jr., of Pennsylvania State University, tells us that the late varieties are generally best adapted to conditions at University Park, Penna., and that the variety Thomas has been the most consistent producer. Other varieties that have produced substantial crops are Ten Eyck, Hare and Zeta. Hare has yielded the best nuts in terms of size of nut, percentage of kernel, and ease of cracking.