# Ten Nectarines for Eastern North America*

L. FREDRIC HOUGH and CATHERINE H. BAILEY**
New Brunswick, New Jersey

Early in his efforts to assemble a varied collection of germ plasm of peaches and related fruits, Professor M. A. Blake of the New Jersey Agricultural Experiment Station, became interested in nectarines. As he said: "The far-seeing breeder must ever be seeking new species and types to increase the opportunities for improvements" (Blake, 1944). Apparently, from the beginning, Professor Blake was trying to build size and improve productivity. In 1926 the first crosses were made, using Goldmine, a small (under 2" diameter), white-fleshed nectarine which he had gotten from New Zealand through the USDA Plant Introduction Section, as P. I. 43141. Goldmine was crossed with a white-fleshed peach selection of medium-large size (2½" diameter), with light pubescence, from a progeny of Belle self-pollinated (Connors, 1927). All the 111 seedlings from this cross were peaches.

In 1932, open-pollinated seeds were saved from one of the largest and best quality peach selections in this progeny from Goldmine. There were two nectarines in the eight seedlings fruiting from this second generation progeny. One of these white-fleshed nectarines was 2½" in diameter. It was crossed with the yellow-fleshed Garden State nectarine (Plant Patent 92) in 1938; from this cross the medium-large, white-fleshed varieties Nectacrest, Nectaheart, and Nectarose were introduced by Professor Blake in 1947.

Also in 1932, Professor Blake sorted out 10 large pits from a shipment of peach pits for stock from the southern mountains. He selected the Redcrest peach and three nectarines from this lot. One of these nectarines, 25032, was medium-large but white-fleshed. This selection, 25032, was crossed with Garden State in 1938, and Nectalate, a large white-fleshed nectarine (2½" in diameter) from this cross was introduced in 1947.

In 1939, just after 25032 was selected, additional crosses were made in an attempt to get still larger size. Candoka, a very large (3½" in diameter), yellow-fleshed peach was crossed with 25032 and with Flaming Gold, a small, soft, yellow-fleshed productive nectarine. There were 23 seedlings in the progeny of the Flaming Gold × Candoka cross. Two large (2¾" in diameter), productive, yellow-fleshed peaches, 53739, 53939, were selected. Out of the 50 seedlings in the progeny of Candoka × 25032, one large (2¾" in diameter), white-fleshed peach, 67239, was selected.

In 1943, open-pollinated seeds from Nectalate and from another selection of the same progeny, Garden State × 25032, were planted by Professor Blake. These progenies fruited in 1948, and three yellow-fleshed nectarine selections, NJN14, NJN17, and Nectared 10 were made by the authors.

In 1951, NJN14, NJN17, 53739, 53939, 67239, and Nectaheart were hybridized in various combinations by the authors. From these crosses, fruiting in 1954 for the first time, Nectared 4 through 9 were selected. In 1955, open-pollinated seeds were

*Paper of the Journal Series, New Jersey Agricultural Experiment Station, Rutgers—The State University of New Jersey, Department of Horticulture, New Brunswick.

**Professor and Assistant Professor, Dept. of Hort., Rutgers—The State University of New Jersey.

collected from some of the other seedlings from the 1951 crosses. The seedlings from these open-pollinated seeds first fruited in 1959, and Nectared 1 through 3 were selected.

Nectared 4, Nectared 5, Nectared 6, and Nectared 8, and the seed parents of Nectared 2 and Nectared 3, are all seedlings from the same progeny.

This nectarine breeding program started with a small, white-fleshed nectarine that was a plant introduction. Breeders have selected for size and adaptability in five successive generations of seedling progenies over a period of 35 years of continuing effort. There now is a series of ten medium-large to large, yellow-fleshed nectarines, ripening over a period of two months. Each of these has been selected for smooth skin (without russetting and flecking) which is resistant to cracking. This series validates Professor Blake's 1937 prediction that "Nectarines are certain to become more popular in the next few years" (Blake, 1937).

## Choice of Names

This series of ten nectarines has been named Nectared 1 through Nectared 10. Since they are similar in appearance, it should simplify merchandising to offer them to the ultimate consumer under a single descriptive name, Nectared, which she can recognize as a group name for eastern-grown nectarines.

As in the case of our series of clingstone peaches recently introduced (Hough and Bailey, 1962), the season of ripening of these nectarines is differentiated by a sequence of numbers. Each digit represents approximately a week's difference in season of ripening. The smaller the number, the earlier the ripening. In keeping with the practice of other authors describing peaches for eastern North America (Bregger, 1954; Dorsey, 1957; Mowry, 1959), we have accepted the season of ripening for Elberta as the base for calculating the season of ripening for these new nectarines. The Elberta base season is identified by the digit "8".

## Parentage and Description of Varieties

**Nectared 1,** tested as NJN49, is an open-pollinated seedling of [53739 = Candoka × Flaming Gold] × [NJN17 = (Garden State × 25032 selected nectarine) open-pollinated]. It ripens about a week to ten days before Jerseyland peach, or about 6½ weeks before Elberta. The skin is ¾ to full red over yellow. The flesh is yellow with no red at the pit. The fruits are 2¼ to 2½ inches in diameter. It is a semi-clingstone. The tree is moderately productive; it has non-showy flowers and reniform leaf glands.

**Nectared 2,** tested as NJN34, is an open-pollinated seedling of [53939 = Candoka × Flaming Gold] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. It ripens with or a few days before Jerseyland peach. The skin is ¾ to full red over yellow. The flesh is yellow with some red at the pit. The fruits are 2⅜ to 2½ inches in diameter. It is a semi-clingstone. The tree is productive and seems to be resistant to brown rot. It has showy flowers and reniform leaf glands.

**Nectared 3,** tested as NJN42, is an open-pollinated seedling of [53939 = Candoka × Flaming Gold] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. Nectared 3 ripens about a week after Nectared 2, or right after Redhaven peach. The skin is ¾ to full red over yellow. The flesh is yellow. The fruits are 2⅜ to 2¾ inches in

diameter. It is a semi-clingstone. The tree is moderately productive, and has had very little brown rot. It has non-showy flowers, and reniform leaf glands.

**Nectared 4,** tested as NJN23, is a seedling of [53939 = Candoka × Flaming Gold] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. It ripens about with Triogem peach, or about 3½ weeks before Elberta. The skin is ¾ to full red over yellow. The flesh is yellow. The fruits are 2⅜ to 2½ inches in diameter. It is semi-freestone. The tree is productive; it has showy flowers and reniform leaf glands.

**Nectared 5,** tested as NJN24, is a seedling of [53939 = Candoka × Flaming Gold] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. Nectared 5 ripens with Sunhigh peach, three weeks before Elberta. The skin is ¾ to full red over yellow. The flesh is yellow. The fruits are 2⅜ to 2¾ inches in diameter. It is a freestone when fully ripe. The tree is productive; it has non-showy flowers and reniform leaf glands.

**Nectared 6,** tested as NJN 25, is a seedling of [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated] × [Nectaheart = Garden State × (Goldmine × Belle selfed) open-pollinated]. It ripens with Goldeneast. It is ¾ to full red over yellow. It has yellow flesh. The fruits are 2¼ to 2½ inches in diameter. It is freestone. The tree is productive; it has showy flowers and reniform leaf glands.

**Nectared 7,** tested as NJN26, is a seedling of [53939 = Candoka × Flaming Gold] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. It ripens about with Summercrest peach. The skin is ½ to ¾ red over yellow. The flesh is yellow. The fruits are 2½ to 2¾ inches in diameter. It is freestone and has good quality. The tree is moderately productive; it has showy flowers and reniform leaf glands.

**Nectared 8,** tested as NJN27, is a seedling of [53939 = Candoka × Flaming Gold] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. It ripens with Elberta. The skin is ¾ to full red over yellow. The flesh is yellow. The fruits are 2⅜ to 2½ inches in diameter, and freestone. The tree is productive; it has showy flowers and reniform leaf glands.

**Nectared 9,** tested as NJN28, is a seedling of [67239 = Candoka × 25032 selected nectarine] × [NJN14 = (Nectalate = Garden State × 25032 selected nectarine) open-pollinated]. It ripens a week after Elberta. The skin is ¾ to full red over yellow. The flesh is yellow. The fruits are 2⅜ to 2¾ inches in diameter. It is freestone with only a medium-size pit. The tree is moderately vigorous and moderately productive; it has showy flowers and reniform leaf glands.

**Nectared 10,** tested as NJN 53, is an open-pollinated seedling of Nectalate = Garden State × 25032 selected nectarine. It ripens 2 weeks or more after Elberta. The skin is ½ to ¾ red over yellow. The flesh is yellow and firm. The fruits are 2½ to 2¾ inches in diameter. It is freestone. The tree is productive; it has showy flowers, aborted pollen, and reniform leaf glands.

Trees may be obtained by contracting for them a year in advance from the New Jersey Peach Council, Inc., F.F.D. #3, Princeton, New Jersey.

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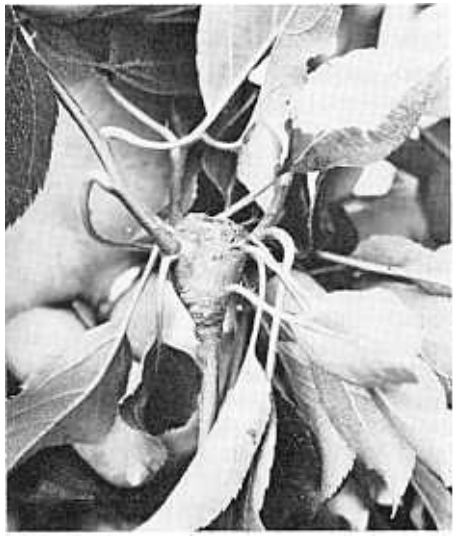

*Fig. 1.* **Fasciated flower cluster of Rome Beauty apple.**

## A Fasciated Flower Cluster of Rome Beauty Apple

In the summer of 1960, an unusual flower cluster was found on a branch of Rome Beauty growing in the University orchard. This cluster was fasciated, approximately 15.5 mm wide and 7.5 mm thick. On the cluster, there had been 33 flowers at bloom. Ten fruits were observed developing on June 5, but these dropped before harvest.

Fasciation is the production of a flat branch resembling several branches growing together. It is a result of multiple terminal buds arranged in a single plane, and is regarded as a malformation rather than a disease. Although this malformation probably occurred by chance, heavy pruning and extreme water supply conditions have been associated with fasciated plant tissue*.—*Loren D. Tukey, et al., Penna. State University, University Park, Penna.*

*Gardner, V. R., F. C. Bradford, and H. D. Hooker, Jr. 1939. *The Fundamentals of Fruit Production,* Second Edition. McGraw-Hill. Pages 95, 462, 776.

## Seedless Sugar Apple in Florida

We have been growing the seedless sugar apple in this area for several years. One clone originated in Brazil and the other originated in Cuba. However, they seem to be very similar in every characteristic. At the Sub-Tropical Experiment Station we have only the clone from Cuba. The main trouble with these clones is that they do not bear very heavily.—*John Popenoe, Homestead, Fla.; Chairman, A.P.S. Committee for Tropical & Subtropical Fruits.*