

# Peach Breeding in Southern California

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Riverside, California

In southern California, about 1922, several thousand acres of peaches, predominantly clings, were coming into production. Wine grapes had been pulled out, on account of a misleading lady named Prohibition, to make way for the peach. Soon the price of peaches dropped, water levels fell and, except at elevations of 3000 to 4000 ft., the trees in most years suffered severely from "delayed foliation" caused by insufficient winter chilling. (Each variety has a characteristic winter chilling requirement). Since no short chilling varieties were available, public and private agencies began to breed them. In the meantime, although commercial peach growing quickly declined, one new short-chilling variety Babcock, resulting from earlier work by E. B. Babcock and G. P. Weddon, was a commercial success.

The need for short-chilling varieties for small orchards and home gardens remained. A few years after short-chilling varieties began to appear, mostly as seedlings, one fairly short-chilling cling originated as a bud-sport. Five varieties were released by the University of California in 1935, but all of them had defects.

Sunglow for instance has considerable merit, but its exterior color is not very attractive; possibly also it was insufficiently publicized. In any case, such varieties were useful as parents and led to the production of more successful ones. The full pedigrees show that these newer short-chilling varieties originated from a short-chilling Peento F1 or F2 hybrid crossed with a commercial variety such

as Elberta, and "backcrossed" for about three generations with the same or with some other long-chilling varieties. A male-sterile parent was not used recurrently and selections for short-chilling were maintained. The yellow freestone varieties Ventura, Bonita, and Rubidoux are mentioned here, in order of maturity, without any intention to underestimate varieties produced by other agencies.

Within the last decade an upswing and increased demand for short-chilling varieties has occurred both in the United States and in foreign countries. Budwood of the new short-chilling varieties has been sent through the office of Foreign Plant Protection Section of the United States Department of Agriculture to practically all the subtropical regions of Europe, Africa, South America and even the Orient. In this country, Florida is testing new short-chilling varieties. In Georgia, the new United States Department of Agriculture varieties bred by Weinberger are widely planted.

Interest among peach growers in short-chilling varieties has also increased in California, especially in the southern San Joaquin Valley. The warm sunny spring climate there is very favorable for early peaches, but in some years winter chilling is insufficient for the varieties now planted. Also it seems that in this climate shorter-chilling varieties may ripen earlier than long-chilling ones on account of earlier blooming and leafing. With short-chilling varieties the danger of spring frost injury is certainly more serious but may be offset by the

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more advanced growth of the leaves and fruit, and the danger could be reduced by orchard heating. In the Coachella Valley of California, Springtime, a fairly short-chilling variety produced by H. Swim, Armstrong Nurseries, Ontario, California, had marketable fruit in mid-May 1957; and in that hot valley short-chilling peaches may possibly have a place.

Looking to new varieties, an early yellow-fleshed near clingstone variety Tejon, originating at the University of California, should be available in 1959. It requires less winter chilling than Springtime—probably a total of 600 hours. In 1956 and 1957 in the southern San Joaquin valley, it ripened at the end of May. Two unnamed new varieties are likely to be released, No. 335-10 a yellow-fleshed clingstone suitable for processing which requires about 650 hours chilling, and No. 254-2, a white-fleshed freestone which ripens a month or so after Elberta, when very few varieties are available. Although this white peach requires approximately 800 hours chilling, it was not injured even after the warmest winters at Riverside. Sufficient blooms set fruit and the delay in leafing did not affect production in this late-maturing variety nearly as much as in an earlier one.



### Pears in New Hampshire

Although most of us don't generally think of New Hampshire as pear country, Dr. A. F. Yeager writes that a number of pear varieties have done reasonably well at the New Hampshire Agricultural Experiment Station, at Durham. These include Clapp's Favorite for an early variety, Gorham for midseason, and Bosc, a late variety. Other sorts which he lists as satisfactory are Tyson, Early Seckel, Seckel, Bartlett, Conference and Beierschmidt. Although New Hampshire

climate is not ideal for pears, growers in this area have the advantage that they do not have the problem of fire blight.



### Observations on Rubus Species

I grew *Rubus inopertus* P. I. 52996 in the greenhouse about 1937-1940. I find no record of its having bloomed during that period. I grew *R. thibetanus* under the name *R. veitchii* in the field about this same period.

Probably I should say that I grew *R. veitchii* which I supposed to be synonymous with *R. thibetanus*. I do not have it at the present time. Records indicate that it was semi-prostrate, very thorny, and medium vigor. The berries were small, bright red, soft, sweet and very small seeded. I was not particularly impressed with either of these species. I have tried at sometime about one hundred plant introductions of *Rubus*, hybridizing several of them with American varieties with the purpose of originating new sorts adapted to the southern region.—G. F. Williams, North Carolina State College, Raleigh, N. C.



### Elderberries

There is an increasing interest in cultivated blueberries. R. D. Way, of the New York Agricultural Experiment Station at Geneva, tells us that 2500 tons of elderberries are processed annually for jams and jellies in western New York and Pennsylvania. Large-fruited American Elder selections from the wild are now under cultivation. Two of these, Adams No. 1 and Adams No. 2, were introduced in 1926 by the New York Station and can be obtained from the New York Fruit Testing Association at Geneva.