

Prolonged Dormancy of Apple Varieties in Mississippi*

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Apple and other deciduous fruit trees have a rest period which is normally broken by cold temperatures (below 46°F) during the winter in the northern part of the United States. In Mississippi, as we approach the Gulf coast, winters are sometimes too mild to adequately break the rest period of some deciduous fruit trees. Four recent winters were warmer than usual, and prolonged dormancy resulted. These winters were 1948-49, 1949-50, 1951-52 and 1956-57.

When the December-January mean temperature is above 48°F, most apple varieties will not grow normally in the spring. In 1956-57 the December-January mean temperature was 58.7°F at Poplarville (forty miles from the Gulf of Mexico) and 53.3°F at Meridian, (about 140 miles north of the Gulf). At Meridian only about 700 chilling hours (below 46°F) occurred before February 15. Severe prolonged dormancy resulted, with late bloom and delayed foliation of apple varieties at Newton near Meridian. Blossoming extended over several weeks between varieties. Leaf formation was irregular and often only terminal buds or those on old limbs near crotches opened.

Apple trees bloom in March and attain full leaf in early April at Newton following a normal winter. The Carlton, Cauley, Early Harvest, and Improved Winesap reached full bloom about May 1, 1957, thus indicating high chilling requirements which were not met this winter. This was four to seven weeks later than normal. Varieties which blossomed and leafed out

earliest were Anoka, Double Red Delicious, Melba, Red Astrachan, Red Rowden, Richared and Stark Earliest. Their early growth indicated shorter chilling requirements.

Prospective apple growers in areas approaching the subtropical zone have to know more concerning the number of hours of chilling required to break the rest period of apple varieties. Obviously, there are rather wide differences between varieties in this respect.

Recent correspondence with a fruit grower at Kitale in Kenya Colony, East Africa, reveals that he can grow the Rome Beauty and Winter Banana varieties. The growing season is September to May. They have no winter at all. To induce new growth they spray in early September with a seven percent solution of Dytrol, which burns all the leaves off; and, in due time, the trees flower and produce fruit.



Figure 1. The Improved Winesap apple, showing symptoms of delayed dormancy at Newton, Mississippi on May 1, 1957 following a mild winter with less than 700 chilling hours before February 15.

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Tremmel and Carol Peaches Continue to Show Hardiness

November, 1958 was very warm at Sigourney, Iowa. The average temperature for the month was 41°F. Peach leaves were still green when an extreme cold wave passed over Iowa which ended about December 12. We had several days with a minimum of 20° F below zero. The result was that many cherry and peach trees were killed or severely damaged.

The Tremmel and Carol peach varieties were damaged some, but had a set of blossoms and required a considerable amount of thinning. Polly, Sungold, Valient and Golden Jubilee and were severely damaged in our orchard.—*J. P. Tremmel, Sigourney, Iowa.*



Peaches in Ontario

The Loring peach continues to show promise and some commercial plantings are being made. The tree seems to be particularly vigorous and it has been a consistent cropper.

For the season a week ahead of Elberta, Merrill Forty-Niner is showing promise. It crops well and has fair color for that season. Blake has been a very light cropper here and seems to be too tender in bud.—*O. A. Bradt, Hort. Exp. Station, Vineland Station, Ontario.*



Apple Varieties in France

P. Remy, Director of a fruit research institute at Angers, in France calls our attention to the incompleteness of the list of commercial apple varieties of France reported by Mr. Beaulieu of Canada on page 18 of Vol. 14 No. 1 of FRUIT VARIETIES and HORTICULTURAL DIGEST. He tells us

that the following varieties should also be included: Reine des Reinettes (King of the Pippens), Golden Delicious, Richared, Starking, Cox Orange Pippin, Reinette Gris du Canada, Calville Blanc, Winter Banana, Reinette Clochard, Jonathan, Staymared and Winesap.



The Sumner red raspberry appears to be the most promising variety for Western Washington. It has yielded very well, has rated high for processing, and has shown continuous resistance to root rot, at Puyallup.



Kendall Apple. I have decided to pull out the nice young Kendall trees which I have at our Clyde, Ohio farm. My objection to them is that they are quite subject to blight, and that they develop a type of bitter pit which is much more severe than what I have on Jonathan. These bitter pit spots, which seem to start rotting, may occur even before the fruit is picked.—*C. L. Burkholder (deceased), Purdue University, Lafayette, Ind.*



Hartman Award to Frank Reimer

Frank Reimer received the 1959 Hartman Trophy at the annual banquet of the Oregon State Horticultural Society. Reimer, a leading authority on pear rootstocks, is retired superintendent of the Southern Oregon Experiment Station at Talent. It is reported in "Better Fruit" that the hybrids he produced by crossing different Oriental pears brought back from his own explorations, may provide a source of pear-decline resistant varieties. He is now privately breeding for red skin color in pear.