

## EFFECT OF SEEDLING VS. SEMIDWARFING ROOTSTOCK

Table 1. Effect of rootstock on flower bud density and bud position on 10-year-old 'Stayman' trees.

Rootstock	Total number of flower clusters	Bud position	
		Terminal	Axillary
Seedling	583	85.43 <sup>a</sup>	14.57
EM VII	938	63.59	36.41

<sup>a</sup>Figures represent percentages of total number of clusters.

Blossom density (flower clusters per unit length of vegetative growth) was appreciably higher on the semidwarfed trees. Differences in characteristic bud position were also noted (Table 1). Whereas in the case of seedling trees 14 per cent of the flower clusters were located in an axillary position, 36 per cent of the clusters

were produced laterally on the semidwarfed trees. Relative to the terminally positioned blossoms, the development of flower clusters axillary on the previous year's shoot growth was considerably delayed. Anthesis of axillary clusters occurred six days later than those borne terminally and may better afford the danger of spring frosts. These clusters would conceivably produce the bulk of the crop in years of heavy frosts. This factor is likely to account in part for the reported frost hardiness differences associated with the effect of various rootstocks.

### Literature Cited

1. Field, C. P. 1938. Low temperature injury to fruit blossom. I. On the damage caused to fruit blossoms by varying degrees of cold. *Rep. E. Malling Res. Sta.* for 1938:127-138.

## Reviews and Abstracts

Pennsylvania State University offers book on propagating nut trees. By C. Marshall Ritter and George C. Weber. \$1.50.

A new booklet, 'Propagating Nut Trees', has been published by The Pennsylvania State University College of Agriculture. The primary objective of this book is to stimulate interest in producing excellent varieties of hardy edible fruits. Many outstanding varieties of black and Persian walnuts, shag and shellbark hickories, filberts and Chinese chestnuts are readily avail-

able for planting and propagation.

Some of the more successful methods of grafting are illustrated and explained. The back inside cover of the book lists nut varieties that can be grown in Pennsylvania. Also included are photos of 9 different kinds of nuts that can be grown in the Commonwealth and surrounding states. Line drawings of various grafting techniques are clean and large so that they may be easily understood.

—R. K. Simons

**Some Aspects of the Program of the Fruit Breeding Station of Angers.** J. Huet (Head, Station de Recherches fruitières, Angers, France).

The Angers Station is responsible for research concerning the breeding of apples, pears, black currants, red currants and raspberries.

Breeding work at this Station includes: 1) Collection and evaluation of numerous cultivars; 2) Selection of the least virus contaminated clone; and 3) Breeding of new types, using methods similar to those of all the breeders: crosses and induction of mutations.

Other research associated with this program include factors that control various reactions of the trees such as temperature requirements of buds or characteristics supplied by rootstocks (compatibility relationships, vigor).

—R. K. Simons

**Reproducing Fruit Trees by Grafting and Budding** by W. D. Armstrong and Carl E. Chaplin. University of Kentucky Ext. Cir. 604.

The art of grafting and budding (a form of grafting) is a necessity for the nurseryman and the commercial fruit grower. It is also a source of pleasure and usefulness for the hobbyist.

This circular documents whip, bark, cleft, and bud grafts. A brief description has been made for the care and selection of scion wood and the stock. The whip graft includes root and stem or top grafting. Bark grafting and cleft grafting has been illustrated. Anyone interested in this art can easily follow the illustrations and instructions.

—R. K. Simons

**Minor Fruits in New York State** by Donald K. Ourecky. Plant Sciences Information Bull. No. 11. (Extension Publication of the New York State College of Agriculture, Cornell University, Ithaca, N. Y.)

This interesting and informative article by Dr. Ourecky describes 16 minor fruits in New York State. Minor fruits are plants which produce edible fruits of no real commercial value. They may be eaten fresh, preserved, made into jams and jellies or used for culinary purposes. These include persimmon, papaw, elderberry, mulberry, Juneberry, highbush cranberry, fig, Cornelian cherry, beach or shore plum, jujube, buffalo berry, medlar dwarf cherry, actinidia, oriental quince, and flowering currant.

These hardy, versatile and attractive fruits offer a new dimension in gardening and may assume increasing importance as a relatively untapped source of food.

—R. K. Simons

**Golden Delicious as Pollinator**

Golden Delicious apple has been causing problems as a pollinator in Washington and New Jersey, according to E. G. Christ (Hort. News, N. J. Hort. Soc., Nov., '70). He has learned from R. B. Tukey that in northcentral Washington Golden Delicious is not a popular pollinator for Delicious. Instead, Winter Banana is grafted to a limb in the northeast corner of each Delicious tree for pollination purposes.