

wood in Oregon. They now are being grown commercially in Oregon and Washington and offer a valuable approach to hardy, decline-resistant size-controlling pear rootstocks.

### Literature Cited

1. Blair, D. S. 1939 Present status of apple rootstock and double-working trials in Eastern Canada. *Sci. Agr.* 20:150-154.
2. Bradt, O. A., Hutchinson, A., Ricketson, C. L., Tehrani, G., 1974 *Fruit Varieties*, Ont. Min. Agr. & Food publ. 430: 100 p.
3. Davis, M. B. 1950 Progress Report 1934-48. *Hort. Div. Can. Agr. Res. Sta., Ottawa*. 259 p.
4. Davis, M. B. 1955 Progress Report 1949-53. *Hort. Div. Can. Agr. Res. Sta., Ottawa, Ont.* 205 p.
5. Fisher, D. V. 1966 High Density Orchards for British Columbia Conditions. *Can. Agr. Res. Sta., Summerland, B.C.*, SP38:29 p.
6. Hutton, R. G. 1930 Stock: Scion relationships. *Jour. Roy. Hort. Soc.* 55:169-211.
7. Hutchinson, A. 1974 Rootstocks for Fruit Trees. *Ont. Min. Agric. & Food Publ.* 334:22 p.
8. Hutchinson, A. 1970 Dwarf apple trees on 'M.9' rootstock: a 30-year trial. *Rept. Hort. Res. Inst. Ont.* 14-18.
9. Macoun, W. T. 1901 Central Experimental Farm Notes. *The Canadian Horticulturist* 24:100-101; 435-455.
10. Spangelo, L. P. S. 1965 Introduction numbers for Ottawa apple rootstock selections (Private Communication).
11. Spangelo, L. P. S. 1971 Hybrid Seedling Rootstocks for Apple. *Can. Dept. Agr. Publ.* 1431.
12. Spangelo, L. P. S., Fejer, S. O., Leuty, S. J., and Granger, R. L. 1974. Ottawa 3 clonal apple rootstocks. *Can. J. Pl. Sci.* 54:601-603.
13. Upshall, W. H. 1943 Mallings stocks and French crab seedlings as stocks for five varieties of apples III. *Sci. Agr.* 23:537-545.
14. Upshall, W. H. 1958 Dwarf Fruit Trees for Orchard Use. *Ont. Dept. Agr. Circ.* No. 334, 5 p.
15. Woolverton, L. 1906 The Fruits of Ontario. *Ont. Dept. Agr.* 275 p.
16. Woolverton, L. 1910 The Canadian Apple Grower's Guide, Wm. Briggs, Toronto. 264 p.

## The Performance of 'Suncling' Peach on Four Peach Seedling Rootstocks<sup>1</sup>

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The peach rootstock trial initiated in 1966 on a fruit farm of sandy loam near Fennville, Michigan, has been completed. The clingstone variety 'Suncling' was budded onto peach seedlings of 'Ambergem', 'Babygold 5', 'Babygold 7' and 'Suncling'.

Uniform trees of these combinations were planted in order to obtain an appraisal of orchard performance. Up to 80 trees each were planted, but only 11 uniform trees were available of 'Suncling'/'Babygold 7'. The survival count of the latter is not valid, but is included in Table 1.

The trees that died were found to have cankers on the branches, often on the southwest side of the trunk. A commercial pest spray program was conducted so that peach borer injury was not associated with tree loss.

From tree survival counts in the orchard, indications were that seedlings of 'Suncling', 'Babygold 5' and 'Ambergem' were similar in response, using one scion variety (Table 1). No abnormal graft union behaviors were observed with any of these combinations.

'Suncling' peach seedlings have cer-

<sup>1</sup>This peach rootstock trial was carried out in cooperation with the grower, and Norman Reath and Jim Breinling of the Gerber Products Company, Fremont, Michigan.

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tain attributes such as high percentage germination, good stand in the nursery and relative hardiness for Michigan conditions. If viable seed of this variety could be obtained from processing plants, it would be a good rootstock for contributing to more uniform orchard performance.

'Babygold 5', developed in New Jersey, is also noted for its hardiness and uniformity in the orchard. 'Ambergem', although quite hardy, does not give uniform seed germination, which results in a poor stand in the nursery.

Previous research reports have shown that certain peach seedling rootstocks will impart both shoot and bud hardiness to scion variety (1, 2). For example, 'Siberian C', which defoliates in the fall earlier than other peach varieties, apparently transmits some cold hardiness to the scion. 'Harrow Blood' also contributes to scion shoot hardiness, but seed germination is not as good.

This being the case, both "Suncling" and 'Babygold 5' could be part of a seed orchard providing seedling rootstocks for nursery propagation of cling and free stone varieties.

**Table 1. Number of trees that survived in the orchard using 'Suncling' as the peach variety budded on 4 seedling rootstocks.**

Seedling Rootstocks	Number Trees Planted	Number Trees Lost	Percent Survival
Ambergem	88	20	77
Babygold 5	30	5	83
Babygold 7	11	4	73
Suncling	70	17	76

Lastly, although different peach seedling sources appear to be more or less uniform in the nursery and later in the orchard, there is no guarantee, due to genetic variation of seedlings, that complete uniformity will exist in certain seedling lines. Therefore, in the future, the clone rootstock approach will prevail, especially those developed which will root with ease from cuttings, be cold tolerant, disease resistant, and perhaps dwarfing.

#### Literature Cited

1. Chaplin, C. E. and G. W. Schneider. 1974. Peach rootstock/scion hardiness effects. *J. Amer. Soc. Hort. Sci.* 99(3): 231-234.
2. Layne, R. E. C., H. O. Jackson and F. D. Straud. 1973. Influence of peach seedling rootstocks on growth, yield and cold hardiness of peach scion cultivars. *Hort-Science*. 8:267 (abstr.).

## Peach Breeders Meet in Ontario

About 30 scientists and graduate students from Ontario, Canada, the United States and Mexico attended the Peach Breeders Work Conference, August 8-10, 1974, at the Harrow Research Station. It was hosted jointly by R. E. C. Layne, Agriculture Canada, Research Station, Harrow and by O. A. Bradt, Horticulture Research Institute of Ontario, Ontario Ministry of Agriculture and Food, Vineland.

Participants from the United States included scientists and graduate stu-

dents from State Universities and from the United States Department of Agriculture. The following states were represented: New York, New Jersey, Maryland, North Carolina, South Carolina, Georgia, Alabama, Michigan, Indiana, Illinois, Kentucky, Missouri, and Arkansas. Ontario scientists from Agriculture Canada and Ontario Ministry of Agriculture and Food also participated.

The Conference included an evening tour of new research facilities fol-