

DWARF APPLE AND PEAR TREES

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The author of this interesting article discussed the results which have been secured with various dwarfing stock at the Horticultural Experiment Station at Vineland, Ontario.

Malling IX Rootstocks

The Malling IX rootstock is one of the most dwarfing understocks for apples. Unfortunately the roots are very brittle and the tree must be tied to a post or trellis type support throughout its life. In planting, the bud union should be at least three inches above the ground level. If the bud union is below the surface of the soil, roots will form on the scion variety and may partly or completely overcome the dwarfing effect of the Malling understock.

At the Vineland Station, varieties on Malling IX roots have come into bearing at 3 or 4 years of age whereas similar varieties on standard roots may be expected to produce their first crop when 5 or 6 years old. Compared to standards, the trees on Malling IX roots show a greater tendency to biennial bearing. For a given unit of bearing area, the trees on Malling IX have been much more productive than the standard trees. The fruit on the dwarf trees was a little smaller, had slightly increased red color, and matured somewhat earlier than fruit on the regular trees.

Even though the dwarf trees come into production very early in their life, there is no indication that they will be short-

lived. There is also no evidence that trees on Malling IX roots require any higher soil fertility than standard trees. As the trees become older there is a tendency towards greater size differences between the standard and dwarf trees.

Mice appear to be especially fond of the bark of the roots and trunk of Malling IX trees. Such plants should be protected by guards of galvanized wire, quarter-inch mesh, sunk three inches into the soil.

Other Malling Rootstocks

Trees on Malling II were about three-fourths the size of standard trees at the end of the thirteenth year.

Malling IV requires support like Malling IX but produces a larger tree which is slower in coming into bearing.

Trees on Malling VII are reputed to be about half as large as standard trees.

Dwarf Pear Trees

The Angers Quince, designated Quince A by the East Malling Research Station in England, is the rootstock most commonly used for dwarfing the pear.

Compatibility on Quince A

There is considerable variation in the compatibility of pear varieties when topworked on Quince A roots. Bosc gave a poor stand of weak trees in the nursery but the growth of established trees in the orchard was satisfactory. Kieffer, on the other hand, gave strong nursery trees which lived only a few years in the orchard. Bartlett makes a weak union with quince and often dies in early life unless a variety such as Beurre Hardy is used as an interstock.

Anjou, Howell and Vermont Beauty seem to be quite satisfactory on the

Quince A root. Clapp Favorite does reasonably well but is subject to some breakage at the union unless given proper support. Seckel is reputed to be incompatible with quince but has been satisfactory in the nursery row at Vineland.

Handling Dwarf Pear Trees

Dwarf pear trees on Quince A should be planted on well-drained soil. A support such as a post or trellis should be provided for each tree.

Dwarf pear trees maintain a satisfactory state of vigor with very little pruning as long as the soil is kept in a reasonable state of fertility. Because of the danger of fireblight disease it is unwise to force strong growth either by pruning or nitrogen fertilization.

Pear trees on Quince A roots were about one-third to two-thirds the size of standard trees at the end of the thirteenth year in the orchard.

Fruiting of Dwarf Pear Trees

At the Vineland Station both standard and dwarf pear trees were slow in coming into bearing. The dwarf trees usually produced their first crop a year or two ahead of the standard trees.

The fruit on the dwarf trees was slightly larger than on standard trees and somewhat more highly colored.

Quince C Understock

The Quince C understock is reputed to be more dwarfing to pears than Quince A. Ten-year-old trees at Vineland on Quince C were about half as large as similar varieties on Quince A. The tree survival record has been somewhat better on Quince C. This rootstock is probably most useful for varieties like Vermont Beauty which grow quite vigorously on Quince A. Bartlett and Howell on Quince C will require extra feeding to maintain satisfactory vigor.

—W.P.

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