

APPLE, QUINCE, AND PEAR ROOTSTOCKS IN CALIFORNIA

By Leonard H. Day, 1947

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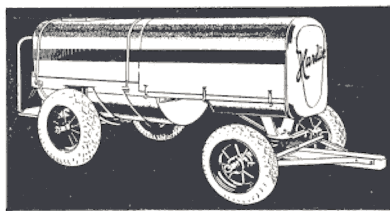
This bulletin gives a complete and detailed account of the various rootstocks used for apple, quince, and pear in California. It is of particular interest to nurserymen and growers who propagate trees. It is also of value to orchardists because it gives them a better understanding of how different rootstocks influence growth and yield of trees.

Rootstocks for Apple

The discussion of rootstocks for apple varieties in California pointed out that the seedlings from France, on which the old orchards were planted, were a mixture derived from seeds of small-fruited forms, which had run wild, and of larger dessert and cooking varieties, from the cider presses of France and Austria. Despite their diverse origin, these seedlings made satisfactory trees of considerable uniformity of vigor and fruitfulness. The so-called French seedlings grown from seeds of certain common commercial varieties, chiefly in Oregon and Washington, are the only ones now available; but these are apparently as satisfactory as those formerly obtained in Europe. A good, well-tested rootstock resistant to the woolly apple aphid is highly desirable, but no completely satisfactory one has yet been fully demonstrated. For dwarf trees for home gardens the East Malling Paradise apple selection No.

IX, which is propagated by root cuttings, is available only in limited quantities at the present time. The use of the Malling No. IX as an intermediate stock between French seedling roots and apple variety tops has also resulted in dwarf trees in experiments elsewhere, but has not been tried in California.

Rootstocks are discussed in relation to insect pests, diseases, and tolerance of various soil conditions. Observations and experiments with various other



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roots and intermediate stocks are recorded.

Rootstocks for Quince

Quince varieties are grown only on roots of their own species. The greatest use of rooted quince cuttings in California is for dwarfstocks for pear trees. For this purpose, the Angers type is used. Since quince root is tolerant of rather wet soil conditions, it is often used as stock for pear in low wet spots in pear orchards.

Rootstocks for Pears

Pears are grown in California on the so-called French pear roots, with or without the blight-resistant Old Home as an intermediate stock; and on quince roots with Hardy as intermediate. The French roots now used are mostly seedlings from Bartlett seeds. Roots of several Oriental species have also been used for resistance to blight and root aphid, but at least three of these have produced black-end fruits, with considerable financial loss to the growers.

According to experimental orchard tests, Old Home could be substituted for Hardy as the intermediate stock between quince roots and pear variety crops. When planted with the graft union 10 or 12 inches below ground it would produce Old Home roots above the quince, and thus furnish resistance below ground as well as in the trunk and scaffold branches.

The relation of the various rootstock species to insect pests and diseases and tolerance to soil conditions are discussed. Observations and experiments with various other roots and intermediate stocks are recorded. —W.P.J.

WALNUT NOTES

By G. H. Corsan, Islington,
Ontario, Canada

I find the Ohio, Ten Eyck, Stabler, Allen and Wiard black walnuts inferior and unsuitable. The Stabler has only a small crop every five years. Very excellent varieties, I find, come from Thomas seedlings. I have very many named as well as unnamed black walnut seedlings that are very excellent nuts.

The black walnut makes an excellent stock for the Persian walnut in low and slightly damp ground. I bud the Persian on the black during August.

The Japanese heartnut and the butternut x heartnut hybrid can be grafted on black walnut. The Persian walnut when grafted on the black decidedly outgrows the latter. The reverse is the case when Japanese heartnut, Japanese butternut, or hybrids of either are grafted on the black.

So far I have not found one good butternut worthy of naming, but there is one Japanese butternut that grows in clusters of 17 or even more that has a very thin shell; it is the Helmick.

The Weiker hickory ripens nicely with me and I consider it one of the best varieties in every way.

Taken from
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