

SUMMER ROOTING OF STONE FRUIT UNDERSTOCK CUTTINGS

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Where we have had success in rooting, I think the key is the taking of a butter-soft cutting in summer and propagating in an air-conditioned environment.

We will consider specifically mahaleb Mazzard crosses — called M×M. The mahaleb × Mazzard (M×M) stocks are assumed to be natural hybrids resulting from open pollination (1). The optimum time for taking cuttings in Canby, Oregon is in July to the middle of August. The percentage of success drops after the third week in August and in September. As the cuttings are so soft, we like to take them early in the morning. The wood is cut 12 to 14 inches in length, the bottom 3 inches is stripped of leaves, and a ½" diagonal bottom cut is used with a short back cut to keep the end from being too pointed. We soak the cuttings in a solution of Diazinon and Benlate for 15 minutes; when damp dry the cutting is dusted with Hormodin #3. We have tried many types and combinations of rooting media but for dependability and ease of use, we use straight perlite. We insert the cuttings into a 5" deep, 2¼" square, slightly tapered open bottom pot or band. A Portland flat will handle 48 of these pots.

These flats are set under intermittent mist. Even though it is summer we maintain 70°F bottom heat. The first few days, the cuttings take a severe wilt. In the afternoon 2 to 3 inches of the tips will droop. After a few days those tips which are not erect in the morning are cut off although the percentage is low. Roots start appearing in about 4 weeks. Then we start feeding with a full NPK fertilizer in the water. In another week or two, misting is discontinued and the flats are kept on bottom heat in this condition until October, when they are put outside under lath.

In summer our greenhouse is shaded externally with quick lime and, inside over propagating benches, a 55% shade Saran cloth is hung above misting nozzles. We used to cool with vertical excelsior pads, but now thanks to an article in the IPPS Proceedings (Volume 26), we have converted to horizontal cooling pads of excelsior, 4" thick. No more dry spots, and even on those days over 90°F we are able to keep inside temperature in the low 80°F range. Most of the summer we hold the maximum inside temperature at 78°F.

We have had good results in summer rooting of *Prunus*

besseyi. Marianna plum (*Prunus cerasifera* × *P. miunsoniana*?) and myrobalan plum (*Prunus cerasifera*) root easily as hardwood cuttings directly in the field row so we don't use greenhouse space for these.

One might ask why go to all this trouble to root M×M in the summer. We do this because it is a root we like to use and we are unable to obtain it elsewhere. We have seen no crown gall on M×M and haven't inoculated with an antagonist when planting in the field. It is compatible with all the cherry cultivars we use. We are able to bench graft these newly-rooted cuttings by bringing the flats back in to the greenhouse in late January. We force root activity with bottom heat and graft using the chip bud and the whip graft.

When all danger of frost is past, we plant directly in the field with actively-growing scion and rootstock. All of this process has taken only seven months starting from scratch, as opposed to the conventional method of two or three years.

LITERATURE CITED

1. Westwood, M.N., A.N. Roberts, and H.O. Bjornstad. 1976. Comparison of mazzard, mahaleb and hybrid rootstocks. *J. Amer. Soc. Hort. Sci.* 101(3) 268-269.

A STUDY OF POTTING MIXES

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At the request of the California State Department of Food and Agriculture a study was made of commercial potting mixes available on nursery shelves for purchase by the general public. This request was made because of complaints from consumers based on the performance of some of the mixes.

Twenty-nine potting mixes were purchased off the shelves of all type nursery outlets. The following are the mixes that were tested and these include the U.C. mix which was used as a standard or check, since knowledge of its performance was well known.

APG Potting Soil
Angel City Potting Soil
B's Worm Castings, an Organic Planting
Mix
Bandini Potting Soil

Best Potting Soil
Black Magic Complete House Plant Mix
Eager Beaver Potting Soil
Earth and Sea Brand Live Earth Potting
Soil