

## Multi-Budded Fruit Trees®

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### INTRODUCTION

Backyard fruit trees have always been popular in the residential landscape. Grocery store fruit can be lackluster, to say the least. The health-conscious consumer has become more demanding than ever. Residential fruit tree, vegetable, and herb gardening has become more popular than ever, and it's not just a trend, but a lifestyle change.

With the reality of residential properties becoming smaller and smaller, the popularity of multi-budded fruit trees have increased dramatically. It's common sense; grow three or four successive ripening varieties in the space of one orchard size tree. Home orchardists are not looking for the same yield as commercial growers. In fact, it's just the opposite. They want a little fruit all the time, as opposed to farmers looking to harvest large crops all at once. The multi-budded fruit tree fills this niche.

From the wholesale growers' perspective, with experienced, well-trained propagators on staff, it's no more difficult to grow multi-bud trees, than it is to grow single bud varieties. Multi-bud trees demand a premium price on the wholesale and retail markets. To the nursery professional, multi-bud trees have a desirability and mystique that demands attention and increases marketability.

Considerations for growing quality multi-bud trees are: (1) rootstock selections and cultivation, (2) bud selections chosen for successive harvest, cross pollination, and compatibility, (3) top-working of mature trees, and (4) helpful hints for the home orchardist.

### MULTI-BUDDED FRUIT TREE CONSIDERATIONS

**Rootstock Selection and Cultivation.** Successful rootstock selections should be sturdy and self-supporting, adaptable to a diversity of climates and soils, bud compatible to a wide range of varieties within their genus and species and disease and insect resistant whenever possible.

Young rootstock seedlings or rooted cuttings should be lined out and grown for the first season to a height of 48–60 in. (without topping). Desired size for budding is  $\frac{3}{8}$ – $\frac{1}{2}$  in. caliper, at a height of 24–30 in. Three to five buds can be inserted into each rootstock. Buds can be set in the fall (Aug./Oct.) and equally spaced around the circumference of the rootstock. Each bud should be given an equal percentage of growing space and not overcrowded. Young buds will heal in to the rootstock and go dormant for the winter season. As trees come out of dormancy the following spring, buds will grow vigorously and should be trained as primary scaffolding structure for future fruit development. Growth should be monitored through this first growing season, to ensure that no variety is allowed to dominate the combination. All buds should be of equal vigor at the end of season to promote a healthy balance of structure.

**Bud Selection Considerations.** A well-balanced multi-bud tree should consist of varieties that harvest successively. Early, early-mid, late-mid, and late-season varieties should be included so that fruit can be harvested all season long. This successive harvest sequence is crucial to the success of any home orchard; a small harvest of fruit over an extended period, as opposed to a large harvest of fruit all at once. Another consideration is cross pollination. If desired varieties are not self fertile, cross-pollinating varieties should be included in the budded selections. It's a well-known fact that even self-fruitful varieties will produce better crops with cross pollination. It's very important to select compatible varieties for inclusion in the combination, as some varieties may not be compatible to some rootstocks. Vigor is also a consideration, as some varieties can be easily overgrown by more aggressive selections. Remember, first season management practices are important to make sure no varieties are allowed to dominate the combination.

**Top Working of Mature Trees.** Often, mature fruit trees are unproductive or undesirable. Maybe the variety needs more winter chill than certain geographic areas can provide. Sometimes the fruit quality is undesirable or the tree is just not productive due to lack of pollination. Mature fruit trees of good health can be easily top-worked to change one variety to another, add cross-pollinating selections, or add variety to create combinations. Top working can be easily accomplished by bark grafting during the dormant season, to large caliper scaffolding branches. With bark grafting several two to four bud scions can be inserted under the bark layer at the point of fresh cuts. These scions should be secured with heavy nursery tape and any exposed cut sealed with a grafting wax or pruning seal. Within one season, young grafts can grow out several feet and become productive in the second year. Continue to follow the same basic structure management practices to achieve balance of growth.

**Helpful Hints for the Home Orchardists.** For long-term success with multi-bud fruit trees a few common sense horticultural practices should be followed. Always consider the planting site. Make sure the tree is in the right soil for the rootstock and the varieties are adaptable to the specific climate. Make sure when placing young trees to angle the weakest grafts toward the southwestern exposure. Never give vigorous grafts the dominant position for exposure. With any young fruit tree, protection against sun burn is an important consideration. Be sure to white wash the trunk and young branch structure with a very light coat of neutral color paint. Remember to prune all varieties to a balance; never let one variety dominate the combination. No graft should be any more vigorous than the weakest graft on the tree. Irrigation should be thorough when applied, and established trees should be allowed to go just slightly dry between watering. Fertilize two to three times per year, from late-winter through mid-summer, with a low nitrogen fruit tree fertilizer. A little more nitrogen for young trees establishing fruiting canopy is acceptable, but after fruiting structure is established, nitrogen just creates more growth, more pruning, and less fruit. A little goes a long way. Be sure to mulch the soil surface under the canopy with bio-diverse large particle wood mulch. Enjoy fresh, tree ripened fruit all season long.

For more information on multi-budded fruit trees and fruit growing in general, be sure to visit us at <[www.davewilson.com](http://www.davewilson.com)>.

## QUESTIONS AND ANSWERS

**Anonymous:** What apple rootstock would you use for a wet soil or a dryer, sandier soil?

**Tom Spellman:** It depends on the kind of tree. There are some great selections for Malling Research Station. M 7 or MM 111 are probably the most popular apple rootstocks in the world at this point. They are very diverse in their adaptability. They'll take a heavy, wet soil or they'll take a fairly dry soil. They're bud compatible with all *Malus* cultivars. They don't sucker very readily after the first year or so. They're fairly resistant (not immune) to *Eriosoma lanigerum* (woolly apple aphid).

**Douglas Justice:** Can you talk a little about pollinizers?

**Tom Spellman:** That's a great point for multi-budded fruit trees since it provides an opportunity to include the pollinizers on your selections. Even self-fertile variety of *Malus*, *Prunus*, or *Pyrus* will always produce a much better crop if they have cross-pollination.

**Douglas Justice:** When you're selling a tree that has early, mid, and late maturing fruit ripening don't you also have to consider when the timing of the pollinizer?

**Tom Spellman:** Yes, but with most varieties, especially apple, it's relatively easy to select ones that are compatible both in terms of budding and in terms of pollination.

**Patrick Petersen:** What is your main method for getting after-care information into the hands of your customers?

**Tom Spellman:** We're really proud of our website. We put a lot of information there.

**David Cain:** Do you have one budder do all the buds on one tree or do you have four budders each doing one variety?

**Tom Spellman:** We use four budders. Each one knows the placement of their particular bud and they just follow each other down the row.

**Jack Bennett:** What's your opinion of the practice of planting two trees in one hole?

**Tom Spellman:** I'm all for it. That's an extremely important concept for backyard orchard culture. The goals of a backyard grower are different than those of a farmer. The backyard grower wants a little fruit all the time while the farmer wants a lot of fruit all at once. This can also affect tree spacing considerations. In a backyard, trees can be grown closer together. When you plant multiple plants in one hole you can select which ones are planted. In a multi-budded tree the variety selections have already been made for you.

**Charles Brun:** In southwest Washington we need a more dwarfing apple rootstock than MM 111. What would you recommend?

**Tom Spellman:** MM 111 is the most popular dwarfing apple rootstock, but it's only about 15% dwarfing. Absolutely, we need other choices.

**Charles Brun:** Do you have any plants that use the M 9 rootstock?

**Tom Spellman:** We use about 12 different apple rootstocks including M 27, M 9, and others that are considerably more dwarfing than MM 111. We don't use those for multi-budded trees since the resulting plants are too slow-growing to produce a quality nursery product.

**Charles Brun:** In western Washington we're faced with dealing with apple scab, which makes or breaks backyard grower's success and satisfaction. Will you design us a tree that will be resistant to apple scab?

**Tom Spellman:** I'll get right on that.