

# PLANTING & CARE OF YOUNG FRUIT TREES

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Fruit trees should be planted where they will receive full sun for six or more hours daily during the growing season. For maximum production, fruit trees need well-drained and deep soils (3 feet or more). Such soils do not occur everywhere in Sacramento County, especially in residential areas where the topsoil may have been partially removed by land grading and the remaining soil compacted by the weight of construction machinery.

An additional complication in many areas is the presence of an impervious layer of cemented hardpan beneath the surface. Where hardpan is found within 1½ to 2 feet of the surface, it must be penetrated to allow for drainage and root growth. This may require the use of a powered soil auger, available at equipment rental outlets. It may be possible to break through the hardpan with a pickaxe. If there is no way to penetrate it, use raised beds 1 to 2 feet tall. In any case, use care in irrigating to prevent the buildup of excess water in the root zone.

## TREE SELECTION

Fruit trees may be planted at any time of the year, but are often purchased during the winter months when they are dormant and available as bare root stock.

The best sizes are those having a trunk diameter between ½ and 5/8 inch. Young trees of this size sustain little damage when dug from the growing field and will usually become reestablished faster than smaller or larger planting stock. When bare root trees are not to be planted soon after purchase, they should be "heeled in" to prevent drying of the roots. This means to cover the roots with soil or compost that is kept moist.

## PLANTING

Examine the roots of a bare root tree and cut off any broken roots. Potted tree roots that are wound around should be gently pulled outward to avoid constriction. Dig the planting hole at least twice as wide as the spread of the tree's roots — the wider the better. Tree roots can ultimately spread twice the width of the canopy or more, so if the soil is compacted it will need to be cultivated deeply in a wide area; roots will not grow through densely compacted soil. Leaving the bottom of the hole undisturbed will help prevent settling of the tree below its root crown and therefore reduce the



likelihood of crown rot, which often kills trees in poorly drained soil. In soil containing a high percentage of clay, score the sides of the hole with the shovel to aid root growth outward from the planting hole, and plant trees on a slight mound.

It is best not to add soil amendments or fertilizers at planting time. In heavy soils, undecomposed organic amendments may rot or be toxic to new roots. However, thoroughly incorporating moderate amounts of gypsum or compost that is well broken down can be beneficial to roots of young trees. Wait to further amend the soil or fertilize until new growth is several inches long.

Place the tree in the hole and partially fill the hole with the same soil that was excavated and firm gently, eliminating large air pockets. When properly planted, the soil line on the trunk of the tree will be several inches above the level of the surrounding ground (placing a shovel handle or other straight edge across the hole can be a helpful way to check this point during the filling process). In general, the uppermost large root should be just below the soil surface, however, the root should not be



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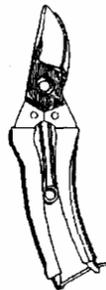
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exposed after the soil has settled. The soil should slope downward from the tree to prevent water from accumulating near the trunk. Also, the graft union should be several inches above the soil surface, and the protruding notch of the union should be oriented toward the northeast to reduce the likelihood of sunburn.

### HEADING THE TREE

The next step in the planting process is to head (cut) the tree at knee height (18-24 in.).

An important goal of backyard orchard culture is to maintain relatively small trees to facilitate pruning, thinning, pest management, and harvest. By heading the newly planted tree at knee height, you force the tree to branch low.



However, if access under the tree is important, head the tree higher — up to 36 inches. Do not head potted trees after new growth is several inches long to avoid severe shock to the roots.

Small trees (e.g., 3/8-inch or less trunk diameter) usually have no lateral branches on their trunks worth saving, so remove all side branches. Larger trees (1/2-inch diameter or larger) often have large lateral branches along their trunks. Some of these branches can be removed completely, but a few that are well spaced vertically and radially around the trunk can be headed back, leaving 3-inch stubs with two or three lateral buds. These stubs will produce shoots that will become the main scaffold branches.

### IRRIGATION

Newly planted bare root trees should usually not be flooded after planting if soil is heavy loam or clay, which is the predominant soil type in many parts of Sacramento County. There is usually sufficient moisture in the soil for emerging roots, and flooding in a basin eliminates air spaces in heavy soils, creating anaerobic conditions that can kill trees. The tree should be basin irrigated if the soil is sandy to loam, if the clay soil is dry, or when a potted tree is planted during the growing season.

To facilitate watering while the tree is becoming established, a low dike of soil may be formed around the tree. Care should be taken to ensure that water does not stand close to the trunk. The ground within three feet of the tree trunk should be kept free of grass or other vegetation that would compete with the tree for water and nutrients. A 3 to 6-inch thick layer of mulch, such as wood chips, will control weeds and conserve moisture.

### SUNBURN PROTECTION

Lastly, to protect the bark of the tree from sunburn and subsequent infestation by borer insects, the entire tree should be painted with tree trunk whitewash or white interior latex paint diluted to half strength with water. Paint the entire trunk, including dormant buds, and paint the trunk 2 inches below ground in case the soil settles. The trunk of a potted tree should be painted also.



## YOUNG TREE CARE

### SUNBURN PROTECTION

Tree trunks may need to be painted again in the summer or in the second season if the canopy is not sufficient to protect the trunk from hot afternoon sun (south and west sides).

### IRRIGATION

First year trees do not require much additional water until the weather turns warm and new growth is several inches to a foot long. A healthy first year tree with no mulch uses less than 5 gallons of water per week in the summer, and much less than that where mulch is used. The frequency and amount of irrigation depends on the soil type, the method of irrigation, and the ground cover, if any. For best growth, the soil in the root zone should be moist at all times, yet well drained. Test the soil periodically with a soil tube to determine how wet the soil is.

### TRAINING AND PRUNING

Summer pruning is important to begin developing trees in the desired manner, rather than waiting until the dormant season. Dormant season pruning is used to continue shaping the tree and to begin to manage young fruiting wood. See *Environmental Horticulture Notes #82 (Training and Pruning Fruit Trees)* for details on pruning.

### REFERENCE

*Adapted from Environmental Horticulture Note #83, Sacramento County University of California Cooperative Extension.*