A PUBLICATION OF THE SOUTHEAST REGION HORTICULTURE TEAM

Pruning Stone Fruit Trees

Pruning and Training to an Open Center

Pruning a young tree controls its shape by developing a strong, well-balanced framework of scaffold branches. Unwanted branches should be removed early to avoid the necessity of large cuts in later years. The pruning system best suited for most stone fruit trees is the "open center" tree form. Pruning and training trees to this system produces a vase-shaped tree and keeps the fruit-bearing surface close to the ground. All stone fruit are very susceptible to brown rot. Open-center trees allow better air circulation and light penetration within the tree—both important factors in reducing the development of brown rot on fruit.

Pruning at Planting

If you purchase an unbranched tree, or one with no branches 20 to 30 inches above the soil line, cut the tree at 26 to 30 inches above the ground after planting. Failure to do so will result in a tree whose major branches are too high above the ground (Figure 1). The scaffold branches will develop within 4 to 6 inches below the cut.

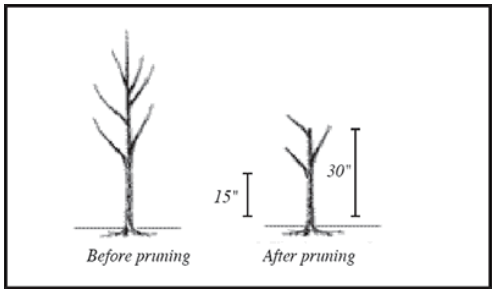

Figure 1. Pruning stone fruit at planting.

If you purchase a tree with healthy branches located 15 to 30 inches above the soil line, select three or four branches, one at each of the compass points. Choose branches that initially develop from the main axis at a 60- to 90-degree angle. Cut them back by one-half to a healthy outside-facing bud. Remove all branches that are less than 15 inches above the soil line and cut the tree off just above the topmost selected scaffold (see Figure 1). During the summer, pinch off any shoots that begin to grow toward the center of the tree.

By the end of the first summer, trees should begin to take on the typical open vase shape. Three or four permanent scaffold limbs should be selected at this time and the others removed. The permanent or primary scaffolds chosen should be distributed evenly around the trunk, approximately 6 inches apart vertically. Small side branches along the scaffolds can be left for early fruiting. Do not select primary scaffold limbs that are directly above one another. The limbs selected should have an angle of 60 to 90 degrees from vertical.

Pruning the Winter after Planting

The best time to prune stone fruit trees is from March to bloom. Stone fruit trees are very susceptible to a disease called Cytospora canker. If pruned from December to February the trees cannot protect the pruning wounds from infection by this disease.

First, remove any broken or diseased branches. Second, cut out any vigorous upright shoots that might have developed on the inside of the main scaffolds. Ultimately, prune the tree so it becomes vase shaped with no branches in the center (Figure 2).

Pruning the Second Winter

Trees that have grown well for 2 years may be 5 to 7 feet tall, 6 to 8 feet wide, and have trunks 3 to 6 inches in diameter. During the second winter after planting, the trees should begin to develop secondary or subscaffold branches on the primary scaffolds. Select two or three limbs per branch that developed during the second summer. They should be spaced 6 to 8 inches apart, 18 to 24 inches from the main trunk, and on opposite sides of the branch (Figure 3). Remove all other limbs. Large, vertical-growing limbs on the primary scaffolds should be removed, leaving only the less vigorous wood for fruiting.

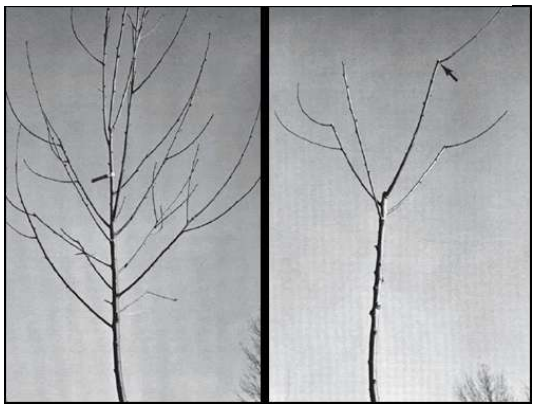

Figure 2. Two-year-old peach tree before (left) and after pruning.

Figure 3. Pruning the second winter after planting.

Pruning the Third and Subsequent Years

After careful pruning and training during the first 2 years, heavy pruning should not be necessary. Light corrective pruning should maintain the open center (Figure 4). A well trained tree should have 3 to 5 scaffold branches with wide angles evenly distributed around the tree. Thin out and shorten inside limbs to prevent shading of the center. Remove large, branched water sprouts. These shoots may be 4 to 7 feet long. They are not very fruitful and shade the tree center. Prune every year to keep the tree within its allotted space and to prevent limb breakage. Remove vigorous upright branches and leave the less vigorous ones.

Pruning Mature Trees

Limit the height and spread of older mature trees. Their height can be limited to 7 to 9 feet tall by removing large branches from the upper side of scaffolds, leaving only small fruit-producing shoots. Remove or cut back damaged portions of larger branches. Maintain the open center to prevent shading of the interior portion of the tree. Retain shoots that grow horizontally and 12- to 18- inch fruiting shoots, regardless of their orientation. Thin fruiting shoots to a spacing of about 4 to 6 inches apart on the limbs.

Figure 4. Mature peach tree before (left) and after pruning.

An OUTREACH program of the College of Agricultural Sciences

Reference:

This handout has been adapted from *Fruit Production for the Home Gardener* published by Penn State University in 2006.

This publication can also be viewed on-line at http://ssfruit.cas.psu.edu/default.htm.

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