

# PRUNING MATURE FRUIT TREES

## Pruning the Bearing Apple and Pear Trees

Uniform vigor of the fruiting wood throughout a tree is ideal. Fruiting wood in the top of the tree, however, has the best exposure to sunlight, which is essential for plant and fruit growth, and is therefore more vigorous than the wood in the lower portion of the tree, which is shaded. Also, the orientation of the fruiting wood along a main lateral branch influences its vigor and fruiting potential.

For apples and pears, a cone-shaped tree most efficiently intercepts light. The cone shape, although easily maintained in a young tree, is difficult to preserve as the tree ages. The top of the tree, which has the most vigorous growth, tends to spread and shade the lower limbs. When pruning, avoid small cuts, which have an invigorating effect. Making one or two large cuts, either removing an entire branch or cutting a major portion back to a vigorous fruitful lateral, is more effective. Remove upright-growing, vigorous water sprouts and leave the weakest ones.

In the lower part of the tree, remove limbs that are shaded by other limbs. When limbs are young and fruitful, they are in an upright to horizontal position. As they become older and less fruitful, they rotate to a drooping position and should be taken out. Also, eliminate all broken and crossing limbs.

## Rejuvenating an Old Apple or Pear Tree

Most old apple and pear trees are too tall for convenient spraying or harvesting. This can be a limiting factor in the ability of the home orchardist to adequately control diseases and insects. To facilitate spraying, it may be necessary to decrease the height of a tree. The top one-third of an old tree can be eliminated by making major cuts just above large side branches.

During the growing season, water sprouts grow in the vicinity of these large cuts. These should be cut or pulled off during July and August to keep them from shading the center of the tree where light penetration is desirable.

During the dormant pruning season, remove all vigorous upright shoots at their point of origin. Many latent buds are at the base of these vigorous shoots, and any stubs left will give rise to many water sprouts. Leave a few of the weakest water sprouts to provide shade in the top and reduce sunscald. Prune the lower part of the tree as previously described for bearing trees.

Fine pruning—the removal of small limbs to create space between fruiting limbs—allows good light penetration to all the leaf surfaces. Generally, some fine pruning is necessary for fruit trees, especially for terminal-bearing apple cultivars such as Rome Beauty and Cortland. Do not, however, fine prune small limbs the first and possibly second year after severely heading back the tree top.

## Pruning the Bearing Stone Fruit Tree

Cherry, plum, and prune trees require the least pruning of all fruit trees because of the way they bear their fruit. Lightly heading back to a strong lateral branch to keep the tree in bounds, thinning out branches to provide good light exposure for the remaining limbs, and removing dead, broken, or diseased growth is sufficient.

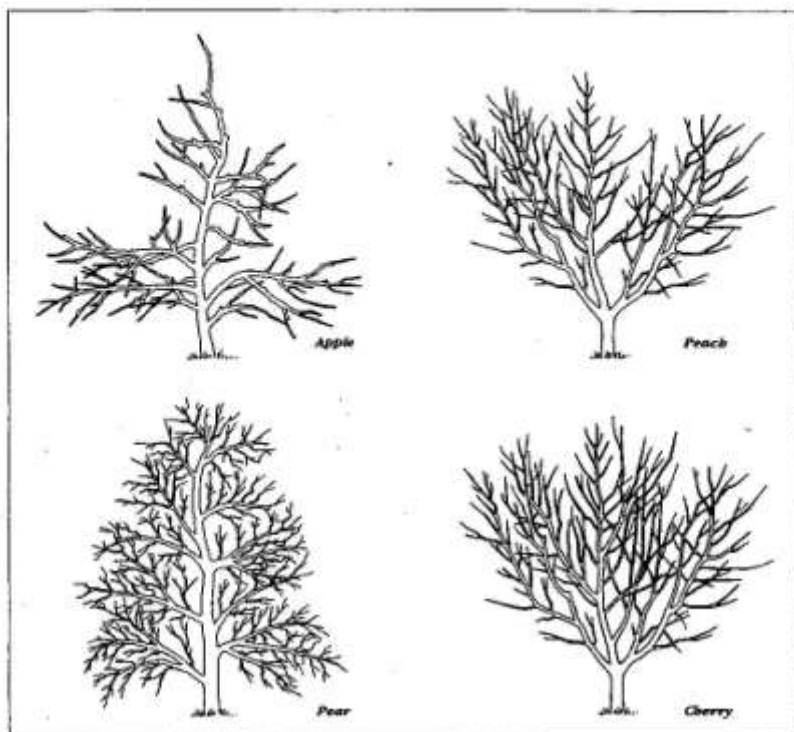
Peaches are borne on the previous season's shoot growth. As the trees attain full size, severe pruning maintains and renews fruiting wood of good vigor throughout the tree. Terminal shoot growth of 12 to 18 inches is desirable. If the shoot growth is weak or the lower limbs become too

long, cut the branches back into two- or three-year-old wood; make the cuts to an outward-growing side branch. After heading back all of the main branches, thin and space the fruiting shoots so they are about 6 to 8 inches apart. This spacing provides good light exposure to the fruiting shoot and allows development of new shoots for next year's crop. The fruiting shoots should not be headed back, but the fruits should be thinned, as generally fruit set is excessive.

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# The Home Fruit Planting

Marcia Eames-Sheavly and Marvin P. Pritts



Mature fruit trees with good branching structure. Note different growing habits.



Fig. 6. Overlapping branches of adjacent trees: typical crowding in the row in high-density plantings.

Incorrect pruning: the numerous heading-back cuts, a, stimulate undesirable vegetative growth in the vicinity of the cuts and result in loss of fruitfulness farther back on the branches.

Correct pruning: the removal of the large branch, b, eliminates crowding without stimulating undesirable vegetative growth.

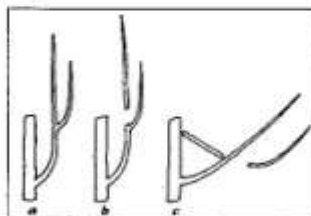


Fig. 7. Training on upright scaffold limb: a, upright scaffold: once narrow crotch angle and smaller, upright lateral branch; b, incorrect procedure: thinning out to the upright does not improve the crotch angle and limb position or control vigorous vegetative growth; c, correct procedure: spreading the limb increases the crotch angle and properly positions the scaffold; remove the lateral, for it will be shaded by growth from the main scaffold limb.

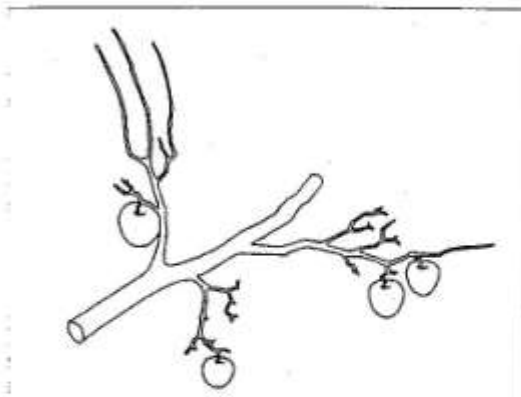


Fig. 4. Orientation of fruiting branches: the upright branch is excessively vigorous, only moderately fruitful and produces fruits that are often soft and poorly colored; the branch growing from the underside of a larger branch is heavily shaded and, as a result, is low in vigor and fruitfulness and produces small fruits of poor color; the horizontal branch is of moderate vigor and very fruitful, and because of good light exposure, produces fruit of superior color.

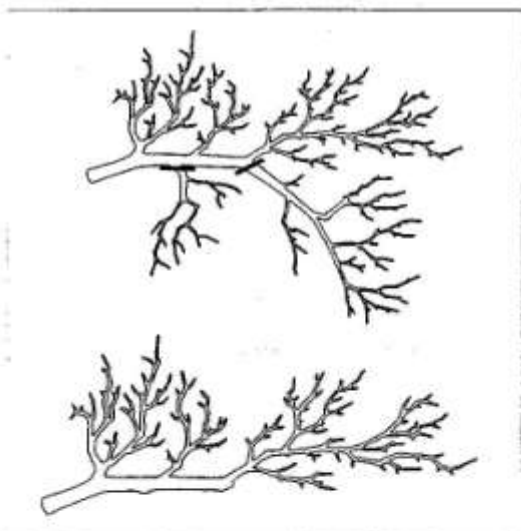


Fig. 5. Pruning drooping branches: above, branches that droop downward are not well exposed to light and usually shade other branches below; to prune, remove the ends of such branches back to a lateral in a near-horizontal position, and remove all branches growing downward from the bottom of larger branches.