



Linking Edible Arizona Forests

Growing Edible Arizona Forests, An Illustrated Guide

Excerpt from *leafnetworkaz.org*

Edible Tree Guide

CARE for Your Trees

- Thinning Fruit and Pruning Branches

Thinning Fruit and Pruning Branches

PRUNING YOUR TREES

We recommend careful pruning of your edible trees each year. Pruning trees can stimulate growth and fruit production, facilitate care and harvest, and shape the trees for the site. While most native trees do not need extensive pruning, proper shaping of the trees, especially those with spines or thorns, can be important in public spaces. Pruning young fruit and nut trees can promote sturdy branch development, distribute sunlight, create more airspace among the branches, control size and make trees easier to harvest. Pruning is most critical just after planting and within the first few years of growth for correct tree structure and to facilitate early fruiting.

Annual pruning encourages new, productive fruiting wood and increases fruit yield. On peach trees, for example, the one-year-old wood produces fruit. On other fruit trees, such as apples, pears, cherries and plums, the two- to three-year-old wood produces the best fruit. Overgrown trees can quickly become unproductive, while 70-year-old fruit trees that are pruned annually may still bear fruit. Structural pruning of vertical branches at the tip stimulates development of horizontal branches, which yield more fruit. Additionally, branches with wide angles between the branch and trunk are stronger and will hold more fruit weight. Vertically oriented branches with narrow angles (less than 60°) are weak and break easily. Keeping a well-maintained orchard will enhance its health, productivity and long life.

WHY PRUNE?

- Improve tree structure and strengthen limbs
- Control tree size for easier care in maintaining and harvesting fruit
- Remove undesirable wood— dead, broken, and crossing branches
- Increase airflow through the branches
- Distribute sunlight evenly throughout tree
- Stimulate shoot growth by reducing the number of buds
- Renew fruitwood to continue producing vigorous buds and flowers
- Increase or regulate fruit yield

PROPER PRUNING TOOLS

- Hand pruning shears
- Lopping shears (loppers) with 24- to 30-inch handles
- Pruning saw with 8- to 15-inch curved blade and wide set teeth



HAND PRUNING SHEARS



LOPPING SHEARS (LOPPERS) AND PRUNING SAW

HOW TO PRUNE

Three common pruning patterns are described below.

Central Leader

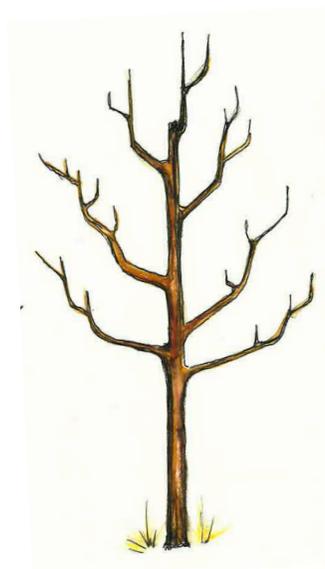
A tree trained to a *central leader* takes up less space and can be high yielding, but fruit on high branches may be harder to harvest. To train trees to a central leader, choose a strong, vigorous shoot high on the tree the first winter after planting. Cut off the top inch to stimulate branching. Cut, or “head” all other vigorous shoots more severely. Repeat the process in the following two seasons so that no side branches compete with the central leader. A tree trained to a central leader will take up less space and be high yielding, though fruit may be produced higher on the tree and be more difficult to harvest. Trees that respond best to central leader pruning are apple, pear, persimmon and pecan.

Modified Central Leader

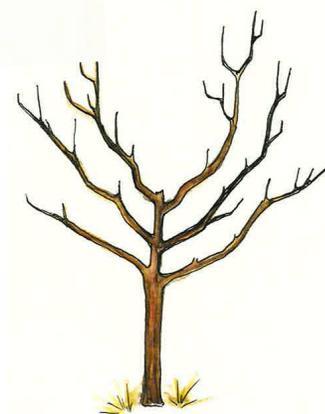
A *modified central leader* tree has the central leader pruned back at a reduced height so that the tree develops a wide scaffold, with a balance of vertical and horizontal branches. This stops the upright growth and stimulates growth of side branches. Repeat annually to reduce the vigor of the tree.

Open Center or Vase Shape

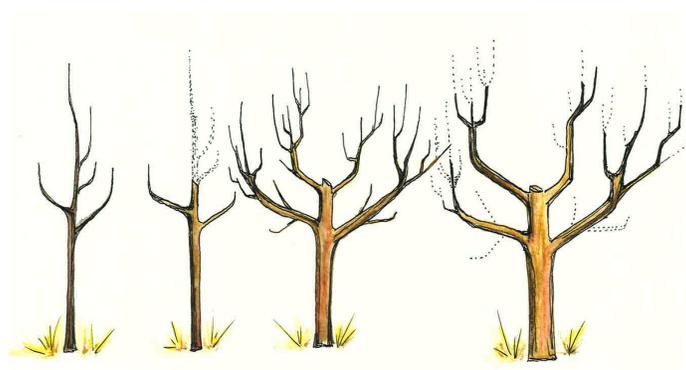
A tree pruned to an *open center* or *vase shape* has a spreading branch structure that allows for airflow, more sunlight and easy harvesting. All fruit trees can be trained to an open center with judicious pruning. However, the normal growth habits of some kinds of fruit trees allow easier open-center training. Trees that respond best are almond, apricot, cherry, fig, nectarine, olive, peach, pear, persimmon, plum and pomegranate. For an open center or vase shape, choose two, three or four evenly distributed shoots to form primary scaffold branches the first winter. Remove or severely head all others. Choose one or two more the second season. Scaffold branches should be at least 8 inches apart on the trunk for a strong tree structure. Prune interior vertical branches and watersprouts (new vertical growth) each year to allow air and sunlight to reach all branches of the tree. Leave some strong one-year-old wood on the outer branches for future small shoot development. This should be used primarily for stone fruit trees, but can result in sun damage to trees planted in the low desert.



TREE PRUNED TO
CREATE CENTRAL
LEADER



TREE PRUNED TO
CREATE MODIFIED
CENTRAL LEADER



STEPS IN PRUNING A TREE IN THE OPEN CENTER OR
VASE SHAPE

WHEN TO PRUNE

Prune deciduous trees each year in winter or early spring when branches are bare and easy to see, sap is slow, and the wounds have time to heal. If the trees are bare, the structure of the tree is readily identifiable and pruning decisions are easier. Evergreen trees should also be pruned during the winter dormant season, except citrus, which should be pruned in the spring between February and April. There are three stages of pruning during the life of a fruit trees.

Pruning at transplanting

When trees are just transplanted, remove any shoots below 18 inches on the tree trunk. If the tree is unbranched (whip), the top of the main trunk or leader may be cut off at 30-36 inches tall to stimulate more lateral branch growth. This will remove 1/3 to 1/2 of the tree depending on size. If the tree has branches, select up to four that form wide angles (45° or larger) with the trunk. Select branches that are spaced 4-6 inches apart on the trunk in a spiral arrangement. Prune these back to 1/4 of their length. To train into a central or modified leader shape (see above), prune the top to 12 inches above the top branch. For an open center or vase shape, prune the top to just above the top branch. We always recommend transplanting trees during the dormant season. This gives the tree time to establish before hot weather, and gives pruning cuts time to seal.

Training young trees

Training fruit and nut trees during the first years of growth can promote desired tree forms and fruiting habits. Shape generally involves three training methods: a) central leader, b) modified leader or c) open or vase shape (see above). Remember that pruning can also damage and weaken young trees so keep severe cuts to a minimum. Choose your pruning cuts carefully and always make them during the dormant season when sap is slow and the wounds have time to heal properly.

Pruning mature trees

Most fruit trees should be pruned each year in spring. Prune interior branches and new vertical growth to allow air and sun to reach all tree branches. Make clean cuts in line with the branch collar at the limb juncture and don't leave stubs. Leave healthy one-year-old growth on outer branches for future shoot growth and fruit production.



WELL-PRUNED YOUNG APPLE TREE

To prune mature trees, follow these simple steps:

- Remove root suckers—those that grow from the rootstock. They may be growing up through the soil from the tree roots. Prune them out at any time.
- Remove any dead or diseased wood.
- Remove broken limbs; cut them back to the base.
- Remove crossed limbs. No two limbs should touch one another; one should be removed.
- Remove parallel limbs.
- Remove limbs that produce shading. Shaded branches eventually stop fruiting.
- Remove watersprouts; these are upright shoots growing straight up from older limbs.
- Upright branches remain vegetative and vigorous, while horizontal branches are more fruitful. A good combination of the two is necessary for proper growth and fruiting.
- Downward bending branches eventually lose vigor and produce only a few small fruits; cut off the part hanging down.
- Prune “directionally” by pruning back to an outward facing bud on the branch to direct tree growth and encourage spreading branches.
- Do most of the pruning in the top of the tree so that the lower branches are exposed to sunlight. Sun-exposed wood remains fruitful and produces the largest fruit.
- Make sure to leave enough fruiting wood to produce a high yield. Fruiting wood can be identified by its smooth, shiny green or green-brown bark and well-developed buds.

Other considerations when pruning:

- Make clean cuts (within 1/4 inch) of the bud, and don't leave stubs.
- Use spreaders or tie downs to make 45° angles between the trunk and branches of upright vigorous growing trees
- If trees are large or overgrown, do not remove more than 1/3 of the branches in one year.

THINNING FRUIT

Thinning fruit can increase the overall size and quality of the mature fruit and the vigor of the tree. Carefully thin overly abundant small fruits, damaged fruits or malformed fruits. The timing will depend on the type of fruit trees. When thinning stone fruit, remove immature fruits after flower petals have fallen and as soon as the fruits are large enough to see. Remove any damaged or malformed fruits. Leave fruits spaced about 6-8 inches apart, leaving only two fruits on a shoot. When thinning apples and pears, thin fruit within 30 days after blooming to help reduce the alternate-year bearing that can occur in these trees. Apple blossoms and fruits occur in clusters; leave only the largest fruit in each cluster. Space fruits 6-8 inches apart.



Multiple apples growing from the same point on the stem. Thinning fruits early in their growth will result in larger individual fruits and a reduction in alternate-year bearing.