

## How to prune a fruit tree

### PRUNING SCHEDULE

Fruit trees should not be over-pruned. This is not a 'commercial orchard' the fruit trees meant to look like natural and approachable. They don't want to be pruned vigorously. Many varieties of fruit trees will only bare fruit on the last year's growth. See attached photos.

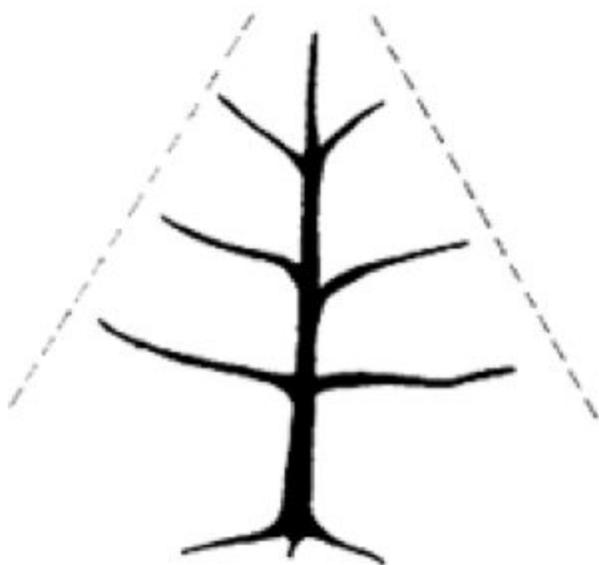
**1st Year Pruning** - Prune dormant root tree to main stem or 2 or 3 primary branches.



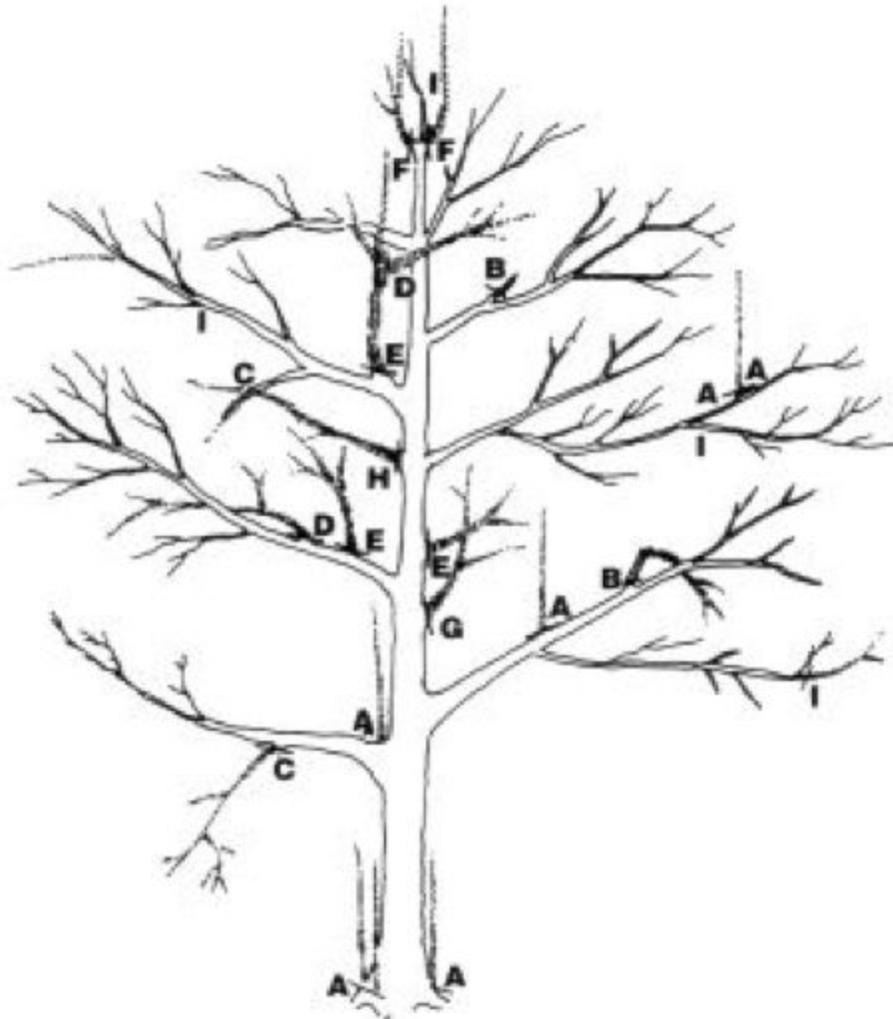
**2nd Year Pruning** - Prune to leave 3-5 main branches, remove all small branches and trim the tips of the main branches to maintain thickness. Pay attention that branches extend in 360°. Avoid lopsided trees, even if it means keeping the main branches short until a 360° radius is achieved. See second diagram (overhead view) for ideal example.



**3rd Year Pruning** - Keep pruning back to the strongest branches. Allow a second and third whorl, so that the overall structure looks like a Christmas tree. A space of 18 to 24 inches is left between each scaffold whorl. Note the Christmas-tree shape that allows light penetration to the lower branches and interior of the tree.



**Long-term (over 4 year old trees) Suggested Pruning Cuts** - Since our human perspective is a side view, the figure below sketches branches to consider removing as one works around the spokes or "scaffold" branches of a tree.



- A.—Suckers
- B.—Stubs or broken branches
- C.—Downward-growing branches
- D.—Rubbing branches
- E.—Shaded interior branches
- F.—Competing leaders
- G.—Narrow crotches
- H.—Whorls
- I.—Heading back or growth diversion

A. Suckers or watersprouts are vigorous vegetative shoots which drain nutrients needed for fruit production. They often appear at the base of grafted trees, or in crotches and sites of previous pruning cuts.

B. Stubs or broken branches result from storms, heavy fruit loads, or improper pruning. Diseases and insects may enter the tree at these sites, so they should be headed back to healthy side branches or removed.

C. Downward-growing branches develop few fruit buds and eventually shade or rub more productive scaffold branches.

D. Rubbing branches create bark injury which also invite insects or disease. Head back or remove the less productive of the two.

E. Shaded interior branches develop less quality fruit and limit access for harvest.

F. Competing leaders result when suckers or branches near the top of the tree are allowed to grow taller than the uppermost bud of the trunk or central leader. Head these back or an unbalanced, structurally unsound tree will develop.

G. Narrow crotches occur when a branch develops more parallel than perpendicular to the trunk or limb from which it originates. As each grows, bark trapped between the two interferes with the growth of a strong joint.

H. Whorls occurs when several branches originate at the same point on the trunk or limb. Joints are weaker there, so select the best-located and remove the others.

I. Heading back or growth diversion cuts are used to limit or redirect the growth of the central leader or branches. For limiting, cut back to a weak bud or lateral twig; for diversion cut back to a bud, twig, or branch oriented in the preferred direction.

## **PRUNING AFTER PLANTING**

Bare root fruit trees have more “top” than the roots can provide for initially. While it may seem wasteful to trim some of the beautiful top of the tree, the remaining tree will start off faster and better. Pruning fruit trees helps keep them healthy and is necessary for optimal fruit production and longevity of the tree. Pruning removes any dead, diseased or broken branches and select branches to sufficiently open up the canopy of the tree in order to allow for optimal light penetration to the leaves of the tree. Pruning also allows for adequate airflow which is essential to keep the tree dry. A wet tree cannot fight off disease and insects.

Major pruning should be done in the winter months when the tree is dormant and most of its energy is stored in the trunk and roots. Major pruning cuts should be done at an angle so that moisture does not collect and allow for rot and disease to settle.

All pruning cuts should be made so that they will heal quickly.

The Central-Leader Pruning System: This is used for pruning apple and sweet cherry trees. A "central leader" is the main stem or trunk of the tree from which other lateral branches develop. Central-leader pruning is based around thinning the lateral branches.

The Open-Center Pruning System: Used for peach tree pruning where there is no dominant, vertical trunk (central leader). Open-center fruit tree pruning is based around three or four main limbs set at wide angles with about five lesser branches on each.

Here are some helpful links to information on the Web about fruit tree pruning:

"Training and Pruning Fruit Trees", <http://www.ces.ncsu.edu/depts/hort/hil/ag29.html>

"Basic Fruit Tree Pruning Instructions",  
<http://www.lawn-and-gardening-tips.com/fruit-tree-pruning-instructions.html>

## **APPLE**

Pruning Apple trees respond well to pruning. Prune off any broken branches. If there are a lot of branches, remove many, leaving 5-8 on the trunk. If branches are long (over 24 inches), cut them back to 18 - 24 inches long. The first branch should be no closer than 24 inches to the roots. If there are a lot of high branches, remove or shorten them. Remove limbs with narrow crotch angles that grow parallel to the central leader. The ideal tree should resemble a pyramid on the trunk when done, with a central leader or trunk growing up the center. It should not appear like an open vase. Some trees do not branch well in the nursery and may resemble whips or have only a few heavier, upright branches. These trees do not need to be trimmed as severely as heavily branched trees.

Here are some helpful links to information on the Web about apple tree pruning:

"Training and Pruning Apple Trees", [http://eap.mcgill.ca/CPTFP\\_7.htm](http://eap.mcgill.ca/CPTFP_7.htm)

"Pruning and Training Apple and Pear Trees", <http://hgic.clemson.edu/factsheets/hgic1351.htm>

## **CHERRY**

Pruning Cherry trees are central-leader trees. This means that there is one main upright trunk, called the leader. All branches will sprout and grow out of this. A properly pruned cherry tree should have a scaffold shape. This means that there are branches circling the tree, perpendicular to the leader, and there should be an area of about two feet between the levels to allow for light to reach the lower leaves and fruit. The first level of branches should begin between 24 and 36' above the surface of the soil. The branches growing out of the central leader should be either weighted down or tied loosely to string to promote outward growth as opposed to vertical growth. The outward growing branches will produce more fruit and grow less vigorously. Here is a helpful link to information on the Web about cherry tree pruning:

“Four Simple Steps to Pruning Cherry Trees...”,  
<http://extension.oregonstate.edu/catalog/pdf/pnw/pnw592.pdf>

## **PEACH**

Pruning The open-center or vase-shaped system, is recommended for peach trees for maximum sunlight exposure, maximum yield, and best quality. Pruning and training should be done in the year of planting and every year after to develop a strong, well balanced framework of scaffolds (a tree with a strong trunk and well positioned side branches); and to maintain the balance between vegetative growth and fruit production. Remove low-hanging, broken, and dead limbs first. Next, remove the vigorous upright shoots along the scaffolds. Lower the tree to the desired height by pruning the scaffolds to an outward growing shoot at the desired height. During the first year, remove diseased, broken, and low-hanging limbs. Then remove vigorous upright shoots that may have developed on the inside of the main scaffolds and if left could shade the center. During the second and third years, remove low-hanging, broken, and/or diseased limbs. To maintain the open vaseshape, remove any vigorous upright shoots developing on the inside of the tree, leaving the smaller shoots for fruit 4 production. Finally, prune the vigorous upright limbs on the scaffolds by cutting them back to an outward growing shoot. Fruit Thinning: In years without frost and freeze damage, more peaches will set than the tree can support and fruit must be thinned. Approximately three to four weeks after bloom or when the largest fruits are the size of a quarter, fruits should be removed by hand so that the remaining peaches are spaced about every 8 inches. Fruit thinning will allow the remaining fruits to develop optimum size, shape, and color, and prevent depletion of the tree. Here are some helpful links to information on the Web about peach tree pruning:

“Growing Peaches and Nectarines in the Home Landscape”,  
<http://ohioline.osu.edu/hyg-fact/1000/1406.html>

“Home Fruit Production: Peach and Nectarine Culture”,  
<http://extension.missouri.edu/xplor/agguides/hort/g06030.htm>

## **ADDITIONAL RESOURCES / INFORMATION**

There are a number of resources available on the Web for information on growing, managing and spraying home fruit trees. Listed below are Internet links to several good sources of information. Some of these are web sites with a variety of helpful information.

Others are pdf files that can printed for reference. Useful Publications for Fruit, B. Shane, M. Longstroth, & A. Gaus, Michigan State University Extension:  
<http://web1.msue.msu.edu/fruit/fruitpub.htm> A Word document version of the above page is also available at:  
[http://www.msue.msu.edu/objects/content\\_revision/download.cfm/item\\_id.163740/workspace\\_id](http://www.msue.msu.edu/objects/content_revision/download.cfm/item_id.163740/workspace_id)

[.112004/Useful%20Fruit%20Publications.doc/](#) Home Tree & Small Fruit Pest Management Guide, University of Rhode Island:

<http://www.uri.edu/ce/factsheets/sheets/fruitsprayguide.html#apple> Apple IPM Publications, The University of Maine Cooperative Extension: <http://pmo.umext.maine.edu/apple/Publications.htm>

Home Fruit Spray Schedule, University of New Hampshire

<http://extension.unh.edu/Pubs/HGPubs/HFSS01a.pdf> Spraying the Home Orchard, Cornell Cooperative Extension:

<http://counties.cce.cornell.edu/chemung/publications/spray-home-orchard.pdf> No-Spray Fruit Growing in Home Orchard, Cornell Cooperative Extension:

<http://scnyat.cce.cornell.edu/vegfruit/articles/homeorchard.htm> 12/2008 5