



Pruning in Action 2019

Tools for the job

- Bypass pruners for 1/2" or smaller diameter canes/branches
- Loppers for 1/2" to 1" diameter canes/branches
- Pruning saw for larger than 1" diameter canes/branches

Treat your tools right

Keep them sharp, sanitized (denatured alcohol), clean and dry, oiled when needed

Purpose of pruning

Train young plants, groom for appearance, increase air flow, control shape and size, influence flowering and fruiting, remove damage and disease, invigorate stagnant growth

Crown thinning to increase light penetration into canopy, reduce wind resistance & pest infestation

If pruning to remove diseased material disinfect pruners between cuts with denatured alcohol and immediately place removed plant material in bin, do not put in compost.

How to approach a neglected shrub or tree

Know it will look worse before it looks better, patience is required and will be rewarded

Make the right cut at the right time

Types of Cuts

Heading back – cut back to stub, lateral bud or small lateral branch, resulting vigorous upright dense growth from just under the cutting

Dormant heading cuts often result in vigorous vegetative growth in the Spring

Figure 13.4

Heading back is cutting to a stub, small lateral, or bud. Source: After Harris et al. 1981, p. 3.

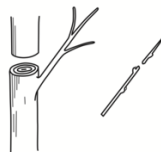


Figure 13.5

Vigorous upright growth stimulated by heading. Source: After Harris et al. 1981, p. 4.



Figure 13.8

Make pruning cuts about 1/4 inch (6 mm) above a bud and slightly angled away. Source: After Caldwell et al. 1972, p.10.

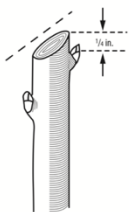
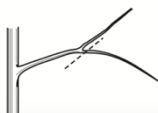


Figure 13.9

Prune back horizontal limbs to a more upright lateral or to an upward-growing bud. Source: After Harris et al. 1981, p.18.



Strongest growth goes to the terminal (end) bud. When cut, the lateral bud becomes the terminal bud and growth continues in that direction.

Angle matters: should be away from terminal bud and a min of 1/4" above

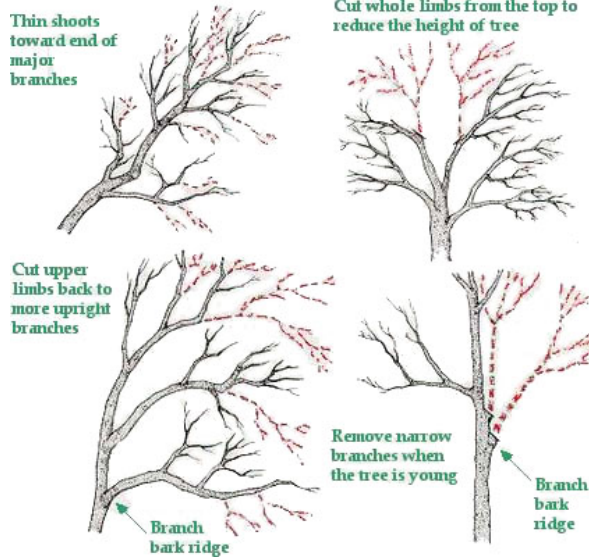
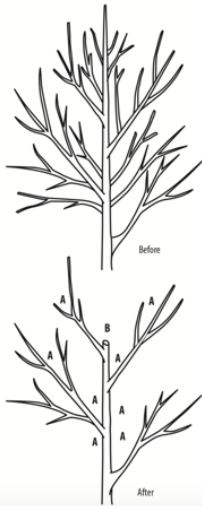
Make the cut holding clippers with cutting blade on top



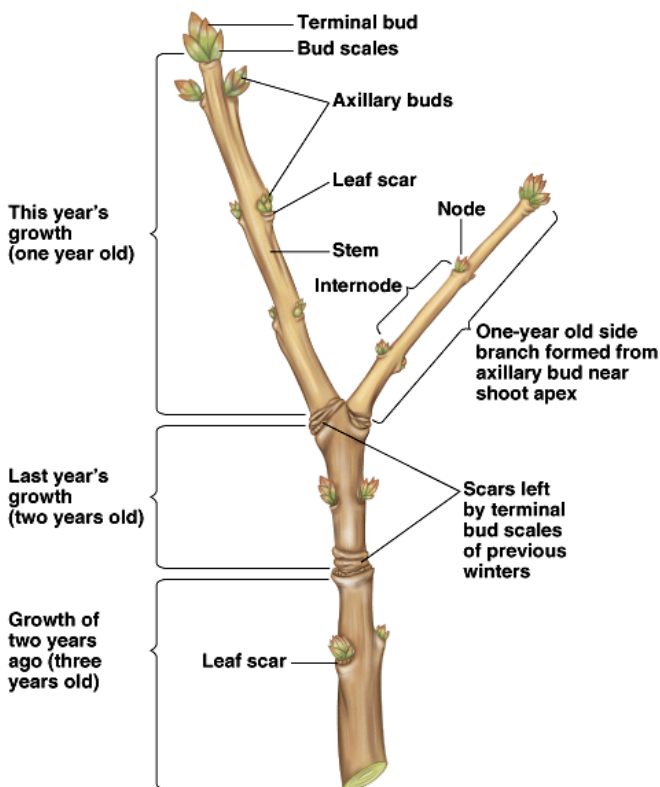
Thinning – removal of a lateral branch at its origin or to a lateral large enough to assume the terminal role, resulting in more open but natural growth habit Apple & Pear Tree pruning below

Figure 13.7

Thinning removes a branch (A) or cuts to a larger one (B).
Source: After Harris et al. 1981, p.4.



Fruit Tree Wood





Take large branches off the correct way to minimize damage to branch collar and bark ridge

Figure 13.10

To remove a large limb, make first cut at (A), second at (B), third at branch bark ridge (C).
Source: After Harris et al. 1981, p. 5.

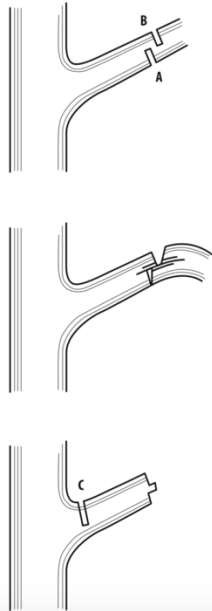
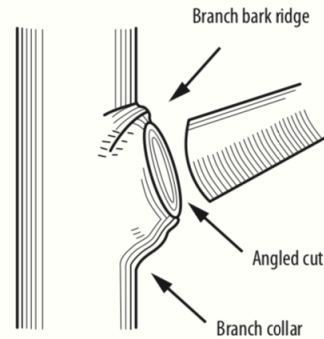


Figure 13.11

Pruning cuts should be made just outside the branch bark ridge (top of cut) and the collar (bottom of cut) so that the bottom of the cut is angled slightly outward. Source: After International Society of Arboriculture 1995, p. 3.



Open Central Pruning

For Peach, Plum, Pluot, Apricot, Almond, Fig & Nectarine

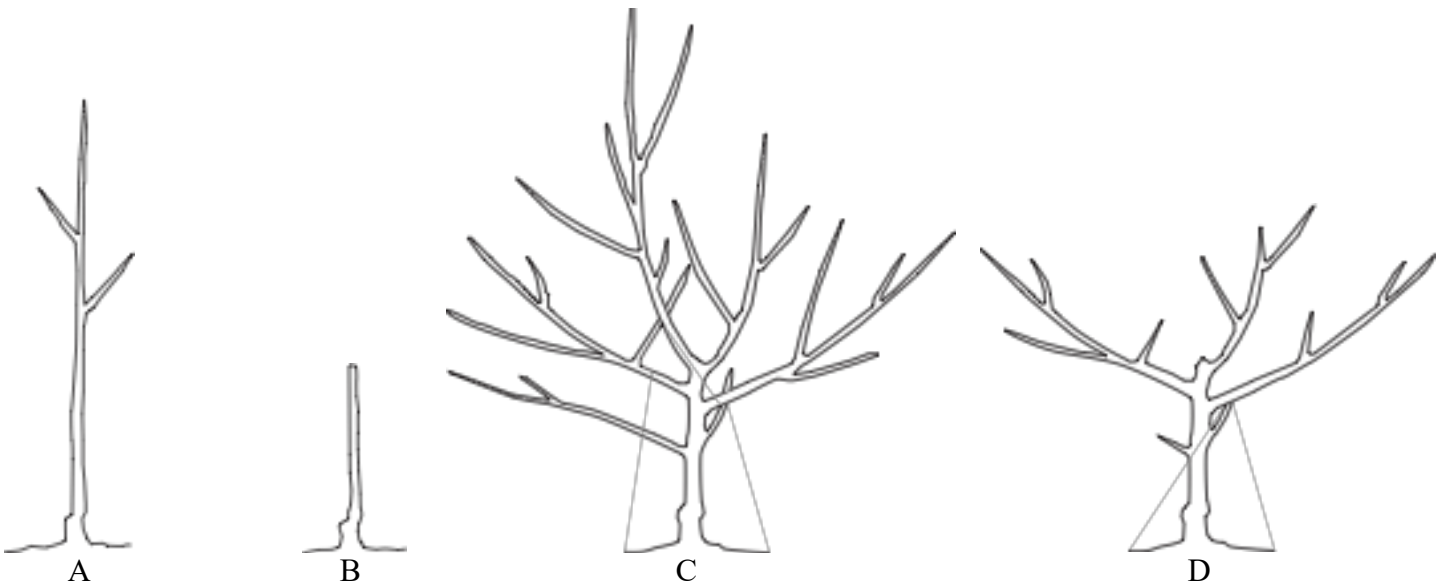
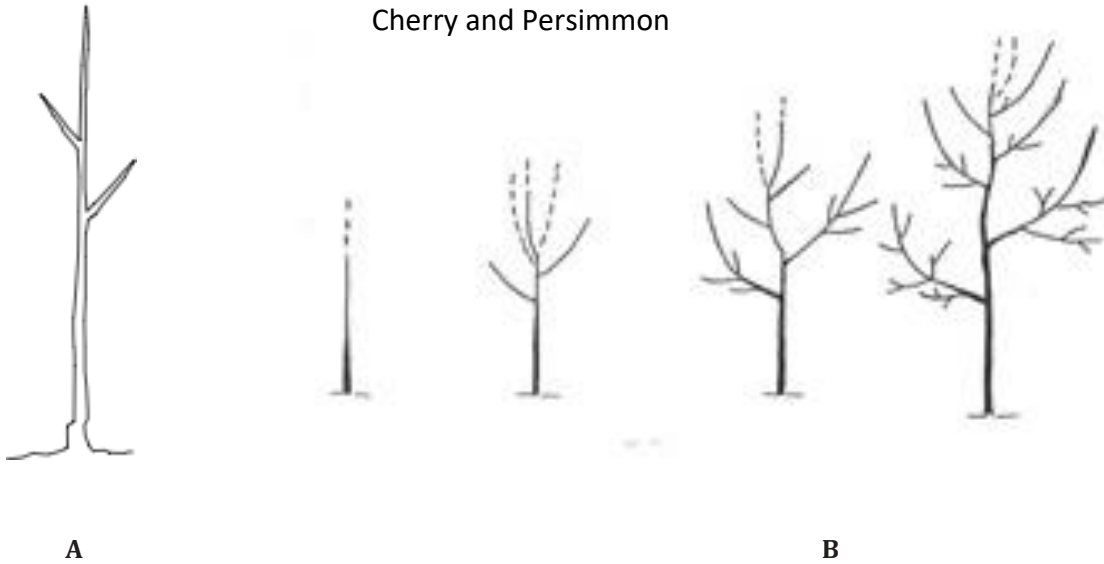


Figure 1. Open center pruning method. (A) Bare root tree at planting time. (B) Tree headed after planting. (C) Growth after one season. (D) Tree pruned after one growing season.



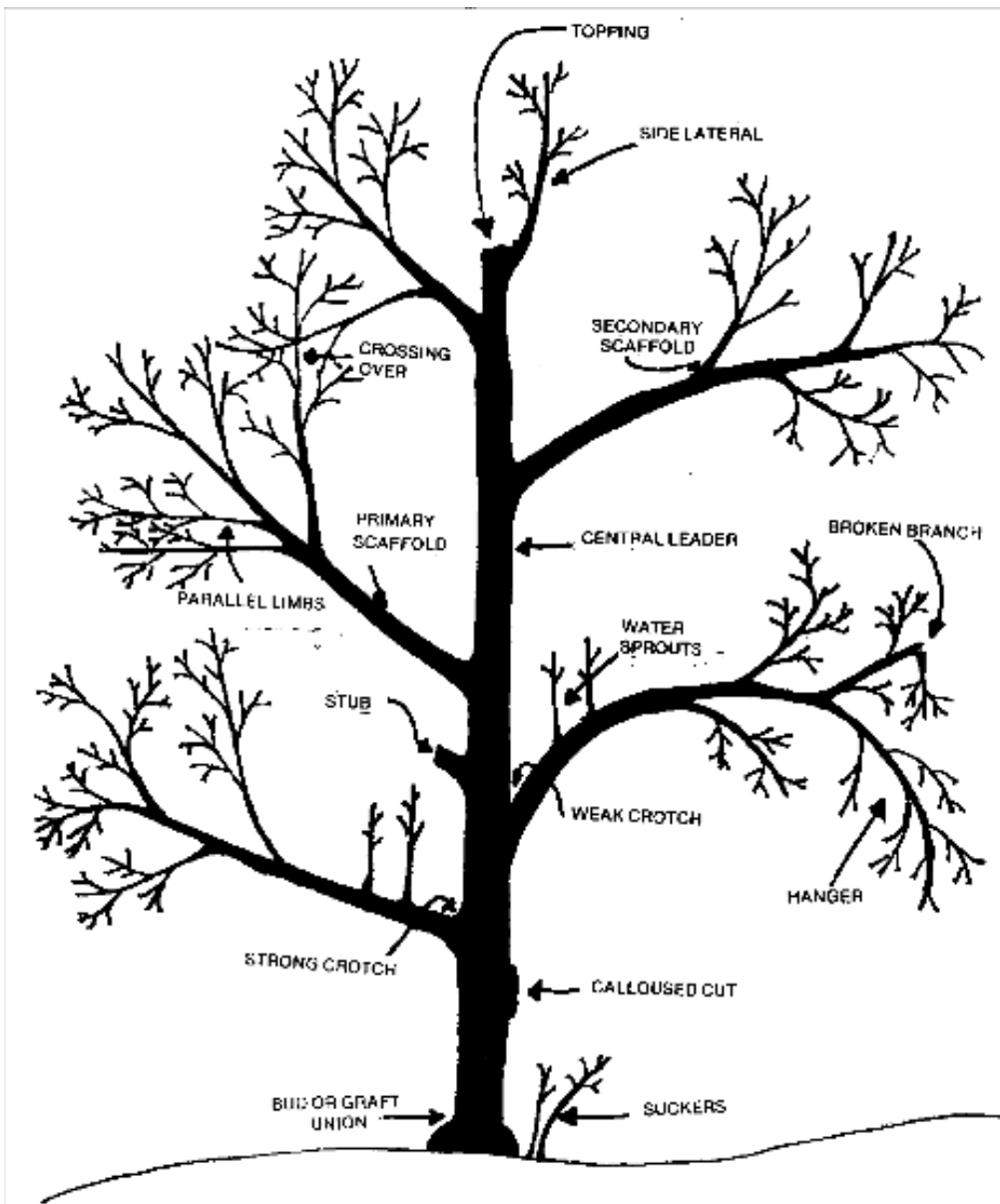
For Apple, Pear, Asian Pear,
Cherry and Persimmon



Modified central leader pruning method. (A) Bare root tree at planting time. Branches evenly spaced around central leader. (B)

Table 1. Fruiting wood characteristics and pruning of fruit Trees

Type of tree	Location of fruiting buds				Spur life (years)	Type of training system	Amount of pruning for mature trees
	On long shoots		On short shoot or spurs				
	Laterally	Terminally	Laterally	Terminally			
almond	minor	—	major	—	5	open center	light (thinning)
apple	minor	very minor	—	major	8–10+	central leader, open center, or modified central leader	medium
apricot	minor	—	major	—	3	open center	heavy
cherry, sweet	minor	—	major	—	10–12	open center	light
fig	major	—	—	—	bears on 1-yr and new shoots	open center or modified central leader	various
nectarine	major	—	minor	—	1–2	open center	heavy
peach	major	—	minor	—	1–2	open center	heavy
pear, Asian	minor	very minor	—	major	6–8	central leader or open center	medium to heavy
pear, European	minor	very minor	—	major	8–10	central leader or multiple leader	medium
persimmon	major	minor	—	—	bears on new shoots	modified central leader	light (mainly thinning)
plum, European	very minor	—	major	—	6–8+	open center	medium
plum, Japanese	minor	—	major	—	6–8	open center	heavy
quince	major	minor	—	—	bears on new shoots	central leader or open center	light (mainly thinning)
walnut	minor on young trees	major on young trees	minor on mature trees	major on mature trees	8–10	modified central leader	light (thinning)



GLOSSARY OF PRUNING TERMS

bare root. Nursery stock in which the plant is sold without soil around the roots.

canopy. The part of the tree composed of leaves and small twigs.

central leader. The main trunk of the tree; a method of training trees that consists of a single dominant trunk and tiers of lateral branches.

crown. The aboveground parts of the tree, including the trunk. The root crown is the trunk below ground and the large roots coming from the trunk.

dormant pruning. Pruning that takes place when the tree is not actively growing, such as in winter for apple trees.



heading cut. Removing a portion of a shoot or branch, leaving only buds or a tiny twig on the remaining portion; results in an increased number of branches. Compare with **thinning cut** and **topping**.

internode. The part of a stem between two nodes.

latent bud. A dormant bud that is more than 2 years old but has grown enough each year so that its growing point remains at or near the surface of the bark.

lateral. A secondary branch arising from scaffold limbs.

leader. A dominant upright branch. The central leader is the trunk that extends from the root to the top of a tree.

open center. A method of training trees in which scaffold branches are trained upward and outward from the trunk and the center is kept free of vigorous upright shoots.

primary scaffold limb. One of the major limbs arising from a tree trunk.

rootstock. The plant that provides the root system upon which the desired fruiting variety has been budded or grafted.

scaffold. Main branch that forms the structure of an open center tree.

shoot. The growth that emerged from a bud in the current growing season.

spur. Short twig that is specialized for bearing flower buds and fruit on many fruit species.

sucker. Vigorous upright shoot that arises below the bud union from the rootstock or roots.

thinning cut. Removing branches at their point of origin or to a lateral whose diameter is at least 50 percent larger than the diameter of the removed branch. Thinning results in a reduced number of branches. Compare with **heading cut**.

tier. Arrangement of three or more buds or branches at the same level around the stem. **topping.** Reducing the height of a tree by heading large branches (generally considered poor practice); also, removing upright shoots to maintain a tree at its desired height. Compare with **heading cut**.

watersprout. Vigorous upright shoot that arises from a latent or adventitious bud on older wood.



References:

Where to begin to get information of specific types of fruit trees, berries and nut trees including pruning guidelines

<http://ipm.ucanr.edu/PMG/GARDEN/fruit.html>

Univ. of CA, Div. of Agriculture and Natural Resources, Integrated Pest Management Program

When to prune fruit trees resource material

<http://homeorchard.ucdavis.edu/8057.pdf>

Fruit Trees: Training and Pruning Deciduous Trees. 2002. Chuck Ingels, Pamela M. Geisel, Carolyn L. Unruh. Univ. of CA, Div. of Agriculture and Natural Resources, Publication 8057.

Pruning basics with diagrams

<https://ucanr.edu/sites/gardenweb/files/28952.pdf>

Page 321-332 in *California Master Gardener Handbook*. 2009. Donald R. Hodel and Dennis R. Pittenger. Univ. of CA, Div. of Agriculture and Natural Resources, Publication 3338.

Pruning Small Trees and Shrubs

http://ceventura.ucanr.edu/Environmental_Horticulture/Landscape/Pruning/

Univ. of CA, Div. of Agriculture and Natural Resources, Ventura County

Pruning and Training, The Big Picture

http://homeorchard.ucanr.edu/The_Big_Picture/Pruning_&_Training/

University of California, The Backyard Orchard