

Old Apple (*malus domestica*) Tree Pruning 101

The wild apple is native to the Kazakstan region of central Asia. Humans have been domesticating the apple for several thousand years, resulting in variants that taste great eaten whole, baked or as apple cider. However, these variants do require constant pruning (unlike their wild asian ancestors.)

Most agricultural sources (which focus on yield) recommend cutting down old apple trees and planting new semi-dwarf stock rather than trying to resurrect old trees through years of pruning. However, old apple cultivars are an important source of biological diversity and old apple trees are (IMHO) beautiful, historic additions to the landscape.

Pruning Goals:

- 1) Survival (Strong Trunk, No Rot)
- 2) Spur Apple Production
 - a. Make light available
 - b. Favor horizontal branches – they produce the most fruit

Pruning will encourage new growth, which normally bears more fruit (the exception being vertical water sprouts.)

Remove:

- 1) Dead/Injured Wood
- 2) (Vertical) Water Sprouts
- 3) Branches That Point Down
- 4) Branches That Are Parallel (Shade Each Other) or Cross Each Other
- 5) Branches That Grow Towards the Center

Do not remove more than 1/3 of live branches in any given year.

Techniques:

- 1) Cut a branch off as close as possible to the branch or trunk from which it's growing. Usually, there is a bulge on the parent branch where the smaller branch emerges from it. Cut flush against that bulge without cutting into it.
- 2) Undercutting – when removing large branches, cut along the bottom of a branch first so that you do not peel off a lot of bark when the branch breaks.
- 3) To shorten a branch, always cut just beyond a leaf or fruiting bud.

Tools:

Triple Razor Cut Pruning Saw (Kibby's Equip. Bridge St. WRJ)
Shear/Lopper
Extension Ladder

Further Reading:

The Botany of Desire: A Plant's-Eye View of the World By MICHAEL POLLAN

<http://www.smallkitchengarden.net/small-kitchen-garden/prune-fruit-trees-2-tools-and-technique>

<http://www.ipm.iastate.edu/ipm/hortnews/2001/2-9-2001/prunetree.html>

<http://extension.oregonstate.edu/catalog/html/ec/ec1005/>

http://eap.mcgill.ca/CPTFP_7.htm

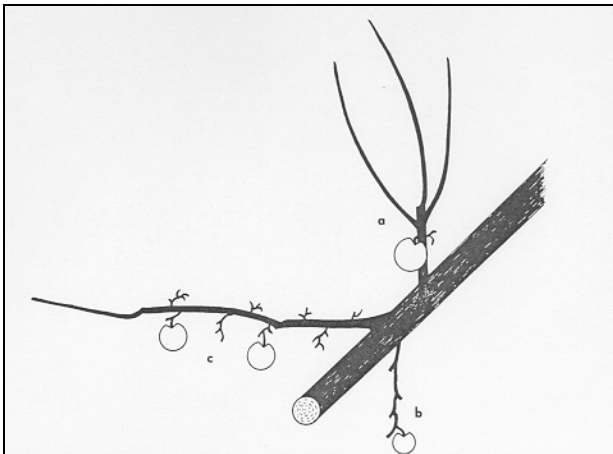


Figure 18. Orientation of fruiting branches. The upright branch (a) is excessively vigorous, only moderately fruitful, and produces fruits that are often oversize, soft, and poorly colored. The branch growing from the underside of a larger branch (b) is heavily shaded and, as a result, is low in vigor and fruitfulness and produces small fruits of poor color. The horizontal branch (c) is of moderate vigor and very fruitful and, because of good light exposure, produces fruit of superior color.

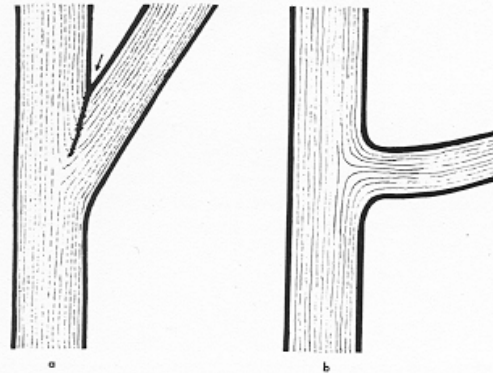


Figure 13. Structure of narrow and wide crotches. (a) Narrow crotch. Note the development of a bark inclusion (arrow) where bark of the trunk and branch have been pressed together. This structure weakens the crotch and serves as an entry point for decay organisms and pathogens. (b) Wide crotch. Annual rings of wood are deposited all around the junction of the scaffold and trunk, increasing crotch strength as the scaffold increases in size and fruit-bearing capacity.

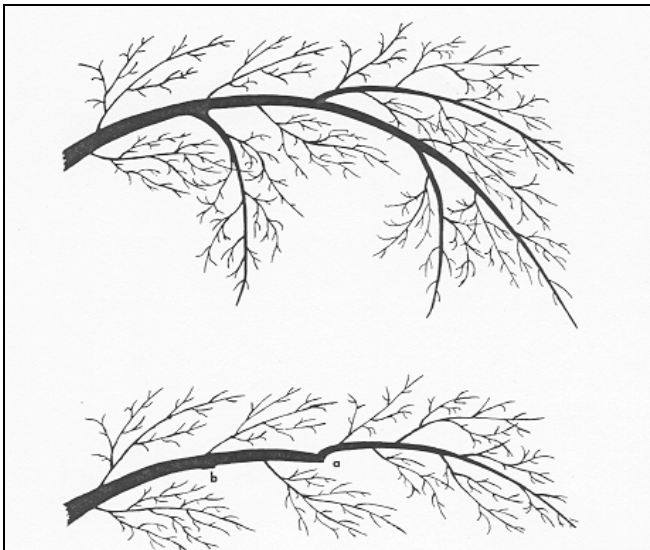


Figure 19. Pruning drooping branches. Branches that droop downward (upper) are not well exposed to light and usually shade other branches. In pruning, (lower) the ends of such branches should be removed back to a lateral in a near-horizontal position (a), and branches growing downward from the bottom of larger branches should be removed entirely (b).

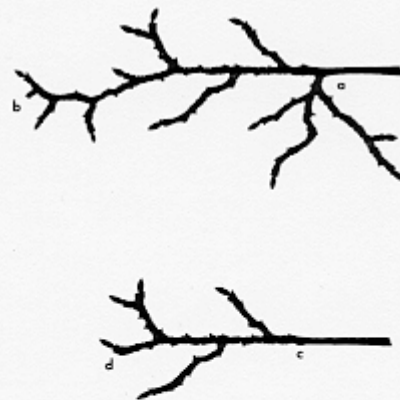


Figure 22. Spur invigoration. An unfruitful, "spur-bound" condition (upper) is indicated by numerous branches (a) and weak growth with small buds and occasional dead spurs (b). Such fruiting wood can be invigorated (lower) by removing some branches entirely (c) and heading back others to a strong bud (d).