

Fruit Trees

Tree Needs are Interdependent

- Water
- Nutrients
- Sunlight
- Gasses
- Space
- Suitable temperature
- Soil/medium to grow it in

Apical Dominance

Vertical growth supersedes lateral growth

Use the Right Tools for the Job!

- Pruning saw/pull saw
- Bypass hand pruners
- Bypass loppers
- Pole pruners/saws
- Japanese hand hoe

Before You Begin, Ask:

1. What species is it?
 - Asian pears and sweet cherries are best pruned during the driest season (July-early Sept).
 - All other major fruit can be pruned either during traditional dormant season (Nov-April) or during summer (mid May-early Sept).
2. How old is the tree? Trees respond to pruning differently at different life stages.
 - Newly planted trees should be pruned only to remove broken or diseased twigs. They can, however, be trained.
 - The 2-4 year old tree needs pruning to train the tree.
 - The mature tree need pruning to maintain their frame and regenerate flower bud bearing wood.
 - The ancient tree is becoming physiologically fragile. It has the same needs as the mature tree but it cannot tolerate as much pruning or it may require more radical pruning.
3. What is the current maintenance status?
4. Are there special circumstances, like power lines, to consider?
5. Why am I pruning?
 - Do I want to lower the height?
 - Thin the tree?
 - Create better air circulation?
 - Allow for better sunlight?
 - Train the tree?

Types of Cuts

1. Heading Cut
 - Reduces the length of a stem or branch
 - Primarily for young trees and small branches
 - Redirects or slows growth to improve structure
 - Cut back to a lateral branch (or a bud in small twigs) which is of adequate size to assume the lead. 45-60 degree cut away from the bud/branch
2. Thinning Cuts: Removes an entire branch back to its parent stem or trunk
 - Useful for opening up congested areas and for removing disease or damage
 - The part that remains is larger than what was removed
 - Cut as close to possible to the branch collar

Pruning/Young Tree Training Systems

- Open Center
- Central Leader
- Modified Central Leader
- Espalier

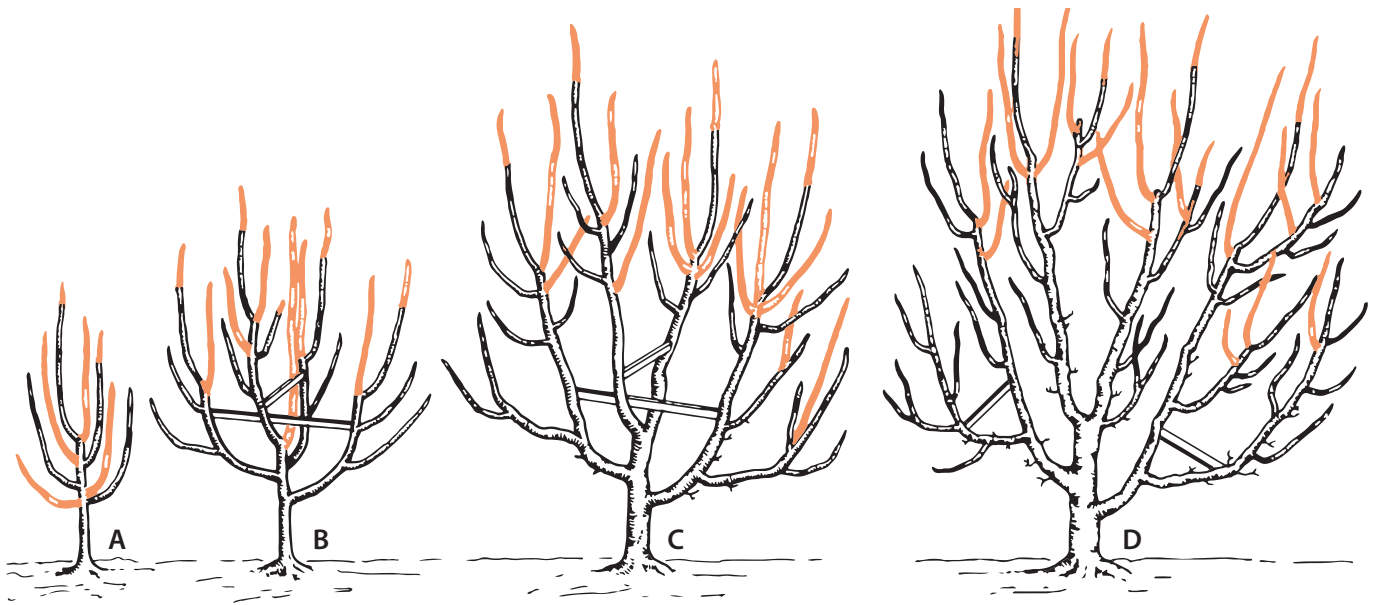
Mature Tree Pruning

- Remove no more than 25% of the tree's live wood per year
- Patience is key

Pruning Steps:

1. Survey the work needed and view the tree from all sides
 - What is the density, distribution and quality of flower buds?
 - Are there any larger limbs in need of removal?
 - What is the level of and distribution of disease?
 - Are ladder/access bays necessary or desired?
2. Remove the 3-Ds
 - Dead
 - Diseased
 - Damaged
3. Look For Defects
 - Crossing branches
 - Branches growing inward or downward
 - Branches rubbing one another
4. Step Away from the Tree
 - Assess your progress
 - Remember, no more than 25% of live wood should be removed per year
5. Look for Water Sprouts
 - Prune in summer
 - Can be trained into branches if needed
6. Make Additional Cuts as Needed
 - Remove larger limbs you have identified

- Open up new ladder bays (if needed)
- Thin out or shorten other material that is shading



It takes four winters to train trees to an open center. Color indicates removed or headed shoots.

- The first winter, choose three or four shoots to form main scaffold branches. Remove or severely head all others. Scaffold branches should be at least eight inches apart on the trunk for a strong tree structure.
- The second winter, choose one or two more.
- By the third winter, scaffold selection should be complete.
- The fourth winter shows a good open center. Four main scaffold limbs evenly distributed around the trunk are enough; a fifth limb crowds.

Source: *Training & Pruning Your Home Orchard*, Jeff Olson, PNW 400

Resources

Tree Biology & Soils

- ***Botany For Gardeners***, Brian Capon
- ***Soil Science Simplified***, Helmut Kohnke and D.P. Franzmeier

Pruning & Training

- ***Training & Pruning Your Home Orchard***, Jeff Olsen
A Pacific Northwest Extension Publication PNW 400
- ***Guide to Pruning***, Cass Turnbull
- ***Training and Pruning Tree Fruits*** Alabama Cooperative Extension System, ANR-0053-K
www.aces.edu
- ***Pruning & Training (American Horticultural Society)***, Brickel and Joyce
- ***Growing Fruit (Royal Horticultural Society)***, Harry Baker
Complete, sequential, color-coded drawings of how to train the best configuration for each kind of fruit.
- **Plant Amnesty**
www.plantamnesty.org

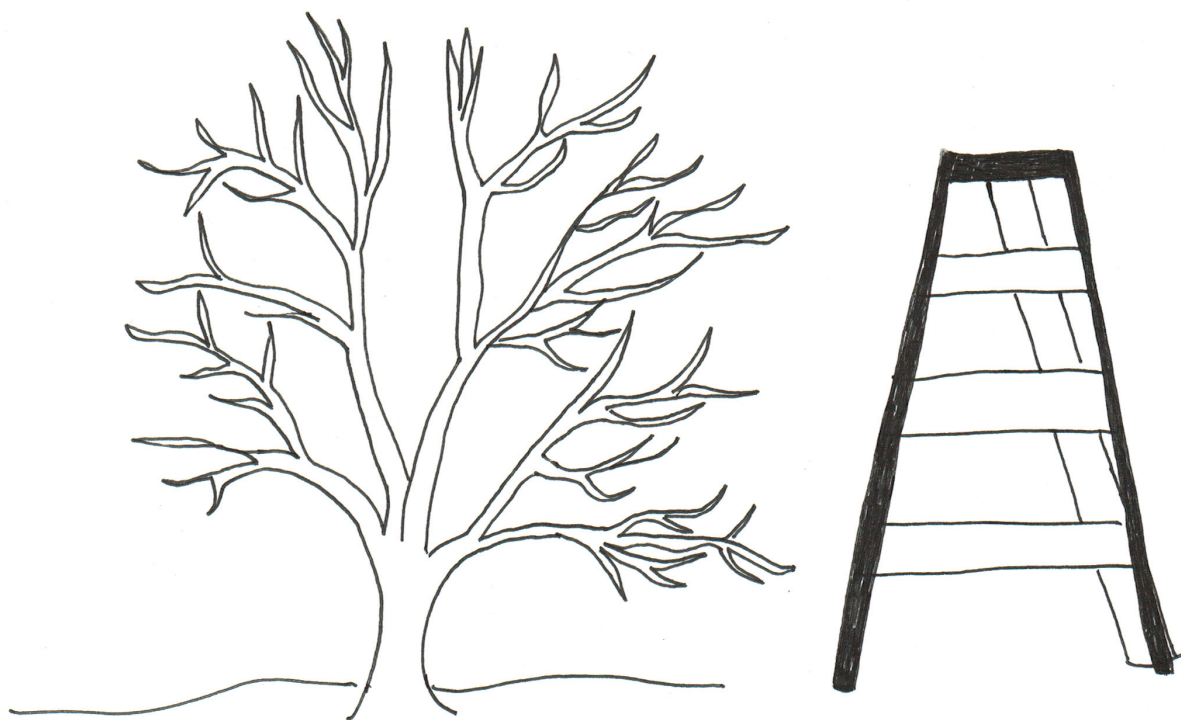
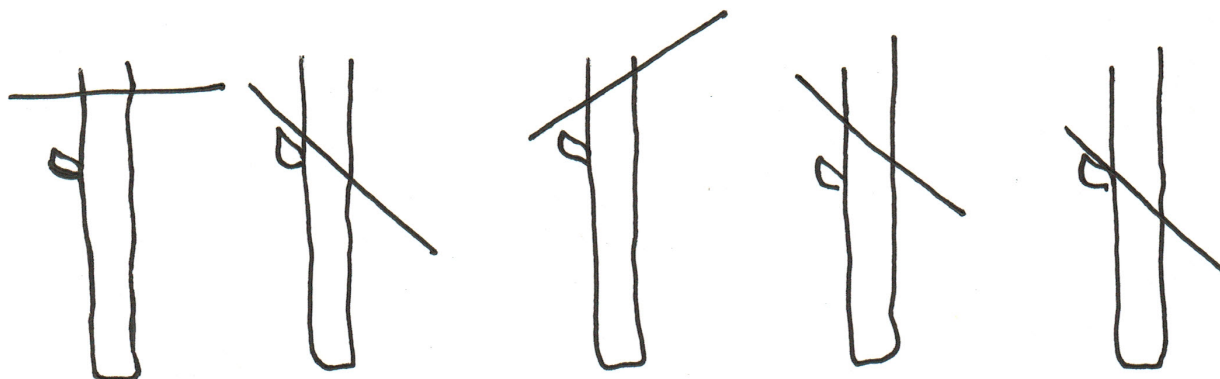
Temperate Forest Gardens & Permaculture

- ***Edible Forest Gardens, Two Volumes***, Dave Jacke and Eric Toensmeier
- ***Creating a Forest Garden: Working with Nature to Grow Edible Crops***, Martin Crawford
- ***Forest Gardening: Rediscovering Nature & Community in a Post-Industrial Age***, Robert Hart
- ***How to Make a Forest Garden***, Patrick Whitefield
- ***Gaia's Garden***, Toby Hemenway
- ***Sepp Holzer's Permaculture***, Sepp Holzer
- ***Roots Demystified***, Robert Kourik
- ***Mycellium Running***, Paul Stamets
- ***Agroforestry News***
Quarterly newsletter focused on temperate trees & shrub crops
- **Plants for a Future** (extensive online plant database)
www.pfaf.org

Local Organizations

- **Tahoma Fruit Tree Society**
Meets 7:00 p.m. first Thursday of each month
Rainer View Christian Church
12305 Spanaway Loop Rd, Spanaway
tahomawcfs@gmail.com
- **Tacoma Urban Forestry**
www.cityoftacoma.org/urbanforestry
- **Curran Apple Orchard**
www.curranappleorchard.com

Which is the correct cut? Why?



This tree is too tall, how would you prune to reduce the height so that it is roughly the height of the orchard ladder?