

The Backyard Orchard — Pruning

UC Master Gardener Program of Santa Clara County

Presented by: Allen Buchinski
UC Master Gardener Volunteer

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Our Mission

“To extend research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of California.”



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Advice to Grow By...Ask Us!

In Person

- Visit our Demo Gardens
- Library Talks
- Community Events
- Field Trips
- Adult Education Schools
- Plant Sales

Online

- Garden Help info at mgsantaclara.ucanr.edu
- Help Desk
- Tips & Events newsletter
- Online Plant Clinic
- Virtual Workshops
- Social Media



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Demonstration Orchards

- Martial Cottle Park
- Emma Prusch Farm Park
 - High density orchard
 - International orchard
- Guadalupe Historic Orchard



Demo gardens on our website



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Pruning Agenda

- Overview of pruning principles & basics
- 10 Basics of pruning
- Tools
- Pruning systems and tree structure



Presentation slides
and pruning resources

ucanr.edu/site/uc-master-gardeners-santa-clara-county/fruit-tree-pruning



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Pruning Overview



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Orchard Considerations

- Site
- Tree selection
- Prep/Planting
- First year care
- Irrigation
- Pollination
- Pruning & Training
- Fertilization
- Fruit thinning
- Pests & Disease
- Harvest



Reasons for Pruning

- Remove undesirable wood (disease, deadwood, crossing branches)
- Control size for easier care — a primary home consideration
- Develop strong limb structure
- Distribute sunlight evenly throughout the tree
- Regulate fruit bearing — removes excess fruitwood
- Renew fruitwood — to continue strong buds and flowers



Types of Pruning Cuts

Pruning is a dwarfing process used to control tree form and function. There are three types of cuts:

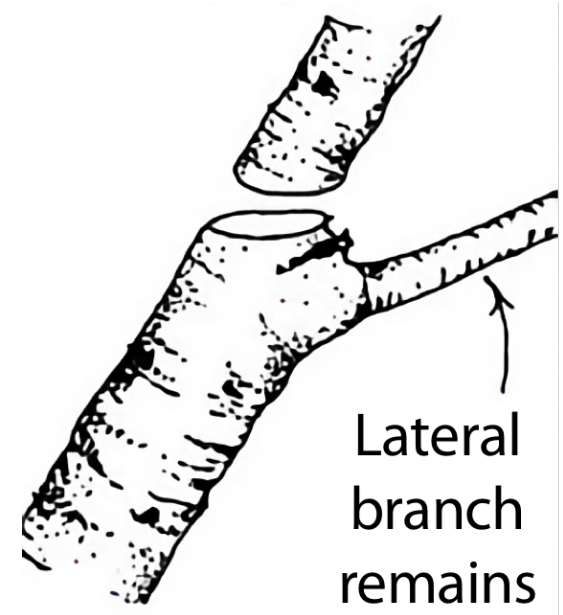
- **Reduction**
- **Removal**
- **Heading**



Types of Pruning Cuts — Reduction

Reduction Cut

- Shorten a branch to a “large enough” lateral
- “Large enough” = at least 1/3 the size of the part being removed
- Sometimes referred to as a thinning cut, or a bench cut



Credit: University of Florida

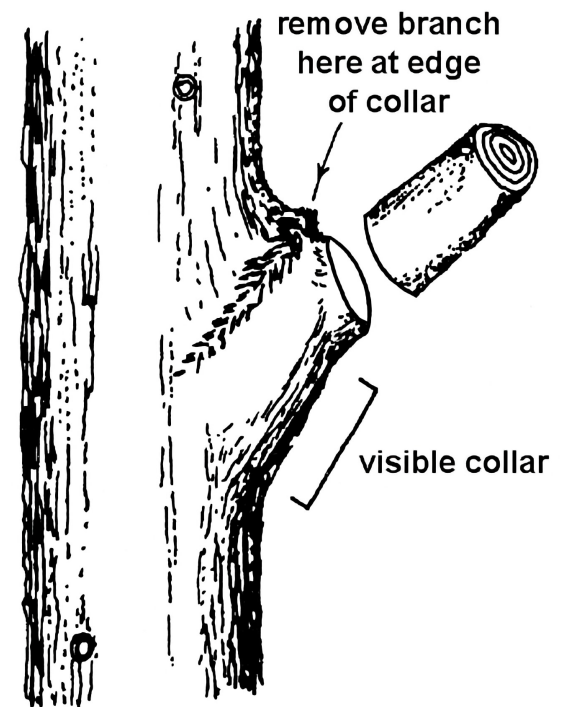


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Types of Pruning Cuts — Removal

Removal Cut

- Removes branch at collar
- Clean cut at collar reduces chance of new shoots at the cut
- Sometimes called a thinning cut



Credit: University of Florida

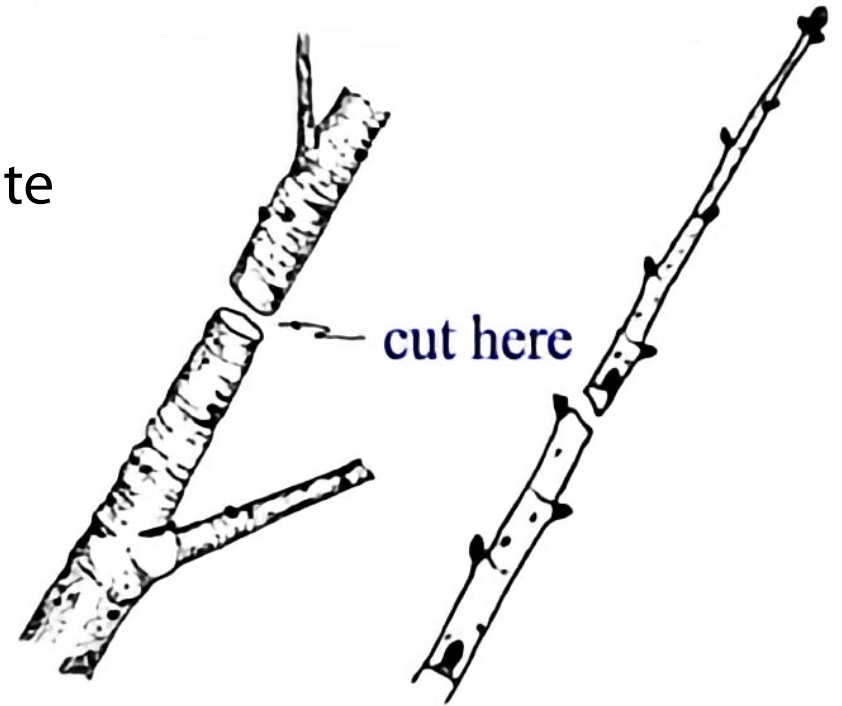


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Types of Pruning Cuts — Heading

Heading Cut

- Cut back to a bud or to an indiscriminate position
- Also called topping/tipping

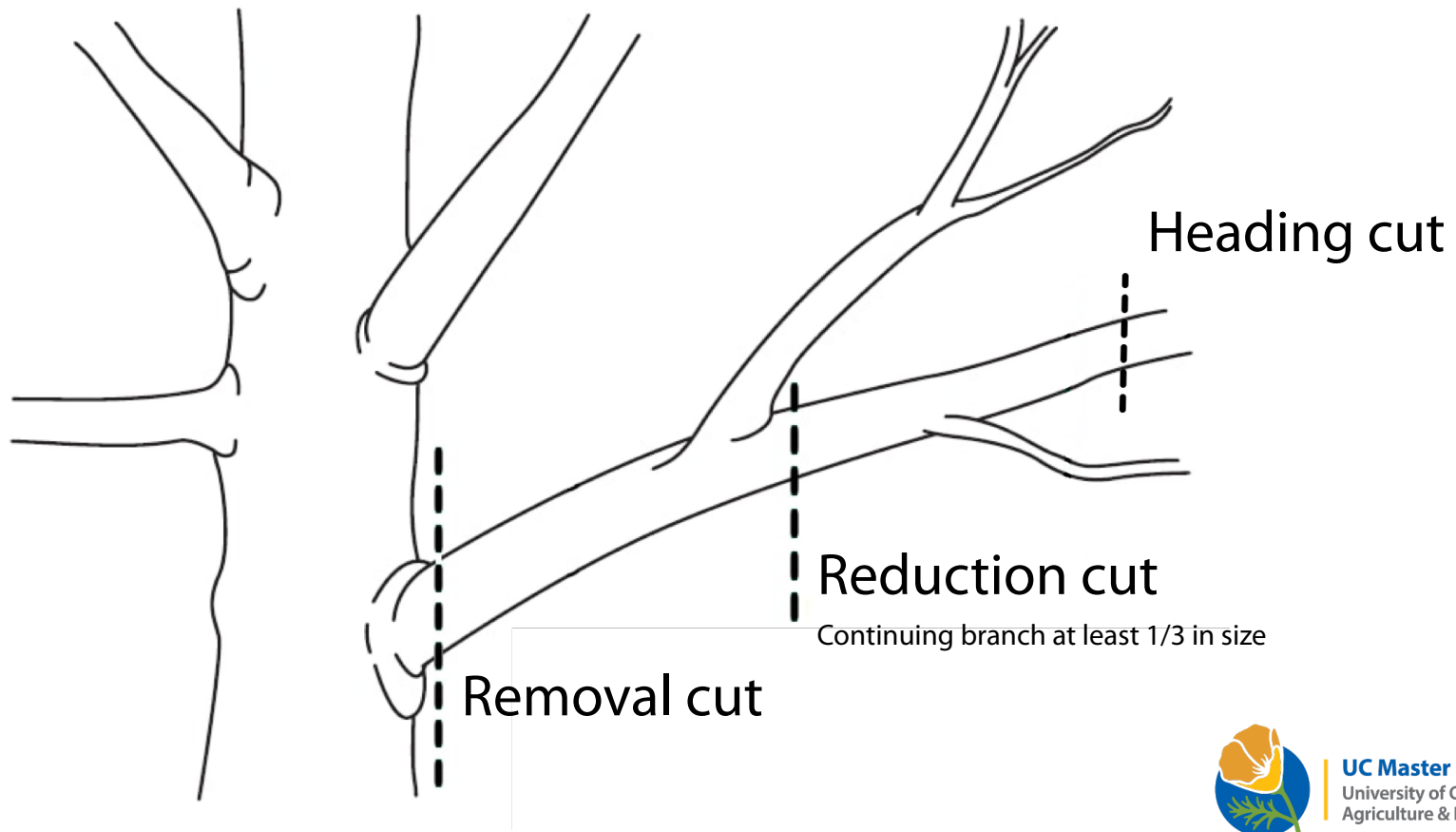


Credit: University of Florida



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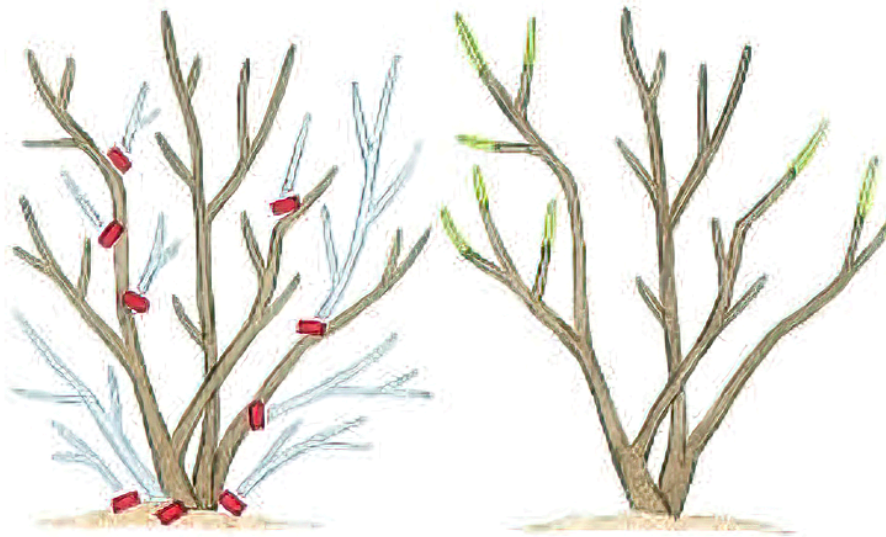
Pruning Principles — Types of Pruning Cuts



Pruning Principles — Thinning vs. Heading

Thinning

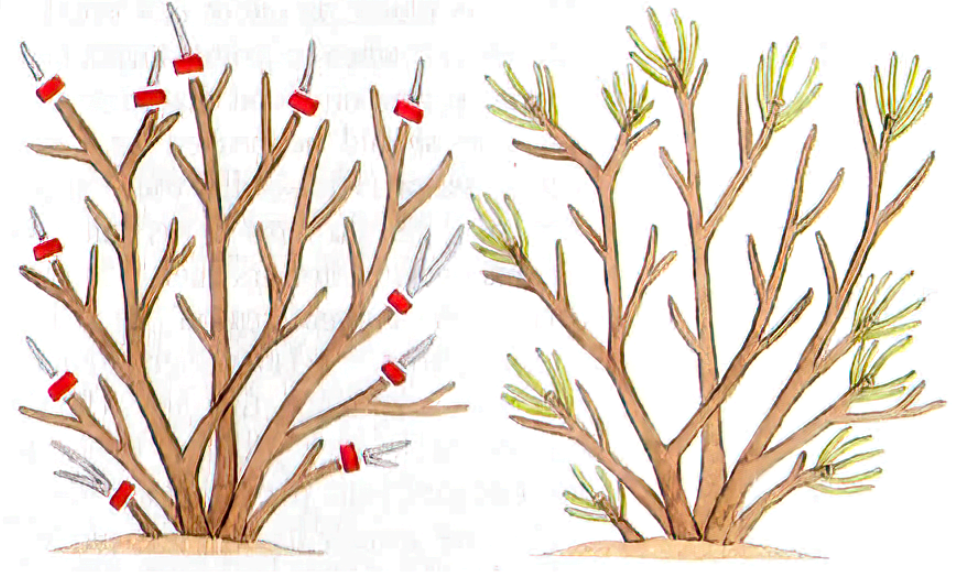
Combination of removal and reduction



Before

After

Heading



Before

After

Credit: Sunset Western Garden Book

Pruning Basics

- Pruning combines both art and science
- Avoid the “new pruner effect”
 - Not cutting enough; too worried about damaging the tree, or losing potential fruit



10 Basics of Pruning

Adapted from: Ten Basics of When and How to Prune Fruit Trees

By Paul Vossen, Farm Advisor, Sonoma County



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#1 – Prune Fruit Trees When the Leaves Are Off*

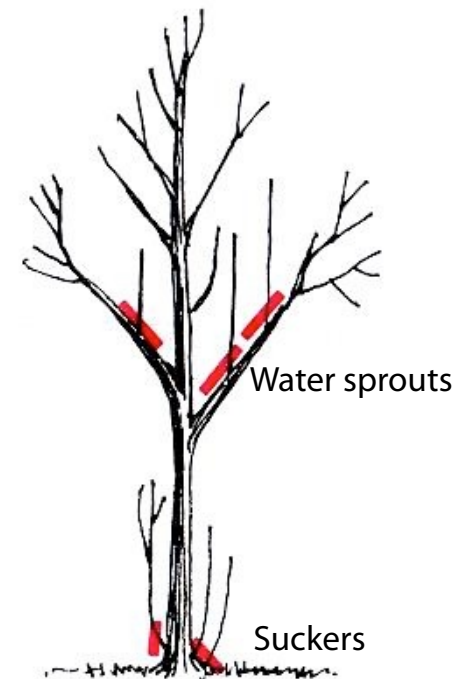
- Easiest to see what you're doing
- Invigorates remaining buds
- Summer pruning has pros and cons, is most used to slow down overly vigorous trees or trees that are too large, but slows fruit development and risks sunburn

* Exception for apricot & cherry



#2 – No Brainers

- Remove diseased or broken branches
- Remove suckers, water sprouts and most competing branches
- Downward bending branches eventually lose vigor and produce only a few small fruit; cut off the part hanging down



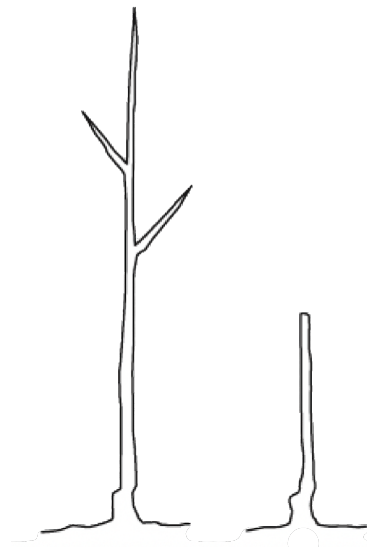
Credit: University of Idaho



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#3 – Right after Planting a New Tree

Cut it off to short stick 24 to 30 inches high and cut any side shoots remaining below that to 1–2 buds. Paint the tree with white latex paint.



Source: UC ANR Publication 8057



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#4 – Pruning Young Trees

Low vigor

- Prune fairly heavily and encouraged to grow rapidly for the first 3 years without much fruit
- Leave most of the small horizontal branches untouched for later fruiting

Vigorous growing

- Can be pruned much less or not at all and encouraged to fruit with branch bending



#5 – Horizontal vs. Vertical Branches

- Upright branches generally remain vegetative and vigorous
- Horizontal branches generally are more fruitful
- A good combination of the two is necessary, for fruiting now and in future years
- Branches bent to 45° to 60° achieves this balance



#5 – Spreading and Tying Down Branches

Spreader
example



Tie down
example



Photo credit:
Chuck Ingels, UC

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#6 – Deciding Where to Cut

- Reduction and removal cuts
 - Cutting vertical branches opens the tree to more light
 - Removing horizontal branches may remove fruit
- Heading cuts
 - Topping a vertical branch encourages vegetative growth
 - Tipping horizontal branches is done to renew fruiting wood and to thin off excessive fruit



#7a – Cut Location

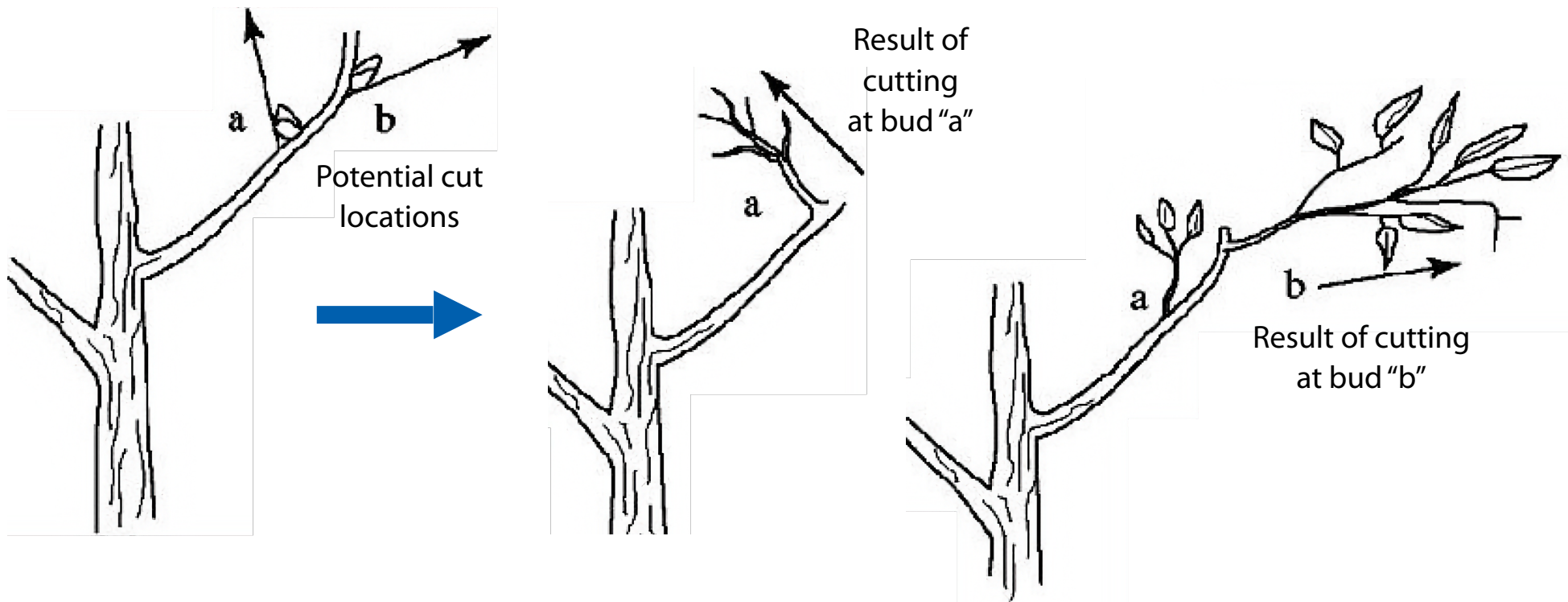
- New growth occurs where you make the cut; the cut only affects the buds within 1–8" of the cut — not farther down the branch
- The more buds cut off, the more vigorous the new shoots will be
- Heading cuts on vertical growth result in the most new shoots, typically with very narrow angles
- Removing/reducing can also spur new shoots, but not as much



Source: [Virginia Cooperative Extension](#)



#7b – Consider Potential Bud Growth after Cut



#8 – Prune Most in the Top of the Tree

- Expose lower branches to sunlight
- Sun exposed wood remains fruitful and produces the largest fruit
- Shaded branches eventually stop fruiting and will never produce without drastic topping and renewal of the entire tree



#8 – Prune Most in the Top of the Tree

Prune most in the top of the tree



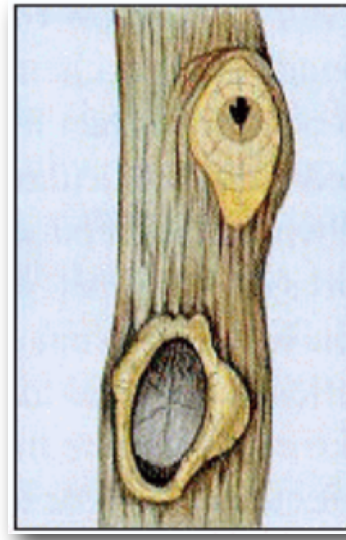
#9a – Make Clean Cuts



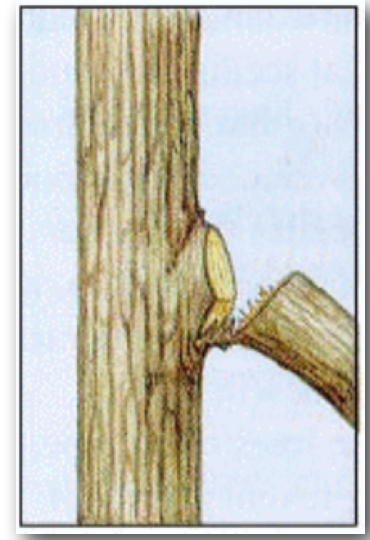
Clean cut



Stub cut



Flush cut



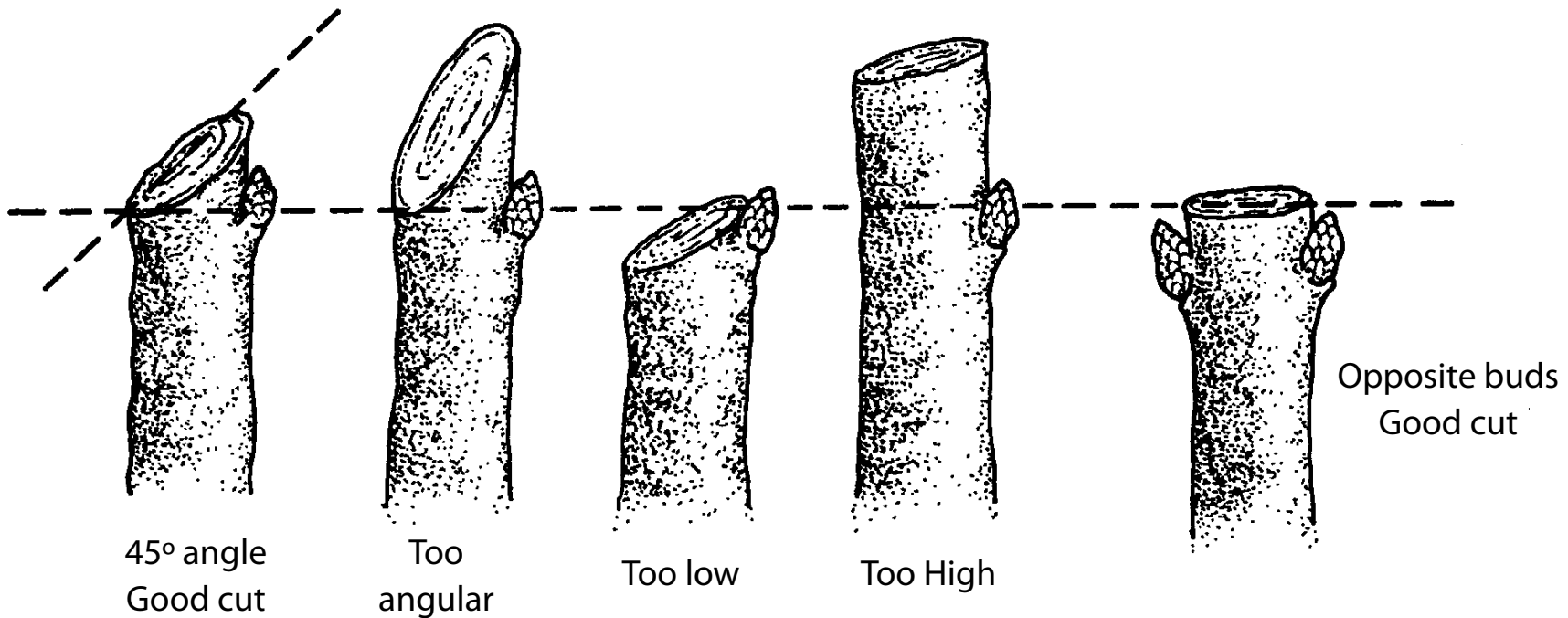
Ripped cut

Illustrations: Julie Janke ([USDA Forest Service](#))



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#9b – Make Clean Cuts at a Good Angle



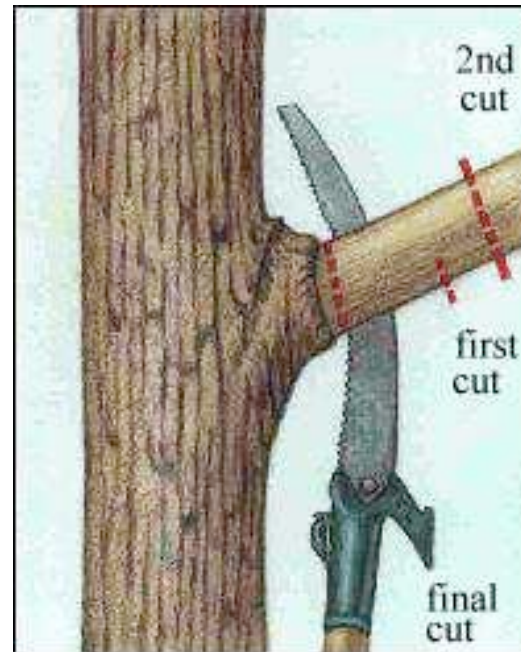
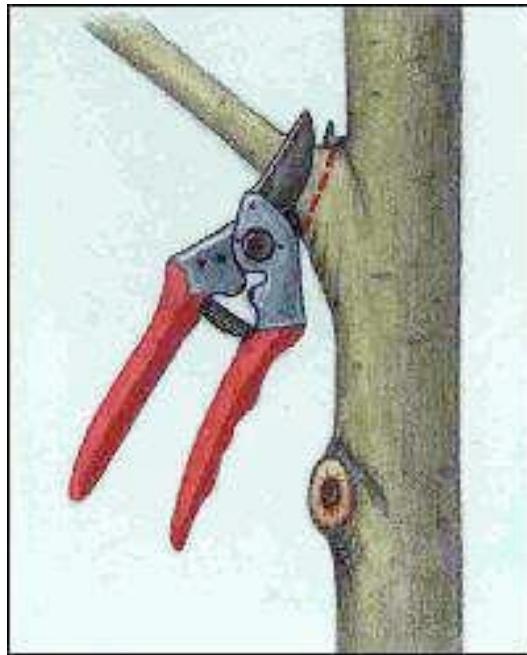
Credit: [Oregon State University Extension](https://oregonstate.edu/extension/)



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#9c – Make Clean Cuts (small vs. large branches)

Small branches can be pruned with a single cut



Use three cuts for larger branches

Illustrations by Julie Janke, ([USDA Forest Service](https://www.usda.gov/forest-service))



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#10 – Know Your Plant

- Peach, nectarine, and blueberry bear on last year's shoot growth
- Cherry, apple, pear and plum bear on spurs
- Apricot, and pluot bear produce short spurs on two year wood and older, bear some fruit on one-year-old wood
- Figs produce fruit on one year old wood and new shoots
- Quince, persimmon, and pomegranate bear on new growth
- For citrus, just keep branches pruned up off the ground
- Grapes bear most heavily on new growth off of 1-year-old wood
- Kiwi: flowers develop on current and last-season shoots; older wood rarely produce flowers.



#10 – Know Your Plant (example 1)

Apple leaf bud vs. fruiting spur



10 Basics of Pruning

#10 – Know Your Plant (example 2)

Know your plant — older apple spurs



Credit:
[University of Georgia Extension](https://www.uga.edu/extension/)

10 Basics of Pruning

#10 – Know Your Plant (example 3)

Apricot spurs



Credit: L. H. Bailey Standard Cyclopedia of Horticulture

10 Basics of Pruning

#10 – Know Your Plant (example 4)

Cherry spurs



Credit: [University of Maine Extension](#)

Pruning Tools



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Get to Know These Pruning Tools



Lopping shears

Carbide
sharpening tool



Hand saw



Hand pruners

No endorsement of named products/company is intended, nor is criticism implied of similar products that are not mentioned.

Pruning Tool Considerations

- Good tools for the job will not guarantee success, but are recommended for long term use. Price is a general reflection of quality
- The three most useful tools:
 - Hand pruning shears
 - Folding or fixed handled pruning saw
 - Lopping shears (loppers) with 24– to 30–inch handles
- Caution! Folding ladders and extension ladders are unsafe—not designed for unstable ground or tree work
 - An orchard (tripod) ladder is the only ladder considered acceptable and safe

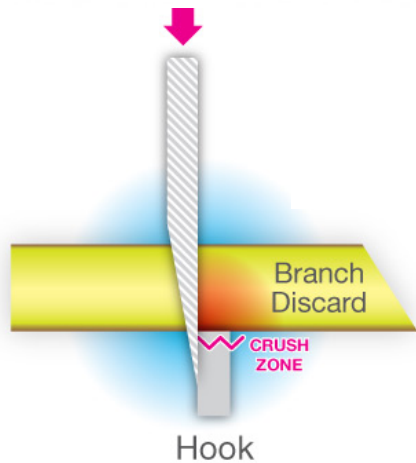


Bypass vs. Anvil Pruners



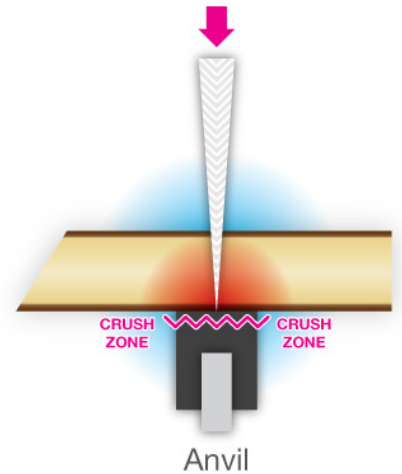
← **Bypass pruners**

Make a cleaner cut, and reduce the risk of damage to the tree and should be the tool of choice



Anvil pruners →

Better for cutting up dead and removed wood



Pruning Systems



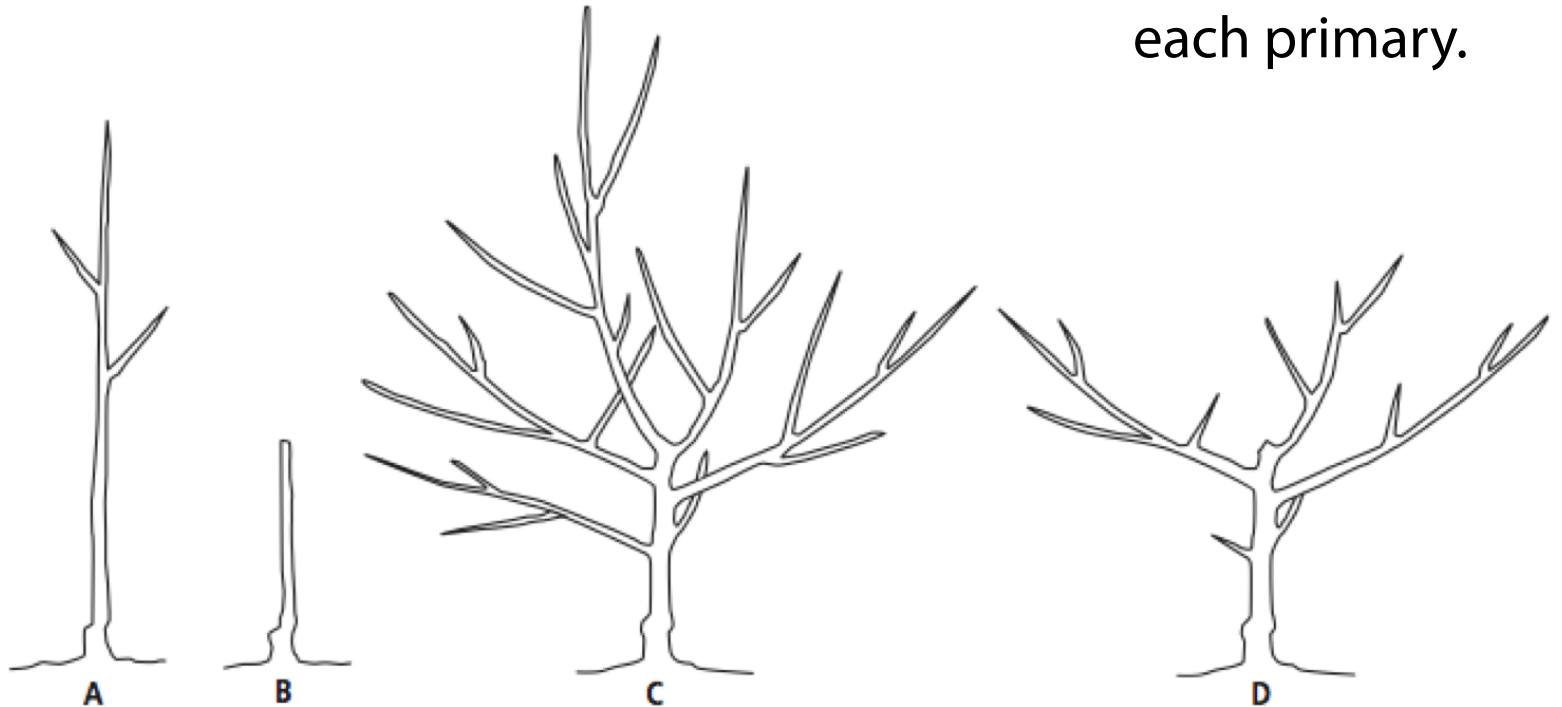
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Training/Pruning Systems — Open Center or Vase Shaped

Can be used on all fruit and nut trees

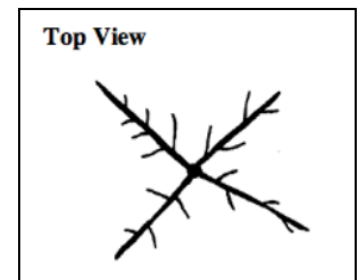
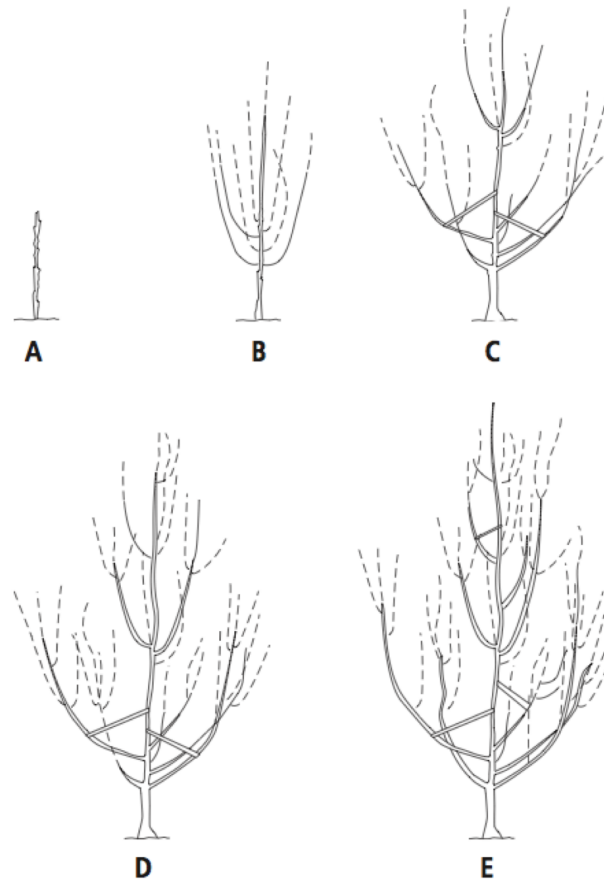
First year: three to four limbs evenly distributed around trunk.

Second year: select one or two limbs on each primary.



Training/Pruning Systems — Central Leader

- Makes a small tree
- Select lateral branches, spaced evenly around tree, two to three feet apart vertically
- Laterals may need training to 45° angle



Pruning Summary

- Understand the basics, of pruning and your plants
- Practice, practice, practice
- Do some research and ask questions:
 - Ask if you have questions! mgsantaclara.ucanr.edu

ucanr.edu/site/uc-master-gardeners-santa-clara-county/fruit-tree-pruning



References and Resource List

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2. Bedker, Peter J., Joseph G. O'Brien, and Manfred M. Mielke. 2012. "HOW to Prune Trees." USDA Forest Service. Accessed December 22, 2025. <https://www.fs.usda.gov/nrs/pubs/na/NA-FR-01-95-Rev-2012.pdf>.
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5. Ingels, Chuck, Pamela M. Geisel, and Carolyn L. Unruh. n.d. "Fruit Trees: Training and Pruning Deciduous Trees." University of California Agriculture and Natural Resources. Accessed December 22, 2025. <https://ucanr.edu/sites/default/files/2025-03/UC%20ANR%20Publication%208057.pdf>
6. Marini, Richard P. 2025. "Pruning Peach Trees." Virginia Cooperative Extension. Accessed December 22, 2025. <https://www.pubs.ext.vt.edu/422/422-020/422-020.html>.
7. Oregon State University Extension Service. n.d. "Pruning Trees and Shrubs." Accessed December 22, 2025. <https://extension.oregonstate.edu/sites/extd8/files/documents/12281/pruningtreesshrubs.pdf>.



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 9. University of Maine. n.d. "Pruning." Accessed December 22, 2025. <https://extension.umaine.edu/fruit/growing-fruit-trees-in-maine/pruning/>
 10. VanDerZanden, Ann Marie, and Diane Nelson. 2004. "Pruning Ornamental Shrubs." Iowa State University Extension and Outreach. Accessed December 22, 2025. <https://shop.iastate.edu/extension/home-garden/lawn-and-garden/ornamental-crops/pm1958.html>
 11. Vossen, Paul. n.d. "Ten Basics of When and How to Prune Fruit Trees." University of California Agriculture and Natural Resources. Accessed December 22, 2025. <https://ucanr.edu/sites/default/files/2023-08/386911.pdf>.
 12. Wegmans Nursery. 2022. "Fruit Tree Pruning." Accessed December 22, 2025. <https://www.wegmansnursery.com/care-guides?view=article&id=60:fruit-tree-pruning&catid=15:fruit-citrus-trees>.
- mgsantaclara.ucanr.edu/fruit-tree-pruning



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