

How to a Complete Diet with Permaculture Principles: Tropical Subsistence Gardening. 24 part class series

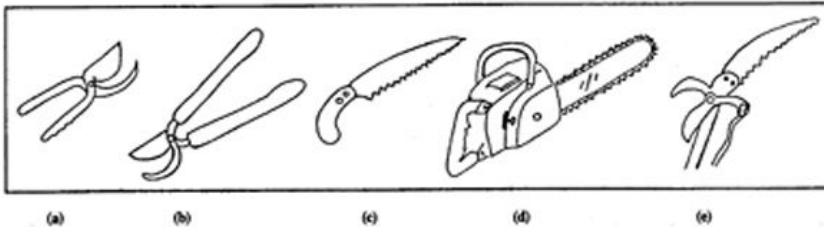
Part 9 of 24 Pruning & Fertilizing Fruit Trees:

Learn how to prune for increased fruit tree health and ease of harvest. Find out what organic fertilizers you can use and when it's best to apply them.

Acknowledgements: A special thanks to Hawaiian Sanctuary, County of Hawaii Research and Development and all others involved to make these classes a reality! We are still looking for support to complete and enhance this amazing FREE program. <http://hawaiiansanctuary.com/donate>

Introduction: Pruning can help keep fruit trees healthier and easier to harvest. Proper pruning can help trees heal after storm damage by preventing rot and disease in rough wounds.

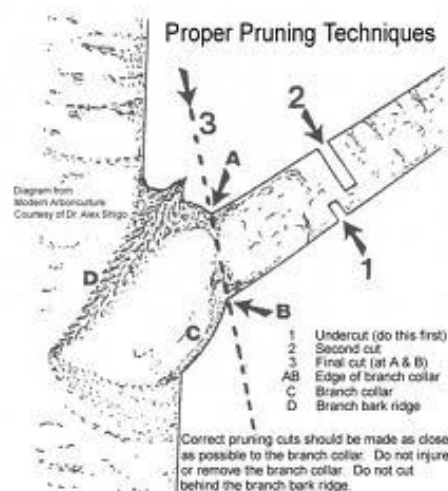
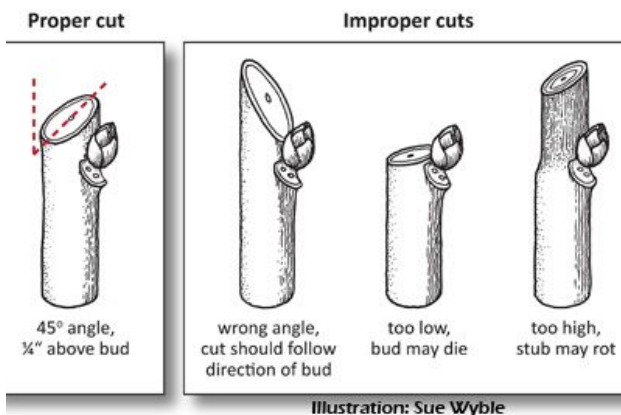
Pruning Tools: Select the right tool for the job



A. Bypass pruners: small diameter less than $\frac{3}{4}$ inch greenwood **B. Loppers:** for larger diameter branches (Anvil pruners and loppers with a flat bottom jaw are for cutting deadwood) **C. Pruning saw:** cuts too big for loppers **D. Chainsaw:** larger cuts **E. Polesaw:** for hard to reach branches

Sterilizing Tools: to prevent the spread of disease wipe debris off tool blades and then spray with 91% rubbing alcohol in-between each tree.

Maintaining and sharpening tools: keep metal parts oiled with tool oil, sharpen with a small diamond file only on originally sharpened surfaces! (pruners blades are only sharpened on one side!)



How, Where, and when to make cuts:

Growth ring: cut as close as possible but do not damage, this is what will heal over cut.

No stubs: leaving stubs prevents growth ring from healing over quickly.

Removing larger branches: first undercut to remove most of weight, then make clean final cut, this prevents bark tearing down and creating a hard to heal wound.

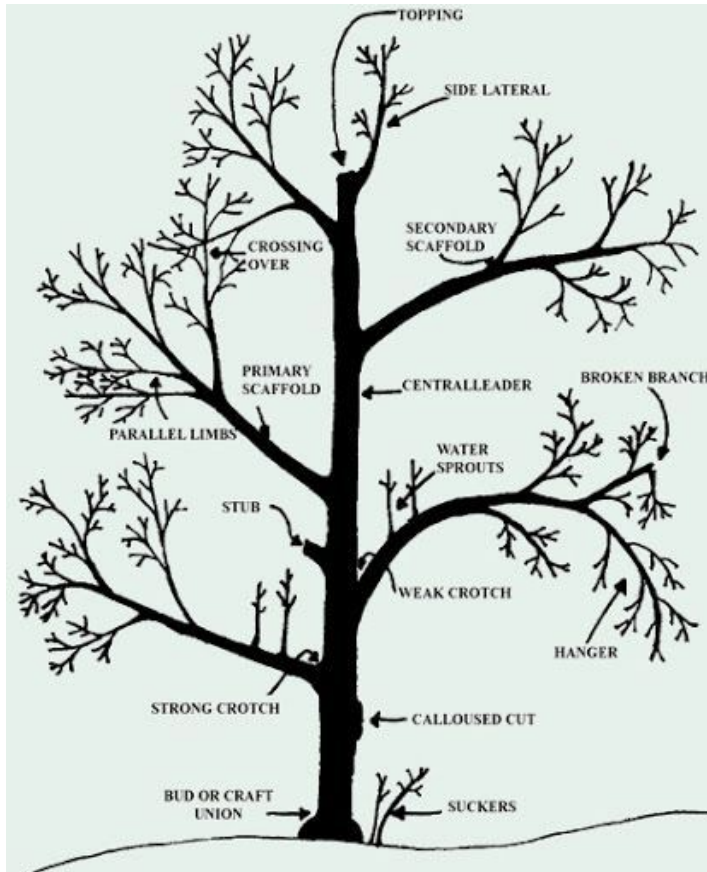
Topping: (removing central leader) for bringing trees back down to manageable size or to induce multiple leaders, careful of vigorous regrowth after, re-prune soon after to prevent “handing.”

Cleaning Wounds and Broken branches: large tear downs in bark should be pruned back if possible.

Preventing rot in very large cuts: pruning seal and or roofing scraps may be used to keep water out of very large pruning cuts or wounds (4-6 in or greater in diameter) while they are healing,

Preventing sunscald: if large areas of bark that were shaded are exposed suddenly to full sun the bark may burn, painting white keeps from burning, like sunscreen.

Timing around fruiting: Pruning after fruiting is often good timing



General rules for what to remove:

Dead: dry, brittle, no green

Diseased: cankers, etc

Dying: dropping most of leaves, etc

Crossing or rubbing branches: can create wounds that are hard to heal, wind keeps wounds open allows disease entry.

Branches growing towards Center of tree: are more likely to cross and congest airflow

Water Shoots: vigorous growth growing straight up

Suckers from rootstock: if left to grow will not be grafted variety

1/3 Rule: Usually not more than 1/3 of the tree at once. Avocado trees to be top-worked can be “stumpified”

Fertilizing fruit trees: Trees may need different fertilizers depending on their stage of growth

Young trees: more nitrogen (N)

Mature trees: more phosphorus(P) and potassium(K)

Further Reading: Pruning trees and shrubs: <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/L-8.pdf>

Pruning Basics: http://extension.oregonstate.edu/linn/sites/default/files/pruning_pub_handout2012.pdf

Pruning Avocado Trees: http://lee.ifas.ufl.edu/AgNatRes/Pubs/Pruning_Avocado_trees.pdf

Homework: Prune a fruit tree, or shrub following the information here and in pdfs above.

Next Week March 16: part 10. Staple Tree Crops (carbs): Bananas & Plantains

Learn to grow and use this super productive food plant from yard to table, including mulching, thinning, disease prevention, and more. Find out how to cook green bananas like potatoes!

Contact: Malama Aina Permaculture: Edible Landscape Design, Education & Nursery

We provide consultation, design, install, maintenance, edible plants & work-exchange.

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(Past class notes, registration and links to further educational materials available below)

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Malama Aina Permaculture