

Pruning Tropical Fruit Trees



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'Pruning'

The term "pruning" has come to mean everything from

- cutting,
- pinching,
- de-limbing,
- heading
- shaping
- trimming,
- disbudding,
- topping,
- shearing,
- thinning,
- Whatever the method or the term the aim is to keep people and property safe, and to keep plants healthy, productive, attractive, and in bounds.

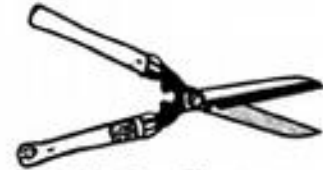


Pruning Tools and Gear

- Use the proper tools, wear safety gear, know where limbs will fall, count your fingers, and keep your ladder upright.



Bow Saw



Hedge Shears



Pruning Saw with D Grip



Lopping Shears



Pruning Saw with Crescent Grip



Combination Pole Saw-Pruner



Folding Saw



Draw Cut or Scissor-Action Pruners



Anvil or Snap Cut Pruners

Pruning for Safety

- Making sure woody plants don't injure people or structures
- Remove branches that threaten to fall and do damage.
- Trim limbs that may interfere with utility lines.
- Cut back growth that blocks the line of sight at driveway and street intersections
- Curb thorny plants that endanger passersby.
- Lighten vines that threaten to bring down trellises and other supports
- Tame plants that are growing into someone else's yard. (Avoid being sued).

Pruning for Good Health

For good health, begin with the two D's:

- Prune wood that is (1) damaged or (2) dead; it always needs to come off.
- Remove branches that rub against each other.
- Remove branches with weak, unnatural branch-union angles, as they are vulnerable to breaking.
- Remove suckers and thin out *water sprouts*, or *epicormic shoots*, which are weakly attached vertical shoots that emerge from latent buds.



Pruning to Limit Growth

The math is simple: Smaller equals more.

Pruning to Shape



You may want to prune off low limbs to reveal attractive bark or interesting stem and trunk forms—a technique called *lifting*—or

Pruning to Encourage Flowering and Fruiting

- Pruning young plants stimulates vegetative growth and delays the production of flowers and fruits.
- Note: for trees that bear fruit on terminals (for example mangos, lychees and longans) - the more terminals you have, the more fruit.



Pruning to Repair or Renew

- When a tree, shrub, or vine is damaged or allowed to outgrow its space, drastic surgery may be required.
- Severe pruning, which may mean topping (removing most or all of a plant's crown) or cutting plants to the ground, carries risks.
- Some species grow back successfully, but others respond less successfully—or not at all.
- If a mature tree needs to be topped, remove it instead.



When to cut?

- Right now is always the best time to remove dead or damaged wood.

Spring, after growth begins, is an acceptable time to;

- Cut out damaged or dead wood;
- Remove small shoots heading in the wrong direction;
- Pinch back new growth.



Caveat!!!

- Don't be a botanical butcher!
- Pruning stresses trees, shrubs, and vines—it's surgery, after all.
- A faultily pruned plant won't recover for years.



Experience teaches

- Over time you'll develop your own pruning techniques, but it never hurts to take advantage of others' knowledge and experience.



For the health of the plant:

- Respect the natural form of the plant when you prune.
- Don't overstress plants by cutting away too much at one time.
- Always cut back to healthy, living wood.



Make clean cuts.

- No ragged edges, no torn or bruised bark.
- Don't leave stubs and snags when you cut and saw.
- Don't expect pruning to solve problems created by an inadequate site or poor maintenance.



Heading Cuts and Thinning Cuts

- All pruning begins with these two basic approaches, Heading or Thinning.
- **Heading** or *heading back*, is cutting off a portion of a stem or branch. Since heading eliminates the terminal bud, it forces new growth close beneath the cut.



A badly placed heading cut

Heading cuts

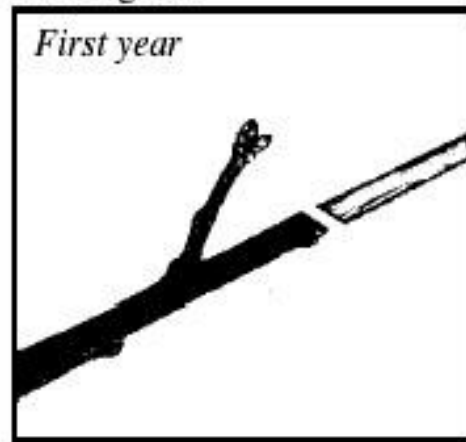
- The more stem you remove, the more vigorous the new growth on the portion that's left.
- If you want to invigorate a plant, to encourage branching and bushiness, heading back shoots and limbs is the way to do it.
- Heading back, which is also known as *tipping*, is most effective with young stems.



Heading cuts

- When heading, make your cuts above a node—the point on the stem where buds, leaves, or stems are attached. Now the bud or buds just below the cut become the stem's new growing point, or terminal.

Heading cut



Heading cuts

- Heading also affects flowering and fruiting because it alters the balance between above- and below-ground growth. The more stems and leaves you remove, the harder the plant tries to replace them—at the expense of flowers and fruits.
- Heading a young plant, especially, delays the development of flowers and fruits.
- Prune a mature plant lightly and blooms will be plentiful, but each fruit will be smaller; prune severely and flowers and fruits will be larger but fewer in number.

Heading 'severely'

- Heading the entire crown of a woody plant to reduce its height is known as *topping*, *stubbing*, or *lopping*.
- The approach, also called *hat racking* since the result resembles a hat rack, is used all too often by power, telephone, and cable companies to keep trees from growing into their lines.



Thinning

- **Thinning** is removing an entire shoot, stem, or branch back to its point of origin, the main stem, a lateral stem, or even to the ground.
- Thinning opens woody plants, promoting good health by reducing foliage and allowing more air and light to reach their interiors.
- It is less invigorating than heading, produces less re-growth, and better allows plants to retain their natural forms.
- Thinning cuts are also used on fruit trees to establish strong frameworks and to direct and shape growth.

Thinning cuts

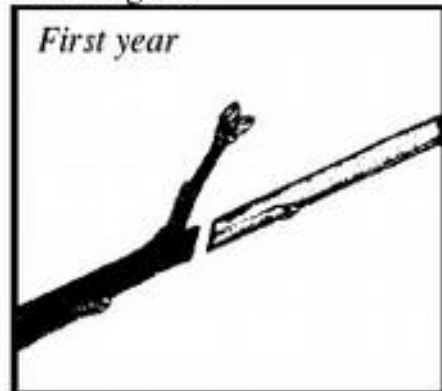


Before



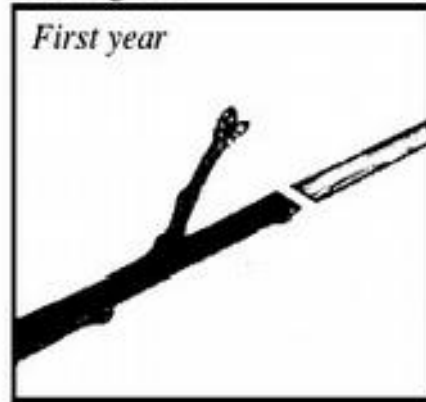
After

Thinning cut

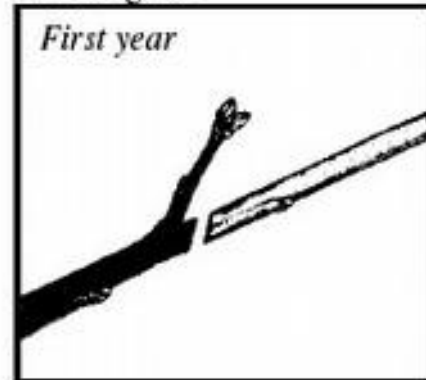


Heading and Thinning - *comparison*

Heading cut



Thinning cut



Heading and thinning cuts

Heading and thinning cuts have different effects on subsequent growth.

How Trees Heal

- Top Left: A tree is forming woundwood around the perimeter of a proper pruning cut.
- Top Right: Eventually, the tree will close off the wound completely.
- Bottom: If the bark on the trunk or the branch collar are injured when a branch is removed, the tree cannot form woundwood properly and is open to infection by pathogens.

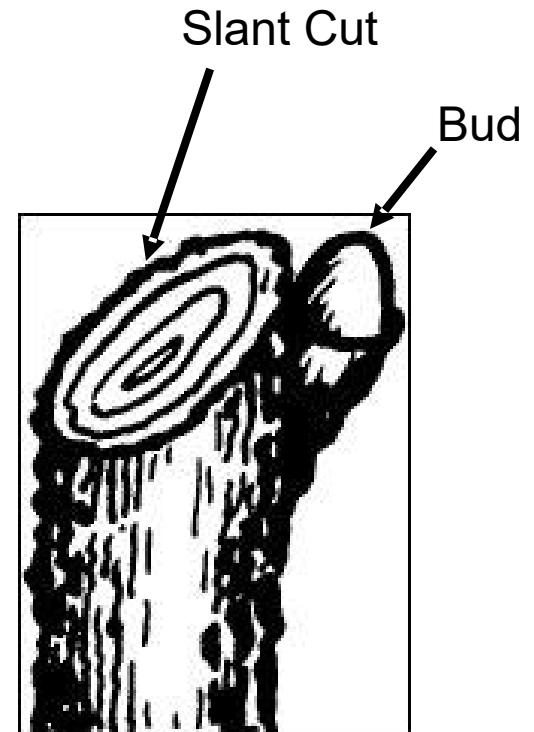


Photographs: Neil Soderstrom

Making your cuts

Small Cuts

- For jobs that can be done easily with pruning shears—cutting shoots, stems, and branches less than one inch in diameter—you have two choices.
- If you're heading, cut back to a bud that is pointing in the direction you want the new growth to go.
- Cut about a quarter inch above the bud, and slant the cut away from the bud



Making your cuts

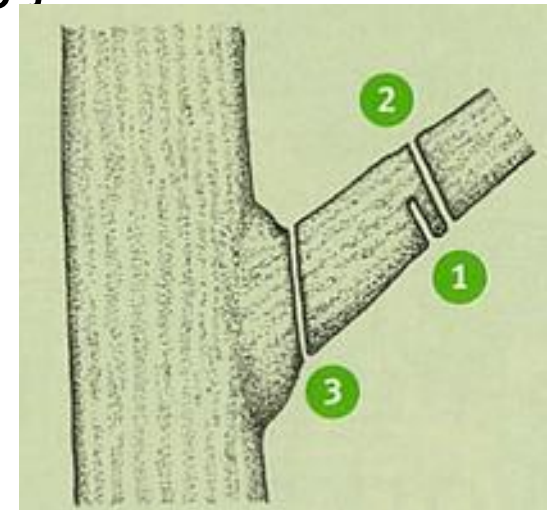
- **Large Cuts** Big thinning cuts—those made with a saw—are harder on plants.
- Big wounds close up more slowly, leaving plants open to infection. Always cut back to a branch with a diameter that is at least half as great as that of the limb you're removing.
- When taking off large limbs, either dead or living, be sure to cut to—but not into—the *branch collar*, the swollen area surrounding the base of a limb.
- The branch collar helps the plant to form a chemical barrier against pathogens that may attempt to enter through the open wound. It gives the plant protection while it closes up the cut surface with woundwood.



Good or bad?

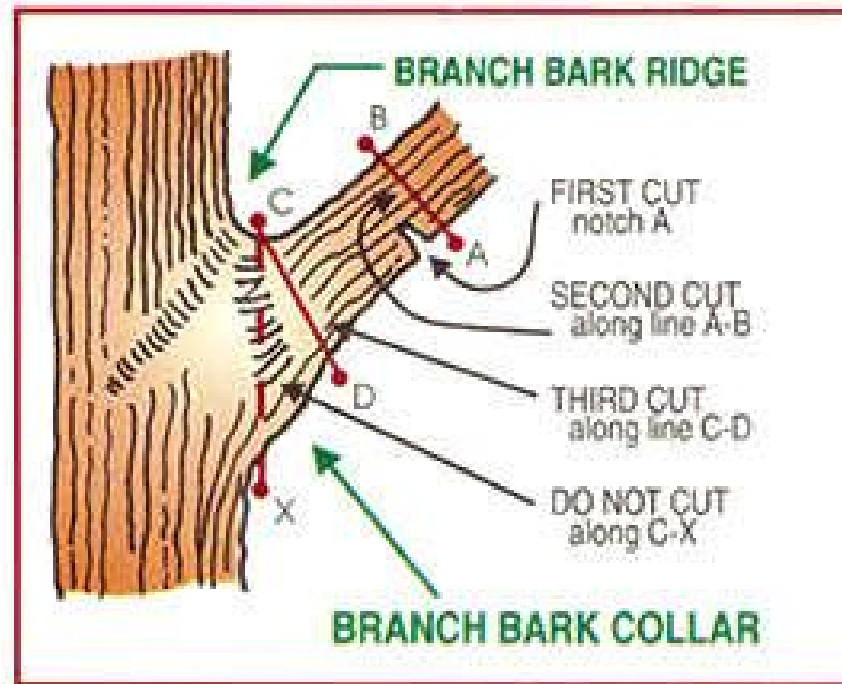
The Three-Cut Technique

- When removing large limbs it will be necessary to use a three-cut technique to avoid damage. If you'd rather be safe than sorry, use this technique every time you work with a saw rather than hand pruners.
- **Step 1** Notch under the limb upward, 6 to 12 inches from the trunk or branch, stopping before the saw binds.
- **Step 2** Cut through the limb from the top, 1 to 3 inches beyond the underneath notch until the limb falls.
- **Step 3** Remove the remaining stub, cutting just outside the branch collar and bark ridge.



The Three-Cut Technique – *Another illustration*

Cuts should be done as follows:



Should Tree Wounds Be Dressed?

- Tree wound dressings, a.k.a. pruning paints, once were standard treatment for cuts larger than an inch or two. The theory was that they prevented disease and insect damage to (and through) the wound.
- More recently, researchers have established that bituminous paints and other wound dressings not only don't prevent damage, they may do damage by slowing the formation of woundwood.



**"That's
all
folks!"**

