

Intro to Winter Fruit Tree Pruning

Why Prune?

Most fruit trees are the result of centuries of breeding, which means they've evolved in close relationship with human care. We also live in a wet, temperate climate, which makes trees more susceptible to diseases that result from lack of adequate air flow or light penetration.

Pruning allows us to establish a strong structure for the tree to prevent breakage; encourage airflow and light penetration to prevent disease; encourage fruiting wood and increase sunlight for a better harvest; and create a tree that fits our environment and access needs.

When to Prune?

Pruning times generally fall into two main categories: winter/dormant season (January to early March), and active/summer season (mid-July to mid-September). Most fruit tree pruning is done in late winter/early spring when the tree is dormant and helps establish and maintain structure, stimulating growth and easier access to your tree. Summer pruning can help to manage the size of your tree, reduce issues with watershoots, and discourage certain diseases (especially for plums, cherries, and other stone fruits).

Tools and Tool Care

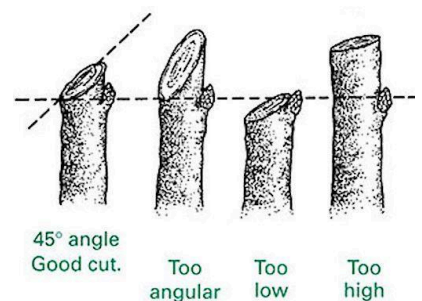
Having the right tools to care for your fruit tree helps to ensure that you are making clean, accurate cuts that support the trees' overall health. The right tools also help you stay safer while working on taller trees. Here is a list of some tools and equipment you may choose to use when pruning, along with recommendations and notes:

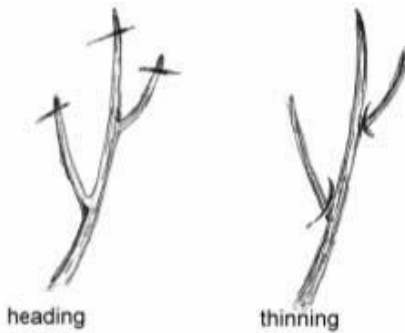
1. By-pass secateurs
 - a. Consists of two blades that cross over (like scissors). Creates a much cleaner cut compared to anvil secateurs.
 - b. Use for pruning cuts less than 1/2" in diameter.
 - c. Tool recommendation: Felco.
2. Pruning saw
 - a. Consists of a narrow blade which allows for accurate cuts in tight spots. Often curved, can be fixed or folding.
 - b. Use for pruning cuts greater than 1/2" in diameter.
 - c. Tool recommendation: Silky.

3. Orchard ladder
 - a. 3-legged tripod form allows for safety and stability on soft and uneven surfaces.
 - b. Note that orchard ladders without center chains CANNOT safely be used on hard surfaces such as concrete.
 - c. Tool recommendation: Hasegawa from Gardener's Kit for added stability and flexibility of use; standard aluminum from Integrity Farm Supply for affordability.
4. Pole saw/pruners
 - a. Helpful for reaching challenging spots; often telescoping. Can come in separate tools (that is, one pole saw and one pruner) or as a multi-tool, which is one implement with both parts.
 - b. Tend to make less accurate and clean cuts as compared to hand tools.
 - c. Tool recommendations: If using these, consider purchasing a separate pole saw and pole pruners to allow for better maneuverability in the tree.
5. Loppers
 - a. Can be tempting to use for medium sized cuts, but tends to be inaccurate. We recommend using a pruning saw instead.
6. Tool care
 - a. 70-90% Rubbing Alcohol
 - i. Use in a spray bottle to sterilize cutting surfaces between trees or after cutting diseased wood.
 - ii. Use with an old toothbrush to clean out and sterilize the teeth of pruning saws
 - b. Sharpening stick/tool
 - i. Use to maintain a sharp blade on secateurs and loppers.
 - c. Mineral oil
 - i. Use to keep secateurs pivoting smoothly and help protect against rust

Types of Pruning Cuts

1. Heading Cuts stimulate lateral branching to fill out gaps in the canopy. Cut the shoot straight across just above at a bud, at any point along its length. Heading cuts result in new branching from the 2 or 3 buds directly below the cut, or direct growth into the lateral.



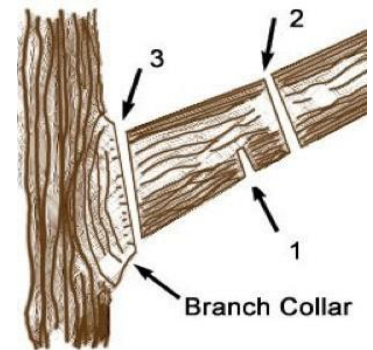


cut.

2. Removal Cuts are a type of thinning cut that involve removing the branch at its point of origin, where it is joined to the next largest branch. For larger branches ensure you are cutting just outside of the tree collar, not into it.

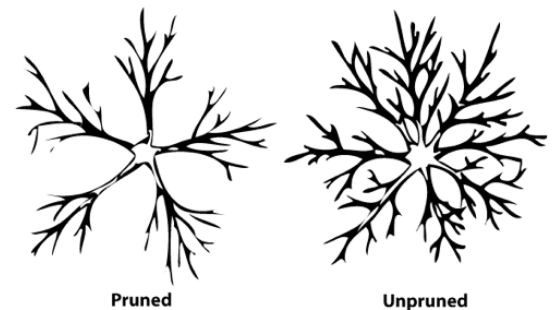
3. Reduction Cuts are another type of thinning cut, which involve reducing the length of a branch back to a side shoot or secondary branch. When making a reduction cut, the branch you are cutting back to must be at least $\frac{1}{3}$ the diameter of the branch being cut.

4. The 3- Point Cut is used to avoid tearing the bark when removing large limbs. An undercut (1) about $\frac{1}{3}$ the diameter of the branch creates a breaking point that stops any bark tearing if the branch falls prematurely while making your through cut (2). Without the extra weight, the final cut (3) can be made with more precision.



Pruning Your Tree

1. First, remove dead, diseased, and/or damaged wood, as well as any suckers emerging from the base of the tree. Dead and diseased wood can be removed at any time of the year, but should always be your first step in a proper prune.
2. Identify and remove watershoots (branches growing straight upwards) that are causing congestion. Some watershoots can be shortened rather than removed to develop new branches or spur networks.
3. Make your biggest pruning cuts first, and save heading and thinning new growth until last. For large branches, use the 3-cut method to avoid tearing the bark .
4. For younger trees, prune for 3-5 main scaffolding branches that are spaced both evenly up the trunk and around the trunk if viewed from above (see figure at right).
5. Prune out branches that are growing back through the centre, or that are crossing and rubbing with other branches. All major branches should move from the trunk away from the centre like an outstretched hand, ideally at a 20-45° angle upwards.



6. Try mentally dividing the tree into four quarters. Start in one quarter, and prune from the top of the tree and work downwards, and from the centre of the tree outwards on each scaffolding branch.
7. Consider your space and access needs. If you want to be able to move around easily under the tree, remove low-hanging branches. If you want to be able to pick apples from the ground, focus on opening the canopy for light penetration so lower branches are healthy and fruitful.
8. Don't remove more than 1/3 of the tree in any given year, unless you are doing a major renovation. If you prune heavily, you will need to come back in the summer and following spring to manage re-growth.
9. Plan for future fruit!
 - a. Apples and pears fruit on fruiting spurs, which form on wood that is 2+ years old. Help form more fruiting spurs by heading back new growth to 2-5 buds.
 - b. Most figs only reliably produce the Breva crop in our climate, which forms on last year's growth. Cut hard back into ½ of branches, leaving the other half untouched to maintain plant size without removing all fruit.
 - c. Grapes and kiwis are very vigorous growers that produce best on new wood growing off of last year's wood. Prune back hard to a framework, leaving spurs with 1-2 buds of last year's growth.
10. Avoid pruning stone fruit (e.g., peaches, plums, cherries, nectarines) in winter to reduce disease issues. Instead, prune during the summer window.

Additional Resources

Helpful overview: *Good to Know: Apple Pruning 101* (article and video in english and spanish)
<https://goodfruit.com/good-to-know-apple-pruning-101-video/>

Dive deep: *The Holistic Orchard: Tree Fruits and Berries the Biological Way* by Michael Phillips; *RHS Pruning and Training* by Christopher Brickell.

Figs: Bob Duncan of Fruit Trees and More (<https://fruittreesandmore.com/>) has numerous youtube videos on growing and pruning figs, citrus and mediterranean fruit trees for our climate

LifeCycles Fruit Tree Care Booklet

<https://lifecyclesproject.ca/app/uploads/2018/12/LifeCycles-Fruit-Tree-Care-Booklet.pdf>

Members of the BC Fruit Testers Association have access to online resources, (<https://bcfta.ca/>) for more info