

Intro to Pruning: Summer Edition

Why Summer Prune?

Most fruit trees are the result of centuries of breeding, and have evolved in close relationship with human care. Pruning allows us to: establish a strong structure for the tree to prevent breakage; encourage airflow and light penetration to prevent disease; enhance fruiting wood and increase sunlight for a better harvest; and create a tree that fits our environment and access needs. More specifically, summer pruning allows us to manage the size and vigour of your tree, avoid certain diseases (especially for plums, cherries and other stone fruits), and develop new fruiting buds earlier.

Broadly speaking, summer pruning accomplishes two outcomes. The first is size and vigour control. By removing mature shoots in the summer you reduce photosynthesis, thereby restricting how much energy the tree can store for the winter. This has a mild dwarfing effect, and is a great way to deal with overgrown trees that are being renovated, restricted forms, such as espalier, and for managing vigorous species like plums and pears. The second effect is really a consequence of the first. By removing the recently grown shoot, you also temporarily remove the hormones that dampen lateral side branching. This allows leaf buds lower in the branch to transition into flower buds, making your tree more fruitful.

When to Prune?

The window for summer pruning opens in July after this year's new shoots have started to harden off at the base. Test the timing by bending a pencil sized new shoot. If it breaks with an audible 'snap,' pruning can commence. Continue to summer prune until mid-September, but not later. Any new side shoots resulting from your cuts need a good 6 weeks to harden off before the first frosts of November. Cuts made earlier in the summer pruning window will throw up weak side shoots and may even set flower buds that on rare occasions actually bloom. Cuts made in early September have a greater vigour-dampening effect, and may shoot, but won't reliably set new flower buds. Very vigorous trees, especially in years with lots of growth, can be pruned both in early July and early September.

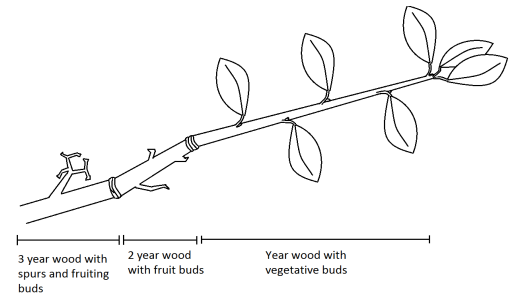
Tree Anatomy?

Good pruning depends on knowing the different parts of the tree and being aware of how your cuts will affect their growth. It helps to set out some shared language.

The *trunk* is obvious, and most people can distinguish the *main scaffold limbs* from the *secondary lateral branches*. Shrinking in scale, a *shoot* refers to a portion of new growth without laterals grown in the last year. A so-called "sucker" is a type of shoot that occurs at the base of the tree or below

the first desirable scaffolding limbs. A “water-sprout” refers to a vigorous vertical shoot, usually growing in opposition to the canopy. Shoots are vegetative and unfruitful but provide opportunities to shape your tree's structure.

In contrast, a *fruiting spur* is a small branch system with a short stem that grows perpendicular to its parent branch. Spurs are defined by the presence of *fruiting buds*, which are fatter and rounder than leaf buds, and tend to stand proud. A shoot, left unpruned, will eventually develop fruiting spurs, but rarely in positions optimal for supporting fruit. In a multi-year shoot, you can distinguish growth years by finding the *basal node* best described as a wrinkled collar the circumference of the branch (see image). Basal nodes between year 1 and 2 growth will be accompanied by a whirl of slender leaves in the summer months.



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 ½" 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 ½" 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

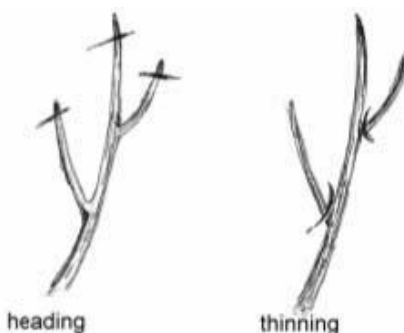
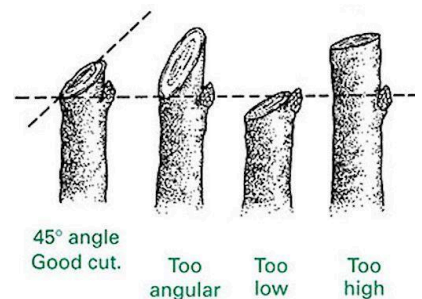
- Helpful for reaching challenging spots; often telescoping. Can come in separate tools (that is, one pole saw and one pruner) or as a multi-tool, which is one implement with both parts.
- Tend to make less accurate and clean cuts as compared to hand tools.
- Tool recommendations: If using these, consider purchasing a separate pole saw and pole pruners to allow for better maneuverability in the tree.

5. Tool care

- 70% Rubbing Alcohol
 - Use in a spray bottle to sterilize cutting surfaces between trees or after cutting diseased wood.
 - Use with an old toothbrush to clean out and sterilize the teeth of pruning saws
- Sharpening stick/tool
 - Use to maintain a sharp blade on secateurs and loppers.
- Mineral oil
 - Use to keep secateurs pivoting smoothly and help protect against rust

Types of Pruning Cuts

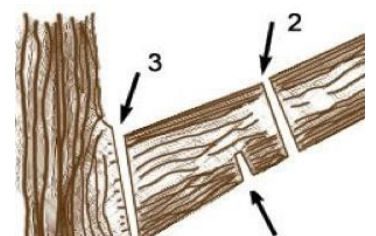
- Heading Cuts stimulate lateral branching to fill out gaps in the canopy. Cut the shoot straight across just above at a bud, at any point along its length. Heading cuts result in new branching from the 2 or 3 buds directly below the cut, or direct growth into the lateral.



cut.

- 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.

- 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.

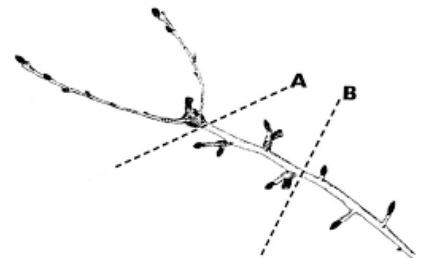


4. The 3- Point Cut is used to avoid tearing the bark when removing large limbs. An undercut (1) about $\frac{1}{3}$ the diameter of the branch creates a breaking point that stops any bark tearing if the branch falls prematurely while making your through cut (2). Without the extra weight, the final cut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

How to Summer Prune?

Summer pruning is primarily focused on the present year's shoots and other small diameter growth. The following is a sequence you can follow when approaching your tree.

1. Start by removing suckers from the base of the tree. Just like any cut, remove them back to the collar and don't leave any stubs.
2. Next, look for weak lateral shoots that are well placed to support future fruit. The ideal branch angle is 45° , but really as long as it is not oriented straight down, you can work with it. Count 3-5 buds (aka leaves) above the ring of leaves that mark the basal node and make a heading cut. Try to favour an outward facing bud, where possible. You don't have to head back all of the shoots. You may choose to leave some shoots for winter pruning in locations where you want to fill out the structure.
3. As you go, remove shoots in the interior of the tree that are growing inwards, and water-sprouts that have emerged from thinning cuts made in a previous year. A note of nuance, here. Not all shoots are 'water-sprouts', and not all vertical shoots need to be removed. Think about where the shoot is located in the overall structure of the tree. Is there a gap? Would it be nice to have another branch here? Maybe just a short fruiting spur? Often, verticals can be headed back to create a second layer of fruit. Be thoughtful. Consider the future. Still unsure? Just head it back the 3-5 buds and see what happens. You can always cut it off later.
4. Remember the goal is more fruit, not more tree! For every cut you make, consider how it will encourage or support fruiting spurs. Cutting perpendicularly to an existing fruiting spur, will terminate a branch and stop it from growing more shoots. This is a good way to set up a consistent spur system.
5. A note on plums. Most prunus species are quite susceptible to moisture loving fungal and bacterial diseases and are best pruned when it's dry. There are basically two windows, after blossom (if you are still trying to build the tree's structure) or early in the summer window. Focus on



thinning cuts and opening of the canopy. Peaches will fruit on the present year's growth, so avoid too much thinning of new growth when summer pruning.

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

Victoria Tool Library has a range of pruning equipment including an orchard ladder

<https://victoriatoollibrary.org/>