



CORONA

SEASON AFTER SEASON

PRINCIPLES OF PRUNING



The Definitive Guide for Pruning Confidence

CORONA®

MAX



Corona's best-in-class tools, designed for professionals and passionate gardeners looking for heavy-duty durability and lasting performance, season after season.

- **Maximum sharpness/durability/strength**
- **Forged, heavy-gauge steel and higher quality materials offering strength and performance**
- **Limited Lifetime Warranty**
- **Extensive replacement parts program**
- **Founded on Corona's heritage**

CORONA®

RED



Designed for general, less intense use by casual gardeners and landscaping enthusiasts who want comfort and control.

- Feature-rich tools with value-oriented performance
- Limited Warranty
- Limited replacement parts

THE PRINCIPLES OF PRUNING

Proper pruning improves shrubs and trees in any number of important respects, but improper pruning can be more harmful than none at all. Confidence and skill in pruning is gained through experience, so do not shy away from the task. On the other hand, understand the basics before proceeding.

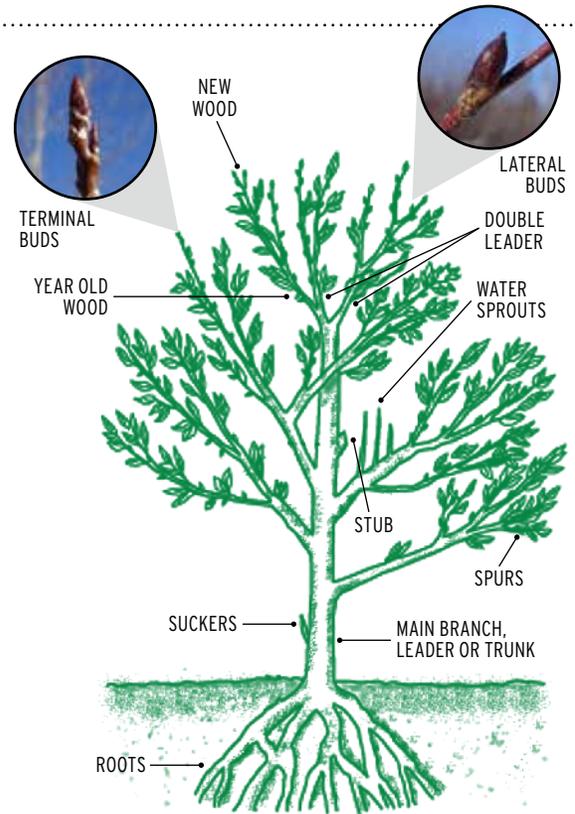
The principal reasons for pruning are:

- To produce more or better blooms and/or fruits.
- To develop or maintain a desired size or appearance. Most of us have small gardens and vigorous modern plants. Prune to save room for an interesting variety of plants and to keep plants from becoming leggy or scrubby.
- To re-establish a balance between root and branch systems after transplanting.
- To train a young plant. Pruning now to encourage balanced, open growth saves effort later.
- To rejuvenate, older, neglected shrubs. Removal of old, over crowded stems or limbs encourages the growth of vigorous young ones.
- To maintain health. Regular removal of dead or diseased wood keeps plants healthy. Maintenance pruning includes removal of dense growth to let light and air reach the inner and lower stems.
- To repair injury. Damaged wood, whatever the cause, is not unsightly, it is an open invitation to disease-causing organisms.

Download the companion guide
Principles of Planting
at coronatusa.com

HOW PLANTS GROW

Before you start out to prune, learn how plants grow. Trees and shrubs put on new growth each year from the ends of the branches (terminal buds) and from side branches (lateral buds). A plant's direction and rate of growth are determined by its terminal buds. Lateral buds form branches and twigs that fill in the skeleton of major branches. Dormant buds, which are much less obvious and sometimes hidden below the bark, held in reserve. They only begin to grow if the plant suffers injury to its terminal and lateral buds. A key to skillful pruning is learning how to take advantage of lateral and dormant buds in redirecting growth or rejuvenating a plant.



PRUNING TOOLS

When selecting a pruning tool, the most important thing to consider, is it the right tool for the job. The right tool will assure that you are successful, get the job done confidently instead of quickly, is better for the plant or tree and save excess wear and tear on you. Tools are an investment so purchase the best tool you can afford. Quality tools, when properly cared for, will last many seasons and do a far better job than cheaply made ones. Both you and your plants will benefit so choosing the right, quality tools from the start, will provide years of lasting performance.

All backyard pruning can be done with just three or four single hand tools. If a job calls for power tools, it is probably not a pruning job and you should seek a certified professional. **See treecaretips.org**

Recommended tools for proper pruning

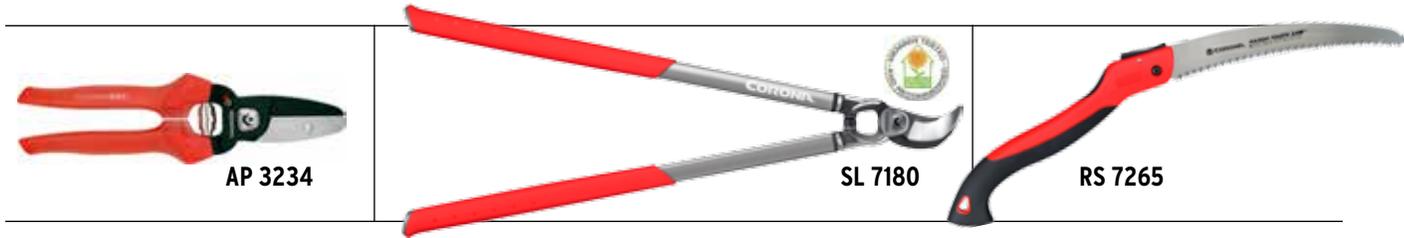
A pair of hand pruners is a necessity. Choose them carefully and select the pruner that is comfortable in your hand and is best suited for the job you intend to do.

There are two styles of hand pruners:

Bypass which employ scissor-like cutting (cutting blade passes by the hook) of fresh, green limbs and branches. They are the ideal choice for making the cleanest, closest cuts that will help plants heal faster and leave minimal opportunity for diseases. If you are cutting limbs or vines with sap, look for one with a sap groove to prevent the blade from gumming up and sticking together.



PRUNING TOOLS



Anvil have a straight-edged blade that cuts against a soft metal anvil. They are ideal for cutting harder, dead wood and should not be used on live stems as it will crush it rather than leave a smooth cut.

NOTE: *Bypass and anvil pruners serve two different purposes and should not be considered interchangeable. Using a hand pruner in a manner for which it was not designed can cause damage to the tool, the plant, as well as bodily injuries.*



Be sure to also pay attention to the pruner's rated cutting capacity. You should not attempt to cut stems that have a larger diameter than the recommended cutting capacity. If

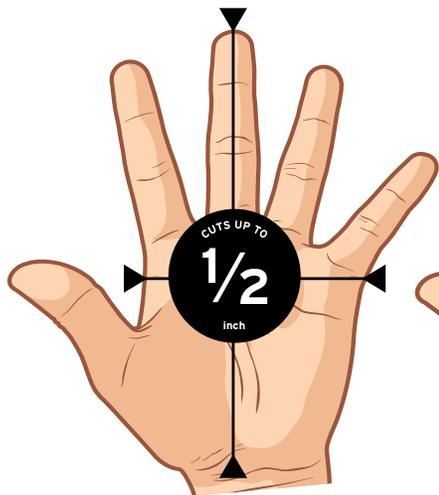
you have to open the tool wider than its natural open position, the limb is likely bigger than the pruner is designed to cut. When in doubt go with a larger cutting tool like a lopper.

Loppers are long-handled pruning shears that require two hands to use, providing additional leverage while making larger cuts up to 3 inches depending on the recommended cutting capacity. Loppers are useful for pruning hard-to-reach or thorny growth and cutting up discarded branches for the green waste bin.

Pruning Saws are for branches greater than 1-inch in diameter. Pruning saws have curved blades designed to cut on the pull stroke to help remain in the cutting channel, making cuts quickly and evenly.

PRUNING TOOLS

Choose the proper hand pruner:



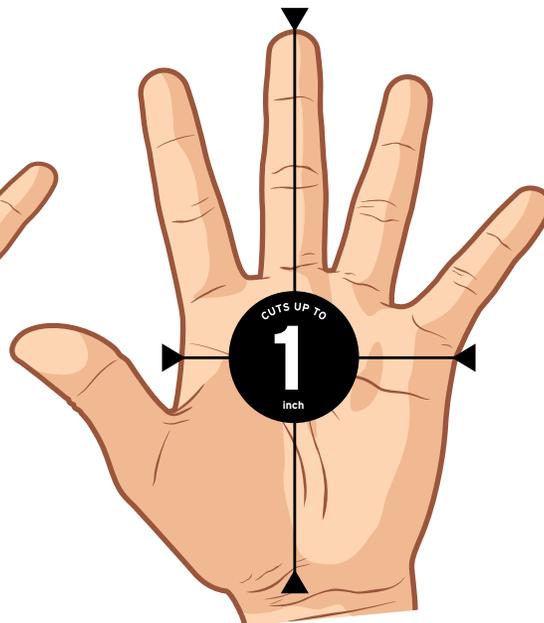
SMALL HANDS

Wide: less than $3 \frac{1}{4}$ inch
Height: less than $6 \frac{1}{4}$ inch



MEDIUM HANDS

Wide: $3 \frac{1}{2}$ to 4 inch
Height: $6 \frac{1}{2}$ to 8 inch



LARGE HANDS

Wide: more than 4 inch
Height: more than 8 inch

Small Hands



U.S. Patent 5,483,747

BP 3130

- Resharpenable bypass blade



BP 3224

- Specially coated non-stick blade

Medium Hands



U.S. Patent 5,483,747

BP 3160

- Resharpenable bypass blade



BP 3214

- Specially coated non-stick blade



BP 6310

- Replaceable resharpenable bypass blade



AP 3234

- Specially coated non-stick blade

Large Hands



U.S. Patent 5,483,747

BP 3180

- Replaceable resharpenable bypass blade



Patents
U.S. D660,104, D664,406, 8,910,386
Canada 2,775,512

BP 7100

- Resharpenable bypass blade



BP 6250

- Replaceable resharpenable bypass blade



BP 6340

- For left handed users
- Replaceable resharpenable bypass blade

PRUNING TOOLS



TP 6870

Tree Pruners or **Pole Pruners** are handy for high work, especially in places where using a ladder would be dangerous. Do not attempt to cut dead wood more than 1-inch in diameter with a pole pruner.



HS 4344

Hedge Shears are long-handled shears with straight blades at least 8 inches long designed to clip soft young growth on hedges and smaller vines. They will not cleanly cut older, harder wood and should not be used in place of hand shears or loppers.

TIPS FOR MAINTAINING YOUR TOOLS

Pruning tool blades that are coated with sap or debris, rusted or dull will decrease their performance. It will be harder to make cuts and will not cut cleanly, that to which will present opportunities for disease and pests.

Clean tools after each use with a moistened cloth or towelette with water and mild cleaner like Lysol® or Pine Sol® to remove loose debris. For harder, caked on debris, go for a stiff wire brush, then wipe them down with a moist cloth.

Sharpening Your Tools - Sharp tools will make better cuts and require less effort to power through cuts. Use a file to make 4-5 passes on the cutting side of the blade (beveled) and once on the flat edge to remove metal burrs. It takes only a few seconds but will help keep your tools cutting like new.

TIP: *Sharpening might be one of the most important tasks for maintaining your pruning tools. You can also apply the same principle to digging tools. Sharpening your shovels and hoes will help you cut through hard soils and roots easier, too.*



TIPS FOR MAINTAINING YOUR TOOLS

Protect the Metal - Apply a generous coat of machine or natural oil on the exposed metal. It will form a protective coating that prevents moisture and water from collecting on the metal. It also helps prevent debris from sticking to the tools during use, making them easier to wipe clean. Give wood handles a coat of linseed oil to protect the finish and prevent moisture from getting on the wood.

Disinfecting Blades - To prevent the spread of diseases from one plant to another, exposed tools should be disinfected. Avoid using harsh chemicals such as bleach on metal as studies show they can break down or degrade the metal over time. Using rubbing alcohol will disinfect the tool, evaporate quickly and will not leave the tool vulnerable to rust.

Rust Removal - It happens, if your pruner or lopper spends a season out in the elements, or was not properly cleaned after use, it will likely rust. Depending on how bad it is, use a fine grit sand paper to remove light rust. If the rust is severe, replace the blade, if the tool has that option. Many Corona MAX tools offer genuine replacement parts available on our website.

TIP: *Do not use steel wool, it can introduce metal burrs into the blade that are prone to rust.*

Inspection - Before putting up your tools at the end of the season or before the season begins, inspect your tools for signs of wear that will affect performance. Check for stress cracks in wooden handles, loose pivot bolts and springs.

Warranty - Most tools come with some form of warranty from the manufacturer that will help repair or replace your tool if there is a material defect. Although every tool wears out eventually, you can bet if you have done all of the above and properly cared for your tools, the company is more likely to honor it and take care of the problem. Neglecting or using tools for an unintended purpose could likely void the warranty.

PRUNING CUTS EVERY GARDENERS SHOULD KNOW

Presented by:

 MONROVIA

Grow Beautifully

Pruning is necessary to promote good plant health, remove damaged limbs, encourage new growth, and maintain shape. There are four basic pruning cuts, each aimed at producing a different effect. Use sharp, clean tools and wipe-down blades with a clean cloth when moving from plant to plant.

Tip: For cuts that involve cutting above a growth bud, angle it at about 45 degrees, with the lowest point of the cut opposite the bud and even with it, the highest point about 1/4 inch above the bud.

Pinching

To stop a stem from growing longer, help shape a small-leafed shrub, and to encourage bushy growth, pinch the terminal bud (the new clusters of leaves at the tip of a stem with your thumb and forefinger. Do this with annual and perennial flowers.

Heading

To encourage dense growth, shorten branches, redirect growth and help shape small shrubs and flowering perennials, cut further back on the shoot than with pinching. Use hand-pruners to remove a portion of the branch to just above a healthy bud or side branch.

Thinning

To shorten limbs, improve light penetration into plants and to direct the growth of shoots or limbs, remove an entire limb or branch either back to its point of origin on the main stem or to the point where it joins another branch. Use hand-held pruners, loppers, or a pruning saw to make thinning cuts, depending on the thickness of the branch being cut.

Shearing

To create a hedge or bush with a spherical or square form on small-leafed plants such as boxwoods, use hand-held or electric hedge shears to closely trim leaves until the desired shape is achieved. Shearing stimulates many buds to produce new growth, so you'll be repeating the job regularly once you start.



PRUNING THROUGH THE LIFE OF A TREE



Presented by:

Proper pruning will get a tree off to a good start and keep it safe and healthy through its life.

There are several reasons to prune a tree:

- **Structure** - make sure a young tree develops a strong, balanced structure
- **Sight lines** - remove branches that would impede roads, signs or sidewalks
- **Safety** - keep branches from growing into buildings or power lines
- **Health** - remove dead, cracked or diseased branches before they fall

Let's dig a little deeper to learn more about each of these reasons for tree pruning:

Structure: Pruning a young tree to encourage the right structure can eliminate many problems later on. Trees of most species are strongest if they have a

strong central leader—one stem that leads straight up through the center, with other branches spaced more or less evenly around it.

Good nurseries prune saplings properly, so when you buy a young tree, check for that strong central stem.

Bear in mind, though, that each kind of tree has a characteristic form, which may be very different between species. This form may not be as apparent in a young tree as it will be later on. Before you buy a tree, research the species you're considering so you know what shape and size to expect and how it should be pruned.

Clearance: As the tree grows, it may become necessary to remove some side branches to keep a sidewalk, sign or driveway clear, or to prevent branches from coming into contact with buildings or power lines.

It's best to anticipate problems and prune out these branches when they're small enough to remove easily and safely. Once a tree is large enough that

PRUNING THROUGH THE LIFE OF A TREE

pruning would require a ladder, your wisest move is to call in a professional. Pruning without the proper knowledge and training can not only lead to accidents, but do long-term damage to a tree, causing it to decline or die.

Certified arborists are trained not only in safety but in tree care. They know how each kind of tree needs to be pruned to preserve its characteristic form.

Eliminating hazards: As a tree grows overtime, it becomes more beautiful, casts more shade and adds more to the value of the property. But it also becomes larger and heavier. Over time, some branches may crack in high winds, become infected with disease or start to rot. Rather than waiting for them to fall and cause damage, have a professional arborist check large trees regularly.

A professional can remove problem branches before they become unstable, as well as checking the tree's overall health.

Each species has a different natural lifespan; some trees naturally begin to decay in just a few decades, and others may live for hundreds of years. A trained professional will know what hazards and stresses to look for in each species. Regular professional pruning can often extend the life of a tree so you can enjoy its beauty safely for many years to come.

Visit [treecaretips.org](https://www.treecaretips.org) to locate a certified arborist

[loveyourlandscape.org](https://www.loveyourlandscape.org)
for professional landscapers



TREE PRUNING METHODS

Presented by:



Proper pruning is an art based on scientific principles of plant physiology. At its most basic level, pruning trees involves removing damaged, dead or structurally weak limbs, which will improve a tree's health and reduce the chances of personal or property damage caused by falling limbs. More advanced pruning methods aid in improving the tree's structure and long-term health.

There are four basic methods for tree pruning:

Clean

Selective pruning to remove one or more of the following parts: dead, diseased, and/or broken branches. This type of pruning is done to reduce the risk of branches falling from the tree and to reduce the movement of decay, insects and diseases from dead or dying branches into the rest of the tree. Cleaning is the preferred pruning method for mature trees because it does not remove live branches unnecessarily.

Thin

Selective pruning to reduce density of live branches. Thinning trees reduces the density at the edge of the crown, not the interior, which increases sunlight penetration and air movement.

Raise

Selective pruning to provide vertical clearance. Crown raising shortens or removes lower branches of a tree to provide clearance for buildings, signs, vehicles, pedestrians, and vistas.

Reduce

Selective pruning to decrease height and/or spread. This type of pruning is done to minimize risk of failure, to reduce height or spread, for utility line clearance, to clear vegetation from buildings or other structures, or to improve the appearance of the plant. Not all tree and shrub species can tolerate reduction pruning, so the species and plant health should be considered.

There are also certain pruning practices that are not acceptable and can injure trees:

Topping

The reduction of a tree's size using cuts that shorten limbs or branches back to a predetermined crown limit, often leaving large stubs.

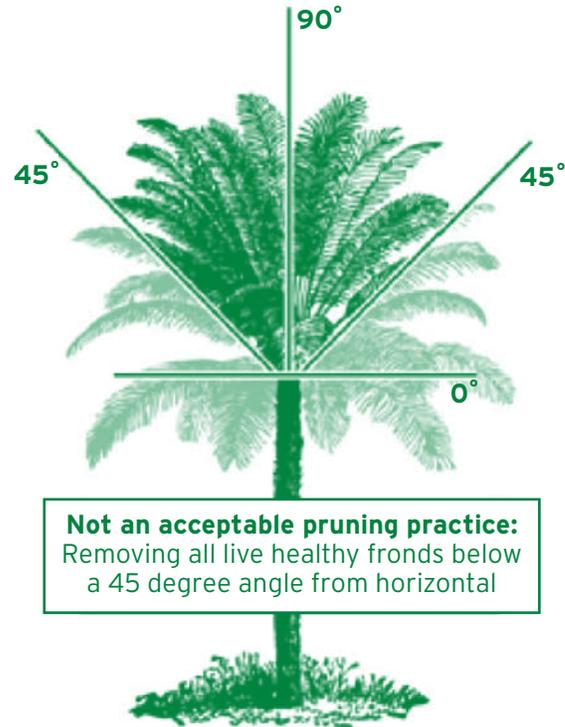
Lion's Tailing

The removal of an excessive number of inner branches from the tree.

Rooster-Tailing

The over-thinning of palms by removing too many lower fronds.

An understanding of the end goals lie at the heart of good pruning. Before beginning work, it is imperative that your plans include the objectives of pruning, the pruning types to be used, the size range of branches to remove, the percentage of live crown to be removed, and the location of branches.



PRUNING DOs AND DON'Ts

Presented by:



DO:

- Ask your arborist or tree care company if they prune according to the American National Standards Institute standard for tree pruning, which is called ANSI A300. This standard recommends, and in some cases requires, that the use of certain tools, cutting techniques and pruning methods be followed, and sets the standard definitions for terms the arborist will use in your estimate. Properly written work estimates for tree pruning should be written in accordance with ANSI A300 standards.
- Remember that poor pruning can cause damage that lasts for the life of the tree.
- Assess your trees after a storm to see if there is pruning needed.



PRUNING DOS AND DON'TS



DON'T:

- Prune without a good reason
- Remove any more than 25 percent of foliage during a growing season.
- Prune a newly planted tree for the first year, unless you are removing dead or broken branches.
- Prune within 10 feet of a utility conductor - leave it to the pros.
- Try to tackle a pruning job that requires a chain saw and ladder work - leave it to the pros.
- Leave branch stubs, or cut off the branch collar (not make a flush cut).
- Climb the tree with climbing spikes
- Use wound paint



PRUNING FAQS

Q: What is the best time of year to prune?

Although it all depends on your pruning objectives, most trees can be pruned year-round, if pruned properly. In fact, winter can often be the best time for an arborist to prune. Since the leaves are off, the view of the entire tree's architecture is clear and a thorough check can be performed. They can locate deadwood by looking for changes in branch color, fungus growth, cracks, and other symptoms that can help them make this determination. It's worth noting that some areas may have pruning restrictions in place if a particular insect or disease is a problem. Contact your local county extension office to find any pruning restrictions.

Q: How often do I need to have my trees pruned?

Trees have deadwood pruned out regularly, at least once per year.

Q: What tools do I need to prune my own trees?

If you are pruning a smaller tree, the three basic tools are: hand pruners, loppers, and hand saws. Remember that these tools need to be sharp and clean to ensure success. Do not use shears to shape young trees. If the tree is larger and requires more attention, contact an arborist or tree care company.

Q: What is the difference between pollarding, reducing and topping?

These three practices are often confused. Some disreputable tree care companies will purposefully use the wrong term to confuse the homeowner.

TOPPING IS FOR ICE CREAM, NOT TREES!

Presented by:  Topping is not an acceptable practice. Topping is when a tree is indiscriminately cut back to stubs. Usually topping is done to flat-top the tree or cut it back on all sides. The result is unsightly. Topping is often sold as a method to reduce tree size, however studies have shown that a topped tree will actually grow larger over a five-year period compared to an unpruned control tree. This occurs because the severe cuts cause many weak, but fast-growing sprouts to shoot from the stubs.

There are a lot of misconceptions about the appropriateness “tree topping,” a very controversial and damaging tree care practice.

For the unfamiliar, tree topping is defined as “the removal of main tree branches to stubs in either a straight-across hedge fashion - or a complete delimiting of the tree, leaving only the main trunk or trunks of a tree.”



Many homeowners - and even some arborists - contend that tree topping is an effective way to stimulate growth, manage the size of the tree, and avoid the expenses of detailed pruning.

But how effective and safe is this practice, really? Is it worth it to cut corners? We don't think so!

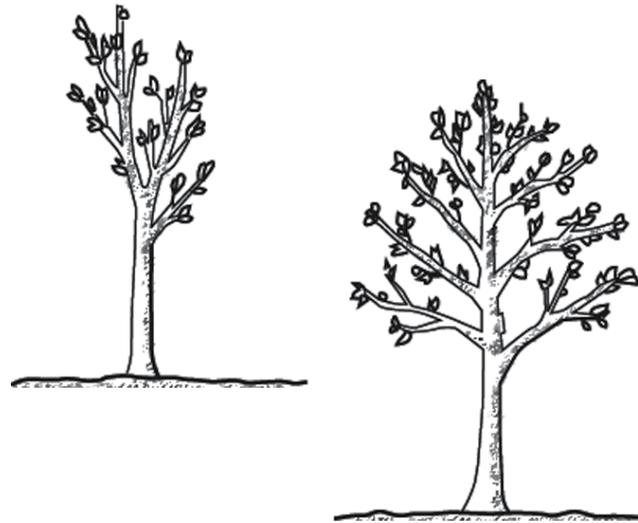
SHADE TREES

A tree's first few years are critical. Pruning then has a profound effect on the ultimate size, shape, and health of the mature tree.

Pruning When Planting

Shade trees are usually sold balled and burlapped, that is, with most of their roots intact and surrounded by soil. Such trees need little pruning when planted. Simply remove any twiggly growth that won't be part of the tree's framework of branches. Container-grown trees need almost no pruning, since none of their roots have been removed. Prune only to remove dead or broken branches. Plants that have been too long in the container can form circling roots. Prune them; if left, they could become girdling roots.

Bare-root trees (in which many of the roots have been removed or damaged), may require some pruning when planted, but the old practice of removing up to one third of the stem and half of each branch has been seriously questioned. Instead, prune any broken branches or roots before planting. You may want to



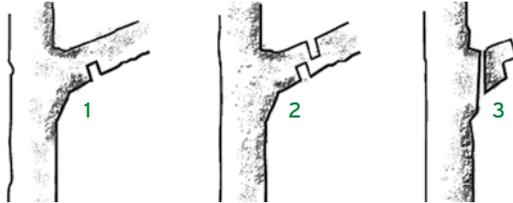
Prune young shade trees to establish branch patterns that preserve the natural habit of the tree. Certain trees - pin oaks, birches, poplars, and the like - form a single central trunk with clearly subsidiary side branches. Any tendency of such trees to produce more than one leader calls for removal of the weaker ones.

cut back the main stem of an especially spindly bare-root plant to encourage branching.

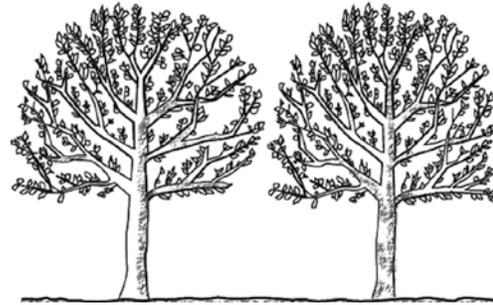
Mature Trees

Mature trees that have been pruned since planting require little besides maintenance care: removal of dead or damaged wood or the occasional general thinning

to allow more air into the crown. Always cut large limbs back to a live branch or the main trunk. Most branches have an obvious, sometimes wrinkled, swelling at their base. This is the bark-collar, an area where cell growth is especially abundant and wound closure is rapid. Make your final cut just outside this collar.



Use the tree-cut method when sawing off a large branch. First make an undercut at least 6 inches from the bark collar. Then, about an inch beyond that, remove the limb with a top cut. Finally, remove the remaining stub with one smooth cut from top to bottom just outside the bark collar. With a very big limb, first reduce its length by removing it in sections.



If possible, remove branches that form a deep V-shaped crotch. Such crotches are vulnerable to wind damage and can cause rot. Wide crotch angles are stronger.

PRUNING FRUIT TREES

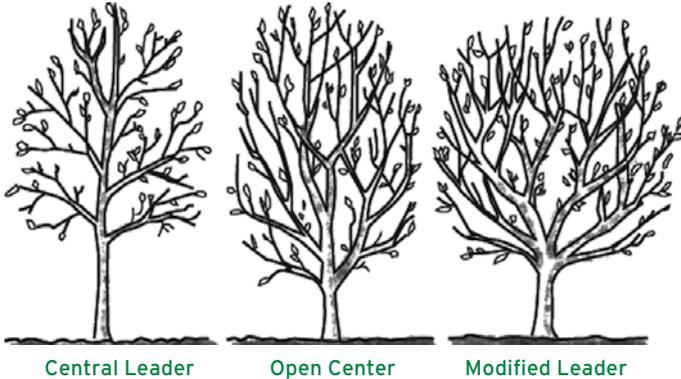


The reasons for pruning fruit trees are the same as those for pruning any tree or shrub. Pruning of two-year-old whips is important to the shape, health, and productivity of the mature tree. Regular maintenance pruning to remove dead or diseased wood or wood that is growing in awkward directions is also important.

ant. Unlike pruning ornamental trees and shrubs, properly pruning fruit trees makes a difference between large, annual crops of excellent fruit and spotty, intermittent crops of variable quality. Fruit trees are encouraged to bear lots of large fruits, pruning to develop a strong branch system capable of withstanding the annual load of ripe fruit is also critical. For tips on basic pruning techniques and the best times to prune, see “Pruning Methods” and “When to Prune”.

Most fruit trees are sold as two-year-old bare-root whips, and must be pruned when planted. Cut the main stem back by about one third to a fat bud, and prune side branches until you have removed about a third of the total wood. Such severe pruning of small, newly purchased trees is always difficult for beginners, but years of experience have shown that it is beneficial and will get your tree off to a faster, healthier start.

Prune fruit trees to allow ample sunlight to reach into the middle of the tree, otherwise fruits will not ripen properly and will lack good color. This can mean removing many more lateral branches and stems to



There are three generally accepted systems for pruning fruit trees, each designed to produce a different configuration of main branches and secondary and lateral branches.

make the most pleasing-looking, bushy plant. Such pruning also allows for good air circulation through the crown, and that prevents disease.

Central Leader

Apples and pears, which bear large crops of heavy fruit, should be pruned to form a central leader. This system encourages the growth of strong side branch-

es from one main trunk. Remove branches growing from the trunk to maintain open space between limbs, and also thin the secondary branches that grow from these limbs. Prune to allow sunlight and air to reach the center of the tree.

Modified leader

This method began the same as the central leader system, with one strong central trunk.

Eventually though, you must prune the central leader to form several leaders. The modified leader system is generally easier to maintain because most fruit trees tend to grow in this way naturally.

Open center

Also called the vase system, this method lets plenty of light and air into the center of the tree, but it also makes for weaker branches and is not recommended for apples and pears. It is well suited to quinces, crabapples, plums, cherries, peaches, nectarines, and apricots. Be sure to prune so as to avoid making lots of limbs arise from nearly the same point of the trunk, or weak crotches will result.

PRUNING FRUIT TREES

A fruit tree allowed to bear all the fruit it sets in the spring will produce scads of poor-quality fruit, or it will produce well only every other year. For consistently good crops you must thin clusters of young fruit to a single fruit. Do this when the fruit is still small (marble to golf-ball size). Each fruit should be 6 inches or more from its neighbor. Such thorough fruit thinning is time-consuming, but you will appreciate the effort come fall.

Pears, plums, and cherries produce most of their fruit on stubby growths between the branches called spurs.

Peaches grow on one-year limb growth, and apples grow on both spurs and limbs. Spur-type trees produce less limb growth and so require less pruning, but even spurs must be thinned periodically. A spur will produce good fruit for two or three years. Then it should be removed to encourage new, more vigorous spurs.

Try to maintain a strong central leader on young apples, switching to a modified-leader form as the trees age. Prune them lightly every year. Remove dead or damaged wood, thin branches for open growth, re-

move suckers and water sprouts. Moderate annual pruning is far better for the tree than irregular severe pruning. As with all fruit trees, thinning of young fruits ensures a much finer crop.

Cherries need less pruning than other fruit trees. They tend toward an open-center growth habit, but it is still a good idea to encourage a central-leader habit when the tree is young, changing over to a modified-leader or open-center system.

Peaches, nectarines, and apricots are all very vigorous and therefore need regular, careful pruning to produce well. They are also relatively short-lived (about 10 years), another reason pruning is so important, since it stimulates new, vigorous growth. Train all three to an open-central growth habit. They tend to grow tall, and the best fruit forms at the top of the tree, so prune to keep the top in bounds. Prune in late winter while the trees are dormant yet when you can remove any cold-damaged wood.

Train a pear tree in much the same manner as an apple, with a central leader that can be allowed to form

PRUNING FRUIT TREES



a modified leader as the tree matures. As with apples, a light annual pruning to remove dead or damaged wood and suckers and encourage spreading form is preferable to occasional heavy pruning. Thin spurs annually to keep the tree from setting too much fruit. Likewise thin young trees.

Prune plums to an open center. Japanese plums, like peaches, require lots of pruning. Keep after them every year in late winter. European and American plums need much less pruning; an occasional thinning is all that is needed. Many plums bear heavily only every other year. To encourage good annual crops thin young fruit so that the plums are at least 5 inches apart.

Bare-root citrus fruits trees (grapefruits, lemons, limes, and oranges) should be pruned at planting time; containerized ones probably need none. Where occasional frosts occur be sure to wait to prune until any danger of a freeze is past in the spring. And postpone fall or early-winter pruning until spring, since it can make fruit trees more cold sensitive. Citrus trees tend to grow unevenly, sending out the odd long limb. These should be pruned back to a good bud. Citrus trees lose vigor and productivity as they age, but because frigid winters are not a problem, they can withstand severe rejuvenation pruning. After such pruning be prepared to wait two or three years for good fruit production to resume.

AFTER THE STORM: TLC FOR YOUR TREES

Presented by:



Besides being the most notable features of your yard, trees are also likely to be your property's most valuable feature.

They are investments that mature over time. Whatever you spent on them initially is only a fraction of what they are worth, monetarily and environmentally, as they grow year after year. Ultimately, there is no price that can be put on your trees, and accordingly, it is important to ensure the long-term health of your largest (and tallest!) investments, particularly when weather starts to take its toll.

Tree damage caused by wind and storms can severely jeopardize a tree's health. Such damage must be inspected promptly and properly; otherwise, further damage could occur. When remedying damage to your trees from storms, there are a few important things to keep in mind:

Safety first: Be very aware of power lines that have

either fallen or are close to falling on a tree after a storm. These can be very dangerous and should only be handled by a certified technician. A more common safety hazard is fallen branches that are being held up by stable limbs. More often than not, the slightest disturbance will send these branches crashing to the ground, so be sure to steer clear and seek help from an arborist as soon as possible.

Remove attached but broken branches: Broken branches or limbs should be pruned back to the point where they connect to the trunk or unbroken branch. It is very important that the cut be clean and flush with the un-damaged portion of the tree to prevent damage or disease.

Repair torn bark: Smooth out ripped or torn bark. Jagged or ragged bark can create a hiding place for harmful insects and a breeding ground for fungus. Take care to harm as little of the inner (green) bark as possible as this layer is very important in carrying nutrients throughout the tree.

AFTER THE STORM: TLC FOR YOUR TREES



Don't over prune or top: Removing problem branches may leave your tree looking uneven or bare in spots. Resist the temptation to over prune in an effort to make the tree more symmetrical. Small branches and leaves will grow back soon enough, promising the tree will once again be full and balanced.

Cutting back healthy limbs (topping) to deter future storm damage should also be avoided. The (misguided) reasoning behind this practice is that short, stubby branches will make future storm damage less likely. In reality, new growth that results from topping will be quite vulnerable to storm damage. Topping also removes healthy foliage which produces much of the tree's nutrients.

It is important for trees to be well cared for and periodically inspected in an attempt to prevent damage from storms; however if they have been damaged, a knowledgeable arborist can prescribe just the remedy that will ensure a long and vigorous life for your trees.

INSPECTING TREES FOR SAFETY

Presented by:



Acute stress occurs suddenly and causes almost immediate harm. Damage caused by flooding, drought,

wind, and untimely frosts and freezes are examples of acute stress.

Chronic stress occurs over time and can be brought on by a nutritional imbalance, improper soil pH, or other factors that take a longer time to develop. Chronic stress is bad enough, but it can be compounded by disease and insects that prey on weakened trees.

Both forms of stress can weaken a tree and ultimately make it unsafe for nearby homes and other structures, parked vehicles, and passersby.



Here are a few things to look for when inspecting your trees for safety:

- Large, dead branches or branches that are just hanging around can pose a danger. The best time to check for these potential threats is late fall or winter when there is little or no foliage to obstruct your view.
- Cavities, rotten wood, or cracks and splits along the trunk or major branches may provide an entrance for cankers and wood-rotting organisms.
- Wires in contact with tree branches.
- A pronounced lean or a tree with several major branches arising from one point in the trunk may ultimately pose a threat.
- Root damage from installing pavement, repairing sidewalks, or digging trenches can weaken a tree.
- Heaving soil at the base of a tree is a potential indicator of an unsound root system.
- Leaves that have prematurely developed an unusual size or color or if the tree has been heavily pruned. Dead leaves at the top of trees are usually the result of environmental or mechanical root stress whereas twisted or curled leaves may indicate a viral infection or insect infestation.

This list may be a good start if you're looking to ensure your trees are healthy and safe. If you see any of the above signs, give your landscape professional or tree care expert a call. They can quickly determine if the symptom poses a real threat and needs to be addressed quickly.

PRUNING ROSES



Susan Fox

As a consulting rosarian that speaks, grows, photographs, and shows roses, company founder Susan Fox was recently awarded the American Rose Society's (ARS) Presidential Citation "for Promoting the Rose and Rose Education Via Social Media." She is one of the most highly regarded rosarian's and gardeners in the industry. Visit her website at gagasgarden.com

Depending on the season where you live pruning time can come between the middle of January and the end of April. You want to prune early enough that you will not be cutting off too much new growth, and late enough that you will not promote premature growth. Usually this is just when the buds begin to swell, and then if you do not get a late frost the bushes will be off to a good start for your growing season.

Pruned late, even after new growth starts, the canes are cut to a swollen dormant bud and the bush will do just fine, so it is probably better to prune late than too early. Late-pruned bushes will bleed, but this has not been shown to be harmful to roses. Bleeding interferes with sealing cut ends but I stopped sealing smaller canes, with no increase in cane borer problems. If you prefer to seal the canes as you prune, then just seal the canes with Elmer's Glue.

FALL ROSE PRUNING | WINTERIZING YOUR ROSES

"There are many factors why plants are winter hardy. When artificial means are used to bring a plant through winter, often they can conflict with some beneficial factors. For die-back-hardy woody plants, the simplest winter protection technique is applying a few inches of mulch year round. This allows the plant in the autumn to grow into its fullest state of natural dormancy. It prevents the soil from getting as cold as would in open ground. And it allows the plant to break dormancy slower in the spring. Cutting back the canes only in the spring provides shade to the lower branches and helps attract snow cover that insulates and guards against low temperature injury and fluctuating temperatures." ~ Will Radler Creator of the Knock Out® Rose

1. Fall rains usually do the job, but if the weather has been dry, water deeply (to a depth of at least 18 inches) after the first frost but before the ground freezes. Many folks like me that grew up in the North forget about watering through the winter. However, in Texas before a hard frost watering protects your roses.

2. In early to mid fall, when the nights are getting regularly frosty, you can use soil to cover the base of the plant, above the bud union.

3. I prune my roses in the spring however you can cut the canes back to 3 or 4 feet high and tie them together with string to prevent winter winds from whipping them around and damaging the canes. In the spring you will be prune them off but in warmer climates damaging parts of the canes that are living is the perfect entry point for disease and weakens the plant. If you plan on mounding with soil get new soil. I like Organic Mechanics soil because it is important to know what kind of soil and run

off that you are putting in your rose garden.

4. When the ground is thoroughly frozen, cover the mound with a thick layer of mulch, such as straw, leaves, or compost. This year I am going to just do as Will Radler suggests.

FALL ROSE PRUNING | WINTERIZING YOUR ROSES



There are several reasons to prune your roses:

- Removing dead or diseased canes
- Remove non-productive branches and make room for ones that will make flowers
- Removing crossing branches that clutter the bush or damage others
- Open up the interior of the bush for ease in spraying and to promote good flowering stems;
- Remove non-productive canes at the base to promote growth of new vigorous canes

Finally, shape the bush to please you. Before cutting out canes, you need to look at the branches they produced. If they have long, healthy, new branches, they should be left. If they have nothing but short twiggy non-blooming shoots, remove them. Sometimes there is not much left, but then perhaps the bush should be, as my mother used to say, “shovel pruned” and removed from the garden. We are told to reduce the number of canes to 3-5, but this is not necessarily a good guide.

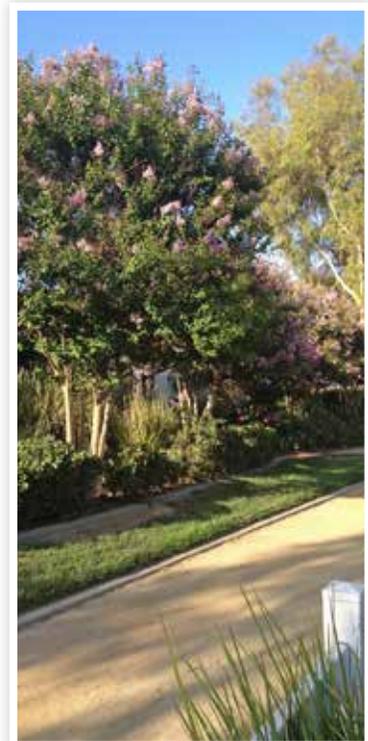
SYMMETRY AND BALANCE

Overall, shearing shrubs into uniform balls and transforming trees into green lollipops should be avoided. Such pruning produces an overly dense canopy of vigorous but weak branches that hinders sunlight and air from reaching into the interior of the plant. Some species can tolerate this, but most become more prone to disease and breakage.

Instead, take a critical look at deciduous trees and shrubs to get an idea of where branches are headed as they grow. Ideally, each plant should look something like a roughly symmetrical river and tributary system, regardless of which side you are viewing it from. If there are branches that really throw off the symmetry, they should be removed to keep the canopy bal-

anced. Also, remove any branches that are going to make contact with a wall or roof of adjacent buildings or other structures as they grow.

If branches have begun to shade a shrub or smaller tree that needs more light, strategically remove branches to allow more sunlight to penetrate. Pay special attention to trees that are growing near the edge of densely shaded wooded areas. These trees are quite likely to be one-sided, and are often the first to fall when weighted with snow or ice. If the branch structure is so unbalanced that pruning won't improve the symmetry of these trees, it may be best to remove them entirely, particularly if they could damage structures or bring down power lines when they fall.



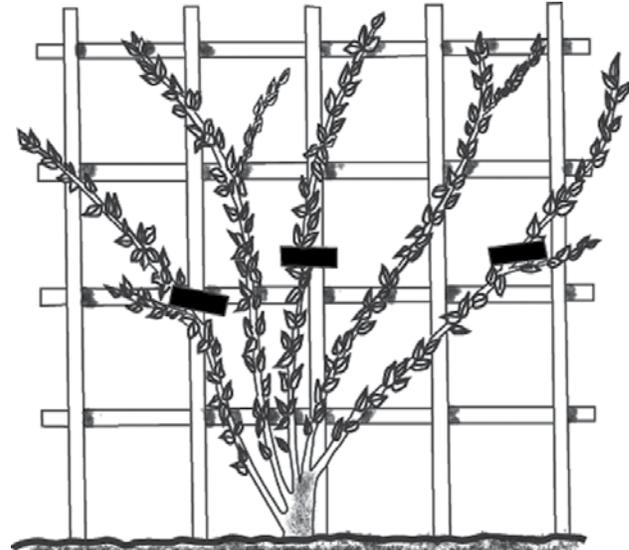
ORNAMENTAL VINES

Whether they climb, creep, cling, twine, or flop and scramble, vines have one thing in common: given favorable conditions they grow like crazy. Pruning vines is largely a matter of keeping them in bounds, and that is best done by controlling growth from the day you plant a vine.

When planting, select several of the strongest shoots and prune them back to half their length to encourage more new shoots to grow from the base.

As a vine grows, keep it in check. If you want it to be compact, continually prune terminal growth during the growing season. If you want it to ramble, cut to the base all but three or four of the strongest shoots. Be sure to prune to let light reach the base of the vine or it will become bushy on top and bare below.

Most flowering vines bloom on wood formed the previous year, so try to avoid drastic pruning in early spring or you will remove the flower buds. On the other hand, all drastic pruning of vines should be done when the plants are dormant.



||| *When planting a vine, prune about half the strongest shoots to half their original length. This will encourage growth at the bottom of the vine as well as above.* |||



WORKING WITH WOODY SHRUBS

Presented by:



Shrubs can vary greatly in their pruning needs even shrubs in the same genus (hydrangeas or roses, for example) may have very different requirements. This is why it's always a good idea to seek out in-depth instructions for a particular plant to ensure you are giving it the most appropriate care.

That said, most deciduous shrubs tend to be fairly forgiving when it comes to pruning. Preventive pruning for them involves removing a few of the oldest or weakest branches from the crown of the shrub close to the soil surface. When spring arrives, this will stimulate vigorous growth from the crown of the shrub to keep it looking its best. This method works well for plants such as lilacs, red-osier dogwoods (*Cornus sericea*), blueberries, and nandinas.



Be aware that some flowering shrubs that bloom on old wood—forsythias, ornamental quinces (*Chaenomeles* spp.), weigelas, and ninebarks (*Physocarpus* spp.), to name a few—should be allowed to bloom prior to pruning. Then, just as the flowers are fading, cut them back to a height of six inches or a foot from the ground.

SMALL BERRY FRUITS

Small-berry fruits require regular pruning. Without annual pruning grape vines bear many small, poor fruits, and bramble fruits become unapproachable (much less harvestable) masses of prickly brambles.

Grapes produce fruit on new lateral growth from year-old stems. Prune grapes to limit the number of new laterals and the number of fruit clusters per lateral. As with fruit trees, it is best to thin young fruits to direct more of the plants' strength into producing fewer, better fruits.

Prune grapes in late winter or early spring before buds swell. When planting grape vines, leave only one or two buds above the soil. During the first winter, select the longest, strongest stem to become the main stem and remove all other stems. During the second spring allow one terminal and two lateral buds to form shoots.

For European table and wine grapes four permanent lateral stems are maintained on either side of the main stem. During the second winter prune back to



this framework. In the third year remove all growth except for a series of strong stems spaced 6 to 10 inches apart along the four lateral stems. Prune these spurs back to within two buds of the lateral stems. In subsequent years prune all growth back to the spurs.

For American grape varieties use the cane pruning system, in which the four main stems are replaced each season. During the second winter remove all growth

SMALL BERRY FRUITS

except for four lateral shoots. Prune these back to two buds. In the third winter cut back the upper cane of each pair to two buds. (This will become next year's replacement canes.) Cut the lower cane back to 12 buds. This year's fruit will be borne on these canes.

In subsequent years, remove the cane that bore fruit the previous year. Cut the upper cane of the replacement pair back to two buds; the lower cane back to 12 buds.

Whichever pruning method you choose, you will have better harvests if you limit each cane to one or two clusters of grapes. After four years of bearing you can leave half of the grape clusters.

Bramble fruits (blackberries, boysenberries, black raspberries, and red raspberries) require the same simple annual pruning. All bear fruit on year-old canes. The canes grow from the ground and bear fruit in their second summer. After bearing they become barren or die, and should be removed immediately after harvest. Clean up the plants in late winter or early spring before they begin to put on new growth.



New canes sprouting from the ground should be thinned. Remove all but four or five of the strongest new canes. With blackberries or boysenberries, whose vine like canes trail, let these new canes grow on the ground until the two-year-old canes are cut after harvest. Then tie the new canes to a wire trellis or stake for support. When the new canes are about 30 inches long tip them back to stimulate fruit-bearing lateral growth.

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