
Think ‘*Top Down*’ When Pruning Fine Hardwood Trees

Harlan Palm, Member, Missouri Walnut Council

Proper pruning of young hardwood trees (such as black walnut, red oak, and white oak) can potentially increase log values 10 to 20-fold. The objective is to develop a straight, single-stemmed tree with a solid trunk free of side branches up to 10 to 24 feet. Here are some helpful tips that the Missouri Chapter of the Walnut Council shares with new members.

General Tips –

You get what you pay for. Buying low-end equipment will give you low-end results. Always purchase good quality sharp clippers, pruning saws and telescopic pole pruners with the cutting shears and saw blade combination.

Take care of your equipment and it will take care of you. Ever try cutting something with a dull saw? If you have, then you know the value in proper tool maintenance. Take the time to clean your clippers and pruning saws at the end of the day and to sharpen them before beginning any pruning task.

The best time to prune is... This debate seems to be as old as the Missouri Ozarks. Most experts agree the best time to prune is during the dormant season (late November to early March) and the worst time is during sap flow (mid-March to late June).

Think top-down, not bottom-up. After confirming the lower stem on young trees is healthy and undamaged, make pruning decisions starting at the top and work down. Assist the central leader by assuring its tip or apical bud is taller (higher) than any other leaders or branches that are competing for dominance. Totally remove or at least tip-prune any competitive leaders.

Easy does it. Remove no more than one-third of the tree canopy in any single year season. Remember that the key to a healthy root system is a healthy crown. If you remove too much of the tree’s ability to make food, root growth will suffer and set the stage for reduced crown growth the following year leading to reduced root growth... well, you get the picture.

Don’t take the ‘donuts.’ Do not prune flat to the stem. Instead, make an angled cut just outside of the branch collar (the donut-shaped growth surrounding the branches’ attachment to tree) so that the wound is about the same diameter as the branch. Do not leave stubs.

Size-Dependent Tips -

Seedlings (< 1 inch in diameter). Resist unnecessary pruning the first couple of years. You will want to prune only to develop a single, straight, central leader.

Saplings (1-3 inches in diameter at breast height, DBH). As with seedlings, prune to maintain the single, straight, central leader. If a fork exists, save the shoot that is most vertical. Assuming they are nearly identical, save the one that has a strong lateral branch underneath which will influence the remaining single leader to straighten up. One-year old leaders will straighten up considerably, but two or three-year old wood is too rigid to straighten very much. A splint can be taped to support and straighten a crooked leader, but this is time consuming.

If a tree is hopelessly crooked, cut it off near ground level (a technique known as coppicing) and start over. The root collar and strong root system will produce multiple sprouts the following season. After a couple of years, select the straightest sprout and remove the rest.

Pole-Size Trees (3-6 inches DBH). Continue pruning with the same techniques as above. If a tree has never been pruned, prune so it has a single stem and remove the largest branches. But *limit pruning to no more than 25% of the tree's total crown*.

If the tree is hopelessly crooked, coppice and start over.

If planted or volunteer walnut trees are densely populated, start selecting the best ones, and spend time on only those that are 25 to 35 feet apart so there is ample space for crown development.

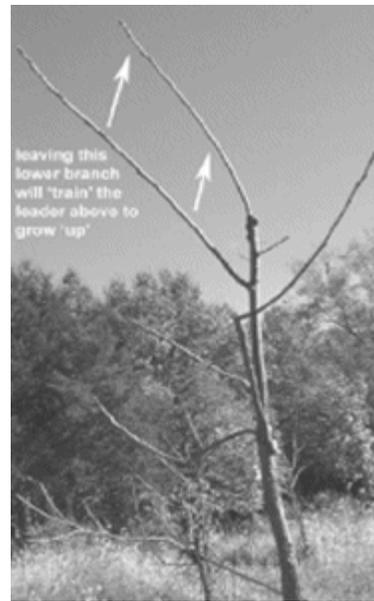
Large Trees (> 6 inches DBH). With large trees one must really ask the question ***“Is it worth the effort?”*** Even if you are taller than six feet, it is almost impossible to accurately handle a telescoping pruner, not to mention extremely tiring. Plus, a large tree that has never been pruned will, likely, have somewhere in that first, 16 foot log (1) a major fork, (2) a large branch exceeding two inches in diameter, or (3) both. The adage ***“You can't make a silk purse out of a sow's ear”*** is very true in these cases.

These basic tips should easily take care of 80 percent of the situations you might find yourself in this pruning season. And, for the other 20 percent, help from the Missouri Chapter Walnut Council is only a phone call, text message, or email away.

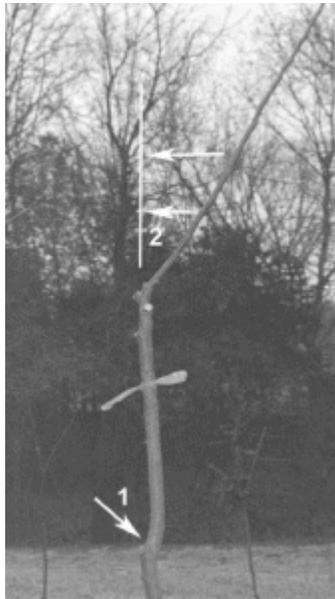
For more information about the Missouri Chapter or pruning hardwoods go online to our chapter website at: [Missouri – Walnut Council](#) and look for **“Pruning Articles”**.



While a central leader is present, the tree is wasting too much energy growing 'out' rather than 'up'. Remove some of the lateral branches so that the tree can put its energy into the terminal shoot.



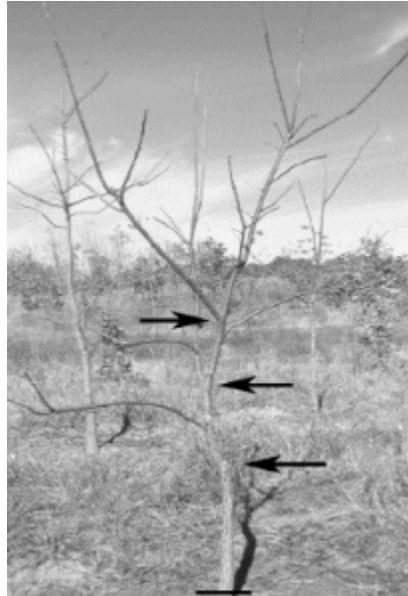
While one might be tempted to favor the larger leader on the right, the smaller leader on the left has less of a dog-leg to overcome and should be the one to leave. This smaller leader is new (1-year-old) growth and will straighten up, especially since it has a branch below to force it upright.



The tree above shows how the leader straightened after pruning one year ago (1). The selected leader (2) will also straighten, and, over time, this young tree will yield a high-quality log.



A late-spring frost or insect damage can result in the death of the terminal shoot, and it should be removed. Also remove the lateral branch on the left but leave the one on the right to train the 'new terminal' shoot above.



You cannot teach an old dog a new trick. The severe low forks in the older wood of the tree to the left will never straighten up. This tree would be an excellent candidate for coppicing except for the fact that there are two good trees within 35 feet, making this spot in the planting irrelevant.