

# Missouri Chapter News

Walnut Council: Growing Walnut and Other Fine Hardwoods  
SPECIAL EDITION



Missouri Chapter, Walnut Council

Website: <http://www.walnutcouncil.org/state-chapters/missouri.html>

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## Pruning Guide for Walnut & Other Valuable Hardwoods

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Proper pruning of young black walnut, red and white oak, and black cherry trees can potentially increase tree values 10 to 20 fold. Instead of a mature black walnut worth only \$150, that same tree properly managed and pruned could produce logs worth \$500, \$1,000 or much more. Our objective, depending on the site suitability for hardwoods, is growing a straight, single-stemmed tree with a solid trunk free of side branches up to 10 to 24 feet. To achieve that objective pruning should be an annual event, especially on good hardwood sites, starting when the trees are about five foot tall. Try to complete the pruning by the time the stem is no more than 3 to 5 inches in diameter at breast height (DBH) or 2 to 3 inches in diameter in the section of stem being pruned above breast height.

### **GUIDELINES:**

1. Prune black walnut, white oak and black cherry during the dormant season of late November to early March with December to February being the best timing. This reduces susceptibility to disease and minimizes bleeding of sap on warm, sunny days although bleeding is not harmful to the tree. Pruning of all oak species should be avoided during the high risk period for insect transmission of diseases. In Missouri, this is generally from mid-March to mid-June for oak wilt.
2. Use good quality, sharp tree shears for small low branches, folding or curved pruning saws for larger low branches, and telescopic pole pruners with the cutting blade and saw blade combination for high branches. A 13" curved pruning saw, which cuts on both push and pull strokes, requires less work and the blades do not bend. Clean the saw blades if sap builds up by applying a solvent like an oven cleaner spray and wipe it off with a rag. If you are concerned about the possibility of diseases like Witches broom or Fusarium canker transferring to a

healthy tree, spray your blades with rubbing alcohol or dip them in a 10-20% bleach solution. Allow them to dry 10 minutes when using a 10% bleach solution before moving to the next tree.

3. After confirming the lower stem on a young tree is healthy and physically undamaged, make pruning decisions starting at the top and work down. Prevent the formation of a crotch and assist the terminal leader so it grows as straight up as possible. Do not simply remove the lowest branches each winter.
4. Assist the central leader formation by assuring its tip or apical bud is taller or higher than any other leaders or branches that are competing for dominance. Totally remove any competitive leaders.
5. Next, look for the largest branches and remove no more than 1/3 of a tree's volume or branch biomass per year. Removing more than 1/3rd of the crown may trigger excessive epicormic sprouting along the trunk resulting in the need for additional pruning the following year to remove those sprouts. Remove the largest diameter branches so that the wound is still preferably less than 1.5" in diameter which will cover over within a couple of years. Leave small branches intact as their presence minimizes emergence of epicormic shoots along the trunk. The small branches can be removed a year or two later.
6. Do not flush-cut or prune flat to the stem. Instead, make an angled cut just outside of the branch collar so the wound is about the same diameter as the branch. Examine the base around a dead branch and see how the callus of the branch collar encircles the branch leaving a ridge of bark between the stem and branch on the top and angles away from the stem at the bottom. Make similar angled cuts on live branches so the wound is about the same diameter as the branch. Do not leave stubs.

Review this presentation for more information on target pruning.

### SEEDLINGS (< 1 INCH IN DIAMETER)

1. Resist unnecessary pruning the first couple years.
2. Prune only to develop a single straight central leader.

### SAPLINGS (1-3 INCHES IN DIAMETER AT BREAST HEIGHT, DBH)

1. Prune to maintain the single straight central leader. A late frost or insect damage to the terminal bud of the leader can result in the emergence of 2-5 lateral branches that compete for dominance.



Photo 1

They typically grow at an angle equidistant from vertical. (Photo 1)

2. Save the shoot that is most vertical especially if it has the strongest terminal bud and if it has a strong lateral branch underneath that will competitively influence the remaining single leader to straighten up. (Photo 2) One-year old leaders will straighten up considerably, but two-year old wood will be too rigid to straighten. Using a splint or competing branches taped together (Duct Tape works well for this) to support and straighten a crooked leader can be effective, but this process is time consuming. (Photos 3, 4 and 5, as seen on page 3)



Photo 2

3. If a tree is hopelessly crooked or severely damaged by deer, coppice or cut off the stem near ground level and start over. For oaks (and possibly all hardwoods) the closer to the ground the cut is made the less likely the sprout will break over in the wind. The root collar and strong root system will produce multiple sprouts the following season. To minimize the number of competing shoots, coppice at a 45-degree angle rather than a flat cut. A single bud near the top of the angled cut may become the dominant sprout. This angle cut wound tends to callus over more quickly and gives the selected sprout greater stability. After a couple of years, select the straightest and most erect central sprout. The extra surrounding sprouts can protect the central leader from



Photo 3



Photo 4



Photo 5

future deer rubs. (Photo 6) Prune the tips of the inferior sprouts to assure that the “chosen leader” is the tallest and becomes the dominant sprout. Over time, eliminate other sprouts by cutting them off at ground level.

#### **POLE-SIZE TREES (3-5 INCHES DBH)**

1. Continue pruning with the same techniques as indicated 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 1/3 of the branch biomass. To prevent tearing the bark, make an initial cut about a foot from the stem reducing the weight of the branch then cut the stub off at the branch collar.
2. If the tree is hopelessly crooked or deer rubbed, coppice as described above and start over.
3. Tree spacing is critical in reaching the objective. If planted or volunteer hardwood trees are densely populated, spend pruning time on the best trees that are 25 to 35 feet apart and gradually remove competitive trees so there is ample space for crown development of the crop trees. Keep and prune a few extra “insurance trees” in case there is severe wind damage to some of the chosen crop trees.

Also, see the article published in [“Green Horizons.”](#)



Photo 6