

THE OUTSIDER

Illinois Extension Horticulture serving Henry, Mercer, Rock Island, and Stark



THE TIME IS NOW: TREE PRUNING

Pruning is an essential maintenance activity to promote health, safety, and aesthetics in trees. Since trees are large, long lived plants in our landscape, pruning activities throughout the life of a tree can have significant impact on how that tree functions in the landscape and how long it survives. Pruning conducted while a tree is young can have exponentially advantageous results for overall tree health, maintenance requirements, and beauty.

Because no two trees are the same, pruning is an art and a science. Research has helped advance our understanding of tree physiology and response to pruning activities, therefore improving techniques and outcomes. Making decisions about which pruning cuts to make is influenced by many unique factors such as plant species, age of specimen, reasons for pruning and desired outcome.

PRE-PRUNING ASSESSMENT

Prior to making a pruning cut, it is important to assess the entire tree and surrounding site conditions that influence the tree. It is also critical to articulate desired objectives for pruning. Every pruning cut, large or small, should have an explicit purpose and advance the tree toward the identified objectives. There are many reasons for pruning a tree including safety, health, and appearance.

Pruning for safety involves pruning branches that interfere with human activities or pose a threat of causing harm. Examples of pruning activities that immediately improve safety include the removal of limbs that block traffic site lines, or branches over sidewalks and trails that impeded pedestrian traffic. Additionally, broken limbs in the canopy pose a fall risk and should be removed for improved safety.



Pruning for health includes removal of branches that cross or rub with others to minimize self-wounding. Pruning trees for structural integrity is an effective way to increase safety and promote tree health, especially while trees are young. One of the most common structural concerns is co-dominant leaders. Trees with two or more dominant leaders develop structurally weak branch angles that threaten to split under the weight of the canopy. Corrective pruning should be done to encourage a single leader. Pruning dead or diseased limbs removes disease pathogens from the tree and should always be an objective of a pruning regime.

Pruning for aesthetics turns the focus toward human preferences. Desired appearance is a subjective analysis, however pruning decisions made for aesthetics should still adhere to proper pruning techniques and prioritize health and safety of the tree.

WHEN TO PRUNE

Branch before pruning



Photo by Ryan Pankau

Branch bark collar intact



Photo by Ryan Pankau

Flush cut: don't do



Photo by Ryan Pankau

The late dormant season is the optimal time to prune trees for several reasons. For starters, deciduous trees have shed their leaves making it much easier to assess the overall form of the tree during the dormant season, making choices related to pruning for structural integrity easier.

The annual cycle of deciduous trees is one of creating sugars in leaf material, storing those carbohydrates through the dormant season, then using those stored starches to break dormancy and start the cycle over. Trees use considerable energy to produce new leaves in the spring and summer. By pruning just prior to spring, trees are better able to allocate energy resources towards producing leaves that are going to remain and sealing wounds created by pruning activities. Pruning branches full of leaves diminishes the trees capacity to do photosynthesis and replenish carbohydrate reserves.

In response to a wound, trees “wall-off” the wound area to protect the rest of the tree. Wood remaining near the wound site will decay and creates potential for rot to enter the tree. A trees response to wounds is slowed by the dormant season and most efficient in the early growing season. Balancing wound response with other considerations, it is recommended that the optimal time for pruning activities of deciduous trees is the late dormant season or the months of February and early March.

Yet another reason for pruning during the dormant season is that opportunistic insects and disease pathogens are also dormant, reducing the risk of infection prior to compartmentalization. This is especially important when pruning oak species. Oak wilt is a lethal, fungal disease that can be transported from tree to tree by beetles attracted to the pheromones released by a wound.

"Take care of the trees and they will take care of you."

— Unknown



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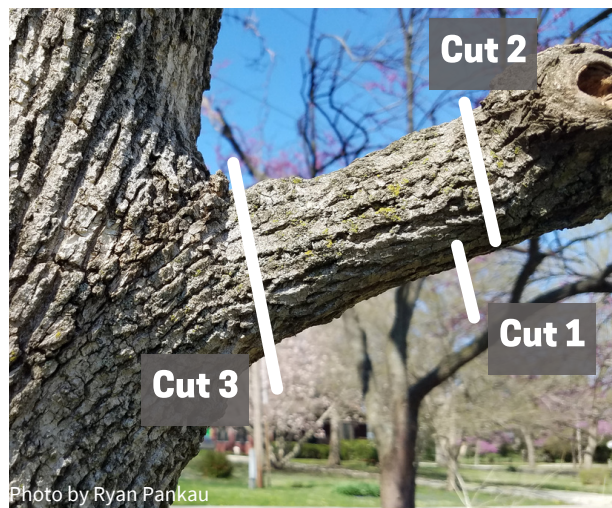
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MAKING THE CUT

Once a pruning cut has been determined to be necessary, proper technique is required. Preservation of the branch bark collar is essential to wound sealing. The branch bark collar is a swollen or raised strip of bark at the intersection of the branch and the trunk of a tree. Pruning practices of the past that include flush cuts removed the branch bark collar and are no longer recommended as best practices. Pruning cuts should be made just outside of the branch bark collar and have a smooth finish. If larger branches are being removed, a three-point pruning cut is recommended to avoid ripping the bark as the limb falls during the pruning activity, under the weight of the branch.

Dressing the wound with paint is not recommended, although it was in the past. Studies have shown that this practice does not accelerate the sealing process, nor does it prevent decay. In some cases, wound dressing has been observed to stall compartmentalization processes and protect decay fungi. The exception to this recommendation is if pruning of oaks or elms is required during the growing season. To protect against the spread of oak wilt or Dutch elm disease, apply a latex based house paint to the wound within 10 to 15 minutes of making the cut. Recommendations are to avoid pruning these susceptible species during the growing season unless unavoidable, for example after storm damage has occurred.

Pruning is an ongoing maintenance activity and trees should be assessed annually for pruning needs. Being consistent with assessment and action can help minimize the workload for pruning and minimize stress response in trees. If mature trees need pruning, it is recommended that a professional arborist be consulted. Safety should always be the top priority. Pruning activities that require lift equipment or power tools should be performed by a professional arborist.



"In a forest of a hundred thousand trees, no two leaves are alike. And no two journeys along the same path are alike."
— Paulo Coelho

OUTSIDER ACTION

Try these activities to be more of an Outsider

- Learn more about tree compartmentalization by watching this Four Seasons Webinar session: go.illinois.edu/TreeCompartmentalizationYoutube
- Walk around your landscape and assess trees. Take action if pruning is needed.

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