

## Private Applicator Trainings, March 9 & 10

Private pesticide applicators are farmers or producers raising an agricultural commodity on land they own or rent. Or an employee making pesticide applications on their employer's farm. Private applicators have four ways to recertify or get a new license. Traditional training classes — visit <https://go.unl.edu/2020pat> for dates and locations. Cost is \$40 per participant collected at

the door. No pre-registration required. Trainings at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln will be held:

- Monday, March 9 at 6 p.m.
- Tuesday, March 10 at 9 a.m., followed by optional dicamba applicator training at 12 p.m.

More options for private pesticide training can be found at <http://pested.unl.edu>.

## Recent Workshop Recordings Online

Video recordings of Nebraska Extension's recent "Successful Farmer Series" and "Managing Agricultural Land in 2020 and Beyond" (aka "Landlord/Tenant Cash Rent") workshops are archived online. Links are at <https://lancaster.unl.edu/ag>

## Southeast Nebraska Soil Health Conference, March 3

Nebraska Extension's annual Southeast Nebraska Soil Health Conference will be held on Tuesday, March 3 from 9 a.m. until 3:30 p.m. at the Hickman Community Center, 115 Locust St., Hickman. This year's focus will be: "Feeding the Underground and Above Ground Livestock." This conference is for producers or landowners who have an interest in soil health, grazing cover crops

or no-till farming practices.

Speakers will include:

- Dwayne Beck, South Dakota State University
- Paul Jasa, UNL Extension Engineer
- Ray Ward, Ward Laboratories
- Gary Lesoing, UNL Extension Educator
- Mary Drownoski, UNL Extension Ruminant Nutritionist
- Farmer Panel

There is no cost to attend the conference and lunch will be provided, thanks to our sponsors. Please pre-register by Friday, Feb. 28 by going to <https://lancaster.unl.edu/ag> or by calling the Extension office at 402-441-7180.

If you would like to set up a booth or display (cost \$100) or be a program sponsor, contact Randy Pryor at 402-450-6058.

## Dicamba Training, March 10

The EPA has extended the registrations for three restricted-use pesticide dicamba products (XtendiMax®, Engenia®, FeXapan™) until Dec. 20, 2020. You must hold a valid applicator's license AND receive annual, state-authorized, dicamba- or auxin-specific training to use these products. There are many options to receive this Dicamba label-required training.

University of Nebraska–Lincoln offers in-person trainings and has developed an online dicamba training program. The schedule and online training can be found at <http://pested.unl.edu>.

Nebraska Extension in Lancaster County will host an in-person training on Tuesday, March 10 at 12 p.m. at the Lancaster Extension Education Center, 444 Cherrycreek Road,

Lincoln. There is no cost to attend and no pre-registration needed. Please arrive on time and bring your certified applicator license. For questions on the training, contact Tyler Williams at 402-441-7180. For dicamba-specific questions, contact the Nebraska Department of Agriculture at 402-471-2351.

# Pruning to Create Strength and Good Structure in Young Trees

Sarah Browning

Extension Educator, Lancaster County

Trees are an essential part of any landscape, providing a wealth of benefits. However, there is also risk associated with trees either from a large tree falling, splitting, or branches breaking. When trees are located near homes, businesses or in areas with a lot of human activity, the potential for damage or injury when a tree fails or branches break is high.

Unfortunately, risk of branch or tree failure is often increased by improper pruning — or no pruning at all — starting when trees are young. Left unpruned, trees often don't create good structure on their own; some tree species have more inherent problems with poor structure than others.

We can minimize risk with regular pruning, using proper pruning techniques, throughout a tree's life. The ultimate goal is to create good tree structure and strong branch-to-trunk connections. And now — late winter — is an excellent time to prune shade trees. Branches are easier to remove when not weighed down by leaves and the tree's branching structure is easy to see.

### Structural Defects to Avoid

Several common problems occur in trees and can easily be corrected through pruning, especially if you address them when the tree is young. These problems are:

- Codominant branches.
- Included bark.
- Lack of pruning in young trees requiring removal of large branches later on.

Looking for these problems in your trees and developing a management plan is the best thing you can do to maintain the health and strength of your trees as they get large and mature.

**Codominant branches** are stems of approximately equal girth and height that originate from the same location on the tree. They create a weak



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union at that point on the trunk, because the branches do not develop a proper branch collar. A branch collar is an area at the base of a branch where new growth of trunk wood wraps around that year's new branch wood. This creates an interconnected, overlapping pattern of growth and creates a strong branch/trunk union.

A frequent problem resulting from codominant branches is splitting of the trunk when the tree is older and under extreme load, such as a heavy snow or ice, or during very high winds. This type of failure is very common in older Bradford pears due to their strong natural tendency to form codominant branching. Almost any shade tree can develop codominant branches and, unfortunately, many homeowners unknowingly create codominant branching in their trees by pruning young trees incorrectly.

What can be done to manage codominant branches? Ideally they are pruned

out when their branches and foliage make up only a small percent of the tree's total canopy. Shortening is another method that works well, especially if the branch has been allowed to get large and makes up a higher percentage of the tree's canopy. Remove some of the codominant branch's height, making it several feet shorter than the main leader, cutting back to a secondary branch or shoot to redirect growth.

Why does shortening work? Growth hormone movement in trees is determined by shoot height. The main leader should always be the tallest shoot in the tree so it continues to receive the most growth hormones. Once you've shortened it, over the next few years, the shortened codominant branch will receive fewer growth hormones than the main leader, growing slower and allowing the main leader to develop. Eventually the codominant branch can be removed completely, or left in the tree as a secondary branch.

**Included bark** often develops at the junction of codominant branches. Bark is pinched between these competing branches, so there is no physical connection between them. Instead, at their base, is bark pressed against more bark. Often a trunk split will begin at this weak union point and once a split or crack begins to develop, it only gets worse over time.

Lower branches in trees are commonly removed to create better clearance beneath the tree for equipment and people. **Removal of large limbs** usually happens when tree pruning maintenance is not done on a regular basis, allowing branches to get very large before they are removed. The resulting large wound creates a perfect opening for wood rot fungi, since the wound is slow to close. Ideally, lower branches should be removed gradually during the first 25 years of a tree's life to prevent the need for removal of very large branches. Ideally, if a branch needs to be removed, it should be done before the branch diameter is more than 2–3 inches, especially on decay-prone trees like silver maple, red maple, willow, apple, cherry and hackberry.

### Pruning Young Trees

Focus on creating good structure in your trees with the following strategies.

Develop and maintain a central trunk by shortening or removing any secondary leaders, which are branches originating from the trunk, grow very upright and approach the height of the main trunk.

Shorten or remove competing codominant branches so that only one main branch originates from any point on the trunk. Long-term structural branches should be spaced around the trunk like spokes in a wheel and up the trunk at alternating levels.

Slow the growth of lower, temporary branches by shortening them and remove them completely before they reach more than 1/3 the trunk's diameter.

### How Much Can Be Removed?

One method used to determine how much live wood can be removed safely during one annual pruning is based on the tree's growth rate. Examine 6–12 twigs randomly around the tree's canopy to determine an average growth rate. Keep in mind if a large amount of pruning is needed, it may need to be spaced out over the course of several years.

For trees putting on very little growth, limit pruning to address codominant branches.

For trees putting on an average of 6–12 inches of new growth, 10% of the canopy can be removed.

For trees putting on an average of 12–24 inches of new growth, 10–15% of the canopy can be removed.

Trees putting on higher amounts of growth, on average, may tolerate 25% or more canopy removal. But, ideally, trees should be pruned annually, removing smaller amounts of live growth each time.

### FOR MORE INFORMATION

University of Florida publication "Developing a Preventive Pruning Program: Young Trees," (ENH1062) available at <http://go.unl.edu/youngtreep pruning>