College of Agriculture,
Food and Environment
Cooperative Extension Service

Kentucky Nursery LISTSERV Bulletin

University of Kentucky Nursery Crops Team | End of October 2018

A Cooler and Wetter Than Average November

November is likely to be cooler and wetter than average across the bluegrass region, especially for the western region.

This trend might give way to a winter with a more mild and overall warmer temperatures, with a typical amount of precipitation as the El Niño pattern forms. As a reminder, El Niño generally results in cooler, wetter weather to our south with milder, drier weather to our north and west.

This forecast does not mean we shouldn't still be cautious for sudden freezes that can damage unprotected stock. Next month's double issue will include a deeper dive into overwintering practices.

Please see the **UKAg Weather Center's Long Range Outlooks** for more information.

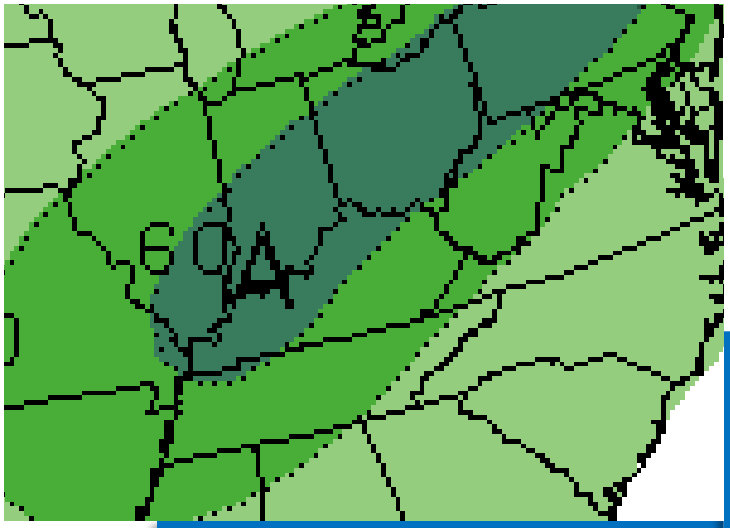
Nursery Crops Extension & Research Team

Winston Dunwell
Extension Professor
270.365.7541 x209

Dewayne Ingram
Extension Professor
859.257.8903

https://NCER.ca.uky.edu/

Joshua Knight, Managing Editor



One-Month Outlook, Precipitation Probability
October 31st, 2018. Valid November 2018
Source: NOAA Climate Prediction Center

Practicing Proper Pruning

Savannah McGuire, Research and Extension Support Staff, Horticulture

Many landscape, nursery, and ornamental plants can benefit from pruning to resist pest pressure from insects and diseases. Certain insect pests like wood borers, beetles, and scale insects may be able to be controlled this way. Pruning for pest control is most effective when infestations are small and when labor is available. Good pruning practices are critical to ensuring that plant health is increased rather than diminished. Many plants will thrive off of being pruned during the fall and winter. Check with your local extension office to determine the best time to prune a particular plant.

Figure 1. Pruning small branches

Image: The University of Kentucky

Deciding When to Prune

It can be difficult to determine the best time during the year to prune plants. It is best not to prune during "times of low energy reserves, when a tree is stressed, and when the soil is uncharacteristically dry or flooded "(Gilman, 2012, p.128). Be aware of pest and insect pressures that may be more prevalent at the time of year when you are planning to prune. It is best to prune small branches off of trees frequently rather than wait to prune once branches are larger. This minimizes wound size and thus makes the tree more resistant to harmful forces.

Pruning Methods and Techniques

When pruning, it is best to consider the type of plant that you are working with when determining which cuts to make. Plant anatomy will play an important role in this decision. According to UGA Extension, "the terminal bud (the bud at the end of a branch or twig) produces a hormone called auxin that directs the growth of lateral buds (buds along the side of the branch or twig)." When a terminal bud is present on a plant, auxin will prevent shoots and lateral buds from growing beneath the terminal bud. When the terminal bud is removed, shoots and lateral buds will grow rapidly, especially 6 to 8 inches from the terminal bud cut.

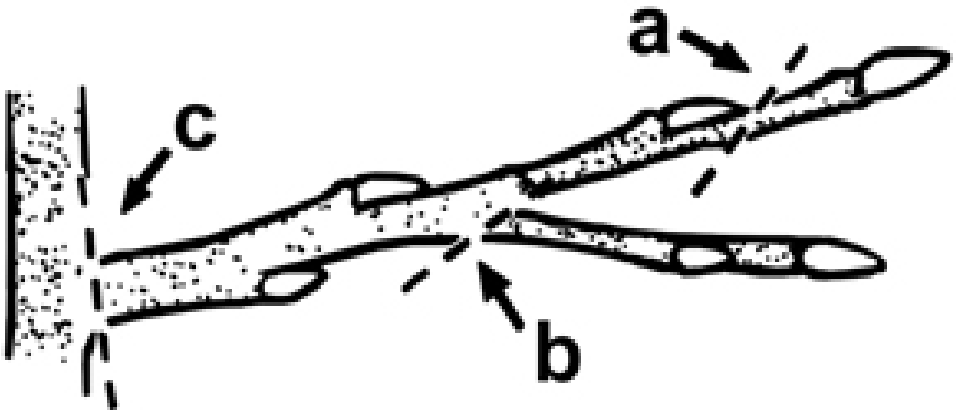


Figure 2. "Always cut back to a bud (a), a lateral branch (b) or main trunk (c), and avoid leaving a stub. Therefore, regardless of whether you are pruning a small twig or a large branch, you can avoid leaving a stub by always cutting back to a bud, a lateral branch or the main trunk.

Note: Dashed lines on tree branch drawing indicating where cuts should be made. "

Image: UGA Extension

Continued on next page...

If the pruning cut is back to the main trunk, lateral branch or lateral bud then the wound will heal quickly because there is a higher concentration of hormones at these points. It will be much more difficult for the wound to heal if there is a stub left between the pruning cut and one of these points. Unhealed wounds leave the plant vulnerable to insect and disease pressure that may cause further damage.

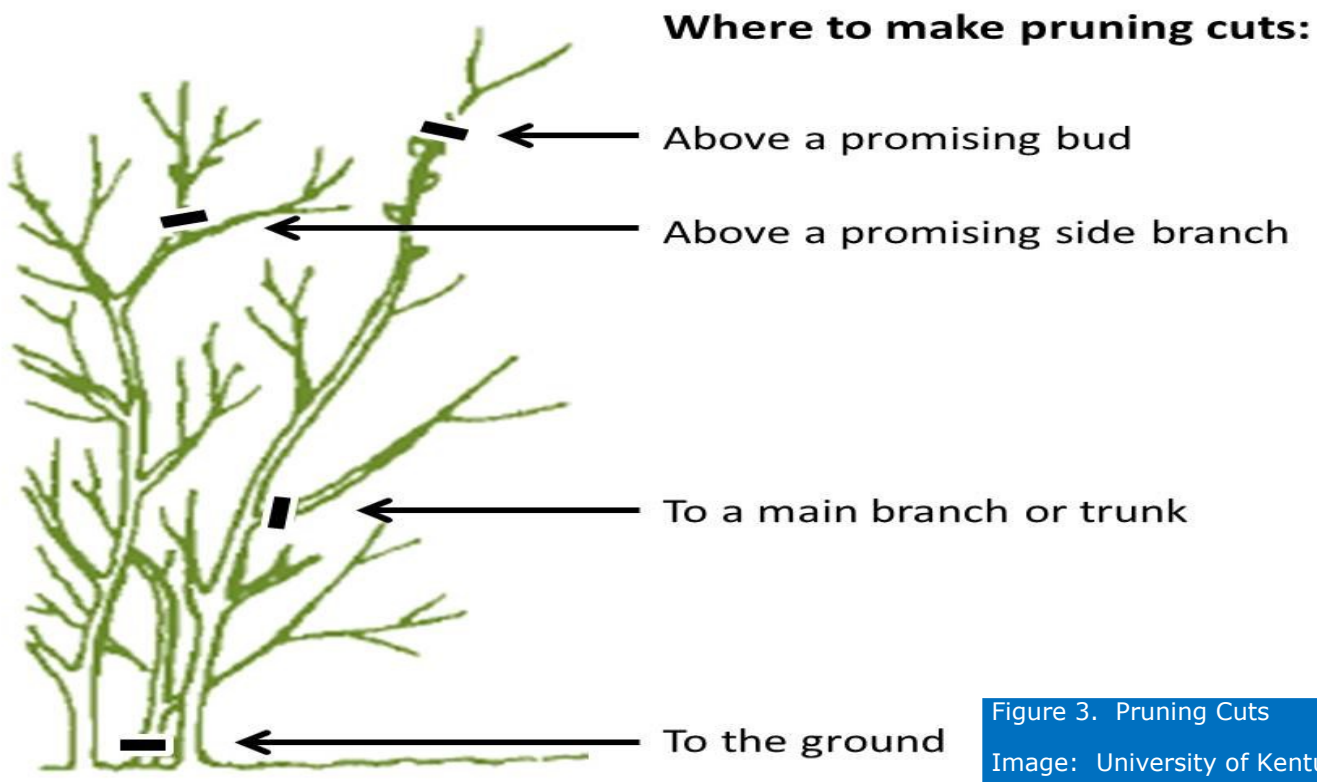


Figure 3. Pruning Cuts

Image: University of Kentucky

Ornamental plants with flowers will bloom at different times during the year, and this is an important consideration to make when pruning. Plants that flower in the springtime (azalea, dogwood, etc.) will set their buds in the fall. Fall is not a good time to prune these plants because it will reduce the flower show during the spring. Winter is a suitable time to prune plants that flower during the summer (crape myrtle, abelia, etc.) and form flower buds on new growth.

According to UGA extension, "As a general rule, plants that flower before May should be pruned after they bloom, while those that flower after May are considered summer-flowering and can be pruned just prior to spring growth." Check the specifications for each plant, as there are exceptions to this rule. If plants are not grown for showy flowers, then they can be pruned in late winter, spring, or summer. Do not prune during fall or early winter because new growth may occur that cannot withstand colder temperatures.

Continued on next page...

"In three simple steps:

1. **Prune small, prune often!**
   …and limit the total amount of branches removed.
2. **Prune well!**
   …by making correct cuts; with clean tools, timed to avoid insects and diseases; and disposing of pruned material appropriately.
3. **Respect the natural form!**
   …by remembering that we cannot "make" a round-headed redwood by pruning or a pole-like coast live oak without severely stressing the tree."

-UC Davis Extension

Figure 4. Tree Pruning

Image: UNH Extension

Additional Resources:

Pruning Ornamental Plants in the Landscape
http://extension.uga.edu/publications/detail.html?number=B961&title=Pruning%20Ornamental%20Plants%20in%20the%20Landscape

Pruning and Tree Physiology: The Bad and The Ugly
https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=14551

Landscape Sanitation: Clean Up for Clean Plants

Nicole Ward-Gauthier, Extension Specialist, Plant Pathology
Kimberly Leonberger, Extension Associate, Plant Pathology

Autumn has arrived in Kentucky and, as leaves will soon begin to change color and fall from trees, it is time to focus on landscape sanitation. Good sanitation practices can help reduce disease-causing pathogens. These organisms can survive for months or years on dead plant material or in soil, causing infections in subsequent years. Elimination of disease-causing organisms reduces the need for chemical controls and can improve the effectiveness of disease management practices. Following these sanitation practices both in autumn and throughout the growing season can reduce disease pressure in home and commercial landscapes.

Figure 1: Cankers can provide an overwintering site for plant pathogens.
Image: Nicole Ward Gauthier, UK

Sanitation Practices:

- Remove diseased plant tissues from infected plants
- Prune cankers (Figure 1) and galls from branches by making cuts well below visible symptoms (Figure 2). Clean tools between each cut with a sanitizer, such as rubbing alcohol or household bleach.
- Rake and remove fallen buds, flowers, twigs, leaves, and needles (Figure 3)
- Discard all above and below ground portions of heavily infected perennial and annual plants. Severely infected trees and shrubs should be cut down and stumps removed/destroyed.

Figure 2: When removing cankers, make cuts well below visible symptoms or at the base of branches.

Image: Joseph O'Brien, USDA Forest Service, Bugwood.org

Continued on next page...

- All discarded plant material should be burned, buried, or removed with yard waste. Do not compost diseased plant material. Exercise caution when storing limbs and trunks as fire wood or using for mulch.
- Soil from containers should be discarded and not reused.
- Remove weeds, including roots, which may serve as alternate hosts for pathogens.
- When treating infected plants with fungicides, remove infected tissues prior to application.

Figure 3: Fallen leaves, and other plant parts should be gathered and discarded. Image: Nicole Ward Gauthier, UK

Additional Information

- Landscape Sanitation (PPFS-GEN-04)

- Plant Pathology Publications

Armillaria Root Rot – A Threat to Stressed Landscape Trees

Nicole Ward-Gauthier, Extension Specialist, Plant Pathology
Kimberly Leonberger, Extension Associate, Plant Pathology

Tree stress can come from numerous factors including weather, mechanical damage, insects, or poor growing conditions. These stresses make plants more susceptible to the plant disease Armillaria root rot. This fungal disease is also known as shoestring root rot, mushroom root rot, or oak root rot. Once symptoms are observed, damage is often too severe to save infected trees, as no effective management strategies are available.

Armillaria Root Rot Facts:

- Symptoms include dieback and decline. Loose or decayed bark near the base of the tree is often observed. When bark is peeled back, creamy white fans of fungal mycelium (thread-like structures) or dark brown rhizomorphs (thick strands of fungal mycelium) (Figure 1) may be present. In fall, distinct "honey" mushrooms are produced at the base of the tree or along decaying roots (Figure 2).

Figure 1. Dark brown rhizomorphs (or shoestrings) may be observed under the bark of trees infected with Armillaria root rot.

Image: Cheryl Kaiser, UK

- The fungal pathogen overwinters in decaying wood and can persist for many years on this plant material in soil.
- Common hosts include oaks, maples, pines, hornbeams, taxus, and fruit trees.
- Trees exposed to stressful growing conditions such as drought, winter injury, insect defoliation or borers, mechanical injuries, or construction damage are more likely to become infected.
- Caused by multiple species of the fungus *Armillaria.*

Continued on next page...

Figure 2: "Honey" mushrooms may be present at the base of infected trees or along decaying roots, especially during rainy seasons.

Image: Homeowner, Kenton County Kentucky

Disease Prevention Options:

- Consider removal of infected trees, roots, and stumps.
- Maintain plant health with proper nutrition.
- Select well-drained planting sites that are high in organic matter.
- Minimize stress from environmental factors.
- If site has a history of Armillaria root rot, avoid susceptible tree species.

Additional Information

- Shoestring Root Rot- A Cause of Tree and Shrub Decline (PPFS-OR-W-05)
- University of Kentucky Plant Pathology Extension Publications (Website)

The University of Kentucky's **Nursery Crop Extension Research Team** is based out of two locations across the bluegrass to better serve our producers.

The **University of Kentucky Research and Education Center (UKREC)** in **Princeton** serves western Kentucky producers while our facilities and personnel on main campus in **Lexington** serve central and eastern Kentucky producers.

Check out our YouTube Channel!

Like us on facebook!

Contact Us

Western Kentucky
UK Research & Education Center
1205 Hopkinsville Street
P.O. Box 496
Princeton, KY 42445
270-365-7541

Central / Eastern Kentucky
UK Main Campus
Horticulture Department
N-318 Ag. Science Center North
859-257-1273

Visit us on the web at
https://NCER.ca.uky.edu/