Horticulture Tips
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Oklahoma Cooperative Extension Service
Division of Agricultural Sciences and Natural Resources
Department of Horticulture & Landscape Architecture
Oklahoma State University

GARDEN TIPS FOR MARCH!

David Hillock, Associate Extension Specialist

Lawn and Turf

- Remove excessive thatch from warm-season lawns. Dethatching, if necessary, should precede crabgrass control treatment. (HLA-6604)
- Broadleaf weeds can easily be controlled in cool-season lawns at this time with post-emergent broadleaf herbicides. (HLA-6421)
- Preemergent crabgrass control chemicals can still be applied to cool- and warm-season turfgrasses (HLA-6421). Heed label cautions when using any weed killers near or in the root zone of desirable plantings.
- March is the second-best time of the year to seed cool-season turfgrass; however, fall is the best time to plant. (HLA-6419)
- Cool-season lawns such as bluegrass, fescue, and ryegrass may be fertilized now with the first application of the season. Usually, four applications of fertilizer are required per year, in March, May, October, and November. (HLA-6420)
- Begin mowing cool-season grasses at 1 ½ to 3 ½ inches high. (HLA-6420)

Flowers & Vegetables

- Cultivate annual flower and vegetable planting beds to destroy winter weeds.
- Apply mulch to control weeds in beds. Landscape fabric barrier can reduce the amount of mulch but can dry out and prevent water penetration. Thus, organic litter makes the best mulch.
- Prune roses just before growth starts and begin a regular disease spray program as the foliage appears on susceptible varieties. (HLA-6403 & EPP-7607)
- Avoid excessive walking and working in the garden when foliage and soils are wet.
- Start warm-season vegetable transplants indoors.
- Divide and replant overcrowded, summer and fall blooming perennials. Mow or cut back old liriope and other ornamental grasses before new growth begins.
- Your cool-season vegetables like broccoli, cabbage, carrot, lettuce, onion, peas, spinach, turnips etc. should be planted by the middle of March.
- Watch for cutworms that girdle newly planted vegetables during the first few weeks of establishment. Cabbage looper and cabbageworm insects should be monitored and controlled in the garden (EPP-7313).

Trees & Shrubs

- Prune spring flowering plants, if needed, immediately following their bloom period.
- Plant evergreen shrubs, balled and burlapped, and bare root trees and shrubs.
- Anthracnose control on sycamore, maple, and oak should begin at bud swell. (EPP-7634).
- Diplodia Pine Tip blight control on pines begins at bud swell. (EPP-7618)
- Chemical and physical control of galls (swellings) on stems of trees should begin now. (EPP-7168 & EPP-7306)
- Dormant oil can still be applied to control mites, galls, overwintering aphids, etc. (EPP-7306)
- The first generation of Nantucket Pine Tip Moth appears at this time. Begin pesticide applications in late March. (EPP-7306)
- Control Eastern tent caterpillars as soon as the critters appear.

Fruits

- Continue to plant strawberries, asparagus, and other small fruit crops this month.
- Start your routine fruit tree spray schedule prior to bud break. (EPP-7319).
- Remove winter mulch from strawberries in early March (HLA-6214).

Spring Cleaning

David Hillock

Cleaning up the garden in late winter/early spring is a common practice. One reason for this is to remove debris that was infected with unwanted diseases and insects to reduce the chances of those organisms infecting new growth. Another reason is to allow the sun to reach the ground and warm it up encouraging new growth and provide space for the new growth. And another reason is some people just don't like the look of all the old stems and foliage in the garden.

Recently, however, we have learned more about these dormant habitats and the importance they have on our native bees and beneficial insects. Many of our native bees are solitary bees and some nest in standing spent plant stems. Cavity nesting bees and some solitary wasps use hollow or pithy stems to construct their nests.

The folks at the Lurie Gardens in Chicago have been experimenting and learning a lot about these habitats. The horticulturists at the Lurie Gardens say we still have a LOT to learn but have shared what they do know.

They have found that plants that have sturdy and fibrous stems with pithy, hollow centers that are about 1/8" to 5/16" in diameter are great for these stem nesting bees. The bees are usually nesting in the lower 24 inches of the stem. By leaving these stems somewhat intact throughout the year we are preserving their habitat and hopefully increasing a declining population of important pollinators. Leaving stubble that is 18-24 inches high in the garden may seem unsightly at first, but as the new growth develops in the spring, those stems will soon be hidden and may even provide additional support to the new growth.

Plants we know are host plants for native bees and solitary wasps include *Monarda fistulosa*, *Rudbeckia* sp., *Echinacea* sp., *Solidago* sp., *Aster* sp., *Asclepias incarnata*, *Vernonia* sp., *Veronicastrum virginicum*, *Agastache* sp., and *Hydrangea arborescens*. Other species that the Lurie Gardens are experimenting with include *Phlox paniculata*, *Kirengeshoma palmata*, *Thalictrum* sp., *Eutrochium maculatum*, and *Actaea* sp.

Additional suggestions by the team at the Lurie Gardens to help preserve this valuable population of pollinators include: First, leave plant material standing through the winter. Second, identify plants that are desirable habitat and cut them high in early spring, leaving 18-24 inches of stem stubble. Third, leave the stem stubble undisturbed for at least a year and a half. Fourth, repeat! Try to use the same individual plants each year – consistency is really helpful. Fifth, don't just stick to the known host plants. Try a few others that might look like the right fit, because we still don't know all of the potential habitat. And sixth, observe and share your findings!

Plants that don't have these pithy, hollow stems can be cut back now. That might include many of your ornamental grasses and other perennials. New growth will begin to emerge soon on some grasses and perennials; waiting until new growth is several inches high will make it difficult to remove dead foliage without damaging the new growth; debris that has not been infected with pests can be left lying in the garden as a mulch or thrown into the compost pile to be used later as a soil amendment.

Cleaning Up after the Storm

David Hillock

Recent storms resulted in an array of damage to our homes and landscapes. Trees are particularly susceptible to this kind of damage, and it is important to approach the clean-up efforts carefully. We can implement measures to manage storm-damaged trees and minimize risk to people and personal property.

Rehabilitation or Removal? – The decision to save or remove a storm-damaged tree is usually a subjective one, with the choice relying more on opinion than fact. Emotions often are the overriding factor in the decision process, especially when the damaged tree is a very large, old, or 'heirloom' tree. Here are a few points to keep in mind when deciding whether to rehabilitate or remove your storm-damaged tree:

1. Use common sense and ask yourself if the damage has perhaps rendered this tree hazardous? In other words, does it now look vulnerable to any additional wind or ice event that could cause it to fall in its entirety or at least "drop" one or more large branches that could damage nearby property or prove fatal to people and pets?
2. Educate yourself as to the potential growth rate and commercial availability of replacement trees.
3. Even if the tree can be salvaged, assess whether it will ever look "right" again with some semblance of symmetry.

4. If significant bark has been ripped or loosened from the trunk, be realistic about the tree's potential for attack from opportunistic microorganisms and damaging insects outlined later.

Do Not Top Trees – Topping or dehorning permanently ruins the structural integrity of the tree. This practice leads to adventitious or epicormic shoots (shoots or new growth that is weakly attached to main scaffold branches or limbs). This adventitious growth is likely to break away from the tree during a future ice or wind storm. Besides negative impacts on structural integrity, such severe pruning practices compromise the attractiveness of the tree.

Safety – More than 50 fatalities nationwide are reported each year from professionals removing or pruning trees. The accident rate is much higher for people not trained in this specialized work. Consumers should be confident about the size and magnitude of the "job" to avoid trees falling on them, electrocution, or other catastrophic events. Even if a person is comfortable with heights, many other safety considerations come into play when pruning mature trees. Is appropriate safety equipment available? Is someone available to perform an aerial rescue if necessary (i.e., backup arborist)? Is there apparent risk to people or property from falling limbs? When in doubt, hire an ISA-certified arborist.

Choosing a Certified Arborist – Many storm-damaged trees are too large for property owners to rehabilitate or remove themselves. In these cases, a professional arborist should be consulted for the job. Hiring an arborist should be similar to hiring other professionals around the home such as plumbers, electricians, and carpenters. Do your homework–ask your friends and neighbors for recommendations. Additionally, be sure the individual you hire is certified by the International Society of Arboriculture (ISA). Most reputable arborists will tout their ISA status in the yellow pages or other means of advertisement. You can search for ISA-certified arborists in your area at the following URL: https://www.treesaregood.org/findanarborist/findanarborist. Finally, make sure the arborist you select is insured.

For more information on addressing tree damage issues and pruning see OSU Extension Fact Sheets EPP-7323 – Managing Storm-Damaged Trees and HLA-6409 – Pruning Ornamental Trees, Shrubs, and Vines.

Winter Damage to Broadleaf Evergreens

David Hillock

Recently we've noticed some damage to broadleaf evergreens and even some needled evergreens like pine and atlas cedar. Some of the damage may be from dry conditions which can result in leaf burn but we also have some damage from the freezing temperatures received around Christmas last year. Damage from winter burn and excessively cold temperatures can be misdiagnosed as an infectious disease. Winter burn is caused from desiccation, which is a type of dehydration injury. When roots are in dry or frozen soil, water lost through transpiration cannot be replenished by the roots and dehydration occurs. Water loss through transpiration is normally low during winter months, but it increases when plants are subjected to drying winds or are

growing in warm sunny spots. The degree of damage from cold temperatures can vary depending on plant species and exposure.

Symptoms of winter burn and freeze temperatures include scorching of leaf tips or outer leaf margins, complete browning of leaves and needles or browning from the needle tips downward, or death of terminal buds and /or twigs. Broadleaf evergreens affected by winter damage will likely survive and send out new shoots and leaves this spring, depending on the severity of the damage. Where death of tips and/or small twigs has occurred, simply prune back to live, undamaged tissue. In some cases, needled evergreens such as atlas cedar may recover and send out new needles this spring if shoot buds have not been damaged.

Several means of eliminating or minimizing winter burn may be used. Avoid planting broadleaved evergreens in areas of high wind exposure. Deep water plants during dry periods throughout winter months when temperatures remain above freezing for prolonged periods. Erect physical windbreaks; burlap "walls" can help cut down wind and subsequent moisture loss to evergreen shrubs and small trees. Antitranspirants of various types are available but have shown limited success under Oklahoma's climatic conditions.

When it comes to freeze damage, control really starts at choosing the right plant. Make sure it is cold hardy to your area and maybe even a zone colder. Also, avoid areas of extreme exposure and low areas where cold air can settle or get trapped.

If you have damage to your evergreens, be patient and wait for new growth this spring and then remove dead tissue back to live, healthy growth if necessary.

Irrigation System Maintenance: Spring Start Up

David Hillock

Now is a good time to prepare your irrigation system for the season. Before turning it on make a visual inspection of the sprinkler heads. Check for broken heads or covered up heads; free heads, make height adjustments, and be sure spray heads are still properly orientated. Check all valve boxes for rodent nests and debris.

Make sure there is power to the controller and set stations for proper run times. Turn the main water source on slowly to fill the system. If you have manual drain valves, leave them open to allow air to escape as the pipes fill with water; when water starts coming out the drain valves, close them.

Turn on each irrigation zone one at a time or set your controller to run through each zone using a test cycle setting. If choosing to run a test cycle of each zone, set a time limit long enough to observe each zone and mark needed repairs, about three minutes.

While each zone is running, walk through the yard and check each sprinkler head, noting any that require attention. Flag or mark problems to make them easier to identify when making repairs; look for leaks, make sure all heads are providing adequate coverage to their area and are

closing properly. If the system is not running properly, additional troubleshooting should begin, and repairs made. If major issues are discovered, an irrigation specialist may be needed to fix the problems. Replacing backup batteries could also be done at this time.

Irrigation technology has come a long way over the past several years so if your system is old and not as efficient, now would be a good time to consider upgrading the system. Smart controllers, such as climate-based controllers and soil moisture sensor controllers, provide easier access and more precise control of the system. Add-ons that also make systems more efficient are soil moisture sensors, rain and freeze sensors, and wind sensors. Smart sprinkler heads that provide better coverage without waste are also available.

Making sure the system is running properly and efficiently now will ensure your landscape plants will be healthy going into the growing season.

Training Young Shade and Ornamental Trees

David Hillock

Proper pruning when a tree is young will ultimately result in a tree that is structurally stronger, longer-lived, and less costly to maintain.

Training a tree early in its life may prevent storm damage when the tree approaches maturity in 15 to 20 years. Training young trees should help reduce storm damage and expensive pruning operations when the tree is mature.

There is no need to prune a newly planted tree unless branches have been damaged. It has been found that removing tips and buds of young trees slows root growth. If trees are left unpruned, expanding buds and new leaves help root expansion and tree establishment. Damaged branches can be removed at their point of origin, or they can be cut back to a lateral branch that will yield foliage and bolster establishment the first season.

Training begins the year after transplanting, continues through the next three to five years, and should be complete within eight to ten years. Following the training period, only maintenance pruning should be needed.

At planting, decide on the system of guidance or training you will follow based on the tree species' growth habits. For instance, most oaks and sycamore develop a central leader, whereas species such as elm and mulberry will always fork somewhere in the main trunk. For these species, develop a modified central leader. The modified central leader is the most desirable system for fruit trees doubling as yard trees.

Walk around the tree before making any cuts and inspect the overall branching structure. Remove branches that are rubbing, shooting inward, or competing too closely to another branch. Narrow branch angles may also need to be removed as they can be weak joints susceptible to breakage. However, some species have narrow branch angles and still have strong joints such as zelkova.

Early in the tree's life, decide which closely spaced scaffold branches to keep. Scaffold branches are large branches that form the main structure of the tree. Try to visualize how the tree will look as it thickens in years to come. Know the natural form of the species. Remember — branches do not slowly rise above the ground! As a tree grows, branches retain their position on the trunk, though they increase in diameter and become more crowded. Spacing scaffold branches radially and vertically allows growth to be channeled where it will be more effective. No more than 1/4 of the canopy should be removed at any one time.

During the training years, frequent inspections must be made to channel growth in desirable directions. The more vigorous species require closer attention. At the end of the season after leaf fall, inspect the tree and make any necessary corrective cuts.

The tip of the main trunk of a young shade tree should not be cut back. Heading back, as is practiced, is not beneficial to most trees and often results in undesirable forks in the main trunk. This is especially true of species that already fork, such as elm and maple.

For more information about training shade and ornamental trees see OSU Extension Fact Sheet HLA-6415 – Training Young Shade and Ornamental Trees.

Dwarf Pink Flowering Almond – *Prunus glandulosa* 'Rosea'

Casey Hentges, Associate Extension Specialist
Bailey Lockhart, Extension Assistant

A lot of spring flowering fruit trees are blooming this time of year. The dwarf pink flowering almond is a flowering ornamental shrub in the *Prunus* genus. Like many fruit trees, it prefers full sun but can handle a few hours of shade. Early spring is when this ornamental plant gives the best show. The nice thing about the dwarf pink flowering almond is that it gives the wonderful classic look of a spring fruit tree with an abundance of flowers without the fuss of traditional fruit tree maintenance. It is deciduous in the winter, so the first sign of it coming out of dormancy is the swelling of the flower buds. They seem to burst open overnight with double, almost rose-like flowers. The pink flowering almond is the most common, however there is also a white cultivar. Though the flowers are small, they are plentiful and will cover the branches of this plant before it pushes out new leaves. It is a perfect addition for smaller yards as it will remain a moderate height of 4 feet. While it is native to China, it has long been growing in the United States and was even noted by Thomas Jefferson in 1794. It is also a larval host plant for the Eastern Tiger Swallowtail. All in all, it is a durable plant and once established will become more drought tolerant. Because it is blooming now in the spring, keep in mind it blooms on old wood. So, wait to prune it until right after it is finished blooming.
https://youtu.be/0gyvjWF6eWI

New Ideas Presented at Pest Workshop

Becky Carroll, Associate Extension Specialist

On February 21, pecan growers from around the state gathered at the Gordon Cooper Technology Center in Shawnee for the Pecan Pest Management Workshop. Ninety-four attendees represented about 30 Oklahoma and 1 Kansas counties and about 15,000 pecan acres.

Jen Olson, OSU Extension Specialist discussed ways that the Plant Disease & Insect Diagnostic Lab can assist growers. Identifying pests and problems is helpful in how to respond. She stressed the importance of proper sample collection, how to take helpful photographs, and utilizing your county extension office to help with submitting samples.

Weed Control Strategies for pecan growers was the topic presented by Mike Trammell, OSU's SE Regional Agronomist housed at Pottawatomie County. Mike stressed the importance of knowing what type of weeds are giving you problems, choosing the right method of control, and types of herbicides. Other considerations were using IPM methods and economic thresholds to trigger control. Weed resistance and fungicide rotations, grazing for weed control, and he emphasized reading the herbicide label for each crop. Alley cropping and cover crops were also discussed.

Pesticide Education Coordinator Kevin Shelton quizzed the group about statements on pesticide labels. He asked if label wording was mandatory, advisory, or factual. These questions helped the audience to understand specifics on the label.

After lunch on their own, the group reassembled for an interesting talk from Kelly Seuhs, OSU Extension Specialist in Entomology & Plant Pathology. Kelly gave a talk on some of the common native pecan insect pests and their management plus introduced the growers to Microbials. Growers have been utilizing biopesticides for years in pecan production but there is increased interest in some of the new products being developed. Kelly shared research from Dr. David Shapiro-Ilan, Bryon, GA, that incorporated microbial biopesticides, nematodes, and fungi. More research needs to be completed to try to develop more efficient application techniques and reduced costs associated. Grandevo WDG is a bacterium that has been studied to control pecan weevil and also may help with black aphid issues. Another plus is the reduction in loses of beneficial insects like green lacewing and lady beetle. Kelly has also studied Grandevo at a few rates at the Cimarron Valley Research Station with some success. The only issue is cost per acre to apply. Other potential biopesticides include Entomopathogenic nematodes for weevil control but cost, number needed, environmental sensitivity, like heat, desiccation, and uv may affect the stability or application. Fungi may also be used to treat trunks or cover crops to control weevil but also have high price of application. Both Kelly and Dr. Shapiro will be speaking more about their research at the upcoming OPGA Annual Conference in June.

Charlie Graham, Noble Research Institute Pecan Specialist, presented information on diseases that are commonly found in pecan orchards. He discussed spray schedules but also cultural methods to reduce disease pressure like tree spacing, pruning up low limbs for increased airflow, and using resistant cultivars. Another important topic was continuing to control diseases even in off-years. Trees that defoliate early due to disease or drought, may not have a return crop the next season.

Tying it all together, Charles Rohla, Noble Research Manager of Pecan Systems, explained how IPM Principles can advance your knowledge for better results in the orchard. Integrated Pest Management (IPM) programs emphasize PREVENTION, INSPECTION and the use of a wide variety of NON-CHEMICAL tools BEFORE pesticide applications are ever considered. Charles shared that a common misconception is that pesticides are not used in IPM programs. IPM programs can be designed that exclude the use of pesticides, but well-designed IPM programs can also include the careful and selective use of pesticides WHEN necessary. Pecan IPM has been well researched with trapping methods and economical thresholds for growers. Models like the Pecan Scab Advisory on Mesonet and the Pecan ipmPIPE that monitors pecan nut casebearer are useful IPM tools. Often cultural or mechanical control can assist with issues, but biological or chemical control may be needed.

New Sprayer Technology was the last presentation. John Long, OSU Extension Specialist in Biosystems & Ag Engineering provided information on basic spray equipment and nozzle selection for the most efficient applications. He shared some of the newest products including many automated spray equipment and things like variable orifice nozzles, pulse width modulation (allowing control of both nozzle pressure and flow independently), sensor based optical equipment (spraying only weeds and not clean soil or target plants), and even autonomous sprayers that can eliminate the need for additional workers, machinery and keep applicators away from treatments. With the tree heights of pecan trees, spray coverage can sometimes be spotty. Drones or tethered drones may be possibilities in the future for getting good coverage at extreme heights. John's senior design group has been developing a tethered drone sprayer.

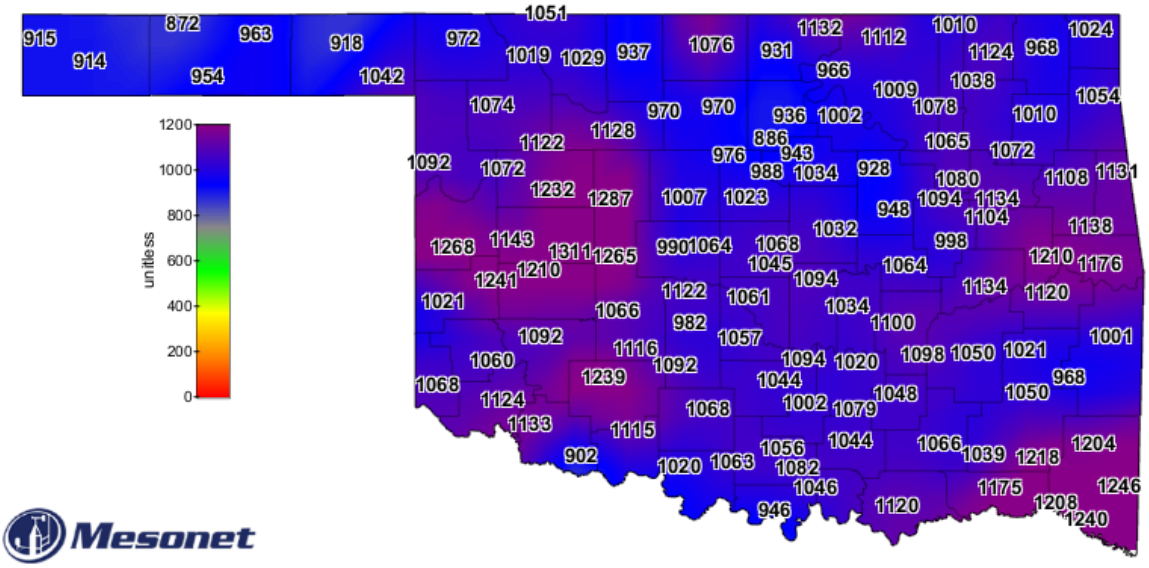
Attendees with a private pesticide applicator license were given the chance to acquire 5 hours of CEUs toward their certification renewal. Door prizes were distributed to a few lucky winners and time for questions was offered. Overall, the workshop talks all built on each other, sharing similar knowledge that worked together for a good pest management system. Knowing what is happening in the orchard/grove and having a plan in place before a problem arises is key. Don't start up your sprayer, just because your neighbor is spraying or it's the topic at the coffee shop. Using the tools available can help growers produce a high quality product with less inputs with an economical and environmental benefit.

Chilling Hours Closer to Normal for 2023

Becky Carroll

Here's an update from the February Horticulture Tips on Chilling Hours.

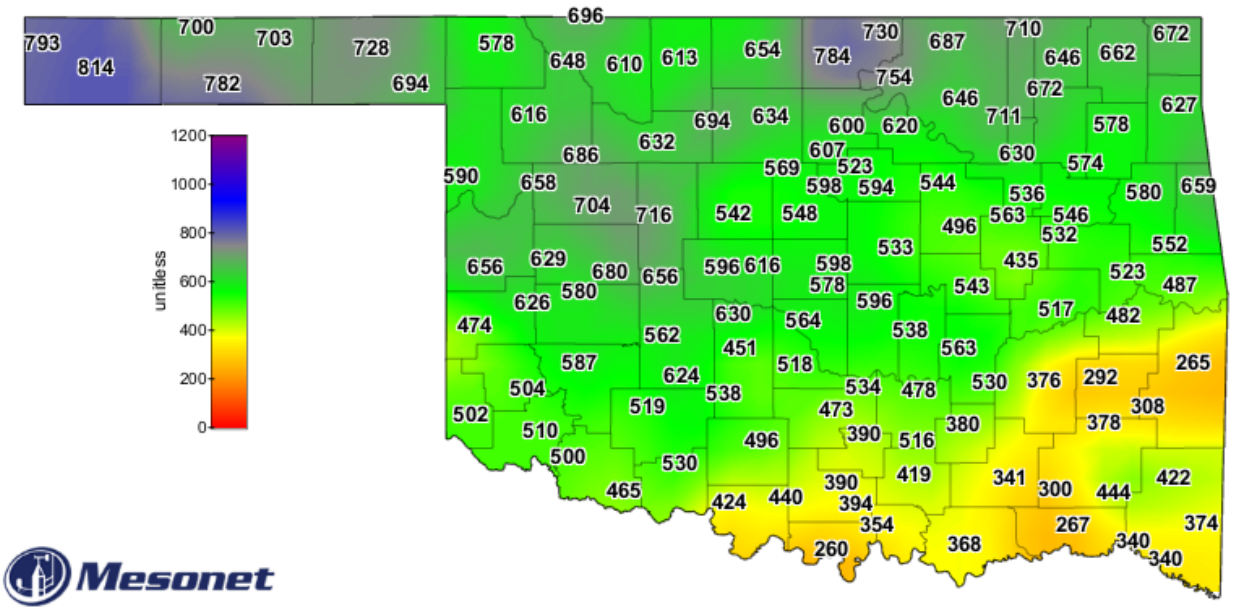
I've included maps from March 1, 2021, and 2022, and an updated map of 2023 to view. We are doing much better in the southeastern counties and look great across the state for our fruiting crops. We would like to see at least about 800 hours or more all along the red river in March and around 1200 hours at the northern edge of the state. I'll keep an eye on numbers with Wes Lee and Mesonet's assistance and will update on the OSU Extension Fruit Management Facebook page. We should have a couple of more weeks of accumulation.



Mesonet

Chill Hours - Utah Model

12:00 PM March 1, 2019 CST



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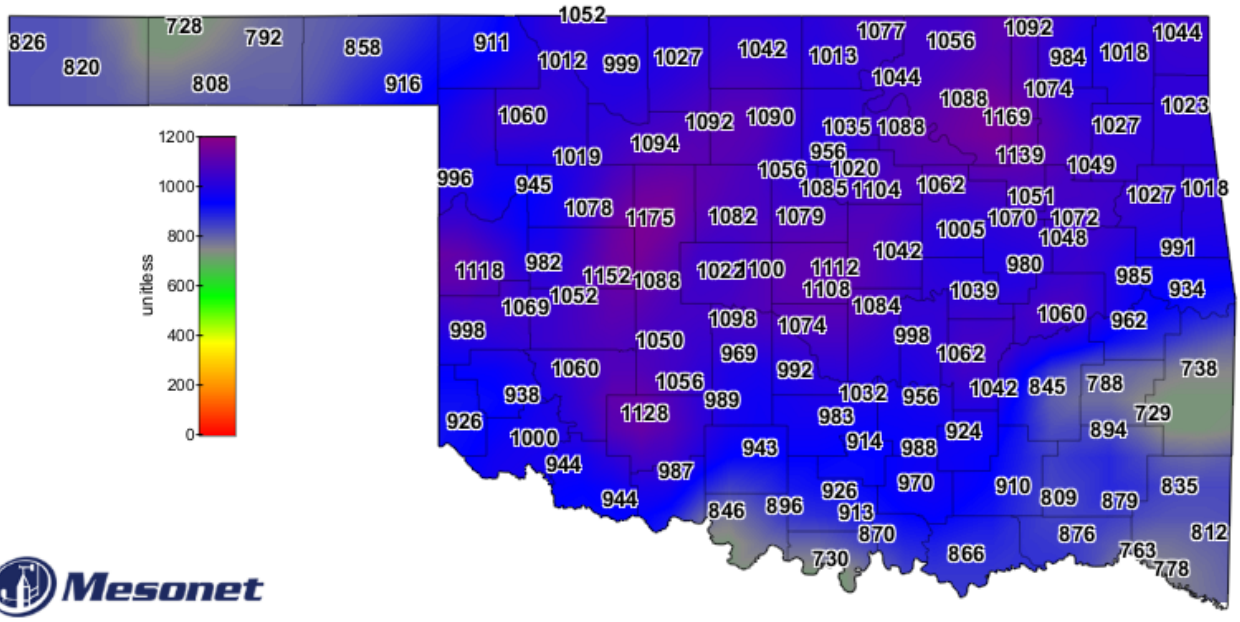
Chill Hours - Utah Model

4:50 AM March 1, 2022 CST



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Chill Hours - Utah Model

4:50 AM February 27, 2023 CST