

Horticulture Tips

May 2019

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

GARDEN TIPS FOR MAY!

David Hillock

Trees and Shrubs

- Prune and feed azaleas immediately after blooming.
- Insect Alert: ([EPP-7306](#))
 - * Bagworms on juniper and arborvitae. (Late May)
 - * Elm leaf beetles and larvae on elms. (Late May)
 - * Mimosa webworms on mimosa and honeylocust.
 - * Lace bugs on sycamore, pyracantha and azalea.
- Soak new transplants and newly planted trees unless rainfall is abundant.
- Pine needle disease treatments are needed in mid-May.

Turfgrass

- Cool-season lawns can be fertilized again. If you did not fertilize cool-season grasses in March and April, do so now.
- Warm-season lawns may be fertilized again in May. ([HLA-6420](#))
- Seeding of warm-season grasses such as bermudagrass, buffalograss, zoysiagrass and centipedegrass is best performed in mid-May through the end of June. The soil temperatures are warm enough for germination and adequate growing season is present to promote winter hardiness.
- Dollar spot disease of lawns can first become visible in mid-May. Make certain fertilizer applications have been adequate before ever applying a fungicide. ([EPP-7658](#))
- Nutsedge plants become visible during this month. Post-emergent treatments are best applied for the first time this month. Make certain warm-season grasses have completed green-up.
- The second application of pre-emergent annual grass herbicides can be applied in late-May or early June, depending upon timing of first application. Check label for details.
- Vegetative establishment of warm-season grasses can continue. ([HLA-6419](#))

Flowers

- Annual bedding plants can be set out for summer color.
- Plant summer bulbs such as cannas, dahlias, elephant ear, caladiums and gladiolus.
- Shake a leaf over white paper to look for spider mites. If the tiny specks begin to crawl, mites are present.

Water Gardens

- Clean out water garden and prepare for season. Divide and repot water garden plants.
- Begin feeding fish when water temperatures are over 50°F.

Fruits and Vegetables

- Plant watermelon, cantaloupe, cucumber, eggplant, okra, sweet potatoes, etc.
- Fruit spray programs should be faithfully continued during the next several weeks.
- Late May is the best time to control borers in the orchard. Check for label recommendations and controls.

Oklahoma Pecan Growers Meeting Offers a Few Changes

Becky Carroll

The 89th Annual Oklahoma Pecan Growers Association (OPGA) Meeting will be held at the Ardmore Convention Center on June 12-14, 2019. This year the conference will meet on a Wednesday through Friday which is a little different than in previous years. On Wednesday afternoon from 1 – 5 pm a mini pecan class will be offered to convention participants featuring an overview of pecan management. The group will learn about tips for successful planting, insect and disease management and pecan cultivars.

Registration material should be available at www.okpecangrowers.com. This year conference registration can be completed online. Early registration saves \$20. Registration at the event begins at 3 pm on Wednesday. Wednesday evening includes a dinner sponsored by Savage Equipment from 6 – 8 pm with time to meet and greet. Box lunches for Thursday's lunch break can be purchased during registration.

The meeting will be held at the Ardmore Convention Center with accommodations at the Holiday Inn (hotel attached to Convention center) or SpringHill Suites (a short walk from convention). Room reservations should be made by May 15, 2019. Be sure to ask for the OPGA room rates for best prices. Holiday Inn is \$109 plus tax and SpringHill Suites is \$72 plus tax, both for single or double occupancy.

Commercial exhibits, educational meeting, state pecan show and pecan food show will be the included in the three day event. Speakers for Thursday's educational meeting include OSU's Phil Mulder covering Aphid Considerations during weevil season; Lu Zhang talking about Pecan Bloom and Spring Freezes; Jen Olson will cover Pecan Fungicide Resistance; and graduate student Gianna Ricci discussing Which Pecan Tastes the Best? Also on the program is Basil Savage III, presenting information on pecan equipment for cleaning and processing; Low Input Orchards with NRI's Charlie Graham; University of Georgia's Lenny Wells, and pecan marketing from Dan York the President of National Pecan Shellers. Also, Secretary of Agriculture Blayne Arthur will address the group and APC's Alex Ott & USPC's Janice Dees will provide updates.

Please encourage 4-H kids and adults to enter the state pecan food show. Entries are needed to make the food show successful. Grand Champion winners receive silver serving pieces for the adults and silver pecan necklaces or tie tacks for youth. Entries are accepted Friday from 7:30 – 10 am. More information is available in the meeting information pack.

Awards for the pecan show, food show and grower awards will be presented at the Award Banquet Thursday evening. The auction of award winning food show entries is always a highlight.

The Friday Field day will be held at the Arbuckle Mountain Pecans, hosted by Mike and Valerie Bynum. Friday's lunch is provided by Farm Credit Services. The schedule and meeting agenda are posted to the webpage. For questions concerning the OPGA meeting, please contact Deann Smith at opgatreasurer@gmail.com.

Water Conservation Program at the Oklahoma City Zoo and Botanical Garden

Kevin Moore, Joshua Campbell, Casey Hentges, Shelley Mitchell, and Justin Moss

When you think of a zoo, you probably picture animals like elephants, bears, and gorillas. However, the Oklahoma City Zoo is also a nationally accredited botanical garden, featuring the largest collection of Oklahoma native plants in the country. It is part of what makes it such a beautiful place to visit, and it offers something a little different each month. In addition to Oklahoma plants, the zoo includes species from across North America, Australia, Asia, Africa, and South America.

Plants need water to grow and thrive, and the Oklahoma City Zoo strives to utilize this valuable resource efficiently. To demonstrate this, a water conservation workshop will be held on Wednesday, May 15 from 9 am to noon at the Oklahoma City Zoo Rosser Conservation Education Center Auditorium. The program will highlight water-efficient plant materials and irrigation technology in the Zoo's Botanical Garden. The event will begin with a presentation on drought tolerant plants by Casey Hentges, Host of *Oklahoma Gardening*. Participants will then complete a walking tour of the Butterfly Garden, the picnic gardens, Oklahoma Trails, the water conservation garden, and the front entrance garden. Zoo staff, master gardeners, and Oklahoma State University extension personnel will be on hand at each location to discuss the exhibits and answer questions. Kid-friendly activities will also be provided at each stop on the tour.

This program is held in cooperation with the Oklahoma State University Department of Horticulture and Landscape Architecture, the Oklahoma County Extension Office, and the Oklahoma City Utilities Department. The cost of the program is \$7 for ZooFriends members, \$9 for non-members, and \$6 for children. This includes admission to the zoo. Participants can register online at <https://okczoeducationdepartment.regfox.com/hort-water-conservation-workshop>.

Water Saving Tips

David Hillock

Plants need water, but how you water and how much you water can make a big difference in plant health and how much your pocket book is affected. Below are some tips on how to water so you don't waste water or money and have healthy plants.

- Water deeply, but infrequently. Allowing the water to soak into the ground and letting the soil dry out between watering forces plants to produce strong, deep roots.
- Mulch. Mulch retains soil moisture, prevents erosion, controls weeds, and increases soil quality.
- Install a rain sensor. A rain sensor turns the irrigation system off during and immediately after a rain event.
- Don't water hardscapes. Make sure sprinklers are watering the lawn and not the street or sidewalks.
- Avoid heavy pruning. Pruning stimulates growth and your plants will require more water.
- Mature plants require less water. Mature plants and trees have deep root systems and can be watered less frequently.
- Use a rain gauge. Typically, lawns require 1 inch of water per week to stay healthy and up to 2 inches per week to stay green in the summer.
- Take advantage of your downspouts. Direct the downspout to your garden rather than draining towards the street.
- Fix or replace broken sprinkler heads. Take the broken irrigation head with you when buying a new one to ensure you get the right one.
- Adjust your irrigation system. Plants require less water in the fall and winter than in the spring and summer.
- Check for leaks. If you have a sudden increase in your water bill, dry or soggy areas in your yard, or overgrown turf areas you might have a leak.

For more information on efficient watering practices and low water use landscapes see the following OSU Extension publications:

[E-1038](#) – A Guide to Saving Water in the Home Landscape
[E-1037](#) – Drought-Tolerant Plant Selections for Oklahoma
[HLA-6444](#) – Drought-Tolerant Plant Selections for Oklahoma
[HLA-6445](#) – Smart Irrigation Technology: Controllers and Sensors
[HLA-6610](#) – Simple Irrigation Audit for Home Lawns in Oklahoma
[L-332](#) – Xeriscape Demonstration Garden
[L-333](#) – Xeriscape Garden Plants
[L-434](#) – Irrigation
[L-438](#) – Water Saving Design Ideas for Oklahoma Landscapes
[L-444](#) – Lawn Watering Tips
[L-450](#) – The Water Conservation Garden.

How to Produce High Quality Tomatoes

David Hillock

1. Select or prepare soil high in organic matter and sufficiently loose to allow for extensive vigorous root growth.
2. Apply needed fertilizers and mix into the soil prior to planting.
3. Obtain husky plants of recommended nematode and wilt resistant varieties. Set them into the garden as early as weather and recommended planting dates permit.
4. Water in newly set plants with a starter solution.
5. Provide protection from cutworms and other possible pests of the transplanting season.
6. Use mulching materials around plants within one month following planting.
7. Apply supplemental water as needed, drip irrigation being preferred.
8. Control insects and spider mites as well as leaf and fruit diseases if numbers are increasing week to week.
9. Windbreaks may be especially desirable as hot, dry weather develops.
10. Maintain the identity of different varieties to evaluate their qualities and thus determine the more appropriate kinds for future plantings.

For more information on growing tomatoes see OSU Extension Fact Sheet [HLA-6012](#) – Growing Tomatoes in the Home Garden.

Growing in Raised Garden Beds

David Hillock

Raised bed gardens are an ideal way to grow vegetables and small fruit. They are elevated a few inches or more above the soil level, and just wide enough to reach across by hand. Plants can be grouped together in a bed with permanent walkways on either side. The soil does not get compacted, since the soil in which plants are grown is never walked on.

The idea of growing plants in single file or “row crops,” started with the use of a horse and plow to cultivate crops on a large scale. The straight rows, far enough apart to drive a horse between, made plowing easier. Wider spaces later accommodated tractors and their implements. Not knowing the reasons behind growing crops in rows, many home gardeners plant single row vegetable gardens. However, foot traffic on each side of a single row can severely compact soil by the end of a growing season. The excessive row spacing also wastes garden space that can be planted with crops.

Raised bed gardens can range from a simple rectangular plateau of soil to a more elaborate bed framed in wood, stone and mortar, straw bales or modern snap-together plastic blocks. Although more expensive and time consuming to build, permanent structures will keep soil in place during heavy rains and will look nicer in the landscape. However, for a large garden, several beds of mounded soil are very adequate to achieve desired results. Just make sure plenty of mulch is used on the soil to hold it in place during drenching rains.

Benefits of Raised Beds –

Higher Yields – Raised beds allow more garden space for growing plants, with less space utilized for walking paths. Individual plant yields may be slightly less with less space per plant than in traditional rows, but more plants can be grown in a given space.

Better Soil – Amendments such as compost and fertilizer are only spread on beds and not wasted on pathways. Looser (non-compacted) soil also drains better. Frequent tillage of the garden can be eliminated.

Water Conservation – Plants grown close together shade the soil, decrease evaporation and keep roots cooler. Water is only provided to the beds and not the pathways.

Fewer Weeds – Closely planted crops keep weeds crowded out. Pathways can be covered in landscape fabric or mulch to choke out weeds.

Extended Season – Soil in raised beds can be worked earlier in the season, because it warms up faster than soil in traditional in-ground gardens. Rainy weather is less of a hindrance to working in the garden, since mud is not an issue.

Better Pest Control – Raised bed gardens are easy to cover with insect screening fabric. Crops are easy to rotate from bed to bed — preventing a buildup of pests.

For more information about using raised beds see OSU Extension Fact Sheet [L-6033](#) – Raised Bed Gardening.

Crop Rotation – An Effective Management Tool

David Hillock

Rotating where vegetables are planted is an excellent way of keeping harmful soil organisms to a minimum. Experienced gardeners know the value of proper crop rotation. They are aware that the same crop planted in the same spot year after year decreases in productivity. This is because soil borne diseases, soil insects, nematodes, and toxic chemical residues tend to collect and build up in a given area. As these detrimental factors increase, crop yields decrease. Therefore, it is necessary to rotate the location of vegetables each season.

Each family of vegetables has certain unique effects on the soil, and most vegetable varieties within a given family are susceptible to the same diseases and insects. Therefore, it is important to know which vegetables are included in each family. The common backyard vegetables generally fall into nine distinct families. The pea or legume family includes peas and beans of all kinds. The mustard family is one of the largest, which includes cabbage, collards, brussels sprouts, kale, cauliflower, broccoli, turnips, and radishes. Beets and spinach belong in the goosefoot family. Carrots, parsley, and celery are in the parsley family. The nightshade family includes potatoes, tomatoes, eggplant, and all varieties of pepper. The vine crops are in the gourd

family—squash, pumpkin, watermelon, cantaloupe, and cucumber. The composite family is made up of lettuce, dandelion, and artichoke. Onions, garlic, and chives make up the lily family. Sweet corn comes from the grass family.

Remember that just rotating the placement of each single vegetable is not enough. Rotation of family groups is also important.

Very small gardens and the lack of other available space in the landscape often make rotation impossible. However, soil solarization has proven to be very effective for small garden areas. Soil solarization controls a wide variety of soil pests and is a technique commonly used in integrated pest management programs. For more information on soil solarization, see OSU Extension Fact Sheet [EPP-7640](#).

Turfgrass Species for Oklahoma Lawns

David Hillock

The geographic location of Oklahoma permits turfgrass species popular in the north, south, east, and west environments of the United States to be grown somewhere in the state. However, high temperatures and limited rainfall during the summer limit the success of the cool-season turfgrass species to shaded areas and sites with irrigation systems. Relatively low temperatures during the winter prohibit the success of many warm-season (grows in the summer, dormant in the winter) turfgrass species.

Successful turfgrass management begins with the selection of a turfgrass species adapted to the wide fluctuations in temperature and moisture found in the state. It also involves the selection of a turfgrass suited to your personal need(s) (a show place, a neighborhood sports field, an average lawn, or cover to protect the soil from erosion), and a turfgrass species suited to any physical or environmental limitations of the planting site such as shade, no supplemental water, or poor soil conditions.

Bermudagrass (*Cynodon* spp.) – Bermudagrass is an aggressive, warm-season turfgrass species that spreads rapidly by above-ground (stolons) and below-ground (rhizomes) stems. It is the best-adapted turfgrass for full-sun areas in Oklahoma due to its excellent heat and drought tolerance during the summer and its sufficient winter hardiness. Many cultivars are available for different situations.

Buffalograss (*Buchloe dactyloides*) – Buffalograss is a warm-season, sod-forming, native prairie grass that spreads by stolons. It has a fine texture and a grayish-green color. It has excellent tolerance for the heat, drought, and cold conditions found in Oklahoma. Buffalograss is best suited to full-sun sites in areas of Oklahoma receiving 12 to 25 inches of rainfall per year. It grows best on heavy-textured soils and has some tolerance of alkaline soils. Buffalograss is the best choice for unirrigated lawns and general turf areas of western Oklahoma. It produces numerous seed heads which may distract from the general appearance of the turf.

Zoysiagrass (*Zoysia* spp.) – Zoysiagrass is a fine to medium-textured warm-season turfgrass that spreads by stolons and rhizomes. Its winter hardiness and its ability to grow under light shade are its desirable features. Its slow establishment rate is its greatest liability. Zoysiagrass requires more frequent watering to prevent wilting than bermudagrass, but has lower annual fertilizer requirements. Zoysiagrass should only be utilized for lawns when a top-quality and high-maintenance turf is desired. Meyer zoysiagrass (Z-52) is the only cultivar that is commercially available in appreciable quantities in Oklahoma.

St. Augustinegrass (*Stenotaphrum secundatum*) – St. Augustinegrass is a medium to coarse-textured, warm-season turfgrass that spreads by stolons. It is suited to southern Texas, but can sometimes be grown in the extreme southern regions of Oklahoma on sheltered sites. St. Augustinegrass produces a quality lawn on full-sun to lightly- shaded sites. However, it requires more frequent watering and better soil conditions than bermudagrass.

Occasionally, cool-season turfgrass species are the best selection for a lawngrass. The warm-season turfgrasses cannot tolerate shaded sites, so a cool-season turfgrass such as tall fescue (*Festuca arundinacea*), Kentucky bluegrass (*Poa pratensis*) or perennial ryegrass (*Lolium perenne*) should be seeded (ideally in the fall) if a permanent turf is desired. Cool-season grasses provide a green cover the entire year if properly watered and fertilized.

Cool-season turfgrasses, such as tall fescue and Kentucky bluegrass can also be successfully grown in full sun, but requires more frequent watering during the summer than bermudagrass to prevent wilting, thinning, and a loss of turf density. Thus, cool-season turfgrasses may be utilized in full sun only when a convenient means of irrigation is available.

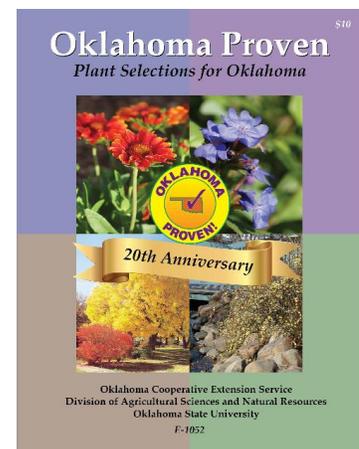
For more information on these grasses see OSU Extension Fact Sheet [HLA-6418](#) – Selecting a Lawn Grass for Oklahoma.

20 Years of Oklahoma Proven – A Plant Evaluation and Marketing Program

Kevin Moore, David Hillock, and Justin Moss

In 1999, the Department of Horticulture and Landscape Architecture at Oklahoma State University introduced Oklahoma Proven – a plant evaluation and marketing program focused on promoting plants that thrive in Oklahoma. The executive committee selects one annual, perennial, shrub, and tree for promotion each year. These plants are well-adapted to Oklahoma growing conditions, readily available, resistant to pests, and non-invasive. Many of them are also drought-resistant following an establish period, an important consideration for conservation-minded gardeners.

To recognize the anniversary of the program, a new publication has been produced with all of the plants from the last 20 years – *Oklahoma Proven Plant Selections for Oklahoma (E-1052)*. This



publication can be downloaded for free from the Oklahoma Proven website (www.oklahomaproven.org). A spiral bound print copy can also be ordered from the website for \$10.

Additionally, OSU has partnered with several nurseries in the Oklahoma City area and the Oklahoma City Utilities Department to hold an Oklahoma Proven plant sale on May 4. Participating nurseries will offer a 10% discount on the sale of Oklahoma Proven plants during this event. The plant sale will take place at the following locations: Lowe’s Garden Center in Yukon, Marcum’s Nursery in Norman and Oklahoma City, Plant Wisdom Garden Center, Prairie Wind Nursery, Precure Nursery and Garden Center, and Ross See Company in El Reno. Look for plants with an Oklahoma Proven sticker on the pot.

Oklahoma Proven Selections, 2015 – 2019

Year	Annual	Perennial	Shrub	Tree
2019	Graffiti® series star flower	Rattlesnake master	Double Take™ series flowering quince	‘Vanderwolf’s Pyramid’ limber pine
2018	Supertunia® Vista Bubblegum® petunia	Indian Pink	‘Little Volcano’ and ‘Gibraltar’ bush clovers	Japanese zelkova
2017	Firecracker flower	Milkweed	Dwarf palmetto	Fringetree
2016	Annual vinca	Sedge	‘Color Guard’ variegated yucca	Escarpment live oak
2015	Spider flower	Volcano® series garden phlox	Columnar barberry	Hedge maple

Outdoor Water Conservation Classes for the City of Edmond

Kevin Moore, Joshua Campbell, and Justin Moss

The City of Edmond is partnering with the ThinkWater team at Oklahoma State University to provide monthly workshops on outdoor water use efficiency. Kris Neifing, Director of Water Resources, told The Edmond Sun, “in the winter months, water consumption is about 8 million gallons a day and that can peak up to 26 million gallons a day in the summer.” Much of this increase is related to lawn irrigation, which is why Edmond is focused on outdoor water use. Additionally, the population of Edmond has increased 35% in the past 20 years. The city is currently investing over \$400 million to upgrade and expand water and wastewater facilities to meet the needs of the growing community.

Workshops will be held in room 207 of the Edmond Downtown Community Center located at 28 E. Main. A broad range of topics will be discussed concerning efficient water use in the landscape. Each presentation will last about an hour. The workshops are free, but pre-registration is requested. Visit <http://edmondok.com/1528/2019-Outdoor-Water-Conservation-Classes> to register.

Drought Resistant Plants for Oklahoma: May 16, 3 pm

Drought resistant does not mean desert landscape! Oklahoma native and well-adapted plants that require minimal or no supplemental watering will be discussed. Come see some of the beautiful, drought resistant plants that thrive in Oklahoma.

Turfgrass Maintenance and Irrigation: June 13, noon

When should you fertilize? How much water does your turfgrass need? How long should you cut your grass? These questions and more will be answered.

Smart Irrigation Month – Home Irrigation Checkup: July 9, 10 am

Smart Irrigation Month is an initiative to promote outdoor water use efficiency during peak summer demand. Outdoor water use makes up about 30% of overall water use in the United States, and up to 50% of this water is wasted. During this workshop you will learn how to complete a simple home irrigation checkup to ensure your system is functioning efficiently.

Smart Irrigation Month – Smart Irrigation Technology: July 18, 3 pm

Smart irrigation technology can help homeowners to apply the right amount of water to their landscape and maximize system efficiency. The workshop will discuss smart irrigation controllers, soil moisture sensors, rain/freeze sensors, and pressure reducing spray heads.

Dealing with Difficult Shady Areas: August 15, 10 am

Shady areas can make it difficult to grow a healthy lawn, but there are many ways to find success in the shade. Common problems and solutions will be addressed, as well as alternatives to traditional turfgrass.

Composting: September 17, 3 pm

Compost is a natural, dark brown, humus-rich material formed from the decomposition or breakdown of organic materials such as leaves, grass clippings, and vegetable food scraps. Composting reduces the flow of material to the landfill and provides an excellent source of nutrients for your garden. Procedures for composting will be discussed, along with options for establishing a compost container, bin or pile.