

# Horticulture Tips

## April 2019

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

### Garden Tips for April

*David Hillock*

#### Fruit and Nut

- Don't spray insecticides during fruit tree bloom or pollination may be affected. Disease sprays can continue according to schedule and label directions. ([EPP-7319](#))
- Control cedar-apple rust. When the orange jelly galls are visible on juniper (cedar), following a rain, begin treating apple and crabapple trees with a fungicide. ([EPP-7319](#), [EPP-7611](#))
- Fire blight bacterial disease can be controlled at this time. Plant disease-resistant varieties to avoid diseases.
- Continue spray schedules for disease prone fruit and pine trees.

#### Tree and Shrub

- Proper watering of newly planted trees and shrubs often means the difference between success and replacement.
- Remove any winter-damaged branches or plants that have not begun to grow. Prune spring flowering plants as soon as they are finished blooming. ([HLA-6404](#), [HLA-6409](#))
- Control of powdery mildew disease can be done with early detection and regular treatment. Many new plant cultivars are resistant. ([EPP-7617](#))
- Leaf spot diseases can cause premature death of foliage and reduce plant vigor.

#### Flowers

- Most bedding plants, summer flowering bulbs, and annual flower seeds can be planted after danger of frost. This happens around mid-April in most of Oklahoma. Hold off mulching these crops until spring rains subside and soil temperatures warm up. Warm season annuals should not be planted until soil temperatures are in the low 60s.
- Harden off transplants outside in partial protection from sun and wind prior to planting.
- Let spring flowering bulb foliage remain as long as possible before removing it.

#### Vegetables

- Wait a little longer for it to warm up before planting cucurbit crops and okra.
- Plant vegetable crops in successive plantings to ensure a steady supply of produce rather than harvesting all at once.

- Cover cucurbit crops with a floating row cover to keep out insect pests. Remove during bloom time.
- Watch for cutworm damage and add flea beetle scouting to your list of activities in the vegetable garden.

### Landscape - General

- Hummingbirds arrive in Oklahoma in early April. Get your feeders ready using 1 part sugar to 4 parts water. Do not use red food coloring.
- Keep the bird feeder filled during the summer and help control insects at the same time.
- Lace bugs, aphids, spider mites, bagworms, etc. can start popping up in the landscape and garden later this month. Keep a close eye on all plants and use mechanical, cultural, and biological control options first.
- Be alert for both insect pests and predators. Some pests can be hand picked without using a pesticide. Do not spray if predators such as lady beetles are present. Spray only when there are too few predators to be effective.
- Schedule a group tour of The Botanic Garden at OSU in Stillwater between the first of May and late October.

### Lawn

- Warm season grass lawns can be established beginning late April from sprigs, plugs or sod. ([HLA-6419](#))
- Fertilizer programs can begin for warm season grasses in April. The following recommendations are to achieve optimum performance and appearance of commonly grown species in Oklahoma.
  - Zoysiagrass: 3 lbs N/1,000 sq. ft./year
  - Bahiagrass: 3 lbs N/1,000 sq. ft./year
  - Buffalograss: 2 - 3 lbs N/1,000 sq. ft./year
  - Buffalograss/grama mixes: 3 lbs N/1,000 sq. ft./year
  - Bermudagrass: 4-6 lbs N/1,000 sq. ft./year
  - Centipedegrass: 2 lbs N/1,000 sq. ft./year
  - St. Augustinegrass: 3-6 lbs N/1,000 sq. ft./year

When using quick release forms of fertilizer, use one pound of actual nitrogen per 1,000 sq. ft. per application; water in nitrate fertilizers. ([HLA-6420](#))

- Mowing of warm-season lawns can begin now ([HLA-6420](#)). Cutting height for bermudagrass and zoysiagrass should be 1 to 1½ inches high, and buffalograss 1½ to 3 inches high.
- Damage from Spring Dead Spot Disease (SDS) becomes visible in bermudagrass ([EPP-7665](#)). Perform practices that promote grass recovery. Do not spray fungicides at this time for SDS control.
- Grub damage can be visible in lawns at this time. Check for the presence of grubs before ever applying any insecticide treatments. Apply appropriate soil insecticide if white grubs are a problem ([HLA-7306](#)). Water product into soil.

## Garden Planting Guide for Warm Season Vegetables

<u>Vegetable</u>	<u>Time to Plant*</u>	<u>Days to Harvest</u>	<u>Method of Planting</u>
Bean, Lima	April 15-30	90-120	Seed
Beans, Green or Wax	April 10-30	50-60	Seed
Beans, Pole	April 10-30	60-90	Seed
Cantaloupe	May 1-20	80-100	Seed or Plants
Cucumber	April 10-30 or later	50-70	Seed or Plants
Eggplant	April 10-30	80-90	Plants
Okra	April 10-30 or later	60-70	Seed
Pepper	April 10-30 or later	90-110	Plants
Pumpkin	April 10-30	90-120	Seed
Southern Pea	May 1-June 10	85-100	Seed
Squash, Summer	April 10-30 or later	40-60	Seed or Plants
Squash, Winter	May 15-June 15	110-125	Seed or Plants
Sweet Corn	Mar. 25-April 30	80-100	Seed
Sweet Potato	May 1-June 10	100-120	Plants
Tomato	April 10-30	70-90	Plants
Watermelon	May 1-20	90-120	Seed

\*These dates indicate planting times from southeast to northwest Oklahoma. Specific climate and weather may influence planting dates. For Cool Season Vegetables, the soil temperature at the depth where the seeds are planted should be at least 40°F.

### **Don't Cut Back Spring Flowering Bulbs Too Early!**

*David Hillock*

As spring flowering bulbs such as tulips, daffodils, hyacinths, etc. finish blooming, if possible, allow the foliage to turn yellow and die back. The leaves should be easily removed by just tugging on them when they have completely died back. Allowing the leaves to remain on the plant until they turn yellow allows the photosynthesis process in the green leaves to replenish the bulb with plenty of energy for next year's blossoms. Removing them too early robs the plant of food needed to produce spectacular blooms.

In Oklahoma, most tulip bulbs are treated as annuals, meaning they are replanted every year. The high heat and humidity along with heavy clay soils makes it difficult to maintain most tulips as a perennial plant in the garden. A gardener interested in a challenge could dig them up after the leaves have turned yellow and store them in a cool, dark area and then replant them in the fall.

Daffodils are probably our most reliable species that is perennial in Oklahoma and typically needs little care. Locating daffodils in an area such as a perennial border or shrub and groundcover area where they can be left to die back after flowering is best. Occasionally they will need to be thinned out to encourage vigorous growth and lots of blooms.

Giving your spring flowering bulbs a light feeding after flowering, but before leaves turn brown will help in developing stronger plants.

## **How Many Bedding Plants Do I Need?**

*David Hillock*

Here is a simple way to avoid overbuying or under-buying the number of bedding plants you need for your flower beds. All it takes is some simple arithmetic.

First, measure the area of your garden and calculate its square footage (width x length = square feet). If the area is irregularly shaped – oval, round or long and winding – a rough estimate is good enough.

Next, use the chart below to estimate the number of plants you will need. You will probably want to get at least a few more than you will need, just in case some are damaged by weather, animals or pests.

<b>Recommended Spacing</b>	<b>Number of Plants per Sq. Ft.</b>
6 inches	4
8 inches	2.25
10 inches	1.44
12 inches	1
18 inches	.44
24 inches	.25

To figure out how many you actually need multiply the square footage of your bed x the number of plants per square foot based on the recommended spacing. For example, let's say your flower bed is 125 sq. ft. and the recommended spacing for the plants you are buying is 10 inches.

Multiply 125 (sq. ft.) x 1.44 (number of plants per sq. ft. for 10 inch spacing) = 180. You will need to buy approximately 180 plants for your bed.

## **All-America Selections Presents Winners For 2019**

*David Hillock*

All-America Selections (AAS) judges have again finished a rigorous year of trialing and now the AAS Board of Directors is pleased to announce the newest AAS Winners. A couple years ago the organization began recognizing regional performance; the entries that did well in a majority of regions are designated as traditional National Winners.

In 2019, eighteen plants made it on the National Winners list with 9 vegetables and 9 flowers. Vegetable selections include a melon (Orange SilverWave F1), potato (Clancy F1), pepper (Just Sweet F1), five tomatoes (Chef's Choice Black F1, Fire Fly F1, Mountain Rouge F1, Red Torch F1, and Sparky XSL F1), and a watermelon (Cal Sweet Bush); the flowers include a begonia (Viking™ XL Red on Chocolate), nasturtium (Baby Rose), petunia (Wave® Carmine Velour F1), vinca (Mega Bloom Polka Dot F1), zinnia (Holi Scarlet F1), and four marigolds (Big Duck Gold F1, Big Duck Orange F1, Big Duck Yellow F1, and Garuda Deep Gold).

All of these winners were trialed next to similar varieties that are currently on the market. The AAS Judges do a side-by-side analysis of growth habit, disease resistance and more to determine if these entries were truly better than those already available to home gardeners. Only those flower entries with superior garden performance or the vegetables with superior taste and garden performance are given the AAS stamp of approval.

A complete list of trial grounds and judges can be found here:

[http://www.aaswinners.com/trial\\_grounds/index.cfm](http://www.aaswinners.com/trial_grounds/index.cfm)

A complete list of all AAS Winners since 1932 can be found here:

<http://www.aaswinners.com/winners/index.cfm>

All-America Selections® was founded in 1932 and continues as the oldest independent testing organization in North America. Every year, new, never-before-sold varieties are trialed in our Trial Grounds and professional horticulturists determine which varieties will be deemed winners based on their garden performance. AAS relies upon a public relations program to inform gardeners about AAS Winners that are announced three times each year.

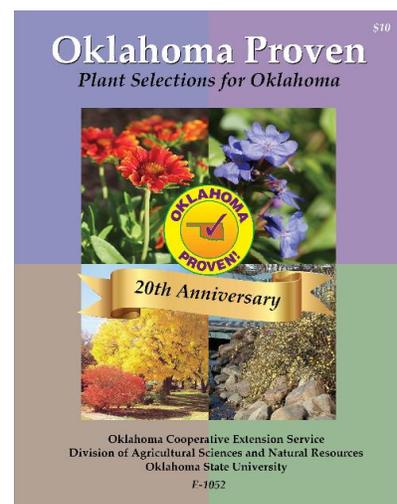
## **20 Years of Oklahoma Proven – A Plant Evaluation and Marketing Program**

*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](http://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 April 27 and 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**

<b>Year</b>	<b>Annual</b>	<b>Perennial</b>	<b>Shrub</b>	<b>Tree</b>
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

**Resistance, Our First Defense to Pests**

*David Hillock*

One of our best defenses to common pest problems in the garden and landscape is plants with natural resistance. By selecting varieties of plant species, or species that are inherently resistant to common pest problems, the use of pesticides needed to keep our plants looking good can be reduced.

When buying seeds or plants, try to choose those with built-in resistance to diseases, insects, and nematodes. Sources for this information include OSU Extension Fact Sheets, seed catalogs, and plant and seed packages. It may be better to forego some production capability in favor of the increased pest resistance, if you must make such a choice.

During the growing season, stressed plants can lose their resistance to pests, so be sure the crop has the water and nutrients it needs. When shopping for seeds and plants, check the labels for indications of pest resistance. For example, many garden phlox and crapemyrtles are susceptible to powdery mildew fungal disease; however, several varieties are available that are resistant to powdery mildew. When purchasing vegetables, check labels or packaging for abbreviations similar to these, used to designate various types of pest resistance or tolerance:

A—*Alternaria* stem canker  
ALS—angular leaf spot  
ANTH—anthracnose  
CMV—cucumber mosaic virus  
DM—downey mildew  
F—*Fusarium* (race 1)  
FF—*Fusarium* (races 1 & 2)  
L—leafspot  
MDM—maize dwarf mosaic

N—nematode  
NCLB—northern corn leaf blight  
PM—powdery mildew  
SCLB—southern corn leaf blight  
St—*Stemphylium* (gray leaf spot)  
SW—Stewart's wilt  
TMV—tobacco mosaic virus  
V—*Verticillium*

## Pruning Hydrangeas

*David Hillock*

Hydrangeas are one of the more popular plants in the landscape. They have attractive foliage and typically produce large, striking flowers. Hydrangeas are generally easy to grow and tolerate a wide variety of soil. About the only care they need is pruning, however, there are different types of hydrangeas that require different pruning techniques depending on the time of flowering.

Hydrangeas that bloom in the spring, usually before May and June, bloom on last year's growth. Those that bloom later flower from buds formed on the new wood that growing season. Varieties that bloom in spring should be pruned after they flower while those that bloom on new wood can be pruned if necessary in late winter, early spring before new growth develops.

So which are which? The types that bloom on old wood include the mophead, big leaf, and lacecap types, which are *Hydrangea macrophylla* varieties, and the oakleaf hydrangea, *H. quercifolia*. These all produce flower buds on last year's wood.

Types that bloom on new wood include the panicle hydrangea, often referred to as PeeGee types, *H. paniculata*, and the smooth hydrangea, often referred to as the Annabelle types, *H. arborescence*.

The one exception is the variety 'Endless Summer', which blooms on old and new wood. In all cases it is helpful to remove old blossoms as they fade.

If you're not sure of which type you have, the safest approach is "no pruning is better than the wrong type of pruning." However, you can also take a simplified approach which is suitable for all types. The simplified approach includes removing only winter-killed wood or all dead stems in the spring before or as the buds are opening. You can check for live wood by scratching the stems with your thumbnail or a knife, if it is green it is still alive, brown and hard it is dead and should be removed. Rejuvenation is another way to keep your plants healthy by removing dead or very old stems by cutting them back to the ground, this will stimulate new growth and produce more blooms later on.

Today there are a wide variety of hydrangeas; make sure you choose a variety that will suit your landscape needs, as well as the site. Most like some water and most prefer a little protection from the hot Oklahoma afternoon sun. With good choices, and correct timing with pruning, your hydrangeas will be the envy of the neighborhood.

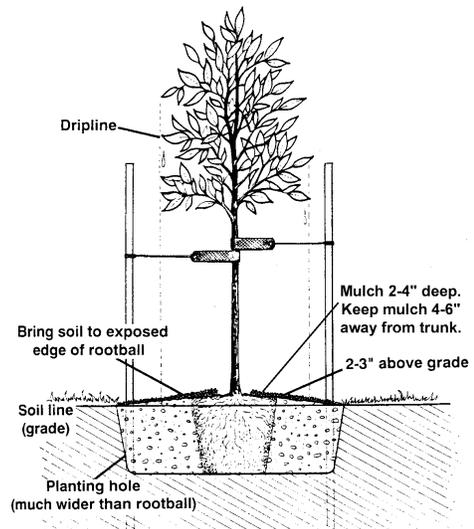
## Planting Trees

David Hillock

To ensure successful tree establishment, the following planting techniques and methods should be used.

**When to Plant** – The best time to plant most trees is spring or fall; however, many containerized trees can be planted any time if handled properly. Plants installed during the growing season are susceptible to high transpiration rates leading to drying of plant tissues.

- Early fall - best time for container-grown and balled & burlapped (B&B) trees.
- Mid-February through early April - bare-root.



**Handling Trees before Planting** – Avoiding unnecessary damage and stress to trees prior to planting will insure better success.

- Keep the rootball moist.
- Handle the tree by the container, not by the trunk.

**Preparing the Hole and Planting the Tree** – Preparing the planting area properly before planting is very important.

- *Do not* apply amendments to backfill.
- Dig the planting hole two to three times the diameter of the tree's rootball and no deeper than the rootball itself.
- Since most Oklahoma soils are clay, plant trees 1-3" above grade. Plant trees at original grade in sandy soil.
- *Do not* put crushed stone or gravel in the bottom of the hole!
- Remove the bag, container, and all strings and wires from the trunk! The burlap of B&B trees may be left on to decay. Be sure to lay burlap back away from trunk and cover with soil.
- If roots are excessive and circling inner walls of the pot, score the outer edge of the rootball by slightly severing or scratching the root system. *Do not* cut deeply into the rootball.

**Backfilling the Planting Hole** – Fill in the planting hole (backfill) with native soil and tamp lightly. Soil amendments are not necessary and may result in further complications such as root rot.

**Fertilizing** – A new tree has a very limited capacity for utilizing fertilizer until it becomes established. Heavy fertilization is not recommended at the time of planting. Excessive fertilizer in the root zone can be damaging. If fertilizer must be used at planting or in the first growing season, apply a controlled-release or liquid fertilizer at the lowest labeled rate.

**Watering the New Tree** – Newly planted trees should be watered well at the time of planting and during establishment. Natural rainfall is usually not adequate to provide the moisture needs of newly planted landscape trees.

Generally, young plantings need an equivalent of one inch of rain per week. Newly planted trees may need to be watered two or three times a week in extremely hot, dry, windy weather because their root systems cannot take up the amount of water needed to replenish the water lost through the leaves. Watch for signs of wilting as an indicator that the tree needs water.

Apply water slowly at the base of newly planted trees. This is especially important for container grown plants as their soilless mixes can dry while the bed or surrounding soil remains damp. If you have several young trees and shrubs, a drip irrigation system would be wise.

Be cautious not to overwater or the amount of oxygen in the soil will be lowered to a level that will damage roots. Make certain the timing and patterns of lawn watering systems are not overlapping into plant beds and too much water is being applied.

**Mulching the New Tree** – New trees should be mulched using an organic mulch 1-3” deep and 5-6’ in diameter; keep mulch at least 2-4” away from trunk of tree. Do not mound mulch up against trunk of tree. The benefits of mulching are:

- Create a weed and turf-free area.
- Reduced plant competition for water and nutrients.
- Regulate soil temperature and moisture.

**Pruning the New Tree** – Avoid overpruning new trees. Leave the lower limbs intact if possible. Remove injured or diseased branches only. Overpruning may result in sunscald and inhibit tree growth.

**Staking Trees** – Stake young trees sparingly and briefly when possible. In fact, prolonged staking can have detrimental effects on the development of the tree. Too often, staking materials end up injuring or girdling the tree.

Stake trees when top-heavy or planted in windswept areas. The material used to attach the tree to the stake should be broad, smooth and somewhat elastic. Do not stake the tree too rigidly. Always allow for sway. Tight or prolonged staking results in an overall weaker tree that is more

subject to girdling. Triple staking provides more protection against strong wind and lawn mowers. Support stakes and guy wires generally should be removed after one growing season. If staking is left in place for more than two years the tree's ability to stand alone may be reduced, and the chances of girdling injury are increased.

## **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.

### *Rainwater Harvesting: April 16, 10 am*

Rainwater can be collected and stored for watering plants in the garden. This class will cover how to properly size and install a rain barrel to collect water from your roof. We will also discuss how to increase the storage capacity of an existing system.

### *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.