

Horticulture Tips

April 2015

Oklahoma Cooperative Extension Service
Division of Agricultural Sciences and Natural Resources
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.

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.

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.
 - Bahiagrass: 3 lbs N/1,000 sq. ft.
 - Buffalograss: 2 - 3 lbs N/1,000 sq. ft.
 - Buffalograss/grama mixes: 3 lbs N/1,000 sq. ft.
 - Bermudagrass: 4-6 lbs N/1,000 sq. ft.
 - Centipedegrass: 2 lbs N/1,000 sq. ft.
 - St. Augustinegrass: 3-6 lbs N/1,000 sq. ft.

When using quick release forms of fertilizer, use 1 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 ([EPP-7306](#)). Water product into soil.

Landscape - General

- Hummingbirds arrive in Oklahoma in early April. Get your bird 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 between the first of May and late October!

What's New in Hort Plants Version 2.0 (Feb. 2015)

David Hillock

Created by the University of Arkansas, Hort Plants is a comprehensive photographic plant database covering all types of plants for mid-south USA such as trees, shrubs, vines, groundcovers, ornamental grasses, annuals, and perennials. Included with the photographic database is comprehensive cultural and plant characteristic information.

This major release has been several months in-the-making and includes some amazing additions.

* Redesigned interface - Significant improvements were made to each aspect of Hort Plants. The app now loads much quicker, includes more detailed previews of plants, and provides a unique way to view information about each plant in a way that highlights images.

* Improved search - Searching for plants without knowing its name has been difficult in Hort Plants. To fix this problem, filters were introduced. You can now search by plant use, size, shape, color, and more! There are a total of 18 **searchable categories** divided into four broad categories: Plant Characteristics, Leaf Characteristics, Cultural Traits, Flowers & Fruit; total search options within 18 categories – 89.

* Tips - With the new interactive tips, navigating through Hort Plants is simpler than ever! And if you have any questions, please do not hesitate to contact the email support within the app.

* Improved database – New plants have been actively added to the Hort Plants database. Enjoy browsing through the new plants and the high-quality images.

Database includes: 276 plants (focused on USDA Plant Hardiness zones 6, 7, and 8)

- 70 trees
- 120 shrubs
- 10 groundcovers
- 11 vines
- 31 annuals
- 24 perennials
- 10 ornamental grasses

Hort Plants is available for **FREE** as a download from iTunes store.

Water Wise Plant Nursery Extension Displays

Joshua Campbell and Justin Quetone Moss

The Department of Horticulture and Landscape Architecture has been in partnership with the City of Oklahoma City since December 2012, and has been providing extension outreach and education for Oklahoma City residents in the area of water conservation. The emphasis of this extension work has been on ways to conserve water in home landscapes. This includes topics such as proper plant selection, turf management, efficient irrigation technology and more. This partnership has led to a growing water conservation department at the City of Oklahoma City Water Utilities and innovative extension programming

Extension publications have been created to serve as a tool in the effort to educate Oklahoma City residents about water conservation. These publications follow the seven principles of water wise landscapes, or xeriscape, and help provide simple tips to help residents reduce outdoor water use while maintaining a beautiful lawn and garden.

In 2015, “water wise” displays were placed in four Oklahoma City metro plant nurseries to display the outdoor water conservation extension leaflets and fact sheets. While there are currently only four display stands, the publications can be found in seven Oklahoma City plant nurseries and garden centers. They include, Marcum’s Nursery, Foster’s Nursery and Tree Farm, Tony’s Tree Plantation, both Precure Nursery and Garden Center locations and both TLC Garden Center locations. The four brochure stands are housed in Marcum’s, Foster’s, Tony’s, and the NW 63rd Precure location. While the project began with only four stands, plans are to expand to other Oklahoma City nurseries and possibly even to the big box stores around the city like Lowe’s and Home Depot.

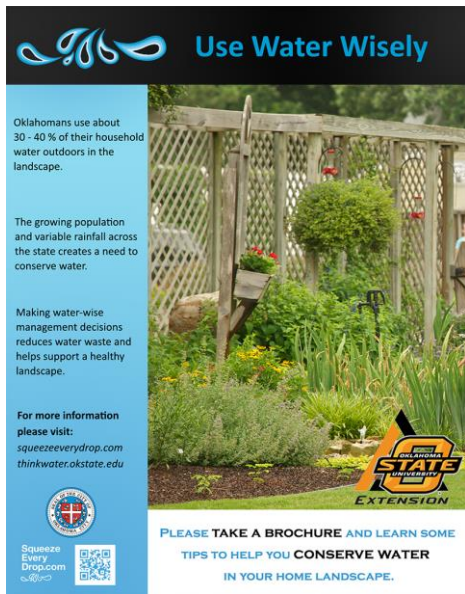
Many retailers have expressed excitement about having water related brochures and some have commented on the eye appeal of the leaflets and display stand. The presence of these displays will help to promote our extension efforts in Oklahoma City by teaching people that making water wise management decisions will help reduce their water waste and support a healthy home landscape.

The extension publications in the displays include:

Landscape Planning	L-431
Seasonal Landscape Maintenance	L-432
Plant Selection Factors	L-433
Irrigation	L-434
Improving Soil Quality	L-435
All you need to know about mulch	L-436
Turfgrass Management in Oklahoma	L-437
The Water Conservation Garden	L-450
Simple Irrigation Audit for Home Lawns in Oklahoma	HLA-6610

The QR code on the display directs people to the PDF of the drought tolerant plant guide:
Drought-Tolerant Plant Selections for Oklahoma E-1037

We would love to work with other communities around the state to promote outdoor water conservation. If you are interested in doing projects like this in your county, please contact Dr. Justin Moss at (405) 744-5729 or by email at mossjq@okstate.edu



The Importance of Irrigation Water Quality and Soil Tests for Turfgrass *Morgan Hopkins and Justin Quetone Moss*

Water quality and soil testing provide significant information for improving the health of plants and turfgrass, as well as protecting the health of the public and overall environment. Water quality can directly affect the soil, turf, and plant quality and performance. The demand for

potable water is increasing, pressuring irrigation water users to invest in alternative water sources, such as reclaimed water. These alternative water sources can contain excess nutrients and salts, placing a great importance on regular water quality testing. Knowing the quality of your soil is important for plant and turf selection, as well as the incorporation of best management practices, including fertilizer, herbicide, and pesticide applications. Certain chemicals established naturally in the soil and water can be toxic at specific concentrations. Human activities also play a major role in the composition of water and soils. Overall testing of soil and irrigation water is critical to achieving successful soil and water management.

Irrigation Water Quality – The constituents included in irrigation water quality tests can be divided into three categories; biological, chemical, and physical. The chemical constituents are often primarily focused on to determine the quality of irrigation water sources. The characteristics of chemical constituents in water concentrate on the salt content, as well as parameters that are determined from salt composition. These parameters derived from the salt composition in water include Electrical Conductivity/Total Dissolved Salts or Total Soluble Salts (EC/TDS/TSS), Sodium Adsorption Ratio (SAR), Residual Sodium Carbonate (RSC), and ions that contribute to salinity issues (Na, Cl, B, Ca, and Mg). Below is a table is a range of water quality parameters relevant to irrigation water tests.

Water Quality Parameter	Desirable or Normal Range for Use
EC	0.31-0.78 mmhos/cm
TDS/TSS	200-500 mg/L
pH	6.5-8.4
SAR	<3.0
RSC	≤1.25 meq/L
Na (root absorption)	<70 mg/L
Cl	<70 mg/L
B	<1.0 mg/L

Soil Quality – Testing soil for quality can be a complex process, but an important measure to take in order to maintain healthy soil, crops, plants, turf, and local watersheds. Soil tests are both predictive and diagnostic, and an overall optimal best management practice. Soil quality and content is dynamic, and can vary considerably depending on location, mineral composition, and soil texture (sand, silt, and clay). The significant soil chemical properties to test for soil quality include pH, EC, Na, macronutrients (N, P, K, Ca), and micronutrients (B, Cu, Zn, Mn). Soil testing procedures vary geographically across the United States, therefore consistency of test results will vary by lab. Soil tests result interpretations allow nutrient levels to be typically categorized as low, adequate, or high. The soil test results analysis provides recommendations, typically for fertilizer as pounds per 1000 square feet. Recommendations and nutrient interpretations will also vary depending on established nutrient management plans, soil type, and vegetation.

All-America Selections Presents Regional and National Winners for 2015

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. Last year the organization began recognizing regional performance; the entries that did well in a majority of regions are designated as traditional National Winners.

In 2015, seventeen plants made it on the National Winners list with 11 vegetables and 6 flowers. Vegetable selections include a basil, beet, broccoli, chive, lettuce, and radish, two squash, and three pepper varieties. Flowers include a dianthus, two impatiens, and two petunias.

The Regional Winners include an additional eight plants, all in the vegetable category. Types include a basil, Brussels sprouts, cucumber, oregano, pak choi, tomato, and two peppers. To see which ones performed the best in regions similar to Oklahoma visit the website. You can filter your search to find just the right type of plants for you.

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

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 the 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.

2015: Year of the Sweet Pepper

By The National Garden Bureau and Heather Kibble.

Sweet peppers bring a rainbow of colors and a plethora of shapes to the table. It is easy to value them for looks and flavor alone, but the sweet pepper is a nutritional powerhouse as well. A serving of the most popular type in the USA, the sweet bell, contains more vitamin C than the average orange, a generous amount of vitamin E and many antioxidants with only 29 calories. Peppers have high nutrient levels at any stage but are the most beneficial when eaten fully ripe. The few colors of bell peppers in the average supermarket are only the beginning, blocky shaped

bell peppers can ripen to many colors; ivory, pink, purple, red, yellow, orange and chocolate. Sweet peppers come in many shapes as well; the elongated banana, the blocky bell, the oblong or “half-long” bells, flat “cheese” shapes, and smooth cherry types.

Home gardeners can find many varieties of sweet pepper plants available at a local nursery. True enthusiasts usually branch out from there and spend the winter perusing seed catalogs, on-line shops and seed swaps for unusual colors shapes sizes and flavors. The variety and nuance of sweet pepper flavor compares to fine wine, coffee, or chocolate. Sweet peppers are also similar to other foodie obsessions in that many cultures and regions have different favorites. Cooks love the flexibility and wide spectrum of possibilities sweet peppers offer in the kitchen. Pepper plants are easy to grow, require very little space and are an attractive addition to any garden, yard, or balcony and that is the reason National Garden Bureau chose 2015 as the Year of the Sweet Pepper.

Nomenclature – Sweet bell peppers are a cultivar of *Capsicum annuum*. (A cultivar is simply a horticultural term for a group of cultivated plants given a unique name for a set of desirable characteristics.) Non-pungent banana peppers, sweet jalapenos and sweet cherries are also members of *Capsicum annuum*. Currently capsicum includes at least 25 species, four of which are domesticated.

Sweet peppers are called sweet because they do not produce capsaicin--a chemical that causes a “burning” sensation when hot peppers are consumed (or when they come in to contact with the eyes or nose etc.). Sweet peppers lack capsaicin due to a recessive form of a gene that eliminates capsaicin and, consequently, the "hot" taste usually associated with the rest of the *Capsicum* genus.

Classification – Sweet peppers are actually a fruit (because they come from a flowering plant and contain seeds) but treated and spoken of as a vegetable. Worldwide, each culture has its own preferred shapes, textures colors, flavors and recipes.

A few examples of the plethora of sweet pepper types grown are bells, Bull’s Horn, snacking mini-peppers, half-longs, sweet bananas and sweet jalapenos and sweet habaneros.

“Bell” is a term used in the U.S.A. that refers to sweet peppers with 3-4 lobes. Bell might either refer roughly to the fruit shape or to the pendulous way the fruit hang from the plant. In the U.S. agriculture industry, the 3-4 lobed fruit that are nearly as wide as they are tall are referred to as “blocky” bells and the elongated bell peppers (which are not as common in North America) are called “half-long” bells (half as wide as they are long). Bells can be found in many colors including red, yellow, orange, purple, chocolate and ivory.

“Bull’s Horn” peppers are sweet and wide at the shoulder, tapering to a point. They often have thicker walls than the blocky bells and commonly mature to red. They are thought to have been brought to the U.S. from Italy and are also called “Corno di Toro”- which translates to “Horn of the Bull.”

Mini-Snacking peppers have been popular with home gardeners for many years and have gained popularity in U.S. grocery stores in the last 10 years or so. They are blocky, pointed, thin-walled, sweet, and come in bright colors including, yellow and orange. The best snacking peppers are crunchy and have just a few seeds or no seeds at all.

And now we enter the dangerous territory of varieties that can be either sweet or hot. Bananas are long and thin and usually mature from a light green or yellow to red. They are used fresh and pickled as rings. Because there are both sweet and hot banana peppers available, be sure and order the seed or buy the plant you prefer. Sweet jalapenos and habaneros are also available though not as common. They are worth searching out; the flavor revealed by removing the burn is a pleasant surprise for the pepper enthusiast.

Use – Fully mature sweet peppers don't store well so eat them up. Extra peppers can be roasted and peeled and preserved in oil. There is nothing better than the aroma of roasting peppers filling the house on a late summer afternoon. With some simple preparation peppers freeze well. Sweet peppers are a great vessel for cooked fillings or cool dips. Chopped peppers can be added to soups, salads, and omelets.

Conclusion – No matter how they are grown or used in the kitchen, sweet peppers add beauty, variety and health to any garden or home.

For the full article *2015: The Year of the Sweet Pepper* see - http://ngb.org/year_of/index.cfm?YOID=41.

Upcoming Horticulture Events

Current Challenges in Floriculture

June 11, 2015

Wes Watkins Center – Stillwater, OK

Hunger and Horticulture

July 30, 2015

Food and Agricultural Products Center – Stillwater, OK

GardenFest

September 26, 2015; 10 AM – 4 PM

The Botanic Garden at OSU – Stillwater, OK

Tree Care Issues Conference

October 29, 2015

Wes Watkins Center – Stillwater, OK

For more information about upcoming events, please contact Stephanie Larimer at 405-744-5404 or stephanie.larimer@okstate.edu.