

# July Hort Tips

## Garden Tips for July!

*David Hillock*

### Vegetable Garden

- Make fall vegetable garden plantings in late July. Fact Sheet [HLA-6009](#) gives planting recommendations.

### Lawn

- Brown patch disease of cool-season grasses can be a problem. ([HLA-6420](#))
- Meet water requirements of turfgrasses. ([HLA-6420](#))
- Fertilization of warm-season grasses can continue if water is present for growth. ([HLA-6420](#))
- Vegetative establishment of warm-season grasses should be completed by the end of July to ensure the least risk of winter kill. ([HLA-6419](#))
- Mowing heights for cool-season turfgrasses should be at 3” during hot, dry summer months. Gradually raise mowing height of bermudagrass lawns from 1½ to 2”.
- Sharpen or replace mower blades as needed. Shredded leaf blades are an invitation to disease and allow more stress on the grass.

### Tree and Shrub

- Control bermudagrass around trees and shrubs with products containing sethoxydim, fusilade or glyphosate herbicides. Follow directions closely to avoid harming desirable plants.

### Fruits

- Continue insect combat and control in the orchard, garden, and landscape. ([EPP-7306](#), [EPP-7313](#), [HLA-7319](#))
- Check pesticide labels for “stop” spraying recommendations prior to harvest.
- Harvest fruit from the orchard early in the morning and refrigerate as soon as possible.

### Flowers

- Divide and replant crowded Hybrid iris (Bearded Iris) after flowering until August.

## General Landscape

- Water plants deeply and early in the morning. Most plants need approximately 1 to 2½ inches of water per week.
- Providing birdbaths, shelter and food will help turn your landscape into a backyard wildlife habitat.
- Insect identification is important so you don't get rid of the "Good Guys." ([EPP-7307](#))
- The hotter and drier it gets, the larger the spider mite populations!
- Expect some leaf fall, a normal reaction to drought. Water young plantings well.

## Leaf Sampling for Pecan and Fruit Trees

*Becky Carroll, Associate Extension Specialist, Fruit and Pecans*

July is the month to determine how much fertilizer will need to be applied to our pecan, peach, and apple plantings for the next spring. How does that work? Tissue sampling.

Leaf tissue sampling is the process of collecting leaves from specific areas of the tree at a particular time of the growing season to submit to the SWAFL lab or other commercial labs. This test analyzes the tissue to see levels of nutrients in the tree and what it can uptake from the soil. Tissue sampling gives a better picture of tree nutrition levels than just looking at soil test results. Soil samples are great tools for assessing soil nutrients and pH prior to planting and to keep an eye on pH every 3-5 years. The pH level and other nutrients that may be out of balance can affect uptake of other nutrients, which can cause deficiencies or toxicities to some plants. Trees may also have hidden deficiencies that could go unnoticed unless tissue sampling was used.

Following the prescribed timing and tissue sampling location gets a more accurate result since nutrients move throughout the tree at different growth stages. The standards were set for the early to mid-July growth stage using the middle leaf on the terminal (not the youngest or oldest leaf). In the case of pecan with compound leaves, the middle pair of leaflets are collected from the middle leaf. On peach and apple with simple leaves, the middle leaf is collected from the terminal.

It's also important to select trees that are alike. If you have a native pecan orchard and an improved pecan orchard, samples should be collected from each area. Native pecans usually require less nutrients to produce a quality crop. Likewise, if you have apple and peach trees, select samples from both. Don't combine unhealthy trees with healthy trees or areas with widely different soil types.

Avoid sampling from water sprouts or suckers or shoots that have damage. Collect about 100 leaves or 50 pair of leaflets from around the planting or off several trees. Only collect one pair of leaflets per terminal branch or one leaf per shoot. Avoid leaves that have insect feeding or disease.

Rinse the leaves with tap water (don't soak) to remove dust and spray residue. Lay the leaves out to dry and then submit to county extension office in a paper sack. Label the paper bag with type of tree, cultivar if available and any other pertinent information. A leaf tissue test at SWAFL is \$20 and results are normally available within a couple of weeks.

The lab will return your results with percentage or ppm of nutrients. For each crop, there are ranges that are appropriate for healthy trees. To find interpretation for pecan - <http://soiltesting.okstate.edu/publications/interpretation-of-pecan-leaf-analysis>. For peach or apple samples, contact [becky.carroll@okstate.edu](mailto:becky.carroll@okstate.edu) for interpretation of results.

Using leaf tissue sampling as a management tool can help growers save money by applying only what is

needed, protect the environment, and have better harvests by supplying nutrients that keep the tree healthy and productive.

Printable Instruction Sheet – <http://okpecans.okstate.edu/news/pecan-leaf-samples-instructions> HLA 6232 – Fertilizing Pecan & Fruit Trees – <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1010/HLA-6232web.pdf>.



## Diagnosing Problems in the Landscape and Garden

*David Hillock*

Throughout the growing season a number of problems can arise in the landscape and garden. The County Extension Offices throughout the state as well as your local garden professionals are a good source in helping diagnose the problem. The County Educators and garden professionals are trained to look for and ask certain questions to help narrow in on the problem. Knowing some of the things they will be looking for will help you possibly diagnose the problem yourself or be better prepared with the information they will need to solve the dilemma. Here are some of those areas to consider.

1. Keep an open mind. Do not jump to conclusions.
2. Avoid assigning "Guilt by Association." The insect, animal or disease observed may not be the actual cause of the problem or symptom.
3. Take a thorough history: weather extremes, site alterations, fertilizer and pesticide use, cultural practices, etc. Once mature trees (especially pines and oaks) begin to decline, there is often no way to reverse the process.
4. The symptom may indicate a problem in a different part of the plant. Example, brown leaves may be the result of a root problem or trunk or stem damage.
5. Know what the healthy plant should look like.
6. At least one half of all observed landscape problems are not caused by insects or diseases. Try to eliminate other causes first.
7. A particular problem may be caused by several factors.
8. There is a great variation in the expected life-span of landscape plants. All plants go through periods of growth, maturity and decline. Plants grown in urban locations generally have shorter lives.
9. Many pests and diseases are plant specific. Symptoms affecting more than one plant species may indicate cultural and environmental problems.

There are many other areas to consider and questions that may need to be asked. Be prepared to answer questions to the best of your ability. Remember, we can never ask enough questions. The more thorough you are the better the diagnosis will be!

## **Watering the Yard and Garden Efficiently**

*David Hillock*

During the summer, watering the landscape and garden can be the primary focus of our activities. Irrigation systems, whether a simple hose-end sprinkler or an elaborate in-ground system, help us accomplish this great task with a little more ease. Obviously some systems require a little more attention and effort than others. However, all should be closely monitored and managed so that they are working efficiently and providing adequate coverage for the plants' needs.

A minimum of 1 inch of water per week is usually required to maintain optimum growth of most plants. However, that will vary depending on the types of plants grown, the soil type, and weather conditions. During the hottest and driest part of the summer, 2 or more inches per week may be necessary. But, how much water does your sprinkler(s) put out?

One way to find out how much water your system is discharging is to catch the water. Use straight-sided canisters such as tuna cans and place them randomly under the sprinkler pattern. About 6 cans work well. Turn the sprinkler(s) on and let them run for about 15 minutes. Turn off the water and measure the depth of water caught in each can using a simple ruler. Average all the measurements together and this will tell you how much the system is discharging and how long to run the sprinkler system. For example, you wish to place 1 inch of water when you irrigate. The average amount of water that was measured when running the system for 15 minutes was .25 inches. So, you will need to run your system for one hour in order to irrigate 1 inch.

Some plants require constantly moist soils to maintain optimum growth and performance while others are quite drought tolerant and might even prefer drier soils. One way to make sure all the plants in the landscape are getting what they need is to group plants together based on their watering needs. Be careful not to plant together two plants that have completely different water needs or one of them will eventually

suffer and die.

## **Water Temperature Management for Hydroponic Production in the Summer**

*Bizhen Hu, Small Farm/Urban Horticulture*

The summer heat is here. High temperature is not only a challenge for open field crop production but also for hydroponic systems even in controlled environments. One related factor which is easily overlooked is the water temperature, more precisely the temperature of the nutrient solution, in the hydroponic systems.

The ideal water temperature in hydroponic systems is in the 60s (°F). Unfortunately, it can easily rise to be above 100°F if no control is taken in the warm summer months. When the temperature gets higher, the amount of dissolved oxygen in the nutrient solution is lower, which will cause problems such as inviting pathogens and root diseases. For leafy greens such as lettuce, the higher water temperature will also cause bolting.

To prevent the water temperature from getting too high and hurting the crops, the most effective but usually also the most expensive way is to hook up a chiller to the reservoir where the nutrient solution is stored. Other less expensive methods are to keep the reservoir under a shade, paint the reservoir in a light color such as white (the reservoir should still be opaque to keep the algae out), and use a larger reservoir.

## **Tomato Blossom-End Rot**

*David Hillock*

This is a common physiological disorder. A small water soaked spot appears near the blossom end of affected tomatoes and enlarges, darkens and becomes sunken and leathery. Fruits are most commonly affected when they are a third to half grown. Blossom-end Rot (BER) often occurs on developing fruit when plants have grown rapidly during the early part of the season and then are subjected to prolonged dry weather. Other factors that increase BER are heavy applications of nitrogenous fertilizers, a widely fluctuating water supply and hot, dry winds. The exact nature of this disease is still debated, but involves an imbalance in amount of calcium in the fruit.

Control - On soils known to be deficient in calcium, use agricultural lime and avoid over fertilizing with commercial fertilizer. Use gypsum as a supplement to liming on calcium-deficient soils. Provide an even supply of water to the plants and avoid any water stress (mulching encourages even soil moisture and temperatures; irrigate during hot, dry periods). Plant in well-drained soil. Within 1 foot of the plant, do not cultivate deeper than 1 inch. Protection from exposure to wind is also beneficial. Affected plants can also be sprayed with a commercially-available calcium preparation. ([EPP-7627](#) – Common Diseases of Tomatoes, Part 3: Non-Infectious Diseases)

## **Water Garden Plants Belong in the Water Garden - ONLY!!**

*David Hillock*

A small water garden is a great source of relaxation and enjoyment for an increasing number of Oklahomans. While water gardening can certainly be a rewarding hobby, individuals should take certain

precautions to ensure that their water garden will not harm the surrounding native environment.

Water gardens are great; however, people need to be aware of the potential problems they could cause if they release non-native plants into nearby lakes and streams.

Many of the plants used in water gardens, such as water hyacinth or milfoil, are non-native species. One of the reasons these plants are so popular is that they can reproduce rapidly - quickly filling a water garden with lush vegetation. For this same reason they can have a very negative impact on Oklahoma's lakes and rivers. If gardeners release these plants into a nearby drainage ditch or creek, they can out-compete our native species and become very difficult to eradicate or even control.

Water hyacinth and water lettuce are two of the most common water garden plants which could become ecological problems when released. According to Oklahoma Wildlife Conservationists, a large water fern known as giant salvinia, poses the highest threat to native environments.

Once established, non-native plants can decrease native plant diversity, block out light from entering the water and even harm fishing.

There is a wide range of alternatives to releasing excess or otherwise unwanted plants into the environment. "You can burn them, mulch them, or give them away to a fellow water gardener. Basically, do anything except release them into a nearby creek or pond," say Wildlife Department specialists. "This situation has not become serious yet, but everyone needs to do their part so people can enjoy their water gardens as well as our lakes and rivers."

For more information on identifying and controlling non-native plants contact the Oklahoma Wildlife Conservation Department, [www.wildlifedepartment.com](http://www.wildlifedepartment.com).

(Excerpted from the Oklahoma Department of Wildlife Conservation's Weekly Wildlife News, week of June 24.)

## Poisonous Plants for Pets

*Casey Hentges, Oklahoma Gardening Host*

Our pets are part of our family these days and we want to make sure we are providing them with a safe environment to play. Sometimes their place of play is also in our garden and just like there are poisonous plants for people, there are poisonous plants for our furry friends as well.

Some plants can be fatal to our pets, but many are more annoying than anything with symptoms like vomiting and drooling.

**Sago Palms** (*Cycas revolute*) or **cycad** are tropical here in Oklahoma but are often used to jazz up a porch or deck especially around pools. With their sharp, pointed, and very stiff leaves, they don't seem like they would be very palatable to a dog, but for some reason some dogs do like to chew on them. Regardless, you don't want to let them get a hold of this plant as all parts of it are extremely potent and poisonous and can cause liver failure. So if you are going to add this one to your landscape make sure it is in a big container out of your dog's reach.

**Lilies** – The liliaceae family is one of the largest plant families representing many of our beloved plants such as– daylilies, Asiatic lilies, oriental lilies, crocus, hyacinths, tulips and aloes. Lilies of all kinds with the exception of Lily of the Nile (which is in the Amaryllidaceae) are poisonous especially to our feline friends in which it can cause acute kidney failure. If ingested by dogs it does not cause kidney damage;

however, you may be cleaning up a mess as their bodies tend to expel it out one end or the other.

**Castor Bean** – Castor Bean is a plant often used ornamentally for its bold, tropical green and burgundy foliage. While it might look nice in a garden, it is one of the most toxic to not only pets, but people also. This is one you definitely want to be cautious of especially when it comes to the beans it produces.

**Lily of the Valley** – While you might think I covered this one when I mentioned lilies, Lily of the Valley is actually in the Asparagaceae family. It looks dainty and smells sweet, nonetheless, it is poisonous and can cause heart problems.

**Portulaca** – When we are talking about Purslane or Portulaca, you may think you are off the hook because you haven't planted any moss roses in your garden (*Portulaca grandiflora*); however, there is another species that is *often identified as a prolific weed, that you may very well have growing in your backyard Portulaca oleracea*. Just like the saying “one man's trash is another man's treasure” some people don't see this plant as a weed, but as a nice addition to their salads. In fact, the specific epithet ‘oleracea’ means of the vegetable garden. However, this is one meal you don't want to share with your pet.

**Periwinkle** – Our annual periwinkle (*Vinca rosea*) are many gardeners favorites with their pinwheel like flowers, but this plant will send your pet spinning as their body tries to expel it and can affect their central nervous system.

**Azaleas & Rhododendrons** are large shrubs we add to our landscape for their array of color. Often placed in the back of the landscape due to their size, this one is best to be placed in the back out of reach of your cats and dogs just in case they decide they are hungry. It can cause a number of symptoms from vomiting to death.

**Daffodils** – They look like little teacups of sunshine, but hopefully your pets don't try them out as they can cause vomiting and convulsions. Unfortunately if you have dogs that like to dig, you especially want to be careful as it is the bulb that is the most poisonous part.

**Cocoa** – We all know dogs aren't supposed to eat chocolate, and while you probably aren't growing a cacao tree in your landscape, if you use cocoa mulch in your garden you might find that your dog is attracted to it and even in this form it can still be toxic to dogs.

This is not an exhaustive list, just some of the more common things you might have in your landscape. Also, with anything the symptoms can vary depending on a number of factors related to your pet and the plant. Of course, the first thing you should do if you ever suspect your pet has eaten or chewed a poisonous plant is to call your vet.

Oklahoma Gardening Video - <https://youtu.be/63oSNlwADpk>