

# Horticulture Tips

## June 2014

Oklahoma Cooperative Extension Service  
Division of Agricultural Sciences and Natural Resources  
Oklahoma State University

### ***GARDEN TIPS FOR JUNE!***

*David Hillock*

#### General Landscape

- Find someone to water plants in the house and garden while on vacation. Harvesting vegetables and mowing the lawn are a must and imply that someone is home.
- Mulch ornamentals, vegetables, and annuals to reduce soil crusting, and to regulate temperatures and moisture during hot summer months. Mulching will reduce about 70 percent of the summer yard maintenance.
- Remain alert for insect damage. Add spider mite to the list. Foliage of most plants becomes pale and speckled; juniper foliage turns a pale yellowish color. Shake a branch over white paper and watch for tiny specks that crawl. Watch for first generation fall webworm. ([EPP-7306](#))

#### Turfgrass

- Fertilize warm-season grasses at 1 lb. N per 1,000 square feet. Don't fertilize fescue and other cool-season grasses during the summer.
- Dollar spot disease of lawns can first become visible in mid-May. Make certain fertilizer applications have been adequate before applying a fungicide. ([EPP-7658](#))
- Seeding of warm-season grasses should be completed by the end of June (through July for improved varieties such as Riviera and Yukon) to reduce winterkill losses. ([HLA-6419](#))
- Brown patch disease of cool-season grasses can be a problem. ([HLA-6420](#))
- White grubs will soon be emerging as adult June Beetles. Watch for high populations that can indicate potential damage from later life cycle stages as grubs in the summer.

#### Fruit and Nut

- Renovate overgrown strawberry beds after the last harvest. Start by setting your lawnmower at its highest setting and mow off the foliage. Next thin crowns 12 to 24 inches apart. Apply recommended fertilizer, preemergence herbicide if needed and keep watered. ([HLA-6214](#))

#### Trees and Shrubs

- Vigorous, unwanted limbs should be removed or shortened on new trees. Watch for forks in the main trunk and remove the least desirable trunk as soon as it is noticed. ([HLA-6415](#))
- Pine needle disease treatments are needed again in mid-June. ([EPP-7618](#))
- Remove tree wraps during the summer to avoid potential disease and insect buildup.

- Softwood cuttings from new growth of many shrubs will root if propagated in a moist shady spot.
- Protect trees from lawnmowers and weed eaters by mulching or using protective aerated covers.

### Flowers

- Pinch back leggy annuals to encourage new growth. Fertilize and water appropriately.
- Feed established mums and other perennials.
- When picking fresh roses or removing faded ones, cut back to a leaflet facing the outside of the bush to encourage open growth and air circulation.
- Stake tall perennials before toppling winds arise.

## **Protect Tree Trunks During Summer**

*David Hillock*

Trees are an important aspect and investment of any landscape. Keeping them healthy through proper management and care insures they will be around for many years. Unfortunately, one of the most common stresses to urban trees is caused by humans, one that can easily be avoided.

This stress is often referred to as lawnmower or string trimmer blight – mechanical injury to the trunk of the tree by careless use of equipment near the trunk. This injury usually results in wounds that can eventually be fatal to a tree depending on severity of the damage and how often it occurs.

The trunk of a tree not only provides support to the branches and leaves, it is the main conduit for water and nutrients up and down the tree between the leaves and root system. The cambium layer, which lies just below the bark, is a thin area responsible for this movement. If damaged, the movement of this vital solution up and down the tree is hindered.

Minor damage on one side of the trunk may result in only a few stressed branches; however, if the damage surrounds the entire trunk, the tree can be sent into a slow decline. This sort of damage is only enhanced when the tree is then further stressed by environmental conditions making it difficult to recover from and return to normal growth.

The best way to address this issue is to not grow grass under the tree or at least not right up to the base of the tree. Keeping the area around the base of the tree free of grass and weeds means you don't need to mow or trim around it, which keeps the equipment a safe distance from the tree. Tree guards can be used on young trees to help protect the trunk, but it is still recommended to maintain a grass/weed free area around the tree to keep equipment safely away.



Plastic tree guards can help protect young trees from mechanical injury.



Mulched area under the canopy of the tree keeps power equipment away from trunk.

## **Beneficial Fungi**

*Kim Toscano*

Fungi are an incredible diverse kingdom of organisms. As gardeners, we are familiar with the edible forms of fungi that we may try growing ourselves or use in cooking. We also deal regularly with fungi that produce plant diseases in the landscape. There are also many beneficial fungi that live in the soil and benefit the plants we grow.

The two main types of beneficial fungi below ground are saprophytes and mycorrhizae. Saprophytic fungi grow on decaying matter such as leaf litter, fallen trees, and dead animals. They help break down these materials into organic matter, thus replenishing the soil. Mycorrhizae are fungi that develop a partnership or symbiosis with living plants, such as trees and grasses. Their presence increases the effectiveness of the plant's roots. The fungi deliver minerals and nutrients from the soil to the plant roots, which in turn supply the mycorrhizae with water and carbohydrates. Two types of mycorrhizae are ectomycorrhizae, which grow outside of roots and endomycorrhizae, also called arbuscular mycorrhizae, which have highly branched hyphae that penetrate root cells.

As much as 90% of all plant species have mycorrhizal associations. Some plants, like pine trees, are highly dependent upon mycorrhizal for growth. The prairie ecosystem is also dependent upon mycorrhizae.

Mychorrhizae are an important component of soil. The long, threadlike hyphae help hold soil particles together. With all of the fungi in the soil it must have an impact on soil structure. They help support soil structure and healthy soils. We can protect these beneficial fungi in our garden soils through a number of practices:

- Limit fertilizer applications
- Utilize organic fertilizers
- Practice low-till or no-till gardening
- Avoid fungicide use, especially soil drenches

Source: *Oklahoma Gardening* segment, June 30 – July 1, 2012, Information Sheet (#3853), with Dr. Gail Wilson, Associate Professor of Natural Resource Ecology and Management.

## **Pruning and Staking Tomatoes**

*Kim Toscano*

Every gardener has his or her own method for pruning tomatoes and also, an opinion on whether or not tomato plants require pruning. Staking tomatoes helps manage disease problems by increasing air circulation in the leaf canopy and reducing contact with the soil. A structured training system can also make tomatoes easier to harvest. Pruning can help boost yields, by exposing more of the leaf canopy to full sun and reducing competition between suckers and the developing fruit.

Several different tomato training systems exist; the type of support to be used depends on tomato growth habit. Tomatoes can be divided into two types, determinate and indeterminate. The determinate varieties have short to medium vine lengths. Plants are heavily branched and growth stops when they start flowering. Every branch tends to end up with a flower cluster. Determinate varieties are not heavily pruned as most of the fruit is produced on the branches. Indeterminate varieties continue to grow and produce leaves as well flowers throughout the entire growing season. Pruning methods will depend on the type of support system used.

The three most common training systems for tomatoes are stake and weave, trellis, and cage. All three of these techniques can be used with indeterminate tomato varieties, but only cages and stake-and-weave are used with determinate varieties.

Trellised tomatoes are the most heavily pruned. A trellis system consists of sturdy posts anchored in the ground about 20 feet apart. The top of the posts should be set so the tops stand six feet or more above ground level. Stretch a piece of wire between the tops of the posts. Then attach a length of sturdy twine or string above each plant in the row. Tie the twine to the base of each plant and wrap plants around the twine as they grow or tie them to the twine with plastic ties. You can train one or two stems per plant, using a separate cord for each stem. Plants are pruned back to these main shoots, with 2 to 4 side shoots along the main stem.

When we prune tomatoes we remove small side shoots from the main stem. This reduces competition between vegetative growth and the fruit. Pruned plants produce larger and an earlier fruit as most of the plant energy is channeled into the fruit. Prune shoots when they are four inches long. It can be more difficult to remove larger shoots and you are more likely to damage the plant when removing large shoots. Remove a sucker by grasping it between your thumb and second finger and bending it to the side until it breaks. It is advisable to do this early in the day when the plant is still crisp. Do not cut suckers with a knife or pruners as this can lead to spread of diseases. Limit the branches of indeterminate varieties to two to three fruit producing branches by selecting the main stem, the sucker that develops immediately below the first flower cluster, and another sucker below that. Remove all other suckers, and periodically remove additional suckers that develop on the selected branches. The stake and weave method is commonly used with determinate tomato varieties, but also works with indeterminate tomatoes. Staking plants requires metal or wooden stakes.

The wooden stakes need to be at least one inch square for support. You can also use rebar or t-posts as stakes. Determinate varieties require three to four feet long stakes and indeterminate varieties require stakes that are five to six feet long. Set a stake between every other plant. Lines of twine are strung between stakes on either side of the plants to provide support. Twine must be resistant to weather and stretching, and have sufficient "grip" to wrap tightly around stakes. String the first line 8-10 inches above the ground by securing the twine to an end stake, and wrapping the twine around each stake until the row is completed. Loop around this end stake and complete the stringing on the other side of the plant row. Run the next row of twine 6-8 inches above the first row before plants begin to fall over. Prune plants back to keep them more or less contained within the stake and weave system and from crowding one another. Remove the lowest branches, as these are most likely to become infected by soil-borne diseases.

Caging is a support system that requires less work than staking or trellising, but provides similar benefits in protecting plants from contact with the soil. Caged plants may not produce ripe tomatoes as early as staked or trellised plants, but the fruits they produce are less likely to suffer from cracking or sunburn. It will be necessary to lift branches and direct them upwards through the cage. Again, prune the lowest branches to reduce disease.

It is important to decide on type of support before setting plants in the garden. Plants grown on a trellis system can be planted closer together than those grown in cages or staked. Check your plants regularly to continue training them to the support system and prune as needed.

Source: *Oklahoma Gardening* segment, June 4 – 5, 2011, Information Sheet (#3749)

## **Day Camp Ideas**

*Dr. Shelley Mitchell, Extension Youth Specialist*

Time for summer fun! If you have a day camp for 4-H or Junior Master Gardener, or you just need an activity to fill in some time at other events, here are some inexpensive and child-

approved activities (the ones with asterisks are favorites). In addition, some games to help cool children off are listed below.

**\*\*Termite NASCAR** – termites communicate using pheromones that just happen to be perfectly mimicked by Papermate ballpoint pens (only this brand). Use Papermate pens to draw trails for the termites to follow. Termites placed on paper follow fresh ballpoint pen trails around curves, along squiggly paths, etc. Termites can be found outdoors on rotting wood, or from university entomology departments. Sometimes exterminators have a colony to show people what they look like (or they could save some for you!). Use a small paintbrush to handle the termites. They are very fragile.

**Discover the identities of the different beans in 15-bean soup mix** – Use the chart here: <http://www.clover.okstate.edu/fourh/aitc/lessons/legumes.pdf> (on page 10). Glue the beans to cardboard to make mosaics.

**Make rain gauges from clear plastic bottles**—cut the tops off of bottled water or 2-liter bottles and use a ruler and a Sharpie to mark inch (or smaller) increments, starting from the bottom of the bottle. You can tape a stick or dowel rod to the outside to keep the rain gauge from falling over and anchor it into the ground.

**Botanical Wood Prints** – using potatoes and cheap metal knives and spoons, carve half of a potato into a positive or negative impression (simple is best—stars, hearts, etc.) and then let students use the potato ‘stamps’ to make block prints using tempera paint and paper.

**\*\*Rainbow Chips** (from LifeLab “back pocket” activities) - Collect paint chips from home improvement stores, Walmart, etc. Give each camper (or pair of campers) one or two color chips, and have them walk around the garden and look for plants or objects that have colors that match the color of their chips.

**\*\*Flower Petal Bookmarks** (from LifeLab’s “back pocket” activities) - Give each camper about 6” of painter’s tape to take with them into the garden. Allow them to collect petals or leaves of whatever colors appeal to them. By taking the tape into the garden, kids will not over-collect. When the tape is full, they are done collecting. Make sure to just have one layer of petals on the tape, not whole flower heads or succulent leaves. Stick the painter’s tape onto 2” wide strips of watercolor paper (about 8” long) so that the petals are sandwiched between the tape and paper. Use a rubber mallet to hammer the tape---make sure to get every part of the tape hammered well. When you are done, peel the tape off and look at the colorful art! Punch a hole at one end of the paper and thread yarn through. Now you have a bookmark!

### **Games to help the children cool off on a hot day:**

**Leaking Relay** – Drill holes in coffee cans or small buckets. Players fill containers with water and carry them above their heads to an empty bucket. They dump remaining contents into the bucket and run back to start.

Cold Potato – The group stands in a circle and tosses a water balloon across the circle. A player is out if they drop the balloon.

Soap Shrink – Divide into 2 or 3 player teams. Give each a bar of soap (hotel samples work well) and a bucket of water. Teams wash hands to shrink the soap. If the bar breaks, they are disqualified. Call time after five minutes. Smallest bar wins.

Obstacle Course – Set up an up, over, around and through obstacle course that players must complete carrying a cup of water. Dump cup contents in bucket at end of course.

Ice Cube Melt – Melt in hands. Fastest to melt ice cube wins.

Feet Freeze – Using a bucket or pool with ice cubes, players retrieve marbles with their toes and drop in buckets.

## **Upcoming Horticulture Events**

### **Herbaceous Plant Materials Conference**

July 17, 2014

Wes Watkins Center – Stillwater, OK

### **Water Conservation Demonstration Garden Workshop**

July 19, 2014; 9 AM – 11 AM

OSU-Oklahoma City Agriculture Resource Center, Room 196, 400 N. Portland, OKC, OK

Come discover drought-tolerant landscape ideas and learn about irrigation management at Oklahoma City's first water conservation demonstration garden. Please RSVP by calling 405-297-3380 or emailing [Malarie.Gotcher@okc.gov](mailto:Malarie.Gotcher@okc.gov).

### **Greenhouse Production Conference**

September 11, 2014

Wes Watkins Center – Stillwater, OK

### **GardenFest**

September 20, 2014; 10 AM – 4 PM

The Botanic Garden at OSU – Stillwater, OK

The Botanic Garden's Annual GardenFest brings together individuals from across the state with a common interest in gardening and sustainable living for a day of educational workshops, tours and activities for the whole family. It is also a wonderful opportunity to view the beautiful landscapes and innovative demonstrations throughout The Botanic Garden at OSU while experts are on hand to answer questions. Live music and vendors will be featured along with our educational programming.

**Global Horticulture Conference**

November 6, 2014

Wes Watkins Center – Stillwater, OK

For more information about upcoming events, please contact Stephanie Larimer at 405-744-5404 or [stephanie.larimer@okstate.edu](mailto:stephanie.larimer@okstate.edu).