

# Horticulture Tips

## June 2015

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.

#### 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.
- 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.

### Fruit and Nut

- Renovate overgrown strawberry beds after the last harvest. Start by setting your lawnmower on 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](#))

### 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.

## **The Challenges of Wet and Cold Weather**

Lynn Brandenberger

We are finally receiving the much needed rain to help alleviate the drought conditions from the last several years. Although I'm thankful for the moisture, extra moisture often results in disease problems in crops and several of our heat-loving crops are not happy about the cool temperatures.

Both commercial producers and home gardeners are experiencing similar issues. Early crops like cucurbits (squash etc.) and fruiting crops like okra, tomato, pepper, etc. are experiencing problems ranging from disease to no or slow growth, or even crop death.

First let's talk about those crops that are just not growing or doing very poorly. Crops such as okra, cowpea, sweet potato, and even cucurbits (squash, cucumbers, etc.) are heat loving plants. When we have a cool, wet spring like this year they will just sit still, not grow, and some of them like okra and cowpea may never emerge from the soil when direct seeded. If you have plants that have emerged the most important thing to do is to be patient and hope the weather warms up with plenty of sunshine. The sun will do wonders for helping these crops come out of their stalled condition. If you've planted seed, but nothing has emerged; I would suggest waiting to reseed until soil temperature has increased to at least the low 70's especially for crops like cowpea and okra.

The first step in controlling any pest is to identify what is causing the damage. Your local County Extension office is a great place to start and can often identify what is causing the damage. If the County Extension office isn't able to provide the help you require, the OSU Plant Disease and Insect Diagnostic Lab (PDIDL) is available to view samples and assist with determining what is causing your specific problems. Visit their website is at: <http://entopl.okstate.edu/pddl/pdidl> and look for the instructions on how to take and send a good sample to the lab.

Cultural practices such as mulching will reduce the amount of soil splashed onto the crop and thereby reduce to some extent the amount of disease problems in crops. If crops were planted in free-standing raised beds covered in plastic mulch, the additional elevation and the plastic mulch will help water drain away from the crop thereby reducing water-logged soils which leads to plant death from low oxygen levels in the soil. Black plastic mulch also has the added advantage of warming soil more quickly than bare soil thus helping to alleviate the cold temperatures crops are experiencing.



For growers who are considering the application of fungicides for fungal disease control, an application of a broad spectrum fungicide would likely be the best way to go. As with all pesticide applications, be certain to read and follow the label instructions. The label has information on rates, how often to spray, protective equipment, what is controlled, pre-harvest intervals and much more. Again, your County Extension office is a great place to start for any pesticide recommendation.

OSU's Department of Entomology and Plant Pathology has some great fact sheets covering plant disease control including:

- EPP-7625 through EPP-7627 – Tomato disease control
- EPP-7646 – Asparagus disease control
- EPP-7666 – Crucifer vegetable disease control

These and other fact sheets are available at:

<http://pods.dasnr.okstate.edu/docushare/dsweb/View/Collection-228>.

## **More Moisture Requires Less Irrigation**

*Leighona Bernstein and Justin Quetone Moss*

Full reservoirs, rushing rivers and flooding are all symptoms of the intense rainfall in Oklahoma this spring.

According to Mesonet, parts of Oklahoma received an excess of 304% of normal rainfall and average total rainfall for the state has exceeded 18 inches in the last 60 days.

Despite the inundation of water, smart irrigation practices and water conservation are still necessary to avoid falling back into the drought Oklahoma was experiencing before the rain.

Smart irrigation practices include turning off sprinklers for seven to 10 days after rainfall and resuming supplemental watering only once dry soil conditions resume. The installation of a

climate based or soil moisture reading irrigation controller can save money and reduce water usage.

Water is an important factor in a healthy Oklahoma and smart water usage guarantees a strong environment for the state's future.

For more information on water conservation, please refer to the Oklahoma Cooperative Extension Service's Guide to Saving Water in the Home Landscape or the Smart Irrigation Technology: Controllers and Sensors fact sheet which can be found at <http://pods.dasnr.okstate.edu/docushare/> by searching for the title of the article.

## **Powdery Mildew of Ornamentals**

*David Hillock*

Powdery mildew is a fungal disease that affects many host plants, including ornamentals, shrubs, and trees. On some ornamental plants, such as rose, lilac, crapemyrtle, oak and zinnia the disease can be very destructive. Severity of the disease depends upon many factors—variety of the host plant, age and condition of the plant, time of infection, and weather conditions during the growing season.

Although there are several different types of powdery mildew fungi, a lot of them produce similar symptoms on plant parts. Plant damage may range from an unsightly whitish powdery coverage of the foliage to drying out and browning of infected leaves. In some plants, buds may be infected and production of flowers, fruits or nuts may be affected. If diagnosed early, powdery mildew can be effectively controlled to prevent severe damage to plants.

Symptoms – The first sign of the disease is the development of a white to gray or slightly brownish growth of mycelium over the surface of leaves or other parts. Powdery mildew fungi may also attack stems, buds, and flower petals of various ornamental plants. Powdery mildew infection of broadleaf plants may cause distortion (curling and twisting) and a reduction in size of infected leaves. When older leaves become infected, they usually show only the white patches of the fungus. Infected leaves may become distorted, turn yellow, and fall prematurely. Infected buds may fail to open and infections can spread to mature flowers, causing flower blight. Also, nuts of the pecan can be infected, causing a reduction in quality.

Hosts (Susceptible Plant Species) – Powdery mildews are known to occur on almost all ornamental plants. Certain plant species and/or varieties are more susceptible to the disease than others. In Oklahoma, powdery mildews are common on ash, crapemyrtle, lilac, oak, photinia, roses, and zinnia.

Conditions Favoring Powdery Mildews – Humid conditions with widely fluctuating temperatures increase the occurrence of powdery mildew. The disease is common in crowded plantings where air circulation is poor and in damp, shaded areas. Young succulent growth is more severely

affected than older tissues. Disease development is enhanced when cool, moist nights are followed by warm daytime temperatures.

Cultural Control of Powdery Mildews – Several practices will reduce or prevent development of powdery mildew. These practices involve reducing populations of the fungus in the vicinity of the host, changing environmental conditions around the host, and selecting more resistant varieties. Before plants are purchased, it may be to the homeowner's advantage to inquire if the ornamental variety desired has any resistance to powdery mildew. If only susceptible varieties are available, avoid planting in low, shady locations. If powdery mildew becomes a problem, removal and destruction of infected plant parts, should be practiced. Pruning of crowded plant material will also help increase air flow around leaves. This reduces humidity and thus helps prevent infection. Late summer application of nitrogen fertilizer should be avoided to limit production of succulent tissue, which may be susceptible to powdery mildew infection in the fall. Water only in the mornings so that the foliage will be dry by evening.

Chemical Control of Powdery Mildews – If cultural controls fail to prevent disease build-up or if the disease pressure is too great, fungicide spraying may be necessary. The best course of action is to combine both approaches using cultural methods as well as following a good spray schedule.

When powdery mildew has been a problem in previous years, a recommended fungicide spray schedule should be started in the spring as new growth develops. The fungicide should also be applied during the flowering period to avoid blossom blight. For suggested fungicides contact your OSU county extension office. Be sure to follow the instructions on the label for use on specific applications.

## **Anthracnose of Deciduous Shade Trees**

*David Hillock*

Homeowners are justifiably concerned when foliage of their yard trees becomes diseased, especially when these diseases cause defoliation, twig and limb death, and perhaps death of a tree that has been defoliated several years in a row. Concerned homeowners need information on how to prevent or otherwise control leaf diseases.

Anthracnose is very common during wet, mild spring weather and can also occur in the fall when weather again turns wet and mild.

Anthracnose – Irregular dead areas on leaf margins, between and across and/or along veins, often moving onto the shoots and small twigs; sometimes whole leaves are engulfed.

Ash, green and red (*Fraxinus* spp.) – The common leafspot and scorch on ash leaves is caused by the ash anthracnose fungus, *Glocosporium aridum*. Large areas of infected leaves, especially along the edges, turn brown. Premature leaf drop may occur.

Birch (*Betula* spp.) – Anthracnose of birch leaves is caused by *Glocosporium betularum*. This fungus causes brown spots with dark brown to black margins.

Maple (*Acer* spp.) – Anthracnose, caused by the fungus *Gloeosporium apocryptum*, can be serious on sugar and silver maples and box-elder, during rainy seasons. Indefinite light brown spots appear early; they may enlarge and run together causing death of infected leaves. Partially-killed leaves appear scorched. The sycamore anthracnose fungus, *Gnomonia Veneta*, also infects maple leaves.

Oak (*Quercus* spp.) – Anthracnose, caused by the fungus *Gnomonia quercina*, is a common disease of oaks. Rainy weather favors infection and defoliation may result. Infected areas frequently run together and cause the appearance of a leaf blotch or blight. The dead areas follow smaller veins and are bounded by larger veins.

Sweetgum (*Liquidambar* spp.) – Anthracnose of sweetgum leaves is caused by the fungus *Gloeosporium nervisequum*. Infection by this fungus causes black areas on the leaves.

Sycamore and London plane tree (*Platanus* spp.) – Anthracnose of sycamore and London plane tree is caused by the fungus, *Gnomonia platani*. The London plane tree is more resistant to anthracnose infection than are sycamore trees. Anthracnose is the most serious disease of sycamore. The first symptoms appear in early spring as the leaves begin to unfurl from the leaf buds, and at this stage the disease may be mistaken for frost damage. Infected leaves that do not drop will develop light brown dead areas, usually along the veins. The spots may enlarge to cover entire leaves and cause premature defoliation.

Walnuts and butternut (*Juglans* spp.) – Anthracnose, sometimes called brown leafspot, is caused by the fungus *Gnomonia leptostyla* (Syn. *Marssonina juglandis*). Anthracnose is a common disease of these trees. Leaflets are infected during the summer and irregular brown spots develop. Defoliation may result.

Control – Most leaf diseases of yard trees are controlled by gathering and destroying fallen, infected leaves. Where fallen diseased leaves have not been destroyed, chemical control is the alternative approach. For suggested fungicides, consult the OSU county extension office.

During very rainy springs when leaf diseases become severe, two to three chemical applications, beginning when the leaves are first unfurling from the buds and repeated when the leaves are half grown, and again when the leaves are fully developed, will usually provide good control.

Trees that have been affected by leaf diseases every season should also be well fertilized and watered to maintain vigor. Do not fertilize during early fall. Fertilize only after the trees are dormant.

## Common Composting Questions and Answers

*David Hillock*

How long does it take compost to form? – The time of completion will vary according to the type and amount of materials used, the climate, the size and type of bin or pile used, and the amount of aeration or turning of the pile. With the correct carbon to nitrogen ratio, water, and air, compost should be ready to use in 4 to 6 months. If the pile is turned more frequently, the compost should be ready more quickly. The smaller the individual pieces of material in the pile, the more surface area the microorganisms have to work on and the faster the materials will decompose. Shredding or chipping branches decreases the decomposition time.

When is the compost “done?” – Compost is ready when the temperature of the pile falls to ambient levels, the material is dark, crumbles easily, pieces are small and there is no odor.

How can the process be sped up? – Mixing frequently provides more air for the bacteria. Keep the material moist with soaking about once a week. Break the materials into smaller pieces.

### What can be composted?

- Most yard waste such as grass clippings, leaves, twigs, excess vegetation
- Non-fat containing food scraps
- Twigs or chipped branches
- Coffee grounds, tea leaves

### What cannot be composted?

- Large branches
- Fatty foods and grease, meats, dairy products, fish
- Bones
- Synthetic products such as plastics
- Diseased plants
- Weeds and vegetables that produce abundant seeds
- Pet or human waste

### Why make compost?

- Recycle natural materials
- Reduce amount of chemical fertilizer used
- Reduce amount of material going to landfills
- Reduce landfill tipping fees for individuals or communities
- Prolong landfill life

### What can compost be used for?

- Improve soil structure and texture
- Increase water-holding capacity of sandy soil
- Loosen clay soil and improve drainage
- Add nutrients to improve soil fertility

- Aid erosion control
- Potting soil
- Mulch around shrubs to retain moisture

## **Drought-tolerant Gardening at the Oklahoma City Zoo and Botanical Garden**

*Leighona Bernstein and Justin Quetone Moss*

The Oklahoma State University Department of Horticulture and Landscape Architecture has partnered with the City of Oklahoma City Utilities and the Oklahoma City Zoo and Botanical Garden to construct a drought-tolerant garden. The selection of brightly colored, water-saving plants will serve as the centerpiece to conservation efforts in the Botanical Garden portion of the zoo.

Drought-tolerant gardening is often associated with abundant cacti, rocks and a general brown hue. The garden, located by the Indian Rhinoceros exhibit, displays a diverse group of species like yucca, Russian and Autumn Sage, agave, and Blue-Stemmed Goldenrod. Many of these species bloom in vibrant hues of reds and yellows and serve as a colorful addition to the foliage.

Goals of the garden include educating Oklahomans about the incorporation of water conservation into their landscaping and demonstrating how attractive drought-tolerant plant selections can be.

The garden will open to the public on June 1, 2015. For more information, please visit [thinkwater.okstate.edu](http://thinkwater.okstate.edu) or contact Justin Moss at [mossjq@okstate.edu](mailto:mossjq@okstate.edu).

## **Smart Irrigation Month**

*Leighona Bernstein and Justin Quetone Moss*

July is Smart Irrigation Month and OSU-Oklahoma City will host an irrigation seminar on July 16 from 12 to 1 p.m. in Room 196 of the Agriculture Technologies Center. The seminar will feature Robert Reaves from the Oklahoma Irrigation Association.

Reaves will demonstrate the proper use and benefits of water conservation technology. Soil moisture sensors, climate based irrigation controllers and rain/freeze sensors will headline the seminar. Mist reduction irrigation nozzles will also be discussed.

These devices save water by helping users determine how much irrigation is necessary to keep their lawns alive while conserving water and being smart about irrigation.

Register by calling 405-297-3477 or emailing [Joshua.Campbell@okstate.edu](mailto:Joshua.Campbell@okstate.edu). Admission is free and lunch will be provided to pre-registered guests.



## **Upcoming Horticulture Events**

### **Current Challenges in Floriculture**

June 11, 2015

Wes Watkins Center – Stillwater, OK

For registration and other information visit [www.hortla.okstate.edu/events](http://www.hortla.okstate.edu/events).

### **Hunger and Horticulture**

July 30, 2015

Food and Agricultural Products Center – Stillwater, OK

For registration and other information visit <http://www.hortla.okstate.edu/events/>.

### **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](mailto:stephanie.larimer@okstate.edu).