

Horticulture Tips

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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 on its highest setting and mow off the foliage. Next thin crowns 12-24 inches apart. Apply recommended fertilizer, preemergence herbicide if needed and keep watered.

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.

Soil Type and Irrigation

Kim Toscano

Taken from *Oklahoma Gardening Show Notes*, May 26-27, 2012

Soil type affects the water holding capacity of a soil as well as the rate at which water infiltrates the soil. These characteristics influence the frequency and duration of irrigation, and both are related to the pore spaces of a soil.

The pore space is the voids between soil particles and is occupied by either air or water. Soil is composed of on average 50% minerals and organic matter and 50% pore space. The actual quantity and size of the pore spaces vary with soil type. Coarser soils, such as sand or sandy-loam have larger pore spaces. Finer soils, such as clay loam have smaller pore spaces.

These pores influence infiltration or the downward flow of water from the surface through the soil. As you would imagine, coarse textured soils with larger pores allow water to enter the soil more rapidly than medium or fine textured soils with smaller pores. Think about how much faster it is to drink through a large straw compared to a small one. Other factors influencing infiltration include moisture content of the soil, tillage, plant residues on the soil surface, slope, and plant cover. Soil compaction also plays a role in infiltration. Compaction creates a barrier to water movement. It compresses pore spaces making it more difficult for water to move through the soil. Likewise, if the soil is already saturated with water, then any additional water will not infiltrate into the soil because the pore spaces are full. When water cannot infiltrate into the soil it will run off into storm drains, creeks and streams or pool into puddles in the landscape.

When irrigating, water should be applied only as quickly as it can be absorbed by the soil. Some of the recent spring storms have demonstrated what happens when water is applied too quickly to the landscape. Applying water at a rate faster than it can infiltrate the soil causes erosion, wastes water, and compacts the soil surface. Based on the soil characteristics alone, sandy soils absorb water more quickly, so water can be applied more quickly than finer soils such as clay. Water applied too rapidly to clay soils is wasted in run off. One way to get around this problem is to build a small berm around the plant root zone to contain water. This allows for water to pool as it infiltrates slowly into the soil. Using a drip irrigation system is another way to apply water at a slower rate.

Soil type also impacts how often we need to irrigate. Coarse-textured soils such as sand or sandy-loam hold less water that is available to plants than fine-textured soils, such as clays. The large pore spaces of a coarse-textured soil not only allow water to enter the soils more quickly, but also to drain out of the soil. Because of this characteristic, sandy soils need to be irrigated more often than fine-textured soils. Clay soils retain water more effectively; therefore, water must be applied less often.

Even when using a drip irrigation system, we need to adjust for our local conditions. Many of us consider rainfall or temperatures when setting our irrigation systems, but we also need to consider soil type. Avoid wasting water by releasing water more slowly in clay soils, and be sure water is applied more frequently to sandy soils. Remember, soil type can vary significantly across a single landscape, so sample several areas of your garden and adjust for the localized conditions.

Soil Improvement; the Good, the Bad, and the Dirty

Malarie Gotcher

Most of us could only dream of having a deep, loam soil with a rich earthy smell. Unfortunately, if you live in Oklahoma you most likely have a silty clay or clay loam soil that sticks to our shoes or a sandy soil that refuses to hold water. Keep in mind that all soil types have good characteristics and bad characteristics. Clay soils provide many benefits such as a high cation exchange capacity meaning they are able to hold more nutrients than sandy soils. They also retain moisture for a longer period of time which means less frequent watering, which is great during dry months but can be hard on plants if we receive a lot of rain that saturates the air filled soil pores that roots need. On the other hand, sandy soils are easy to work and less susceptible to compaction but plants in sandy soils may need to be watered more frequently. They also drain more quickly which can be better for plants that are in a low or boggy area. Luckily, there is a solution to our soil woes. Organic matter (compost, kitchen scraps, and leaves) is beneficial for all soil types. For clay soils, it helps decrease compaction and increase drainage. Sandy soils benefit from increased aggregation and higher nutrient holding capacity. Organic matter is also rich with nutrients that are important for plant growth.

Adding organic matter to our soil can be a daunting task, but with some patience hard work always pays off. Trench composting is one method that is easy to do and beneficial for your soil. You dig a trench or hole and add materials that are compostable and bury it. You can rotate where you dig your trenches so your entire garden will benefit from the organic matter additions. Make sure to cover bare soil with leaves or mulch to reduce evaporation and erosion. Over time, the materials are decomposed by beneficial microbes and eventually your scraps will improve your soil structure and water holding capacity.

Another way to increase soil quality is by directly adding compost. Compost can be made from yard waste and kitchen scraps and incorporated into the soil. There are numerous ways to make a composting system, from just piling yard waste to building a compost bin. Add layers of green and brown vegetation to the pile and keep it moist. Turning the compost pile speeds up

decomposition of plant materials. The finished compost can be incorporated in the soil and supplies beneficial organisms and nutrients.

Groundcovers

David Hillock

In a broad sense, groundcovers include any material that covers the ground surface so the ground cannot be seen from above and rain does not strike directly upon it. With this definition, grass, various types of paving, shrubs, and even trees could be called groundcovers. However, here we are referring to groundcovers as low (up to 18 inches), mat-forming or trailing plants, other than grasses or other plants that tolerate walking or mowing. Most ground covers are not intended to be walked upon and will be severely damaged by pedestrian traffic.

When groundcovers are chosen carefully and placed correctly, they greatly enhance the beauty of the landscape composition. In addition to their aesthetic value, they fulfill a number of other important functions including the following:

- Control erosion on slopes
- Obstruct traffic without impeding view
- Conserve soil moisture and lower temperatures during periods of extreme heat
- Reduce lawn maintenance
- Fill narrow, odd-shaped areas where mowing and edging might be difficult
- Provide vegetative growth where grass is difficult to maintain
- Produce interesting patterns with variation in height, texture, and color

In practice, the groundcovers most frequently used are plants that are easily propagated, vigorous, and hardy perennials.

Selection – selection of a groundcover will depend upon the area where it will be used. Is the area flat or sloping? Is it sun, or partially or deeply shaded? Soil conditions must be studied. Some groundcovers prefer a moist soil, rich in organic matter while others will adapt to dry, sandy situation. Give consideration to color, texture, height, and habit as well, since some groundcovers tend to grow rampantly. One problem that may limit the use of groundcovers is the cost of installation since large numbers of small, individual plants are required. In addition, a well-prepared planting bed is essential to the establishment of groundcovers and can be costly and time-consuming. Weed control in a newly planted groundcover bed can likewise be difficult and labor-intensive.

Culture – significant maintenance is necessary for the first 1 to 3 years or until the groundcover becomes established. Cultivation is necessary to control weeds and other plant invaders; fertilization to encourage fast, vigorous growth to achieve good cover; irrigation in time of dryness; and disease and pest control. When these maintenance considerations are ignored, the progress toward achieving a good groundcover planting is disappointing.

Wherever paving, lawn or cultivated beds are not desirable, groundcovers can be successfully used. Newly cut banks, and any slopes greater than 12% are best treated with groundcover plantings. Around buildings, groundcovers are superior to paving or structural controls for reducing heat, glare, noise, and dust.

Below are just some of the possible plants used as groundcovers.

Ajuga - Ajuga reptans
Bishop's Weed - Aegopodium podagraria 'Variegatum'
Candytuft - Iberis sempervirens
Creeping Jenny - Lysimachia nummularia
Creeping Mahonia - Mahonia repens
Daylily - Hemerocallis species
Dwarf Bamboo - Arundinaria pygmaea
English Ivy - Hedera helix
Euonymus - Euonymus fortunei coloratus
Fleece Flower - Polygonum cuspidatum var. compactum
Geranium - Geranium sanguineum
Germander - Teucrium species
Gray Santolina - Santolina chamaecyparissus
Lamiaeum - Lamiaeum species
Liriope or Monkey Grass - Liriope muscari
Mondo Grass - Ophiopogon japonicus
Numerous ornamental grasses, sedges, etc.
Pachysandra or Japanese Spurge - Pachysandra terminalis
Plumbago, Leadwort - Ceratostigma plumbaginoides
Poppy Mallow, Winecups - Callirhoe involucrata
Periwinkle - Vinca minor, V. major
Sedum - Sedum spurium and other species
St. Johnswort - Hypericum calycinum
Sweet Woodruff - Galium odoratum
Thyme - Thymus species
Woolly Yarrow - Achillea tomentosa

Selecting Turf Species Based on Form and Function

John Schroeder and Justin Quetone Moss

From a landscape design perspective, turf in the landscape can play many roles from creating a picturesque view of an ornamental planting backdrop to providing a permeable area for recreational activity in the landscape. Turf in the landscape also presents the need for a regular maintenance schedule in terms of appropriate irrigation, fertilizer/herbicide applications, and mowing in order to maintain a healthy lawn. Certain species of turfgrasses commonly used in Oklahoma require different amounts of inputs but also present different types of uses. The first consideration to determine when selecting a turf species is the amount of sunlight the desired

area receives. Areas in the lawn that receive mostly full sun generally require a warm-season grass such as bermudagrass or zoysiagrass. Areas that receive a generous amount of shade throughout the day from either large canopy trees or from built structures typically perform better when using a cool-season grass such as tall fescue or a mix of cool-season grasses that can easily be found at a lawn and garden store. These cool-season grasses can perform well in sunnier areas but would require significantly more water and general maintenance.

Grass species native to the region have recently been cultivated to provide a more adaptable selection for turf in Oklahoma landscapes. Buffalograss, blue gramagrass and other native species and mixes have become popular for less intensively used lawn areas. These native selections require fewer inputs (irrigation, fertilizer, and mowing) due to their natural adaptability. The downside of these grasses is they are more susceptible to damage and perform poorly when exposed to heavy activity from foot traffic or light vehicular traffic. This makes these selections ideal for areas further away from the home that receive less traffic and where lower maintenance in the landscape is desired.

Converting an existing exotic warm-season grass to a native selection can also present challenges. For example, bermudagrass is a very aggressive and resilient turf species and switching to a native species can be quite difficult. Repeated applications of a non-selective herbicide is necessary to kill out the existing bermudagrass. Furthermore, after establishing the native turf, bermudagrass can reemerge and typically can often out compete the less aggressive native species unless managed properly. Therefore, monitoring and bermudagrass and weed removal is necessary throughout the life of the native lawn area.

Irrigation Technologies: “Smart” Water Controllers and the EPA WaterSense Program

Morgan Hopkins and Justin Quetone Moss

Water has become an increasingly precious resource and commodity. Although the pressures of limited water sources may not appear to be extreme, particularly in the United States, water conservation has become a popular trend in industry and domestic institutions. Cities and water municipalities have promoted water conservation through irrigation restrictions and regulations. The technology industry has also integrated into the water conservation ideology.

According to the EPA, outdoor residential water use in the United States accounts for more than 9 billion gallons of water on a daily basis. About half of outdoor residential water use stems from overwatering. Among many of the irrigation technologies geared towards outdoor water conservation, “smart” water controllers are becoming increasingly popular, particularly in residential communities. Water controllers help regulate the amount of water irrigation systems distribute to each specific yard by incorporating local weather conditions and landscape conditions. There are various types of “smart” water controllers that operate on different factors. Soil moisture controllers base irrigation control off the actual amount of moisture in the soil. Another type of “smart” water controller is a sensor that controls irrigation systems through local weather conditions, shutting off an irrigation system after significant rainfall events. A “smart”

water controller can also use daily Evapotranspiration (ET) data to operate an irrigation system. All of these sensors aim to operate irrigations systems based on efficient watering, instead of using preset, timed schedules that lead to overwatering.

EPA WaterSense Program

The EPA's WaterSense program represents irrigation controllers that meet the EPA criteria of water conservation and efficiency. These products have the WaterSense label, and can be purchased at outdoor retail stores, as well as online. Depending on the complexity of the controller, the device can be installed by the homeowner. The cost of "smart" water controllers also vary on the complexity of the device, and researching which device would suit the homeowner and their yard is the best way to find the right controller. "Smart" water controllers are a great way to add value to your home, as well as conserve and sustain the precious resource that is water.

To promote the use of more efficient irrigation control technologies and help purchasers make informed decisions to reduce their outdoor water use, EPA is announcing its intent to develop a specification to label soil moisture-based irrigation control technologies. With this announcement, EPA is releasing a Notice of Intent (NOI) that describes the performance measures WaterSense intends to include in a specification and the technical issues that still need to be more fully defined and resolved.

EPA is interested in your input! If you have comments or suggestions on the specification development process for WaterSense labeled soil moisture-based control technologies, please contact them at watersense-products@erg.com

As indicated in the Version 1.1 WaterSense New Homes Specification, any home with a weather-based irrigation controller must use a WaterSense labeled model beginning June 1, 2013, in order to comply with the specification's irrigation system requirement. However, builders may continue using soil moisture sensor-based irrigation controllers to meet the specification, provided that the controller contains all of the features listed in section 4.2.7 of the specification.

WaterSense labeled irrigation controllers, which act like a thermostat for your sprinkler system, tailor watering schedules to actual onsite conditions to meet plants' needs without overwatering. Compared to a standard clock timer controller, a WaterSense labeled irrigation controller can save an average home nearly 8,800 gallons of water annually.

If you have questions regarding the WaterSense program in general, please contact the WaterSense Helpline at (866) WTR-SENS (987-7367) or e-mail watersense@epa.gov.

Oklahoma School Garden Network

Shelley Mitchell

If you know anyone who is involved in school or youth gardening, let them know about a Facebook page where interesting kids' gardening articles, training opportunities, and grant opportunities related to school gardening get posted---"Oklahoma School Garden Network". Anyone wanting to share information about school or kids' gardening is welcome to 'like' the page and post pictures and messages. The page serves to provide ideas and information to teachers, extension educators, parents, and any other interested people.

Reclaiming Property from Moles

Sean Hubbard, Communication Specialist

filed under [Natural Resources Ecology and Management](#), [Extension](#)

Hairless, beady-eyed, web-footed and about seven inches long, moles leave visible tunnels running just under the soil.

Moles prefer loose, moist soil full of grubs and earthworms, which can be problematic for landowners and gardeners, said Dwayne Elmore, Oklahoma State University Cooperative Extension wildlife specialist.

"Moles remove many damaging insects and grubs from lawns and gardens, as well as aerate the soil. They are extremely beneficial animals," he said. "However, their burrowing habits can disfigure lawns and parks, loosen the soil around shallow rooted plants and create havoc in small garden plots."

For small areas, such as flowerbeds or small gardens, a metal or hardware cloth fence should be installed and buried to a depth of a least one foot and bent out at a 90 degree angle. This will not be practical for large areas.

There are many techniques to rid property of moles, including scaring them away with vibrational devices, using chemical products or toxic grain baits and using fumigants. Most of these are not highly effective. The most successful and practical method of getting rid of moles is trapping.

"Traps are well suited to moles because the mole springs them when following its natural instinct to reopen obstructed passageways," Elmore said. "Success or failure in the use of these devices depends largely on the operator's knowledge of the mole's habits and of the trap mechanism."

A popular style of mole trap is the harpoon or impaling-type trap. This style has sharp spikes that impale the mole when the spring-loaded spikes are driven into the ground.

“Select a place in the surface runway where there is evidence of fresh mole activity and where the burrow runs in a straight line,” Elmore said. “Dig out a portion of the burrow, locate the tunnel and replace the soil, packing it firmly where the trigger pan will rest.”

Once the location is determined, the trap is set by raising the spring, setting the safety catch and pushing the supporting spikes into the ground, one on either side of the runway.

“The trigger pan should just touch the earth where the soil is packed down,” he said.

Release the safety catch and allow the impaling spike to be forced into the ground, which will allow the spike to penetrate the burrow when the trap is sprung by the mole later. Now the trap is set and should not be disturbed. Also, there should be no disturbance to any other portion of the mole’s runway.

“If a trap fails to catch a mole after two days, it can mean the mole has changed its habits, the runway was disturbed too much, the trap was improperly set or it was detected by the mole,” Elmore said. “In any event, move the trap to a new location and try again.”

Moles are very important animals and should only be trapped when they are creating a significant problem. Their benefits far outweigh the damage they cause under most circumstances.

Also, verify that moles are the cause of your damage and not gophers, which create conical shaped mounds rather than long visible runways in the lawn. Gophers are typically found in sandy soils.

Upcoming Horticulture Events

GardenFest

September 21, 2013

10 AM to 4 PM

The Botanic Gardens at OSU – Stillwater, OK

Join us at The Botanic Garden at OSU for our annual GardenFest. The theme for 2013 is "Art in the Garden". GardenFest is a fun filled day of art and gardening ideas, demonstrations, children's activities and merchandise.

Indigenous Plant Materials Conference

October 10, 2013

Wes Watkins Center – Stillwater, OK

This conference will highlight underutilized ornamental plant materials, both native to Oklahoma and/or anywhere else in the Lower 48, and their possible uses in the green industry and ultimately in our landscapes.

Native American Horticulture Conference

November 21, 2013

Wes Watkins Center – Stillwater, OK

This conference will provide a horticulture overview of Native Americans' contribution to both historical and current-day foods, ornamentals and medicine.

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