

Horticulture Tips

February 2014

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

GARDEN TIPS FOR FEBRUARY!

David Hillock, Consumer Horticulturist

General

- Base any plant fertilization on a soil test. For directions, contact your county Extension Educator.
- Provide feed and unfrozen water for your feathered friends.
- Clean up birdhouses before spring tenants arrive during the middle of this month.
- Avoid salting sidewalks for damage can occur to plant material. Use alternative commercial products, sand or kitty litter for traction.
- Join *Oklahoma Gardening* on your OETA station for the start of its new season beginning on February 15. Saturdays at 11:00 a.m. and Sundays at 3:30 p.m.

Trees & Shrubs

- Fertilize trees, including fruit and nut trees and shrubs, annually. ([HLA-6412](#))
- Most bare-rooted trees and shrubs should be planted in February or March. ([HLA-6414](#))
- Finish pruning shade trees, summer flowering shrubs and hedges. Spring blooming shrubs such as forsythia may be pruned immediately after flowering. **Do not** top trees or prune just for the sake of pruning. ([HLA-6409](#))
- Look for arborvitae aphids on many evergreen shrubs during the warmer days of early spring.
- Gall-producing insects on oaks, pecans, hackberries, etc. need to be sprayed prior to bud break of foliage.
- Dormant oil can still be applied to control mites, galls, overwintering aphids, etc. ([EPP-7306](#))

Fruit & Nuts

- Spray peaches and nectarines with a fungicide for prevention of peach leaf curl before bud swell. ([EPP-7319](#))
- Mid-February is a good time to begin pruning and fertilizing trees and small fruits.
- Collect and store graftwood for grafting pecans later this spring.
- Begin planting blackberries, raspberries, strawberries, grapes, asparagus and other perennial garden crops later this month.
- Choose fruit varieties that have a proven track record for Oklahoma's conditions. Fact Sheet [HLA-6222](#) has a recommended list.

Turf

- A product containing glyphosate plus a broadleaf herbicide can be used on **dormant** bermuda in January or February when temperatures are above 50°F for winter weed control. ([HLA-6421](#))

Vegetables

- Cool-season vegetable transplants can still be started for late spring garden planting.
- By February 15 many cool-season vegetables like cabbage, carrots, lettuce, peas and potatoes can be planted. ([HLA-6004](#))

Flowers

- Force spring flowering branches like forsythia, quince, peach, apple, and weigela for early bloom indoors.
- Forced spring bulbs should begin to bloom indoors. Many need 10-12 weeks of cold, dark conditions prior to blooming.
- Feed tulips in early February.
- Wait to prune roses in March.

Houseplants Improve Indoor Air Quality

David Hillock

Did you know that several common houseplants help clean the air we breathe indoors? In fact, in the 80s a study conducted by NASA and the Associated Landscape Contractors of America showed several houseplant species were efficient at filtering volatile organic compounds (VOCs) from the air in space facilities. More recently a research team from Pennsylvania State University studied the effects of three common houseplants (snake plant, spider plant, and golden pothos) on indoor ozone levels. Results revealed that ozone depletion rates were higher in the chambers that contained the plants than in the control chambers without plants.

Why is this important you ask? Indoor air is generally more polluted than outdoor air leading to headaches, loss of concentration, eye, nose and throat problems, and drowsiness. Indoor plants can reduce compounds causing health problems, VOCs may be reduced by 80% and CO₂ by up to 25%. Indoor plants also relieve staff stress and can promote productivity in the workplace. In fact, studies have shown that indoor plants can reduce negative mood states by up to 60% and can cut down on staff sick leave by 60%. So go ahead, place a houseplant on your desk!

Here are just a few of the plants that are known to clean the air we breathe – aloe, spider plant, gerbera daisy, snake plant, golden pothos, chrysanthemum, red-edged dracaena, weeping fig, azalea, English ivy, Warneck dracaena, Chinese evergreen, bamboo palm, peace lily, and heart leaf philodendron.

For more information on growing houseplants see OSU Extension Fact Sheet [HLA-6411](#) **Houseplant Care**.

Deadline for Pecan & Grape Management Classes Quickly Approaching

Becky Carroll, Extension Assistant – Fruit Crops and Pecans

The Pecan Management and Grape Management Courses will again be offered in 2014. The Grape Management Course will begin on February 27 and the first Pecan Management Class is scheduled for March 11. The courses continue to provide present or potential growers with grape or pecan management requirements throughout the growing season. Participants get to learn in both a classroom and vineyard or orchard setting. Engaging in discussions and meeting other growers allow participants to network and learn from each other as well.

The courses not only can help growers learn but is a great opportunity for County Extension Educators to hone their skills with these crops. Educators can take the course at no cost. The online Pecan Management Course is also available to county educators who would like to learn more about pecans.

For questions about the classes, please contact Becky Carroll at becky.carroll@okstate.edu or 405-744-6139.

Pecan Management Brochure - <http://okpecans.okstate.edu/pecan-management-course/pdfs/pecan-course-brochure>

Grape Management Brochure - <http://www.grapes.okstate.edu/grape-management-course/grape-mgmt-brochure>

Graftwood Sources for 2014

Becky Carroll

The graftwood sources for 2014 are listed at the following website:

<http://okpecans.okstate.edu/PDFs/graftwood-source>

2014 OKLAHOMA PROVEN SELECTIONS

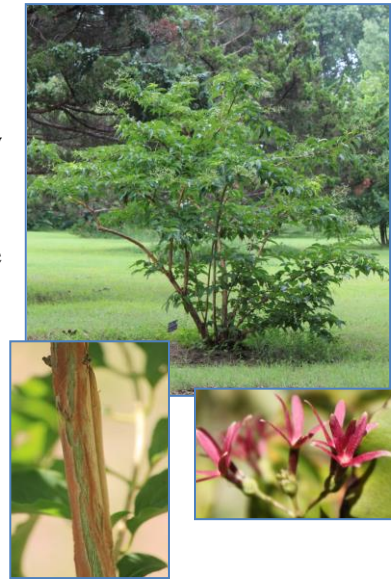
David Hillock

Each year a set of plants is chosen by horticulturists that will help consumers choose plants appropriate for Oklahoma gardens. The program began in 1999 by selecting a tree, shrub, perennial and annual worthy of Oklahoma landscapes. In 2009 a new category was added, the Collector's Choice. This plant has the adventuresome gardener in mind. It is a plant that will do well in Oklahoma and may need special placement or a little extra care, but will be very rewarding and impressive in the garden. Now in its 16th year, there are many plants to choose from including the 2014 selections which are listed below. To see all the plants recommended by the Oklahoma Proven Plant Selection Program, visit our web site at <http://oklahomaproven.okstate.edu/>.

Collectors Choice – Seven-Son-Flower, *Heptacodium miconioides*

An upright, irregular, loose and open shrub growing 15 to 20' high. Leaves appear early spring and are soft green maturing to dark green; very attractive and pest free. Flower buds form in early summer, but do not open until September. Individual flowers are tiny and white, but fragrant and attract butterflies to the garden. Sepals persist and change green to rose-purple and are as attractive as the flowers. Bark is exfoliating, whitish, to rich brown and green. Seven-son-flower grows best in moist, well-drained, acid soil, but seems adaptable.

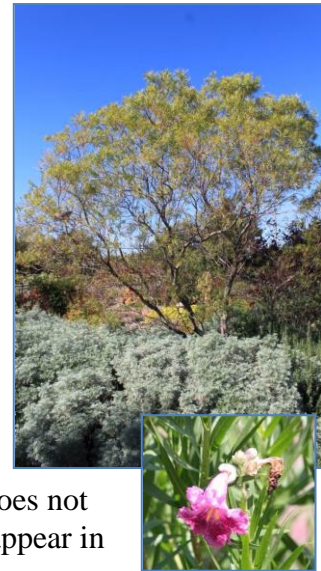
- Exposure: Full sun to part shade
- Soil: Prefers moist, well-drained soil
- Hardiness: USDA Zone 5-8



Tree – Desert-willow, *Chilopsis linearis* cultivars

Desert-willow is not a willow at all and prefers dry, well-drained soils as compared to true willows, which grow along streams and ponds. Because Desert-willow likes the hotter, drier climates it is an excellent choice for western Oklahoma. Native to southern California, west to Texas and south to Mexico it requires very well-drained soil. Desert-willow grows as a small tree reaching 15'-30' high and about 10' to 25' wide. A tree of loose, gangly proportions it is favored for its colorful, funnel-shaped flowers that put on their biggest show in early summer, and then continue to bloom sporadically throughout the rest of the summer. Flowers can be white, pink, rose, or lavender with purple markings inside and are sweetly fragrant. Foliage is a rich green in summer with no valuable fall color, falling early to reveal an interesting branching structure. Several cultivars exist: Timeless Beauty© (*C. linearis* 'Monhews') has a long flowering period, since it does not set seed; large, fragrant bi-colored burgundy and pale lavender blooms appear in clusters at the ends of the branches. Art's Seedless™ has large, pink-rose flowers, long narrow bright green leaves, but no messy seed pods. Bubba has deep pink/purple flowers, not seedless but produces fewer pods than others. Burgundy has deep purple/burgundy flowers. Desert-willow makes a great patio or small specimen tree and attracts hummingbirds as well as other birds.

- Exposure: Full sun
- Soil: Tolerates dry, well-drained soils
- Hardiness: USDA Zone 7-9



**Shrub – Blue Muffin Viburnum, *Viburnum dentatum* ‘Christom’
Blue Muffin®**

Blue Muffin viburnum is a small, compact version of the native arrowwood viburnum growing about 3’ to 5’ high and just as wide. Blue Muffin prefers moist, well-drained soils, but is adaptable to a wide range of other soils. Established plants are somewhat drought tolerant and have no serious pest problems and require very little maintenance making them excellent for the urban landscape. As with many viburnums, Blue Muffin offers season-long interest with white spring flowers, dark green summer foliage that turns red and orange in fall, and blue fruits that the birds love that mature in late summer, fall. Prune right after flowering, but only if necessary. Grow Blue Muffin as a specimen, in groupings, in shrub borders, as a foundation planting, or as a hedge.



- Exposure: Sun to part shade
- Soil: Moist, well-drained
- Hardiness: USDA Zone 3-8.

Perennial – Switchgrass, *Panicum virgatum* cultivars

Switchgrass is a native species to North America and was one of the original components of the tall grass prairie. Switchgrass tolerates a wide range of soil and climatic conditions, including wet or dry. Full sun is the best exposure for switchgrass, but it will grow in part shade; too much shade or rich soils may result in floppy plants. Switchgrass is a clumping, warm-season grass. It has an erect, upright form, forming a positively vertical line with leaves growing 18 to 24 inches long on sturdy stems reaching 4 to 7 feet high. Showy flowers appear in July in airy panicles reaching 1 to 2 feet above the foliage. Flowers may be pinkish, reddish, or silvery when they first appear and turn grayish white or brown as they mature persisting well into the winter. The fall color can be a brilliant yellow, but some cultivars can be red and orange. It is grown as an accent, in groups or masses and can be effective as a screen, as a backdrop for other plants, or as a groundcover for erosion control along banks. It also works well in native plant gardens, wild gardens, meadows, naturalized areas, as well as rain, water, and bog gardens. Leaves can be deep green to gray-green. Common cultivars include Heavy Metal (metallic blue leaves, yellow fall color), Haense Herms (red switchgrass – compact habit 3 to 3 ½ feet tall, with purplish red highlights on leaf tips and bright red-orange fall color), Cloud Nine (upright, arching to 6 feet or more), Northwind (very stiff and upright, straight as an arrow to 5 feet with bluish-green foliage), Shenandoah (red foliage, 3 to 4 feet high), and ‘Cheyenne Sky’ (foliage turns wine red).



- Exposure: Sun, part shade
- Soil: tolerates about any soil
- Hardiness: USDA Zone 5-9

**Annual – Big Twister Corkscrew Rush,
Juncus effusus ‘Big Twister’**

Corkscrew rush with its uniquely twisted stems, though relatively small (18-24” high and wide), still commands attention in any garden space. The stems curl and spiral around creating a tangled mass. Corkscrew rush prefers very moist to wet conditions in full sun to part shade. Happy submerged in water; it is perfect for a water garden. Protect in hot climates by providing shallow water 1-6" over the crown. This duplicates what happens naturally in its northern most range, where the frost kills its greenery back to ground level. Corkscrew Rush is also an excellent accent plant for containers and is spectacular in cut flower arrangements. Though considered hardy to about zone 6, it tends to be more of a tender perennial in our area. One possibility for its annual nature may be the dry winters – and the drastic temperature fluctuations we often experience.



- Exposure: Full sun to part shade
- Soil: Very moist to wet, acidic
- Hardiness: Use as an annual

For more information about Oklahoma Proven go to <http://oklahomaproven.okstate.edu/> or contact David Hillock, 405-744-5158, david.hillock@okstate.edu.

Low Temperatures Bring Possibility of Increased Winter Injury to Bermudagrass Stands

Justin Quetone Moss, Assistant Professor, and Dennis L. Martin, Professor

Due to the cold temperatures throughout Oklahoma this past December and January, some areas have experienced more winter-kill of bermudagrasses than in most previous years. Winter-kill is a relative term, meaning that some portion of a plant or portion of a turfgrass stand has died during the winter. In this article we discuss winter-kill, what it is, how it occurs, and how to detect the amount of winter-kill so that planning can begin to effectively help the turfgrass stand recover in spring.

Winter-kill or tissue death during the winter, can be from dehydration, true low temperature injury, or a combination of the two. For the purposes of this article, we discuss winter-kill associated with low temperature injury. Cold temperatures can damage warm-season grasses, such as bermudagrass, through a series of days and nights with sustained below freezing temperatures or a series of unseasonably warm days followed by a sudden extreme drop in temperature to well below freezing. The grasses are especially vulnerable if they are types with poor winter tolerance and they are left unprotected by some type of cover, such as snow, straw, or geotextile tarp, and when soil temperatures are also below freezing.

Moderate to severe winter-kill of non-protected, low-cut bermudagrass golf course putting greens is relatively common in Oklahoma. However, moderate to severe winter-kill of bermudagrass

lawns, sports fields or golf course fairways is a fairly rare event. The amount of damage present on any bermudagrass stand varies greatly from year to year due to differences in weather and how a turfgrass stand has been managed.

Cases of winter-kill can be severe, such as when an entire turfgrass stand dies and no plant parts survive to regenerate the stand in spring. However, during most Oklahoma winters, only small portions of the upper aerial shoots system are killed. In the latter case, most crowns (growing points) located in the lower canopy, survive, leading to rapid greenup and turfgrass stand regeneration in the warm days of mid to late spring. Winter is not yet over in Oklahoma so we cannot project with great certainty the amount of winter-kill that will be detected once the time of spring greenup arrives. However, it is not too early for homeowners and professional turf managers to begin scouting for winter-kill to assess the damage that has already occurred thus far.

Areas that are most likely to experience winter-kill are:

- Areas with heavy foot or vehicle traffic.
- North facing hills and slopes.
- Areas with moderate to heavy shade, including areas that receive adequate sunlight in summer but that remain in continuous shade from mid-September through mid-March.
- Areas with poor drainage.
- Areas with low soil fertility.
- Areas with excessively high fertility or that received high rates of fertilizer late into the previous growing season.
- Areas that are thin or that were planted much later in the growing season and did not completely cover prior to the first frost.
- Areas with less cold tolerant bermudagrass cultivars.

Bermudagrasses known to have suffered greater amounts of winter-kill as assessed in multiple past research trials include 'Arizona Common', 'NuMex Sahara', 'Sahara', 'Tifway' (also known as '419'), 'Mohawk', 'Princess 77', 'Celebration', and 'Sultan'. Most common bermudagrasses sold as 'U-3' have demonstrated respectable levels of winter tolerance although there can be great variability in cold hardiness of types sold as U-3.

There are several bermudagrasses that have improved winter-hardiness based on research trials conducted around the United States. Cultivars that have both high visual quality and improved winter tolerance that were developed at Oklahoma State University include 'Riviera' and 'Yukon', both available as seed, as well as 'Patriot', 'Latitude 36', and 'NorthBridge', which are interspecific hybrids and available only as sod or sprigs (not seed). Other bermudagrasses that also have improved winter tolerance are 'Hollywood', available as seed from Jacklin-Simplot, and older, less easily found vegetatively propagated bermudagrasses such as 'Midiron', 'Midfield', 'Midlawn' and 'Quickstand Common.'

When air temperatures have fallen into the low teens or several days have elapsed when air temperatures never rose above freezing, scouting for winter-kill of bermudagrass should occur. Allow 7 to 10 days to elapse following a severe winter event to assess its effect on the

bermudagrass stand. Several techniques are available for the homeowner or professional to use to gain insights into whether moderate to severe winter-kill of a bermudagrass stand has occurred. These techniques include:

- Plug collection and greenup assessment technique
 - Use a soil probe or shovel to collect a bermudagrass plug that is at least 4-6 inches deep and at least 3-4 inches in diameter.
 - If possible, collect multiple plugs and include plugs from both an expected good area and bad area. Label the plugs/pots accordingly.
 - Place the plugs in a pot, water as needed, and put the pots in a warm (room temperature or above), sunny area such as a south facing window. If needed, provide supplemental lighting to ensure the plugs receives adequate light for at least 8-10 hours per day.
 - Monitor the plugs for 7-21 days for bermudagrass green-up and growth.
 - If there is no growth on the plugs by 21 days, it is likely that the area has experienced severe winter-kill.

- Canopy brushing technique
 - This technique is useful in “real time” in the field and can help to locate surviving aerial stems and shoots.
 - Use a leather glove to protect hands.
 - Vigorously brush and defoliate (remove leaf blades) on 6-12 inch diameter turf sampling areas. Sample multiple areas, including suspected good and bad areas.
 - Assess the density of living aerial shoots that show green, red, purple, or white segments on the stem between the leaves (internodes) in the lower canopy. The stems often feel sturdy or rigid and may somewhat “snap” when bent in two.
 - If no green, red, purple or white (not tan) color is seen on above ground stems or if they look brown, black, tan, or feel very soft or flimsy, then winter-kill has likely occurred to the entire aerial shoot system. Next proceed to assessing survival of the below ground shoot system, including the rhizomes.

- Combination technique
 - After canopy brushing, plugs can also be removed from the area to check for survival of underground stems including the rhizomes. Rhizomes are generally white, horizontal growing stems with unusual white leaves that have extremely short leaf blades, no leaf sheaths and a sharp growing point at the terminal shoot end.
 - After collecting the plugs, break up the plug to locate the rhizomes. They will look noticeably thicker and /or larger than roots.
 - Look for white, firm rhizomes. Similar to the aerial shoot technique, the rhizomes will feel sturdy or rigid and may somewhat “snap” like a garden-fresh vegetable when bent in two.
 - If the rhizomes look brown, tan, or black and if they feel very soft, flimsy, or mushy, then winter kill of that particular tissue has likely occurred. Rhizomes are the surviving shoots of last resort. If no rhizomes have survived, the stand will not regenerate. Even if some rhizomes survive, if complete aerial system kill has

occurred, the homeowner or professional manager may not be willing to wait for the rhizomes system to regenerate the turfgrass stand. Fortunately complete kill of the subterranean shoot system (including rhizomes) is rare on areas other than putting greens in Oklahoma.

It's best to scout for winter-kill in advance of spring greenup and prior to application of the summer annual pre-emergent program. Most pre-emergent herbicides inhibit root formation on stolons to some degree and thus slow recovery of a stand that is being grown-in after severe winter-kill. Thus, if substantial winter-kill of bermudagrass has occurred, an informed decision as to whether to use normal use rates, reduced use rates or even forego application of the normal first application of the pre-emergent herbicide must be made by the homeowner or site manager. If substantial amounts of winter-kill have occurred such that the stand is not filling in quickly in spring, visit our website at <http://turf.okstate.edu> for information about re-planting or renovation (see Fact Sheet [HLA-6419](#) – Establishing a Lawn in Oklahoma).

Upcoming Horticulture Events

Open House at The Botanic Garden

First and Third Saturdays; March through October; 9 AM to 3 PM
The Botanic Gardens at OSU – Stillwater, OK

Why not grab your family and friends and head out to The Botanic Garden during open house. You will be greeted by our friendly Ambassadors who are eager to help answer your gardening and plant questions.

Herbaceous Plant Materials Conference

July 17, 2014
Wes Watkins Center – Stillwater, OK

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 people 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. Artwork, music and vendors will be there throughout the day as well.

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.