Horticulture Tips
May 2010

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

GARDEN TIPS FOR MAY!

David Hillock

Trees and Shrubs

- Prune and feed azaleas immediately after blooming.
- Insect Alert: EPP-7306
  - Bagworms on juniper and arborvitae. (Late May)
  - Elm leaf beetles and larvae on elms. (Late May)
  - Mimosa webworms on mimosa and honeylocust.
  - Lace bugs on sycamore, pyracantha and azalea.
- Soak new transplants and newly planted trees unless rainfall is abundant.
- Pine needle disease treatments are needed in mid-May. (EPP-7618)

Turfgrass

- Cool-season lawns can be fertilized again. If you did not fertilize cool-season grasses in March and April, do so now.
- Warm-season lawns may be fertilized again in May. (HLA-6420)
- Seeding of warm-season grasses such as bermudagrass, buffalograss, zoysiagrass and centipedegrass is best performed in mid-May through the end of June. The soil temperatures are warm enough for germination and adequate growing season is present to promote winter hardiness.
- Dollar spot disease of lawns can first become visible in mid-May. Make certain fertilizer applications have been adequate before ever applying a fungicide. (EPP-7658)
- Nutsedge plants become visible during this month. Post-emergent treatments are best applied for the first time this month (HLA-6421). Make certain warm-season grasses have completed green-up.
- The second application of pre-emergent annual grass herbicides can be applied in late-May or early June, depending upon timing of first application (HLA-6421). Check label for details.
- Vegetative establishment of warm-season grasses can continue. (HLA-6419)

Flowers

- Annual bedding plants can be set out for summer color.
- Plant summer bulbs such as cannas, dahlias, elephant ear, caladiums and gladiolus.
- Shake a leaf over white paper to look for spider mites. If the tiny specks begin to crawl, mites are present.

Water Gardens

- Clean out water garden and prepare for season. Divide and repot water garden plants.
- Begin feeding fish when water temperatures are over 50°F.

Fruits and Vegetables

- Plant watermelon, cantaloupe, cucumber, eggplant, okra, sweet potatoes, etc.
- Fruit spray programs should be faithfully continued during the next several weeks. (EPP-7319)
- Late May is the best time to control borers in the orchard. Check for label recommendations and controls.

New Publications – Oklahoma Proven and Xeriscape Gardening

David Hillock

Oklahoma Proven

Updated Oklahoma Proven Selections publications are now available. The booklet that has been so popular for the past couple years is back again including this year's plant selections and plants selected for the Collector's Choice Category which was a new category last year. The booklet consists of colorful pictures with a short description of each plant and cultural highlights.

We also revised the brochure this year. It has a new look and style and will be a handsome reference for those seeking worthy plants to grow in Oklahoma. It too has full color pictures, but without the descriptions. However, it serves as a quick reference guide for the consumer. To order copies of these publications, contact Stephanie Larimer at 405-744-5404.

Xeriscape

For the past couple years, we have partnered on a project with the City of Edmond to create a Xeriscape Demonstration Garden for the public to view. The demonstration garden is located at 33rd and Rankin at the Bickham-Rudkin Park. The site is a complete landscape around an old home that has been converted into a pavilion for the park. The landscape demonstrates the use of low water requiring plants and low volume irrigation using components such as in-line drip, drip emitters, and low-volume micro sprays. Each bed is zoned and planted based on expected plant water needs, demonstrating very low, low, and moderate irrigation zones and plantings. In addition to the Xeriscape principles demonstrated in the garden, there is also a rain garden and rain water capturing cisterns that are connected to the irrigation system.

As part of the project we have developed two new publication leaflets, L-332 Xeriscape Demonstration Garden – Edmond, OK and L-333 Xeriscape Garden Plants for Oklahoma. Each are full-color leaflets with information to help the homeowner make wise decisions in regard to designing, planting, and maintaining their landscapes in a way that will result in beautiful landscapes while conserving water and protecting the environment. To order these publications, contact University Mailing Services at 405-744-5385 or you can view/print a copy by going to http://pods.dasnr.okstate.edu/docushare/dsweb/HomePage.

Why is my Bermudagrass Lawn still brown in May and what can I do about it?

Dennis Martin and Justin Quetone Moss

The relatively severe winter of 2009/2010 has resulted in above average winter-kill of bermudagrass across Oklahoma. If there are large, irregular shaped areas of bermudagrass in your lawn that have not greened-up by now, it has likely succumbed to "winter-kill". Winter-kill simply means that part or all of the turfgrass plant died during the winter season. Winter-kill can occur from either acute or extended exposure to low temperatures. It can also be due to complications from the interaction of low temperatures and any number of stressing factors such as insufficient or excessive soil moisture, shade, excessive traffic, soil compaction, low mowing height, insufficient or excessive nutrients, or any number of other predisposing stressful physical, chemical or biological factors. Unfortunately, if the winter-kill area is too large for bermudagrass to grow-in from just a few surviving shoots or the distant surrounding, healthy turf areas, you may need to think about re-seeding, sprigging or sodding the dead bermudagrass areas. Homeowners requiring sources of sod or sprigs in Oklahoma can refer to Fact Sheet CR-6605, "Oklahoma Turfgrass Sod Source Directory". Please note that some sod producers may have suffered winter-kill of their sod crops as well. Turfgrass lawn establishment procedures are covered in detail in the OSU Fact Sheet HLA-6419, "Establishing a Lawn in Oklahoma". Since 1986 the Turfgrass Program at Oklahoma State University has had an on-going effort to develop high quality turf bermudagrasses with improved visual and functional quality and improved winter hardiness. Successful releases have included Yukon seeded bermudagrass (available from Seed Research of Oregon), Riviera seeded bermudagrass (available from Johnston Seed of Enid, OK) and Patriot bermudagrass sod (available from Easton Sod Inc in Oklahoma). The improved winter-tolerance of these varieties has been shown throughout the transition zone states in various National Turfgrass Evaluation Program (NTEP) trials. Even so, these bermudagrasses while having documented improved winter hardiness and having improved stand survival are not immune to winter injury. Generally these varieties have less winter injury than many other types when grown under identical conditions on the same use site.

How Long do you Water your Lawn?

Justin Quetone Moss

Homeowners often ask how long they should irrigate their lawns during the summer, but the volume of applied irrigation water cannot be directly measured in units of time. However, one can estimate how much irrigation water is applied to their lawn over time by following a few simple steps.

1. Purchase a few short, plastic rain gauges from a local lawn and garden retail store.
2. Strategically place the rain gauges approximately at turfgrass mowing height throughout the irrigated turfgrass areas in the lawn.
3. Early in the morning, irrigate the lawn for exactly 20 minutes on a relatively non-windy day.

4. After irrigating for 20 minutes, measure the volume of water in each rain gauge and calculate the average volume over 20 minutes, then multiply by 3 to calculate the average volume over one hour.
5. Move the rain gauges to different areas/zones of the lawn and repeat the process as needed.
6. After completing this process, you will have a very good estimate of average irrigation output in inches per hour for your lawn.

Assume you complete this process and determine that your irrigation system delivers 0.5 inches of water per hour. Assuming you water three times per week for 20 minutes, then your weekly irrigation output would be 0.5 inches of water per week. For more information about lawn irrigation scheduling, visit the Oklahoma Mesonet SIP website at http://sip.mesonet.org/. Now that you know the output of your irrigation system, you can use the SIP website to determine the daily and weekly irrigation requirements for your lawn. In addition, many companies now have "smart" lawn irrigation controllers that have automatic rain "shut-off" sensors and capabilities to connect to local weather stations to help you determine your lawn irrigation needs. For further information, contact your local OSU Cooperative Extension Service Office.

Considerations for Keeping Earworms out of Sweet Corn

Jim Shrefler

One big challenge to sweet corn production is how to prevent caterpillar damage to the ears. In Oklahoma the corn earworm is the primary caterpillar pest of sweet corn although fall armyworm can be a concern with late season corn. In other areas of the country insects such as corn borer and fall armyworm can also be very import lepidopteran corn pests. It is necessary to understand the life cycle of an insect pest such as the corn earworm in order to develop a management strategy. The various life cycle stages of the corn earworm are discussed at http://www.nysaes.cornell.edu/ent/factsheets/pests/cew.html in a Cornell publication. Note that the color and appearance of larvae can vary as the insects develop. Based on this publication from New York, eggs are deposited on the underside of leaves by the first generation and on the silks by the second generation. Probably one reason this pest is a recurring concern is that it does not have a simple answer. Successful control requires careful timing of insecticide applications. The following video clip may help one gain a better understanding of the nature of the problem: http://www.growingproduce.com/gptv/?cid=1 (click on Treatment Window: Building A Treatment Window For Sweet Corn). One interesting point made towards the end of the video is the concept of controlling adults before eggs are laid, rather than trying to killing the numerous larvae that may become present. This may be a strategy to be considered by commercial growers who are in need of a high degree of control. It could involve the use of blacklight traps and learning to recognize the adult moths in order to determine when adult insects are active. Many available references to corn earworm control emphasize insecticide use at the time of silk emergence to control newly hatched larvae. This is the most useful approach for home and market gardeners. Ear development is certainly a key time to control caterpillars as they emerge from eggs. The Cornell web page provides an image of eggs that are deposited on silks. Growers should carefully examine plantings on a daily basis in order to detect egg presence as ears begin to develop. Insecticide application should be initiated based on egg presence and silk

emergence. For home and market gardeners, insecticides to consider include Sevin and Dipel. Application is generally made when silks begin to emerge and should be continued until silks turn brown. For commercial production various insecticides are approved including pyrethroids and spinosad products. Growers using transgenic sweet corn with the BT gene find that earworms are sometimes able to cause damage at ear tips. The Vegetable Crop Handbook for the Southeastern United States indicates that this can occur when earworm populations are high and that for such situations insecticide applications may be needed to prevent tip damage.

References can be found to the recommendation of using sweet corn varieties that have a husk that remains tight and covers the ear as a means of keeping earworms from getting to the ear. However, there do not seem to be readily available lists of such varieties. Several studies were conducted that evaluated husk closure of sweet corn cultivars. These can be viewed at:

http://www.hort.purdue.edu/fruitveg/rep_pres/2003-4/MVVT%202003%20PDF/KY_Strang2.pdf

http://www.mdipm.umd.edu/focus_areas/agriculture/dively/Bt%20Sweet%20Corn%20Hybrid%20Evaluation%20Report.pdf

Oklahoma Vegetable Trial Reports provide the results of sweet corn variety evaluations that include the observation of corn earworm damage that occurs when an insecticide program is followed (http://www.hortla.okstate.edu/industry/vegetables/index.htm).

Plants for Xeriscape Gardens – Low Water Requiring Plants

David Hillock

The following is a partial list of plants that will do well with average rainfall and minimal supplemental water in Oklahoma. During times of below average rainfall they can be kept alive with minimal supplemental water. While drought tolerant, they will still need some water to stay alive during an extended drought.

TREES

- Arizona Cypress (*Cypressus arizonica*)
- Bald Cypress (*Taxodium distichum*)
- Bur Oak (*Quercus macrocarpa*)
- Caddo Sugar Maple (*Acer saccharum* 'Caddo')
- Cedar Elm (*Ulmus crassifolia*)
- Chinese Pistache (*Pistacia chinensis*)
- Chinkapin Oak (*Quercus muhlenbergii*)
- Eastern Red Cedar (*Juniperus virginiana*)
- Ginkgo (*Ginkgo biloba*)
- Kentucky Coffeetree (*Gymnocladus dioicus*)
- Lacebark Elm (*Ulmus parvifolia*)
- Oklahoma Redbud (*Cercis canadensis* var. *texensis* 'Oklahoma')
- Sawtooth Oak (*Quercus acutissima*)
- Shantung Maple (*Acer truncatum*)
- Shumard Oak (*Quercus shumardii*)

- Western Soapberry (*Sapindus drummondii*)
- Winterberry Euonymus (*Euonymus bungeanus*)

SHRUBS:

- Althea or Rose of Sharon (*Hibiscus syriacus*)
- Crapemyrtle (*Lagerstroemia indica*)
- Deciduous Holly (*Ilex decidua*)
- Eastern Arborvitae (*Thuja occidentalis*)
- Junipers (*Juniperus* species)
- Mugo Pine (*Pinus mugo* variety *mugo*)
- Nandina cultivars (*Nandina domestica*)
- Shrub roses (*Rosa* species)
- Smoke Tree (*Cotinus* species)
- Sumac (*Rhus* species)
- Winter Jasmine (*Jasminum nudiflorum*)
- Yaupon Holly (*Ilex vomitoria*)

CLIMBERS:

- Boston Ivy (*Parthenocissus tricuspidata*)
- Climbing roses (*Rosa* species)
- Crossvine (*Bignonia capreolata*)
- Trumpet Vine (*Campsis radicans*)
- Virginia Creeper (*Parthenocissus quinquefolia)*

GROUNDCOVERS:

- Creeping Phlox (*Phlox subulata*)
- Junipers (*Juniperus* species)
- Liriope or Monkey grass (*Liriope muscari*)
- Santolina (*Santolina* species)
- Stonecrop (*Sedum* species)

ORNAMENTAL GRASSES (Perennial):

- Maiden Grass (*Miscanthus sinensis* cultivars)
- Muhly Grass (*Muehlenbergia lindheimeri*)
- Plume Grass (*Erianthus ravennae*)
- Switch Grass (*Panicum virgatum*)

PERENNIALS:

- Autumn Sage (*Salvia greggii*)
- Bearded Iris (*Iris* species and hybrids)
- Black-Eyed Susan (*Rudbeckia fulgida*)
- Blanket Flower (*Gaillardia grandiflora*)
- Blue Mist Spirea (*Caryopteris* x *clandonensis*)
- Coneflower (*Echinacea purpurea*)
- Daylily (*Hemerocallis* species and hybrids)
- Gaura (*Gaura lindheimeri*)
- Plumbago (*Ceratostigma plumbaginoides*)
- Russian Sage (*Perovskia atriplicifolia*)
- Shasta Daisy (*Chrysanthemum* x *superbum*)
- Verbena (*Verbena canadensis*)
- Wormwood (*Artemisia* species)
- Yarrow (*Achillea* species)

ANNUALS:

- Cockscomb (*Celosia* species)
- Dusty Miller (*Senecio cineraria*)
- Firebush (*Hamelia patens*)
- Globe Amaranth (*Gomphrena globosa*)
- Joseph's Coat (*Alternanthera* species)
- Lantana (*Lantana camara*)
- Madagascar Periwinkle (*Catharanthus roseus*)
- Marigolds (*Tagetes* species)
- Mexican Bush Sage (*Salvia leucantha*)

- Mexican Heather (*Cuphea hyssopifolia*)
- Mexican Sunflower (*Tithonia rotundifolia*)
- Mexican Zinnia (*Zinnia angustifolia*)
- Ornamental Peppers (*Capsicum* species)
- Ornamental Sweet Potatoes (*Ipomoea batatas*)
- Pentas or Starflower (*Pentas lanceolata*)
- Portulaca & Purslane (*Portulaca* species)
- Purple Heart (*Setcreasea pallida*)
- Summer Snapdragon (*Angelonia angustifolia*)
- Sunflower (*Helianthus annuus*)

Shrubs that Work Well as Groundcovers

David Hillock

Shrubs that tend to spread or creep along the ground, or that don't grow more than 30 inches tall and when planted close together cover the ground, may be used as ground covers. Plants with attractive foliage and dense growth habit make the best groundcovers.

Abelia, dwarf (*Abelia* x *grandiflora* 'Prostrata,' 'Edward Goucher' and others)
Azaleas, low and spreading (Azalea hybrids)
Barberry, Crimson Pygmy (*Berberis thunbergii atropurpurea* 'Crimson Pygmy')
Cotoneaster, rockspray (*Cotoneaster horizontalis*)
Cotoneaster, Tom Thumb (*Cotoneaster adpressus* 'Tom Thumb')
Cotoneaster, willowleaf (*Cotoneaster salicifolius* 'Repens')
Holly, dwarf yaupon (*Ilex vomitoria* 'Schelling's Dwarf' and other cultivars)
Holly, Japanese (*Ilex crenata* 'Stokes' and other cultivars)
Juniper, Chinese (*Juniperus chinensis* cultivars)
Junipers, creeping (*Juniperus horizontalis* 'Blue Rug' and other cultivars)
Juniper, shore (*Juniperus conferta* cultivars)
Leucothoe, drooping (*Leucothoe fontanesiana*)
Nandinas, Dwarf (*Nandina domestica* 'Harbor Dwarf" and other cultivars)
St. Johnswort, shrubby (*Hypericum patulum*)
Sumac, 'Autumn Amber' Creeping Three-leaf (*Rhus trilobata* 'Autumn Amber')
Summersweet, 'Hummingbird' (*Clethra alnifolia* 'Hummingbird')
Yew, anglojap (*Taxus* x *media* 'Everlow')

25th Anniversary Lane Agriculture Center Field Day, June 12, 2010

Jim Shrefler

This year marks 25 years of progress with Horticultural research in southeast Oklahoma at the Lane Agricultural Center. Scientists and staff of the OSU Wes Watkins Research and Extension Center and the USDA's South Central Agricultural Research Laboratory invite you to join us for the celebration of this milestone by attending the 2010 Field Day. So, please take a moment to

mark your calendar and plan to join us for a day of education events, reminiscing and last, but not least, the enjoyment of a complimentary meal of delicious local cuisine including cold watermelon. The event will be held from 9 AM to 3 PM and will include a blend of activities and events that is sure to include something for everyone. Research and Demonstration projects currently underway at the center will be featured in field tours and poster presentations. All who attend are certain to enjoy the local entertainment, antique tractor exhibits, firefighter demonstrations and equipment displays that will be featured during the course of the day. Also planned are a children's garden and the demonstration of small-scale vegetable production equipment and techniques including drip irrigation systems. A special feature this year will be the OSU Entomology Department's Insect Adventure, a living exhibit featuring many fascinating and unique insects and related animals (see http://insectadventure.okstate.edu/ for details). Additional events to round out the day will include chuckwagon cooking and draft horse farming demonstrations, fire ant presentations, and a petting zoo. The event is open to the public and there is no entrance fee. We sincerely hope you can join us! The Lane Agricultural Center is located 10 miles east of Atoka, Oklahoma on Highway 3. For further information call 580-513-5544.

Upcoming Horticulture Events

June 12, 2010
Summer GardenFest
Botanic Gardens at OSU, Stillwater, OK

September 8, 2010
Turf and Nursery/Landscape Field Day
Botanic Gardens at OSU, Stillwater, OK

October 13-14, 2010
Ornamental Plant Materials Conference
Wes Watkins Center, Stillwater, OK

November 3, 2010
Tree Care Conference
Botanic Gardens at OSU, Stillwater, OK

December 9, 2010
Global Horticulture Conference
Stillwater, OK

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