

Horticulture Tips

October 2005

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

Welcome Our New State Specialist, Dr. Eric Stafne

Dr. Eric Stafne joined our staff as the Extension and Research Specialist for Fruit and Nut Crops on September 1. Eric earned his B.S. (Forestry) from Michigan State University and his M.S. (Horticulture) and Ph.D. (Plant Science) from the University of Arkansas.

Dr. Stafne will be responsible for developing extension programs dealing with pecans, grapes (primarily wine grapes) and peaches, plus service information requests for other fruit crops grown commercially in Oklahoma. In addition, he will develop a supportive research program focused primarily on servicing the expanding grape industry, plus supporting established peach and pecan industries.

You may contact Dr. Stafne at 405-744-5409 or at his email eric.t.stafne@okstate.edu.

GARDEN TIPS FOR OCTOBER!

David Hillock

Turfgrass

- You can continue to replant or establish cool-season lawns like fescue.
- The mowing height for fescue should be lowered to approximately 2½ inches for fall and winter cutting.
- Broadleaf weeds like dandelions can be easily controlled during October. (F-6421 & F-6601)
- Mow and neatly edge warm-season lawns before killing frost.

Ornamentals

- Plant cool-season annuals like pansies, ornamental cabbage or kale, snapdragons and dusty miller when temperatures begin to cool.
- Begin planting spring-flowering bulbs like tulips, hyacinths, crocus and daffodils.
- Good companion plants for bulbs are evergreen ground covers such as ajuga, vinca, English ivy, alyssum, potentilla, moneywort, thrift, phlox, oxalis and leadwort.
- Peonies, daylilies and other spring-flowering perennials should be divided or planted now.
- Dig and store tender perennials like cannas, dahlias and caladiums in a cool, dry location.
- Purchase trees from nurseries and garden centers at this time to select the fall color you prefer.
- Many perennials can be planted at this time and the selection is quite nice.

- Plant fall mums and asters and keep them watered during dry conditions. Don't crowd since they take a couple of years to reach maturity.
- Plant container-grown trees and shrubs this month.
- Check and treat houseplants for insect pests before bringing them indoors and repot rootbound plants.

Fruits & Vegetables

- Dig sweet potatoes and harvest pumpkins and winter squash.
- Remove green fruit from tomato plants when frost threatens.
- Harvest Oriental persimmons and pawpaws as they begin to change color.
- There is still time to plant radishes and mustard in the fall garden.
- Use a cold frame device to plant spinach, lettuce and various other cool-season crops for production most of the winter.
- Plant cool-season cover crops like Austrian winter peas, wheat, clover and rye in otherwise fallow garden plots.
- Remove all debris from the garden to prevent overwintering of various garden pests.
- Start new planting bed preparations now with plenty of organic matter.

Water Gardens

- Take tropical water garden plants indoors when water temperatures near 50°F.
- Close the water garden for the winter by placing hardy plants in the deeper areas of the pool. Stop feeding the fish.
- Cover water gardens with bird netting to catch dropping leaves during the winter months.

Soil Testing for Vegetable Crops

Warren Roberts, Lane Agricultural Center

Now is the time to start thinking about next year's garden or commercial vegetable crop. Soil testing for next year's crops should be done at this time, so that any needed adjustments can be made prior to next spring. Fertilizer prices are high, and may be even higher by next spring. The best way to insure that you get full value from fertilizer is to make sure the pH is ideal. For most vegetable crops, an ideal pH is between 6.0 and 6.5. If lime is needed to raise the pH, it should be added in the fall. While lime may start to react as soon as it is applied, several months are required for it to completely react. If the pH is too low, fertilizers cannot be as effective as they should be.

Winter Season Mulches

David Hillock

The principal reasons for winter mulching are to provide more uniform soil moisture and to protect the plant from severe temperatures during cold weather.

Winter mulches generally are applied around and over the tops of low growing plants after the plants are in a dormant or inactive stage of growth. This usually occurs in very late December.

The amount of mulch applied is influenced by the severity of winter cold, the amount of drying winds, and winter rainfall. Often one will apply a cover, but not totally screen out plants under the mulch. Loose mulch materials are more suitable (straw, pine needles, loose hay).

As growth begins to develop, the young leaves will have a very light green color due to the reduction of sunlight under the mulch. Remove enough of the mulch to allow for normal plant growth. With chrysanthemums this might require removal of at least 3/4 of the mulch while with strawberries removal of 1/2 of the mulch might be adequate.

Often the cause of death in non-mulched plants is the result of low temperature combined with excessive drying of the soil.

Growing Your Own Onion Transplants

Jim Shrefler, Lane Agricultural Center

Onions are a popular crop of many home and market gardeners. In Oklahoma, onions are typically planted from mid-February until mid-April using bare-rooted transplants that are sold in garden shops, groceries and farm supply stores. These plants are grown at latitudes south of Oklahoma and many originate in south Texas. There are several limiting factors to using these transplants. One is that there is only a limited number of varieties commercially available as transplants. Some of the varieties commonly available are 1015Y, Yellow Granex, White Granex, Stockton Sweet Red, Candy and Vidalia. Recent trials in Oklahoma have shown that other varieties perform well in southeast Oklahoma but are not generally found to be available as transplants. In order for growers to use these varieties they need a satisfactory transplant source. A second limiting factor is the availability of quality transplants. Transplant quality depends on weather conditions being suitable where transplants are grown and proper shipping and handling. Although transplant growers strive to produce a quality product, weather condition can result in transplants having problems such as susceptibility to bolting (seedstalk formation instead of a bulb) or decay problems.

Two years of trials with unheated plastic-house transplant production have shown that this method has good potential for southeast Oklahoma gardeners and growers to produce their own transplants. In these trials, onions were planted into the soil on the floors of the plastic-houses. An initial trial was conducted at Ardmore. Onion of the varieties Candy and 1015Y were seeded at weekly intervals from October 15 until October 30. Plants were harvested March 1 and transplanted to an open field using practices comparable to those used with bare-rooted transplants. Both varieties produced good-sized bulbs and bolting was less than 5%.

A second trial was conducted at Lane in 2004-2005. Six varieties were seeded on November 2, 2004. Varieties were Cimarron, Renegade, Candy, Sequoia, 1015 and Rumba (red). Transplants were harvested March 16 and planted to the open field into rows spaced 3 feet apart and 6 inches between plants within the row. As in the first trial, bolting was very low for all varieties.

Mature onion bulbs were harvested on June 24 and weighed. Average bulb weights in lbs. for the varieties were Renegade 0.78, Candy 0.7, Sequoia 0.98, 1015-Y 0.74, Cimarron 0.72 and Rumba 0.62. In summary, two years of trials have produced good results. Because plant quality is so dependent on environmental conditions, additional testing of this method will be initiated at Lane this fall to further verify this method.

Cover Crops

David Hillock

Cover, or green manure, crops are usually grown when the garden soil is idle but are also sometimes planted between rows of fruits or vegetables to serve as a living mulch.

Cover crops are sometimes called "catch crops." Their deep roots absorb nutrients from the soil that could otherwise leach away or are unavailable to garden crops with shorter roots. When tilled under, cover crops decompose and release those "caught" nutrients.

Some cover crops, those from the legume family, even trap and transform atmospheric nitrogen in their roots. This nitrogen serves as a fertilizer source for future crops.

Cover crops in the grass or grain family don't actively fix nitrogen but usually create a thick mulch, produce a large amount of organic matter to be tilled under, and have deep roots that loosen compacted soils, thereby improving drainage and aeration.

Cover crops are divided into two categories: warm-season and cool-season, based on the optimum times to plant and grow.

Warm-season types will not tolerate freezing temperatures and should be planted after all danger of frost. Most take six to eight weeks (or longer) to grow large enough to turn under. An exception is buckwheat, which may need only four weeks under good growing conditions.

Cool-season cover crops will survive through the winter. They are planted in the fall, from mid-September until the end of October, and left over the winter to provide protection from soil erosion. They need to be planted early enough so their roots develop before winter but late enough so they do not complete their growing cycle (and die) before the weather gets cold.

Because they are used in rotation with other crops in the same garden location, cover crops can help suppress harmful soil nematodes. Nematodes, which are parasites, tend to be host specific, attacking just one crop or crop family. They do not "like the taste" of other plant families and their numbers will decline without the preferred food source.

Some cover crops, just like any other crop, may attract insects that could harm other garden crops. Gardeners should watch for pest insects in cover crops and other crops and be ready to use various Earth-Kind Gardening methods while the pest problem is in its early stages.

Legumes need certain strains of bacteria to enable them to convert nitrogen gas from the air into a form that plants can use. The bacteria needed by various kinds of legumes may or may not already be in your garden soil. To be certain, legume seeds should be coated with an inoculant powder that contains living Rhizobium spores. Commercial inoculant is usually inexpensive and widely available. Some legume seeds are sold pretreated with the proper bacteria.

Cover Crop Planting Guidelines

- Prepare the soil as you would if planting vegetables. Legumes will produce the nitrogen they need, but non-legume crops will need to have nitrogen fertilizer (1 to 1-1/2 pounds of actual nitrogen per 1000 square feet) added to the soil to produce maximum yields of organic matter.
- Inoculate legume seeds by moistening them, draining the excess water, adding the inoculant powder, and mixing well.
- Broadcast the seed evenly.
- Cover seed with a thin layer of soil by raking it in or going over the area with a rototiller set **very** shallow.
- Keep the area moist until seedlings emerge. Light watering may be needed twice a day, or more, in hot weather.
- Mow and harvest cover crops before they flower and produce seeds, and till under at least 10 days to two weeks before planting garden crops.

Below is a list of cool-season cover crops. For more information about these species and the warm-season species see OSU fact sheet F-6436 Earth Kind Gardening Series: Healthy Garden Soils.

Hairy Vetch (*Vicia villosa*)
Austrian Winter Peas (*Pisum sativum* variety *arvense*)
Winter Rye (*Secale cereale*)
Winter Wheat (*Triticum* species)
Crimson Clover (*Trifolium incarnatum*)
Red Clover (*Trifolium pratense*)
White Clover (*Trifolium repens*)
Yellow-Blossom Sweet Clover (*Melilotus officinalis*)
Arrowleaf Clover (*Trifolium vesiculosum*)
Ball Clover (*Trifolium nigrescens*)
Birdsfoot Trefoil (*Lotus corniculata*)
Fava Bean (*Vicia faba*)
Garden Pea (*Pisum sativum* varieties)
Barley (*Hordeum vulgare*)
Ryegrass (*Lolium* species)
Purple Vetch (*Vicia benghalensis*)
Common/White Vetch (*Vicia sativa*)
Alfalfa (*Medicago sativa*)
Oats (*Avena sativa*)

Propagating Southern Magnolia Seeds

David Hillock

The Southern Magnolia has lustrous dark green foliage; large, creamy white and beautifully fragrant flowers, which are followed by the rose-red aggregate fruit that splits open in the fall revealing a bright red seed. It is this seed that probably sparks the curiosity of many a gardener to try their hand at propagation. Some of the advantages of raising magnolias from seed are:

- It is cheaper than raising them by vegetative means.
- It generally gives fast establishment and good growth.
- It produces a vigorous root system.

A disadvantage is that they generally take longer to flower than vegetatively raised plants. They may also not be true-to-type, or in other words, will have different characteristics from the parent plant due to open pollination.

Magnolia seeds are gathered in the fall as soon as possible after the fruit is ripe, when the red seeds are visible all over the fruit. The outer seed coat, red fleshy pulp, must be removed before the seed is stratified. Soak the seed for one or two days in warm or hot water to which a detergent has been added to remove any remaining traces of the oily film which protects them from drying out. Separation of good, well-filled seeds from the empty ones can be easily accomplished while they are still in water. The good seeds (without the red pulp) sink, while the empty seeds and the pulp float. After cleaning, the seeds should either be sown immediately in the fall or prior to spring planting, stratified for two to three months at about 40°F.

If you plan to sow them now, in the fall, this can be done two ways. Either by sowing them directly into the soil in a well-prepared spot in the garden or by sowing them thinly in a seed tray or similar container filled with a well-drained potting medium. Water the seeds. Place the labeled and dated seed tray in a cold frame where the seed will be exposed to low temperatures. As this system is not controlled, germination of some seed may be delayed for a season.

A more controlled method is done by mixing the seed with moist sand or peat moss, placing it into a container and storing in a place where temperatures will be maintained at 40°F. The readiness of the seed to germinate is marked by the splitting of the inner seed coat.

Allowing the seeds to dry out at any time seems to be harmful. After sowing, the germination medium must not become dry. *M. grandiflora* (southern magnolia) seeds, and perhaps those of other species, lose their viability if stored through the winter at room temperature. If prolonged storage is necessary, the seeds should be held in sealed containers at 32 to 40°F. After the seed has gone through the stratification period, it can be sown in the same way as mentioned previously and placed where temperatures are about 70°F. Germination will take place in about 30 to 40 days. Magnolia seedlings grow rapidly, and generally are large enough to transplant by the end of the first season. Transplanting should be kept at a minimum, since this retards the plants.

(Sources: Plant Propagation Principles and Practices, by Hartmann, Kester, & Davies, 5th edition, pg. 585, Prentice Hall; Magnolias, by J. M. Gardiner, pg. 23, 24, The Globe Pequot Press; Propagation of Trees and Shrubs by Seed, revised by Campbell & Mitchell, Hort 4, Oklahoma Gardening information sheet).

Shrubs for Shady Areas in Oklahoma

David Hillock

Shady areas of the landscape can sometimes prove challenging. Most shade is due to large mature shade trees coupled with buildings. The shade trees rob other plants of light and often compete for moisture and nutrients. However, there are several shrubs that do quite well in shady areas. Of course site preparation is still important and the area should be properly prepared by tilling the area and adding organic matter to the soil if needed; be careful to not damage existing tree roots. Each species listed tolerates varying degrees of shade so the amount of actual shade in the landscape will determine which plants will grow best. Also consider the region of the state in which you live. Some of these will do fine in western Oklahoma while others are best grown in central to eastern Oklahoma. This is not a comprehensive list but should give you a good place to start.

Abelia, Glossy (*Abelia x grandiflora*)
Aucuba, Japanese (*Aucuba japonica*)
Azalea (*Rhododendron* spp.)
Barberry, Japanese (*Berberis thunbergii*)
Barberry, Mentor (*Berberis x mentorenesis*)
Boxwood, Common (*Buxus sempervirens*)
Buttonbush (*Cephalanthus occidentalis*)
Camellia (*Camellia* spp.)
Coralberry (*Symphoricarpos* spp.)
Currant, Golden (*Ribes aplinum* 'Aureum')
Dogwood, Redosier (*Cornus sericea*)
Euonymus (*Euonymus* spp.)
Fothergilla (*Fothergilla* spp.)
Holly (*Ilex* spp.)
Honeysuckle, Winter (*Lonicera fragrantissima*)
Hydrangea, Oakleaf (*Hydrangea quercifolia*)
Hydrangea (*Hydrangea* spp.)
Jasmine, Winter (*Jasminum nudiflorum*)
Jetbead, Black (*Rhodotypos scandens*)
Kerria, Japanese (*Kerria japonica*)
Leucothoe (*Leucothoe* spp.)
Mockorange (*Philadelphus* spp.)
Mahonia, creeping (*Mahonia repens*)
Mahonia, Leatherleaf (*Mahonia bealei*)
Nandina, Heavenly bamboo (*Nandina domestica*)
Pine, Dwarf Mugo (*Pinus mugo* var. *mugo*)

Privet (*Ligustrum* spp.)
Spirea, Vanhoutte (*Spiraea x vanhouttei*)
Sweet shrub (*Calycanthus floridus*)
Sweetspire, Virginia (*Itea virginica*)
Weigela, Old fashioned (*Weigela florida*)
Yew, (*Taxus* spp.)
Viburnums (*Viburnum* spp.)

2005 Oklahoma Cucurbit Meeting

Jim Shrefler, Lane Agricultural Center

Mark your calendar for the 2005 Oklahoma Cucurbit Production and Marketing Educational Meeting which will be held at the Grady County Fairgrounds in Chickasha on Thursday, December 15, 2005. Program development is underway and there is still opportunity to address topics that growers and Extension Educators would like to learn more about. To be added to the mailing list to receive a program brochure or to suggest meeting topics, call Jim Shrefler at 580-889-7343 or by email at jshrefler-okstate@lane-ag.org.

Upcoming Horticulture Events

Greenhouse Growers' Fall Update

October 26, 2005, Holiday Inn, Stillwater

For more information, contact 405-942-5276.

Tree Care Issues Conference

November 9, 2005, OSU Botanical Garden, Stillwater

This workshop is designed for arborists, nursery professionals, urban foresters, landscape managers, landscape architects, master gardeners and advanced hobbyists. For more information, contact 405-744-5404.

Oklahoma Turfgrass Conference

November 16-18, 2005, West Watkins Center, Stillwater

The 60th Annual Oklahoma Turfgrass Conference & Trade Show is set for November 16- 18, 2005 in Stillwater Oklahoma. The event will be held at the Watkins Center on the corner of Washington and Hall of Fame. Special conference lodging room rates are available at the Fairfield Inn (\$65/night) and the Best Western (\$69/night). Lodging room reservations can be made by calling the Fairfield Inn at 405.372.6300 or the Best Western at 405.377-7010. Conference pre-registration flyers will be sent out in October to those people on the Oklahoma Turfgrass Research Foundation (OTRF) Mailing list or by email on the Oklahoma Turfgrass Notes email list serve. To be placed on the OTRF mailing list contact Tonya Murray at

918.437.0835. To be placed on the Oklahoma Turfgrass Notes email newsletter list contact Dennis Martin at Dennis.L.Martin@okstate.edu.

Poinsettia Open House

December 2, 2005, TLC Florist and Greenhouses (Memorial Road Location), Oklahoma City

For more information, contact 405-761-0630.

6th Annual Oklahoma/Arkansas Turf Short Course

January 11-12, 2006, OSU Botanical Garden, Stillwater

The event is an introductory short course that targets those practitioners in the landscape and lawncare industries who have not had the opportunity to take an introductory turf course. However some attendees are those who are new to the AR/OK region or those simply wanting to brush up on regional turf recommendations. The course covers turf identification, selection, establishment and the maintenance practices common to the region. The focus of the short course is on the "why" behind the "how" turf is managed in the region.

State Master Gardener Continued Training Conference

May 19, 2006, McAlester, Oklahoma

Plans are already taking place for the 2006 State Master Gardener Continued Training Conference to be held in McAlester on Friday, May 19, 2006. The Pittsburg County Master Gardeners will host the conference and are already enthusiastically making plans. Stay tuned for more details! Be sure to mark your calendars now and we hope to see you all in May 2006!

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