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.

Attracting Beneficial Insects to the Home Garden

Kimberly Rebek

Insect pests catch a great deal of attention in the plant world. But more important and certainly more numerous are the beneficial insects that quietly go about their business pollinating our crops, decomposing waste, and preying upon those very pests that occupy our gardens. This last group, the predators, contains our friends in the insect world. In the scientific world we call our garden allies "natural enemies", because they are the natural enemies of our garden pests.

Many of our garden friends go unnoticed by even the most dedicated gardener. Some are simply too tiny to see, like many of the specialized predatory wasps we call parasitoids. Others come out to feed at night, when we are asleep. Many beetles fall into this category. It is important that we get to know natural enemies a little better and do what we can to encourage them to thrive in the garden.

Beneficial insects come in many shapes and sizes, from the minute pirate bug to the giant praying mantid. The following is just a short list of the most common natural enemies present in the home landscape. Of course, there are many others.

Beetles: ground beetle, lady beetle, rove beetle, tiger beetle, lightning bugs, etc.
Flies: hover or flower fly, robber fly, parasitic flies
True Bugs: pirate bug, assassin bug, ambush bug, damsel bug, big-eyed bug, stink bug
Lacewings: brown and green lacewings
Wasps: predatory and parasitoid wasps
Others: mantids, spiders, dragonflies, damselflies, centipedes

Even if you do not recognize all of the many natural enemies at work in the garden, there is much you can do to attract them to the garden. Like any organism, natural enemies need food, shelter, and water. Water features attract a great many beneficial animals, including frogs, toads, lizards, and birds. Water also attracts insects like the dragonfly – a voracious insect feeder.

Natural enemies need shelter from the sun and wind, and from other predators. Nocturnal insects need a place to hide during the day. Many materials we already commonly use in the landscape provide excellent shelter for natural enemies. Rocks, logs, and pieces of bark provide a great place to hide. Organic mulches such as wood chips and straw likewise shelter natural enemies. Natural enemies also need a place to spend the winter. Perennials and ornamental grasses are ideal over-wintering sites. Wait to cut these plants back until spring. In a vegetable garden, cover crops can provide winter shelter for natural enemies.

Predators of course feed on insects and other invertebrates, but they also utilize supplemental food sources, mainly pollen and nectar from flowers. Planting an abundance of flowers throughout the landscape is the best way to attract beneficial insects to the garden. Plants used to attract beneficial insects include a number of garden favorites. And many of the plants used to attract natural enemies are also attractive to butterflies. Several common herbs, when allowed to flower, are also highly attractive to natural enemies. Some of these herbs spread quickly if allowed to seed; remove flower heads when blooms fade to avoid seeding. The following is a list of good plants that attract good insects.

- Aster Family (Compositae)
  - Blanket flower – *Gaillardia* spp.
  - Cone flower – *Echinacea* spp.
  - Coreopsis – *Coreopsis* spp.
  - Shasta daisy – *Chrysanhemum maximum*
  - Calendula – *Calendula* spp.
  - Asters – *Aster* spp.
  - Zinnia – *Zinnia* spp.
  - Dahlia – *Dahlia* spp.
  - Cosmos – *Cosmos* spp.
  - Sunflower – *Helianthus* spp.
  - Yarrow – Achillea spp.
  - Goldenrod – *Solidago* spp.
  - Tansy – *Tanacetum vulgare*
- Carrot family (Umbelliferae):
  - Caraway – *Carum carvi*
  - Coriander – *Coriandrum sativum*
  - Dill – *Anethum graveolens*
  - Fennel – *Foeniculum vulgare*
  - Queen Anne's Lace (wild carrot) – *Daucus carota*
  - Wild parsnip – *Pastinaca sativa*
  - Flowering ammi/Bishop's flower – *ammi majus*
  - Toothpick ammi – *Ammi visnaga*
- Pea family (Leguminaceae)
  - Alfalfa – *Medicago sativa*
  - Clover – *Melilotius* spp.
  - Fava bean – *Vicia fava*
- Mustard Family (Brassicaceae)
  - Basket-of-gold alyssum – *Aurinium saxatilis*
  - Sweet alyssum – *Lobularia maritime*
  - Hoary alyssum – *Berteroa incana*
  - Mustards – *Brassica* spp.
  - Yellow rocket – *Barbarea vulgaris*
- Other Plant Families
  - Beebalm – *Monarda* spp.
  - Speedwell – *Veronica* spp.

- Cinquefoil – *Potentilla* spp.
- Milkweed – *Asclepias* spp.
- Buckwheat – *Fagopyrum sagittatum*
- Phacelia – *Phacelia* spp.

Weed Control Critical for Young Fruit Plants

Eric T. Stafne

Commercial fruit growers and homeowners alike, confront the daunting task of controlling weeds in their plantings. Some weeds are more insidious than others, such as bermudagrass, johnsongrass, and nutsedge. Not only are these weeds competing for water, nutrients, and light, there may also be another effect that reduces the growth of fruit plants. Research has shown that some grasses and weeds have an allelopathic effect on some fruiting plants. Allelopathy is when one plant exudes a chemical substance that causes a reduction in the growth (and eventual success) of another. This is not uncommon. Probably the most well-known allelopathic compound is juglone. Black walnuts exude juglones and inhibit other plants from growing nearby. Some plants are not affected, but others are hindered or killed. Therefore, it is critical to control all weeds in the first couple of years for fruiting plants. Most fruit crops are not competitive with weeds. Some, like blueberries and strawberries, are extremely non-competitive and will die without weed control.

An exceptional source for how to control weeds in small fruit crops and grapes is the Midwest Commercial Small Fruit and Grape Spray Guide. It is published annually and I often have copies that can be sent out. It is also available online at
http://hort.agriculture.purdue.edu/pdfs/08SprayGuide.pdf
This resource is extremely useful, as it lists labeled herbicides, rates, limitations, effectiveness, and other pertinent information. This guide also covers other pesticides as well. I urge you to take a look and save the link for future use.

Protecting Trees in the Landscape

David Hillock

One of the leading causes of death to trees in the landscape is what we refer to as weed-eater or lawnmower "blight." This is usually a result of someone trying to get too close to the base of the tree when controlling grasses and weeds. Constant use of weed-eaters around the base of trees wears down the bark and eventually cuts into the cambium layer girdling the tree and cutting it off to water and nutrients. Lawn mowers often take big chunks out of the trunk of the tree with similar results. The other problem is both of these wounds open the tree up for attack from insects and/or diseases.
To avoid this problem a weed and grass free area should be maintained around the base of the tree. For young trees a 4 to 6 foot diameter circle will work. Mulch can be placed 2 to 3 inches thick in this area to help keep weeds and grass out and at the same time moderate soil temperatures and soil moisture. Be sure to keep the mulch a few inches away from the trunk. Piling mulch several inches up the trunk is often referred to as a "mulch volcano" and can also

have detrimental effects. Occasionally weeds and grasses that creep into the mulched area may need to be sprayed with an herbicide. Herbicides with glyphosate as the active ingredient work quite well. Be sure to read and follow label directions.

Another option for small trees is to put trunk guards or protective wraps made of flexible plastic. In some cases, tree stakes act as a barrier from mechanical injury.

For larger, more established trees, a mulched area or even a bare area near the trunk will help keep lawnmowers and weed-eaters away. Or, consider planting groundcovers or perennials for a more aesthetical appeal.

In any event, avoid injury to the trunks of your trees at all costs. While many trees can recover from an occasional, small wound, repeated damage weakens the tree sending it into a declining spiral and eventually death.

Walnut Tree Toxicity and Planting around Them

David Hillock

Walnuts (*Juglans nigra*) and the closely related Butternut (*Juglans cinerea*) produce a chemical called juglone that can be toxic to many plants. This is how the trees manage competition from other plants, ensuring they have ready access to water and nutrients. If you have a black walnut and have lost plants beneath it in the past, juglone is most likely the cause. The first thing you need to do is determine whether or not you actually have a black walnut. There are many reasons why plants fail, such as nutrient stress or low light, so you want to make sure you understand the true cause of the problem.

Identifying characteristics:
· Alternate branching pattern
· Pinnately compound leaves with an odd number of leaflets (typically 11-23)
· Fruits have green husk and turns to yellow-black when ripe

Sensitive plants growing in the root zone of these trees, which could extend a radius of 50 to 60 feet or more from the trunk of the tree, may be injured. Some species that are sensitive that may be injured include:

- Perennials: Wild columbine (*Aquilegia Canadensis*); Asparagus; Chrysanthemum; *Baptisia australis*; Hydrangea species; Lilies (*Lilium* species [particularly the Asian hybrids]); Peonies (some).
- Annuals and Vegetable Transplants: Cabbage; Eggplant; Peppers; Tomato; Potato; Flowering tobacco (*Nicotiana alata*); Petunia species and cultivars.
- Trees and Shrubs: Silver maple; White birches, *Betula* species; Apples and crabapples; Mugo pine; Eastern white pine; Red chokeberry; Hydrangea species; Privet; Blackberry; Blueberry; Azalea; Mountain laurel; Rhododendron; Lilacs

Juglone-tolerant Plants – while juglone affects many plants, there are also a variety of plants that can tolerate juglone and therefore are ideal for planting beneath walnuts. These include:

- Perennials: *Hosta* species; Solomon's Seal (*Polygonatum commutatum*); Lamb's Ear (*Stachys byzantina*); *Clematis* cultivar 'Red Cardinal'; Bugleweed (*Ajuga reptans*); cranesbill, (*Geranium sanguineum*); grasses, most; and common daylily.
- Trees and shrubs: Japanese Maple (*Acer palmatum*); Redbud (C*ercis canadensis*); Southern Catalpa (*Catalpa bignonioides*); and Rose of Sharon (*Hibiscus*); Euonymus species; Virginia Creeper; multiflora rose; arborvitaes.
- Annuals: Fibrous *Begonia*; *Zinnia* species; Pansy, *Viola*; Morning Glory, *Ipomoea* 'Heavenly Blue'.
- Vegetables: corn, squash, beans, melons, and carrots

Note that these lists are based on observations and not clinical testing. Also, cultivars of some tolerant species may do poorly.

Leaves of walnut can be composted and used in the garden because the toxins are destroyed when exposed to water, air, and bacteria. If composting is complete, toxins should be destroyed in a few weeks depending on how the compost pile is handled. It may be beneficial to test the leaf compost for toxicity just to make sure by planting tomato seedlings in it.

Wes Watkins Agricultural Research and Extension Center Annual Field Day – Saturday, June 21, 2008

Jim Shrefler

The 2008 Annual Public Field Day is scheduled for Saturday, June 21. The event will feature presentations of ongoing research and demonstration projects on horticultural crops and production systems including watermelon, specialty melons, tomatoes, onions, herbs, summer squash corn and southern peas. Part of the farm is certified for Organic production and we plan to have vegetables, herbs and oil crops growing in organic plantings. Among the research topics that field day guests will be able to learn about are watermelon disease studies, onion weed control and variety studies, vegetable production in hoop houses, non-chemical methods for weed control, genetic improvement of cucurbit vegetables, soil fertility improvement using organic methods, and bite-sized tomato variety trials.

Wagon tours of the farm and research projects will be available throughout the day. Indoor displays of Center projects and sponsor exhibits will also be of interest to visitors.

This year's field day will offer something for the entire family. There will be FREE food and refreshments including ice-cold watermelon. Youngsters of all ages are sure to enjoy the games and entertainment that is planned.

For more details, check our website at www.lane-ag.org. You may also call 580-889-7343 for more information. The Lane Agriculture Center is located on State Highway 3, 10 miles east of Atoka, Oklahoma.

Wes Watkins Agricultural Research and Extension Center Organic Workshop and Field Day – July 10, 2008

Jim Shrefler

An educational session on Organic farming will be held July 10 in the afternoon and evening. The event is open to anyone interested in learning about sustainable and organic gardening and farming practices. The event will provide attendees the opportunity to learn about experience gained over the past 5 years with organic vegetable production at the Center. Certified Organic land at the Center has been used for vegetable production since 2003. The activities will begin with an afternoon field workshop in which soil management issues will be discussed. The workshop will address soil fertility management and practices and measures taken to prevent soil erosion.

The afternoon workshop will be followed by a meal and presentations on the production practices that have been used for organic vegetable production at Lane. We will view planted crops and discuss current and past experience with the organic certification process, soil fertility management, cultural practices, insect pests, diseases, weeds, and vertebrate pests.

For further details call 580-889-7343. The Lane Agriculture Center is located on State Highway 3, 10 miles east of Atoka, Oklahoma.

Upcoming Horticulture Events

Bixby Field Day
June 26, 2008, Oklahoma Vegetable Research Station, Bixby, OK

For more information, please contact Lynn Brandenberger at 405-744-5408/ lynn.brandenberger@okstate.edu or the Research Station at 918-369-2441.

Turf and Landscape Field Day
September 17, 2008, OSU Botanical Garden, Stillwater, OK

Tree Care Conference
October 8, 2008, OSU Botanical Garden, Stillwater, OK

Greenhouse IPM Conference
November 5, 2008, OSU, Stillwater, OK

Water Issues in Horticulture Conference
December 4, 2008, Stillwater, OK

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