Horticulture Tips
August 2011

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

GARDEN TIPS FOR AUGUST!

David Hillock

Vegetables

- August is a good month to start your fall vegetable garden. Bush beans, cucumbers, and summer squash can be replanted for another crop. Beets, broccoli, carrots, potatoes, lettuce, and other cool-season crops can also be planted at this time. (HLA-6009).
- Soak vegetable seed overnight prior to planting. Once planted, cover them with compost to avoid soil crusting. Mulch to keep planting bed moist and provide shade during initial establishment. Monitor and control insect pests that prevent a good start of plants in your fall garden.

Fruit and Nut

- Continue protective insect applications on the fruit orchard. A good spray schedule is often abandoned too early. Follow directions on last application prior to harvest. (EPP-7319)

Flowers

- Towards the end of the month, divide and replant spring-blooming perennials like iris, peonies, and daylilies if needed.

General

- Water compost during extremely dry periods so that it remains active. Turn the pile to generate heat throughout for proper sterilization.
- Always follow directions on both synthetic and natural pesticide products.
- Watch for high populations of caterpillars, aphids, spider mites, thrips, scales and other insects on plant material in the garden and landscape and treat as needed. (EPP-7306)
- Water all plants thoroughly unless rainfall has been adequate. It is better to water more in depth, less often and early in the morning.

Trees and Shrubs

- Discontinue deadheading roses by mid-August to help initiate winter hardiness.
- Watch for 2nd generation of fall webworm in late August/early September. Remove webs that enclose branches and destroy; or spray with good penetration with an appropriate insecticide.

Lawn and Turf

- Grassy winter weeds like *Poa annua*, better known as annual bluegrass, can be prevented with a preemergence herbicide application in late August. Water in the product after application. (HLA-6420)

- Areas of turf with large brown spots should be checked for high numbers of grubs. Mid-to-late August is the best time to control heavy white grub infestations in the lawn. Apply appropriate insecticide if white grubs are a problem. Water product into soil. (EPP-7306)
- Tall fescue should be mowed at 3 inches during the hot summer and up to 3½ inches if it grows under heavier shade. (HLA-6420)
- For areas being converted to tall fescue this fall, begin spraying out bermudagrass with a product containing glyphosate in early August. (HLA-6419 & HLA-6421)
- Irrigated warm-season lawns can be fertilized once again; apply 0.5 lb N/1,000 sq ft in early to mid-August.
- Brown patch of cool-season grasses can be a problem. (HLA-6420)

Fall Vegetable Gardening

Kim Toscano

Fall weather is ideal for growing plants and producing vegetables. The warm, sunny days are followed by cool nights which allow plants to convert more energy into delicious produce. The rewards of the fall garden can be enjoyed well into the early winter.

August is an excellent time to get your fall garden started and if you have suffered some damage from the heat, it is not too late to gain a fresh start with some of your summer crops. Mid-July through early August is an ideal time to establish a second stand of beans, cucumbers, and summer squash. It is also an ideal time to start winter squash and pumpkins for fall harvest. This is also the time to transplant slower-maturing cold crops such as broccoli, cabbage, cauliflower, and carrots. As we enter August, we can start to plant out potatoes, beets, lettuce, and turnips. Cilantro is another great fall crop, as the plant performs best at cooler temperatures.

Because fall gardening begins during the driest months of the year, supplemental irrigation is a must to establish the plants. One way to make the best use of limited water supplies is to plant in furrows. Sow seeds in a narrow trench rather than at ground level. Apply irrigation only to this furrow to conserve water and help maintain adequate moisture for seed germination. Soaking seeds overnight will also aid germination. This can be done for any seed except beans and peas, which tend to crack from soaking.

Soil temperatures can be excessively hot during this establishment period. If you are starting seeds for transplant, you may wish to start these in a shaded location outside the vegetable garden, such as on a potting bench. In the garden, you can take steps to cool the soil by providing shade with shade cloth, boards or screens. Be sure to mulch around transplants to cool soils and conserve soil moisture.

One of the challenges to fall vegetable gardening is obtaining seeds and transplants at the appropriate times. Growing your own seedlings is one way to avoid this, or ask growers at your local farmer's market if they have transplants available for purchase. You can use seed leftover from spring and summer plantings as long as it has been stored in a cool, dry place such as a freezer or refrigerator. It is a good idea to look ahead at your seed and transplant needs and

determine if local sources are available or if you will need to order these from catalog or on-line sources. Remember that fall onion, garlic, and shallot plantings are just around the corner. This is a great time to order bulbs, or set a few heads aside from your summer harvests to save as starts for next year's crop.

Fall Planting Guide

Table 1. Tender Vegetables – (harvest before frost*). Many varieties will do well – select varieties that are early maturing and disease resistant.

Kind	Time to plant	Method of Planting	Between Rows (inches)	In the Row (inches)	Depth to Cover Seed (inches)	Days from planting to Harvest
Beans, Bush	Aug. 10-20	Seed	18-24	3-6	1	50-60
Beans, Cowpea	July 15 – Aug. 1	Seed	18-48	6-12	1.5	75
Beans, Pole	July 15-30	Seed	24-36	12-18	1	60-70
Beans, Lima	Aug 10-20	Seed	18-24	4-8	1	70-80
Cilantro	July 15– Aug 1	Seed	9	4	.5	When plant is 4-6 in. tall
Corn, Sweet3	July 15	Seed	36	12-18	1	80-100
Cucumber	Aug 10-20	Seed or Plants2	36-32	12-30	.5 to .75	60-70
Eggplant	July 15	Plants	36	18	-	80-90
Pepper	July 15	Plants	36	24	-	90-110
Pumpkin	July 15-30	Seed or Plants2	36-60	30-48	1	100-120
Summer Squash	July 15-Sept. 1	Seed or Plants2	36	24-36	1	40-50
Winter Squash	July 15-30	Seed or Plants2	36-48	30-48	1	100-120
Tomatillo	July 15	Plants	48	24-36	-	90-100
Tomato	July 1–15	Plants	48	24-36	-	70-90

* Unless using a cold frame or row covers to extend the season.
1 = There may be advantages to planting earlier if soil moisture and climatic conditions are favorable
2 = Set plants into the garden 1 to 1 1/2 months after planting the seed.
3 = Be vigilant about scouting for fall armyworms in whorl of seedlings and young plants.

Table 2. Semi-hardy vegetables – (may continue to grow and be harvested after several frosts). Many varieties will do well – select varieties that are early maturing and disease resistant.

Kind	Time to Plant	Method of Planting	Between Rows (inches)	In the Row (inches)	Depth to Cover Seed (inches)	Days from planting to Harvest
Beet	Aug 1-15	Seed	12-18	3-4	.5-.75	60-70
Broccoli	July 15- Aug 15	Plants	18-30	16-20	-	70-80
Brussel Sprouts	July 15- Aug15	Plants	18-30	16-20	-	90-100
Cabbage	Aug 1-25	Plants	18-24	16-20	-	75-90
Chinese Cabbage	Aug 1-25	Seed or Plants1	12-16	10-18	.5	75-90
Carrots	July 15- Aug 15	Seed	12-18	1-2	.25	70-80
Cauliflower	Aug 1-25	Plants	18-24	16-20	-	70-80
Collards	Aug 1- Sept 1	Seed or Plants1	30-36	18-24	.5	75-85
Garlic	Sept 1-Oct. 15	Bulbs (cloves)	12	4	2	Early June the following year
Irish Potato	Aug 1-15	Seed potatoes	30-42	10-16	2	90-110
Kale	Sept. 1	Plants	24-36	18	-	50-65
Kohlrabi	Sept. 1	Plants	18-24	4-6	-	50-70
Leaf Lettuce	Aug 1-15	Seed or Plants1	12-18	2-3	.25	60-70
Leek	Sept. 1	Seed or Plants1	12-24	2-4	.5	Late spring the following year
Mustard	Sept. 10- Oct 10	Seed	12-18	2-3	.5	40-50
Onions	Sept. 1	Seed, Sets, or Plants1	12-18	4	.25	Late spring the following year
Parsnip	July 15-Aug 15	Seed or Plants1	12-18	4-6	.25	120
Peas, green	Aug 15-Sept. 1	Seed	36	2	2	60-90
Radish	Aug 15- Oct 10	Seed	8-12	.75-1	.5	20-40
Rutabaga	Aug 15- Sept 15	Seed	24-36	3-4	.5	80-90
Spinach	Sept 5-25	Seed	8-12	1-2	.5	50-60
Swiss Chard	Aug 1- Sept 15	Seed	24-30	2-3	.5	50-60
Turnip	Aug 1- Sept 15	Seed	12-24	2-3	.5	50-60

1 = Set plants into the garden 1 to 1 1/2 months after planting the seed.
Note: If planting or sowing into cold frames, plant two weeks later than date indicated. With our abundant winter sunshine, be sure to allow for ventilation. Also, check frequently for pests – especially aphids.

Growing Fall Irish Potatoes

David Hillock

If seed potatoes are available and space permits, potatoes are a desirable supplement to the fall and winter food supply. Yields are usually lower than from spring-planted potatoes, but proper storage is much easier to provide and potato quality is excellent.

The practice of using potatoes from the fresh produce counter for planting purposes is not recommended. This kind of material frequently does not produce adequate growth and is considerably lower in yield.

One of the problems is getting a stand of plants early enough to produce a crop before fall frosts. This emphasizes the need to use matured, medium-to-large potatoes that require cutting into 1 or 1 1/2 ounce size seed pieces.

Cut potatoes should be allowed to cure three to five days before planting, and they should be stored under cool (45° to 65°F) conditions during curing.

In order to have a more favorable (cooler) soil at planting time, deep furrows may be opened in the late afternoon, seed pieces planted, covered with two inches of soil, watered, and mulched with straw or other available organic material. This should provide more favorable conditions for growth.

Grasshopper Management

David Hillock

Once again grasshoppers are showing up in masses in many parts of Oklahoma. My yard is no exception as they have nearly destroyed my Joe-Pye weed, spider flower and seem to enjoy one of my ornamental grasses. Hungry grasshoppers like gardens because they have optimal moisture and excellent plant growing conditions that provide an abundant food supply.

People become alarmed when grasshoppers suddenly appear and begin feeding on prized flowers, vegetables, and ornamental plants. The distress can turn to frustration when grasshoppers are still seen after plants have been sprayed. In most situations, the spray worked and killed the grasshoppers that were there, but there is simply more grasshoppers moving in to take their place. The insecticides available for grasshopper control have a limited residual activity and will not kill new arrivals after several days. Grasshopper management in the garden and landscape requires patience, and when possible, cooperation with your neighbors. The following suggestions are offered for managing grasshoppers:

• Select plants from the following list, which was developed by extension horticulturalists John Cooper and Stan Lovelace of the Texas Cooperative Extension Service as they observed grasshoppers feeding in Denton County in 1998 (As reported by Dr. Mike Merchant, Extension Entomologist, Dallas).

Preferred	Slight Damage	Not Preferred

Althea
Amaryllis
Bachelor's buttons
Bush honeysuckle
Butterfly bush
Canna lily
Cherry laurel
Day lily
Elaeagnus
Hardy hibiscus
Iris
Liriope
Mondograss
Mums
Peach
Photinia
Privet
Rose
Tradescantia
Wigelia
Wisteria
Flowering Almond
Grape
Hardy aster
American beautyberry
Artemisia
Bridal wreath spirea
Confederate jasmine
Coralberry
Crapemyrtle
Dwarf yaupon
Dwarf burning bush
Dwarf Mexican petunia
Euonymus
Forsythia
Juniper
Lantana
Mexican bush sage
Moss rose
Nandina
Passionvine
Perennial dianthus
Persian lilac
Rock rose
Salvia greggii
Verbena (perennial)

• Find hatching sites in surrounding areas and spot treat them with registered insecticides. Either flag those areas and treat them, or, in more suburban areas, try and work with your neighbors to find the sites and develop a neighborhood-wide control program. Best control is achieved if applied to immature grasshoppers in the 2nd and 3rd instar (less than 1/2 inch long).

• Purchase floating row covers to protect vegetables and prized plants. These fabrics permit sunlight to get through and allow for air circulation, yet are strong enough to keep grasshoppers from feeding. They can be sprayed with an appropriate insecticide to enhance their effectiveness. If the plants being protected require pollination (such as cucurbits), they may have to be hand-pollinated. Floating row covers are available at garden and nursery supply stores.

• Poultry, especially guinea hens, are effective predators. They may be useful for gardeners who live in rural areas and have room and interest in keeping them.

Control with Insecticides

Insecticides – Several insecticides are registered and effective at killing grasshoppers. Insecticides work better on small grasshoppers because it takes less active ingredient to kill them. If a single rate is applied (as is suggested in many labels) it will work better and kill grasshoppers longer if they are small.

Temperature and Sunlight – Insecticides start to break down as soon as they are mixed with water. They also break down when exposed to sunlight, and the breakdown process speeds up as

temperatures increase. Thus, in the summer when temperatures are high and sunlight intense, most insecticides will work for about 24 hours. As summer progresses, grasshoppers get bigger, move faster and feed more intensely. All of this means that sprays will need to be repeated to keep plants protected with an insecticide late in the growing season.

Border Treatments – Home yards and gardens in rural areas that are surrounded by range or pastures are subject to invasion by grasshoppers from those areas. Irrigated yards and gardens are an "oasis" for grasshoppers during the heat of the dry summer months. The best way to control grasshoppers in this situation is to prevent them from ever entering the yard. That can best be accomplished by treating the surrounding range and pasture lands to control the grasshoppers as described in EPP-7196, Grasshopper Management in Rangeland, Pastures, and Crops. If preventative control is not possible, the best alternative is to make a border treatment around the yard and garden. Generally, grasshoppers move across areas in 'jumps' as they search for suitable food. A homeowner can slow or block their movement by treating all vegetation in a band or border perimeter around the yard and/or garden with an insecticide. Border treatments that are wider provide more effective control.

Yard and Garden Treatments – The line of last defense is to directly spray the plants that need to be protected. However, none of the insecticides will totally prevent damage from large grasshoppers because they have to do some feeding to pick up enough insecticide to die. Additionally, even the pesticides with the longest lasting residues will have to be sprayed at 3 to 4 day intervals when large numbers of large grasshoppers are constantly invading a landscape. Consult EPP-7306 Ornamental and Lawn Pest Control for Homeowners, or E-832, OSU Extension Agent's Handbook of Insect, Plant Disease, and Weed Control for specific information on available products for control of grasshoppers.

Biological Control – Several botanical and biological products are sold to manage grasshoppers. *Nosema locustae* is a protozoan microbe that causes disease in grasshoppers. Its resting spores are mixed into a bait which is then spread in areas with grasshoppers. The grasshoppers eat the bait and microbe spores, which then infect and kill the grasshoppers. Under the best conditions, these products can provide 30-40% mortality of grasshopper populations and under the wrong conditions (low dose, large grasshoppers and high temperatures) will provide little effective control.

Beauveria bassiana is another microbe (fungus) disease that can kill grasshoppers if sprayed on plants and they eat the spores. The fungus then infects and kills the insects. However, at best, it will provide moderate control and little to no control during the hot and dry summer conditions in Oklahoma.

(Taken from OSU Fact Sheet EPP-7322 Grasshopper Control in Gardens and Landscapes by Tom A. Royer and Jonathan V. Edelson.

Bring on the Heat!

Kim Toscano

The intense heat and relentless, pounding sun coupled with drought conditions have left many gardens and gardeners looking a little sad. Summers like this one remind us how challenging gardening in Oklahoma can be. But if we step back and look around at the native plants in our area, we find there are many species performing quite well, despite the weather. And of course, the horticulture trade has responded quite well in recent years to public interest in low-water garden plants, so we also find a number of heat and drought tolerant ornamentals on the market. Here are just a few selections of summer stand outs.

Switchgrass
Name: *Panicum virgatum* 'Cloud Nine'
USDA hardiness zone: 5 to 9
Size: 6 to 7 feet tall and 2 to 3 feet wide
Conditions: full sun; average to moist soils; drought tolerant

A majestic native grass, 'Cloud Nine' holds a superb vase shape making a striking focal point in the garden. Light metallic blue foliage soars to a height of six feet, the tallest of the switchgrasses. Airy clouds of golden plumes emerge in summer and remain into winter. 'Cloud Nine' is spectacular when illuminated by the rising or setting sun and dances in the slightest breeze. Excellent for mass planting, place in the back of borders or naturalize in meadows. Cut clumps back to the ground late winter or early spring and avoid over-watering.

Cup Plant
Name: *Silphium perfoliatum*
USDA hardiness zone: 4 to 9
Size: 6 to 10 feet tall and 3 to 6 feet wide
Conditions: full sun; average to moist soils

Uncommon in the garden, yet intriguing, this native giant demands attention. Dazzling yellow daisy-like flowers stand tall above the foliage July through October, putting forth a long and glorious display through the dog days of summer. The coarse leaves are fused in pairs along the stem to form "cups" that collect water. Goldfinches and other birds drink water from the cups and are also fond of the plant's seeds. The mass of cup plant is impressive and limits its use to large gardens where it makes a prominent focal point or radiant backdrop for smaller perennials. A tough plant of the tall grass prairie, cup plant can spread by rhizome or seed, allow plenty of room and divide in spring as needed.

Texas Tuberose, Spice Lily or Rattlesnake Agave
Name: *Manfreda maculosa*
USDA hardiness zone: 7 to 10
Size: 1 foot tall spreading to 2 feet wide
Conditions: full sun to partial shade; well-drained soil; low water needs

This agave-like plant is a deciduous succulent native to southern Texas and northeastern Mexico. Fleshy, sword-shaped leaves are covered with purple to chocolate-brown spots and grow close to the ground in small whorls. Foot-tall clumps spread to two feet and create an interesting and unusual groundcover when planted in mass. The magnificent flower stalks are a real treat.

Reaching a height of 6 feet, the stalks produce numerous fragrant, creamy flowers that age to a pale pink. Texas tuberose is extremely drought-tolerant, requiring little to no irrigation, and is excellent for use in xeriscape gardens.

Sunshine Blue® Caryopteris
Name: *Caryopteris incana* 'Jason'
USDA hardiness zones: 5 to 11
Size: 2 to 3 feet tall and wide
Conditions: full sun; dry to average, well-drained soil; drought tolerant once established

Vibrant and sunny, this shrub has golden foliage that holds its color throughout the heat of summer. Vivid amethyst blue flowers erupt late summer through fall when many other plants are past their prime. Caryopteris may die back to the ground in zones 5 and 6, but will send up new growth in spring. Dieback will not affect blooming because caryopteris flowers on new wood. Prune in early spring to remove dead wood or to maintain size in southern gardens. A useful plant in dry, sunny areas, Sunshine Blue® Caryopteris adds color and contrast to any garden.

Upcoming Horticulture Events

Current Challenges in Horticulture and Landscape Architecture
August 25, 2011
Wes Watkins Center, Stillwater, OK
http://www.hortla.okstate.edu/events/pdf/2011_CurrentChallenges.pdf

Tree Care Conference
November 16, 2011
The Botanic Garden Educational Center, Stillwater, OK

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