Horticulture 2011 Newsletter
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Video of the Week:  Beneficial Insects: Not all Bugs are Bad -
http://www.youtube.com/user/KSREVideos#p/c/3/cmvm4wG14mA

UPCOMING EVENTS

Kansas Arborists Association Summer Field Day
June 10, 2011
Clinton Lake - Overlook Park
To download a copy of the brochure, go to http://www.hfrr.ksu.edu/doc3156.ashx

NurseryWorks: A Conference for Nursery Growers and Retail Garden Centers
June 15-16, 2011
Manhattan, KS
For more information, go to http://www.dce.k-state.edu/conf/nursery-works/
http://prezi.com/xmuypi4-s4wn/nurseryworks-2011/
Twitter: @Nursery_Works
Facebook: NurseryWorks

VEGETABLES

Mulching Tomatoes

Soils are warm enough now that tomatoes can benefit from mulching. Tomatoes prefer even levels of soil moisture and mulches provide such by preventing excessive evaporation. Other benefits of mulching include weed suppression, moderating soil temperatures and preventing the formation of a hard crust on the soil. Crusted soils restrict air movement into and out of the soil and slow the water infiltration rate.
Hay and straw mulches are very popular for tomatoes but may contain weed or volunteer grain seeds. Grass clippings can also be used but should be applied as a relatively thin layer – only 2 to 3 inches thick. Clippings should also be dry as wet clipping can mold and become so hard that water can’t pass through. Also, do not use clippings from lawns that have been treated with a weed killer until some time has passed. With most types of weed killers, clippings from the fourth mowing after treatment may be used. If the lawn was treated with a product containing quinclorac (Drive), the clippings should not be used as mulch. (WU)

'Staggering' Sweetcorn Planting

Sweet corn is one of those crops that is only "good" for a few days. If you want longer periods of production, consider staggering the planting. In other words, plant a small block, wait a period of time, and then plant the next block. Though it is tempting to follow a calendar schedule, such as planting a small block every week, it is better to use crop development as a trigger. If you plant on a calendar schedule, you may have noticed that later plantings often catch up with earlier ones. Instead, plant the next block of sweet corn when the previous one is one-half to one inch tall. (WU)

FRUIT

Thinning Excess Fruit

Many areas of Kansas have avoided late freezes resulting in a heavy fruit crop this year. At first glance, this might seem to be a good thing. But too many fruit can cause problems that should be alleviated with thinning. For example, a heavy fruit crop can interfere with fruit bud development this summer. This can result in a small to no crop next year. This problem most often appears with apples. Thus, thinning helps ensure that good crops are produced each year. The second benefit of thinning is to promote larger fruit on this year’s crop. Fruit trees are limited in how many fruit they can mature. Too many fruit and fruit size goes down. A third problem often caused by too many fruit is limb damage. Sometimes the weight of a maturing fruit crop can literally break branches. Thininning will help limit weight and preserve branches. So how much thinning should we do? Thinning recommendations vary with the type of tree.
Guidelines for fruit spacing are as follows:

- Apples and pears: 4 to 6 inches apart;
- Peaches: 4 to 8 inches apart;
- Plums and prunes: 4 to 5 inches apart;
- Apricots: 2 to 4 inches between fruit.

These are averages and so you may have several fruit clustered closer than this distance. As long as the average on the branch is close to the recommended spacing, the fruit should size well. Cherries are not thinned and can produce a full fruit load. (WU)

**PESTS**

**Cucumber Beetles and Bacterial Wilt**

If you had cucumbers or muskmelons that suddenly turned brown and died last year, you may have had a disease known as bacterial wilt. The cucumber beetle carries this disease. Once a plant is infected, there is no cure, so prevention is the key. Because cucumber beetles overwinter as adults, early control measures are essential.

There are two types of cucumber beetles: striped and spotted. The striped cucumber beetle is the most common. The 1/4-inch-long beetles are conspicuously colored: black head and antennae, straw-yellow thorax, and yellowish wing covers with three distinct parallel and longitudinal black stripes. Young plants can be protected with row covers, cones, or other types of mechanical barriers. Edges must be sealed to ensure that the beetles do not find a place to enter. Plants will eventually outgrow these barriers, or they will need to be removed to allow insect pollination of the flowers. Apply insecticides before beetles are noticed in the planting. Continue to spray weekly throughout the season. Homeowners can use Rotenone or permethrin (numerous trade names). Once plants have started flowering, spray late in the evening after bees have returned to the hive. Check labels for waiting periods between when you spray and when the fruit can be picked. (WU)

“Cabbageworms”, Colorado Potato Beetles, Bean Leaf Beetles

Four “favorite” garden vegetables currently are growing well. But they need to be watched over.

White cabbageworm butterflies are a continual presence as they flit over cabbages and broccoli, but then rest to deposit eggs. Control of “cabbageworms” is especially important as broccoli heads currently are forming. Wormy and frass-ladened heads are not desirable when ready to be
harvested. For cabbages, holes in wrapper leaves may be acceptable. But newly forming heads should be protected against “cabbageworms” to preserve their marketability.

Early planted potatoes have thrived. Colorado potato beetles currently are active. Without spending a lot of time flipping leaves, eggs were not seen – but they were surely present.

Handpicking beetles and destroying eggs are two methods often cited for controlling Colorado potato beetles. Practicality depends on number of plants requiring inspection and the amount of time an individual wants to devote to this. If doing neither, watch for the appearance of Colorado potato beetle larvae and apply timely insecticide applications to keep numbers down to avoid severe defoliation of plants, which could have a negative impact on the production and size of tubers.

While cole crops and potatoes are generally regarded as cool-season crops, and snap beans typically are regarded as more of a warm-weather crop, they can be planted early in the gardening season. Currently, bean seedlings are emerging, and are already being fed upon by bean leaf beetles. Bean leaf beetles are small (1/8-inch) and appear in two color forms. Beetles are elusive and will disappear when approached, quickly moving to the undersides of leaves or dropping to the ground.

Failure to control bean leaf beetles on newly emerged seedlings can result in stand reductions because beetles feed on developing stems, in addition to young leaves. (BB)

**When Good Bugs Become Bad Bugs**

A pest might be defined as something out of place – undesirable in a certain setting. A tomato plant, somehow having sprouted and growing in the middle of a flowerbed might be removed without hesitation during the weekly weeding chore. In a vegetable garden, that same tomato plant would be pampered and welcomed. In the realm of insects, an insect predator might be regarded as beneficial. Yet from another person’s viewpoint and under certain circumstances, that same insect might be regarded as a pest.
Case in point: I promote eastern tent caterpillars in my flowering crabapple tree by collecting egg masses from various locations and attaching them to the tree. And as eggs hatch, I follow the larvae as they develop. My hope is that eventually I will have a sufficient population of moths producing egg masses on my tree that I don’t have to hunt elsewhere for egg masses to monitor the onset of eastern tent caterpillar activities.

This year, caterpillars emerged from five of the six egg masses under observation. The caterpillars grew and constructed tents. I ignored them for a couple of weeks, until I noticed the telltale odor of stink bugs as I passed the tree while mowing my lawn. Stopping to investigate, I found four, spined soldier bugs (a type of stinkbug) concentrated on one tent. One pair was mating and eating (photo). The female’s proboscis (yellow arrow) extended through the webbing as she impaled a tent caterpillar and sucked out its body juices. Although I was disappointed to find all five tents devoid of caterpillars, another person might have been happy to see this example of effective biological control. (BB)

**Pine Needle Scale**

Pine needle scale is a soft scale that is found across the United States but especially in the eastern half. It not only attacks pine but also feeds on spruce, fir, hemlock, and, occasionally, yew and cedar. Pine needle scale appears as conspicuous white specks on the needles. Scales feed by sucking sap from needles causing them to yellow and eventually brown. Heavy infestations can kill twigs, branches, and even entire trees.

Though both female and males are white, the female is larger (1/8 inch long) and wider at one end with the narrow end sporting a yellow or orange cap. Males are 1/32 inch long and narrow. Newly hatched scales are called crawlers and are a reddish color. Pine needle scale overwinters as eggs underneath female covers. Each female produces about 100 eggs. There are two generations per year in Kansas. Crawlers appear in May to early June and again in mid- to late July. Start looking for crawlers now.

Dormant oil treatments can be applied in early spring to kill overwintering eggs, or insecticides can be applied to exposed first- or second-generation crawlers. Effective insecticides include acephate (Orthene), cyfluthrin (Tempo, PowerForce Multi-Insect Killer Concentrate, Bayer Home Pest Control Indoor & Outdoor Insect Killer), permethrin, (numerous trade names) and carbaryl (Sevin). Remember, insecticides must be applied to crawlers soon after they emerge. Though crawlers are a
bright red to brown color, they are so small that a magnifying glass should be used to check for them. Once the scale has settled down and formed its waxy cover, insecticides are ineffective. Check for crawler activity at seven-day intervals for the two weeks following your initial spray. If active crawlers are present, spray again.

Imidacloprid (Merit, Annual Tree and Shrub Insect Control, Guard-N-Grow, Max Tree & Shrub Insect Control, Bayer Tree & Shrub Insect Control) is a systemic and therefore is effective on soft scales even after they are covered. However, it must be applied early as it takes 1 week to 3 months for the product to move from the roots to the needles. (WU)

**MISCELLANEOUS**

**Helping Roundup (Glyphosate) Products Work Better**

Though glyphosate products (Roundup, Killzall, Pronto Weed & Grass Killer) are non-selective and will kill most plants the spray contacts, these herbicides are not taken up by the roots of nearby desirable plants. This is because the active ingredient is neutralized when it contacts the soil due to being tightly bound to soil particles.

Unfortunately, this binding effect can also take place in hard water that is high in magnesium and calcium, which reduces its effectiveness. To avoid this, mix ammonium sulfate with your spray water before adding the glyphosate product. The ammonium sulfate ions tie up the calcium and magnesium ions so that the glyphosate remains at full strength. Also some of the glyphosate will form a compound with the ammonium that weeds will more readily absorb, thus increasing effectiveness.

Note that this binding effect takes place in hard to very hard water (above 7 grains or above 120 ppm). Adding ammonium sulfate to softer water will not help. So if you have your water tested and find you have hard water, how much ammonium sulfate should you add? As a general rule, add 8.5 pounds per 100 gallons. This would equal about 1.4 ounces per gallon or four tablespoons per gallon. (WU)

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To view Upcoming Events: [http://tinyurl.com/fswqe](http://tinyurl.com/fswqe)

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