Horticulture 2010 Newsletter
No. 25       June 23, 2010

UPCOMING EVENTS

Tomato Day
Saturday, July 24
Sedgwick County Extension Center, Wichita
For more information, call (316) 660-0100

Bedding Plant Field Day
Thursday, July 29
K-State Research & Extension Cntr. (35230 W. 135th, Olathe)
5:00 p.m. to dark
Audience: Greenhouse and Landscape Industry professionals
Registration: $45.00

K-State Research and Extension Horticulture Center Field Day
Saturday, July 31

The K-State Research and Extension Horticulture Centers’ Annual Field Day is the public’s best opportunity to learn how Kansas State University Research and Extension develop its list of recommended varieties of grass, flowers and vegetable.

The event will be held Saturday, July 31, from 8 a.m. – 3 p.m. at the K-State Research & Extension Center in Olathe (35230 W. 135th)

This is a once-a-year opportunity to:

    talk with the experts,
    learn about the latest plant varieties,
    learn about methods for success in the garden.

Admission is $5 per person, and includes bottled water and hourly seminars delivered by professionally trained experts.  For more information, go to www.johnson.ksu.edu/hort-field-day
FRUIT

‘Tip’ Blackberries, Black Raspberries and Purple Raspberries

The growth and fruiting habits of blackberries and raspberries are the same. The root system is perennial, surviving many years, but canes are biennial.

First-year canes are called primocanes. They emerge from the soil and grow but with most varieties, the primocanes do not fruit. Primocanes become floricanes the second year. Floricanes fruit and then die. Each cane lives only two years. Pinching (tipping) the top 2 to 3 inches of the primocanes increases branching and fruiting the next year.

Blackberries not grown on a trellis are normally tipped when they reach 3 to 4 feet. Trellis-grown blackberries are tipped when primocanes are 10 to 12 inches above the top wire. Black or purple raspberries are tipped at 30 to 40 inches if trellised, and 24 to 30 inches if not supported. Red raspberries are not tipped. (WU)

Cherry Leaf Spot

We are nearing the time to control the fungus disease cherry leaf spot. This disease causes small, pinpoint dark lesions on the leaves. The black spots often fall out, resulting in a shot-hole appearance. Numerous lesions turn light green, then yellow, and eventually the infected leaf will drop. Removing diseased leaves at the end of the season can help, but a fungicide application immediately after harvest is also helpful. Try using chlorothalonil (Daconil, Fertilome Broad-Spectrum Fungicide, Ortho Garden Disease Control, or others), captan (found in some fruit tree sprays) or myclobutanil (Immunox). Reapply two weeks after the first application. (WU)
PESTS

Squash Bugs

Squash bugs are the grey, shield-shaped bugs that feed on squash and pumpkin plants. If you have had problems with these insects in the past, you know that they are almost impossible to control when mature. This is because the squash bugs have a hard body that an insecticide has difficulty penetrating. Thus, spraying when the insects are small is important. We are now seeing the nymphs of the first generation. These nymphs will eventually become adults, which will lay eggs that will become the second generation. The second generation is often huge and devastating. Therefore, it is important to control as many squash bugs now as possible. Because squash bugs feed by sucking juice from the plant, only insecticides that directly contact the insect will work. General use insecticides such as permethrin (Bug-B-Gon Multi-Purpose Garden Dust, Green Thumb Multipurpose Garden and Pet Dust, Bug-No-More Yard and Garden Insect Spray, Eight Vegetable, Fruit and Flower Concentrate, Garden, Pet and Livestock Insect Control, Lawn & Garden Insect Killer), malathion, rotenone, and methoxychlor provide control if a direct application is made to young, soft-bodied squash bugs. This means that you MUST spray or dust the underside of the leaves because this is where the insects live. (WU)

Sweet Corn Earworm

Corn earworm tends to be a problem every year on sweet corn in Kansas. The earworm moth lays eggs on developing silks at night. When the egg hatches, the larva crawls down the silk and into the ear. Feeding starts at the tip of the ear and works down. Though several earworms may hatch and attack a single ear, only one is usually present at harvest due to the cannibalistic nature of the insect. Control is challenging as silks continue to grow over a period of time. This means that even if silks are treated, new silk will appear that hasn’t been protected. Applications every 2 to 3 days are needed for insecticides to be effective especially in late June to early July when peak flights of these moths usually appear.

There is a three-week period from silking to harvest but there is only a two-week period from when the silks appear and when they begin to dry. Since moths prefer juicy silks and shun those that have started to dry, insecticides are only needed the first two weeks of silking.
Homeowners can use cyfluthrin (Bayer Powerforce Multi-Insect Killer, Spectracide Triazicide) or carbaryl (Sevin) though cyfluthrin is more effective. Commercial growers have additional choices including zeta-cypermethrin (Mustang Max), (bifenthrin+zeta-cypermethrin (Hero), spinetoram (Radiant) and flubendiamide (Belt).

Though more time consuming, mineral or other light horticultural oils may also be used. The oil is placed inside the silk end of the ear with a medicine dropper (1/2 to 3/4 of a dropper) after the silks brown. This will coat the earworms already present and likely suffocate them though some damage to the tip of the ear will likely have occurred. Applying the oil before the silk has browned may interfere with pollination leading to incompletely filled ears. (WU)

Slugs…With A Bit of Humor!

The recent wet weather experienced throughout most of Kansas will likely increase slug population activity. Slugs are destructive pests that feed on many plants in landscapes and gardens including annuals, perennials, vegetables, bulbs, ground covers, trees and shrubs. Slugs can devour young seedlings overnight. One of their favorite plants to feed on is hosta.

Slugs are mollusks, related to oysters and clams. Slugs are referred to as “naked snails,” because they possess no shell. They are brown in color and 1-1/2 to 2 inches long. Slugs lay clusters of translucent, pearly-shaped eggs under debris or beneath the soil surface. They can lay between 20 and 100 eggs several times per year. The gray garden slug, Deroceras reticulatum, is the slug generally encountered in the Midwest. It is approximately 3/4 to 1-1/2 inches long. Colors include pale yellow, lavender or purple. In addition, they are covered with black or brown spots and mottling.

Slugs have chewing mouthparts and cause plant damage by creating large irregular shaped holes in leaves with tattered edges. They feed using a structure called a radula, which is in the mouth and covered with small teeth. Slugs tend to feed on succulent foliage such as seedlings, herbaceous plants and fruit lying on the ground.

Slug movement depends on soil moisture because they need it to produce a slimy mucus substance, which allows them to move around. It dries, leaving a shiny, noticeable trail. Slugs are mainly active at night (nocturnal) when relative humidity is high from evening rains or irrigation. They hide during the day under mulch, plant debris, rocks, boards, weeds, and ground covers.

Slug management involves implementing a combination of strategies such as handpicking, habitat modification, and use of barriers, traps, baits and commercial molluskicides. Monitoring is important to determine the effectiveness of slug management strategies. Monitoring involves going out in the evening with a flashlight and looking for slugs. Handpicking is recommended to reduce initial slug numbers. It is especially effective during moist weather conditions. Placing
slugs into a jar containing soapy water will kill them.

There are two other methods of killing slugs once they have been collected. But both are quite macabre. One method involves stepping on the critters. Slugs make a squishy sound when stepped on (although this depends on the intensity of the step). The other method is to scatter slugs on a driveway and drive back and forth over them with a truck or car. Or have children with bikes run over the slugs. But they will have to do this more than once.

Habitat modification is one of the most effective strategies in reducing slug problems. This involves eliminating hiding places such as mulches, weeds, old vegetation and plant debris. Proper watering practices can also alleviate slug problems. For example, avoid watering late in the day, which creates moist conditions conducive to slug activity. Instead, water plants early in the morning. Research has shown that morning watering provides as much protection from slug damage as metaldehyde (Deadline) pellets. In addition, the use of drip irrigation systems, in which water is directed toward individual plants, may reduce slug populations.

Copper barriers may be placed around the base of shrubs and trees subjected to constant feeding. Slugs receive a slight electric shock when their moist bodies contact copper; this then repels them. However, widespread use of this method may not be feasible. Furthermore, copper bands have sharp edges, which can harm children and pets.

Diatomaceous earth, shredded bark, egg shells, and wood ash have been used as barriers to prevent slugs from feeding on plants. Overall, these materials work best during dry periods when slugs are less active. However, the effectiveness of these materials is reduced by rainfall, which means they have to be reapplied regularly. Moreover, these materials lose their effectiveness after getting wet. Constant use of some of these materials such as eggshells and wood ash is discouraged because over time they may raise the pH of the soil. Also, never pour salt on slugs because it may burn plant foliage and roots.

Traps, such as wooden boards or rolled newspaper can be positioned where slugs are feeding. Check traps early in the morning. Perform this procedure once or twice per week. Afterwards, place slugs into a jar containing soapy water to kill them.

Baits are available that attract slugs into traps where they then drown. One popular bait is beer. Although there may be better uses for beer, some die-hard practitioners insist that beer reduces slug populations. This can be done by pouring beer into a shallow pan and placing it in the ground with the pan edges extending about 1/8 to 1/4 inches. Slugs are attracted to the yeasty smell and fall into the pan and drown. Some folks claim that when slugs “party” they consume too much beer, get sluggish from the high alcohol content, and it eventually kills them. I have not seen any data that supports this claim. But a study from Colorado State University showed that Kingsbury Malt Beverage (from Heileman Breweries) was the beer most preferred by slugs. (I guess they conducted a slug taste test.) But beer does not have an Environmental Protection Agency registration number, so using it as a pesticide is technically not legal.

Most commercially available poison baits include metaldehyde (Deadline) as the active ingredient. Metaldehyde does not directly kill slugs. Instead, it works by paralyzing and causing slugs to secrete excess amounts of mucus. Death generally occurs from water loss and/or exposure to direct sunlight. Nonetheless, under cool, moist weather slugs may actually recover.
Metaldehyde is sensitive to environmental conditions, degrading very rapidly when exposed to direct sunlight and excessive moisture. However, the new formulation of Deadline is more resistant to degradation. Metaldehyde is toxic to cats and dogs if large quantities are ingested.

The mollusicide, Sluggo is also available. The active ingredient is iron phosphate. Sluggo contains a bait that attracts and kills slugs. Once they consume the material they crawl away and die. This is why people do not typically see dead slugs around the area. Sluggo kills slugs within 3 to 6 days. It can be used around pets and may remain potent for a longer time compared to metaldehyde.

There are various beetles such a firefly larvae and ground beetles that feed on slugs. But these predators may not be present in sufficient enough numbers to maintain slug populations below damaging levels. (RC)

**MISCELLANEOUS**

**Slime Molds**

Slime molds are primitive organisms that are common on turf and mulch. Slime molds are not fungi and are no longer classified as such. They belong to the Kingdom Protista rather than Kingdom Fungi. On turf, you might often see large numbers of small gray, white or purple fruiting structures, called sporangia on leaf blades during cool and humid weather throughout spring, summer and fall. Affected areas are often several inches to 1 foot in diameter. During wet weather, the fruiting structures may appear slimy. As the structures dry out in hot weather, they become ash gray and break up easily when touched. Homeowners often are concerned that this is a disease organism that will kill the grass, but slime mold feeds on bacteria, other fungi and dead organic matter. It simply uses the turf as a structure on which to grow. However, slime mold can damage turf by completely covering leaf blades and interfering with photosynthesis. Chemical control of slime molds is not necessary. Use a broom or a heavy spray of water to dislodge the mold.

Slime molds on mulch often attract attention because of their bright colors and disgusting appearance. Common names are often quite descriptive. For example, the "dog vomit" slime mold is a bright, whitish color that resembles its namesake. It eventually turns brown and then into a hard, white mass. There is also the "scrambled egg" slime mold, "the yellow blob" slime mold and the "regurgitated cat breakfast" slime mold. Slime molds do not hurt anything, but most people do not find them attractive and want to get rid of them. Simply use a shovel to discard the offensive organism and then stir up the mulch for aeration. For some excellent photos of slime mold, see Megan Kennelly’s post to the KSU Turfgrass Information Blog at http://blogs.ksre.ksu.edu/ksuturf/2010/06/slime-goo-and-caviar/ (WU)

**Contributors:**
Ward Upham, Extension Associate; Ray Cloyd, Entomologist
To view Upcoming Events: http://tinyurl.com/fswqe

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For questions or further information contact: Hort WebMeister.

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