Video of the Week:  Water-Wise Ways to Irrigate Trees

UPCOMING EVENTS

K-State Bedding Plant Field Day
Tuesday, July 21, 2015
For more information, go to:
http://www.hfrr.ksu.edu/doc4321.ashx

Kansas Turf & Ornamentals Field Day
Thursday, August 6, 2015
For more information, go to:  Turf Field Day

TURFGRASS

Grub Control in Lawns

If you plan on using a grub preventative on your lawn, the first half of July is a good target date for most products. Preventatives are normally used on areas that have had a history of grub problems. Traditional grub insecticides such as Dylox or carbaryl (Sevin) are normally applied in late July after grubs are present or as a rescue treatment once damage is seen. Products that contain Merit (imidacloprid) are considered grub preventers. Actually, these products do not prevent grubs, but rather kill grubs when they are quite small, and long before they cause damage. Merit is safer to use around pets and humans than traditional grub killers. Merit can be found in Bayer's Season-
Long Grub Control, Grub No-More and Grub Free Zone.

Another grub preventer with the trade name GrubEx contains chlorantraniliprole. Though this product is very effective, it is less water soluble than imidacloprid. It should be applied earlier, preferably April or May, but applications through June should still be effective. Remember, all grub products should be watered in soon after application. (Ward Upham)

**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. (Ward Upham)

**FRUIT**

**Strawberry Bed Renewal**

Next year's strawberry crop will be affected by what you do to this year's strawberry bed. The sooner after harvest the patch is cleaned up, fertilized and irrigated, if possible, the better the chance of getting a good crop next year. One of the main goals in renovation is to provide a high level of sunlight to plant leaves so they can manufacture
the food the plant needs. If leaves have disease spots, remove all the leaves in the bed. Removing, these diseased leaves and weeds will cause new, non-diseased leaves to develop and remove competition from weedy plants. Hedge shears or even a mower can be used. Be sure the mower blade is high enough to avoid the strawberry crowns.

It is also important to reduce the number of strawberry plants so they do not compete for light, moisture and nutrients. If you have a small bed, you can hoe out or pull some plants so they are spaced about 4 to 6 inches apart. On large beds, adjust a rototiller so you can till between the rows, and cut each row back to about 10 inches wide.

The next step is to fertilize the plants with about 3/4 to 1 pound (3 to 4 cups) of a complete fertilizer such as 13-13-13 (nitrogen, phosphorus and potassium) or an equivalent on each 25 feet of row. If a soil test shows adequate levels of phosphorus and potassium, use 3/4 pound (1.5 cups) of a 16-0-0 (nitrate of soda) fertilizer per 25 feet of row instead. If nitrate of soda is unavailable, use the lawn fertilizer that contains about 30% nitrogen such as a 30-0-3, 28-0-3 or something similar. Make sure the lawn fertilizer does not contain a weed killer or preventer. These fertilizers should be used at the rate of 3/4 cup per 25 feet of row. The next step is to irrigate to wash the fertilizer into the soil and provide moisture for the rapid growth of the strawberry plants. When the soil is dry, apply about 1 inch of water. A garden sprinkler can do a good job applying the water.

Controlling weeds and watering throughout the summer are important so plants are vigorous when fruit buds begin to develop in September and October. (Ward Upham)

**VEGETABLES**

**Vegetables Produce Flowers But No Fruit**

If you have vegetables that are blooming but not setting fruit, you may have a problem with flower pollination. There are several possible reasons for this that usually vary by species. One condition that can affect several species at the same time is overfertilization. Too much nitrogen causes the plant to emphasize vegetative growth, often to the detriment of fruit production. Overfertilization can lead to a delay in flower production and a decrease in fruit set among the
flowers produced.

Squash, cucumbers, watermelon, and muskmelon can have a couple of other problems. First, the early flowers on these plants are usually all male. The production of both male and female flowers becomes more balanced as time passes. You can easily tell the difference between the two because only the female flower has a tiny fruit behind the blossom. If you have both, have not over-fertilized, and still have a problem, make sure you have pollinators. Look for the presence of bees visiting the plants. If you don't see any, try hand-pollinating several flowers. Use a painter’s brush to transfer pollen from the anther of the male flower to the stigma of the female flower. If you get fruit on only those flowers you pollinated, you need more pollinators. Make sure you aren't killing them with overuse of insecticides.

Tomatoes are wind pollinated and therefore not dependent on pollinators. But they have another possible problem, which is temperature. Tomatoes normally won't set if the night temperature is below 50 due to sparse pollen production. They also won't set when nighttime temperatures are above 75 degrees F and daytime temperatures are above 95 degrees F with dry, hot winds. (Ward Upham)

PESTS

“Miller Moths” = Army Cutworm Moths

A “miller moth” is an all-inclusive umbrella term used to describe any plain brown drab moth. At this time of year, the "miller moths" are army cutworm moths, *Euxoa auxillaris*. Upon close examination, army cutworm moths definitely are not plain, brown or drab. There are 5 morphological forms (varieties) of army cutworm moths. Each possesses its own intricate and distinctive wing pattern. Adding more to the visual array, brown forms of each variety are males, whereas grayish individuals are females.

The seasonal life history begins in the fall of the year when moths deposit eggs in the soil in fields of fall-seeded wheat, alfalfa stands and weedy fields/patches. Eggs may hatch within several days of being deposited but may be delayed under unfavorable/dry conditions. Larvae preferably feed during the dark of night and seek shelter in the soil during daytime hours. Army cutworms overwinter as partially grown larvae.
Each year in the Central Plains states, overwintered army cutworm larvae resume their feeding as temperatures moderate and become warmer. They complete their development toward the beginning of May after which they burrow into the ground where they create protective earthen cocoons inside of which they pupate.

Moth emergence usually begins by late May. For a period of time, moths remain near areas where they emerged. Then an undefined stimulus (likely photoperiod driven) signals moths across the Central Plains states to migrate westward to the higher elevations in the Rockies. There in the cool-of-summer, they feed, accumulate body fat and attain sexual maturity. In mid-to late September, they migrate back to the Central Plains where they deposit eggs to initiate the next generation of army cutworms.

The current complaints revolve around the moths. Again, because moths are active during evening hours, they shun daylight. That is, with the approach of daylight, army cutworm moths seek shelter/cover in any conceivable space. Excluding moths is difficult because they will exploit very small openings.

Another interesting tidbit about army cutworm moths is that they are food for grizzly bears. During summer months, bears move to the higher elevations to feast on army cutworm moths. It was determined that a single moth possesses \( \frac{1}{2} \) calorie of fat content. It was further estimated that a bear obtains 20,000 calories of fat on a daily basis by consuming 40,000 moths per day. (Bob Bauernfeind)

**MISCELLANEOUS**

**Vinegar as a Herbicide**

We often hear of home remedies that have not been scientifically tested. Vinegar has been suggested as an effective herbicide, but until recently it had not been studied for effectiveness. The USDA's Agricultural Research Service has finally put vinegar to the test. They used concentrations of varying strengths including 5, 10 and 20 percent. Household vinegar is close to a 5 percent solution. Weeds tested included lambs-quarters, giant foxtail, velvetleaf, smooth pigweed and Canada thistle.

Weeds were hand-sprayed so that the leaves were uniformly coated with material. Young plants within the first two weeks of life were killed with the 5 and 10 percent solution. Higher concentrations provided 85 to 100 percent kill regardless of the size of the weed. Canada thistle proved to be exceptionally susceptible to vinegar. The 5 percent solution gave 100 percent kill of top growth. Vinegar sold as a herbicide is most often a 20% solution.

Note that all weeds tested were annuals except the thistle. Vinegar is not translocated, so it would
burn the top growth of perennials but would be unlikely to kill established plants. Vinegar is commonly made from wine, cider or malt, though a wide variety of materials can be used. This study included only vinegar made from fruits or grains, so it conforms to organic farming standards. (Ward Upham)

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