

Horticulture 2008 Newsletter No. 28 July 16, 2008

ORNAMENTALS

Leaves Falling From Trees



We have had a number of calls regarding leaves falling from trees. Dropped leaves are most often yellow (but can be green) with no discernible disease spots. The falling leaves are well distributed throughout the tree resulting in a general thinning.

Trees will often set more leaves in the spring than they can support during the summer. Heat and drought stress will cause the tree to lose leaves that it cannot support with the available soil moisture.

This year leaf drop is likely worse because excess rains in certain areas weakened the trees' root systems. Now that certain areas of the state are drying out and warming up, that weakened root system can no longer keep up with the moisture demands of the foliage and tree drops leaves to compensate. Actually, excess soil moisture itself can cause leaf drop because waterlogged root systems can't take up water and transport it due to a lack of oxygen.

As long as the root system wasn't heavily damaged by excess water, the effect on the health of the tree should be minor. (WU)

PESTS

Spider Mite Control

Spider mites tend to be a yearly problem in Kansas. On ornamental plants, commercial applicators often use Talstar and Capture for mite control. The active ingredient of both products is bifenthrin and can be found in homeowner packaging in Ortho's Rose and Flower Insect Killer. Note that it is not to be used on edible crops. Other



effective miticides for commercial use include deltamethrin (DeltaGard) and Scimitar (lambda cyhalothrin). Lambda cyhalothrin is now packaged for homeowners under the name of Spectracide Triazicide and is labeled for a wide range of ornamentals as well as a number of the brassicas (cabbage, broccoli, cauliflower, etc.). All of the above materials kill predatory mites as well as those you seek to control. Predatory mites feed on the mites that feed on plants and therefore provide a natural control.

Horticultural oils can also be an effective control of moderate infestations on ornamental and vegetables. Adequate coverage is essential including the bottom of the leaf. Horticultural oils help suppress all three life stages eggs, immatures and adults and they are kind to mite predators. (WU)

Squash Vine Borer



If you have squash or related plants that suddenly wilt and die, you may have squash vine borer. This insect will bore into the stems of squash, zucchini, pumpkins and gourds. Hubbard squash are a favorite, and butternuts are less likely to be attacked than other squash. Cucumbers and melons are usually not a target, although each can be affected by a disease that also causes plants to wilt known as Bacterial Wilt (See May 31 issue of this newsletter).

The adult of this insect is a clear-winged moth that resembles a wasp. The forewings are a dark metallic green but the rear wings are clear. The abdomen is orange with black spots. The larva is cream-colored and rather wrinkled. Adults emerge in the spring and lay eggs on or near susceptible plants. Larva bore into the plant and will feed for about a month as they move toward the base. Mature larva will exit the plant, burrow into the soil and pupate where they remain until the next year. Each plant can have numerous borers.

If you suspect squash vine borer, split the stem of a collapsed plant near where it enters the ground. Infested plants will be hollowed out and mushy and may contain borers. Unfortunately, there isn't much you can do at this late stage. Control measures should center on prevention. Suggested preventative controls would include crushing the dull red eggs before they hatch, excavating larvae from stems before they cause much damage or using insecticide applications. Applications should begin when the vines begin to run and reapplied every 7 to 10 days for 3 to 5 weeks. Direct the spray at the crown of the plant and the base of runners. Effective insecticides would include carbaryl (Sevin), endosulfan (Thiodan), permethrin (numerous trade names) and esfenvalerate (Monterey Bug Buster and Ortho MAX Garden and Landscape Insect Killer). (WU)

Tomato and Tobacco Hornworms



When home gardeners pass by their tomato plants, they sometimes note a disappearance of leaves. Often, "green stuff" will be noted on the ground beneath the defoliated plants. These are fecal pellets/poop of "worms" And by closely inspecting the affected tomato plant, the culprits will be found: hornworms.

Two closely related "hornworms" feed on tomato plants: tomato hornworms (TOM) and tobacco hornworms (TOB). It may be a moot point as to actual species present because the life cycles and feeding habits of both are similar. For the record, each has its own identity. The TOM has a black "tail"/horn and 8 chevrons. The TOB has a red "tail" horn and 7 diagonal stripes. Shades and darkness of the primary color (green) vary. TOM/TOB overwinter in the soil as pupae earthen cocoons.

TOM/TOB moths emerge from the pupa beginning in late May-early June, and will be continually present throughout the summer. These are one of the species of the "hummingbird moths" commonly seen hovering over flowers during early evening hours. They uncoil their long proboscis as they "drink" nectar/liquids from flowers.

Moths deposit eggs on tomato foliage. Although fairly large, eggs are seldom observed due to the thick foliage of plants as well as their green coloration which blends with the leafy background. Equally difficult to observe are the small 1.5 mm long larvae which eventually hatch.

For approximately 4-5 weeks, larvae go undetected as they feed. But they betray their presence when large enough to consume large amounts of foliage. At this point in time, there is little to be done other than handpicking and disposing of larvae or, simply, allowing them to complete their feeding cycle (they are already nearly done). (BB)

Masked Chafer Flight Peak

In the Manhattan area, masked chafer flights peaked the evening of July 5. (This may have occurred earlier in southeast Kansas, or is yet to have occurred in far northwest Kansas). For people who previously applied preventative systemic insecticide treatments (or plan to yet do so within the next couple of weeks, the flight peak is of little importance because there is no need for further treatment considerations.



However, people considering the use of short residual contact insecticides as preventative treatments against annual white grubs (the larvae of masked chafer beetles), the flight peak has a bearing on treatment application. The 10-day optimal treatment window 30 - 40 days after the flight peak based on the rationale that (roughly) all deposited eggs will have hatched, and 90% of the grubs will be in either their first or second developmental stage - too little to have caused damage, and especially susceptible to insecticide kill.

It is important for consumers to read product labels. Two active ingredients have proven "acceptable" efficacy against annual white grubs: carbaryl and trichlorfon. For the homeowner, carbaryl is formulated as a granular product with the trade name Sevin Lawn Granules, and trichlorfon as a granular product marketed as 24-Hour Grub Control.

Steps for successful control include:

- 1) Calibrating applicators. Drop spreaders are more accurate than whirlybird spreaders. Both are more practical to use than hand-held applicators when treating large areas. Calibration ensures that proper amounts of insecticide are applied to achieve maximum kill. Manufacturers may suggest settings-to-use with their equipment. However, especially after wear and tear on the equipment, calibration becomes important to maintain proper product delivery rates.
- 2) Thatch can tie-up insecticides. To facilitate the movement of insecticides into the soil zone where grubs actively feed, a vertislicer, power rake or core aerator will help create passage ways through the thatch layer.
- 3) Apply a pretreatment watering to the lawn/turf. This should encourage grubs to be near/in the root zone. More importantly, a pre-moistened soil will facilitate the following.....
- 4) Apply a post-treatment irrigation as soon as possible after insecticide granules have been applied. Short-residual insecticides are subject to rapid breakdown and must immediately be moved into the soil. (BB)

FLOWERS

Dividing Iris



Bearded irises are well adapted to Kansas and multiply quickly. After several years, the centers of the clumps tend to lose vigor, and flowering occurs toward the outside. Dividing iris every three to five years will help rejuvenate them and increase flowering. Iris may be divided from late July through August, but late July through early August is ideal.

Because iris clumps are fairly shallow, it is easy to

dig up the entire clump. The root system of the plant consists of thick rhizomes and smaller feeder roots. Use a sharp knife to cut the rhizomes apart so each division consists of a fan of leaves and a section of rhizome. The best divisions are made from a double fan that consists of two small rhizomes attached to a larger one, which forms a Y-shaped division. Each of these small rhizomes has a fan of leaves. The rhizomes that do not split produce single fans. The double fans are preferred because they produce more flowers the first year after planting. Single fans take a year to build up strength.

Rhizomes that show signs of damage due to iris borers or soft rot may be discarded, but you may want to physically remove borers from rhizomes and replant if the damage is not severe. It is possible to treat mild cases of soft rot by scraping out the affected tissue, allowing it to dry in the sun and dipping it in a 10 percent solution of household bleach. Make the bleach solution by mixing one-part bleach with nine parts water. Rinse the treated rhizomes with water and allow them to dry before replanting.

Cut the leaves back by two-thirds before replanting. Prepare the soil by removing weeds and fertilizing. Fertilize according to soil test recommendations or by applying a complete fertilizer, such as a 10-10-10, at the rate of 1 pound per 100 square feet. Mix the fertilizer into the soil to a depth of 6 inches. Be wary of using a complete fertilizer in areas that have been fertilized heavily in the past. A growing number of soil tests show phosphorus levels that are high enough to interfere with the uptake of other nutrients. In such cases, use a fertilizer that has a much higher first number (nitrogen) than second (phosphorus). (WU)

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