

# Horticulture 2017 Newsletter

No. 25 June 20, 2017

1712 Claflin, 2021 Throckmorton Plant Science Cntr.  
Manhattan, KS 66506 (785) 532-6173

---

**Video of the Week:** [Water-Wise Ways to Irrigate Trees](#)

## UPCOMING EVENTS



August 3 Turf & Ornamentals Field Day, Wichita  
<http://www.kansasturfgrassfoundation.com/annual-ktf-field-day.html>

## VEGETABLES

### Tomato Leaf-Spot Diseases



This time of year, two common leaf-spot diseases often appear on tomato plants. Septoria leaf spot and early blight are both characterized by brown spots on the leaves.

Septoria leaf spot usually appears earlier in the season than early blight and produces small dark spots. Spots made by early blight are much larger and often have a distorted “target” pattern of concentric circles. Heavily infected leaves eventually turn yellow and drop. Older leaves are more susceptible than younger ones, so these diseases often start at the bottom of the plant and work up.

Mulching, caging, or staking keeps plants off the ground, making them less vulnerable. Better air circulation allows foliage to dry quicker than in plants allowed to sprawl. Mulching also helps prevent water from splashing and carrying disease spores to the plant.

In situations where these diseases have been a problem in the past, rotation is a good strategy. It is too late for that now, but keep it in mind for next year. Actually, rotation is a good idea even if you have not had problems in the past. But many gardens are too small to make it practical. If you have room, rotate the location of the tomatoes each year to an area that has not had tomatoes or related crops (peppers, potatoes, eggplant) for several years.

If rotation is not feasible, fungicides are often helpful. Be sure to cover both upper and lower leaf surfaces, and reapply fungicide if rainfall removes it. Plants usually become susceptible when the tomato fruit is about the size of a walnut. Chlorothalonil is a good choice for fruiting plants because it has a 0-day waiting period, meaning that fruit can be harvested once the spray is dry.

Chlorothalonil can be found in numerous products including Fertilome Broad-Spectrum Landscape and Garden Fungicide, Ortho Garden Disease Control, GardenTech Daconil, Bonide Fungonil and others. Be sure to start protecting plants when the disease is first seen. It is virtually impossible to control this disease on heavily infected plants.

If chlorothalonil doesn't seem to be effective, try mancozeb (Bonide Mancozeb Flowable). Note that there is a five-day waiting period between application and when the fruit can be harvested.

You may wish to pick some tomatoes green just before you spray if you use Mancozeb as the tomato fruit will ripen inside. (Ward Upham)

## ORNAMENTALS

### Trees Losing Leaves



Before we get into leaf loss, we should also touch on scorch. The hot, drying winds recently have resulted in some tree suffering scorch where the outer edge of the leaf and/or the area between veins turning brown. This is caused by the tree not being able to take up enough water to replace that lost through transpiration. This is especially common on maples. Though the tree does not look good, the effect on health is minimal as long as the tree is watered as needed.

There are three situations we may run into regarding tree leaf loss this summer. The tree may produce yellow leaves scattered throughout the canopy of the tree, all the leaves on a tree may turn yellow and drop or the leaves may turn brown but stick to the branches.

If falling leaves are well distributed throughout the tree and result in a general thinning of the leaves, the problem is not serious. 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. Leaves that drop are most often yellow with no discernible disease spots. However, at times, we can have green leaves drop that appear perfectly

healthy. As long as the leaf drop results in a gradual thinning of the leaves, the tree should be fine if it is kept watered during dry periods.

In some cases we may see virtually all of the leaves drop. Certain trees such as hackberry can drop all of the leaves and enter summer dormancy. We are a bit early for this to occur but may happen later in the summer if we have a hot, dry summer. Trees that are summer dormant should have supple twigs and healthy buds. Usually, the effect on the health of the tree is very minor and the tree leafs out normally next spring. As long as the tree has enough stored energy reserves to make it through to next spring, it will survive. The twigs and buds tell the story. If the buds die and the twigs become brittle, at least that part of the tree is dead.

The last case involves trees that have leaves that die and remain attached to the tree. This can happen seemingly overnight. In such cases, the tree couldn't keep up with moisture demands and died quickly. This year, the cause may be due to the cold snap last December 18 where most locations had temperatures well below zero. Damage to underlying tissues is the root cause of this problem. As in the last case, the twigs and buds are the most important clue as to the health of the tree. As long as the buds are alive and the twigs are supple, do not remove the tree, it still has life.

If you limited ability to water and need to prioritize, trees should come first because they are the most difficult and expensive to replace. They also take the most time to reach an acceptable size. We have a couple of publications that give useful watering tips for trees. See the two articles near the bottom of the page at:

<http://hnr.k-state.edu/extension/publications/trees-shrubs-and-woody-vines.html> (Ward Upham)

## TURGRASS

### 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, Bonide Grub Beater, Gordon's Grub No-More and Hi-Yield 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)

## Little Barley in Lawns



Many people mistake little barley (*Hordeum pusillum*) for a little foxtail because the foxtail and little barley seedheads are similar. However, little barley is a winter annual that comes up in late September - October and spends the winter as a small plant. It thrives in the cooler spring temperatures, forms seed heads and dies out usually by July. Foxtail, on the other hand, is a summer annual that does well in hot weather. Also, foxtail will not produce seedheads until mid- to late-summer.

So, why are we talking about little barley now? Because now is NOT the time to control it unless it is in an area where a non-selective herbicide that kills everything such as glyphosate (Roundup) can be used. The best control for little barley in turf is a thick lawn that is mowed high enough that sunlight does not hit the soil. Little barley seed will not germinate in such conditions.

Overseeding in early September can thicken up a tall fescue lawn and prevent a little barley infestation. However, if you do not plan to overseed even though the lawn is a bit thin, preemergence herbicides can be used to provide at least partial control of this weed. The only preemergence herbicide that I know is labeled specifically for little barley is Surflan. It is also sold under the name of Weed Impede by Monterey Lawn and Garden.

Surflan can only be used on warm-season grasses (bermudagrass, buffalograss, zoysiagrass) and tall fescue grown in warm-season areas such as Kansas. However, Dimension (dithiopyr), is labeled for barley (*Hordeum* spp.) which would include little barley and therefore can be used to keep this weed under control. Because little barley is a winter annual, apply the preemergence herbicide about mid-September and water in to activate. If overseeding, do not apply any preemergence herbicide as it will interfere with the germination of tall fescue. (Ward Upham)

## PESTS

### Hornworms on Tomatoes



Hornworms are the largest larval insect commonly seen in the garden. Though usually seen on tomato, they can also attack eggplant, pepper, and potato.

The larval stage of this insect is a 3 ½- to 4-inch long pale green caterpillar with five pair of prolegs and a horn on the last segment. The two most common hornworms are the tobacco hornworm (seven diagonal white stripes and, most commonly, a red horn) and the tomato hornworm (v-shaped markings with a horn that is often blue or black).

Tomato Hornworm

The adult of the tobacco hornworm is the Carolina sphinx moth. The five-spotted hawk moth is the adult of the tomato hornworm. Both moths are stout-bodied, grayish-colored insects with a wing spread of 4 to 5 inches. The larva is the damaging stage and feeds on the leaves and stems of the tomato plant, leaving behind dark green or black droppings.

Though initially quite small with a body about the same size as its horn, these insects pass through four or five larval stages to reach full size in about a month. The coloration of this larva causes it to blend in with its surroundings and is often difficult to see despite its large size. It eventually will burrow into the soil to pupate. There are two generations a year.

This insect is parasitized by a number of insects. One of the most common is a small braconid wasp. Larva that hatch from wasp eggs laid on the hornworm feed on the inside of the hornworm until the wasp is ready to pupate. The cocoons appear as white projections protruding from the hornworm's body. If such projections are seen, leave the infected hornworms in the garden. The wasps will kill the hornworms when they emerge from the cocoons and will seek out other hornworms to parasitize.

Handpicking is an effective control in small gardens. Though large, these larvae are surprisingly difficult to see. Missing foliage is often the first clue that you have an interloper. Bt (Dipel, Thuricide), spinosad (Conserve; Colorado Potato Beetle Beater Conc; Captain Jack's Dead Bug Brew, Monterey Garden Insect Spray), cyfluthrin (Bayer Vegetable & Garden Insect Spray) and other insecticides may also be used to control hornworms. (Ward Upham)

## 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, 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. (Ward Upham)

Contributors: Ward Upham, Extension Associate

Horticulture & Natural Resources  
2021 Throckmorton, KSU  
Manhattan, KS 66506  
(785) 532-6173

For questions or further information, contact: [wupham@ksu.edu](mailto:wupham@ksu.edu) OR [cdipman@ksu.edu](mailto:cdipman@ksu.edu)  
This newsletter is also available on the World Wide Web at:  
<http://hnr.k-state.edu/extension/info-center/newsletters/index.html>

The web version includes color images that illustrate subjects discussed. To subscribe to this newsletter electronically, send an e-mail message to [cdipman@ksu.edu](mailto:cdipman@ksu.edu) or [wupham@ksu.edu](mailto:wupham@ksu.edu) listing your e-mail address in the message.

Brand names appearing in this newsletter are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned. K-State Research and Extension is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision or hearing disability, or a dietary restriction please contact Extension Horticulture at (785) 532-6173.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service K-State Research and Extension is an equal opportunity employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, and United States Department of Agriculture Cooperating, John Floros, Dean.