Video of the Week: Tomato Problems

UPCOMING EVENTS

K-State Research & Extension Center Horticulture Field Day - July 27

Turf & Ornamentals Field Day - August 1
John C. Pair Horticulture Research Center, Haysville
http://store.kansasturfgrassfoundation.org

Grape and Wine Workshops

On July 29th, Highland Community College in conjunction with Kansas Department of Agriculture is hosting a vineyard workshop at Wine Barn Winery in Kansas City, KS. The workshop will be taught by HCC Viticulture Instructor Dominic Martin and will cover a range of topics including pre-harvest vineyard activities such as using irrigation to adjust harvest parameters/timetable and post-harvest vineyard activities such as fertilizing vines in the month prior to the shift into winter dormancy as well as pre-planting preparation for next spring. The workshop is FREE and open to the public. Please RSVP to Scott Kohl at Highland Community College, 785-456-6006 or skohl@highlandcc.edu.

Here is the upcoming workshop schedule:

* Pre/Post-Harvest Vineyard Activities- Monday, July 29, 5:30-7:30p (Wine Barn Winery, Kansas City, KS)
* Basic Winemaking- Monday, August 5, 5:30-7:30p (Location TBA)
* Sensory Evaluation/Wine Tasting- Monday, October 21, 5:30-7:30p (HCC Klinefelter Conference Center, Hiawatha, KS)
* Winery Sanitation- Monday, November 11, 5:30-7:30p (Location TBA)

The workshops are open to the public. (Ward Upham)
VEGETABLES

Tomato Cracking

Tomatoes often have problems with cracking caused by pressure inside the fruit that is more than the skin can handle. Cracks are usually on the upper part of the fruit and can be concentric (in concentric circles around the stem) or radial (radiating from the stem). We don’t know everything about cracking but here is what we do know.

Tomatoes have a root system that is very dense and fibrous and is quite efficient in picking up water. Unfortunately, the root system can become unbalanced with the top of the plant. Early in the season it may be small in relation to the top growth resulting in blossom-end rot during hot dry weather. Later it may be so efficient that it provides too much water when we get rain or irrigate heavily after a dry spell. This quick influx of water can cause the tomato fruit to crack. Therefore, even, consistent watering can help with cracking. Mulching will also help because it moderates moisture levels in the soil. However, you can do everything right and still have problems with cracking in some years.

We have evaluated varieties for cracking during our tomato trials at K-State. It takes several years worth of data to get a good feel for crack-resistant varieties but we have found some real differences. Some varieties crack under about any condition and others are much more resistant. The difference seems to be pliability of skin rather than thickness — the more pliable the skin the more resistance to cracking.

The old variety Jet Star has been the most crack resistant of any we have tested including the newer types. Unfortunately, Jet Star is an indeterminate variety that puts out rampant growth. Newer varieties with more controlled growth are often more attractive to gardeners. Mountain Spring, Mountain Pride, Mountain Fresh, Floralina and Sun Leaper are smaller-vined types that have shown good resistance to cracking. (Ward Upham)

Fall Gardening: Cole Crops

Probably the last thing most gardeners are thinking of now is planting vegetables. However, for those hardy few, now is the time to start the cole crops such as cabbage, broccoli, and cauliflower. These members of the cabbage family can be either seeded directly in the garden or started in pots for transplanting about mid-August.

Plant slightly deeper than you would in the spring so the seed stays cooler and the soil around the seed stays moist longer. Plant more thickly and
thin later. The plants may need to be protected from rabbits through the use of fencing.

Use light amounts of fertilizer before planting. For example, apply 1/4 cup of a low-analysis fertilizer (6-7-7) per 10 feet of row. Sidedress two weeks after transplanting or four weeks after sowing seed by applying 2 tablespoons of a 16-0-0 or 1 tablespoon of a 27-3-3, 30-3-4 fertilizer, or something similar per plant.

Watering must occur more frequently because seed should not be allowed to dry out. Overhead watering often causes soil to crust, making it more difficult for young, tender plants to emerge. Prevent this by applying a light sprinkling of peat moss, vermiculite or compost directly over the row after seeding. Even better, use a soaker hose right next to the row to allow water to slowly seep into the ground.

Plants should be ready for harvest in late September to early October, with broccoli side shoots developing well into November, weather permitting. (Ward Upham)

FRUIT

When to Pick Peaches

Peaches are best when ripened on the tree but fruit growers may wish to pick a bit early to prevent damage from birds, have a higher pectin content for jams and jellies or to have firmer fruit for canning.

Peaches that are mature enough to pick are still hard. They do not give when lightly squeezed. However, these peaches will ripen off the tree and will have very good quality. They may not be quite as sweet as a tree-ripened peach but are still very good. So what do we look for to tell if a peach is mature enough to harvest? Let’s look at a couple of factors.

**Color:** The reddish coloration is not a good indicator. Look instead for what is called the “ground color.” This is the part of the peach that does not turn red; for example around the stem. The ground color of the peach will lose its greenish tinge and turn yellow when the peach is mature enough to harvest. I use this characteristic more to determine when NOT to pick a peach. If there is any green in the ground color, it is too early. If the ground color is yellow, then I move to the next characteristic.

**Ease of Removal:** A mature peach will separate easily from the branch if the peach is lifted and twisted. If it doesn’t, it is not mature enough to pick yet.

All peaches will not be ready to pick at the same time. Pick only those that are ready and come back later for more. It often takes 3 to 5 pickings to harvest a peach tree. Peaches that are picked early but will be used for fresh eating should be allowed to ripen inside
at room temperature. Once they are ripe, they can be refrigerated to preserve them for enjoyment over a longer period of time. (Ward Upham)

**PESTS**

**Blister Beetles**

These beetles are notorious for quickly stripping vegetables (especially tomatoes) and ornamentals of their foliage. There are several species of blister beetles which vary in size (often between 0.5-0.75 inch long) and color (such as black, gray or brown-striped), but most are recognized by their elongated, narrow, cylindrical, soft bodies with middle body part (thorax) narrower than the head or wingcovers.

Some home gardeners like to use hand picking as a nonchemical method for controlling these large insects. However, wear gloves and use caution because these beetles contain a substance called cantharidin. This chemical is an irritant capable of blistering internal and external body tissues exposed to the chemical. On tender human skin, body fluids of adult blister beetles may cause large, erect, watery blisters.

Chemical control of blister beetles is also possible. Cyfluthrin (PowerForce Multi-Insect Killer) and gamma- or lambda-cyhalothrin (Spectracide Triazicide, Bonide Beetle Killer, Bonide Caterpillar Killer) can be used for control. Cyfluthrin has a 0 day waiting period and lambda-cyhalothrin has a 5-day waiting period on tomatoes. (Ward Upham)

**Emerald Ash Borer (EAB) Confirmed in Johnson County, Kansas**

Adult EAB insects were found in a trap set by the United States Department of Agriculture (USDA) in Johnson County, Kans., in the area of I-435 and Holiday Drive, on July 5, 2013.

Adult EAB insects have been also found in traps set by Kansas Department of Agriculture (KDA) in Wyandotte County, in the area of the first confirmed sighting in 2012. Johnson County is now under quarantine. Wyandotte County is also under quarantine. Quarantine means all hardwood material (except conifers), firewood, or live ash trees cannot be transported out of the county. For more information, see [http://www.johnson.ksu.edu/p.aspx?tabid=1270](http://www.johnson.ksu.edu/p.aspx?tabid=1270) (Dennis Patton)
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 1/2- 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). The adult of the tobacco hornworm is the 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. Bt (Bacillus thuringiensis) found in Dipel or Thuricide and other insecticides also may be used to control hornworms. (Ward Upham)

Contributors: Dennis Patton, Johnson Co. Horticultural Agent; Ward Upham, Extension Associate

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