Video of the Week:  
Efficient Water Use in the Garden

UPCOMING EVENTS

Kansas Turfgrass Field Day - August 2 (Manhattan)

The field day program is designed for all segments of the turf industry - lawn care, athletic fields, golf courses, and grounds maintenance. Included on the program are research presentations, problem diagnosis, commercial exhibitors, and equipment displays. There will be time to see current research, talk to the experts and get answers to your questions. To register or download a copy of the program, go to [http://2018turfday.eventbrite.com](http://2018turfday.eventbrite.com)

The Commercial Vegetable Research Field Day - August 27 (K-State Olathe Research & Extension Cntr.)

Bring your walking shoes for this event as we will take a comprehensive tour of all our specialty crop research. Projects include tomato grafting, organic sweet potato, high tunnels, postharvest quality, variety trials, cover cropping techniques, and the effects of light on high tunnel crops. Stay for a cookout in the shade hosted by the staff and students.

VEGETABLES

How to Pick a Ripe Melon

Telling when a melon is ready to be harvested can be a challenge, or it may be quite easy. It all depends on the type of melon. Let’s start with the easy one. Muskmelons are one of those crops that tell you when they are ready to be picked. This can help you not only harvest melons at the correct time, but also choose good melons when shopping. As a melon ripens, a layer of cells around the stem softens so the melon detaches easily from the vine. This is called “slipping” and will leave a dish-shaped scar at the point of stem attachment. When harvesting melons,
put a little pressure where the vine attaches to the fruit. If ripe, it will release or “slip.”

When choosing a melon from those that have already been harvested, look for a clean, dish-shaped scar. Also, ripe melons have a pleasant, musky aroma if the melons are at room temperature (not refrigerated).

Watermelons can be more difficult and growers often use several techniques to tell when to harvest.

1. Look for the tendril that attaches at the same point as the melon to dry and turn brown. On some varieties this will need to be completely dried before the watermelon is ripe. On others it will only need to be in the process of turning brown.

2. The surface of a ripening melon develops a surface roughness (sometimes called “sugar bumps”) near the base of the fruit.

3. Ripe watermelons normally develop a yellow color on the “ground spot” when ripe. This is the area of the melon that contacts the ground.

Honeydew melons are the most difficult to tell when they are ripe because they do not “slip” like muskmelons. Actually, there is one variety that does slip called Earlidew, but it is the exception to the rule. Ripe honeydew melons become soft on the flower end of the fruit. The “flower end” is the end opposite where the stem attaches. Also, honeydews should change to a light or yellowish color when ripe, but this varies with variety. (Ward Upham)

**Weird Squash, Cucumbers or Melons**

Occasionally we receive a call from someone who has a squash (or cucumber or melon) that just doesn’t look like what was supposedly planted. They often wish to know if that fruit had cross-pollinated with another vegetable close by. In such cases, the gardener is assuming that cross-pollination will affect the fruit. Such is not the case. The characteristics of the fruit is determined by the mother plant and is not affected by cross-pollination. However, there will be a problem if seed is saved for the next year from a flower that was cross-pollinated. All bets are off on what you will get if that happens.

So, how do we end up with this weird fruit? Though it could be that the gardener had forgotten exactly what he planted, more likely is that the seed he planted had been cross-pollinated before packaging. Another possibility is that it came from seed that came from fruit that had rotted in the garden the previous year. Regardless, don’t worry about planting different cultivars of squash or cucumbers or melons close to one another. Though cross-pollination may occur in some cases, the fruit will not be affected. (Ward Upham)
**Fall Gardening**

Probably the last thing most gardeners are thinking of now is planting vegetables. However, fall gardens will often produce higher quality, tastier cool-season crops as the vegetables mature during cooler, less stressful temperatures.

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.

Following is a “calendar” of what to do when.

*Mid-July:* Plant potatoes if you can find or have saved back seed potatoes. Do not use freshly dug potatoes as they have a built-in dormancy that will prevent growth. Also, grocery store potatoes are often treated so they don’t sprout.

Cabbage, broccoli, and cauliflower can be started from seed at this time. Choose a protected place where the soil can be kept moist and rabbits will not bother them. This will not be where they will grow the entire season but these crops will be transplanted about mid-August.

*Late July:* Seed beets, carrots and beans.

*Late July to Early August:* Seed spinach and long-season maturing lettuce. Leaf lettuce will be seeded later.

*Second Week of August:* Transplant cabbage, broccoli and cauliflower to their final location.

*Mid to Late August:* Seed radishes and leaf lettuce.

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 or drip irrigation right next to the row to allow water to slowly seep into the ground. (Ward Upham)

**PESTS**

**Raccoons and Sweet Corn**

It seems the official sweet corn inspector should be the
raccoon as they seem to harvest the sweet corn the day before it is to be picked. The only effective control measure I have had success with is fencing; either electric or kennel fencing. First are some suggestions for electric fencing. Other designs may very well work but this is what has worked in my garden.

– Two or more wires must be used. Place the first about 5 inches above the ground and the second 4 inches above the first (or 9 inches above ground). Raccoons must not be able to crawl under, go between or go over the wires without being shocked.

– Fence posts used for electric fences work well for this application (go figure), as do the insulators used to support the electric wire.

– It is much easier to use the woven electric wire with strands of wire embedded than to use a solid metal wire. The woven wire is easier to bend around corners and to roll up when done for the year.

– Though both the plug-in and battery operated fencers work, the battery operated types allow more versatility in where corn is grown. One set of batteries is usually sufficient for the season. In my case, I pull the battery out of an old tractor that is not used often. It will also last the season if fully charged at the beginning. My fencer is probably on for a total of a month.

– Start the charger before the corn is close to being ripe. Once raccoons get a taste of the corn, they are more difficult to discourage.

– Control weeds near the wire. Weeds can intercept the voltage if they touch a wire and allow raccoons entry beyond the weed.

– Check the wire occasionally to make sure you have current. This can be done easily (but unpleasantly) by touching the wire. There are also tools that will measure the voltage available for sale. They are worth the money.

As mentioned earlier, kennel fencing can also be used. Make sure that the panels are tied together well enough that raccoons can’t squeeze through corners. (Ward Upham)

**Spider Mites**

Most spider mites like hot and dry weather and we are seeing populations start to explode. Look for stippling on the upper surface of the leaves as well as some fine webbing on the underside of the leaves. These tiny arthropods (they are not true insects) are often difficult to see due to their size and their habit of feeding on the underside of leaves. If mites are suspected, hold a sheet of white paper beneath a leaf and tap the leaf. Mites will be dislodged and can be seen as tiny specks on the paper that move about.

Spider mite control can be challenging. A strong jet of water can be used to remove the mites but may not be as easy as it sounds. A high-pressure directed spray is needed to dislodge the mites.
Since spider mites feed on the underside of the leaves, the spray is most effective if it comes from below. This can be difficult to accomplish with a thumb over the end of the hose.

Some gardeners use a water wand hooked to a shut-off valve. The water breaker is then replaced by a brass nozzle. Specialized spray wands can also be used. For example, Mite-Y-Fine (miteyfine.com) has a wand that makes spraying the underside of leaves easy. Spraying once will not be enough. It is recommended to use 3 sprays spaced 3 to 4 days apart.

Horticultural oils and insecticidal soaps (Safers, for example) can also be helpful. Spray early in the morning when temperatures are cooler and plants have rehydrated. Resprays will likely be needed. (Ward Upham)

**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 and may be the only practical method of control if populations are large. Cyfluthrin (Bayer Vegetable and Garden Insect Spray) and permethrin (Bonide Eight and Hi-Yield Lawn, Garden, Pet and Livestock Insect Control) are recommended. Cyfluthrin and permethrin have a 0 day waiting period on tomatoes. (Ward Upham)

**Green June Beetle**

These large beetles feed on sweet corn, blackberries, and peaches. They look much like the common May beetle, or June bug, but have a dull, velvety green color. The underside is more of an iridescent green. These beetles have poor navigational skills and seem to fly until they hit something. They also make a buzzing sound somewhat like a bumblebee. Unfortunately, they are also about the size of a bumblebee and so cause concern for many gardeners even though they cannot harm people. As noted above, they may damage crops.

A number of general-use insecticides, including acetamiprid (Ortho Flower, Fruit & Vegetable
Insect Killer), carbaryl (Sevin) and malathion, may be used to discourage feeding. See table below.

<table>
<thead>
<tr>
<th>Insecticide</th>
<th>Peaches</th>
<th>Blackberries, raspberries</th>
<th>Sweet Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbaryl</td>
<td>3*</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Malathion</td>
<td>7</td>
<td>1</td>
<td>------</td>
</tr>
<tr>
<td>Acetamiprid</td>
<td>7</td>
<td>1</td>
<td>------</td>
</tr>
</tbody>
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* Days to harvest

Sevin has a two-day waiting period between spraying and harvest on sweet corn and a three-day waiting period on peaches. There is a seven-day waiting period for Sevin on blackberries, so malathion, with a one-day waiting period, may be a better choice. Acetamiprid has a 7 day waiting period on peaches and a 1 day waiting period on blackberries and raspberries. (Ward Upham)

**Budworms on Garden Plants**

If you have noticed a small hole in the buds of some of your flowers, you may have tobacco (geranium) budworm (*Helicoverpa virescens*). Though a number of flowers can serve as hosts, geraniums and petunias are most commonly attacked. The larva of this insect damages the buds by boring into them before they open. The caterpillars feed on the flowers for about a month and then drop to the soil to pupate. There are normally two generations per year, with the second causing the most harm. The striped caterpillars vary widely in color with green, red, light brown and dark forms possible. The color of the larva is related to the color of the flowers on which they feed. The adult of this insect is a moth.

Damaged buds often fail to open. Those that do will show evidence of feeding on the petals. Damage normally peaks in late summer because of increased numbers from the second generation.

Control of the budworm is difficult. Handpicking at dusk can be effective on small plantings. For larger plantings, chemical control may be the only practical option. Look for products with synthetic pyrethroid active ingredients such as permethrin (Bonide Eight and Hi-Yield Lawn, Garden, Pet and Livestock Insect Control), esfenvalerate (Asana, Bug Buster II), cyfluthrin (Bayer Vegetable & Garden Insect Spray), bifenthrin (Hi-Yield Bug Blaster Bifenthrin) or gamma-cyhalothrin (Spectracide Triazicide). Products with the organic active ingredient spinosad (Captain Jack’s Dead Bug Brew, Monterey Garden Insect Spray) should also be effective.

Severe winters can be a natural form of control from one year to the next. Temperatures below 20 degrees F are hard enough to kill overwintering pupa. Because pupal cases are usually 2 to 6 inches deep, most exposed areas in Kansas will provide good control during a cold winter. Microclimates next to heated buildings may allow survival. (Ward Upham)
MISCELLANEOUS

Plant Triage and Watering

With some areas of Kansas under water restrictions, plant triage may be in order. In other words, determine which plants are the most important to save. Of course, if no outside watering is allowed, there aren’t many options. Mulching can help if the soil is moist enough to make preserving what water remains practical. Hopefully, outside watering can still be done on certain days in your area. If that is case, prioritize what plants are most important.

Large, established trees should be first on your list as they are expensive to remove, expensive to replace and take years to become large enough to fulfill their purpose. Next would be trees planted in the last 2 to 3 years as their root systems are still not completely established. Normally, these trees would be first on our list as the larger, more mature trees are more drought resistant. However, sometimes a drought will be severe enough that even large trees may die or become so weakened that borers move in and take them out.

Next would be shrubs, then perennial flowers and finally lawns, annual flowers and vegetables. You probably see the pattern here. Start with what is most expensive to replace and move down from there. For more information on watering trees, see last week’s issue of this newsletter at http://hnr.k-state.edu/extension/info-center/newsletters/index.html (Ward Upham)

Organic Matter: “The Living, the Dead, and the Very Dead”

Did you know organic matter strongly affects soil properties even though it is found in low percentages? “Building Better Soil for Better Crops” states that most agricultural soil contains between 1% and 6% organic matter and is composed of three parts thought of as the living, the dead, and the very dead. The living (microorganisms such as fungi and bacteria and macroorganisms such as insects and earthworms) portion is about 15% of soils’ total organic matter and strongly influences the dead and very dead portions of organic matter and the overall soil properties. Micro- and macroorganisms help bind soil particles together which helps soil aggregates and improves water infiltration, percolation, soil aeration, and soil structure. The dead portion of organic matter is made up of recently-dead micro- and macroorganisms, crop residues, and dead plant roots. Dead organic matter is easily decomposed by living organisms, cycling some of the nutrients that plants need. The dead portion in organic matter also plays a role in improving soil aggregation. The last portion that makes up organic matter is the very dead portion, also known as humus. I know what you’re thinking, but this humus is not the kind you snack on with pita chips. Humus is a stable source of well-decomposed organic material that is not readily available to plants. “Building Better Soils for Better Crops” states that the average age of humus is over 1,000 years old and stores important nutrients for plants that can be released slowly over time. If
you want to learn more about enhancing the organic matter in your own soil, turn in to next week’s blog. To learn more about soil organic matter and biochar as a soil amendment follow this link, https://bit.ly/2MP3K48, to the “Building Better Soils for Better Crops” chapter called Organic Matter: What It Is and Why It's So Important.  (Chandler Day)

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To view Upcoming Events: [http://hnr.k-state.edu/events/index.html](http://hnr.k-state.edu/events/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 or wupham@ksu.edu listing your e-mail address in the message.

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