Horticulture 2013 Newsletter  
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Video of the Week:  Tips for Using Natural Pesticides  

VEGETABLES  

Bumps on Tomato Stems  

Tomato stems sometimes develop “warts” or “bumps” on the stems close to ground level. Though this looks abnormal, the condition is natural and not harmful. These bumps can eventually give rise to roots (called adventitious roots) if conditions are favorable. This is actually the mechanism the plant uses to form roots when tall, leggy plants are planted in a trench. Some varieties tend to be more prone to this condition than others and stress such as that produced by waterlogged soils also makes a “warty” stem more likely. Growth regulator type herbicides such as 2,4-D can also induce this state. So if you see a warty stem, don’t be concerned. The bumps will not harm the plant in the least. (Ward Upham)  

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 or misuse 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)

FRUIT

Cherry Leaf Spot

We are nearing the time to control the fungus disease cherry leaf spot. This disease causes small, pinpoint dark lesions on the leaves. The black spots often fall out, resulting in a shot-hole appearance. Numerous lesions turn light green, then yellow, and eventually the infected leaf will drop. Removing diseased leaves at the end of the season can help, but a fungicide application immediately after harvest is also helpful. Try using chlorothalonil (Dacthal, Fertilome Broad-Spectrum Fungicide, Ortho Garden Disease Control, or others), captan (found in some fruit tree sprays) or myclobutanil (Immunox). Reapply two weeks after the first application. (Ward Upham)

PESTS

Grub Control

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, neither product prevents grubs, but rather they 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)

**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 both can be affected by a disease that causes similar symptoms, known as bacterial wilt.

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 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 (too late for that) and reapplied every seven to 10 days for three to five weeks. Direct the spray at the crown of the plant and the base of runners. Chemicals used for borer control in gardens are permethrin (Bug-No-More Yard & Garden Insect Spray; Eight Vegetable, Fruit & Flower Concentrate; Lawn, Garden, Pet and Livestock Insect Control; Lawn & Garden Insect Killer), bifenthrin (Hi-Yield Bug Blaster II, Bug-B-Gon Max Garden Insect Killer) or carbaryl (Sevin), applied as sprays or dusts. Continue on a 7 to 10 day reapplication schedule for 3 to 5 weeks. If plants wilt, look for the presence of holes and ooze. However, in extreme heat, these plants will wilt in the afternoon even if undamaged by this insect. (Ward Upham)
ORNAMENTALS

Pruning Storm Damaged Trees

Summer storms may cause serious tree damage. Often you will have to decide whether a tree can be saved or not. Here is a checklist on care of a storm-damaged landscape.

1. Be safe: Check for downed power lines or hanging branches. Don't venture under the tree until it is safe. If large limbs are hanging precariously, a certified arborist has the tools, training and knowledge to do the work safely.

2. Cleanup: Remove debris so you don't trip over it.

3. Decide whether it is feasible to save a tree. If the bark has been split so the cambium is exposed or the main trunk split, the tree probably will not survive and should be removed. If there are so many broken limbs that the tree’s form is destroyed, replacement is the best option. Topping, where all the main branches are cut and there are only stubs left, is not a recommended pruning procedure. Though new branches will normally arise from the stubs, they are not as firmly attached as the original branches and more likely to break in subsequent storms. Also, the tree must use a lot of energy to develop new branches, leaving less to fight off diseases and insect attacks. Often, the topped tree's life is shortened.

4. Prune broken branches to the next larger branch or to the trunk. If cutting back to the trunk, do not cut flush with the trunk but rather at the collar area between the branch and the trunk. Cutting flush with the trunk leaves a much larger wound than cutting at the collar and takes longer to heal. Middle-aged or younger vigorous trees can have up to one-third of the crown removed and still make a surprisingly swift comeback.

5. Take large limbs off in stages. If you try to take off a large limb in one cut, it will often break before the cut is finished and strip bark from the tree. Instead, first make a cut about 15 inches from the trunk. Start from the bottom and cut one-third of the way up through the limb. Make the second cut from the top down but start 2 inches further away from the trunk than the first. The branch will break away as you make the second cut. The third cut, made at the collar area, removes the stub that is left. Note: Pruning can be dangerous. Consider hiring a trained arborist to do major work such as this. Also, a good arborist knows how to prune trees so that storm breakage is less likely to occur. Preventing damage is better than trying to fix it once it has happened. The Arbor Day Foundation maintains an excellent Web site that contains detailed information. The URL is: http://www.arborday.org/media/stormindex.cfm (Ward Upham)
Lower My Water Bill, Please!

Water is such an important part of our world. It’s hard to believe that though our planet is covered with water (70%), most of it is salty ocean water (96.5%) and unavailable for use. Digging deeper, we know that only 2.5% of the remaining water is freshwater and most of that water (68.6%) is tied up in ice. That leaves surface water (lakes, rivers, etc.; 1.3%) and groundwater (30.1%--not completely accessible) available for our daily use (source: http://ga.water.usgs.gov/edu/earthwherewater.html). So our small portion of water must be managed carefully and re-used when possible. Municipal water departments require a significant amount of infrastructure to make sure that the tap turns on and clear water comes out for you to drink or turn on the sprinkler. It’s a challenging job and really puts your water bill into perspective.

We have to be careful stewards of the water we use in our lives and especially in our landscapes. Fortunately, we are not the first to lament the lack of water. In 1978 the Denver, Colorado Water Department developed a task force to address water efficient landscaping and coined the term “xeriscape” (Xeros means “dry” in Greek). Last month I had the opportunity to attend a professional development trip to the Denver area to learn more about water conservation and ways to manage water restrictions through municipal efforts and xeriscaping. It was an enlightening experience.

First of all, let’s clear up the idea that xeriscape means “no water” (please don’t pronounce it “zero-scape”—that means no plants!). Rather, it means very little water. In fact, the Colorado Plant Select trial garden at one of the local Extension offices featured plants that were maintained with water only 3 times a year (once each month of June, July and August). The gardens we toured were quite lush and beautiful, featuring a variety of blooming plants in all shapes and colors. I was surprised that a low-water landscape could be so full of life.

While recommended xeriscape plants in Colorado are suited for their dry climate (and perhaps much of western Kansas), the principles of xeriscaping can be applied anywhere. It’s important to note that plant selection should emphasize our local climates. In fact, KSRE’s xeriscape publication with a short plant list can be found here: http://www.ksre.ksu.edu/bookstore/pubs/MF1046.pdf. Our Prairie Star program (http://www.prairiestarflowers.com/) also features low maintenance flowering annual and perennial plants suited to the many varied climates of Kansas. How about that? Now you can get started!

Another thing that surprised me was a common choice for mulch: rock. Generally I’m not a fan of rock landscape mulch. It reflects heat and light back into the canopy of the plants and can cause plant stress. Also, rock doesn’t degrade and add organic matter back into the soil. However, in this situation, for plants that are accustomed to growing in naturally rocky places with poor soils and
little water, it’s a good practice to mulch with rocks and by mixing rock sizes, it can be quite attractive. You can continue to use organic mulches effectively in xeriscape landscapes and mulch of any kind will help conserve soil moisture.

I’m not suggesting that you change your entire way of gardening. Think about it, though. Maybe you can incorporate a low water use area into your landscape and save yourself a few cha-chings on your monthly water bill. Worth a try, right? (Cheryl Boyer)

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