Video of the Week: Efficient Water Use in the Garden

VEGETABLES

Mulching Tomatoes

Soils are warm enough now that tomatoes can benefit from mulching. Tomatoes prefer even levels of soil moisture and mulches provide such by preventing excessive evaporation. Other benefits of mulching include weed suppression, moderating soil temperatures and preventing the formation of a hard crust on the soil. Crusted soils restrict air movement into and out of the soil and slow the water infiltration rate. Hay and straw mulches are very popular for tomatoes but may contain weed or volunteer grain seeds. Grass clippings can also be used but should be applied as a relatively thin layer—only 2 to 3 inches thick. Clippings should also be dry as wet clipping can mold and become so hard that water can’t pass through. Also, do not use clippings from lawns that have been treated with a weed killer until some time has passed. With most types of weed killers, clippings from the fourth mowing after treatment may be used. If the lawn was treated with a product containing quinclorac (Drive), the clippings should not be used as mulch. (Ward Upham)

'Staggering' Sweetcorn Planting

Sweet corn is one of those crops that is only "good" for a few days. If you want longer periods of production, consider staggering the planting. In other words, plant a small block, wait a period of time, and then plant the next block. Though it is tempting to follow a calendar schedule, such as planting a small block every week, it is better to use crop development as a trigger. If you plant on a calendar schedule, you may have noticed that later plantings often catch up with earlier ones.
Instead, plant the next block of sweet corn when the previous one is one-half to one inch tall. (Ward Upham)

**ORNAMENTALS**

**Tops of Pine Trees Dying**

We are seeing the tops of pine trees dying in western Kansas. Samples do not show signs of disease or insect damage and so we believe this to be environmental. I was talking to Judy O’Mara in Plant Pathology and she said they have seen a strong correlation between cold weather and this type of damage intermittently over the last 20 years. Though we did not have an extremely cold winter, we did have warm periods followed by sharp drops in temperature. We cannot prove this is the cause but it is what we suspect. There is nothing to do now but prune out the dead (if practical) and try to keep the tree healthy by watering, though that may not be possible due to water restrictions. (Ward Upham)

**TURFGRASS**

**Controlling Yellow Nutsedge in Lawns**

Yellow nutsedge is a relatively common problem in lawns, especially in wet years or in lawns with irrigation. Although it looks much like a grass, it is a sedge. Unlike grasses, sedges have triangular stems, and the leaves are three-ranked instead of two-ranked, which means the leaves come off the stems in three different directions. Yellow nutsedge is pale green to yellow and grows rapidly in the spring and early summer. Because of this rapid shoot growth, it sticks up above the rest of the lawn only a few days after mowing. This weed is a good indicator of poor drainage, but it can be introduced into well-drained sites through contaminated topsoil or nursery stock. As with many weeds, nutsedge is less competitive in a dense, healthy lawn than in an open, poor lawn.

Nutsedge is difficult to control culturally because it produces numerous tubers that give rise to new plants. Pulling nutsedge will increase the number of plants because dormant tubers are activated. However, it is possible to control nutsedge by pulling, but you must be persistent. If you are, eventually the nutsedge will die out.

If you were going to treat with an herbicide, it would be better to leave the nutsedge plants undisturbed so the herbicide can be maximally translocated to the roots, rhizomes, and tubers.
Several herbicides are available for nutsedge control. Sedge Hammer, which previously was called Manage, is the most effective and safe for most turfgrasses. It is also the most expensive, but if an infestation is not too severe, one application should take care of the problem. The Sedge Hammer label instructs user to apply it after nutsedge has reached the three- to eight-leaf stage. Waiting until this growth stage apparently results in improved translocation of the active ingredient to the underground tubers and rhizomes. However, research has shown that the application should go down by June 21. If the initial spray is after June 21, mature daughter tubers may be stimulated to grow.

Small packages of Sedge Hammer are available to homeowners. Using a non-ionic surfactant with the Sedge Hammer will give better control. (Ward Upham)

**Control of Prostrate Spurge**

Prostrate spurge is one of the more difficult broadleaf weeds to control. It is a summer annual that must come up from seed every year. If caught when young, it is easier, though still difficult, to control. Correct herbicide selection is important. Mature plants are almost impossible to control, even with selected herbicides.

Several years ago K-State Research and Extension conducted a study on the phytotoxic effects of certain herbicides on buffalograss. During the application, we noted the presence of a large number of small prostrate spurge plants. As the study progressed, plots were rated for percent control of spurge. The results were interesting. We found that Drive (quinclorac) provided more than 90 percent control. Until recently, Drive was only available to commercial applicators. Now homeowners have additional products that contain Drive. Those products are listed below.

- Ortho Weed-B-Gon Max + Crabgrass Control
- Bayer All-in-One Lawn Weed and Crabgrass Killer.
- Drive in Monterey Lawn and Garden Fertilome Weed Out with Q
- Trimec Crabgrass Plus Lawn Weed Killer
- Bonide Weed Beater Plus Crabgrass & Broadleaf Weed Killer
- Spectracide Weed Stop for Lawns Plus Crabgrass Killer

If you choose to use any of the above products, do not compost clippings or use them as mulch. The quinclorac can harm certain broadleaf plants. Clippings should be returned to the lawn or discarded.

Dimension and Turflon Ester offered more than 80 percent control, and Trimec 78 percent. Dimension results were surprising because it is a preemergence herbicide with some postemergence activity that is commonly used for crabgrass control. Turflon Ester should only be used on cool-season grass such as tall fescue and Kentucky bluegrass; not on warm-season grasses such as bermuda, zoysia or buffalo. (Ward Upham)
PESTS

Carpenter Bees

Carpenter bees are fascinating insects. And one has to marvel at their flying capabilities as they zoom about in their mating ritual. These antics typically begin in May. I noted carpenter bees (well one carpenter bee) back on April 29 (during a brief warm spell). The cool weather that followed sort of put the bees back on hold. But with our recent warm-up, reports and questions regarding carpenter bees have been received.

People might assume that if it looks like a bumble bee and buzzes like a bumble bee, it is a bumble bee. However, the abdomen of the carpenter bee (being devoid of hairs/fuzz) possesses a shiny in appearance. The major positive aspect of carpenter bees is their role as pollinators. However, people do not recognize carpenter bees in that role. Rather, carpenter bees are viewed as “threatening” and “destructive”. Male carpenter bees are territorial and will “buzz” a person who encroaches into their zone. While this may scare people, males cannot sting and are therefore completely harmless. Female carpenter bees are not aggressive and will not deliver a sting unless provoked or carelessly handled.

There is no doubt that carpenter bees have a destructive side. Carpenter bees will attack a variety of bare and/or weathered wooden items such as structural timbers, decks, lawn furniture, fascia surfaces, fence posts, and utility poles. Initially, newly constructed tunnels may be of “minor” significance. However, extensive/destructive tunneling may occur if galleries are repeatedly reused and expanded over a number of years. Additionally, pollen deposits and carpenter bee excrement may cause unsightly stains. And deposits of “sawdust” may require cleaning/removal.

Some people will wage campaigns against carpenter bees if the carpenter bees have been reoccurring and plentiful in number. Maintaining and painting exposed wood surfaces will aid in preventing carpenter bee problems. Existing entrance holes can be filled and sealed to discourage carpenter bees from reusing previous galleries. Continued surveillance is a tactic used by some individuals who will swat and kill the slow-flying hovering females as they seek/investigate potential nesting sites. When active galleries are discovered, a wire can be inserted to an attempt to kill developing larvae. Caulking galleries will entrap carpenter bees and their larvae.

Some people may opt for an insecticide approach when coping with carpenter bees. Dust formulations may be wafted through the entrance hole. Active adults will carry the dust deeper into the gallery system. Preventative sprays can be applied to exterior wood surfaces with the intent of killing carpenter bees as they contact treated surfaces. The results may vary depending on the thoroughness of treatment applications and the deterioration rates of the treatments per se.
Currently, for 2013, there are 231 insecticide products registered (in Kansas) for use against carpenter bees. Visit various local retail outlets and speak with store personnel to determine which product(s) they market for use against carpenter bees. (Bob Bauernfeind)

**Pine Needle Scale**

Although there may be a delay in egg hatching due to the cooler weather we have experienced in the last several weeks, it is still important to be cognizant of the pine needle scale (Chionaspis pinifoliiae). The time to typically treat for this scale pest is when Vanhoutte spirea (Spiraea x vanhouttei) or bridal wreath spirea is blooming. When plants are in bloom, eggs have hatched into young crawlers that move about on plants in search of a suitable place to insert their mouthparts and initiate feeding. The crawler stage is the most susceptible to foliar applications of insecticides and forceful water sprays. Mugo, Austrian, Scotch/Scots, and red pines are the primary host plants of pine needle scale. However, they may also attack fir and spruce trees.

When mature, pine needle scales are elongated, white in color, and 2 to 3 mm long. They overwinter as eggs, which are red in color, and are located underneath the dead female scale cover. During their lifetime, pine needle scale females can lay up to 100 eggs, which hatch into crawlers (nymphs) from early May through June; however, this depends on environmental conditions such as temperature. Therefore, egg hatch is likely to be delayed; possibly up to two weeks, due to cooler temperatures. Crawlers, which are distinctly red in color, actively move around on pine needles before finding a location to settle down and start the feeding process. The crawlers use their piercing-sucking mouthparts to withdraw plant fluids from the mesophyll layer of the needles. This causes the needles to turn yellow, then brown. In situations where excessive populations of the pine needle scale are present, entire branches may be killed. In fact, entire trees may be killed, especially pine trees that are “stressed.” Furthermore, young crawlers may be blown onto other plants via wind currents, or carried by birds and/or animals, which can initiate a new infestation. Pine needle scale is a hard scale so no honeydew is produced. There may be two generations per year.

How do you manage pine needle scale? Similar to most insect and mite pests this involves a combination of maintaining plant health and avoiding undue “stress” and treating infested plants with insecticides accordingly. Cultural practices including watering, fertility (if necessary), mulching, and pruning when properly implemented will avoid “stress” and decrease susceptibility to pine needle scale. Regular forceful water sprays will quickly remove the crawlers from infested plants. Insecticides commonly recommended for regulating pine needle scale populations include those with the following active ingredients: acephate, bifenthrin, carbaryl, cyfluthrin, potassium salts of fatty acids (insecticidal soap), and petroleum, mineral, or neem-based oils (horticultural oils). These are primarily contact insecticides and applications are most effective when crawlers are the predominant life stage present. Thorough coverage of all plant parts is important and repeat applications will be required every seven to 10 days because
second-generation pine needle scale eggs tend to hatch over an extended period of time. Many of these insecticides are directly harmful to natural enemies including parasitoids and predators (e.g., ladybird beetles) so caution should be exercised to minimize applications—if possible—in order to prevent a pine needle scale outbreak from occurring. (Raymond Cloyd)

**Pine Sawfly**

Pine sawflies are feeding now. If you have had a problem with this insect before, check your pines for damage. When these worms are small, they cannot consume a complete needle, so they rasp off the top layer of cells. This leaves individual needles brown and twisted. Look for this damage to pinpoint where sawfly larvae are feeding. The larvae are gregarious, so a number of larvae will be found close together. As the larvae mature, they will consume whole needles and can virtually strip a tree. This happens before new needles expand, so the tree is rarely killed. The pine sawfly prefers Scotch and Mugo pines. A number of insecticides can be used for control including Orthene, cyfluthrin (Bayer Lawn and Garden Multi-Insect Killer), malathion, esfenvalerate (Monterey Bug Buster II) and Sevin. An effective organic product is spinosad (Captain Jack’s Deadbug Brew; Fertilome Borer, Bagworm, Leafminer and Tent Caterpillar Spray). Horticultural oils and Insecticidal Soaps are also effective because of the soft skin of sawfly larvae. (Ward Upham)

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