VEGETABLES

Setting Out Tomatoes

Gardeners often try to get a jump on the season by planting tomatoes as early as possible. Though this can be successful, there are certain precautions that should be observed.

Harden off plants: Plants moved directly from a warm, moist greenhouse to the more exposed and cooler conditions outside may undergo transplant shock. Transplant shock causes plants to stop growing for a time. Plants can be acclimated to outside conditions by placing them outdoors in a location protected from wind and full sunlight for a few days before transplanting. Another way to harden off plants is to transplant them and place a cardboard tent or wooden shingle to protect them from wind and sun for 2 to 3 days. The best conditions for transplanting is an overcast, still day.

Protection from frost: Tomatoes cannot tolerate frost. Though we are past the average date of the last frost in most of Kansas, watch the weather and cover the plants if frost threatens. A floating row cover or light sheets can be used for protection. Actually a floating row cover can be left on the plants for two to three weeks to increase the rate of growth and establishment.

Adequate soil temperature: Tomato roots do not do well until soil temperatures reach a fairly consistent 55 degrees F. Check the temperature at 2 inches deep during the late morning to get a good average temperature for the day. Plastic mulch can be used to warm soil more quickly than bare ground. Purple leaves are a sign of phosphorus deficiency due to too cool soils.

Other tips for getting tomato plants off to a fast start include:
1. Use small, stocky, dark green plants rather than tall, spindly ones. Smaller plants form roots rapidly and become established more quickly than those that are overgrown.

2. Though tomatoes can be planted slightly deeper than the cell-pack, do not bury plant deeply or lay the stem sideways. Though roots will form on the stems of tomatoes, this requires energy that would be better used for establishment and growth.

3. Use a transplant solution (starter solution) when transplanting to make sure roots are moist and nutrients are readily available.

4. Do not mulch until the plant is growing well. Mulching too early prevents soil from warming up. (WU)

**Red Plastic Mulch and Tomatoes**

Plastic mulches have long been known to provide advantages for the vegetable grower including earlier fruiting, increased yields and weed control. More recently advantages have been noted for colored mulches over the more traditional black plastic mulch. With tomatoes, the color of choice has been red. Though normally there is an increase in production of marketable fruit with red mulch over black mulch, the amount of the increase varies with the type of year we have. There may be no increase during years of near-perfect weather or up to a 20% increase with less favorable growing conditions. A good average expected increase is about 12%.

So how do you apply plastic mulch? Commercial growers have a mulch-laying machine that applies the trickle irrigation line and the mulch in one operation. Home gardeners must do this by hand. The first step after soil preparation is to place a trickle line near the center of where the mulch will lay as the plastic will prevent rainwater or overhead irrigation from reaching the plants. Then construct trenches for the outer 6 inches of the plastic mulch. This allows the center of the bed to be undisturbed with the edges of the mulch draping down into the trench. Fill the trenches to cover the edges of the mulch. This will prevent wind from catching and blowing the mulch. If the soil has been tilled, a hoe is all that is needed to prepare the trenches. (WU)
Help for New Vegetable Gardeners

Kansans that are new to vegetable gardening often don’t know how much of each crop to plant. K-State Research and Extension has a publication that can help. The “Vegetable Garden Planning Guide” gives information on the size of planting needed per person and the average crop expected per 100 feet. Also included is a garden calendar highlighting suggested planting dates and expected harvest dates. Crop specific information is detailed including days to germinate, plants or seeds needed per 100 feet of row, depth of planting, spacing within the row and spacing between rows. You can find the publication at your local county extension office or online at: http://www.ksre.ksu.edu/library/hort2/mf315.pdf

If you don’t know the location of your county extension office, see http://www.ksre.ksu.edu/Map.aspx (WU)

FRUIT

Fruit Tree Sprays and Rain

A spreader-sticker should be used in fruit tree sprays to improve the distribution and retention of fungicides and insecticides on fruit and leaves. However, even with a spreader-sticker, a rain can reduce the length of time the materials are effective. Less than one inch of rain since the last spray will not significantly affect residues. One to two inches of rain will reduce the residue by one half. Reduce the number of days until the next spray by one half. More than two inches of rain since the last spray will remove most of the spray residue. Re-spray as soon as possible. Details on when and what to spray are available in the K-State Research and Extension publication, "Fruit Pest Control for Home Gardens" at http://www.ksre.ksu.edu/library/hort2/c592.pdf. (WU)

ORNAMENTALS

Cedar Apple Rusts

The birds are singing, the tulips are blooming, and junipers (also called red cedars) are “blooming” in another fashion. Cedar apple rust is here. The pathogen (a fungus) spends part of its life cycle on a juniper tree, and the other part of its life cycle on apples, crabapples, hawthorns, or quince. To
simplify, we’ll just call them “apple hosts.”

Those jelly-like orange masses on the junipers produce spores that infect the apple hosts. Once infection occurs, leaf spots on apple leaves develop in 1-3 weeks. Eventually, fungal spores are produced in these leaf spots on the apple tissues. The spores are spread by wind and rain back to junipers starting in about July. Without both hosts the fungus can’t complete its life cycle.

The disease looks dramatic on junipers, but it does not cause any harm. The rusts can cause problems in the apple host, however. If infection is severe, many leaves drop off early and the tree is weakened due to reduced photosynthesis. If your tree only gets a small amount of rust each year it probably won’t be an issue for long term tree health.

Management options (for apple hosts):


2) **Tree care:** For any apple tree, proper pruning will allow air movement through the canopy. This practice reduces the leaf wetness that promotes disease. Maintaining overall tree health will also help prevent the disease.

3) **Fungicides:** Homeowners with a bad history of this disease (severe defoliation) might consider preventative fungicide sprays on the apple hosts when leaves are out and the orange galls are active. For best control, applications should continue through May or as long as the orange galls are active.

Products with the active ingredients myclobutanil or propiconazole are examples of materials labeled for cedar apple rust management in flowering crabapples and non-fruiting apples. Some myclobutanil products are labeled for fruiting apples. However, in all cases, make sure you check the label carefully. For example, the myclobutanil product “Immunox Plus” is labeled for rust on flowering crabapples, but not for fruiting/eating apples, as it contains an insecticide along with the myclobutanil ingredient. In contrast, “Immunox Multi-Purpose Fungicide” is labeled for fruiting apples. If your local store does not carry products for fruit trees, you can find internet sites which carry different products.


TURFGRASS

Burning Warm-Season Lawns

My friends Dr. Richardson and Dr. Martin from Arkansas State and Oklahoma State, respectively just wrote a couple of good articles about burning warm-season grasses. It started with an article Dr. Patton wrote last year, “Burning Lawns: A Good Idea or Bad Idea?” [http://turf.uark.edu/turfhelp/archives/030810%20Burning%20Lawns.html] and progressed to an article Dr. Richardson wrote this spring after a bermudagrass area burned at their research center and Mike took some pictures and made some comments. “Burning Grasses and Spring Greenup.” [http://turf.uark.edu/turfhelp/archives/040811%20Burning.html]

Dr. Martin then offered his expertise in an email reply to Mike, “Response to Burning Grasses and Spring Greenup.” [http://turf.uark.edu/turfhelp/archives/041211%20Burning2.html]

Basically, there are some benefits to burning warm-season grasses such as possible reduction of weeds, reduction of thatch, and earlier greenup. But there are some serious negatives. First and foremost is increased risk of property damage and personal injury. Moreover, many cities and municipalities forbid burning within city limits. There also can be some agronomic negatives; burning lawns without adequate soil moisture can actually damage the grass and limit regrowth.

Since burning lawns comes with the risk of catching buildings on fire and possibly injuring people, I usually don’t recommend burning bermudagrass lawns, but check out these posts for the full discussion. (RSJ)

PESTS

Mole Control

Though moles spend most of their time underground, the damage they cause above ground is all too visible. Meandering paths of upheaved soil are evidence of the small mammals foraging for food. Some tunnels may be abandoned soon after being built while others are travel lanes and used for a longer period of time. Even though moles do not feed on plant matter, they can still cause damage by disturbing roots and uprooting small plants.

Numerous home remedies have been concocted to control moles including chewing gum, noisemakers, broken glass, bleaches, windmills, and human hair. None have been found to provide consistent and reliable control. Poison baits also fail to work because moles feed on earthworms and grubs, not vegetable matter. Even grub control products are ineffective as they do not control earthworms, and earthworms are the primary food source for moles.
The best control method is the use of traps. There are three types of traps (harpoon, choker, and scissor-jawed) and each can be effective but may take some time to master. Try the following suggestions.

Moles use some tunnels more than others. Use a broomstick or something similar to poke holes in a number of runs. Check a day later to see which runs have been “repaired.” These are the active runs and should be used for trap placement.

Place a trap in an active run by excavating soil, placing the trap and then replacing loose soil. Secure the trap so that the recoil will not lift the trap out of the ground. Make sure the triggering mechanism is in the center of the run.

Finally, push down two more holes, one on each side of the trap. Moles should be caught when they try to repair the tunnel. Move traps if no moles are caught within three days. For videos on tracking an active mole tunnel and setting a trap, see the mole control page with K-State Extension Wildlife Management at http://www.wildlife.ksu.edu/p.aspx?tabid=40 (WU)

**Termite Swarms Have Begun**

Termites have begun swarming in central Kansas. The presence of swarmers may indicate that there is an existing termite problem in or around a home, but the swarmers themselves are not destructive and are not going to be successful at starting a new colony in a home. Unless the females land on moist soil, they will die within a short time. Once the termites have mated, they will shed their wings and homeowners may find wingless swarmers or wings lying around in window seals (see photos). These insects and wings can be removed by vacuuming them up and placing the vacuum bag in an outdoor trash can. If termite swarmers are found, the home should be inspected for other signs of termites. Common symptoms of termite infestations include tube shelters built between the soil and wooden structures and the presence of mud-filled joints in wood framing, paneling, and trim in finished areas of a structure. In many cases, wood damaged by termites goes undetected. If termite damage is suspected, probe wood near a foundation with an ice pick or similar tool. If the wood is soft and easily punctured, termites should be suspected. Termite infestations are best treated and controlled by a professional pest control operator.

For more information on termites please visit: http://www.ksre.ksu.edu/library/entml2/MF722.PDF (JW)
Termites or Ants

Both termites and ants are able to swarm and may have wings during part of their lives. Since these insects are close to the same size, people often misidentify flying ants as termites. Because flying ants do not attack dry wooden structures like termites, it is helpful to be able to tell the difference.

Fortunately, there are several differences that can easily distinguish between the two. For example, ants have a thin waist; the waist of a termite is thick. Also, ants' antennae are elbowed, while termites' are straight. Thirdly, termites have two pairs of wings that are of equal length. Ants also have two pairs of wings, but theirs are of unequal length. Homeowners who find signs of termite activity should shop for a reputable pest control firm. (WU)

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