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Research and Extension
Butler County

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In this Issue:

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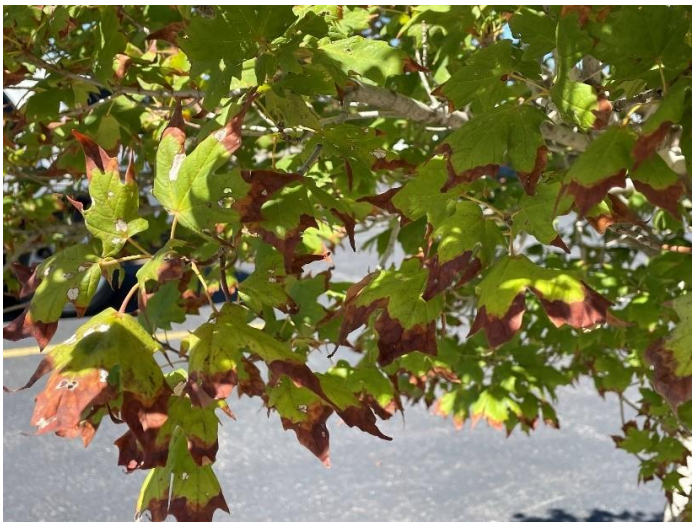
The Grapevine

Leaf Scorch

The hot weather has damaged the tender new leaves of trees and shrubs. This issue is called leaf scorch. Scorch is not a fungal disease but a physiological problem associated with damaged roots, limited soil area, or hot, dry winds. Moisture is lost so quickly from the leaves that the roots can't absorb and transfer water quickly enough to replace what is lost, causing the leaves furthest from the roots to burn around the edges. Though scorch is usually associated with droughty periods, it can appear even when the soil is moist. Newly planted trees or those that have small root systems are especially susceptible.

Leaf scorch typically starts as leaf spots or burns along the margin of the leaf and may spread further around the prominent leaf veins. Some trees, such as maples, aspens, or young oaks, are especially susceptible, but the condition can appear on any tree, including evergreens. The issue is often caused by an inadequate root system that is underdeveloped or damaged by overwatering.

Leaf scorch can also be caused by too much fertilizer being applied. Once leaf scorch appears, there is no cure, and the leaves will likely have brown spots till they drop. While the leaves will not turn green again, you can help the tree recover with proper water management. Happy Growing!!!



Dividing Iris

Iris are one of the easiest perennial plants to grow, providing abundant beauty through the home landscape. While Iris are easy to care for, they can quickly outgrow their space, and if they are crowded, the plants won't bloom very well. It's best to divide this plant every three to five years to encourage vigorous blooms. The best time to divide Iris is from mid-July through early-August when they are dormant for the summer. The root system of Iris consists of thick rhizomes (horizontal underground stems) with smaller shallow feeder roots. It's best to dig up a clump of iris, then divide and reset the plants. Use a sharp knife to cut the rhizomes apart so each division consists of at least one fan of leaves and a section of rhizome. If possible, leave two fans per rhizome, similar to the photo above, as these "double fans" will produce more flowers in the first year after planting. Divisions with a single fan will still bloom; however, it will take a year to have as many flowers as a double fan. Before replanting your iris divisions, inspect the rhizome for disease or damage and discard any pieces that show signs of borers or soft rot. You can remove borers from a rhizome if you wish or treat for soft rot by scraping the affected tissue, letting it dry, then dipping it in a 10% bleach solution. Once you have divided the iris, cut the leaves back by two-thirds before replanting. Plant iris 12-18" apart, closer for dwarf varieties, so the top of the rhizome is still visible above the surface. If possible, do a soil test before planting, as it's easier to add amendments to the soil while the irises are dug up versus after planting them. If you don't do a soil test, add a complete fertilizer into the soil and mix it to a depth of 6 inches. If you have been fertilizing the bed regularly, it's best to do a soil test, as excessive nutrients could be building up in the soil if you have been using a complete fertilizer for several years. Make sure to water your iris after planting and water it as needed while they are reestablished in that bed. This video shows how to divide iris and what the plants look like several years later: https://kansashealthyyards.org/all-videos/video/dividing-iris

Herbicide Drift

One of the most common questions during the summer months, especially in a hot, dry summer, is, "Why are my (insert plant) leaves all twisted and curled?" Herbicide drift injury happens far too often, with the saddest part being that this issue is usually preventable and, in some cases, not caused by the homeowner. Unfortunately, as shown in the picture on the left, many of our bedding and vegetable plants are very sensitive to herbicides, and it doesn't take much time to cause damage.

Various factors, including temperature, wind speed, and improper spraying practices, can cause herbicide drift. It's best to spray when wind speeds are below 10 mph but not completely still (no airflow can make things worse) and when the temperature is below 80 degrees. Several typical lawn and weed killer products contain 2,4-D, which can volatilize at warm temperatures before it dries and spread to where we don't want it. Always check the weather and read the label before applying any chemical to ensure you use it safely.

Luckily, unless a tree or shrub is stressed or gets a hefty dose of herbicide, most trees and shrubs will survive some herbicide drift. On the other hand, annuals and other herbaceous plants can easily be killed or severely stunted by drift. Once a vegetable has been hit with an herbicide, it's ultimately up to the homeowner to decide if they want to eat the produce. There is little information on how much chemical moves into the fruit from the leaves. It's best to prevent drift when possible and replant if you can.

Question of the Week- Tomato Fruit Issues

Tomatoes are the most popular vegetable that people grow in their gardens, and also one of the most requested at the farmer's market. While tomatoes are typically pretty easy to care for, they are not without their leaf and fruit issues. I've covered leaf spot issues in the past, so this time we will focus on the fruit. When we think of tomato issues, the most common one that comes to mind is Blossom End Rot, but that disorder is not the only one that impacts the fruit. There are three disease issues that can impact tomato fruit, and several different disorders that can decrease the quality, shelf life, and even how edible the produce is. Let's take a look at the most common ones and how to prevent them.

Anthracnose- This fungal disease is a frequent problem in the latter part of the growing season, specifically on ripening tomato fruit. The symptoms of this disease first appear as small circular, slightly sunken lesions on the surface of ripening fruit. The spots quickly enlarge, becoming bruise-like depressions that develop a water-soaked appearance beneath the surface of the skin. Soon after, black concentric rings consisting of numerous small fruiting structures form in the center of the lesions. The fungus can survive in infected plant debris and in the soil. During rainy weather, fungal spores are splashed onto the fruit. Most infection takes place on ripe or overripe fruit. Green fruit can also be infected, although symptoms do not develop until the tomatoes begin to mature. Disease development is favored by frequent rainfall and temperatures around 80 degrees Fahrenheit. If you have had issues with anthracnose in the past, you can apply preventative sprays. Once the fruits are infected, they can't be saved. Spray options include the active ingredients Bacillus subtilis, chlorothalonil, copper fungicides, or maneb. Be sure to read the label to check the post-harvest interval (how long after you spray before you can harvest the fruit) and make sure it is labeled for anthracnose and the vegetable you are spraying.

Bacterial Speck and Spot- In average Kansas summers, bacterial speck and bacterial spot of tomato are not common, but they can cause serious damage during wet growing seasons. On tomatoes, both diseases result in spot formation on the leaves and fruit. Heavy infection can cause defoliation, but the main effect of these diseases is the reduction of fruit quality. Leaf symptoms of bacterial speck and bacterial spot are similar. Both diseases cause small (⅛ to ¼ inch) black lesions on leaves. These spots are usually surrounded by a yellow halo. The lesions of bacterial spot tend to have a greasy appearance; those of bacterial speck do not. The two diseases are more easily distinguished by symptoms on the fruit. Bacterial spot results in small, black, slightly raised, water-soaked spots. These spots may enlarge to ¼ inch in diameter and become very rough and cracked. Bacterial speck lesions are also slightly raised, but typically are much smaller (1/16 inch) than those of bacterial spot. Bacterial speck lesions do not crack or become scaly, as in bacterial spot. These diseases can be prevented or reduced in severity by removal of plant debris in the fall, cultivation of weeds, rotation, and the use of clean (non-infested) seed and transplants. Start with the cultural practices described above. There are several copper-based compounds available for homeowners, but chemical control of bacterial diseases is inconsistent. Bacteria have extremely fast reproductive times, and it is difficult to manage an epidemic once it is underway. If you use a chemical, read and follow all label instructions.

Tomato Fruit Issues cont.

Tomato Cracking- Tomatoes typically crack because of fluctuations in the soil moisture. It's common to see cracks appear right after a heavy rain completely saturates the soil, as the tomatoes grow faster than the skin can stretch. Tomatoes can crack in two ways. Vertical splits, such as the photo at the beginning of this article, along the sides of the fruit, are known as radial cracking and are the most serious. This pattern of splitting commonly occurs during hot, humid weather. Cracking that occurs in a circular pattern, similar to the photo on the right, at the top of tomato fruits, ringing the stem end, is known as concentric cracking. With both radial and concentric cracking, your best option is to harvest fruits immediately, before they begin to rot. Your best bet is to keep the soil moisture as consistent as possible.

Yellow Shoulders- This disorder is the reason for this week's article. Yellow shoulders refer to when the top area on tomato fruit ("shoulder") never ripens, staying hard and yellow or green even as the rest of the fruit is red. Tomatoes can also have issues ripening on the inside, with the inside flesh being white and hard. No matter how long these tomatoes are left on the vine, the shoulders and interiors do not ripen. Yellow shoulder is often seen in heirloom tomato cultivars, where the trait has not been improved through plant breeding. Conditions leading to yellow shoulders are a complex blend of environmental conditions and plant physiology, but it is very common during periods of high temperatures. The shoulders of the tomato, or the top edges of the fruit, are often exposed to the most heat and sun, so they are most prone to the problem. Maintain good soil moisture and fertility. Or harvest fruits at the pink stage and allow them to finish ripening indoors, away from outside stresses. This often helps the tomato ripen more evenly. Choose cultivars in the future with less susceptibility to yellow shoulders.

Catfacing- This issue can be a perennial problem for many home gardeners. Catfacing is an abiotic disorder of tomatoes that affects developing fruit. It is a deformity of the tomato fruit when the flower bud develops abnormally before blossoming. It results in the blossom end (bottom) of the fruit becoming cracked, misshapen, or having enlarged scars. The deformity's resemblance to a cat's puckered cheeks gives the disorder its unusual name. Large-fruit tomato varieties, like many of the heirloom types, are most often affected by catfacing. It should be noted that the deformity does not detract from the taste of the tomato. There are several causes of catfacing, including high levels of soil nitrogen, excessive pruning, cool temperatures when plants are planted, extreme fluctuations in day and nighttime temperatures, periods of drought followed by heavy rains, irrigation during ripening, and finally, exposure to herbicides. This disorder doesn't impact the taste of the tomato; it simply makes it unattractive. To prevent this disorder, choose varieties that are less likely to have it, maintain a consistent soil temperature, avoid heavy early fertilization, and wait till after cool weather has passed before planting tomato plants outdoors.

Many of these diseases can be prevented with proper sanitation of the garden after the growing season. While you may not be able to prevent all of the disorders that were discussed, you can reduce the chances of getting them through variety selection, consistent soil moisture (when the weather allows for it), and picking fruit when they first start to turn colors but before they get too ripe.

Video of the Week

Solutions for Your Top Garden Insect and Disease Issues

Insects, diseases, and weather-related problems are always an issue in the landscape and garden. Learn to identify and solve the plant problems in your garden and where to go for more information. Watch the video on the [K-State Research and Extension Garden Hour Website.]

Upcoming Events

Garden Hour Webinars:

August 6th- Innovations in Horticultural Research at Kansas State University

September 3rd- Shrubs that Thrive in Kansas

October 1st-Keys to Successful Community Garden Spaces

Upcoming Events:

July 16th at 6 pm- Annual and Perennial Plants for Kansas at the Bradford Memorial Library

August 13th at 12:15 pm- Bring your lunch and learn about growing Cut Flowers at the Andover Library

August 18th at 12:15 pm- Bring your lunch and learn about growing and using Squash at Lori's EmporiYum

Mediterranean Bowl

This Mediterranean Bowl is perfect for meal prep. Utilize already-cooked brown rice to throw this lunch or dinner together quickly. Make extra dressing and store it in the fridge for next time. Use leftover vegetables, chicken, pork, or other protein.

Ingredients

Bowl

- **1 ½ cups cooked brown rice**
- **1 cup fresh spinach, roughly chopped**
- **½ cup broccoli, roughly chopped (raw or cooked)**
- **½ cup cherry tomatoes, sliced in half**
- **½ cup garbanzo beans, drained and rinsed**
- **Lemon slices to garnish, optional**

Lemon Oregano Vinaigrette

- **1 Tablespoon lemon juice**
- **1 Tablespoon olive juice**
- **1 teaspoon dried oregano**
- **Salt and pepper**

Directions

1. Measure cooked brown rice and place it into a medium to large-sized bowl. (If rice is not cooked, cook according to package directions.)
2. Wash and rinse spinach, broccoli, and cherry tomatoes. Chop or slice vegetables to your preference. Place on top of brown rice.
3. Drain and rinse a can of garbanzo beans. Place ½ cup on top of the brown rice and vegetable mixture.
4. In a small bowl, combine vinaigrette ingredients. Whisk together with a fork. Drizzle all over brown rice, vegetables, and beans.
5. Toss to combine. Add lemon slices as garnish (optional).

Recipe Source: Med Instead of Meds

LUNCH & LEARN

Bring your lunch and join Horticulture Agent, Calla Edwards, over the lunch hour during our monthly Lunch & Learn Program. This will be held over the lunch hour and will cover a variety of horticulture topics.

August 18th
12:15-12:45 p.m.

Lori's EmporiYum Lab!
1604 Custer Ln.
Augusta, KS

August Topic: Squash & How to Use It

Squash is a very fragile vegetable in the garden. Learn tips on preventing insect issues & recipes to use your surplus of squash this season.