

The Grapevine

Epsom Salt Myth

Picture this in your head. Your garden is growing, the tomatoes, squash and peppers are green, lush and doing great. You have had blooms for a while and those first fruits have set and are slowly growing. You check your tomatoes a few days later after a period of hot days with low humidity and notice that the biggest tomato has a brownish black lesion on the bottom. Your garden has been invaded by Blossom End Rot. A quick Google search tells you the best cure for Blossom End Rot is Epsom salts so you rush to the store to buy some. You have to save your tomatoes!!!! This is where I'm going to stop the story because while Google might tell you the Epsom Salts will stop your Blossom End Rot this is one time where Google doesn't know best. The Epsom Salt Myth needs to end here.

Blossom End Rot or BER is a common disorder found on tomatoes and it is more common in certain varieties of tomatoes than others. While BER is most commonly found on tomatoes it can also impact peppers, squash and other vegetables in the garden. Unlike other issues commonly found in the garden BER isn't actually caused by a disease but rather caused by a lack of calcium when the fruit is forming. This lack of calcium in the fruit usually isn't caused by a lack of calcium in the soil, our soils were formed from limestone of which calcium is one of the major components. This lack of calcium can come from a couple of sources:



- The first cause could be that the top of the tomato outgrew the root system during the early growing season while it was cooler and the root system could keep up. Once we hit the hot days of summer the root system can't supply the plant with enough water and calcium to keep up. The plant then sends the water, and the calcium it carries, to the leaves instead of the fruit causing BER. Heavy fertilization in the spring can cause this issue or make it worse.
- The second cause could be disturbance of the plant's roots leading to a lack of water being taken up by the plant. When you are weeding in the garden, try not to cultivate or use your hoe too deep in the ground near the plants to avoid damaging the roots.
- The third cause and most likely issue is inconsistent watering. Keep the soil moist but not water logged. Sometimes we get heavy rain from thunderstorms and there is nothing we can do but to just keep a consistent watering schedule and control what we can. Mulching around the plants can help to control the moisture levels in the soil and prevent weeds which lessens the amount of work you have to do.



There is no benefit to adding Epsom salts to your tomatoes. Epsom salts contain Magnesium Sulfate and have no calcium to help prevent Blossom End Rot. There usually also is no benefit to adding additional calcium to your soil in the form of Tums or Roloids. If you are concerned about your soil and the calcium level the best bet is to get a soil test or apply gypsum to your garden to add additional calcium. The best way to avoid BER is to water consistently, wait till fruit is setting on your plants to fertilize, pick varieties that are less likely to get BER and avoid damaging the roots of the plants. Even if you do have issues with Blossom End rot in your garden, remember that it will only last a short while (as painful as that can be) and will soon be gone from your garden for another year.

The Epsom Salt Myth is one of the most common gardening stories that I hear in the gardening world and unfortunately is one that seems to linger year in and year out. Remember to keep a consistent soil moisture level and your chances of Blossom End Rot will go down. If you keep a garden journal write down what varieties you had issues with and try not to plant them in the future. If you hear any of your gardening friends talk about Epsom salts and Blossom end rot, share these tips. If you have any issues please feel free to contact me either by phone or email. I would love to get out and tour your garden. Happy Growing and I hope your garden is thriving.

Weed of the Week- Pigweeds

This week we have had some questions on controlling “pigweeds” in a lawn or garden. This weed can be a major nuisance for gardeners, homeowners and farmers alike. There are many different types of pigweeds that can be found in the garden however all of them are summer annual weeds that emerge from April through October in Kansas. All pigweeds are from the genus *Amaranthus* which also has several ornamental plants as well. The most common pigweeds to find in the garden include red root pigweed, smooth pigweed, and spiny pigweed however there are other varieties as well. These weeds are native to the desert southwest portion of the United States and thrives in warm conditions with optimal temperatures for growth ranging from 96 to 120 degrees Fahrenheit. Some of the biggest issues with pigweeds is they grow far faster than our vegetables or flowers



with up to 1” of growth per day and they are prolific seed producers with some large plants capable of producing up to one million seeds a year. Pigweeds are commonly resistant to herbicides in part because the large number of seeds they produce leads to genetic mutations causing herbicide resistance. Luckily the seed is only viable in the soil for a few years unlike other weeds. There are several ways to control pigweeds in your garden or lawn, the first is a pre-emergent herbicide in the spring before the seeds germinate. Be sure to read the label to check if it lists pigweeds as one of the weeds it controls. In a garden setting mulch is an excellent preventative tool as the seeds need sunlight to germinate which is blocked by the mulch. If the weeds have germinated and started to come up there are two options, the first is to remove all the weeds either by hand or using mechanical means. The final option is to use post-emergent herbicides such as glyphosate, 2,4-D or a product with a combination of active ingredients.



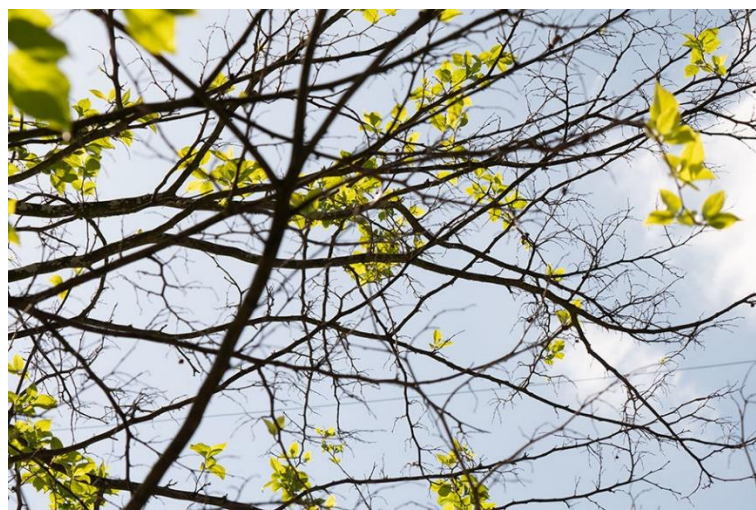
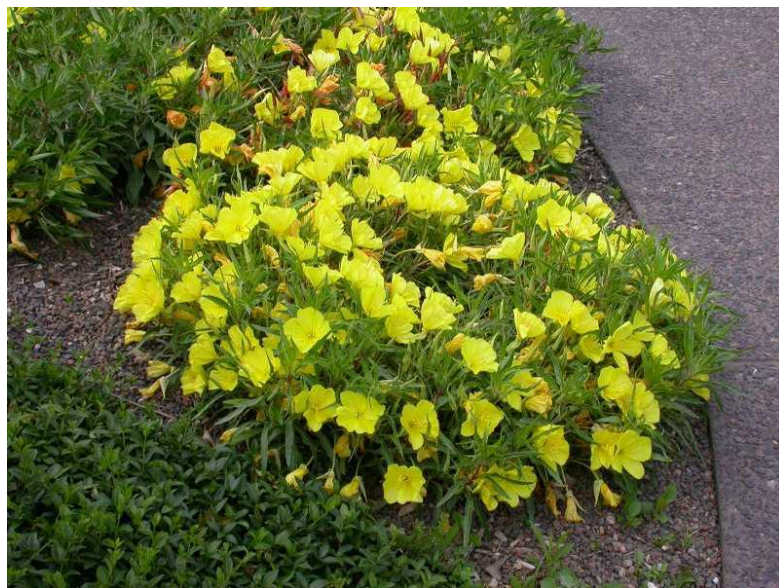
Issue of the week- Herbicide Drift

One of the most common questions during the summer months, especially if it is 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, many of our bedding and vegetable plants are very sensitive to herbicides and it doesn’t take much to cause the damage as shown on the left. Herbicide drift can be caused by a variety of factors including temperature, wind speed and improper spraying practices. It’s best to spray when wind speeds are below 10 mph but not completely still (no air flow can actually make things worse) and when the temperature is below 80 degrees. Several common 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 prior to applying any chemical to ensure you are using it safely. Once a vegetable has been hit with a herbicide it’s

ultimately up to the homeowner if they want to eat the produce. There is not much 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.

Plant of the Week- Missouri Evening Primrose

The beautiful yellow flowers that you might be seeing right now as you drive down the highways of Butler County is a native perennial called Missouri Evening Primrose. This native has a sprawling growth habit and tends to have multiple stems that drape across the ground. It can commonly be found on shallow sites, on the tops of bluffs or growing in rocky road cuts. This native blooms from May through August, has solitary yellow flowers that can be up to four inches wide with four petals and are a bright lemon yellow in color. Each flower only lasts one day typically opening in the late afternoon and staying open all night till the next morning. This plant is an important source of nectar and pollen for night feeding pollinators. When the flowers open they face upward at first but then turn downward after they have been pollinated. Missouri evening primrose can grow up to 12" tall and spread approximately two feet in diameter. This native is popular in rock gardens, native plantings, as a border plant due to its short height and in native pollinator gardens. Missouri evening primrose does not like poorly drained or wet soils and can get root rot in those conditions. It does like poor, shallow or dry soils and performs well in those locations.



Common Issue- Delayed leafing of trees

Across the county this spring we have had numerous reports of issues with trees leafing out this spring. There are a couple of reasons this is happening this year. Some of the reports have said the trees started to leaf out, then the leaves turned brown and fell off. The trees then leafed out a couple weeks later. This first issue was most likely caused by frost damage to the fragile new leaves. Most of the time healthy trees will then leaf out again a couple weeks later with secondary buds and be fine. The second issue we have seen this spring is trees that are not leafing out uniformly across the entire tree or across an entire row of trees. In some cases, the top the tree is leafing out or all the trees in a row have leafed out but one that is just now starting. In this instance there are a couple different reasons this could be happening. One of the first is again frost damage but this damage likely occurred before the leaves started to come out in early spring when we had some very cold nights (lows of 17 and 28) or the sudden drop in temperatures in December that likely damaged those buds. Again, the trees will likely come out of it and be just fine if this is the case. The second cause for this type of damage is the prolonged drought we have been in. While we have had some moisture recently which has been very helpful, prior to that we had one of the driest, if not the driest springs on record and very little moisture through the fall and winter. The trees are unfortunately stressed out, even trees that have been around for decades or even a hundred years, and this leads to delayed leafing out, thinner leaf canopies and trees that are more prone to insect and disease attacks than normal. This summer if it continues to be dry the best thing you can do for your trees is to water them at least once a month deeply to help preserve the health of the tree, yes even those that have survived previous droughts. If the tree doesn't leaf out at all the best way to check if the tree is alive is to scratch the bark off some of the smaller branches with your fingernail. If the tissue underneath is green, the tree may come out, if the tissue is brown that spot is dead.

Reminders-

- Prune off the foliage from spring blooming bulbs as it dies back. By this point in the year they have stored enough food to bloom the following spring. Pruning them back now cleans up the bed.
- Fertilize hanging baskets and annual plants as needed.
- Start mounding soil or mulch around the stems of potatoes to keep the tubers from being exposed to the light. Exposure to light causes the tubers to turn green.

Video of the week: Common Tomato Problems pt 1.

Tomatoes are one of the most popular vegetables to grow. But, there are several things that may cause problems -- anything from changes in the weather to disease and insects. This segment identifies some of the more common things to look for. Watch the video here: <https://kansashealthyyards.org/all-videos/video/common-tomato-problems-part-1>



Upcoming Events

- *June 7th at Noon- Drought Tolerant Lawns of Kansas- Warm Season Turfgrass*
Kansas weather is extreme, but summers are frequently hot and dry. Join Dr. Ross Braun, Assistant Professor of Turfgrass and Landscape Management, as he explains what it means to live in our “transitional climatic zone”, with the option to grow both cool- and warm-season turfgrass species. Learn how to grow grass species that are more drought tolerant, in order to better survive our summer weather and conserve water. This class is offered online via Zoom. For more information on the Garden Hour series or to register visit here: <https://hnr.k-state.edu/extension/consumer-horticulture/garden-hour/>
- *June 11th from 12 to 7 pm at various locations in El Dorado*
Get ready for a blooming good time! Join El Dorado Main Street on June 11th for our Garden Tour fundraiser. You'll embark on a botanical adventure across five unique gardens, showcasing the beauty of our community. Tickets for the event are \$20 each and can be purchased on Eventbrite or at the gardens on the day of the event. Sales support El Dorado Main Street and our mission to enhance our downtown identity and heritage, foster a center of activity for both business and recreation, and ensure economic stability for the heart of El Dorado. For more information or to purchase tickets online: <https://www.facebook.com/events/1427428451341611>
- *July 5th at Noon- Solutions to Your Top Garden Insect and Disease Problems*
Insects, diseases, and weather related problems are always an issue in the landscape & garden. Judy O'Mara, Director of the K-State Plant Disease Diagnostic Lab, and Dr. Raymond Cloyd, Extension Specialist in Horticultural Entomology, are here to help! Learn to identify and solve the plant problems you should be on the lookout for, and bring your insect & disease questions for assistance from our experts. This class is offered online via Zoom. For more information on the Garden Hour series or to register visit here: <https://hnr.k-state.edu/extension/consumer-horticulture/garden-hour/>