The Grapevine

Tomato Support and Pruning

How is your garden growing? Tomatoes are probably the most popular vegetable that people grow in their gardens every year. While tomatoes are pretty easy to grow there are a few things that we need to think of now so our tomatoes can be productive this year. Pruning your tomatoes and providing adequate support for the plants as they grow can make a big difference in how productive, disease free and easy to harvest your plants can be. Before the plants get too big it’s time to do some preventative work so the summer can be stress free.

Until a couple years ago I hadn’t really given a thought to pruning tomatoes. I would periodically trim the vines back so they didn’t get too out of control but beyond that I just let them grow wild. Turns out pruning your tomatoes can help them be more productive and disease free in the long run. Pruning can help balance the ratio of vegetative growth to fruiting growth which can help produce larger fruit and it also allows more air flow through the plants so they are less likely to have disease issues. The first pruning should happen when the tomatoes are planted and that is to remove the bottom leaves that are touching the ground. The second pruning should happen when the plants are approximately 18-24” tall and applies to all types of tomatoes (except the micro sized ones). This time you will remove all the leaves 6-12” above the soil and you will also remove all the suckers up to the first bloom cluster. Removing these leaves helps to reduce the chances of having soil borne diseases on tomatoes and removing the suckers helps keep the tomatoes in check. If you have a determinate variety of tomato your pruning is done for the year. Indeterminate varieties will require a bit more work as you will continue to remove the suckers (like the picture to the right) as the plant grows throughout the season. You can also prune the ends of the tomato vines on indeterminate tomatoes to keep them somewhat in check. Check out this video from Iowa State on pruning tomatoes and some more tips on how to prune.

Once you have your tomatoes planted and you have removed the bottom leaves the second thing to consider is how are you supporting the tomato plant. I won’t spend much time talking about tomato cages because most people know about them but they aren’t the only option. For those of us who dislike storing tomato cages there are alternatives. One of the most popular with commercial growers is to use trellises to support the plants. There are two major methods, the first is to use a string trellis suspended from wire that is strung between two posts. You twist the string around the stem of the plant as it grows to support it. With this method you do prune off any side shoots every week or so and leave just the main stem. This system works really well for indeterminate type tomatoes. To learn more about this method of trellising tomatoes check out this video by the University of Maine. The second method of trellis is called the Florida Basket weave. This method is similar to the string trellis except instead of the strings being overhead the strings run parallel to the ground and the tomatoes are woven between the strands as they grow. This method also works well for determinate and indeterminate types of tomatoes. To learn more about how to grow tomatoes using the Florida Basket weave watch this video by K-State Research and Extension. The final option for growing tomatoes is to use a stake for every plant and tie the tomato to it as it grows up. This method works similar to the string trellis method talked about earlier but without the string.

Tomatoes are one of my favorite vegetables to grow but I’ve always hated storing the cages and how out of control some varieties can get. Hopefully with the above tips you, like me, can keep your tomatoes productive, disease free and under control this growing season. Happy Growing!!
Keeping up with the Weeds

The rain that has fallen over the last few weeks, for some, has been welcome after the dry fall and winter we had however, the weeds are taking advantage. It’s an unfortunate fact that all of our in-ground gardens have a weed seed bank in the soil and once you get behind weeding the garden, it can seem almost impossible to catch up. While the long-range forecast is calling for a dryer pattern to set up later in June, here are some tips to help stay ahead of the weeding during the summer.

- **Weeds vs. Crops-** One of the best steps to keep your garden weed free is to provide an environment that favors the vegetables over the weeds. Plant your vegetables at the ideal times, fertilize the vegetables as needed so they grow vigorously and outcompete weeds, use drip irrigation or soaker hoses to only water the vegetables and don’t water between rows where weeds will sprout.

- **Cover the soil-** The less soil surface that sees the sun, the fewer weeds you will have. There are several options available to cover your soil from grass clippings (make sure you haven’t applied weed killer) to cardboard boxes flattened to weed mat, it all depends on your preference and how much you want to spend. My plan this summer is to use cardboard boxes as the base then cover the cardboard with lawn clippings, leaves and other composted materials to form a layer 4-5” thick to keep the soil constantly covered. Even if you don’t cover the soil around the plants, try to cover the pathways and open spaces between the rows.

- **Use cover crops-** Cover crops are an excellent way to suppress weeds between plants, reduce compaction and add nutrients to the soil. You can plant cover crops in the spring to suppress summer weeds or in the fall after the garden has come out to keep winter weeds from growing. Some common cover crops include winter wheat, annual rye grass, clovers, vetches, peas, soybeans, and buckwheat. I also liked to mix in radishes or a root crop to help break up compacted soil.

- **Use mechanical means-** If possible it’s best to hoe, pull or control weeds when they are small but they aren’t the only mechanical method of controlling weeds. If you are feeling brave using a flame weeder is an option (although I would avoid it if the weather turns dry) to control a variety of weeds. One of my friends is trying a solar powered weeding robot for her commercial vegetable garden. So far, she has had great success with her robot keeping up with the weeds and considers it a good investment although it has a limited range of area it can cover.

- **Chemical-** For some weeds, chemicals maybe the best method of keeping them under control but they should be used with caution. Glyphosphate products can be used in the garden, just make sure to use regular glyphosphate and not one of the options that has a residual. Another option is to use Preen or a similar product that prevents the weed seeds from germinating. If you plant to plant a fall garden, be sure any pre-emergant herbicide will have worn off before you plant your fall seeds. With any chemical application, be sure to read the label thoroughly and apply all products according to the label for your safety and the best growth of the garden.

Weeds will unfortunately always be a part of the gardening process. Your best bet is to use several methods to control the weeds in combination to achieve the best overall control. Do your best to prevent the weeds in your garden from flowering and going to seed which will make the problem worse in the coming years. In my experience the best way to prevent weeds is to cover the ground with something to keep the weeds from germinating. You can eventually win the war but there will be several battles along the way.

**Video of the week: Common Tomato Problems Pt. 2**

Tomatoes are one of the most popular vegetables to grow. But, there are several things that may cause problems -- including insects, sunburn, calcium deficiency, and cracking. This segment shows examples and gives advice on how to correct some of the issues. Watch the video here: https://kansashealthyyards.org/all-videos/video/common-tomato-problems-part-2
Weed of the Week - Bindweed
This week’s weed of the week is field bindweed. This member of the morning glory family is also called Creeping Jenny and is a native of Eurasia that was first introduced to the US via contaminated field and garden seed in the mid 1700’s. It is found in every state in the US and is listed as a noxious weed in 22 states total. Field bindweed is a perennial weed that has an extensive and deep fibrous root system that can reproduce both by the roots and also via seed. Each field bindweed plant can produce up to 600 seeds of which 90% are viable, 25% will germinate in the first year and the seeds are viable in the ground for 60 years or more. One of the reasons field bindweed is challenging to control is its ability to reproduce by pieces of the roots. The root system can go up to 20 feet in the ground and the plant can regrow from a root bud up to 14 feet below the ground. There are a couple options when trying to manage this weed. The first is mechanical control and involves hand pulling seedlings and young plants along with hoeing or tilling every couple weeks during the growing season. Using mulch or weed mat in flower beds or gardens can help slow the spread by reducing the amount of sunlight that reaches the ground. There are biological controls available however they have unfortunately not been very effective and are hard to establish. Often chemical treatment is the best bet but it will have to be continued for several years till the seed and root reserves have been exhausted. Field bindweed is a tough customer, but with time and persistence it can be eradicated.

Insect of the Week - Elm Leaf Beetles
The insect question of the week is the Elm Leaf Beetle. This insect feeds on the leaves of all elms but is especially fond of Siberian and American Elm trees. While their feeding generally will not kill the tree, over time it can weaken the trees and leave them open for attack by the elm bark beetle which carries Dutch Elm Disease. These beetles also become a nuisance of households in the fall as they look for a place to overwinter which often can be inside a house and in the spring when they leave their overwintering site to find leaves to feed on. The larva of the beetle is the most destructive and they are about ½” long and dull yellow with two black stripes. When the larva emerges from the eggs they feed for two to three weeks before dropping or crawling to the base of the tree to pupate for 10 days. The adult beetles are about ¼” long, yellowish to olive green with a black stripe along the side of each of the wing covers, black eyes and four black dots on the thorax. In Kansas we have two generations of these insects. While these insects won’t kill the tree, they do weaken it and make it unsightly. To control the insects, you have three options. The first is to spray the foliage and thoroughly cover all of it to kill any insects. The second option is to treat the larva when they are near the base of the tree and just prior to pupation. With this treatment only the trunk of the tree would need to be sprayed. The third option is to band the trunk with a product called “Tree Tanglefoot Barrier” to catch the larvae as they drop off the tree. Unfortunately, it’s best to have a community wide approach to treating trees as the beetles will spread from one tree that wasn’t treated to another. Be sure to read the label before application but some active ingredients that are recommended to spray on elm leaf beetles include Carbaryl, Cyfluthrin, Imidacloprid, Neem, Pyrethrins. If the beetles are a pest of the home your first plan should be to seal the windows and cracks up around the house the best you can and then spray around the windows and doors with a product that contains permethrin, bifenthrin or cyfluthrin.

Disease of the Week - Phytophthora Blight
This fungal disease can be found world-wide and is a widespread issue in cucurbits and peppers throughout much of the vegetable producing areas in the United States. This disease can impact every part of the plant from the roots to the fruit. In this instance the disease showed itself as a crown rot which is a dark, water-soaked lesion that eventually turns light brown (see the lesion in the photo to the left) right above the soil surface. Other symptoms of the disease include rapid wilting of the plant with root infections, dark-green, water-soaked lesions on the fruit which eventually shrivels but doesn’t drop off. Phytophthora blight is a soil born disease that needs warm, wet soils to infect the plant. Control of this issue can be difficult but usually involves discarding any diseased plants as soon as you can, crop rotation to non-susceptible plants such as cereal crops (corn), and the use of a fungicide to help prevent the fungal infection. It is also recommended to plant varieties that are resistant to the disease in areas where there is known to be a problem.
Reminders-
- Prune off suckers on fruit trees as they appear.
- Remove tree stakes that have been on for a year or more.
- Prune off dead foliage from bulbs.
- Stop harvesting asparagus.
- Turn compost pile as it cools.
- Fertilize warm season lawns

Upcoming Events

- 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/