

# South Plains *horticulture*

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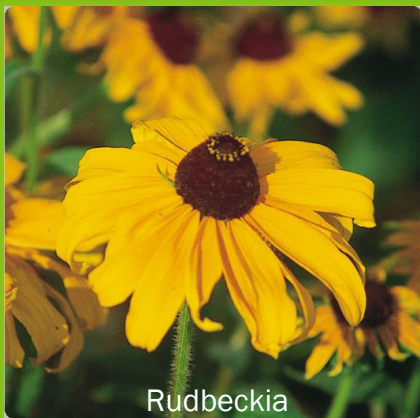
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## PLANT OF THE MONTH: *RUDBECKIA*

Rudbeckia spp, commonly known as Black-Eyed Susan or Coneflower, is a stiff upright biennial and has naturalized across much of Texas. This cheerful plant has become one of the most common American wildflowers!

Bright yellow, daisy-like blooms with dark domed centers occur atop 1-3' stems. This drought-tolerant, sun-loving, plant attracts birds and nectar feeding pollinators and is deer resistant. It is also a larval host plant for gorgone checkerspot and bordered patch butterflies. Rudbeckia is easily grown from seed sown in the fall.



Rudbeckia

Image courtesy of: Wildseed Farms



*Volunteer Mr. Billy Morrison tilling beds*

## BOOKER T. WASHINGTON COMMUNITY GARDEN

Texas A&M AgriLife Extension Lubbock County Horticulture, South Plains Hunger Solutions Hunger and Horticulture Team, and Voice of Hope have partnered with the Roots Historical Arts Council to re-establish the Booker T. Washington Community Garden located on E 24<sup>th</sup> Street and Cedar Avenue in the Chatman Hill neighborhood of Lubbock. This community garden is serving many diverse needs from food insecurity in youth and seniors, to acting as an outdoor classroom for urban youth (YWCA, Guadalupe/Parkway Community Centers, and Phea Boys and Girls Club) to learn to garden. Interested in learning more about the garden or lending a helping hand? Contact Shirley Green with the Roots Historical Arts Council [www.rootshistoricalartscouncil.com](http://www.rootshistoricalartscouncil.com).



Happening Now:

## SPHAEROPSIS TIP BLIGHT OF PINES



Pine trees can make wonderful additions to your property. Due to its year-round color and interest, provided privacy, ability to act as wind breaks, aromatics, and numerous other reasons, they are a highly valuable tree to have.

One drawback to pines is its susceptibility to environmental stressors, including drought, that weaken the trees immune system and make it vulnerable to multiple problems. One fungal disease that I have been receiving frequent calls about this past month is Sphaeropsis Tip Blight, formerly known as Diplodia Tip Blight.

### Symptoms

Sphaeropsis is most common in mature trees, 15 years or older. Symptoms begin in the spring, when new needles are killed as they emerge and elongate on lower branches. The stunted new needles turn yellow then brown and die (figure 1). As the disease progresses it invades twigs and causes branch flagging up the tree leaving only the upper branches green while the middle and lower branches are brown, brittle and dead (figure 3). Symptoms can often be detected in late April/May; but the full extent of the infection may not be visible until late June/July.

Small, raised, black spore-producing bodies of the fungus break through the surface of killed needles, cone scales, and the bark of twigs or branches. It is often necessary, however, to pull the needles out of the needle sheath to observe these spore-producing bodies on the bottom portion of the needle. Stunted, straw-colored-to-gray needles are most likely to show signs of the fungus. The fungus also infects pinecones. The dark spore-producing bodies are also frequently abundant on the underside of the cone scales of second-year cones.

*“Drought conditions are a major contributing factor to Sphaeropsis tip blight.”*



Figure 1. Pine needles are stunted and killed as they emerge in spring.

Photo courtesy of Oklahoma Cooperative Extension Service

### Cause

Sphaeropsis tip blight is caused by the fungus *Sphaeropsis sapinea*. During moist weather in spring, spores ooze from black spore-producing bodies on dead tissue. Wind and rain carry the spores to young needles and buds. The fungus enters and kills the tissue. Within a year, the fungus produces more spores. The fungus infects current season needles and developing shoots from late April to mid-June. New growth is most susceptible in early spring starting when buds begin to open. Wet conditions are needed for infection. If dry weather prevails at the time new growth is most susceptible, infection levels are very low. Second-year seed cones are initially infected in late May.

Numerous spore-producing bodies develop on infected cones; thus, the increased damage to older trees is likely related to this fungus buildup. Infected seed cones are often observed on otherwise healthy pines, which indicates that the fungus builds up on seed cones of older pines before new shoots are extensively infected.

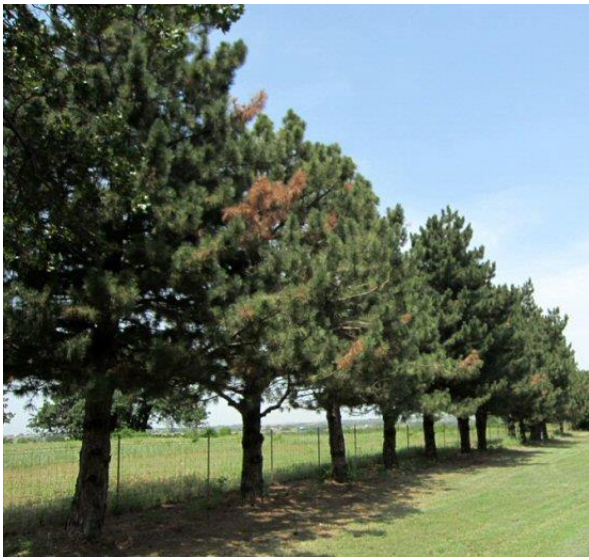


Figure 2. Several branches are flagging due to Sphaeropsis.

Photo courtesy of Oklahoma Cooperative Extension Service



Figure 3. Sphaeropsis progressing up the tree.

Photo courtesy of Oklahoma Cooperative Extension Service

## Control

Stress conditions predispose trees to infection; therefore, do all you can to maintain good plant vigor. Be especially diligent to water during prolonged drought periods or on dry sites. Soil compaction, grade changes, poor water drainage, and restricted growing sites are common urban root stress factors that should be avoided. Remove dead or dying branches from infected trees whenever possible. However, sanitation by itself will not significantly reduce tip blight since so much of the fungus remains within the tree canopy. Avoid pruning trees during spring and early summer, as the fungus can also infect wounded tissue. Also, do not plant susceptible pines near infected trees.

It is critical that the new, expanding shoots be protected from infection in early spring. Fungicides should be applied at bud break, when candles are half grown, and again when candles are almost expanded. Fungicides effective in controlling Sphaeropsis tip blight include: chlorothalonil (sold as Daconil 2787, Fung-onil., etc.); thiophanate-methyl (sold as Halt, Cleary's 3336, etc.); and propiconazole (Banner MAXX).

Not all chemicals will be readily available to homeowners; some are primarily for use by commercial nursery growers and landscape professionals. Before buying or applying any pesticide, check the label to make sure the plant type is listed. Fungicides vary in their formulation and percent active ingredient.

**Follow all label directions regarding amounts of pesticide to use, methods of application and safety warnings.**

Sphaeropsis tip blight is occasionally confused with environmental stress and/or pine tip moth damage. Environmental stress factors including drought or winter damage are common problems. With environmental stress, the shoots are often killed before the new needles start to emerge rather than death occurring during emergence. Pine tip moths hollow out the tip of pine shoots. If the shoot tip is broken off, a hollowed-out area (sometimes containing a larva) is present.



Most ornamental plants have one major job to do: look nice. These plants might reside in your landscape, in your home or office, or in a public park. To achieve their goal to “look nice”, plants need nutrients. In the Lubbock area, iron is one micronutrient (only needed in small amounts) that is hard to come by with our high soil pH and low annual rainfall averages. Iron is important for all plants, as it is part of chlorophyll, plays a role in photosynthesis, and allows the plant to function and grow.

## Symptoms

Iron deficiency symptoms worsen over time. New leaves near the ends of branches or the tops of a plant start to turn a yellow/chartreuse color first. They also will exhibit interveinal chlorosis (veins of a leaf are green but the leaf surface is yellow see figure 1). As the deficiency worsens, the veins will also turn yellow and brown spots may appear on leaves. There are other nutrient deficiencies that look

similar. A soil test or tissue analysis of plant leaves is a way to definitively diagnose iron deficiency. Poorly draining or waterlogged soils also contribute to iron deficiency. Roots cannot get enough air and reduces their ability to take up iron.

## Control

There are different ways to correct iron deficiencies, which is why a soil test can be helpful. If there is an adequate amount of plant accessible iron in the soil (above 4.5ppm) and

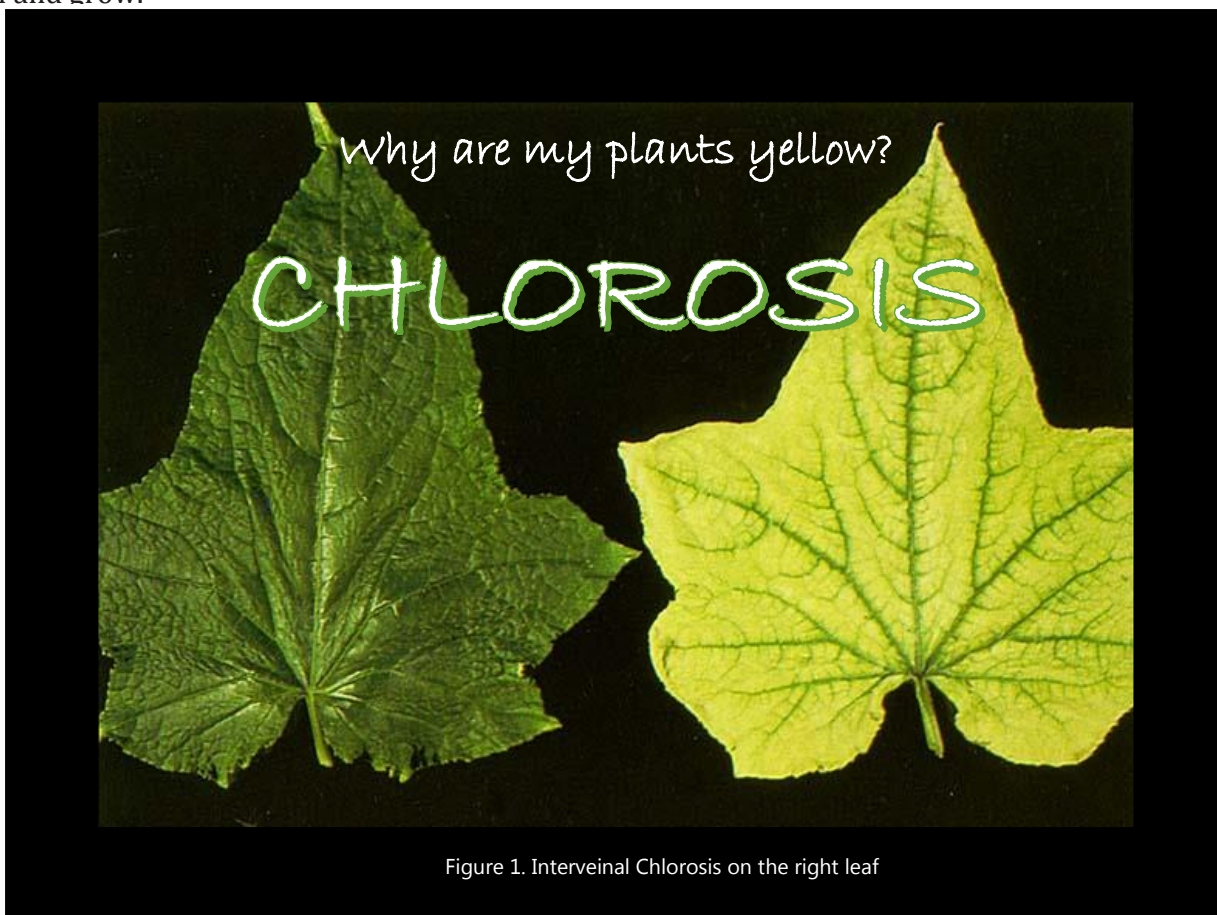


Figure 1. Interveinal Chlorosis on the right leaf

the soil pH is high, the pH needs to be lowered with elemental sulfur or sulfur compounds. Sulfur lowers soil pH but needs to be incorporated into the soil as it does not move easily. Aluminum sulfate is a commonly used sulfur compound to lower soil pH. It is worth mentioning that this product contains aluminum and if over-applied can cause aluminum toxicity. **Follow all label directions regarding amounts of chemical to use, methods of application and safety warnings.**

If the pH level is acceptable for the

plant and the amount of accessible iron is low, iron will need to be added to the soil. This can be done by using an iron fertilizer. These fertilizers contain a high level of iron, some of which will be immediately available to the plants. Some common iron fertilizers also contain sulfur, calcium, and soil bacteria, all of which increase the level of plant available iron.

Iron deficient trees, looking at you Pear Trees, can be injected with iron supplements like ferric ammonium

citrate right into the trunk by trained professionals. This solution is only temporary- the soil must be treated, or the deficiency will redevelop.

## 4 WAYS TO PREVENT MOSQUITO BITES



**Drain or dump** any standing water around your home: Clean out leaf-filled gutters; dump bird baths and flower pot drain dishes every week; and store buckets, toys, wading pools, wagons, and wheel barrows so they do not catch and hold water; and screen rain barrels and cisterns to keep out mosquitoes.



**Day, dusk and dark.** Some kinds of mosquitoes are active at any time, day or night. West Nile virus mosquitoes are active from dusk to dawn; but mosquitoes that carry Zika and chikungunya are active in shady areas all day. Mosquitoes can bite anytime the temperature rises above 55°F.



**Dress** to discourage mosquito bites. When you'll be outdoors for an extended period, wear long pants and loose fitting, long-sleeve shirts. Fabrics with tight weave usually work better than knits or other loosely woven materials.



**DEET** or another mosquito repellent recommended by the Centers for Disease Control and Prevention (CDC) is your best defense if you must be outdoors when mosquitoes are active.



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“For me, gardening is a matter of my enthusiasm holding up until my back and leg muscles get used to it.”

-Every Master Gardener Who Ever Served



<https://www.facebook.com/extensionmastergardener/>

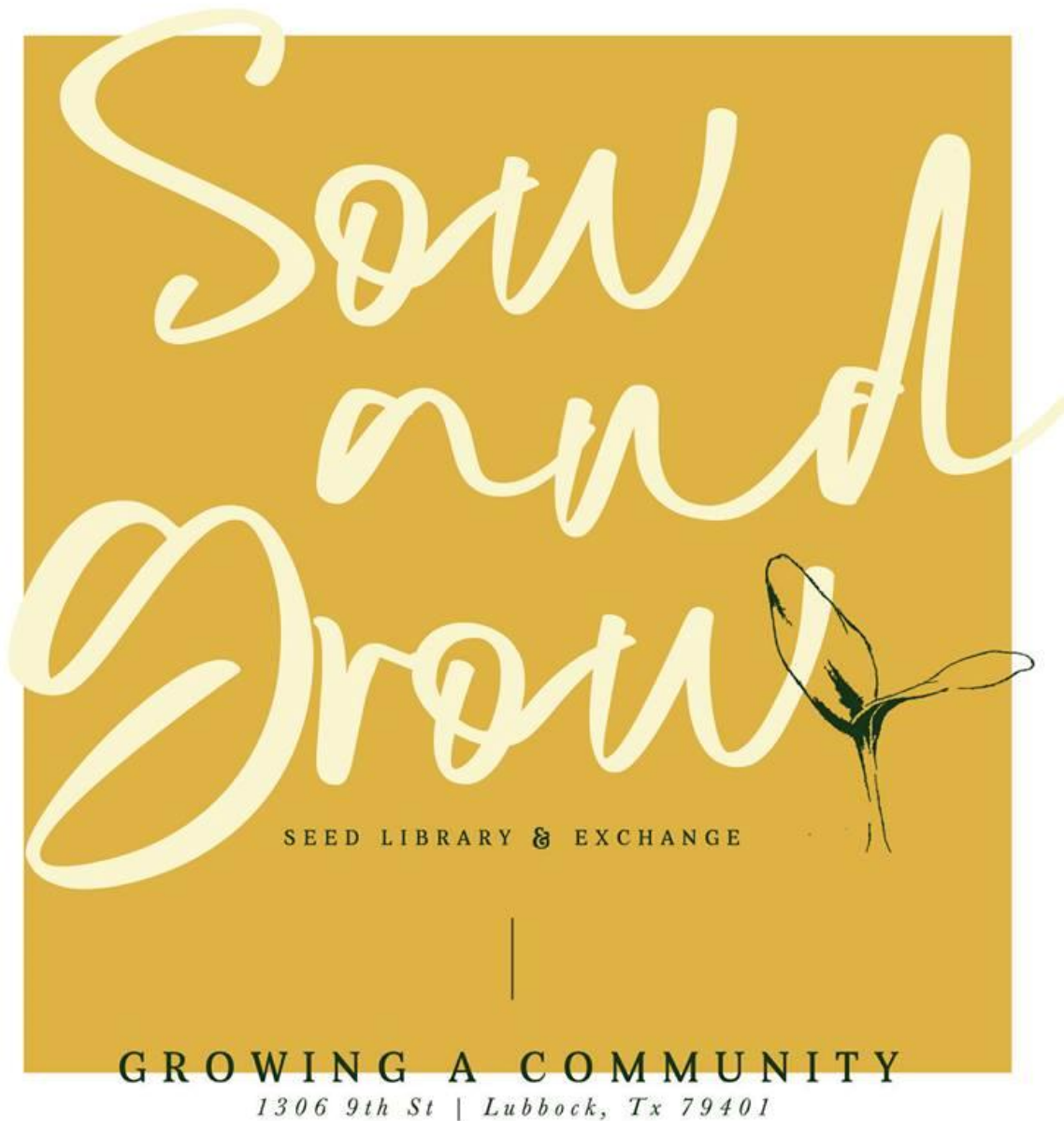
## ASK AN AGENT...

**Q:** How can I tell if I have grubs? With all this rain we have had, my yard should be beautiful!

**A:** It is still a little early in the year to treat for grubs, but here is how you would determine having a grub problem:

- Dig in brown areas of your turfgrass near the edge of healthy green turfgrass. You may need to dig 6-10" deep to find larvae.
- If you find 5 or more May/June beetle larvae per square foot, you should seek a treatment.

Have a question you would like to see answered in a future issue? Email [christina.reid@ag.tamu.edu](mailto:christina.reid@ag.tamu.edu) today!



The Lubbock Public Library Mahon location, the Lubbock Master Gardeners Association and Texas A&M AgriLife Extension Horticulture have started a seed library and exchange. Go check it out and pick up or donate seeds today! This is truly a wonderful local resource for gardeners of all ages! You do not need a library card to participate!



For more information on any of the topics, or to ask questions please contact:

**Christina Reid, County Extension Agent Horticulture**

Texas A&M Agrilife Extension Lubbock County 916 Main, Suite 401, Lubbock, TX 79401 806.775.1740 [Christina.reid@ag.tamu.edu](mailto:Christina.reid@ag.tamu.edu)

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