

Dealing With Summer Heat

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

As spring moves to summer we often struggle for a while as we adjust to the summer heat. It isn't just people, or pets, or livestock that makes that struggle. Plants can struggle also. Whether it's a 50 year old tree, a tomato plant that's been in the ground for ten days or the lawn in front of your house, big swings from cool and damp to hot and dry and multiple weather swings in between can cause our plants to struggle.

With all the rain and cool weather that we had in May, many trees put on a lot of leaves simply because the growing conditions were so good. But those same good growing conditions were also good conditions for leaf diseases to infect those very same leaves. Both of these situations often lead to trees dropping a lot of those leaves several weeks later.

If a leaf is heavily infected with a disease, it loses the ability to carry on photosynthesis in that leaf (the purpose of the leaf is to produce food through photosynthesis). The leaf starts to die and the tree drops it because it is essentially a free-loader! The tree often puts out new leaves to replace those ones that were infected. The replacement leaves normally come out after the infection period so they do not have the disease and they are ready to do their job the rest of the growing season.

The photosynthesis that I mentioned earlier uses water and releases water vapor and oxygen out of the leaves. The water vapor helps to cool the leaf and the oxygen is a byproduct of when the photosynthesis makes food. If a tree has great growing conditions early in the season, and puts on a lot of leaves, each of those leaves are transpiring water out of them. If it turns off hot and dry, the tree starts to shed those "extra" leaves to reduce the amount of water it needs. If conditions become dire, it will shed a lot of leaves as well as fruits or nuts. If we get into extended droughty periods of more than three or four weeks, trees less than ten years of age as well as fruit or nut trees would benefit from long slow watering.

Garden crops are a special challenge. Early in the season they see-saw between trying to grow above ground with leaves and below ground with roots. Sometimes they get out of balance with too much above ground growth and not enough root growth. It sometimes helps if we carefully stress the plant a little to encourage it to increase root size. Check garden plants first thing in the morning. If they look wilted in the morning, they need water. If they look wilted in the afternoon, they may just be hot!

Lawns are probably the most mis-watered plants in the home landscape. Most of our lawns are cool season grass types, generally tall fescue, or Kentucky Bluegrass, or a mix of both. These grasses naturally have peak growth periods in the spring and the fall (when it's cool) and in the summer, especially if it's hot and dry, will go dormant. In general, dormancy doesn't hurt the plant and when it rains then the grass starts growing again.

Many homeowners don't want their lawns to go dormant so they irrigate them to keep them green. Grass plants develop roots where there is soil moisture. If you water a little bit every day, only the top inch or so of the soil will be wet and that's where the plants develop roots. You are better off, IF you irrigate, to only water once or twice a week but apply more water when you do irrigate so you can moisten the top six inches of soil, encouraging deeper rooting by the grass plants. This will make your lawn much more heat and drought tolerant in the summer weather!