KPOV – *The Point*

Gardening: Get Good At It

“Abiotic Tomato Issues”

July 7, 2020

Summer is here! You’ve planted your tomatoes and visions of ripe, red tomatoes dance in your head! But… what’s that crack in that gorgeous tomato? What’s that dark area at the blossom end of the fruit? What’s with the rolling leaves? Today we are going to talk about some abiotic disorders - disorders not caused by a living pathogen, but rather the result of cultural practices or environmental conditions- and how to prevent them

One of the most common abiotic disorders is blossom end rot. Affected fruit have a tan to black flattened spot at the blossom end of the fruit. Blossom end rot can appear on fruit in any stage of development, but it is most common when fruit are one-third to one-half grown. The first fruit produced by the plant are often most severely affected. Fruit that develop later in the season on the same plant can be unaffected.

Blossom-end rot is caused by a calcium deficiency in the tomato plant. Although blossom end rot means that the plant does not have enough calcium with in the developing fruit, it does not mean that there is a lack of calcium in the soil. Fluctuations in soil moisture, heavy applications of nitrogen fertilizer, and injury to roots can all predispose tomato plants to blossom end rot. It can be minimized by maintaining a uniform supply of moisture through regular watering and soil mulches, applying fertilizer according to the results of a [soil test](http://soiltest.cfans.umn.edu/), and avoiding root injury by not cultivating within one foot of the base of the plant.

Growth cracks result from extremely rapid fruit growth. This may be brought on by periods of abundant rain and high temperatures, or can occur when water is suddenly available to the plant through rain or irrigation after a period of drought. Cracks may radiate from the stem end of the fruit or may encircle the fruit. Cracks are often invaded by secondary fungi and bacteria that further rot the fruit.

Maintaining even moisture by watering regularly and mulching the soil around the tomato plant can help reduce growth cracks. Varieties differ in susceptibility to cracking, and variety descriptions may be helpful in choosing a plant less likely to crack.

Leaf roll is a disorder of tomatoes that is most commonly associated with hot dry weather, but can occur in response to other stresses like fast growth, high production, and pruning. Leaf margins roll upward in an almost tube-like fashion. Affected leaves are firm and leathery to the touch. This disorder is believed to be a strategy to conserve moisture. Lower leaves are commonly affected first. Once leaves roll, they will not unroll even if weather conditions become cool and wet. In severe conditions the entire plant may exhibit leaf roll. Leaf roll does not noticeably reduce plant growth or yield.

Sunscald occurs on tomato fruit that have been exposed to too much sun. This is common in plants that are suffering leaf loss from a disease or insect feeding, but can also occur on plants that are over pruned or on fruit that are otherwise exposed to the sun.

Sunscald results in a pale yellow to white spot on the side of the fruit facing the sun. This area may become a flattened, grayish-white spot. The surface may dry out to a paper-like texture. Sunscald spots are frequently invaded by decay-causing fungi and bacteria that further rot the fruit.

The best way to avoid sunscald is to maintain a healthy tomato plant through management of insect and disease pests that defoliate tomatoes.

That’s it for today’s Gardening: Get Good at It with the OSU Extension Service Master Gardeners. For more information or questions about gardening or to contact a Master Gardener, call 541 548 6088 or visit our website at gocomga.com. Look for the KPOV tab on the orange bar.

Resources:

<http://www.extension.umn.edu/garden/yard-garden/vegetables/disorders-of-tomato/>

<http://web.extension.illinois.edu/lmw/eb255/20120925_5934.html>