Tomato Disorders Mistaken For Diseases

There are times when gardeners suspect their tomato crop has some type of disease only to discover it is a physiological disorder instead. There are many disorders that one could mistake for a disease. Blossom-end rot (BER), Rain check, and Sunscald are three common disorders.

Blossom-end rot is caused by a lack of Calcium (Ca) in developing fruit. There are several conditions that may cause BER: low soil Ca, using high nitrogen rates, high concentrations of soluble potassium and magnesium in the soil, too much or too little moisture, damage to the root system by nematodes, diseases, or mechanical damage. The best prevention is good fertilization and water management. Damage to the fruit results in a slight discoloration occurring at the blossom-end (bottom) of the fruit. This area enlarges rapidly producing a brown or black sunken area. The skin over the affected area becomes dry and leathery.

Sunscald is caused by sudden exposure to sunlight. There are two types of sunscald, sub lethal and lethal. Sub-lethal is a yellow, hard area that occurs on the shoulder of the fruit. This occurs when the tissue temperature is above 86°F. The red pigment does not develop and the flesh does not soften because of the high tissue temperature. The high temperature causes the yellow pigment to develop.

With lethal sunscald, the tissue turns white and dies. Many times the dead tissue will turn black from fungi that are feeding on the dead tissue. Lethal sunscald occurs when tissue temperatures rise above 104°F. Damage usually occurs when fruits are suddenly exposed to sunlight. This most frequently occurs after a harvest or a storm when leaves are moved around and fruit exposed. Over pruning can also increase sunscald problems especially with fruit in the upper part of the plant.

Source: Physiological, Nutritional, and Other Disorders of Tomato Fruit, Document HS-954, August 2009, Dr. Steven Olsen, professor, Department of Horticultural Sciences, North Florida Research and Education Center, Quincy. Cooperative Extension Service, Institute of Food and Agricultural Sciences, Univeristy of Florida, Gainesville, 32611.