Challenging spring weather can affect tomatoes

Texas A&M AgriLife Extension Service — Galveston County Office

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If you have a vegetable garden, then it's very likely that tomatoes are part of your home crop. While tomatoes are not difficult to grow, they are sensitive to extremes in environmental conditions. Weather conditions during this year's spring growing season have been challenging.

The cold snap that occurred during the first weekend of March placed unprotected tomato plants at the risk of freeze damage. Since the cold snap, tomato growers have had to contend with drought conditions. Proper watering is critical during extended periods of dry weather.

Many common tomato problems occur when environmental conditions are less than ideal for plant growth. In most cases, the problems will pass when growing conditions improve. The physiological effects on the tomato fruit, however, are determined by how long an unfavorable environmental factor lasts.

The primary causes of these problems are related to environmental conditions and are usually referred to as tomato disorders (as opposed to insect pest and disease problems).

Temperature, plant nutrition and soil moisture conditions are the most serious environmental factors that affect tomato production. Although it is possible for the gardener to make adjustments and corrections for soil fertility and soil moisture levels, there's little we can do to control unfavorable temperature conditions.

Here are some of the most common physiological problems or disorders that local tomato gardeners may experience during the season and some measures to take to avoid or reduce their occurrence:

• Blossom-end rot: This disorder occurs under conditions of extended low soil moisture levels and heavy fruit load. Rainfall has been scarce in the past several weeks, and tomato growers are more likely than usual to encounter this disorder.

Blossom-end rot begins as a small, bruised-like area around the blossom-end of green or ripening fruit. Affected areas darken and enlarge rapidly, then become slightly depressed, black in color and leathery in texture. Usually, blossom-end rot occurs on the first fruits formed or on clusters of fruit formed during prolonged periods of warm, dry weather.

Blossom-end rot is closely associated with low soil moisture levels in our growing region. This means that gardeners should try to avoid fluctuations in soil moisture during fruit set and fruit development.

Mulching can be very helpful in stabilizing soil moisture around the plants. Although some gardening references might indicate that a calcium-deficiency contributes to blossom-end rot, calcium is seldom deficient in our Upper Gulf Coast soils.

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• Blossom drop: This can occur nearly any time during the growing season but is more common during early spring and late spring. This condition occurs when there are extremes in temperature (too hot or too cold), sudden and drastic temperature changes, too little light, too much or too little water, or over-fertilization. In addition, any unpollinated blossom will fall from the plant.

As daytime temperatures approach the mid 90s, blossom drop will become more common and tomato production will start to decline on standard-size tomato varieties. Cherry tomatoes are a general exception to this rule; experienced gardeners know to plant one or more cherry tomatoes to extend the harvest season.

• Catfacing: Catfacing is a generic term used to describe a tomato fruit that has a gross deformity. Catfacing typically refers to tomato fruit that is misshapen, with scars and irregular bulges at the blossom-end of the fruit that may extend to the stem area.

This disorder is caused by an abnormal development of the flower pistil and is aggravated by prolonged cool weather during blossoming. Cool or cold temperatures (below 50 degrees Fahrenheit) that occur about three weeks before bloom can increase the incidence of catfacing.

Catfacing appears more frequently on heirloom varieties. However, due to the unusually cool weather conditions that occurred during March, many home gardeners have been surprised to see this disorder occur on their hybrid varieties. The somewhat good news is that the fruit is still edible.

• Sun scald: This occurs when green or ripening fruits are exposed to hot sun for several days. A yellowish-white area of sunken tissue appears on the side of the fruit facing the sun. Sun scald on fruits is much more likely to occur after plants have suffered premature defoliation caused by disease, or during an extended period of cloudy weather followed by bright, hot sun. Avoid severe pruning of plants to provide adequate foliage growth to shade fruit.