

Red Tomato Blues

By Susan Camp

Jim is having an exceptionally bountiful tomato harvest this summer, despite the long, hot periods without rain followed by drenching downpours—or maybe because of the weather. With tomatoes, it can be hard to tell.

Whatever the reasons, we are enjoying big, juicy red tomatoes in salads, on burgers, in BLTs, and on white bread with mayo, of course, our favorite summer lunchtime treat. We keep a small colander on the kitchen counter filled with cherry tomatoes to snack on throughout the day, and I roast San Marzanos with peppers and carrots to freeze for winter soups and sauces. We give a lot of tomatoes away, too.

I think of the tomato as the unofficial emblem of summer, just waiting to be picked and eaten warm from the garden. Jim grows them because homegrown is so much better than store-bought, even though sometimes the growing is a lot of work, and the harvest isn't always successful. Every home gardener has faced the despair of sparse flowering, poor fruit set, blossom-end rot, cracking, zippering, and catfacing. Then there are viruses, fungi, and insects like the tomato hornworm that can damage the tomato plants and fruit.

Tomatoes (*Solanum lycopersicum* or *Lycopersicon esculentum*) belong to the Solanaceae or nightshade family, along with potatoes, eggplants, and bell and chili peppers. The tomato's family tree makes for interesting reading; it includes deadly nightshade, mandrake, jimsonweed, tobacco, and petunia.

Tomatoes should grow easily in moist, well-drained, humusy soil in full sun. They usually do, but not without a number of hiccups or the occasional bad year, so I decided to offer brief descriptions of a few of the disorders that can arise during a growing season. Most tomato problems cause some type of deformity of the developing or ripening fruit.

Some deformities result from fungal or bacterial infection, but blossom-end rot, a common problem, is not caused by a pathogen. It is, instead, a physiological disorder, caused by a calcium deficiency of the developing fruit, so a soil test before planting is a good idea. Other factors that contribute to the development of blossom-end rot include fluctuations in moisture and excessive fertilization with ammoniacal nitrogen (ammonium sulfate, ammonium nitrate, or 10-10-10), magnesium (magnesium sulfate, which is Epsom salts), or potassium. A calcium nitrate (15.5-0-0) fertilizer is a better choice.

Tomatoes with blossom-end rot develop a light tan spot on the blossom end of the developing fruit. Gradually, the spot turns dark brown and leathery. Internal decay without external evidence sometimes occurs.

Catfacing, so called because the blossom end of the tomato is said to resemble a cat's face— use your imagination here— is thought to result from cool temperatures during pollination and flowering. Excess nitrogen application may also cause catfacing. The fruit bottom is misshapen and often puckered and deeply creased. Larger varieties and heirloom tomatoes suffer most from catfacing, especially if they were set out before the spring temperatures warmed up. A catfaced tomato is unattractive but edible.

Zippering, a long scar that forms at the blossom end, is another tomato deformity. A hole, which may be mistaken for a tomato fruitworm hole, can develop at the site of the zipper, but fruitworms usually enter at the stem end.

Cracking around the stem end can run in concentric circles around the top of the tomato or in radial lines down the sides of the fruit. Cracking occurs when the developing fruit receives excess moisture during periods of heavy rain.

Tomatoes with these deformities are edible after cutting off the damaged section. Internal black mold caused by anthracnose or other fungi can gain entry through an opening in the tomato skin. You can cut out affected parts and eat the rest of the tomato, although quality may be affected. Some people find the thought of black mold unappetizing.

See Missouri Botanical Garden Gardening Help “Tomato Fruit Problems” and Clemson Cooperative Extension Fact Sheet HGIC 2217 “Tomato Diseases and Disorders” for detailed information on these and other problems.