

First Tomatoes Rotting in the Garden
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Many homeowners have been impatiently waiting for that first ripe tomato only to find that it has a dry sunken area of decay at the blossom end of the fruit. This is a physiological disorder known as blossom-end rot (BER). Secondary organisms can then attack and cause the fruit to rot even more. BER can be found on green tomatoes as well as ripe ones. Most commonly seen on the first fruits of the season there is still hope for future tomatoes.

BER is caused by a deficiency of calcium in the fruit. This calcium deficiency is typically due to stress in the plant not by an actual calcium deficiency in the soil. Extreme temperatures, high amounts of nitrogen fertilizer, cultivation that severs roots and uneven watering are the usual cause of BER. Tomatoes move calcium throughout the plant when water moves from the soil to the leaves and out of the plant by transpiration. Leaves control water loss by opening and closing stomata, unfortunately, the fruit do not have the ability to control water movement this way and the result is lower amounts of calcium in the fruit. Rapidly growing fruit that is deprived of the necessary amount of calcium will result in blossom-end rot.

Even soil moisture levels can reduce or eliminate BER. Tomatoes like other garden plants need an inch of water each week and they like the soil to remain moist. Avoid the typical cycle of heavy watering followed by drying of the soil and then watering again. Water often and deeply. Two to three inches of organic mulch can help to moderate soil temperatures and retain soil moisture. Avoid excessive nitrogen fertility as heavy foliage growth can impact the plants ability to maintain sufficient levels of calcium. Avoid root pruning by not hoeing within a foot of the tomato plants.

Container grown tomatoes are especially susceptible to BER as the smaller amount of soil makes them more vulnerable to water and temperature stresses. Other plants that BER can be found on include eggplants, peppers, squash, and pumpkins. If you find BER on tomatoes be patient the later fruit should be better, for those fruit with BER you can still use the portion of the fruit that does not have rot.

Feel free to call me at 605-394-2188 or email to ricky.abrahamson@sdstate.edu for additional information on blossom-end rot or other horticultural issues.