

Answer: Your tomatoes have blossom end rot. This is not caused by a bacteria or other pathogen but rather is a physiological disorder that develops due to a calcium deficiency in the fruit. It is very unlikely that your soil is calcium deficient. The usual cause is inconsistent or inadequate watering which reduces the plant's ability to take up calcium and transport it to the fruit. Because the problem is inadequate or inconsistent watering, adding calcium to the soil or as a foliar spray is almost never effective.

Calcium is necessary for cell growth and the construction of cell walls. When the supply is inadequate, the cells collapse leading to the end of the fruit forming a dark, sunken almost leathery appearance. Other vegetables that can be affected include peppers, especially thick-walled bells, eggplant and summer squash. Note that sunburn on tomatoes and peppers can also appear as a dry area but it will be light colored, not dark.

Some varieties of tomatoes are more susceptible than others. "Pear" shaped tomato varieties such as Roma are more likely to develop blossom end rot, but all full-sized tomatoes are a candidate if the conditions are right. Cherry tomatoes are almost never affected.

The beginning of blossom end rot generally occurs when the developing fruit is only one third to one half size even though the symptoms will not show up until later. This is when the water and nutritional requirements of the fruit are highest. Tomatoes do best with deeper, less frequent waterings, as opposed to daily shallow waterings. Be sure to water in the early morning or later in the evening when the temperature has cooled. This will give the soil time to absorb the water before it can evaporate. While there are probably as many opinions about how to water tomatoes as backyard tomato growers, a total of five to seven gallons of water per week per plant is a common recommendation, especially when the fruit is developing. You can probably reduce the water later in the season, especially if your beds are heavily mulched.

The good news is that fruit that develops later in the year is less likely to develop blossom end rot. And, even the fruit affected by blossom end rot can be utilized by simply cutting off the affected end. The upper part of the tomatoes are wholesome.

Below is a link to an article with additional information.

<https://ucanr.edu/sites/placernevadasmallfarms/files/86509.pdf>