

Causes of Blossom End Rot

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A localized calcium deficiency

Blossom end rot is a common nutritional disorder caused by a localized calcium (Ca) deficiency in the developing fruit.

Blossom end rot can affect many crops, including tomato, pepper, eggplant, squash, pumpkin, and watermelon. Symptoms typically appear on the first developing fruit when plants are growing rapidly, although some varieties are more prone to this disorder than others at later stages.

Light tan, water-soaked blemishes appear on the blossom-end of affected fruits. They may enlarge until the entire bottom of the fruit becomes dark, sunken, and leathery. Occasionally, blossom end rot can occur on the side of the fruit, or internally with no visible symptoms on the outside.

Causes & Prevention

- **Low soil Ca.** Because Ca is typically adequate in Florida soils (250-300 ppm required for most crops), other factors are often the cause.
- **High concentrations of soluble of N, K, and Mg and/or ammoniacal N.** Consider slow release sources of these nutrients and avoid ammoniacal sources of nitrogen.
- **Inadequate soil moisture.** Conserve water by using mulch, organic matter, and techniques such as drip irrigation.
- **Excess soil moisture.** Irrigation frequency should be based on the age of the crop (light, frequent irrigation for young crops vs. heavier, infrequent irrigation for mature crops) and your soil type (sandy, well-drained vs. clay, poorly-drained).
- **Damage to root system.** Manage nematodes, diseases, and avoid damage from mechanical means or heavy pruning.
- Other causes include **high salinity** (resulting from low precipitation, high evaporation, irrigation with saline water) and **low humidity** (weather dependent).

What about calcium sprays?

Foliar applications of calcium are not effective at reducing blossom end rot. This is because very little calcium is taken up by the fruit and the calcium absorbed by the leaves can not be translocated to the fruit. Instead, focus on prevention with proper fertilization and good water management.