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Avoiding Blossom End Rot on Vegetables

Do you have black leathery spots on the ends of your squash or tomatoes? If so, you may have blossom end rot.

Blossom end rot is not a disease but a disorder. The black, leathery spot on the bottom (the blossom end) of crops is caused by a localized calcium deficiency and will not spread from one plant to another. The disorder is most often seen on tomatoes and squash, but also affects peppers, eggplant, melons, cucumbers, and zucchini.

Plants absorb nutrients from the soil in which they are grown. Blossom end rot can be caused by growing crops in calcium deficient soils. However, Iredell county soils are not typically deficient in calcium. In our area, the disorder typically arises during extreme weather and/or soil conditions. Blossom end rot is most often caused by dry weather, several days of hot temperatures, extended periods of wet soil conditions, or low soil pH. All of these conditions interfere with calcium uptake by plants.

Irrigation during periods of dry weather will help to reduce the incidence of blossom end rot. During the growing season, plants need an inch to an inch and a half of water per week. Soaker hoses are the preferred method of watering, because they put the water at the roots, which is where it is needed. Watering the leaves of plants is not recommended, because it increases disease incidence. A two- to three-inch layer of organic mulch, like straw or pine needles, will also help to keep soil moisture consistent.

Soil pH levels should be between 6 and 6.5. (Iredell county soils are typically much lower than this.) To determine if the pH of your soil is too low, submit a free soil sample to the North Carolina Department of Agriculture. Kits are available at the Iredell Extension office. If the soil test report recommends increasing the soil pH, lime should be added. Lime should be tilled into the soil to a depth of 6 to 8 inches to be effective. Sprinkling lime around plants in the garden will not affect soil pH.

Another common cause of blossom end rot is over-fertilization. Excessive fertilization promotes rapid green, leafy growth, and plants that are growing rapidly cannot move enough calcium to the fruit, so the fruit doesn’t develop properly. Applying high Nitrogen fertilizer (ones where the first number on the bag is much higher than the other numbers) should be avoided. To avoid over-fertilizing, follow the recommendations from your soil test report or use slow-release or organic fertilizers.

Root damage of any kind can also increase the incidence of blossom end rot. Examples of root damage include extended periods of wet soil and hoeing too close to the plant’s root system.

While blossom end rot is a common disorder, it can be avoided by following these steps. If you are unsure if your plants have blossom end rot, submit a sample to the Iredell county Cooperative Extension Service office at 444 Bristol Drive in Statesville.