Blossom End Rot in Tomatoes

Source: U of M

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Blossom-end rot is one of the most common tomato disorders seen in Minnesota. Affected fruit have a tan to black flattened spot at the blossom end of the fruit. Secondary fungi and bacteria can enter the blossom end rot area, resulting in further decay of the fruit. Blossom end rot can appear on fruit in any stage of development, but it is most common when fruit are one-third to one-half grown. The first fruit produced by the plant are often most severely affected. Fruit that develop later in the season on the same plant can be unaffected.

Blossom-end rot is caused by a calcium deficiency in the tomato plant. Although blossom end rot means that the plant does not have enough calcium with in the developing fruit, it does not mean that there is a lack of calcium in the soil. Often blossom end rot occurs as a result of several cultural or environmental factors that affect the plants ability to take up calcium. Fluctuations in soil moisture, heavy applications of nitrogen fertilizer, and injury roots can all predispose tomato plants to blossom end rot.

Blossom end rot, M. Grabowski

The amount of calcium salt available to the plant decreases rapidly in the presence of excessive salts such as potassium, magnesium, ammonium, and sodium. Extreme fluctuation in moisture can also reduce the availability of calcium salts needed by the plant. Heavy applications of nitrogen fertilizers and abundant rain cause rapid and luxuriant plant growth and predispose the fruit to blossom-end rot, especially during periods of dry, hot weather.

Blossom-end rot can be minimized by maintaining a uniform supply of moisture through regular watering and soil mulches, applying fertilizer according to the results of a soil test, and avoiding root injury by not cultivating within 1 foot of the base of the plant.