Blossom End Rot - Tomatoes

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Tomato growers must take care to avoid blossom-end rot (BER), a disorder that can dramatically reduce both quality and quantity of tomato fruit. You can reduce damage due to blossom-end rot by using a few simple irrigation and fertilization practices.

Blossom-end rot is a physiological disorder, not a disease. It is easily identified as a brown, leathery rot developing on or near the blossom-end of the fruit. It starts with a dry brown lesion the size of a dime, generally increasing in diameter as the condition worsens. In time, lesions often become covered with a black mold.

Blossom-end rot is caused by calcium deficiency due to fluctuations in water supply, not the lack of available calcium in the soil. **Adding calcium or eggshells to the soil will not prevent this disorder**. Calcium is not a highly "mobile" element in the plant, even brief changes in the water supply can cause blossom-end rot. Droughty soil or damage to the roots from excessive or improper cultivation – for example root pruning – restricts water intake and can prevent plants from getting the calcium they need from the soil. Also, if plants are growing in highly acidic soil or are getting too much water from heavy rain, over-irrigation or high relative humidity, they can develop calcium deficiency and blossom-end rot.

To control blossom-end rot, take the following steps:

- Keep the soil's pH within an acceptable range for the crop (by avoiding excessive manure applications or unnecessary fertilizer.
- Apply the required amount of fertilizer based on soil test results for tomato. Applying too much fertilizer at one time can induce the disorder. The best way to fertilize properly is to follow soil test recommendations from a professional lab test.
- Use mulches to conserve moisture. Use pine straw, straw, decomposed sawdust, plastic or newspaper. Mulches conserve soil moisture and reduce incidence of blossom-end rot.
- Give your plants adequate, consistent water. Tomato plants need about 1.5 inches of water a week during fruiting. Extreme fluctuations in soil moisture can result in a greater incidence of blossom-end rot. Drip or soaker irrigation is best.
- A calcium spray is not a substitute for proper irrigation and fertility management.
- Some varieties of tomatoes tend to be more sensitive to conditions that cause blossom-end rot. Try growing several varieties and keep notes on their performance under your growing conditions.
- If you experience severe problems with blossom-end rot, remove the infected fruits. Once a fruit develops blossom-end rot it will not re-grow or repair the infected area. Leaving the damaged fruit could serve as an entry point for disease-causing bacteria, fungi and insects.
- Tomatoes grown in a container are more susceptible to this disorder due to fluctuations in watering practices.

SOURCE: Dr. Joe Kemble, *Extension horticulturist,* Alabama Cooperative Extension System