

The Dreaded Blossom End Rot



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If you're a gardener you don't need to be told we've had a cool spring. You can see from clues in nature. Peonies bloomed later than usual, for example. The cool temperatures might feel good to some of us, but it can mean trouble for certain vegetable plants. It hasn't been so cold that they're in danger of dying. But it can lead to the dreaded "blossom end rot." (BER from here on.) This phenomenon (it's not a disease) it often first noticed when the fruit we've been waiting for is ready to pick. Once picked we see there is an ugly, leathery patch of dark brown or black on the underside of the fruit. Disheartening, to say the least. If we'd been more observant, we might have seen or felt something "odd" on the bottom of the fruit, also called the "blossom end" of the fruit. I always check for this, especially with the first fruit set. BER starts when the fruit is first forming. Initially, it's just a slight discoloration. If I see it (and I always miss a few) I immediately remove the fruit and discard it. I don't want the plant putting it's energy into fruit that will never be any good.

The question I'm asked most often is how to prevent BER. It's caused by a lack of calcium at the time of fruit creation. No, you can't just add calcium and solve the problem. That would be too easy. In cool weather, tomato plants are unable to draw calcium out of the soil. No matter how much calcium you add, it won't help if the temperatures are too cool. The solution seems obvious—plant later, after the temperatures are warmer. Some experts say the evening temperatures should regularly be at least 55 degrees. This year, we're just getting to that point now.



Example of blossom end rot (BER)



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The tomatoes I planted earliest (May 9, too early, I feel) have been blooming for a week or so now. While blooming, a number of nights have been in the high forties. If/when the first fruit forms, I'll check for signs of BER and take appropriate action. I make my first check when the fruits are the size of marbles. Note that I said "if" the fruit forms. Fertilization is not always successful. Tomatoes are self-pollinating, so insects are not required. However, insects are beneficial because they ensure a more complete fertilization. I just went out and checked my first planting, and I saw that the flowers have fallen off, with no fruit formed. (Sad face). The flowers were not fertilized so they fell off. Nothing to do with BER, I just noticed it so I thought I'd mention it. This can happen for a number of reasons, and they all relate to extreme conditions. Too cold, too hot, too wet, too windy, etc. In this case I'm betting on too cold, and possibly too wet at the critical flowering time. No worries. Harvest will be delayed but other tomato varieties will be flowering shortly so there should be fruit by mid-July or so. This is why I always plant a broad range of varieties. They all bloom at slightly different times, so planting as many as possible is hedging your bet.

photo courtesy of missouribotanicalgarden.org



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Getting back to BER, the main issue is calcium availability, but there are a few other things you can do. One is watering regularly and thoroughly. Use common sense. If we have several rainy days or a prolonged cool spell, less manual watering is needed. But plants like consistency. So water thoroughly every few days rather than just a little drink every day. Once the soil has warmed, mulch your plants to retain moisture. When the first blooms appear on your tomato plants, fertilize your plants with a fertilizer that is fairly high in phosphorous. I'm using one that has an analysis of "2-7-4." Any fertilizer in that neighborhood is fine. Don't use a high nitrogen (that's the first number on the container) fertilizer, as that's been linked to BER. Most tomato fertilizers have added calcium. The one I'm using has 7% calcium. Root disturbance is another factor that has been linked to BER. Since you will have already mulched around your plants, the weeds will be suppressed so no cultivation is necessary.



A couple other things to keep in mind. Determinate (bush) varieties are more prone to BER than indeterminate (vine) varieties. The experts say this is so, but I grow nearly all indeterminate types, and I've experienced plenty of BER. Paste (roma) tomatoes seem particularly heavily affected. Tomatoes are our best-selling vegetable, by far. So they get much of our attention especially with problems like BER. But BER can also affect peppers, eggplant, squash, cucumbers, and melons. These potential problems don't keep us from gardening, though. Gardeners are optimistic by nature. Just get in the garden for a little time every day and all seems right in the world.

Please email me (kevin@milaegers.com) with your questions and comments!

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