

TOM'S GARDEN

BLOG AUGUST 2023

Blossom End Rot (BER)

With tomato season upon us, I thought I would address some tomato maladies. Blossom end rot affects tomatoes, peppers, eggplant, summer, and winter squash, including zucchini, cucumbers, and melons. BER happens especially on the first flush of the season.

BER is not a disease and does not spread to the rest of the plant. It is not caused by fungi or bacteria. BER tends to affect several fruits on the same plant at the same time. It can appear at any time, depending on environmental conditions.

A lot of people think that BER is a result of calcium deficiency. A popular remedy recommendation is to add more calcium to the soil by way of lime or crushed eggshells.



BER is actually a result of inadequate uptake of calcium from the soil to the leaves and fruits. Most garden soil has adequate amounts of calcium. A soil test will indicate what needs to be added to get proper nutrient levels. I test my soil every 3 years. Contact your local extension office for

testing information. Adding calcium to the soil will not reduce BER.

Factors such as excess nitrogen (Miracle Gro), drought, moisture, and high temperatures can prevent calcium from reaching the fruit as it grows. Leaves transpire more moisture than the fruit does, so the leaves get more calcium. You cannot reverse BER.

Since calcium is moved into the plant by adequate moisture, underwatering or overwatering can cause calcium deficiency. Tomatoes have deep roots and benefit from deep consistent watering. Plants grown in containers need to be watered more often. It is best not to use overhead watering or getting the leaves wet to avoid fungal diseases.

Tomato Catfacing

Only tomatoes are affected by this as far as I know.

Description

It is easy to recognize catfacing on tomato fruits. They are deformed on the blossom end with scars, creases, small holes, brown corky tissue, and sometimes cavities inside the fruit.



There hasn't been a great deal of research on what causes catfacing. The main theory is that the exposure of young seedlings to cool temperatures damages their flower buds, which will affect the later development of the fruits. Another potential cause is the excessive pruning of indeterminate tomato plants, which impacts early flower development. Overuse of nitrogen fertilizers, or flower bud damage from thrips. Large, round cultivars and some heirloom tomato varieties seem to be more prone to catfacing.

I believe that the problem comes from early low temperatures. My tomatoes (pictured) were planted early and one frosty morning I sprayed them with a water hose to protect them from the frost. Other plants of the same variety that were planted later, had no catfacing problems.

Strategies

Watch the weather forecast to time the planting of your tomato seedlings. Consider waiting two weeks after the danger of frost for your area. The plants don't grow well in cool conditions, so early planting is not much of a benefit. If there is a sudden cooldown in the forecast later, protect your seedlings with a blanket or tarp.

Avoid intensive pruning while the plants are actively growing and developing flowers.

Look for tomato varieties that avoid catfacing such as hybrids.

Use fertilizers with more phosphorus and potash than nitrogen.

Early Blight (*Alternaria solani*)

Early blight is a fungal disease on tomatoes, potatoes, and eggplant.

It usually doesn't kill plants, but the weakened plants will have smaller or damaged fruit. Early blight can be brought into the garden from contaminated seed or seedlings. Always purchase seed potatoes, eggplant and tomato seedlings from a reputable dealer.

Early blight also overwinters on infected plant debris, in the soil, and on host weeds. Spores are splashed up from the soil onto the lower leaves by rainfall or overhead watering. The spores are also wind-dispersed during dry weather. Wet leaves help the wind-blown spores attach to the plant. It seems as if you just can't win.

Once a plant is infected, the fungus continues to produce spores that cause more infections and spread. The disease starts out on the lower leaves, then progresses to the upper leaves and fruit. Early blight causes dark, sunken spots on the stem end of tomatoes and eggplants, compared to blossom end rot, which infects the opposite end of the fruit. In potatoes, it will attack the leaves and stems and weaken the plant.

What can you do?

Prevention is the best strategy, because once you have early blight, it's there for the remainder of the season.

- *Use a three-year crop rotation if you have the room.
- *Start with disease-free plants.
- *Buy disease-resistant cultivars
- *Stake or cage plants off the ground
- *Prune off the lowest branches
- *Cover the soil with mulch
- *Clean up plant debris
- *Apply biofungicide or copper fungicide as a

preventative measure to the soil and plants when you first put them in the ground.

Remember, prevention is the key. The fungicides will not cure the disease once you have it.

*Keep up with weeds in and around your garden, some weeds are host plants.

*Don't save seed from infected plants. It is best just to purchase new seed.

*Clean up all plant debris at the end of the season and place it in the trash, not the compost pile.



Great Blue Heron

This Great Blue Heron is standing by my water garden most mornings until I chase it away. It has eaten all the frogs (at least a dozen) and is now working on the goldfish. Male and female are very similar, so I can't tell which sex this one is. I named it "Erin" the heron.

Erin likes to pose for photos and is not the least bit afraid of me.

This wader can be seen in any type of water body and unlike most other herons is quite hardy and may be seen in winter wherever there is open water. Great Blues are varied in what they eat. No small animal is safe near them, as they capture fish, snakes, frogs, mice, and even small birds. They are a patient, stand-and-wait predator and can remain motionless for hours. Great Blue Herons sometime form large nesting colonies, occasionally with 300 or more nests.

Are fed up with chipmunks?

Chipmunks are omnivores, eating seeds, berries, grains, insects, nuts, worms and even bird eggs. They damage young plants with their digging Activities. Their burrows can be up to 30 feet long and have chambers for storing food and raising young. Chipmunks are active during the day and like to move around under the cover of shrubs and brush piles.

You will notice their damage to seedlings, chewed corn, tomatoes, and other vegetables and fruits. They also like to uproot bulbs.

You can repel them with an organic animal repellent to keep them away from your favorite plants. Read the label and follow instructions on how to use it.

Use ¼ inch hardware cloth to line bulb-planting holes.

Don't locate bird feeders near the garden and clean up spilled seed.

Get an outdoor cat.