

# ASK A MASTER GARDENER

## WHAT'S THAT SPOT?



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Master Gardener

**QUESTION:** Last year my tomatoes developed soft spots at one end. How can I prevent that problem?

**ANSWER:** Tomatoes are coming! Tomatoes are coming! Yes, it's that time of year when we can finally bite into a tomato that actually tastes like a tomato.

I picked my first tomatoes last week and can't wait for my plants to really start producing. Tomatoes are a very popular home garden crop, so I know the Master Gardener Plant Clinic volunteers will soon be getting all kinds of questions about tomatoes. They are a fairly easy crop to grow, but even the most seasoned gardener may notice a problem or two afflicting their plants.

Problems with tomato plants (and plants in general) can usually be broken down into three categories: diseases, pests and cultural/abiotic (abiotic: physical rather than biological) causes.

Common problems with tomatoes:

- Diseases: late blight, verticillium wilt, fusarium wilt.

- Pests: tomato hornworm, flea beetle, aphids, rats/other vertebrates.

■ Abiotic: blossom end rot, sunscald, blossom drop, physiological leaf roll.

The abiotic causes really contribute to a lot of home gardener issues with tomatoes and one of these seems to cause the lion's share of concern: blossom end rot (BER). The good news is that by incorporating smart cultural practices – such as crop rotation, proper watering and adequate spacing – you will often alleviate other issues as well.

BER shows up as a brown spot on the blossom end of the fruit (the end opposite the stem). You may observe it on green as well as ripe tomatoes. It is more likely to turn up in the earliest tomatoes of the season due to how the plant is growing and using its nutrients.

BER is caused by a lack of calcium in the tomato. However, this does not always mean that your soil needs calcium – it may be that the tomato is just unable to use the calcium present in the soil, and the calcium-deficient cells in the bottom of the fruit die. It often occurs when watering is erratic, fertilizer has been misapplied or there has been some disturbance of the tomato plant's root system.

How can you prevent BER?

1. Ensure uniform soil moisture. Do not plant tomatoes in areas with poor drainage. Make sure you water deeply and on a regular schedule – you don't want the plant to be water-stressed. Utilize mulches to keep moisture even.

2. Fertilize moderately and use nitrogen sparingly – just to keep plants normally green. It is best to use fertilizers high in phosphorus – something like 4-12-4 for instance. Usually your soil is not low in calcium – it is just unavailable to the plant. Soil testing can confirm.

3. Test your vegetable garden soil. The pH should be about 6.8-7.0. If calcium is low, add lime in the fall so it has time to break down by planting time in Spring. (DCMG offers soil testing – contact info below)

4. Make sure there is adequate spacing between plants. Good air circulation helps in plant transpiration (plants give off water vapor through their leaves) and this aids in the calcium distribution in the plant.

5. Don't disturb the roots – anything that reduces the plant's ability to take up water can contribute to BER.

6. Some varieties of tomatoes are more prone to BER. Fast-growing varieties with extensive foliage, and determinate varieties (varieties which set all their fruit in a short period) are more at risk for BER. This certainly holds true in my garden, as the Roma-type varieties are usually the ones with which I have issues. Cherry types are rarely affected.

7. OSU advises you can use foliar applications of calcium nitrate fertilizers or calcium chloride dihydrate (1 1/2 tsp/gallon water plus 1/2 tsp of a surfactant such as CapSil) on a weekly

Tomatoes require 25-35 days to mature from flowering, depending on the temperature and variety.

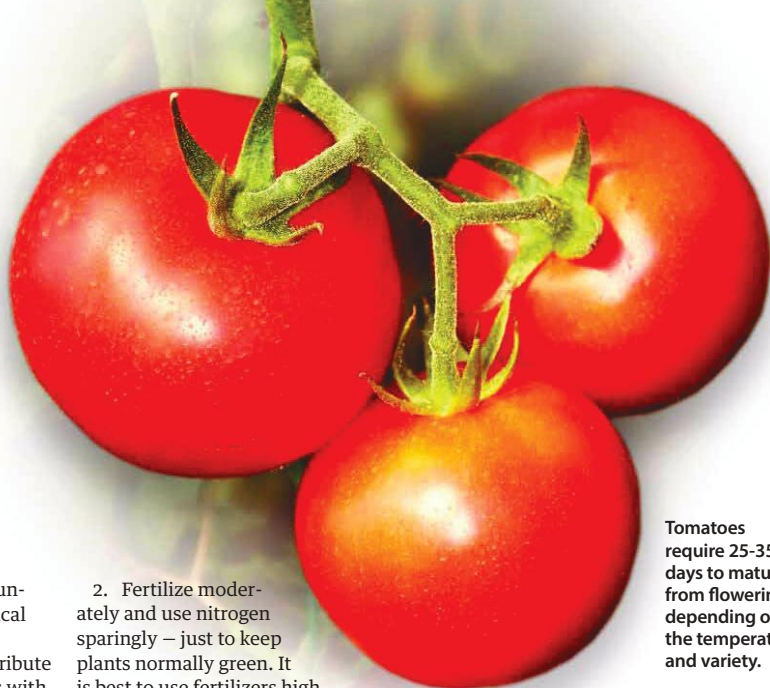


PHOTO COURTESY OF NORTH CAROLINA EXTENSION

Blossom end rot, or BER, shows up as a brown spot on the blossom end of the fruit (the end opposite the stem).



PHOTO COURTESY OF UTAH STATE UNIVERSITY

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basis during fruiting. Make sure to apply in the early morning to avoid foliage injury. Other sources I have researched are not convinced applying calcium in this way alleviates BER, as the calcium absorbed through the leaves is not available to the fruit.

In summary, if you have problems with blossom end rot on your tomatoes, especially early in the season, don't give up! Make some adjustments in your watering schedule as a first defense.

If BER continues all season, think about having your soil tested in the fall so you can amend it in preparation for next year's planting.

All is not lost – if the tomato only has a partial soft spot, just cut it away and the fruit is safe to eat. It may not be the picture-perfect tomato you envisioned, but it will still taste like a tomato!

*Do you have a gardening or insect question? Contact the Douglas County Master Gardeners at [douglasmg@oregonstate.edu](mailto:douglasmg@oregonstate.edu) or 541-672-4461 or visit 1134 S E Douglas Ave., Roseburg. Douglas County Master Gardeners are trained volunteers who help the Oregon State University Extension Service serve the people of Douglas County.*