

Tomatoes tough to grow in cool, wet Northwest

Although tomatoes are backyard gardeners most popular vegetable, they are certainly not the easiest to grow. In the Puget Sound area, we don't get as much heat as tomatoes prefer. We have to choose the right short-season varieties and then coddle them a bit. Eventually we get ripe tomatoes so delicious that they make all the trouble worthwhile. That is, we do unless the tomatoes get diseased.

The worst disease in our region is late blight. This fungus disease strikes toward the end of summer. Dark, dead areas appear on leaves, stems and fruit. The vines may collapse as though hit by an early frost. Infested green fruit rots before it ripens. This disease does have one requirement that the gardener can use to protect tomatoes. There must be free moisture on the plant for the spores to infest. The goal, therefore, is to keep the plant dry. Staking the plant off the ground is essential. Water it only at the base of the plant. Drip or soaker hose irrigation is perfect; it wets the soil not the plant. Remove the lower leaves that touch the ground. Unfortunately, rain dampens tomato plants and may allow the disease to get started. Many gardeners are growing tomatoes under clear plastic shelters of one sort or another. Assuming your tomatoes are exposed to rain, the plants must be able to dry quickly after it stops. This means thinning and spacing the vines for the best possible air circulation around them. Several fungicides can be used to combat late blight. One of the ones used by commercial growers is available to home gardeners under the name Daconil. Organic gardeners may want to try fixed copper or Bordeaux sprays. Read and follow product labels carefully. These must be applied before the disease gets started or plants will need multiple treatments. If you start seeing symptoms on a few leaves, pick those off and get rid of them. You may be able to hold the disease at bay long enough to get a few more mature fruits. Be sure to clean up and dispose of diseased vines as soon as possible. Do not compost them. This goes for potato vines too, because potatoes are also very susceptible to late blight.

Tomatoes have a variety of problems with cultural and environmental causes. Blossom end rot is very common. It causes dark, leathery, sunken blotches on the bottoms of your beautiful, ripening tomato fruit. (It also affects peppers.) Blossom end rot is considered a nutritional disorder, because it is caused by lack of calcium in the growing fruits. Practically speaking, however, the cause is usually lack of proper irrigation. Calcium, unlike many other nutrients, doesn't move around within the plant. Upon absorption, it moves into growing tissue - leaves, stems, fruit, etc. - and there it stays. For proper growth, therefore, the plant needs a constant supply of calcium. Calcium is supplied by lime, but, even if you lime your garden, you may get blossom end rot. Water is essential to calcium absorption. If you are not watering enough, you will soon start to see symptoms. For this reason, drought can be said to cause blossom end rot. To avoid problems:

- Keep your tomato bed soil pH between 6.3 and 7.0 so that calcium will be present.

- Keep plants well watered, so the calcium will be available.

- Use a thick organic mulch around plants to help hold in moisture.

- Avoid over-fertilizing with nitrogen, because that seems to make them especially susceptible.

- If you use black plastic mulch, make sure there are enough holes for water to penetrate it. Shape your beds with concave tops before covering them with plastic to avoid shedding all your water to the paths.

Leaf rolling is common but nothing to worry about. It does not affect production. Some varieties are more susceptible than others. Many tomatoes "outgrow" this problem as the season progresses. Deformed fruit can be caused by several things, but most common are the puckers called "cat facing" that are caused by incomplete pollination. "Zipper streaks" are thought to be caused by the flower petals sticking to and tearing the wall of the tiny developing fruit. Both are purely cosmetic; the fruit is fine to eat. Both deformities are much more prevalent on the earliest fruit of larger varieties and when cold, wet weather happens at flowering time. Cracked fruit is a more serious ailment, since fruit rots and black mold often develop on the crack, making the fruit inedible. Cracks often are in concentric circles around the stem or may be in lines radiating from around the stem. They are most common when high temperatures and rainfall follow a period of dry weather. Sudden rapid growth as the fruit is ripening causes the fruit to "outgrow" its skin. Keeping the soil evenly moist with proper watering techniques and mulches will prevent cracking on most varieties. Fruit exposed to sun is more susceptible, so do not remove the leaves from plants. Sun scald causes white or yellow spots on one side of green fruits. Some varieties are more susceptible, because they produce less abundant foliage. Again, do not remove upper leaves from tomato plants. Blotchiness in tomatoes takes several forms. Usually they are spots of white, yellow or green tissue, sometimes containing brown strands. These discolored areas are usually much harder than the surrounding red-pigmented flesh. Blotchiness is often located around the stem-end and is called "green shoulders". Some varieties are more susceptible, but there is no known control for this condition.

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Tomatoes

Tomatoes are probably the most widely grown of all vegetable garden plants, and there are probably just as many ideas about the best way to grow them as there are gardeners! There are a few practical guidelines that should always be practiced!

1. Choose tomato varieties that are best suited to your climate and that will yield the kind of tomatoes you like.
2. Plant early, midseason and late varieties for production over a long period of time.
3. Tomatoes are a warm season crop. They are particularly sensitive to nighttime temperatures. Plant at least 1 week after the average last frost date.
4. Soil should be well drained and have a good supply of nutrients. Use plenty of organic matter and 5-10-10 fertilizer when preparing soil.
5. Tomatoes need as much sun as you can give them. They should get a minimum of 6 hours a day.
6. You can start tomatoes by seed indoors 6-8 weeks before putting them out in the garden. Transplants may be purchased at your local nursery or garden center.
7. Set transplants deep. Set the first leaf just above soil level. Roots will form along the buried stem to create a stronger root system.
8. Protect from cool nights, as needed, with hot caps, cones, plastic milk jugs, etc.
9. Feed at planting time and then once a month when fruits are developing.
10. Tomatoes require uniform moisture especially after fruit has set. Alternate wet and dry spells can promote blossom end rot, cracking, stunt growth and other problems. Watering must be deep to do good job.
11. Tomatoes need to be supported and/or trained to keep the fruit clean and perfect. Many gardeners use tomato cages, trellises and upright stakes.
12. Tomatoes can be grown in containers, raised beds, planters and even hanging baskets as well as in the ground. In planters, you can be assured of good, disease-free soil and adequate drainage.
13. Keep your tomatoes picked. It encourages the plant to keep producing.

Tomatoes are not without their problems. They are a challenge to grow but if you follow the main rules you should be successful.