Tomato Growing Tips

UC Master Gardener Program of Contra Costa County—Guide to Growing Tomatoes

TERMS:

- *Determinate* —This type of tomato stops growing at a set height of about 3-5' and will bear most fruit within a 4-6 week period. These early ripening types may be best for containers.
- *Indeterminate* —This type continues to grow and set fruit all summer until killed by frost or disease. Many of the commonly grown larger fruited varieties are indeterminate.
- *VF*—resistant to Verticillium wilt and Fusiarium wilt (common fungal diseases)
- *VFNT*—same as above plus resistant to nematodes & tobaco mosaic virus

WHICH VARIETY: Choose varieties that fit your microclimate and space requirements**.** Tomatoes generally need heat to develop well, but there are varieties that will grow in the cooler parts of Contra Costa County that experience strong marine influence. See http://ccmg.ucanr.edu/EdibleGardening/VegetablesforContraCosta for some suggested varieties.

WHEN TO PLANT: Plant in late spring or early summer after nighttime and soil temperatures have warmed up.

LIGHT: Full Sun. Select a planting site that will provide a minimum of 6 to 8 hours of direct sunlight per day.

SOIL: The annual addition of several inches of aged organic matter to your soil will greatly improve plant nutrition and foster appropriate moisture retention. Dig humus, compost or well composted manure into the top foot of soil and allow it to sit for at least a week before planting.

HOW TO PLANT: Roots will form along the buried portion of the stem giving better growth and less chance of injury from a stem that is too weak. Lanky young plants can be buried right up to the first leaves, or even *horizontally* in the ground. Allow several feet between plants for good air circulation. Only grow tomatoes in the same spot a maximum of 2 years in a row. Rotate with other crops from a different plant family to help prevent disease build up in the soil. Tomatoes, peppers, eggplant and potatoes are all in the same plant family—the Solanaceae.

SUPPORT: Tomatoes of all types need a strong support such as a trellis, cage or stakes to keep plants upright. This will save space and allow easy harvesting. Plants that touch the ground are more susceptible to diseases. You may prune out some side shoots to keep plants in bounds.

WATER: Keep the soil moist around new plants for the first 3-4 weeks. Water established plants when the soil is dry to about 2-3". Tomatoes need regular irrigation during the growing season. Avoid extreme fluctuations in moisture as they increase the incidence of fruit cracking and blossom end rot.

FERTILIZER: Healthy, vigorous plants should not require extra fertilizer until they have set fruit. Excessive nitrogen fertilizer during the initial growth period will cause a flush of vegetation that may delay flowering and fruit set. After plants have set fruit you may want to fertilize with nitrogen every 4 to 6 weeks. Follow label directions and avoid over-fertilizing as excess flows into the ground water and eventually into the San Francisco Bay.

INFORMATION SOURCES: free, downloadable publications from UC Agriculture & Natural Resources:

- Publication 8159: *Growing Tomatoes in the Home Garden* at http://anrcatalog.ucanr.edu/Details.aspx?itemNo=8159
- Publication 8059: *Vegetable Garden Basics* at http://anrcatalog.ucanr.edu/Details.aspx?itemNo=8059

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Common Tomato Disorders

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Here are some of the more common tomato disorders that result from nonliving (abiotic) causes often attributable to environmental or cultural factors, or simply to the plant's genetic makeup.

PROBLEM: Blossoms fall off, plant fails to set fruit.

- **PROBABLE CAUSES:** Night temperatures too low(below 55° F), daytime temperatures too high (above 90° F), excessive smog, excess nitrogen fertilizer, too much shade, plants set out too early in spring, and/or poorly adapted variety.
- **CONTROL:** Hormone sprays (from garden centers) can improve fruit set during low temps, but not high temps. Tapping on blossom stems 3 times a week when blossoms are open at midday may improve pollination and help set fruit.

PROBLEM: Yellow or yellow-orange colored fruit instead of normal red.

- **PROBABLE CAUSE:** overexposure to sunlight.
- **CONTROL:** Maintain plant vigor to produce adequate leaf cover. Avoid over-pruning. Provide partial shade (i.e. shade cloth) during the hottest part of day.

PROBLEM: Older leaves suddenly roll upward and inward, become stiff, brittle and leathery.

- **PROBABLE CAUSE:** High light intensity and high soil moisture, particularly when plants are heavily pruned**.** Some varieties are more susceptible.
- **CONTROL:** Maintain even soil moisture, provide shade during hottest part of the day, or try a different variety.

PROBLEM: Blossom End Rot—water–soaked spot on blossom end of fruit enlarges and darkens, becomes sunken and leathery.

- **PROBABLE CAUSE:** Calcium and water are out of balance in the plant, aggravated by high soil salt & fluctuating soil moisture.
- **CONTROL:** Maintain even soil moisture, add organic matter to improve water retention and avoid heavy applications of nitrogen fertilizer. Soils deficient in calcium may be amended with gypsum.

PROBLEM: Puffiness—tomato resembles a bell pepper with normal outer walls and a hollow area inside.

- **PROBABLE CAUSES:** Temperatures that interfere with pollination such as above 90 degrees, or below 55 degrees, low light, excessive nitrogen fertilizer, heavy rainfall (causing bees to stay home).
- **CONTROL:** Avoid heavy nitrogen fertilizer, select varieties suitable to your microclimate.

PROBLEM: Catfacing—circular concentric cracks around the stem end, cracks radiating outward from the stem, malformation and cracking at the blossom end.

- **PROBABLE CAUSES:** Periods of fast growth with high temp and high soil moisture, wide fluctuations in soil moisture, wide difference in day and night temperatures. Some varieties are more susceptible.
- **CONTROL:** Keep soil evenly moist, maintain good leaf cover or provide shade during hottest part of day, apply organic mulch 3-4 inches deep to moderate soil temperature.

Besides these common abiotic disorders, gardeners often discover damage to foliage and fruit caused by a variety of pests including hornworms, fruit worms, pinworms, stink bugs, whiteflies, and leaf miners.

RESOURCES:

- For photographs and information to help you identify and manage pests, refer to the UC Integrated Pest Management for Tomatoes at: http://www.ipm.ucdavis.edu/PMG/GARDEN/VEGES/tomato.html
- For specific pests, see the UC IPM Pest Notes at: http://www.ipm.ucdavis.edu/PMG/menu.homegarden.html**.** Or, contact the UC Master Gardener Program in Contra Costa for assistance. To reach the Help Desk, call (925) 646-6586 or email ccmg@ucanr.edu.