Blights and Wilts

Septoria leaf spot
Spots with tan centers appear on lowest leaves and move upward. Leaves yellow, brown and die.

Early blight
Brown, target pattern spots appear on lowest leaves and move upward. Leaves yellow, brown and die.

Treatment for both: Pick off spotted leaves immediately. Destroy, don’t compost. Mulch soil under plant. Avoid wetting leaves. Space plants and thin out leaves or prune and stake to speed-up drying. Fungicides include copper for organic gardeners or chlorothalonil. Rotate planting location yearly for 3 – 4 years. Choose resistant varieties.

Late blight
Greenish, water-soaked looking, irregular blotches appear on leaves and stems. Plants collapse and die in 7 – 10 days. Treatment similar to above blights. Wait for Extension recommendation before using fungicide sprays.

Verticillium & Fusarium wilts
In mid-summer, plants suddenly yellow, wilt, turn brown and die. Caused by soil-borne fungus. No cure. Select resistant varieties. Rotate planting location yearly for 3 – 4 years.

Black walnut toxicity
Tomato plant wilts when roots contact roots of nearby black walnut tree. Do not plant tomatoes within 60’ of a black walnut tree.

For More Information

UW-Extension Horticulture Team
http://hort.uwex.edu
Septoria leaf spot-XHT1073
Early blight-XHT1074
Late blight-XHT1195
Blossom end rot-XHT1140
Black walnut toxicity-XHT1017
Hornworms-XHT1107

UW Extension Publications:
http://learningstore.uwex.edu • 1-877-WIS-PUBS
Home-grown Tomatoes for WI-A1691
Tomato Fusarium & Verticillium-A2617
Tomato Physiological Fruit Problems-A3798

Horticulture Help Lines
Milwaukee County 414-256-4664
Waukesha County 262-548-7779

UW-Extension Horticulture Center
at Boerner Botanical Gardens
in Whitnall Park, Hales Corners, WI

Become a Master Gardener Volunteer

Milwaukee County UW-Extension Office
414-256-4600
http://fyi.uwex.edu/sewmg
9501 W Watertown Plank Rd Building A
Wauwatosa, WI 53226-3552

Waukesha County UW-Extension Office
262-548-7770
http://www.uwex.edu/ces/cty/waukesha
515 W Moreland Blvd., AC-G22
Waukesha, WI 53188

SouthEast Wisconsin Master Gardeners
Growing Tomatoes

Vegetable gardening is on the upswing again fueled by the organic gardening, local foods, renewable, sustainable, green movement.

Home grown tomatoes are a special case. Juicy, flavorful and warmed by the sun. If asked, most people would say that if they were to grow only one vegetable, the tomato would be it. Others grow dozens of several varieties and are generous enough to share with those who don’t.

Problems of Care & Climate

Blossom end rot
Black leathery bottoms on fruits. Caused by uneven distribution of calcium. Water regularly, avoid drenching and drought. Mulch to hold moisture. Tomatoes are safe to eat. Some resistant varieties.

Catfacing
Tomato bottoms misshapen with folds and bulges. Caused by cool temperatures when young. Some varieties less susceptible.

Cracking
Appears in rings around the stem or in lines in rays from the stem. Excess moisture or fertilizer causes rapid growth. Keep evenly moist and mulch to hold moisture. Some resistant varieties.

Tips for Trouble-Free Tomatoes

Somehow, millions manage to grow gazillions every year. They say the devil is in the details when growing this fruit of the gods. Here are a dozen details that make it work and how.

• Rotate the planting location. Don’t grow the same crop in the same spot for at least 3 years. That way last year’s diseases won’t be in this year’s soil. Also the roots of a black walnut tree make juglone, a chemical that keeps tomatoes from growing near them.

• Buy healthy, resistant varieties. Choose varieties that are resistant to fusarium and verticillium wilts, late blight, blossom end rot and cracking.

• Plant on June 1st. Even if you protect them from frost, cool temperatures keep growth slow and prevent fruit set. Once fruits start to form, cold temperatures cause the blossom end to become deformed which is called catfacing.

• Space plants at least 5’ apart. Air moving between plants and among the leaves allows them to dry quicker so that fungal spores of septoria, early blight and late blight are less able to cause infections.

• Prune out branches and support plants with cages or stakes. Supports keep them from laying in a pile on the damp ground. Removing some stems helps open up the plant for better air circulation. “Vining” using only one stem per plant supported on a stake or trellis is best however fewer stems means fewer tomatoes. Plus without the extra leaves, they can get “sunburned”.

• Fertilize once after the first fruit have started to form. Too much nitrogen makes leaves grow instead of the flowers which are what turn into the tomatoes.

• Mulch the rootzone. Use 1 – 4” of straw, dry grass clippings, or compost. Use just enough to cover any fungal wilt spores on the soil to prevent them from splashing up onto plants. A little more mulch keeps soil moist longer so you can water less often and keep the roots more evenly moist which will reduce blossom end rot.

• Water regularly. Evenly wet soil keeps calcium moving throughout the plant. When the soil dries, calcium is not moved all the way to the blossom end of the fruit which causes blossom end rot. Soil kept too wet causes tomatoes to crack in lines from the stem outward or in rings around the stem end. The roots can also rot.

• Keep leaves dry – water directly to the roots. The less time the leaves are wet, the less time fungi spores for septoria, early blight and late blight can cause infection. This also conserves water because very little is wasted through evaporation.

• Remove and destroy infected leaves as soon as they appear. Do NOT COMPOST or pile up diseased leaves since spores can travel back to the garden on wind and rain.

• Clean up well after frost and do not compost infected plants. Late blight spores are killed when they freeze. The others are not so remove and destroy infected plants completely at the end of the season.

• Use fungicides as a last resort to control blights. Organic gardeners can use cooper products for all three blights. Chlorothalonil is a synthetic fungicide that is very effective if used every 7 – 14 days. As with all pesticides, read and follow all label instructions before use. Fungicides are ineffective on fusarium and verticillium wilts.