Slug: Ask the Master Gardener
Date: June 10, 2007
Contact: WSU/Skagit County Extension: 428-4270

DEK:
To grow great tomatoes, think selection, prevention, and rotation

BODY:

The cooler temperatures and frequent rains of western Washington are rarely kind to heat-loving tomatoes, making the task of growing them a challenging and sometimes frustrating one. Late blight (Phytophthera infestans), for example, typically shows up on tomato plants in August or September (although it can appear as early as late June), making it one of the most prevalent diseases to beset tomatoes in Skagit County.

To help your tomatoes dodge late blight and other common diseases, try a three-pronged approach: Select varieties that are resistant to certain diseases, take steps to avoid giving those diseases a foothold in your garden, and rotate your tomato crops—and those plants that are related to them, such as potatoes—so that you're not growing them in the same bed for more than three consecutive years. Yearly rotations are the safest approach.

Give your tomatoes a fighting chance by waiting to plant them till soil temperatures reach 70 degrees. If you're patient, your tomatoes will quickly catch up to your neighbor's—who planted his two weeks before—and will probably be more vigorous and healthy to boot. When planting your tomatoes, choose stocky plants that are approximately six to eight inches tall, go easy on nitrogen fertilizers (too much will produce overly dense foliage), space plants three to four feet apart to promote good air circulation around the plants, and prune off the lowest branches to prevent them from touching the soil.

Sometimes, though, even your best efforts will be thwarted by Mother Nature. Here, then, is a brief look at the worst offenders in the world of tomato diseases, and what you can do to keep them away from your prized tomato plants.

Late blight (Phytophthera infestans) is a Skagit County tomato's worst enemy. Caused by a fungus-like micro organism that favors wet weather, it shows up as dark, dead areas on leaves, stems and fruit. The vines may collapse as though hit by an early frost. Infested green fruits rot before they ripen. Avoid late blight by planting resistant varieties such as 'Juliet,' 'Sweetie', 'Red Cherr', 'Santa,' and 'Legend.' Because the late-blight fungus loves cool, moist conditions, keep your plants dry by sheltering them with greenhouse-grade plastic, and water them from below using drip irrigation or soaker hoses covered with a thin layer of mulch, taking care not to wet the leaves. Copper sprays can help to reduce the disease occurrence, but since they are designed to protect *un*infected plants, they should be applied before any symptoms are visible. Organic gardeners may want to try fixed copper or Bordeaux sprays. If you spot signs of late blight, take quick action: Remove and destroy infected plant parts (do *not* compost infected plant matter).

Early blight (Alternaria tomatophilai) is caused by a fungus that survives the winter on old vines. Keep it at bay by planting resistant varieties and removing diseased foliage and disposing of it in the garbage (again, *don't* compost it).

Dark, leathery, sunken blotches on the bottoms of your tomatoes are a sure sign of **blossom end rot.** Resulting from a lack of calcium in the growing fruits, blossom end rot usually is caused by inadequate irrigation, since soil moisture is essential for roots to absorb calcium. Avoid blossom end rot by first getting a soil test, then adjusting your soil pH level (if necessary) to between 6.3 and 7.0, maintaining proper levels of calcium in your soil (use lime; follow label directions), watering your plants well and consistently, and using an organic mulch around the plants to help keep the soil evenly moist.

Catfacing isn't nearly as cute as its name suggests. Caused by incomplete pollination in cold weather, catfacing manifests itself in the fruits, which are puckered and sometimes wildly disfigured at their bottom ends. To combat catfacing, select resistant varieties and don't plant your tomatoes too early. The silver lining:

Catfacing is a cosmetic problem; the fruit is fine to eat.

Cracked fruit is a more serious ailment, since rot and black mold often develop on the crack, making the tomato inedible. Cracks 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.

More detailed information on tomato diseases and how to prevent them is available in bulletins available from Washington State University Extension. Visit the WSU Publications Web site at http://pubs.wsu.edu/. Some bulletins are free; some are available for a nominal fee.

SIDEBAR:

Sidebar head:
What's ailing my tomatoes?

Sidebar dek:
A free WSU Know & Grow workshop on tomato diseases and how to prevent them

Sidebar body:

WHAT:	"What's Ailing my Tomatoes?" a free workshop on identification and management of tomato diseases, presented by the WSU/Skagit County Extension Master Gardeners, in partnership with the WSU/Northwestern Washington Research and Extension Center
WHERE:	WSU-NWREC Auditorium and WSU Discovery Garden, 16650 State Route 536, Mount Vernon
WHEN:	Tues., June 19, 1:00 to 2:30 p.m.
SPEAKERS:	WSU-NWREC plant pathologists Dr. Debra Inglis and WSU Ag. Research Tech III Babette Gundersen

Got a great topic that you'd like to see addressed at a future WSU Know & Grow workshop? Contact Ellen Cooley, WSU Master Gardener Program Coordinator, at ellenc@co.skagit.wa.us.

PHOTO CAPTION (Filename: Tomato Boy_photo by Jason Miller):
A Concrete youth hoists a cluster of disease-free Brandywine tomatoes. With a little planning and attention, most tomato diseases can be prevented—or at least postponed until after the fruit is harvested! Photo by Jason Miller.

PHOTO CAPTION (Filename: Tomato hothouses_photo by Jason Miller):
To prevent late blight from decimating his tomatoes, one gardener in Concrete built hothouses using greenhouse-grade plastic film. He has promised not to grow tomatoes or genetically related plants in these structures for more than three consecutive years. Photo by Jason Miller.

This column is written by Washington State University/Skagit County certified Master Gardeners. Questions may be submitted to WSU/Skagit County Extension, 306 S. First Street, Mount Vernon, WA 98273-3805.