

Common Tomato Problems

B Boron Deficiency



End Rot



Swarm



Vilt



Nematodes



Thrips



Common Tomato Problems

Do not be put off by this large list of pests and diseases. In the home garden, especially where biological control is practiced, most of these organisms will not be a problem.

In the warm weather your gardening efforts will be rewarded with lovely bowls of juicy, red tomatoes that can be used in salads, sandwiches, soups or chutneys.

Tips for Growing Healthy Tomatoes

- Improve garden soil by adding organic material such as compost
- Use disease-resistant varieties (e.g., VFN which stands for Verticillium, Fusarium

and Nematode resistance)

- Eliminate competition from weeds
- Keep the plant growing vigorously with proper water and nutrients
- Keep the garden clean of plant debris
- Rotate crops
- Space plants for maximum air circulation
- Monitor for pests

Failure to follow one or more of these steps can lead to pest problems.

To manage pests, identify the source of the problem by assessing symptoms. The key in the following table will help you narrow down the cause.

Controlling Issues

After identifying the potential problem, refer to the appropriate section in **How to Grow Juicy Tasty Tomatoes**.

The book, written by Lucia Grimmer who holds a Masters Degree in Plant Pathology, contains 13 pages of detailed information on eliminating and controlling common tomato diseases, pests and nutritional disorders.

If you're serious about growing abundant juicy healthy tomatoes, visit www.bestjuicytomatoes.com


















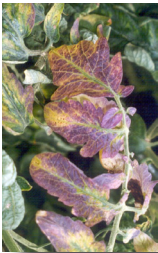











Area affected	Problem	Cause
Seedling death 	Blackening and withering of plant at soil level causing the new stem to collapse	Damping off disease
	Seedling stem cut off or eaten through at or close to ground level	Cutworm Crickets
Wilted plant or leaves (Check roots for rotting and cut stem open to check for discoloration) 	Wilting of plants; no discoloration of vascular system; slow recovery when watered; plant unthrifty with pale foliage	Nematode damage
	No root rot or discoloration of the vascular system	Lack of water
	Vascular system brown along length of plant and no streaming if dipped into water	Fusarium wilt
	Vascular system brown in lower 30cm or 1 ft of plant	Fusarium crown rot
	Midday wilt which turns to complete plant wilt, yellowing of lower leaves and 'v'-shaped lesion on lower leaves	Verticillium







Photo by Caitilyn Allen, University of Wisconsin

Area affected	Problem	Cause
	<p>Sudden wilt. Vascular system brown and milky, white substance flows from stem when cut and dipped into a glass of water</p>	<p>Bacterial wilt</p>
	<p>Vascular system discoloured, discoloration of petioles, lower leaves turn down and edges also turn brown. Small, white scabby lesions on fruit like bird eyes</p>	<p>Bacterial canker</p>
<p>Leaves - Spots</p> 	<p>Leaves with dark brown or black spots that have concentric circles in them. Lower leaves often affected first</p>	<p>Alternaria or Early Blight</p>
	<p>Small brown spots 1 – 2mm in diameter and grey or whitish centres possibly with yellowing of those leaves</p>	<p>Septoria leaf spot</p>
	<p>Water -soaked patches that turn brown and expand rapidly and become brown to purplish black as tissue dies</p>	<p>Late blight</p>
	<p>Leaf spot with small circular lesions about 0.5cm or ½ inch in diameter</p>	<p>Anthracnose</p>
	<p>Dark black raised specks on leaves (and fruit)</p>	<p>Bacterial speck or bacterial spot</p>
	<p>Leaves with spotting and concentric circles. Leaf tissue stiff. Fruit may also be mottled with concentric circles</p>	<p>Tomato spotted wilt virus/impatiens necrotic spot virus</p>

Area Affected	Problem	Cause
	White powdery patches on leaves	Powdery mildew
<p>Leaves: Insect injury</p>  <p><i>Photo: Dept of Entomology, Texas A&M University</i></p>	Chewing injury on leaves and evidence of large caterpillars with tails	Tomato/tobacco hornworm
 <p><i>Photo: Canadian Dept of Agriculture</i></p>	Holes approx 0.5mm in size	Flea beetle
	Distorted new leaves	Thrips
 <p><i>Photo: University of Nebraska-Lincoln Extension</i></p>	Fine white speckling on leaves and small spider-like insects on the back of leaves	Spider mite
	Honeydew present. White insects fly away or green or black sedentary insects present	Whitefly Aphids
<p>Purple Leaves</p> 	Leaves with purple coloration and purple veins and. Early season, cool temperatures. No insects present	Phosphorus deficiency
	Leaflets become purple especially along veins and leaves roll upwards	Curly top virus

Area Affected	Problem	Cause
<p>Yellowed leaves</p>  <p><i>Photo: Whitney Cranshaw, Colorado State University</i></p>	<p>Slight distortion, purpling of veins. Zigzag stem and branching pattern. Check underside of leaves for insects</p>	<p>Psyllids</p>
<p>Mottled leaves</p>  <p><i>Photo: American Phytopathological Society</i></p>	<p>Infected plants turn yellow and soon stop growing</p> <p>Mottled yellow patches on leaves and fruit</p>	<p>Curly top virus</p> <p>Various mosaic viruses</p>
<p>Leaf scorch</p>	<p>Check watering, ambient temperature, level of fertiliser applied, removal of leaves shading the fruit etc</p>	
<p>Distorted leaves</p> 	<p>Curling, shoestringing, cupping and herbicides applied recently plants stunted, no herbicides applied</p>	<p>Herbicide injury</p> <p>Cucumber mosaic virus</p>
	<p>Rolled leaves (inwards)</p>	<p>Differential varietal susceptibility to this condition, but may also be caused by overwatering or hard pruning</p>
<p>Stems</p> 	<p>Black or dark cankers on stem. (Submit samples to a diagnostic clinic for confirmation)</p>	<p>Early blight (<i>Alternaria</i>), tomato spotted wilt virus/<i>impatiens</i> necrotic spot virus, bacterial canker</p>

Area Affected	Problem	Cause
Roots 	Roots with galls	Root Knot Nematode
	Roots discoloured, mushy. Check soil moisture and watering	Root rot
Flowers	Flowers dropping off before fruit sets	Plants that have dried out or are waterlogged, do not have enough light, too much nitrogen or thrips
Fruit Spots 	Ring spots on fruit	Tomato spotted wilt virus/impatiens necrotic spot virus
	Dark pinpricks surrounded by a light, discolored area on green fruit. These areas turn yellow or remain green on ripe fruit. The tissue under the spots is white and spongy and remains firm as the fruit ripens	Stink bugs
	White, leathery areas	Sunscald
	Blotches on the shoulder of the fruit	Green/yellow shoulders
	Holes in fruit and rotting around holes	Bollworm
	White speckling on fruit	Spider mite

Area Affected	Problem	Cause
	Rapid ripening of fruit; no visible fruit damage	Root knot nematode
 <p data-bbox="212 510 523 533"><i>Photo: American Phytopathological Society</i></p>	Mottled yellow patches on fruit	Various mosaic-type viruses
	Small, white to yellow, raised blotches on fruit, often called bird's eye	Bacterial canker
<p data-bbox="161 730 384 763">Distorted fruit</p> 	Yellowing or not, with necrotic areas or not	Catfacing
	Blossom end flattened and black	Blossom end rot
	Yellowing	Psyllids
	Large scab-like lesions or distortion of new fruit	Thrips
	Poor fruit set (also related to flower drop, but may also be due to pollination not occurring)	May be caused by plants drying out, wilting in hot weather. (Pollination may have to be done by hand).
	Ring spots on fruit	Tomato spotted wilt virus/impatiens

Nutritional Disorders

Leaves	
Older leaves yellow, new leaves thin and small with purple veins	Nitrogen deficiency
Purple tinged older leaves and dark green, small fibrous leaves	Phosphorus deficiency
Older leaves dark green with curling and crinkling. Necrosis develops on leaf margins, tissue between veins breaks down	Potassium deficiency
Tip burn of young leaves which turn yellow and death of leaf margins	Calcium deficiency
Interveinal chlorosis of older leaves, green veins	Magnesium deficiency
New leaves small, sometimes long and narrow with interveinal chlorosis which can be almost white and also resulting in dead spots. Leaf margins roll upwards. Short internodes	Zinc deficiency
New leaves turn pale green with a soft mottled interveinal chlorosis which progresses to dead patches surrounded by a yellow ring.	Manganese deficiency
New leaves with spotted white areas. Tips and margins remain green, unless deficiency is severe. Leaves may curl upwards and drop.	Iron deficiency
Blue-green, curled flabby leaves	Copper deficiency
New leaves discoloured, distorted, crinkled, brittle and small	Boron deficiency
Curling of leaf margins, yellowing between veins and small new leaves	Molybdenum deficiency

Whole plant	
Slow growth, hard, thick stems which brown off and die	Nitrogen deficiency
Stems are thin, fibrous and hard. Plants are stunted, have a purplish tinge and yields are poor	Phosphorus deficiency
Foliage dark green with crinkled, curled appearance. No insects	Potassium deficiency
Slow growth, thick, woody stems, flabby plants	Calcium deficiency
Vegetative growth stage, overall pale appearance of plant	Magnesium deficiency
Whorl-type growth pattern of leaves and short internodes	Zinc deficiency
Soft, mottled interveinal chlorosis that gives plant a light mottled appearance	Manganese deficiency
Death of new shoots	Iron deficiency
Stunted shoot and root growth and soft stem	Copper deficiency
Bushy looking plants with blackened areas on the tip of the stem which is stunted. Terminal shoots curl, yellow and die	Boron deficiency

Flowers and Fruit	
Flower buds turn yellow and drop off, small fruit which is pale green	Nitrogen deficiency
Fruit is pale and yield is poor	Phosphorus deficiency
Uneven ripening of fruit, blotchy colour and small amount of flesh. Sepals and stems on fruit yellow, become necrotic and fruit drops as soon as it is mature	Potassium deficiency
Fruit are small and soft with poor shelf life. Blossom-end rot	Calcium deficiency
Soft, pale fruit	Magnesium deficiency
Poor fruit set and fruit has poor texture	Zinc deficiency
Fruit may not mature properly and drop off	Iron deficiency
Few or no flowers	Copper deficiency
Misshapen fruit which split, are corky and die in patchy patterns	Boron deficiency

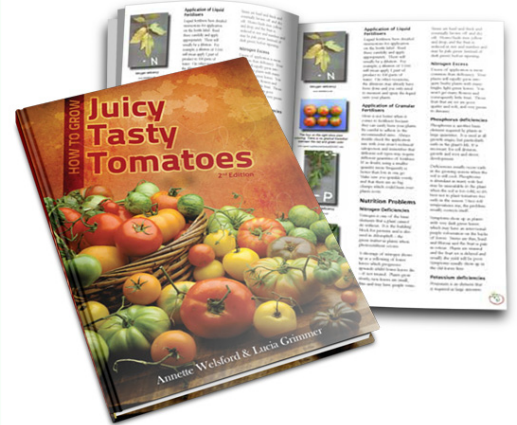
Get Expert Advice From a World Renowned Plant Specialist



Lucia Grimmer, MSc has authored several scientific papers and won awards for her technical articles. She is the “professional” that the commercial growers turn to for expert advice. She travels extensively training horticulturists, agronomists and growers in advanced nutrition, pest and disease strategies for a wide range of food crops. Now she shares her specialist knowledge with home gardeners in two best selling books which are highly popular in 83 countries!

Grow the Best Tomatoes Ever with “How to Grow Juicy Tasty Tomatoes!”

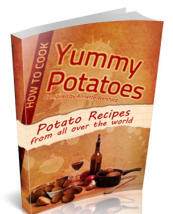
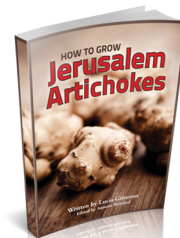
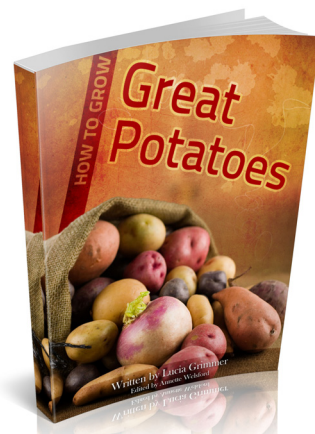
- ✓ Find out which tomato varieties will do best in your climate, which ones grow the biggest and which ones rate the highest in taste tests.
- ✓ We reveal the secret root dip which the professionals use to encourage huge roots.
- ✓ Find out when and how often to water your plants and how much you should really give them.
- ✓ We test 12 different methods of staking were tested. See which one was the best!
- ✓ Find out the professional secrets to fertilizing – it’s all in the mix, the application techniques and the timing at different growth stages. These tips alone will have a huge impact on your plants and give you sweet tomatoes!
- ✓ Discover how to diagnose and control common nutrition issues and pest and disease problems.



Get this incredible 80 page Tomato Bible and 6 Fantastic Free Bonuses now
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Grow the Best Potatoes Ever with “How to Grow Great Potatoes!”

- ✓ How to prepare seed potatoes for planting
- ✓ Which potato varieties to choose for your needs and your climate
- ✓ How to prepare your garden beds
- ✓ How to plant potatoes in several types of containers
- ✓ How to care for your potatoes – mounding, fertilising, watering
- ✓ How to identify common potato diseases and what to do about them
- ✓ How to identify common potato pests and the best methods of control
- ✓ How to harvest and store potatoes
- ✓ Where to purchase seed potatoes – we’ve listed all the major online seed suppliers



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