UC Master Gardener Program Statewide Blog

News and updates from the statewide UC Master Gardener Program office

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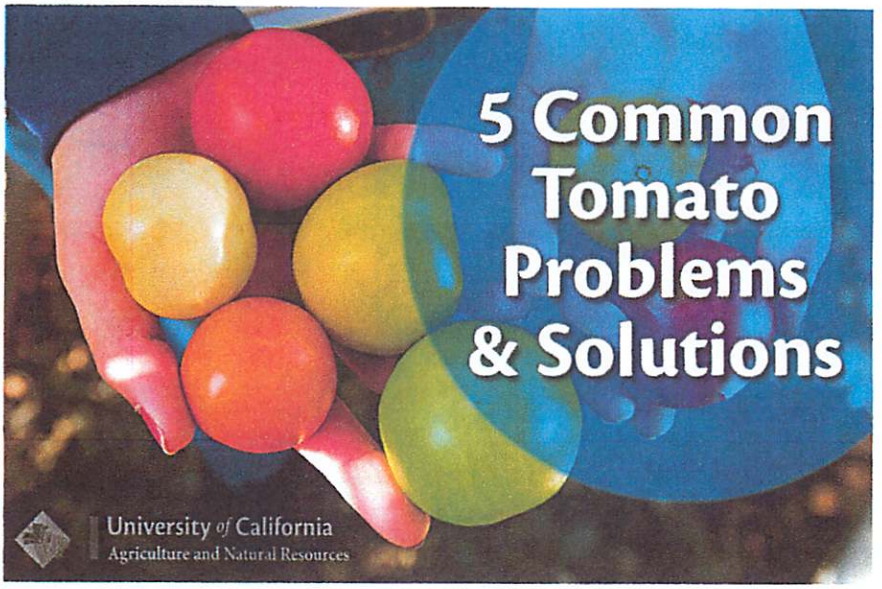

When properly cared for, a single tomato plant can produce 10 to 15 pounds (4.5 to 6.8 kg) or more of fruit. If tomato yields aren't what was expected or the fruit is damaged it could be due to a number of abiotic disorders, diseases or pests. Abiotic disorders result from nonliving causes and are oftentimes environmental, for example: unfavorable soil conditions, too much or too little water, temperature extremes, physical or chemical injuries, and other issues that can harm or kill a plant. Below are five common abiotic disorders of tomatoes and recommended remedies from the UC Agriculture and Natural Resources publication, Growing Tomatoes in the Home Garden.

1. Sunburn

Problem: Fruit turns light brown and leathery on side exposed to sun.

Cause: Overexposure to sunlight.

Solutions:
- Maintain plant vigor to produce adequate leaf cover.
- Avoid overpruning.
- Provide partial shade during hours of most intense sunlight.

2. Leaf Roll

Problem: Older leaves roll upward and inward suddenly, leaves become stiff to the touch, brittle, and leathery.

Causes: High light intensity and high soil moisture, particularly when plants are staked and heavily pruned

Solution:
- Choose less-susceptible varieties.
- Maintain even soil moisture.
- Provide shade during hours of intense sunlight.

3. Blossom End Rot

Problem: Water-soaked spot on blossom end of fruit enlarges and darkens, becomes sunken and leathery. Affects both green and ripe fruit, and is more common on sandier soils.

Causes: Calcium nutrition and water balance in the plant, aggravated by high soil salt content and fluctuating soil moisture.

Solutions:
- Maintain even soil moisture.
- Amend planting area with compost to improve water retention.
- Avoid heavy applications of high-nitrogen fertilizer.
- Soils deficient in calcium may be amended with gypsum.

4. Fruit Cracking

Problem: Circular concentric cracks around the stem end (concentric cracking), cracks radiating outward from the stem (radial cracking), malformation and cracking at the blossom end (catfacing).

Causes: Very fast growth with high temperatures and high soil moisture levels. Wide fluctuation in soil moisture and or air temperature. Any disturbances to flower parts during blossoming.

Solution:
- Keep soil evenly moist.
- Maintain good leaf cover or provide partial shade during hours of most intense sunlight.
- Mulch around the plant 3 to 7 inches deep to maintain soil moisture and temperature.

5. Solar Yellowing and Green Shoulders

Problem: Yellow or yellow-orange instead of normal red color, upper portions of the fruit remian green even though the lower portion appears red and ripe.

Cause: High temperatures and high light intensity.

Solutions:
- Maintian plant vigor to produce adequate leaf cover.
- Avoid overpruning.
- Provide partial shade during hours of most intense sunlight.

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1. IPM Pest Advisories, USU; 2. Dr. Russ Wallace, agrilife.org; 3. UC IPM; 4. League City News Online; 5. UC IPM