Tomatoes 101
Virtual Class Event

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Tomatoes – *Solanum lycopersicum*
Solanaceae family - Nightshades

Fun Facts:
- Full Sun is Best – If not choose wisely
- Many different maturity rates depending on cultivar.
- Determinate vs. Indeterminate
- Many types – dwarf, cherry, paste, storage, etc
- Many colors and shapes
- Heirloom vs. Hybrid
- Interstitial Root Growth
Tomatoes

Tall Support!
Mulch Deeply
• Organic
• Plasticulture
• Check Soil Temperature
Trellising and Support

• Cages
• Stakes
• Florida Weave
• String Trellis
• Cattle Panel
Single Leader Staking
Florida Weave
Single Leader String Trellis
Greenhouse and High Tunnel
• Single Leader
• Clips, woven support
• Lean and Lower
Fertilization and Watering

- Tomatoes like slightly acidic
- Heavy Feeder
- Organic Matter
- Soil Test
- Adjust due to rainfall
- Need to re-apply
- Phosphorus and Potassium
- Bottom irrigate deeply
- Mulch

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**SOIL NUTRIENT LEVELS**

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<tr>
<th>Nutrient</th>
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<tr>
<td>Soil pH</td>
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</tr>
<tr>
<td>Phosphate</td>
<td>(P₂O₅)</td>
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RECOMMENDATIONS FOR: Mixed Vegetables
Abiotic Problems

6/3/2020

• 5cm = 67.84 F
• 10cm = 68.40 F
Blossom Drop

• Extreme Temperature most common
• Ideal:
  • 70-80 F in day and 60-70F at night
• Problems:
  • Over 90F in day, below 50F at night.
Zipper

• Flower Problem
• Cold Weather
Catfacing
- Flower formation injury?
- Pollination problem?
- Can have deep lesions
- Cold weather
- Big Heirlooms
Cracking

• Uneven moisture
• DRY → RAIN
Green/Yellow Shoulders

- Drought
- Heat Stress
- Nutrient deficiency?
Blossom End Rot

- Deficiency of calcium in the fruit
- Calcium not mobile in the plant
- Also can affect peppers and eggplant
- Manage soil moisture - MULCH
- Provide adequate soil calcium
- Choose resistant varieties
- Increase soil organic matter
- Do not overfertilize with nitrogen
Diseases and Insects

- Fungal #1 – disease
- Also viral/bacterial
- IPM Strategies
  - Mulch
  - Crop rotate
  - Fertility
  - Organic Matter
  - Pesticides
  - Resistance
- Insects
  - Hornworm
  - Fruitworm
    - (corn earworm)
  - Aphids
  - Stink Bugs
  - Flea Beetles
Good Bug or Bad Bug?
Growing Tomatoes in the Home Garden

Gary Gao, Associate Professor and Extension Specialist, Ohio State University Extension
Brad Bergeforst, Extension Educator, OSU South Centers, Ohio State University Extension
Bob Prechuer, Associate Professor Emeritus, Department of Horticulture and Crop Science, Ohio State University

The tomato is probably the most widely grown vegetable by the home gardener because of its multiple uses, value, and relative ease of care (Figure 1). Originating in central South America, the tomato was domesticated in Mexico. There are many related wild species in South America, and the tomato was known by Native Americans.

The tomato was first introduced to the United States in the 1700s. It was once thought by some colonists to be poisonous. Thomas Jefferson was one of the first to grow tomatoes, which he called “Love Apples” at the time. The tomato was not recognized as a useful vegetable until the mid-1800s, when its raw or cooked use was recognized as a popular food. The tomato is an almost daily part of the American diet.

One medium-sized tomato has only 25 calories. The tomato is rich in vitamins C and A, and small amounts of the B vitamins and potassium. Tomatoes are also very well known for their high carotenoid content. Nine different carotenoids have been identified in tomatoes, two of the most prominent being lycopene (red) and beta-carotene (orange). Lycopene is the most concentrated in the tomato and is currently in the news for its possible role in disease prevention.

Keeping Tomatoes Healthy in Hot Weather

What a summer it has been so far. Early on the heavy rains provided many challenges for the tomato grower. Now we are in a heat wave with more heat to come. Contrary to what many think, tomatoes are not heat lovers. They much prefer 75 to 95. When temperatures get too hot during the

Keeping Tomatoes Healthy in Wet Weather

We are in the middle of a period of wet weather that is predicted to deliver multiple inches of rain to central Ohio and even more to other soaked parts of our state. Tomatoes are a crop that can suffer several problems related to heavy rainfall that can shorten the harvest period and affect yield.

Planting Tomatoes When the Soil is Too Cold

When planting seeds or transplants it is important for the backyard grower, community gardener or urban farmer to keep track of soil temperatures, as
Questions?

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