Growing Great Tomatoes

Tomato Best Management Practices

Soil Preparation
- Tomatoes need good drainage but do not grow well in extremely sandy soil
- Add organic matter such as compost, aged manure, or pine bark soil conditioner every year
- Till a 2”-3” layer into the soil to increase moisture retention and add nutrients
- Peat moss helps soil hold moisture but does not add nutrients

Soil pH
- Ideal pH: 6.2—6.5
- Soils in Pender County range from 3.5—8.5!
- Lime raises pH, sulfur lowers pH—must incorporate into the soil before planting
- Apply based on soil test recommendations

Soil Testing
- FREE—can be done anytime of the year
- Will measure pH and nutrient content

Variety Selection
- 100’s of varieties available!
- Determinate—produce heavy crop load over short time on bushy plants
- Indeterminate—produce fruits over long season on tall vining plants
- Round Fruit—most challenging to grow well, especially large ‘Beefsteak’ types
- Paste/Roma—often used for cooking, generally grow well
- Cherry and Grape—Easiest, most productive. Many indeterminate
- Heirloom—Great flavor, but lack disease tolerance. Can save seed. Best for the south: German Johnson, Homestead, Cherokee Purple, Mortgage Lifter
- Hybrids—developed for disease resistance. Look for codes: N—nematode resistant; F—fusarium resistant; TSW—tomato spotted wilt resistant (not many varieties have this). NO variety is resistant to all, or even most, diseases, especially wilts.

Most reliable (all are F&N resistant):
- Celebrity—determinate, med-large round fruit, Bush Celebrity—good for containers
- Better Boy—indeterminate, med-large round fruit
- Big Beef—indeterminate, more reliable beefsteak type. Big Boy similar except not F,N resistant
- Cherry Tomatoes—most do well. Many are indeterminate. Sweet Million, Sweet 100, and Juliet are favorites.

Planting
- Early April, late March at coast
- Protect from frost
- At least 6 hours direct sun/day
- Space 3’ apart
- Plant deep. Leggy plants can be planted laying in a trench
- Avoid planting in same space year after year
- Cage tomatoes after planting—cages need to be at least 4’ high
- Plant multiple varieties. Plant in different areas of the garden rather than all together
- Mulch to conserve moisture, keep down weeds, and keep soil cool
- Tomatoes grow well in large containers—at least 5 gallon size. Fill with potting soil, add slow release fertilizer

Fertilizer
- Compost alone rarely adds enough nutrients
- Both organic and synthetic fertilizers are available. Organic has lower concentrations of nutrients but are better for the soil
- Most contain Nitrogen—leaf growth, too much results in overgrown plants with little fruit; Phosphorous—root and fruit growth, most soils have
enough; **Potassium**—important for drought tolerance and flavor

- Look for fertilizers with more Potassium than Nitrogen, eg. 6-6-12. Apply additional nutrients based on soil test results
- Time release fertilizers such as osmocote or organic fertilizers best — release nutrients slowly over several weeks
- Use liquid fertilizers for quick boost and right after transplanting but not every time you water

**Watering**
- Need at least 1” per week
- Avoid wetting leaves
- Drip system or soaker hoses best

**Common Problems**

**Environmental Disorders**

- **Blossom end rot**—Calcium deficiency most often caused by over fertilizing with nitrogen, fluctuating soil moisture levels, drought, and/or extreme heat
- Keep plants evenly moist. Avoid high N fertilizers
- Low soil pH or calcium deficiency can also cause, less common in our area. Soil test to determine if lime or calcium need to be added.
- **Blossom Drop**—caused by extreme heat and/or hot night temperatures. Poor pollination can also cause this—plant flowers to attract bees.
- **Uneven ripening, internal white spots**, green shoulders, poor flavor—extreme heat (in mid 90’s) - wait for cooler weather!
- **Fruit cracking/splitting**—uneven moisture levels, common after heavy rain
- **Leaf rolling**—response to atmospheric conditions, not harmful

**Diseases**

- **Wilt diseases**—most live in the soil and cannot be cured. Do not grow tomatoes, peppers or eggplant where these have been a problem.
- **Tomato spotted wilt virus** (TSWV) - spread by thrips, a tiny insect. No way to treat. Silver reflective plastic mulch can help. Grow resistant varieties: **Amelia**, Crista, Southern Star, BHN 640, Red Defender, Mountain Glory, Nico, Talledaga
- **Leaf Spots and Early Blight**—attack leaves. Keep foliage dry, space properly. Spray regularly. Organic: B.t. subtilis (Serenade), copper. Synthetic: mancozeb, chlorothalonil

**Insects**

- **Tomato hornworms**—hand pick or spray: Organic: B.t. (Dipel), Spinosad; Synthetic: bifenthrin, permethrin
- **Leaf footed bugs, Stink bugs**—cause cloudy spot = cosmetic damage. No organic control. Spray bifenthrin.

**Best Advice:**

- Plant as early as possible
- Plant several varieties
- Plant deep
- Soil test!
- Apply slow release fertilizer
- Water regularly
- Mulch
- Monitor for pests and treat early

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