Growing Tomatoes in Pinellas County

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Getting Started



Sprouting Seeds VS. **Purchasing Transplants Sprouting seeds:** Requires planning ahead Requires additional supplies Greater variety Less disease pressure >Less expensive

Sprouting Seeds VS. **Purchasing Transplants Purchasing Transplants:** ≻Convenient Good for small gardeners Might have underlying disease > Might have insects >Inspect transplants carefully

Tomato Disease Resistance "code"

V = Verticillium wilt **F** = Fusarium wilt race 1 **FF** = Fusarium wilt race 1 & race 2 **N** = Root Knot Nematodes A = Alternaria stem canker T = Tobacco Mosaic Virus **St** = Stemphylium (grey leaf spot) **TSWV** = Tomato Spotted Wilt Virus **TYLC** = Tomato Yellow Leaf Curl Virus

Tomato Growth Types

- **Determinate** is shorter, and produces fruit over a four to six week period.
- Indeterminate continue to grow, flower, and produce fruit throughout the season.
- Indeterminate Short Internode (ISI) combines the controlled growth of a "determinate" with the continual production potential of an "indeterminate."

Heirloom vs. Hybrid

Heirloom:

- Can save seeds
- Open pollinated
- >More flavorful



>Usually more disease pressure

- Is this true in small gardens?
- Grafting to sturdier root stock

Lower heat tolerance

Fruit has shorter shelf life

Heirloom vs. Hybrid

Hybrid

- Productivity harvest more tomatoes.
- Disease-resistance
- ≻Strength
- Consistency
- Better shelf life



- Flavor not as flavorful as heirlooms.
- Seeds not true to parent plant

Starting Seeds

- Choose container(s) holes in bottom
- Use sterilized garden soil or seed starting mix
- Fertilization dilute liquid fertilizer, fish emulsion, or add very small amount to soil
- Sow seed scatter seed over firm, moist surface; lightly cover with soil, then sprinkle with water
- Keep moist and in a warm place after seeding



Starting Seeds

- Damping-off' wet the base of young plants with Neem oil
- Thin to 2 3 inches apart when 1 inch tall
- Resetting into larger pots produces vigorous transplants
- Move plants outdoors during day (if weather is warm) – not in direct sun
- Ready to plant in 4 5 weeks after sprouting

Choosing Transplants

Stocky with stout stem Plant taller plants deep > Well formed perfect leaves Curled and stunted at top – **TYLCV** Mottled leaved – TMV Look carefully for insects > Well formed root system gently remove from pot.



Planting

➢ Best soil pH is 6.2 - 6.5

- Need lime if pH below 6.0
- Need Iron & Manganese if pH is above 6.5
- Compost can be mixed into transplant holeCan be killed by frost
- Plant after rain, on cloudy day, or late afternoon
- Plant deep up to first set of leaves
- Planting dates: Jan.–March or Aug.-Sept.

Planting

Water at planting with a starter solution of 1 to 2 T of 6-8-6 fertilizer dissolved in 1 gal. of water
 Shade from direct sun for 2 – 4 days

Spring planting – January -March



Care

Stake at planting time to avoid damaging roots later – or use a tomato cage

Remove suckers at leaf axils or not?

- Water plants thoroughly once a week -Tomatoes need 1-2 inches of water/week
- Drip irrigation is best can reduce fungal disease
- Use mulch and keep weeds pulled

Prune off bottom leaves

Fertilizing Chemical vs. Organic

Chemical Fertilizers

- For every 10 square feet of soil, 1 pound of 6-8-8 or similar fertilizer
- Apply one half at planting time
 - 2 bands located slightly below and 2 to 3 inches to the side of the row
- 3 weeks after planting apply 1/3 of the remaining ½ as a side dressing
- After 3 more weeks, apply the remaining at 7 to 10 day intervals.

Fertilizing Chemical vs. Organic Organic fertilizers

- Organic blends Peggy Green (local), Gardener's Supply, Epsoma
- If manure is used, broadcast and mix well into the soil 4 - 8 weeks prior to planting.
- Fish emulsion- use as a spray or mixed in watering can - may also mix with Neem for spraying
- Kelp/Seaweed emulsion fertilizer and growth enhancer – apply kelp meal before planting – use spray monthly

Mulching

Mulch:

Holds moisture in soil
Helps control weeds
Keeps fertilizer from leaching
Harbors beneficial insects (organic mulches)
Types of mulch:

- Organic (leaves, straw, lawn clippings, etc)
 Plastic
 - Black (recommended for home gardeners)
 - Red (mixed results from trials at UF)

Pests

Major pests Worms

- cutworms
- hornworms
- fruit worms







- pinworms & leaf miners
- > Aphids
- > Whiteflies
- Stink bugs and leaf-footed bugs
- Nematodes

Pest Control

Biological controls – natural beneficial insects

- Above ground predators lady bugs, lacewings
- Ground level predators ground beetles, spiders
- Parasites insects that lay eggs on/in pest insects
- Bacteria/fungus/nematodes Bt
- Mechanical controls
 - Floating row covers
 - Sticky cards (yellow, blue or white)
 - Barriers
 - Hand removal
- Cultural controls
 - Companion Planting (Intercropping)
- Solarization soil borne pests

Pest Control

> Organic pesticides

- Bacillus thuringiensis (Bt)
- horticultural oils Neem, other plant based oils
- Insecticidal soap
- Pyrethrums
- Rotenone
- Spinosad

Chemical pesticides

- Carbaryl Seven
- Malathion

Diseases

Fungal

- Early & Late blights
- Wilts
- Bacterial
 - Bacterial spot
- ➢ Viruses
 - Tobacco mosaic virus TMV
 Tomato yellow leaf curl virus TYLCV

Disease Control

Crop rotation – rotate solanace with crucifers or beans
Sanitation

Rouging

Fungal diseases - treat proactively

- Neem oil
- Copper and/or Sulfur fungicide
- Garlic spray/Milk spray questionable research results

Bicarbonate salts — 0.5% solution – used to treat fungus already on leaves.

Summer Soil Solarization

Problems

Blossom end rot

- Too little available Calcium
- Too much or too little water
- Severe pruning
- Spray plant with a solution of 4 T of Calcium Chloride mixed in 3 gal. of water twice weekly, 1 qt./plant





Problems

Blossom drop

- night temperatures above 70°
- excess nitrogen
- too much shade
- over-watering
- flower thrips

Fruit cracking/splitting

- heavy rain after period of dry weather
- usually nearly ripe fruit
- pick and allow to ripen inside





Choosing Varieties

>What is your objective

- Eating fresh
- Making sauce
- Canning

Look to UF for varieties researched and found good for Florida

- Choose disease resistant cultivars
- Plant a variety

Propagation

Rooting suckers

Remove well formed suckers



- Place in sterile potting soil
- ➤Water well
- Place in bright shaded area
- Keep moist (they might wilt the first few days)
- Should have rooted in about 3 weeks
- Move into sun slowly
- Ready to plant in garden in 6 weeks

Propagation

Saving Seeds

- Must be open-pollinated varieties not hybrids
- Choose well ripe fruit from best plants
- Scoop out seeds and place in jar of water
- Allow to ferment for 4 -5 days
- Pour off scum from top good seeds sink
- Rinse seeds in strainer
- Dry completely on paper towels (2-3 weeks)
- Place in envelopes and label
- Store in airtight jars

Varieties for Sale Today

Cherry Tomatoes

- Matt's Wild Cherry Indeterminate, wild variety, ½" fruits, very sweet, soft, subject to cracking, some resistance to E & L blight, needs stake or cage
- Ladybug Indeterminate, hybrid, 1" fruits, ultra sweet, resistant to cracking, heat tolerant, needs stake or cage





Small – Medium Size

Early Girl – Indeterminate, hybrid, high yield, early bearing, disease resistant (V, FF)

Homestead - Determinate, heirloom, sturdy vines need staking or cage, UF developed for heat tolerance, disease resistant (F), bears for 6 – 7 weeks

San Marzano – Indeterminate, heirloom, resists cracking, plum, large plants need staking, bears over long season







Extra Large Tomatoes

Abe Lincoln – Indeterminate, heirloom, crack resistant, vines require stake or cage, hybrid variety is disease resistant (VFNASt)

Beefsteak - Indeterminate, ribbed fruit – 1 – 2 lb, hybrid, large plants require stake or tall cage, disease resistant (F,N)

Brandywine Red - Indeterminate, (red or pink), heirloom, 1 lb fruit, intense flavor, vigorous vine requires tall cage, potato like leaves

Brandywine Yellow - Indeterminate, very fine flavor, heirloom, 1 lb golden yellow fruit, vigorous vine requires tall cage











QUESTIONS??

