

# Gardening-Some of the Basics of Growing Tomatoes

By Michael Rose  
Mayes County OSU Extension  
Educator



# Tomatoes

- Warm season crop with harvest between June and September

## Varieties

Amelia, Celebrity, Classica, Florida 47, Floralina, Mountain Delight, Solar Fire, Solar Set, Sun leaper, Sunny, etc..

- Consider varieties with resistant traits

- Can be indeterminate (continue to grow and produce fruit) or determinate (limited growth and duration of yield)



# Soil Preparation

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- Ideal pH 6.5 (range 5.5-6.8)
- A well drained loam soil is the best
- Add organic matter
- Till soil as deep as possible
- Tomatoes are deep rooted, more than 48 inches



# Planting

- Use transplants to beat Oklahoma's heat
- Place plants 2-3' apart in rows 5-6' apart
- transplant after all danger of frost is past
- Transplant when plants are 5-6 inches tall
- For early planting, use a Wall-of-Water
- Tomatoes root anywhere the stem touches soil
  - Deep planting can cause problems
  - Trench planting works much better
- Leave the top growing tip exposed
- Can be seeded (1/4- 1/2 in. deep)





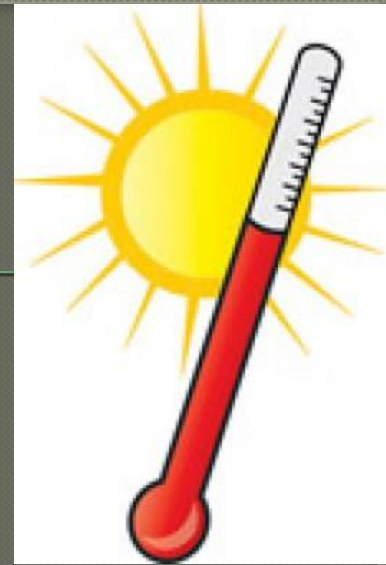
# Staking

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- Cages produce the highest yields and best tomatoes
  - Use 4 feet of reinforcing wire to produce a 15 inch cage
- For stake and weave, place a metal post between every two plants and reinforce end row post. Weave string around post and around opposite plant sides.
- Plants left on the ground have a high amount of disease issues and fruit rot.

# Temperature

- Grow best when night temperatures are above 60F and day temperatures are below 90F
- Pollen can be damaged by high temperatures
- Tomato blossoms will not set fruit well if day time temperatures are above 95F or if night time temperatures remain above 70F
- Night temperatures in the 40s or low 50s will allow fruit set but may cause fruit to be cat faced or not to ripen



# Watering

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- Requires 1 to 2 inches of water per week
- Infrequent deep watering will encourage deep rooting
- Water on the leaves increases foliar diseases
- Best to water in the mornings so the plants will dry out-less opportunity for disease



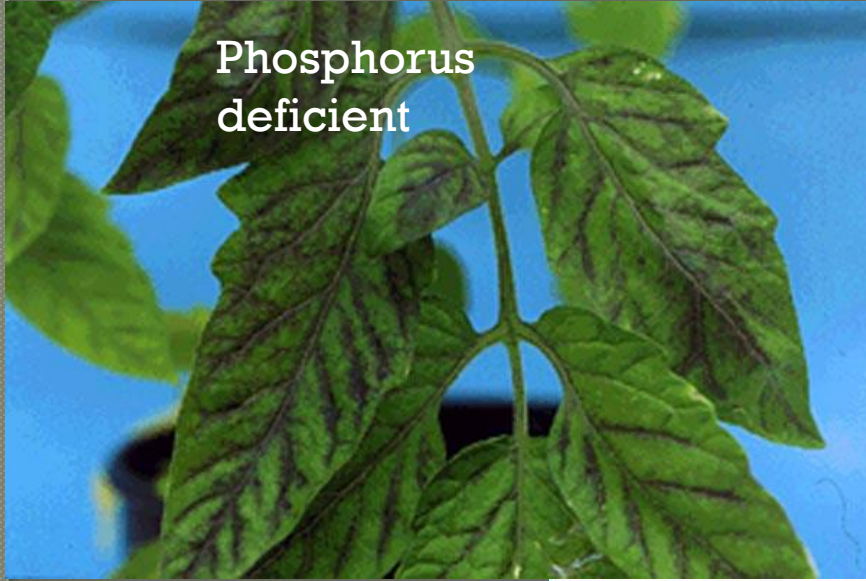
# Signs of Water Stress



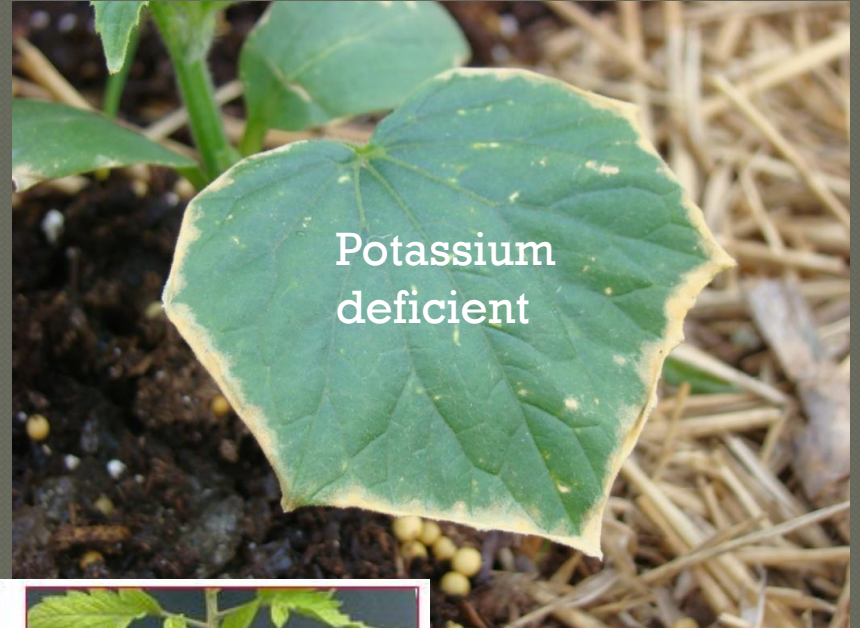
- Lack of water normally causes the plants to wilt
- If you water and the plants recover within 24 hours then it was probably water stress
- Soil that is too wet can also cause the plants to wilt because the roots suffocate from the excess water pushing the air out of the soil.
- Wilting can also be caused by extreme heat. The plant temporarily shuts down to minimize moisture loss. Normally these plants recover in the evening when the temperature cools.

# Nutrient Deficiencies

Phosphorus  
deficient



Potassium  
deficient



Nitrogen deficient



# Fertilizing

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- Take a soil test
- Watch the nitrogen, too much creates large plants and no fruit
- Phosphorus important for flowering and fruit set
- Potassium important for water movement in the plant
- General rate:
  - 1-2 lb. of 10-10-10 per 100 sq. ft. tilled into the soil before planting
  - 2 tablespoons of 10-10-10 per plant when **earliest fruits are 1/3 size**
  - 2 tablespoons of 10-10-10 per plant when **first fruits ripe**
  - 2 tablespoons of 10-10-10 per plant **one month later**





Blossom End Rot



## Spider Mites



**Wizzje Brown**  
**Texas AgriLife Extension**  
**[urban-ipm.blogspot.com](http://urban-ipm.blogspot.com)**



Septoria Leaf Spot

# Spray program for Tomatoes

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- Bacterial spot or speck-copper fungicide like Kocide
- Fungal diseases-Anthrachnose, Early and Late Blight, Septoria Leaf Spot- Chlorothalonil and Mancozeb
- Mancozeb has a 5 day pre harvest restriction
- If you are unsure if the cause bacterial or fungal then a tank mix of a copper fungicide and chlorothalonil works well



- If you treat the plants for bacteria, disease and/or insects and they do not improve then it could be
- 

virus

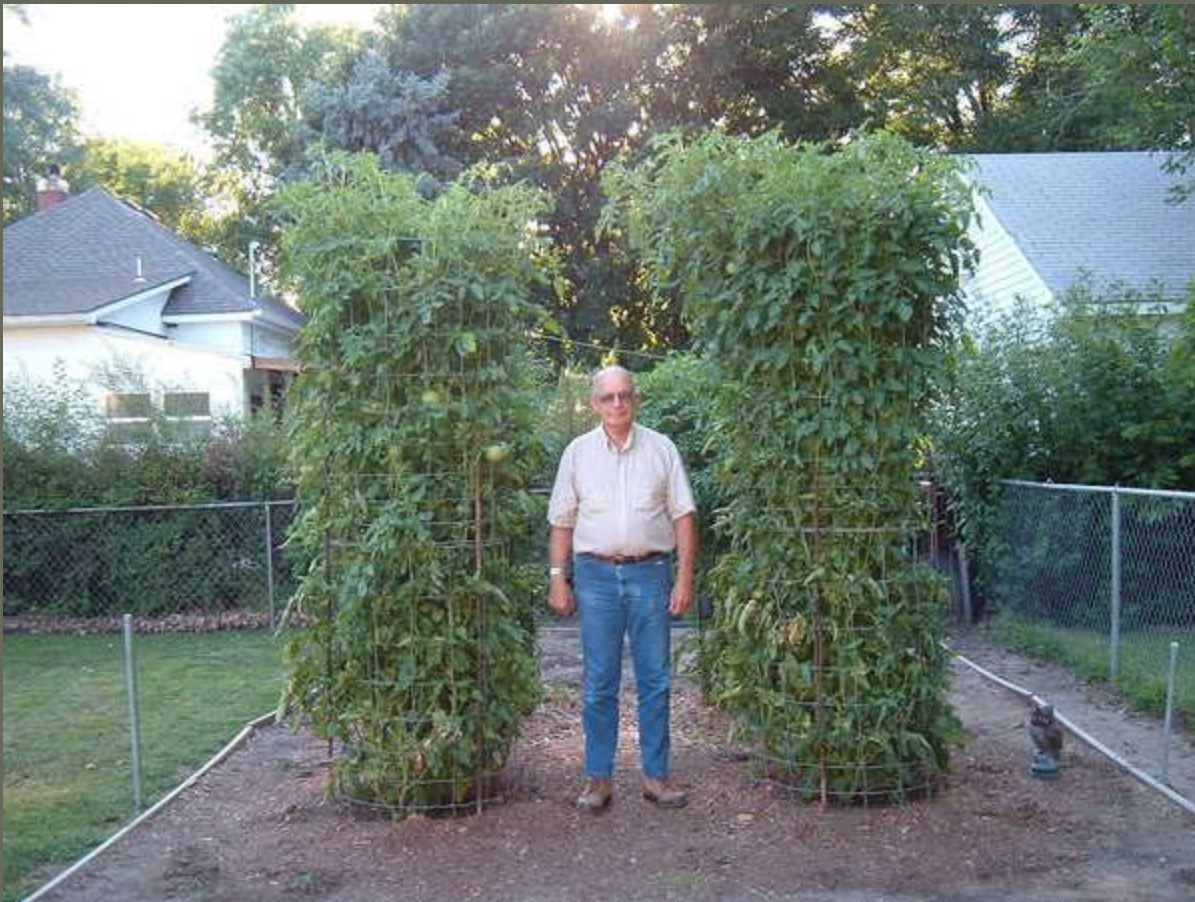
wilt disease

nematodes

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Cannot treat these tomato plants effectively this year for these problems

- Remove and dispose of plants
- Rotation & Soil solarization may help



Too much nitrogen can result in a lot of vegetative growth with limited fruit production.

Plants set fruit when they think they need to produce seed, so pick the fruit they have already produced if you want more fruit.

Plants that have it too good aren't concerned about producing fruit, -there is no need -life is good.



Catfacing



**Growth Cracks**



Herbicide Injury



**Tomato Stem  
Primordia**

# Harvesting

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Harvest begins about 6 weeks after fruit set

High temperatures and diseases are the factors that normally limit yield

- When daytime temperatures go above 80°F, harvest fruit when the blossom end first turns pink. Place fruit in an open container at room temperature for 3-4 days.
- Never refrigerate tomatoes - flavor is ruined when fruit exposed to temps below 55°F.