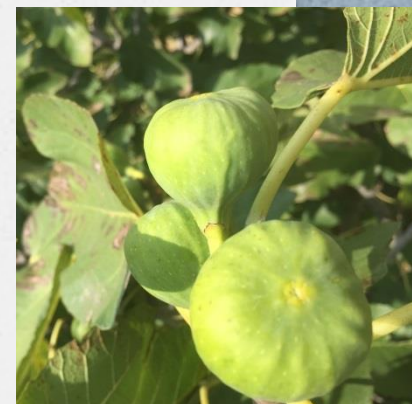


5 X 5

5 Fruit Facts in
5 Fruit Subjects



5 Fruits for CAWF

o Peach

- o Outstanding Fruit Quality
- o Many varieties to choose from
- o Precocious—Fruit in third year
- o No Pollinizer needed
- o Produce 2-4 Bu/Tree
- o Spring & Summer Harvest



5 Fruits for CAWF

o Peach

- o Must prune and thin fruit annually
- o Require protection from late frost
- o Peach tree borers, stinkbugs, curculios
- o Not long lived—12-15 years
- o Don't tolerate flooding
- o Choose the right rootstock



Table 1. Tolerance^z of Peach Rootstocks to Stress.

- o Nemaguard—once the only rootstock recommended in Texas; struggles in high pH; avoid clay soils
- o Lovell & Halford—better on clay soils and high pH, but susceptible to nematodes.
- o Guardian—introduced to industry for nematode resistance, but has not done well in Texas.
- o Myrobalan plum—for noncommercial trees where poorly drained soils and oak root rot is problem.

^zVS = very susceptible; S = susceptible; MS = moderately susceptible; R = resistant.

5 Fruits for CAWF

- o Satsuma Mandarin Orange
 - o Good cold hardiness for citrus (15 deg. Possible).
 - o Highly Productive—10 Bu/tree
 - o Precocious—Fruit in second/third year
 - o No Pollinizer needed
 - o Fall Harvest
 - o Easy to peel, good flavor, seedless



5 Fruits for CAWF

- o Satsuma Mandarin Orange
 - o Require protection in severe freezes
 - o Citrus Greening Disease
 - o Scale, Mites, Mealybugs, Mockingbirds



5 Fruits for CAWF

◦ Blackberry

- Grow well, prolific fruiting. 10 lbs/plant possible.
- Precocious—Fruit in second year
- No Pollinizer needed
- Fit small, confined areas
- Easy marketing and high prices



5 Fruits for CAWF

◦ Blackberry

- Thorns on many varieties.
- Cane anthracnose, double blossom, rust
- Stinkbugs
- Abundant pruning and tying
- Short lifespan—Arkansas varieties
- White drupelet,
- Not Sweet??



5 Fruits for CAWF

◦ Pears

- Low maintenance
- Steady, heavy production
- Attract wildlife
- Not many pests



5 Fruits for CAWF

o Pears

- o Fireblight
- o Early blooms—Spring frost
- o Attract wildlife
- o Slow growth



5 Fruits for CAWF

◦ Figs

- Few pests
- Not much training
- Abundant fruiting
- Outstanding flavor
- Attract birds



5 Fruits for CAWF

○ Figs

- Freeze damage
- High water demand
- Fruit have no shelf life
 - Use it or lose it
- Nematode problems in some soils
- Diseases: Rust and Mosaic



5 New Tree Establishment Tips

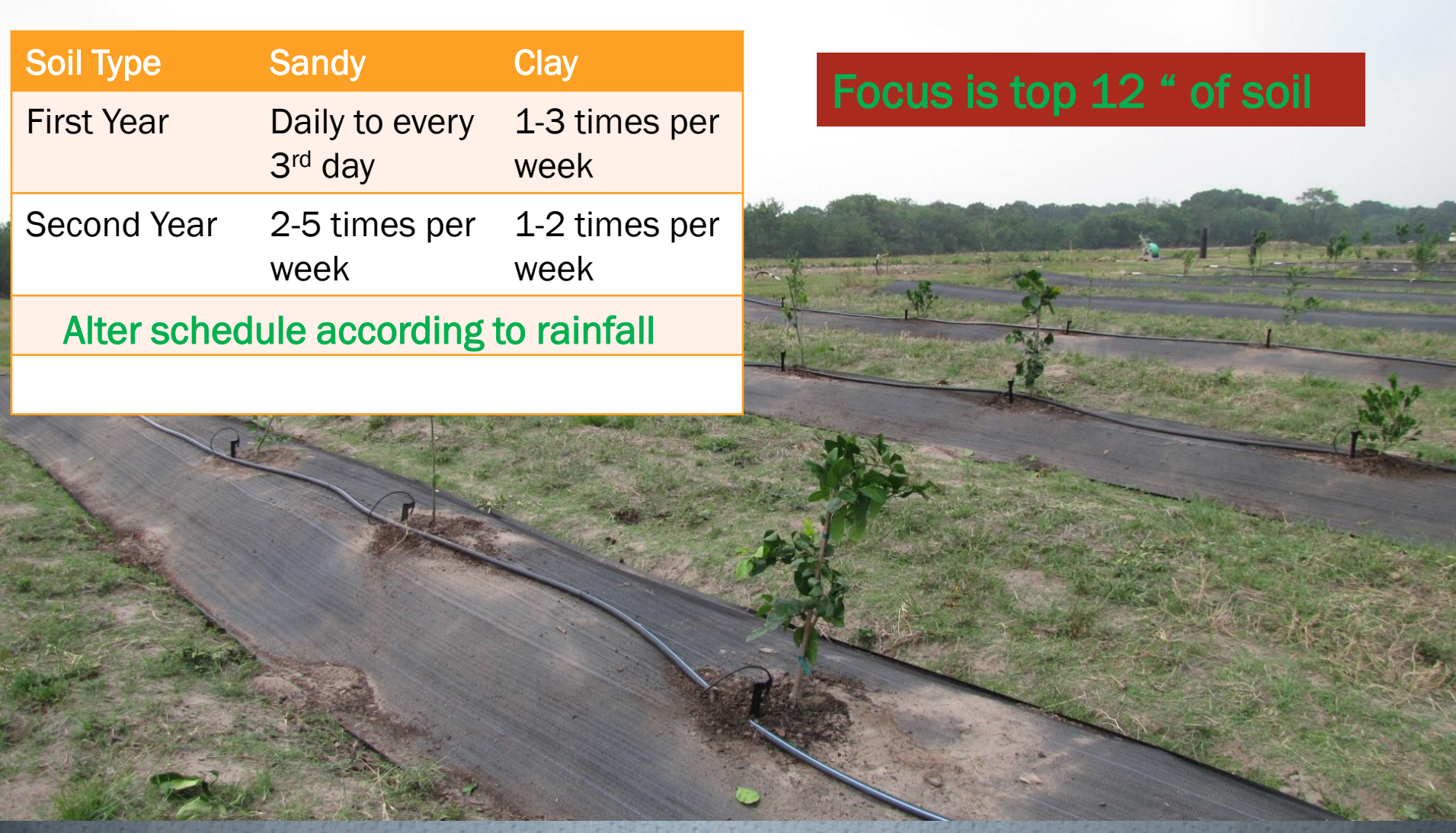
- o Control Weeds
- o Mulch
- o Protect Foliage
- o Frequent Low Dose Fertilizer
- o Prevent Under- and Over-watering

How much water and how often?

Soil Type	Sandy	Clay
First Year	Daily to every 3 rd day	1-3 times per week
Second Year	2-5 times per week	1-2 times per week

Alter schedule according to rainfall

Focus is top 12 " of soil





Drip Irrigation

- Drip emitters have relatively small wetting areas.
- For establishment, drippers must be oriented near tree trunk.
- Otherwise, use microsprayers or water-rings for hand watering.



Microsprayer irrigation

- Wider coverage area
- More evaporative losses
- Less efficient than drip
- Effective for longer # years without modification
- More maintenance



Mulch slows soil moisture evaporation, reduces weed emergence, lowers root temperature: a **win-win-win** for plants and the grower!

Studies on young pecan trees have found from 36-60% increase in trunk caliper over weed control area, depending on area mulched.



Minimum of 4 ft x 4 ft, 8 inches deep



After Shoveling Mulch

Fertilizer



Application of fertilizer (salts) to newly planted trees can compromise establishment.

Trees should demonstrate new leaf & shoot growth before applying any fertilizer.



Second year trees can receive from 0.25 to 0.40 lbs actual N per tree if early spring growth is vigorous (species dependent—consult crop guides and fact sheets).



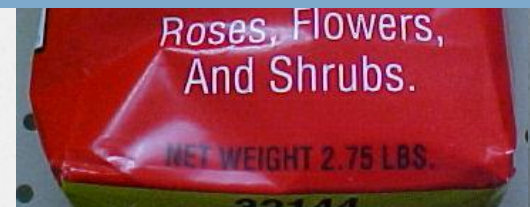
If new fruit plants are making new leaves and shoots, nitrogen only or complete fertilizers can be broadcast around trees to facilitate new vegetative growth.

Nitrogen delivery rates for first year trees are typically $\frac{1}{2}$ pound of ammonium sulfate (0.1 lb actual N) total. Or 1.0 pound 10-10-10 or 13-13-13. First application not before May of planting year and not later than August 15.

Sources of nitrogen for home orchards

- o Grass clippings from mowing
- o Unused fruit
- o Mulch decomposition
- o Soil-fixed nitrogen from clovers and other legumes
- o Manure from grazing animals
 - o Potential Salt Damage; Excessive Phosphorous
 - o Food Safety concerns
- o Composted manure and other organic materials
 - o Food Safety concerns
- o Natural materials
 - o Blood meal (13%), Bone meal (4%)
- o Inorganic fertilizers
 - o Ammonium sulfate, 13-13-13, etc.

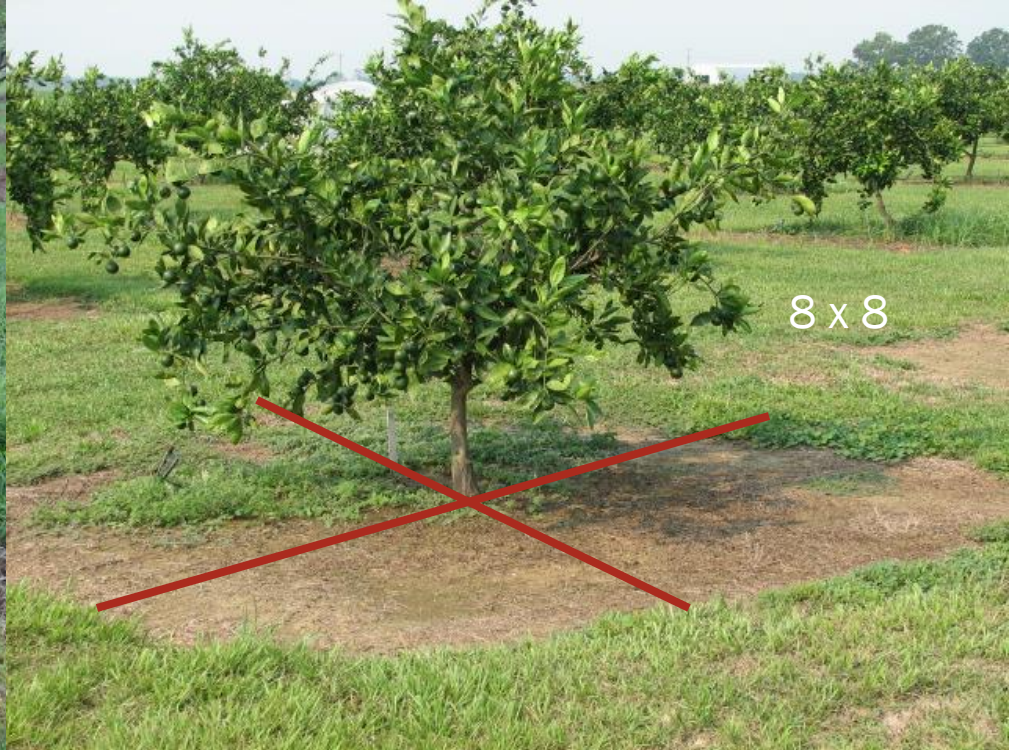
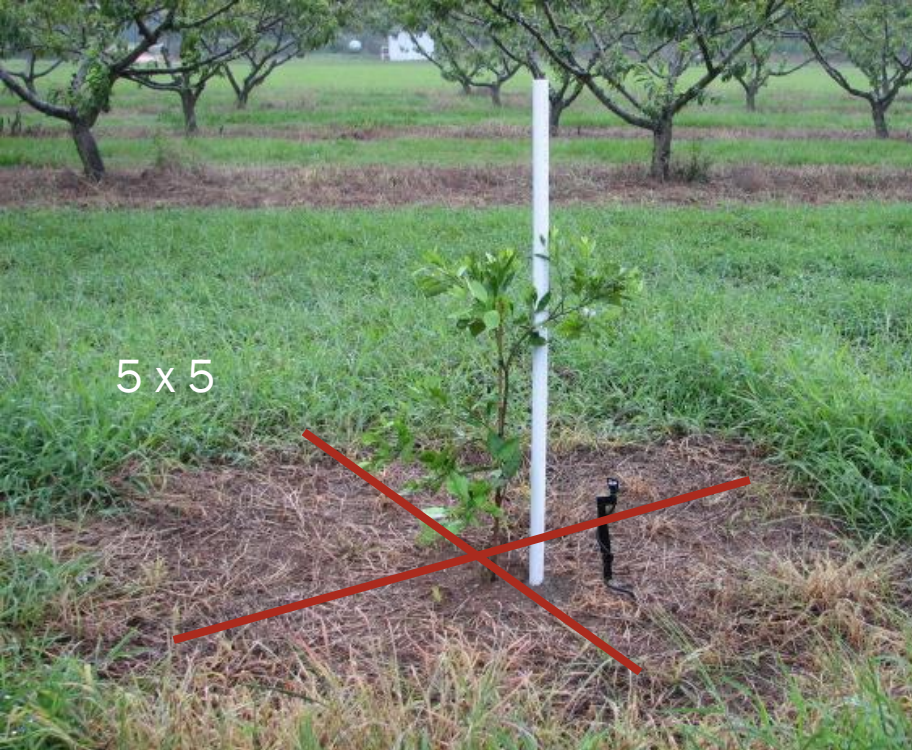
Unquantified and tested sources of organic fertilizers deliver N slowly and with great variation.



Not a product endorsement

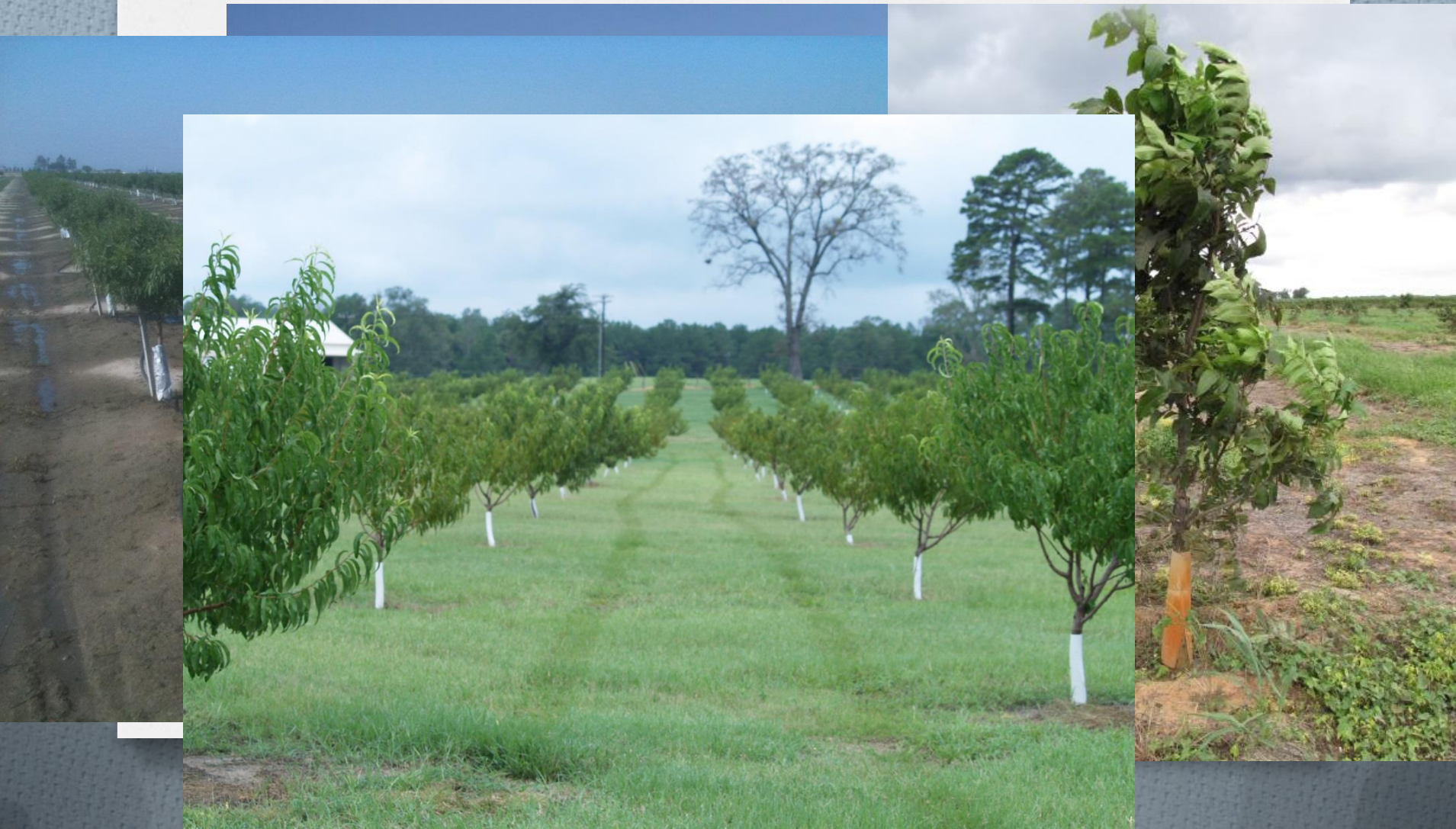
Weed Control is Key to Faster Establishment and Development





How Much Weed Free Area?

Trunk protectors facilitate herbicide use or cultivation



Protection from Pests



Peach Tree Borer-young trees need protection



TREAT TRUNKS EARLY SEPT

Freeze Protection



5 Must-Do's for frost & freeze protection

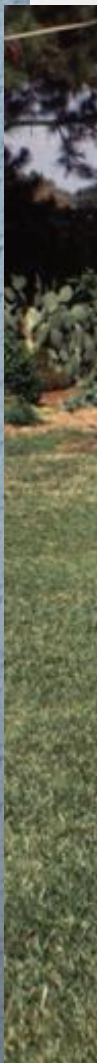
- o Don't plant in frost pocket
- o Delay pruning until winter is over
- o Use water liberally
- o Bare ground is good—remove mulch temporarily
- o Soil banks and covers



Single row houses
Trees: 6' to 8' apart







5 Impt. Fruit Insecticides + 5 Impt. Fruit Fungicides

- o Bifenthrin
- o Imidacloprid
- o Spinosad
- o Neem Oil
- o Malathion
- o Basic Copper sulfate
- o Liquid Lime sulfur
- o Captan
- o Chlorthalonil
- o Phosphorous acid—
(Phosphites)

Sweet
Orange Scab



Facultad de Agronomía - Unidad de Fitopatología

Citrus Leafminer



whiteflies



Rust Mites



Leaffooted Bug



Bird Damage



5 Facts about water

- o Most fully planted fruit orchards need approximately one acre inch of water per week during crop production season (27,150 gallons per acre).
- o Fruit trees are salt sensitive & a water test cost \$20 to find out.
- o Flooding/overwatering is equal or worse (for some plants) than underwatering
- o Manage water in the top 12" of soil. Deep watering may be wasteful.
- o Roots grow in winter and need irrigation in dry spells.

Water Drainage

Brazoria County, 2010



Fruit trees have low tolerance for wet feet (heavy soil, constant wetting)



Enhance surface drainage with
raised beds/berms

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