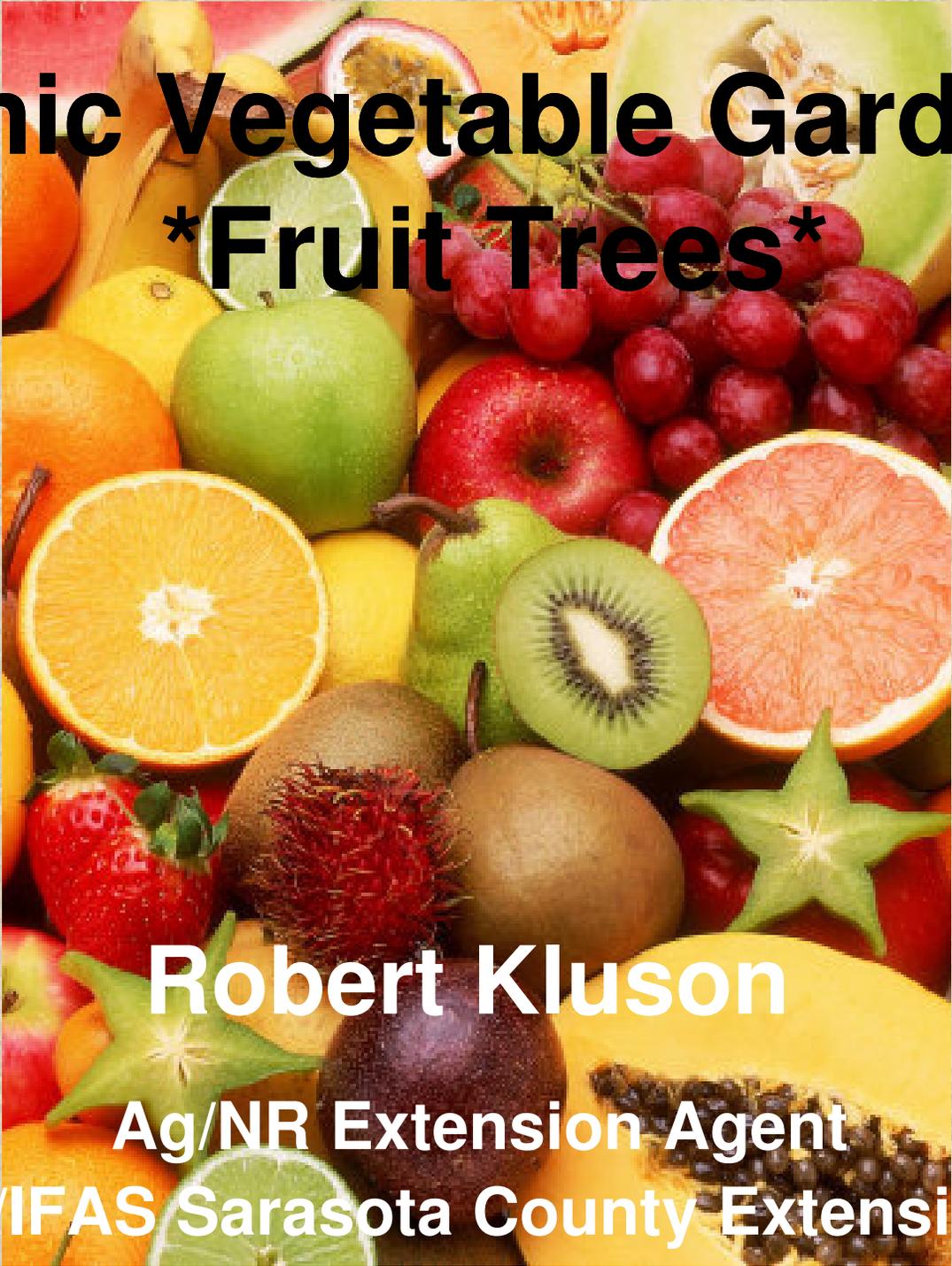


# UF/IFAS Extension

## The Journey to Sustainability Begins with Education





**‘Organic Vegetable Gardening’**  
**\*Fruit Trees\***

**Robert Kluson**

**Ag/NR Extension Agent**

**UF/IFAS Sarasota County Extension**

# Syllabus of Presentation Series

- Introduction to Organic Vegetable Gardening
- Soil Management
- Crop Management
- Pest Management
- Water Management
- Advanced Composting
- Cover Crops & Mulches
- Companion Planting
- Fruit Trees 

University of Florida

Sarasota County Extension  
Solutions for Your Life



## UF/IFAS Sarasota County Extension Community Garden Program

**Pdf Files of Powerpoints of  
Presentation Series Available  
Online at:**

<http://sarasota.ifas.ufl.edu/Hort/commgarden.shtml>

## Organic Gardening Documents

[Organic Vegetable Gardening](#)

[Florida Vegetable Gardening Guide](#)

[Organic Vegetable Gardening Introduction](#)

[Organic Vegetable Gardening Pest  
Management](#)

[Organic Vegetable Gardening Soil  
Management](#)

[Organic Vegetable Gardening Water  
Management](#)

[Organic Vegetable Gardening Crop  
Management](#)

[Organic Vegetable Gardening: Advanced  
Composting](#)

[Organic Vegetable Gardening: Cover  
Crops and Mulches](#)

[Organic Vegetable Gardening:  
Companion Planting](#)

# Introduction

- Approach of this presentation series
  - Provide the concepts, and science from agroecology of management practices used in organic vegetable gardening
  - Provide resources in the management practices of soils and plant nutrition, in addition to our text “Vegetable Gardening in Florida” by James Stephens, UF/IFAS

# Agroecosystem Concept

- An approach that looks at your vegetable garden as a functional whole of interacting living and non living components, i.e. “whole is more than sum of parts”

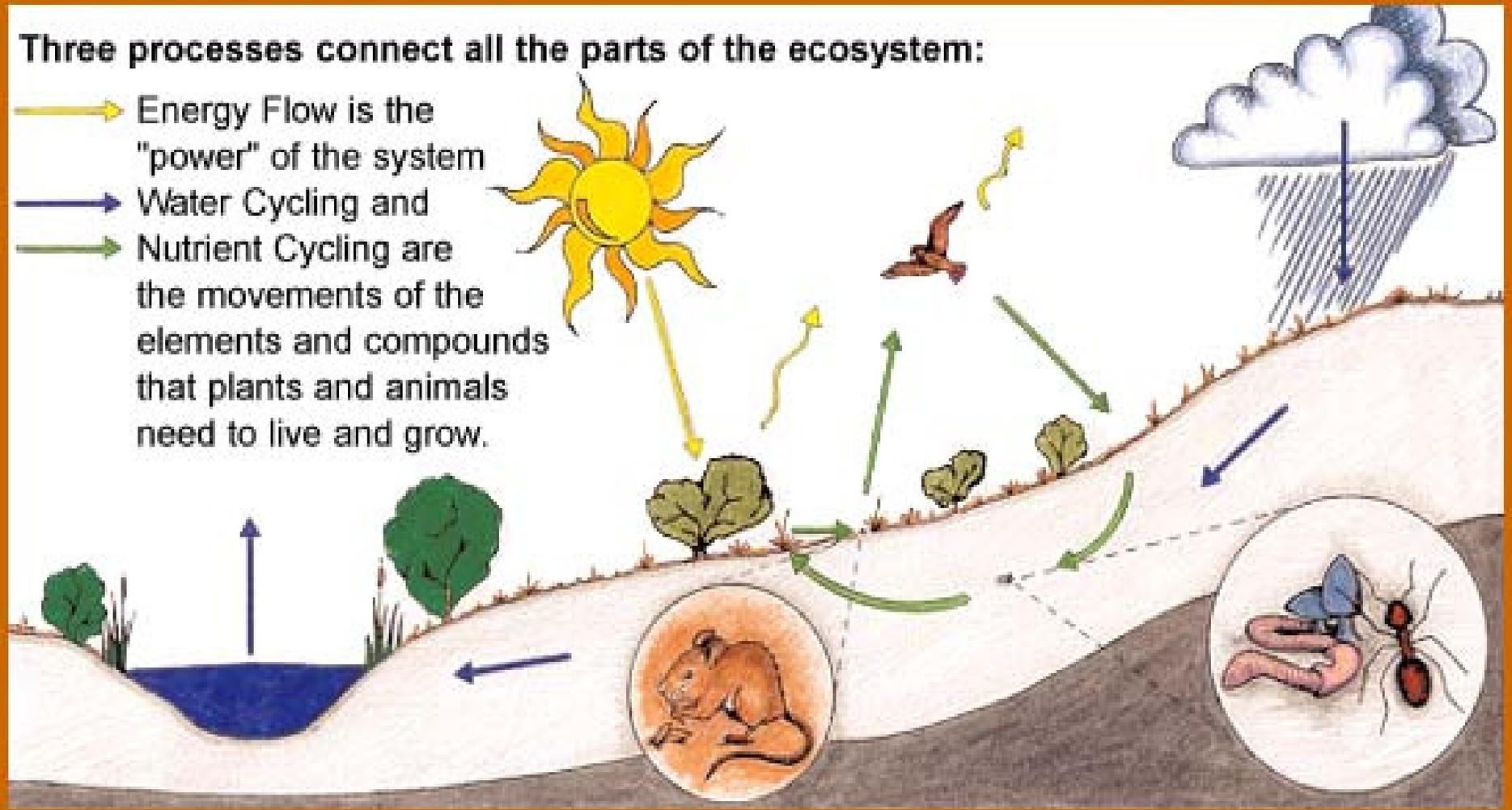
# Nature Model for Organic Vegetable Gardening

## ECOSYSTEM PROCESSES

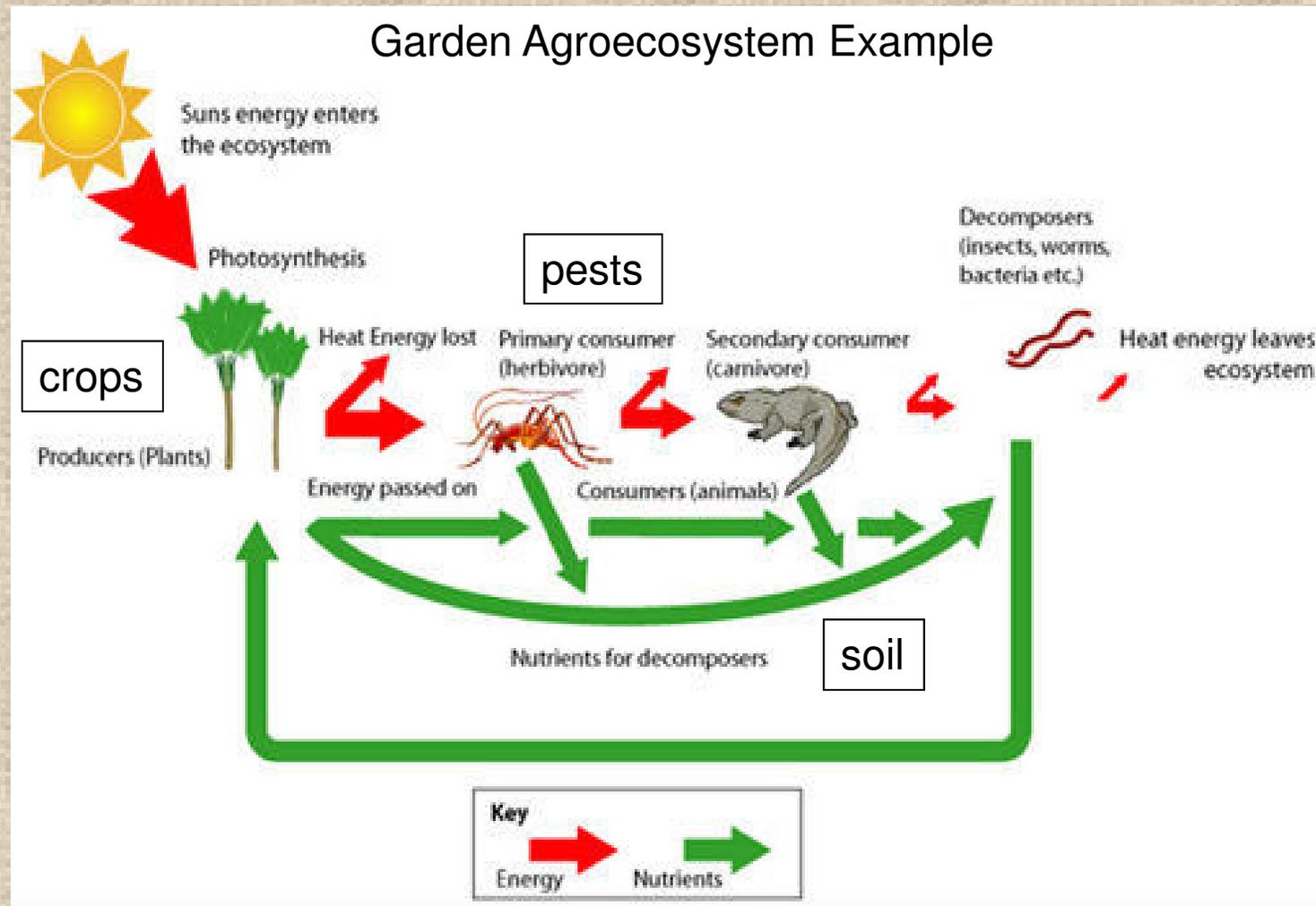
ILLUSTRATION: NICOLE BRAND

Three processes connect all the parts of the ecosystem:

- Energy Flow is the "power" of the system
- Water Cycling and
- Nutrient Cycling are the movements of the elements and compounds that plants and animals need to live and grow.



# Organic Vegetable Garden Ecology



- Garden agroecosystems have functional properties & subsystems from **biodiversity management**

# Introduction

- Goals of Presentation Series
  - Food for your freshest nutrition
  - Food for expanded community benefits
  - Food for thought
  - Food for your soul

# Tree Fruit Nutrition Example



**Pomegranates are not only delicious and beautiful, they're also one of the most nutritious fruits you can eat.**

**High in vitamin C and potassium, a good source of fiber and low in calories.**

Pomegranate juice is high in three different types of polyphenols, a potent form of antioxidants. The three types - tannins, anthocyanins, and ellagic acid - are present in many fruits, but pomegranate juice contains particularly high amounts of all three. As antioxidants, they are credited with helping in the prevention of cancer and heart disease.

So, whether you crunch fresh pomegranate seeds or drink the juice, feel guilt-free as you enjoy each delicious mouthful- you're doing your body a favor!

## Nutrition Facts

Serving Size: 1/2 cup of arils (87g)  
Servings per medium pomegranate: 3.5

### Amount Per Serving

**Calories** 80      **Calories from Fat** 0

**% Daily Value\***

**Total Fat** 0g      **0%**

Saturated Fat 0g      **0%**

Trans Fat 0g

**Cholesterol** 0mg      **0%**

**Sodium** 5mg      **0%**

**Potassium** 180mg      **5%**

**Total Carbohydrate** 18g      **6%**

Dietary Fiber 5g      **20%**

Sugars 12g

**Protein** 1g

Vitamin A 0%      •      Vitamin C 4%

Calcium 0%      •      Iron 2%

\*Percent Daily Values are based on a 2,000 calorie diet.  
Your daily values may be higher or lower depending on your calorie needs.

<http://www.pomegranates.org/>

# Community Fruit Trees

Welcome to Neighborhood Fruit!



**Welcome!** Neighborhood Fruit is here to help you find and share fruit locally: both backyard bounty and abundance on public lands. Currently, there are over 10,000 registered trees nationwide and more get added everyday!

Cities resplendent with edibles are better places to live, and sharing with neighbors is a great way to get there. Join us in creating a future where the food we eat is truly fresh, seasonal and local!

**Download** Find Fruit, Neighborhood Fruit's mobile companion!

**Learn** how Neighborhood Fruit works!

*Neighborhood Fruit is in Beta. Thank you for your patience while we work out all the kinks.*

<http://neighborhoodfruit.com/home>

# Fruit Tree System: Alley Cropping Example “Fruit Tree & Perennial Herbs”



Apricot

Rosemary

2006 7 14

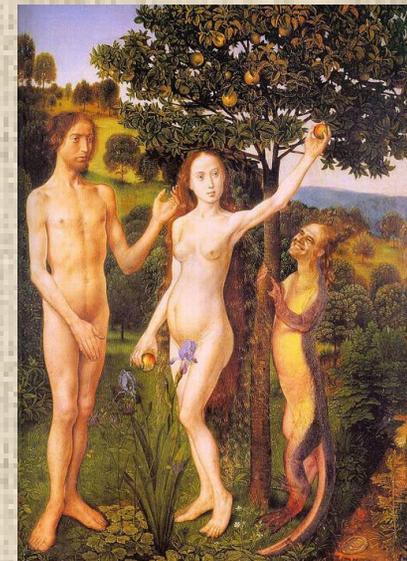
# Tree Fruit Historical Perspectives

- In the fruit trees are hidden certain of God's secrets which only the blessed among men can perceive.  
--- Saint Hildegard von Bingen



VS

- It is here that we harvest the miraculous fruits your heart hungers for; come and intoxicate yourself on the strange sweetness.  
--- Charles Baudelaire, 'The Voyage'

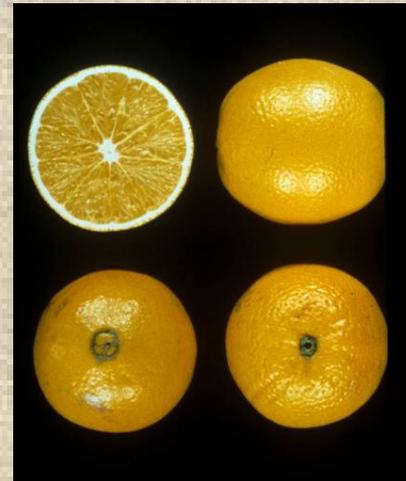


# Outline of Today's Presentation

- Site selection factors for fruit tree gardening
- Horticulture basics of fruit tree growing
- Review of fruit tree examples for south central FL

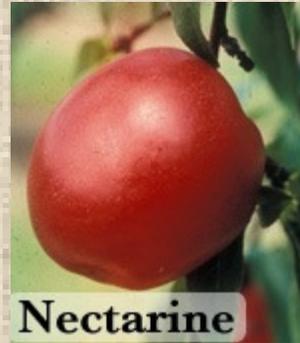
# Introduction

- A wide variety of fruit can be grown in southcentral Florida
- Need to be aware of limitations
  - Varieties
  - Diseases
  - Insects
  - Climate
  - Soil



# Fruit categories that can be grown successfully in southcentral Florida

- Temperate



- Subtropical



- Tropical



# Fruit Tree Considerations Before Planting

- How much time do you want to devote?
- What level of successful production exists?
- Start up cost.
- Production input costs
- Yield outputs – quantity & quality

# Fruit Tree Horticulture Basics

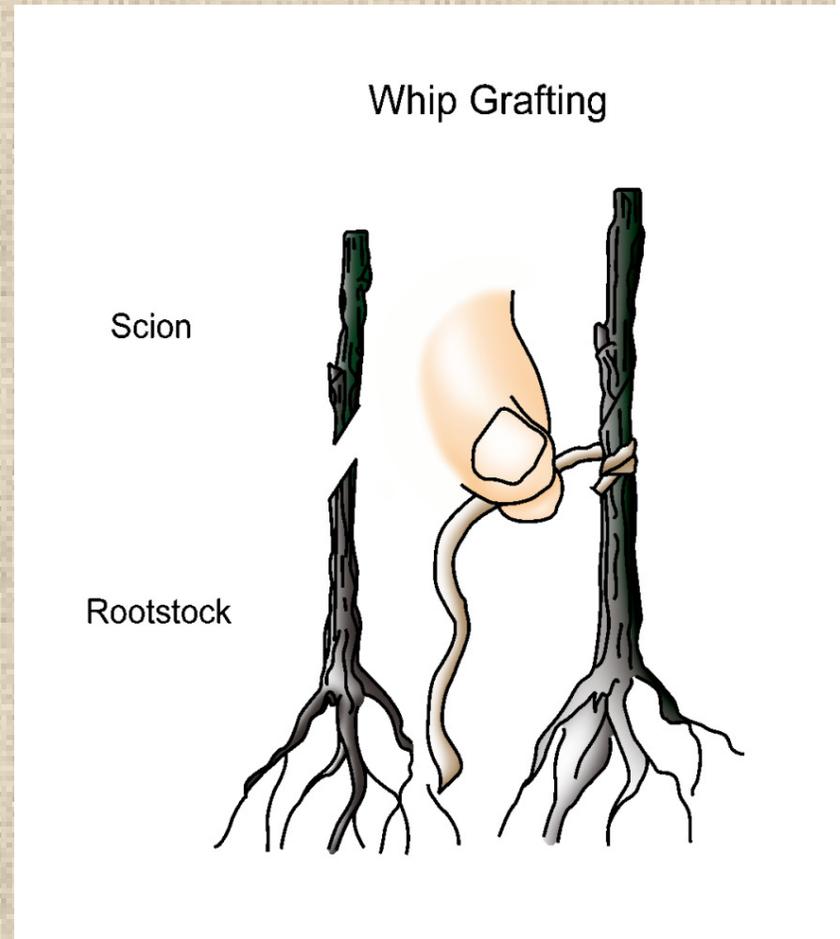
## What are tree fruits ?

- Tree fruits are edible fruit crops that grow on trees
- Trees are woody plants that usually have a single main trunk and produce new growth in the branches of their canopy
- Trees are distinct from shrubs, which typically have several stems instead of a single trunk and produce new growth from the ground
- The grown pattern of trees makes them well suited to grafting

# Fruit Tree Horticulture Basics

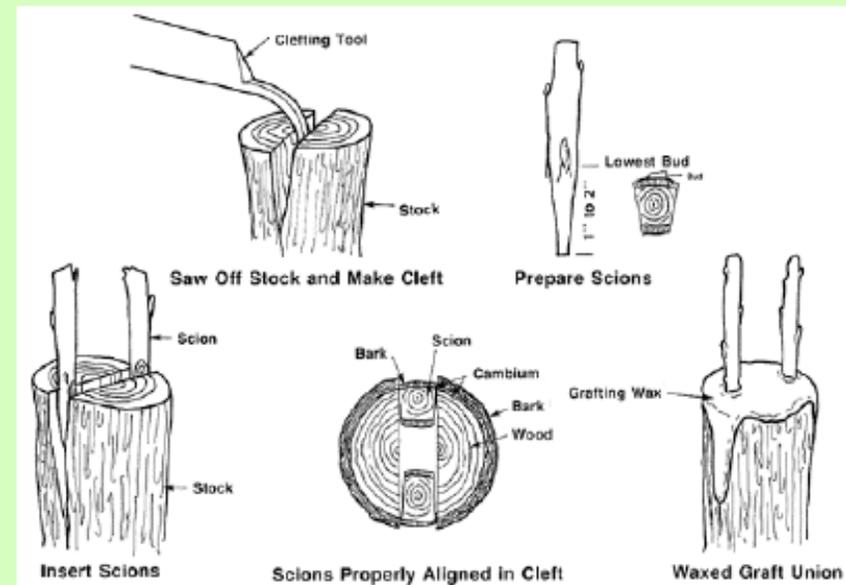
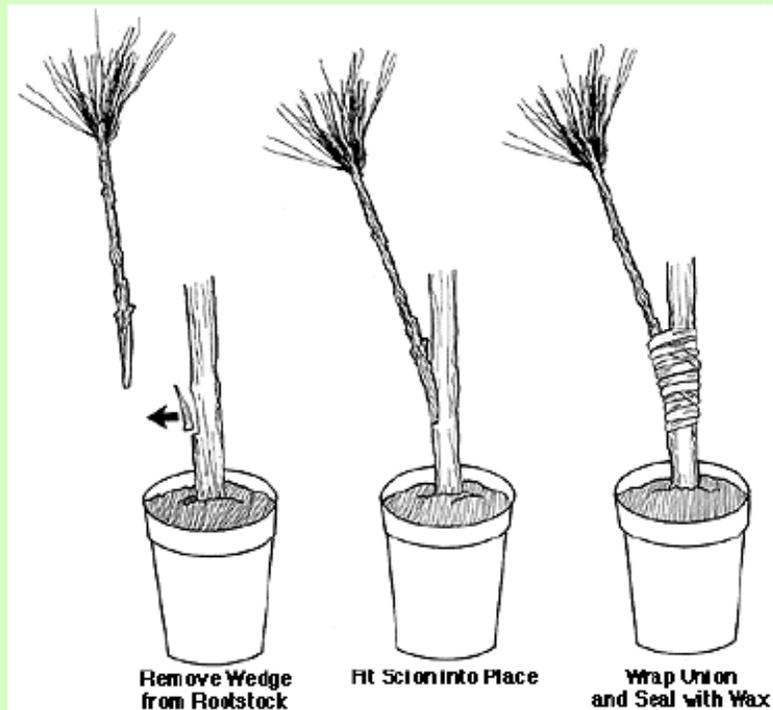
## How are fruit trees produced?

- Grafting is a propagation method in which a bud, twig, or shoot – the **scion** – is taken from one plant and attached to a different but compatible plant, called the **rootstock**.
- The grower can choose one tree for its ability to grow in a particular region or type of soil, its height, or disease resistance, and another for its fruit.
- Grafting allows the grower to combine the best traits of multiple plants and produce a better product.



# Fruit Tree Horticulture Basics

## Many Grafting Techniques



# Fruit Tree Horticulture Basics

## How are tree fruits produced?

- Fruits result from pollination of flowers on fruit trees

### Pollination requirements

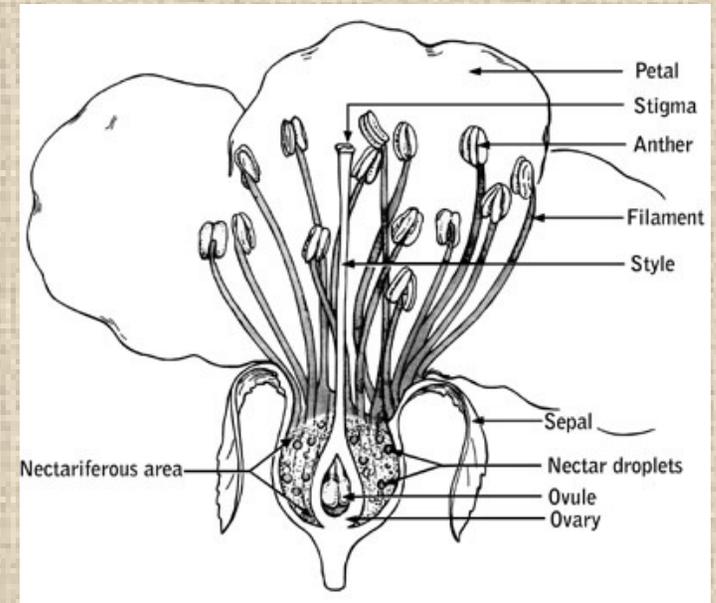
- Self-fruitful cultivars of fruit trees
  - Can self pollinate or do not require pollination
  - Sometimes cross pollination improves yields
- Self-unfruitful cultivars of fruit trees
  - Require a different variety for pollination
  - Can graft a pollinizer limb on top
- Lack of natural pollinators – *cherimoya*
- Timing of pollen availability and pistil receptivity

# Fruit Tree Horticulture Basics

## How can flowers of fruit trees differ?

### ✓ Parts of a flower

- Male reproductive parts:  
stamen = anther + filament
- Female reproductive parts:  
pistil = stigma + style



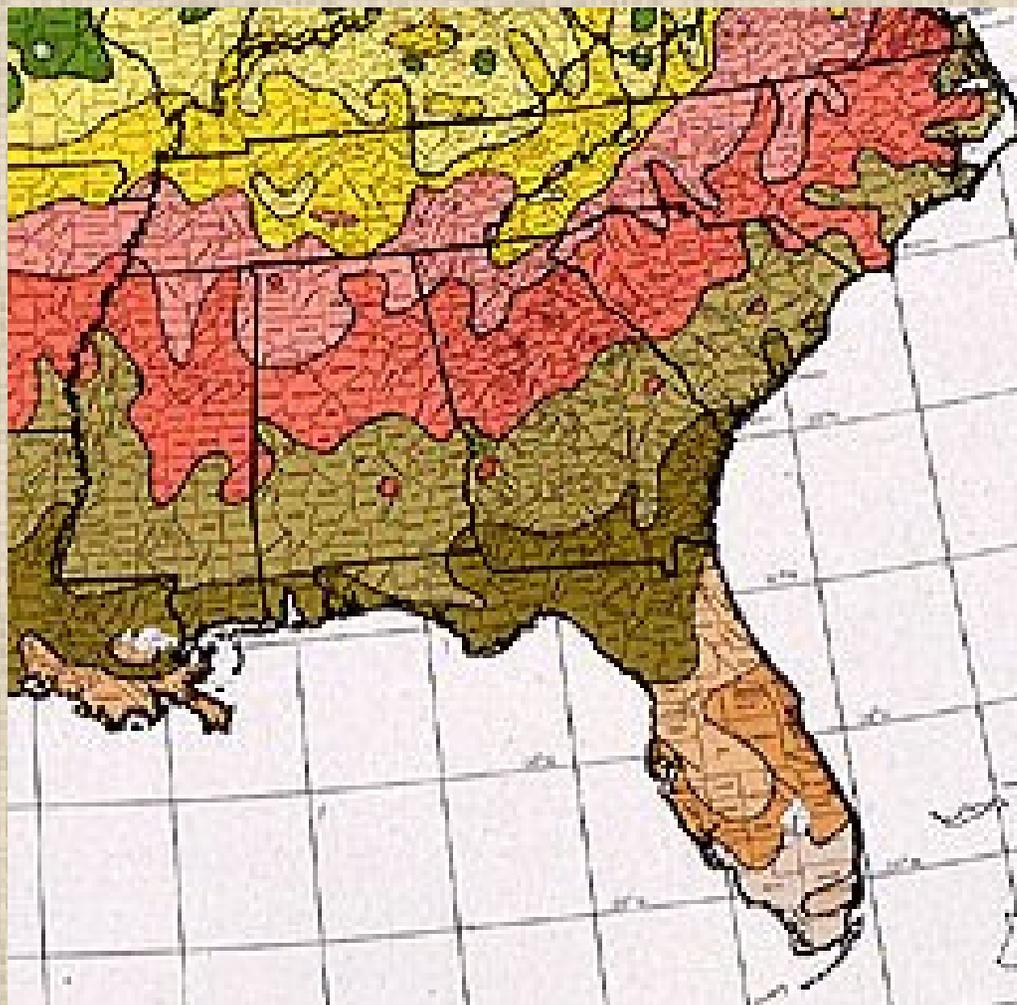
- ✓ Perfect flower – has both male & female reproductive parts
- ✓ Imperfect flower – has male or female reproductive parts but not both

# Site Selection Factors to Consider

- **Environment and Natural Resources**
  - Temperature
  - Soil type, depth, and texture
  - Rainfall and access to water
- **Plant selection and cultivars**
- **Planting in the garden and/or home landscape**

# Regional Environment Example Site Selection - Temperature

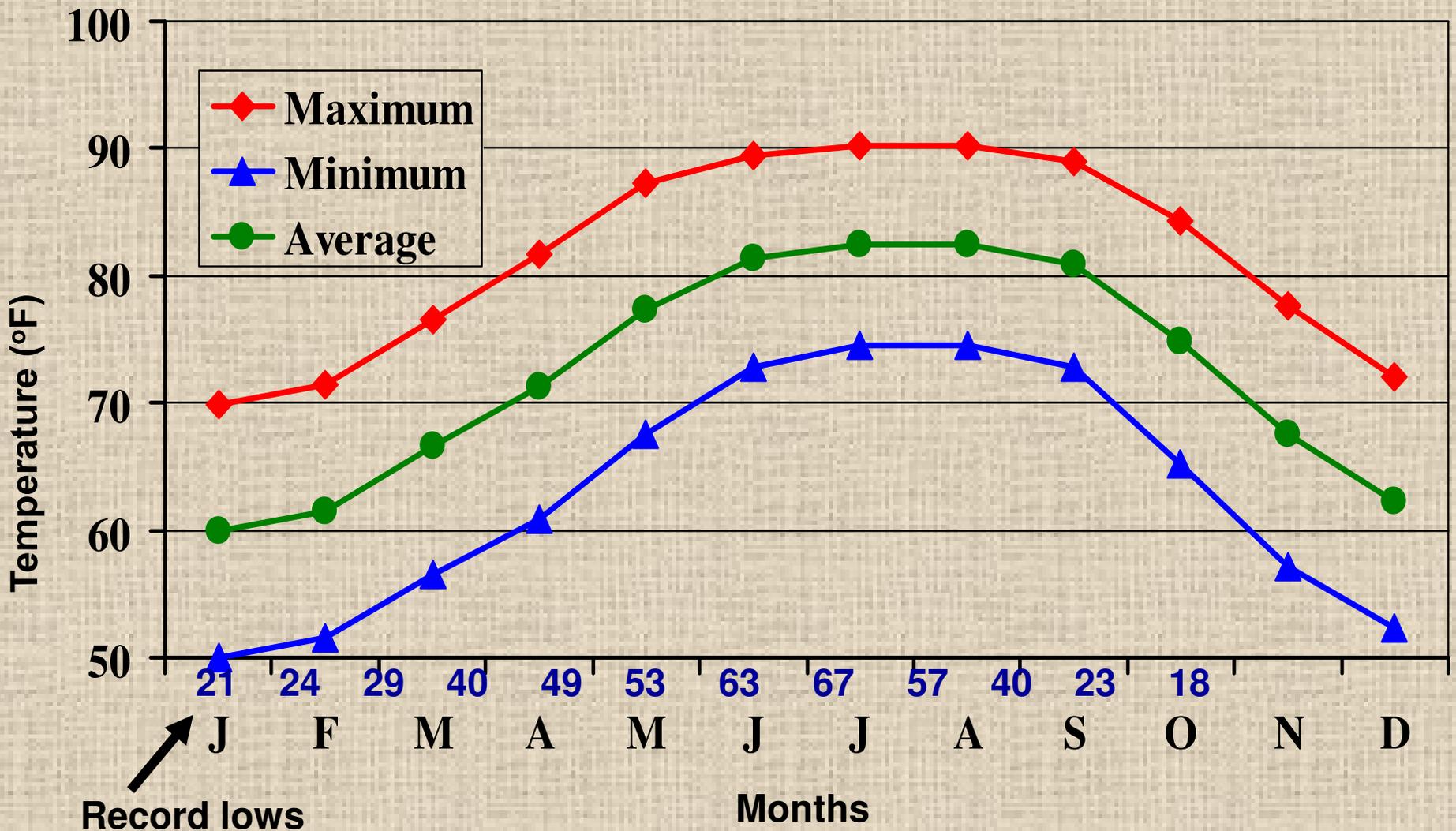
## USDA Plant Hardiness Zone Map



### Average Annual Minimum Temperature

Temperature (F)	Zone
Below -50	1
-45 to -50	2a
-40 to -45	2b
-35 to -40	3a
-30 to -35	3b
-25 to -30	4a
-20 to -25	4b
-15 to -20	5a
-10 to -15	5b
-5 to -10	6a
0 to -5	6b
5 to 0	7a
10 to 5	7b
15 to 10	8a
20 to 15	8b
25 to 20	9a
30 to 25	9b
35 to 30	10a
40 to 35	10b
40 +	11

# Tampa Historical Mean Temperatures (1961-1990)\*

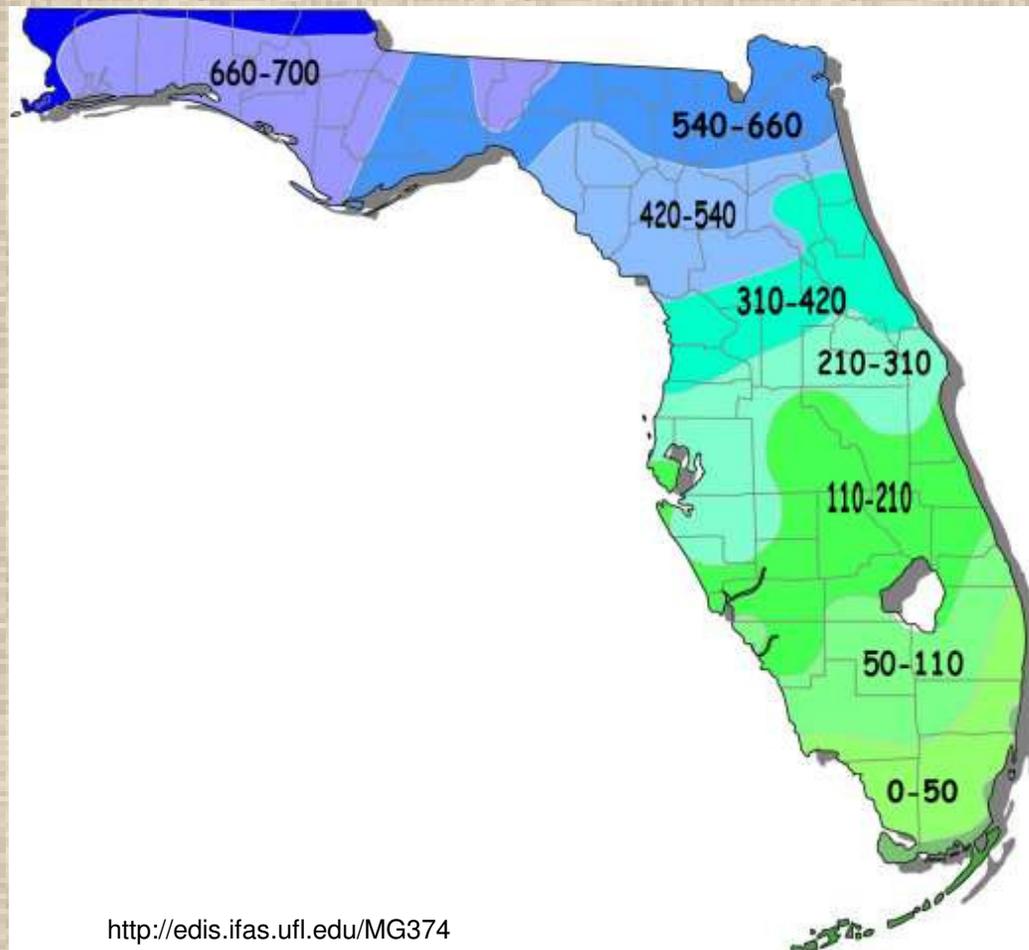


Record lows

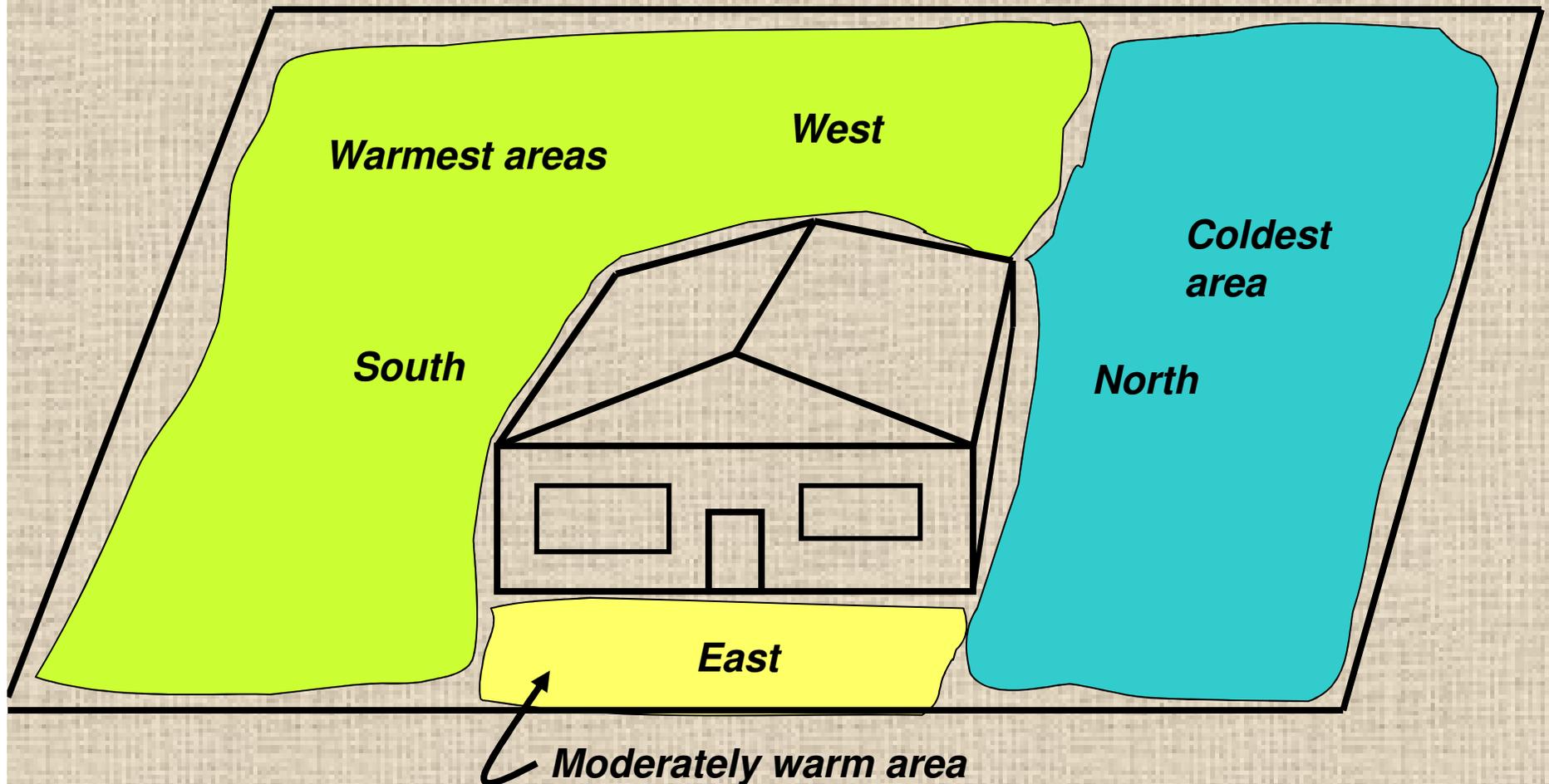
\*, Data source NOAA

# FL Chilling Degree Hours Map

- Hours of 32-45 degrees F during dormant period of fruit grow



# ***Homestead Environment Example Site selection - temperature***



# ***Homestead Site Selection - temperature***

- The warmest to coolest sides adjacent to your home are generally the south, west, east, and north.
- **The warmest and coolest locations in the landscape are similar.**
- In general, the tops of slopes are warmer than the lower areas in your landscape.  
Note, even a few inches can make a difference.

# ***Site Selection - Temperature***

- **The best time of year to plant and establish fruit trees in the home landscape is typically during the spring and summer - air and soil temperatures are warm and it's the rainy season. Trees will establish quickly and easily during this time of year.**
- **During the fall and winter, cool air and soil temperatures slow establishment (i.e., new root and shoot growth) of newly planted trees. In addition, our fall and winter is the driest time of the year and during the fall and winter young trees are more susceptible to freezing temperature damage.**

# Site selection - soil type, depth, & texture

- The soil type, depth, and texture in a particular local area and home landscape is another major deciding environmental factor impacting the selection of which fruit crop is suitable for the home landscape.
- **Fruit crops vary in their tolerance to continuously wet or periodically flooded soils.**
- The effect of excessively wet soils on plants depends upon their inherent flood tolerance, the growth stage of the plant (i.e., actively growing vs dormant), the duration of wet soil conditions, time of year (e.g., summer vs winter), and how often the area experiences excessively wet soil conditions.

## Site selection - soil type, depth, and texture

There are five main soil types in south Florida:

- Flatwood lowland soils which are usually poorly drained, sandy and of acid (low) pH.
- Sandy soils which may have a high or low soil pH and may be underlain by a hardpan that impedes water drainage.
- Highly organic muck soils which are high in nitrogen and moderately to poorly drained depending upon the water management in the area.
- Limestone-based soils which have a high pH and calcium carbonate content.
- Urban fill-based soils which may be composed of sand, silt, muck, and natural and manmade rock fragments of various types and sizes.

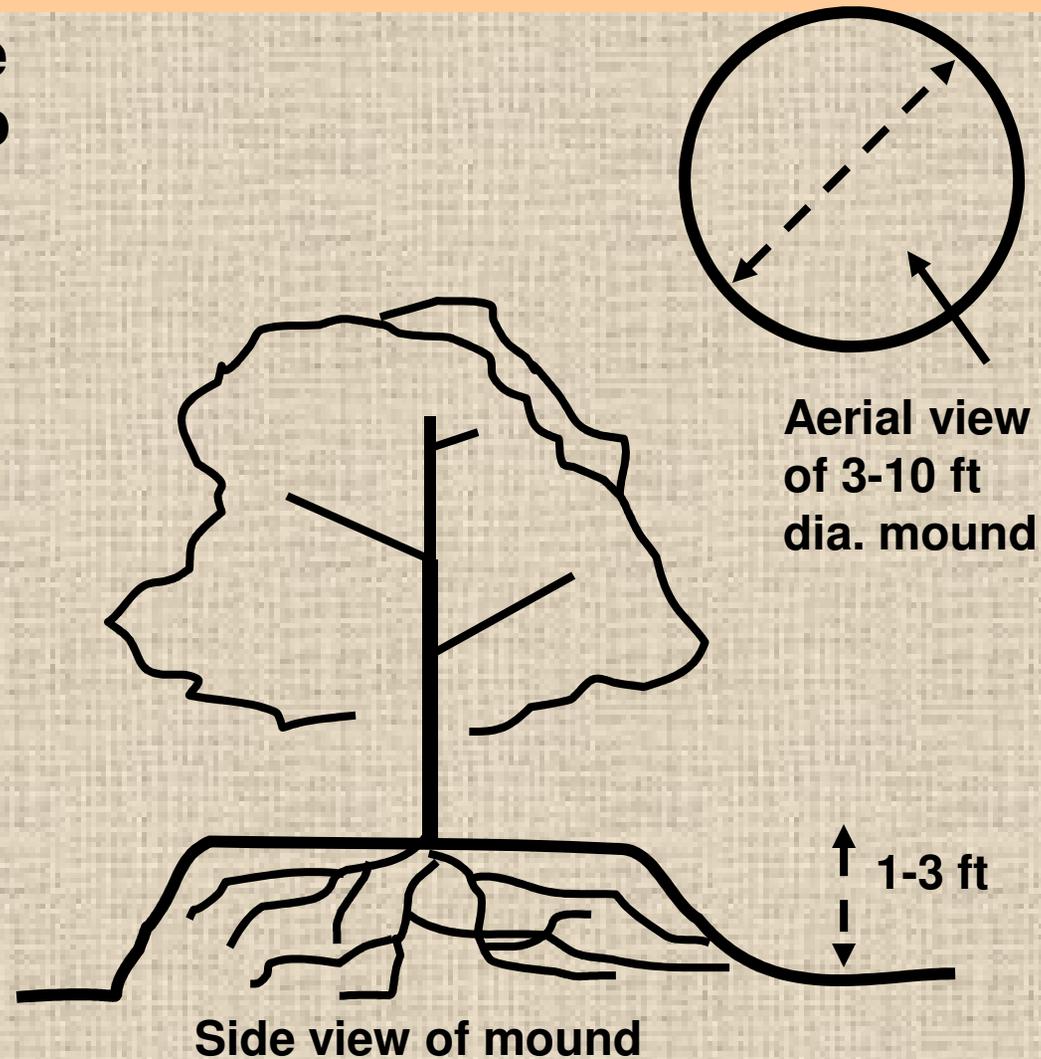
# Information sources

- **Soils –**
  - **National Soil Survey**  
(<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>)
  - **Natural Resource Conservation Service**  
(<http://www.nhq.nrcs.usda.gov/> )
  - **Contact your local University of Florida County Cooperative Extension Service**
  - **UF Extension publications at**  
(<http://edis.ifas.ufl.edu>)

# ***RECOMMENDATION***

## ***Site selection - soils***

- Select sites in the landscape that do not flood.
- In places that have high water table or periodically flood, plant trees on mounds constructed of native soil.
- Mounds should be 1-3 ft high and 3-10 ft in diameter.



# ***RECOMMENDATION***

## ***Site selection - soils***



# Examples: Soil depth, drainage, and flood tolerance of tropical fruit crops

<b>Flood tolerance</b>		
<b>Tolerant</b>	<b>Moderately tolerant</b>	<b>Not tolerant</b>
<b>Guava</b>	<b>Canistel</b>	<b>Atemoya</b>
<b>Sapodilla</b>	<b>Carambola</b>	<b>Avocado</b>
<b>Caimito</b>	<b>Lime</b>	<b>Jackfruit</b>
<b>Grafted citrus*</b>	<b>Longan</b>	<b>Mamey sapote</b>
	<b>Lychee</b>	<b>Papaya</b>
	<b>Mango</b>	<b>Passion fruit</b>
		<b>Sugar apple</b>

**\*, Flood tolerance varies with rootstock.**

# ***RECOMMENDATION***

## ***Site selection - soils***

- On sites that may periodically flood select only flood tolerant fruit species (see EDIS fact sheet HS957).
- On sites with a hardpan, if possible dig into or auger planting holes past the hardpan to improve water drainage.
- On sites with rockland or urban fill soil, use a auger or backhoe and have holes 3 or more feet deep and wide constructed.



# Site selection - rainfall & water access

- Rainfall is an important source of irrigation water for fruit trees in the home landscape in that:
  - The best time of year to plant fruit trees in the home landscape is during the spring-summer wet season (May-August).
- Access to good quality well and/or city water is important for irrigating fruit trees in the garden/home landscape during prolonged dry periods.

# Site Selection- light exposure

- Performance of fruit trees is best in full sunlight but variable shade tolerance exists (see <http://lawrencefruittreeproject.files.wordpress.com/2009/02/fruit-variety-comparison2.pdf>)
- Shaded trees tend to be weak growing and less productive.
- The lower limbs of mature trees may be lost if shaded for too many hours of the day, resulting in fruit trees that only have fruit far from the ground.

Table 1. Suggested spacing of fruit trees.

Crop	Spacing in Feet <sup>2</sup>
Blueberries	
- Rabbiteye	6 x 12
- Highbush	4 x 12
Chestnuts	20 x 20
Figs	10 x 12
Muscadine Grapes	15 x 10
Bunch Grapes	10 x 10
Persimmons (Japanese)	10 x 15
Pears	20 x 20
Peaches and Neclaines	15 x 20
Plums	10 x 20
Pecans	60 x 60
Blackberries	5 x 12
Apples	15 x 20

<sup>2</sup>The first number refers to the space between trees within a row, and the second number refers to the space between rows. So 6' x 12' means 6 feet between the trees in a row and 12 feet between rows.

## Site selection in the home landscape – tree spacing

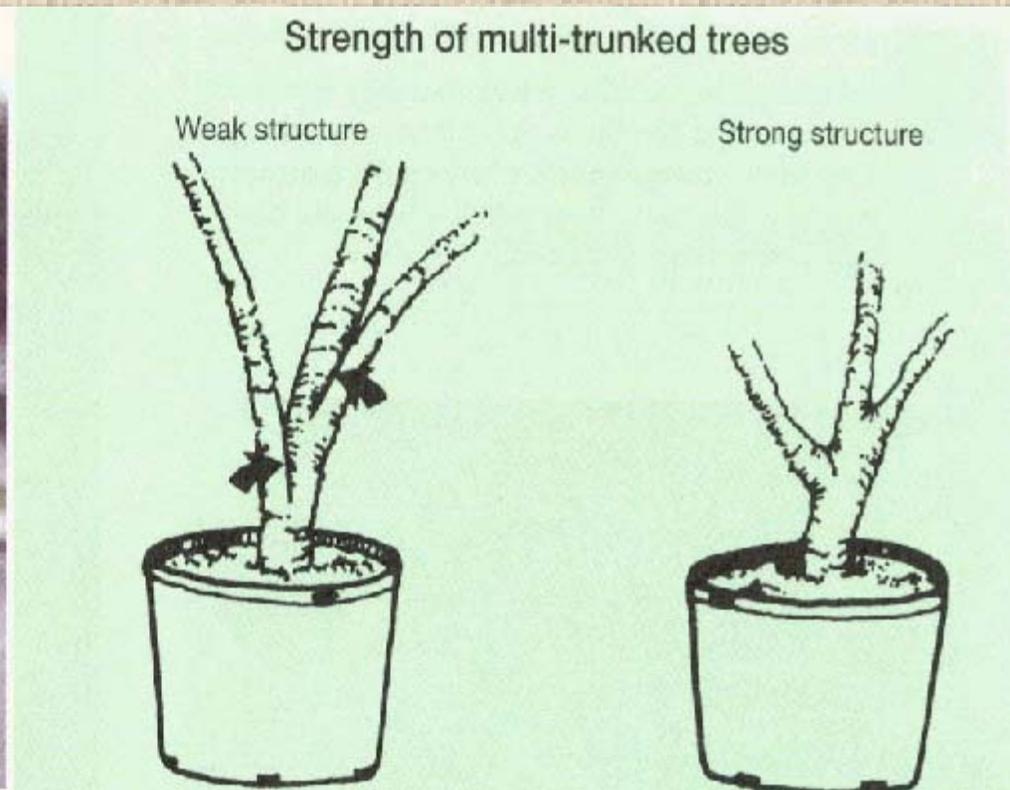
- The ultimate size of fruit trees varies with species and growing conditions.
- Some have the potential to grow very large (e.g., mango, avocado, sapodilla), others are inherently smaller (e.g., guava, jaboticaba).

# Site Selection in the Garden/Home Landscape -Make a Map

- ✓ In general, you want to determine -
  - The warmest sites possible
  - Areas with well drained soils
  - Areas of greatest sun exposure
- ✓ **Plant the least cold-hardy trees**
  - adjacent to the south or west side of structures
  - at the top of a slope
  - near pavement
  - adjacent to mature trees (e.g., pines) that may be used as overhanging trees which provide additional cold protection

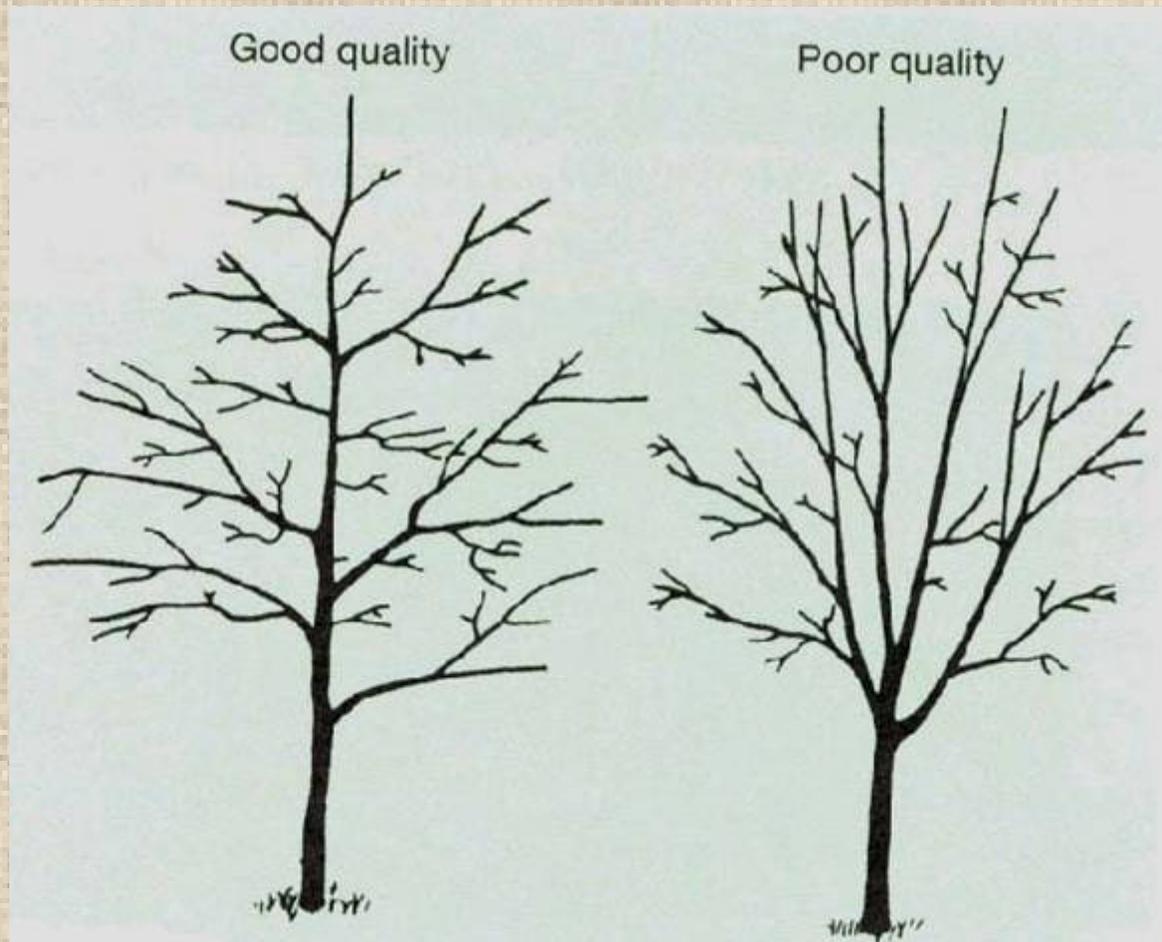
# Tree Selection

- Weak crotches have bark included in trunks
- **Strong crotches are wider, without bark**



# Tree Selection

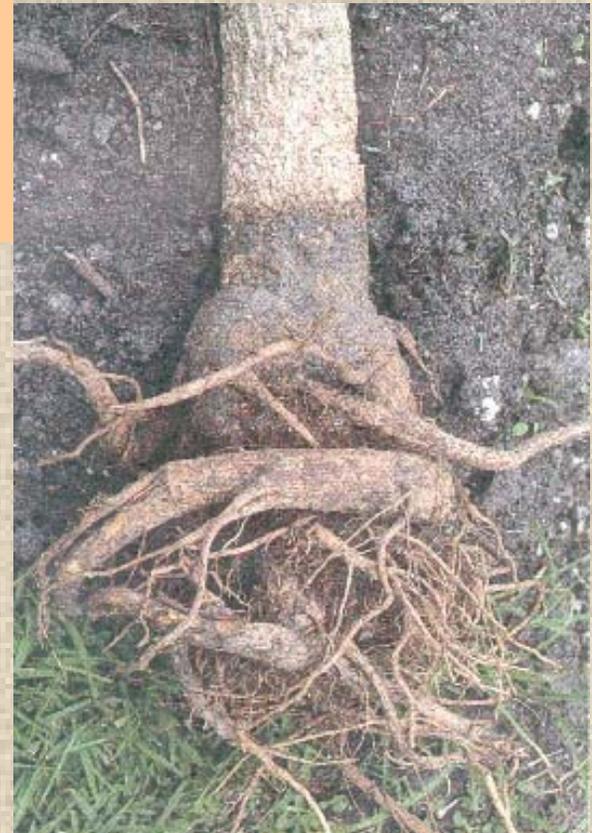
**One Central Leader with branches evenly spaced**



# Root Ball Defects

## Effect Growth & Survival of Tree

- **Kinked roots**
- **Lack of roots**
- **Circling surface roots**
- **Tree planted too deep in field or container cuts off oxygen to roots & trunk rot**
- **Root Rot**





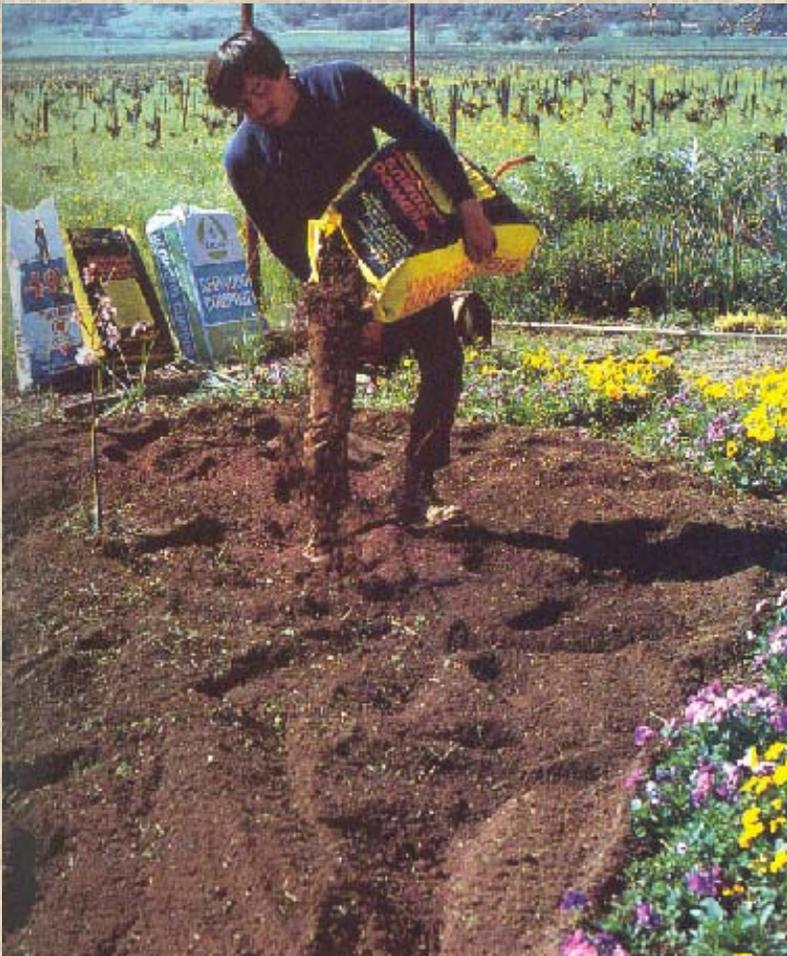
## Inspect and Tease Apart Roots



# Planting Site Preparation

## Organic Materials Amendments

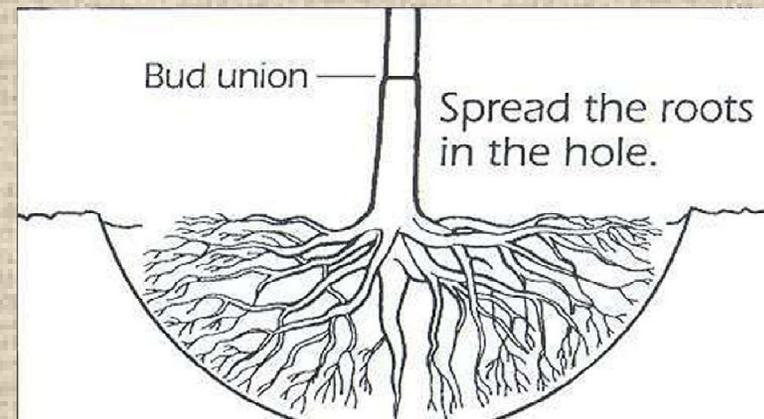
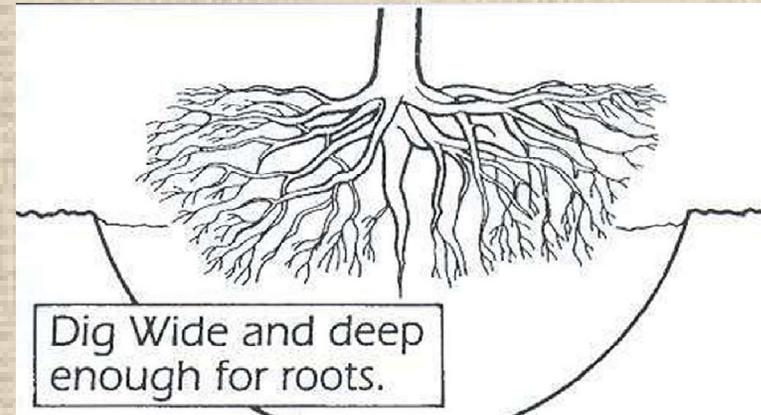
mixed at least top 12" of area



- **Decomposed**
  - compost
  - animal manure
  - bark
  - peat moss
- **Fresh**
  - grass clippings
  - green leaves

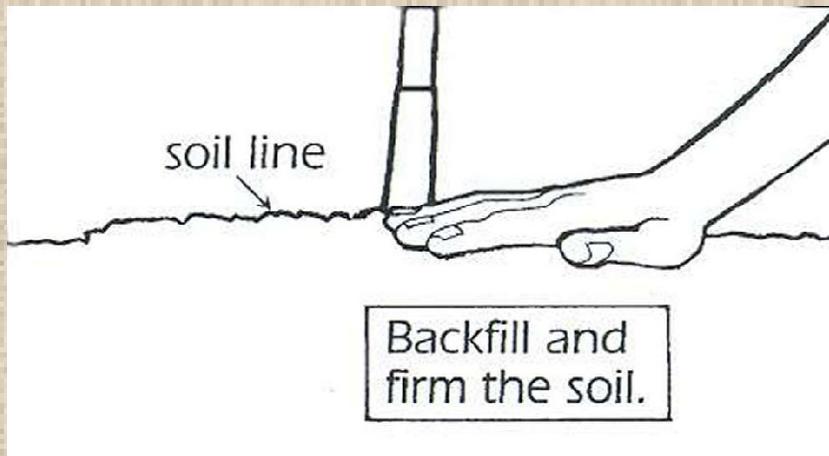
# Planting Site Preparation

- If planting in site where old tree was located, remove all old roots
- Dig hole wide and deep enough to accommodate root system
- Prune roots for pot binding or J rooting



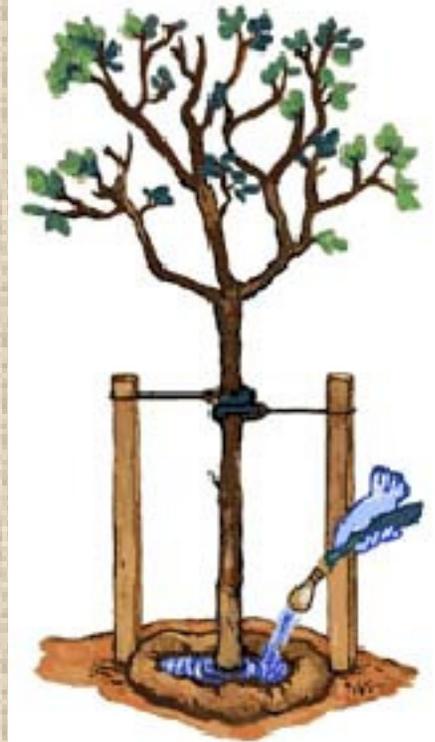
# Planting Your Fruit Tree

- Water your tree before and after planting
- **Make sure to keep bud union above soil line**
- Remove air pockets

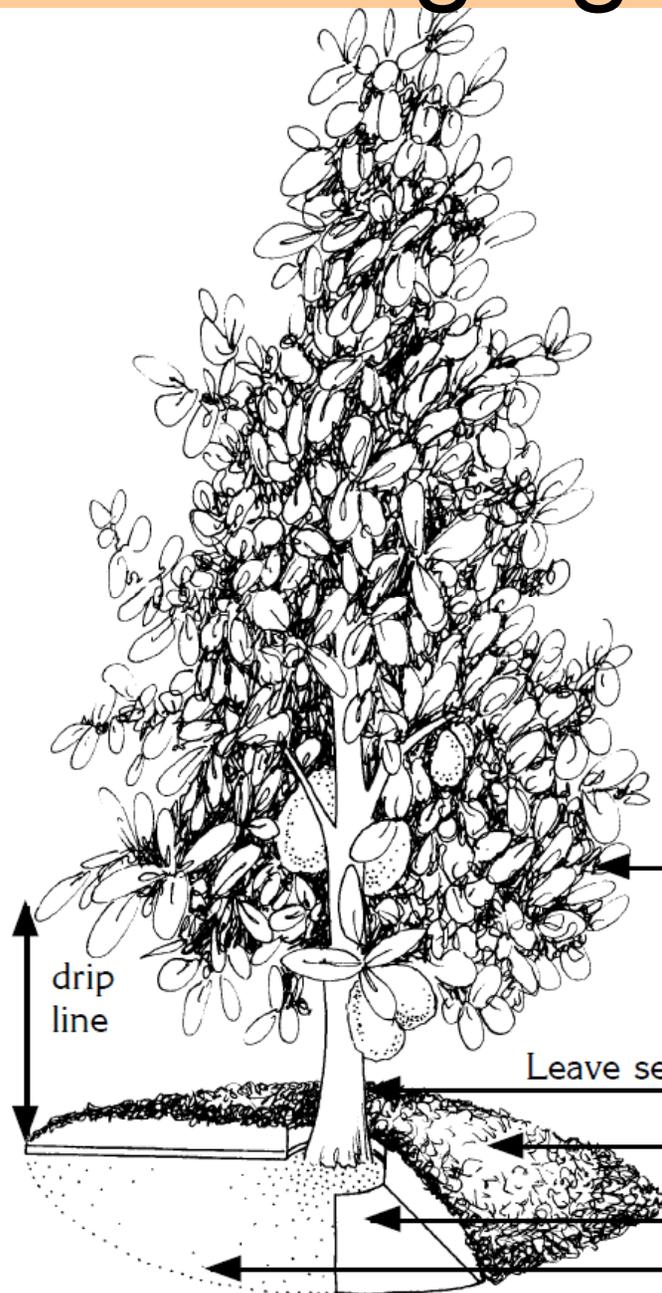


# Fruit Tree Planting

- **Construct 1-2” soil berm at edge of root ball to entrap irrigation water**
- **For newly planted trees, water directly on root ball**
- **After establishment: remove berm to encourage root growth**



# Managing Your Fruit Tree



Crop tree

Leave several inches between trunk and mulch

Mulch layer (renewed with hedgerow prunings)

Weed barrier layer

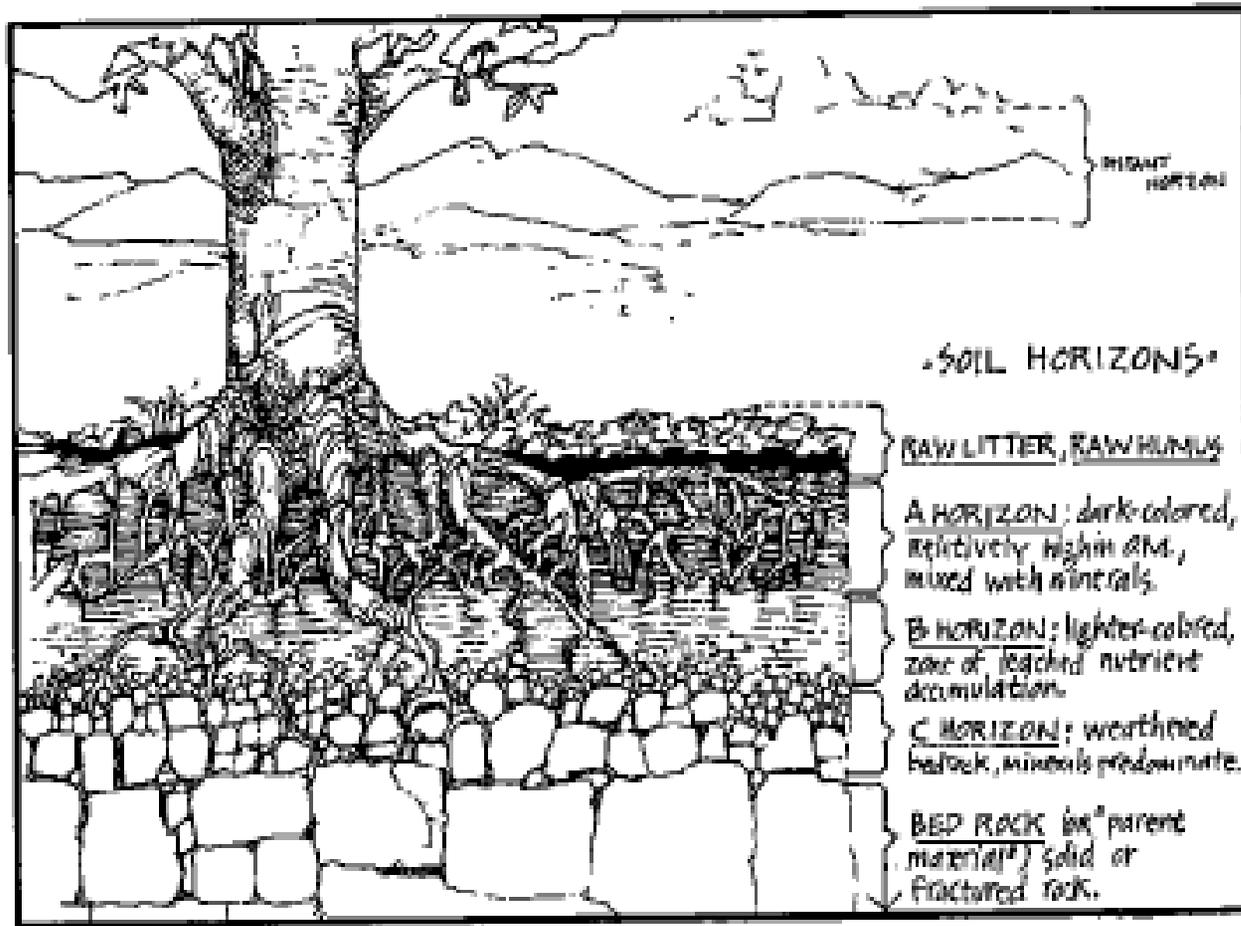
Original soil amendments

Sheet mulching as shown here is one of the best things you can do for your crop trees. Mulching has many benefits, including:

- Suppression of weeds
- Conservation of soil moisture
- Stimulation of healthy soil life
- Improvement of nutrient retention
- Reduction in soil temperature
- Protects crops from damage of mowers and weeders

The mulched area should encircle the tree from the trunk out at least 3 or 4 feet, or to the edge of the drip line, whichever is greater.

# Managing Your Fruit Tree



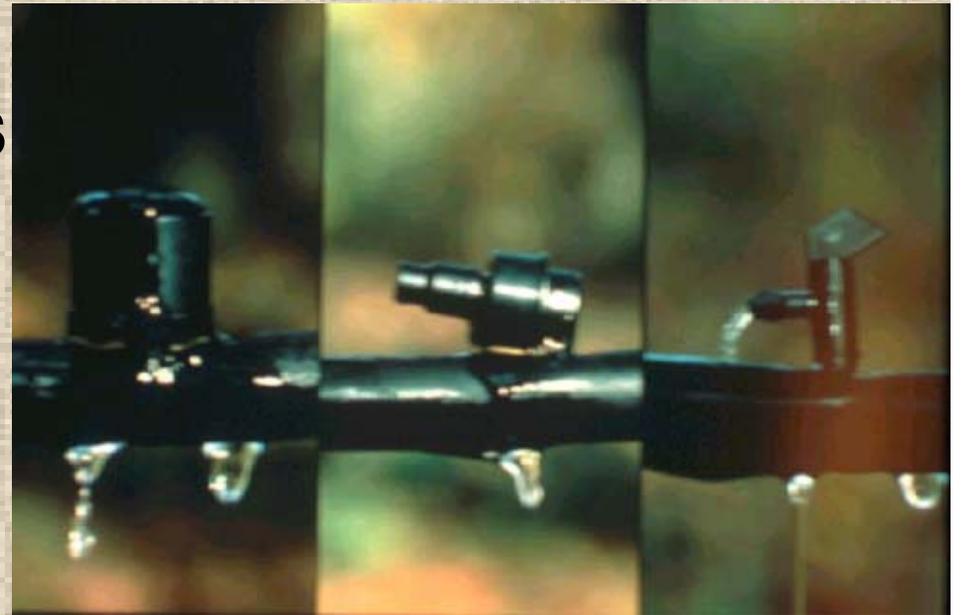
Conserve the root/soil ecology

Kourik, 1986, Designing & maintaining edible landscape naturally.

# Managing Your Fruit Tree

## Drip Irrigation

- **Uses 30-50% less water**
- **Efficient and effective application**
- **Fewer pest problems**
- **Fewer weeds**
- **No wind effects**
- **Easily automated**
- **Economic to install**



# Managing Your Fruit Tree

## Landscape with Insectary Plants

- Provide habitat for wildlife and beneficial arthropods, such as pollinators and natural enemies of fruit tree pests.
- Potential sites include:
  - hedges alongside fruit trees
  - perennial cover crops under fruit trees
  - garden/homestead borders & corners



# Heading Nursery Trees At Planting

- When planting typically some of the roots are cut off or disturbed.
- Some removal of foliage is necessary to help correct the root/shoot ratio.
- Training the plant at this time is appropriate.
- Try to leave 3 to 4 branches in a whirled pattern to promote proper canopy development.



# Pruning and/or Training Fruit Tree Benefits

- Aid in the establishment of newly planted trees
- Promote development of a strong framework
- Enhance early productivity
- Aid in the development and maintenance of desirable tree size and shape

# Pruning and/or Training Benefits (Continued)

- Increase fruit size and enhance fruit quality
- Promote flower bud development throughout the tree canopy
- Increase tree vigor and promote development of new fruiting wood needed to maintain productivity
- Reduce the tendency for biennial bearing

# Pruning and/or Training Benefits (Continued)

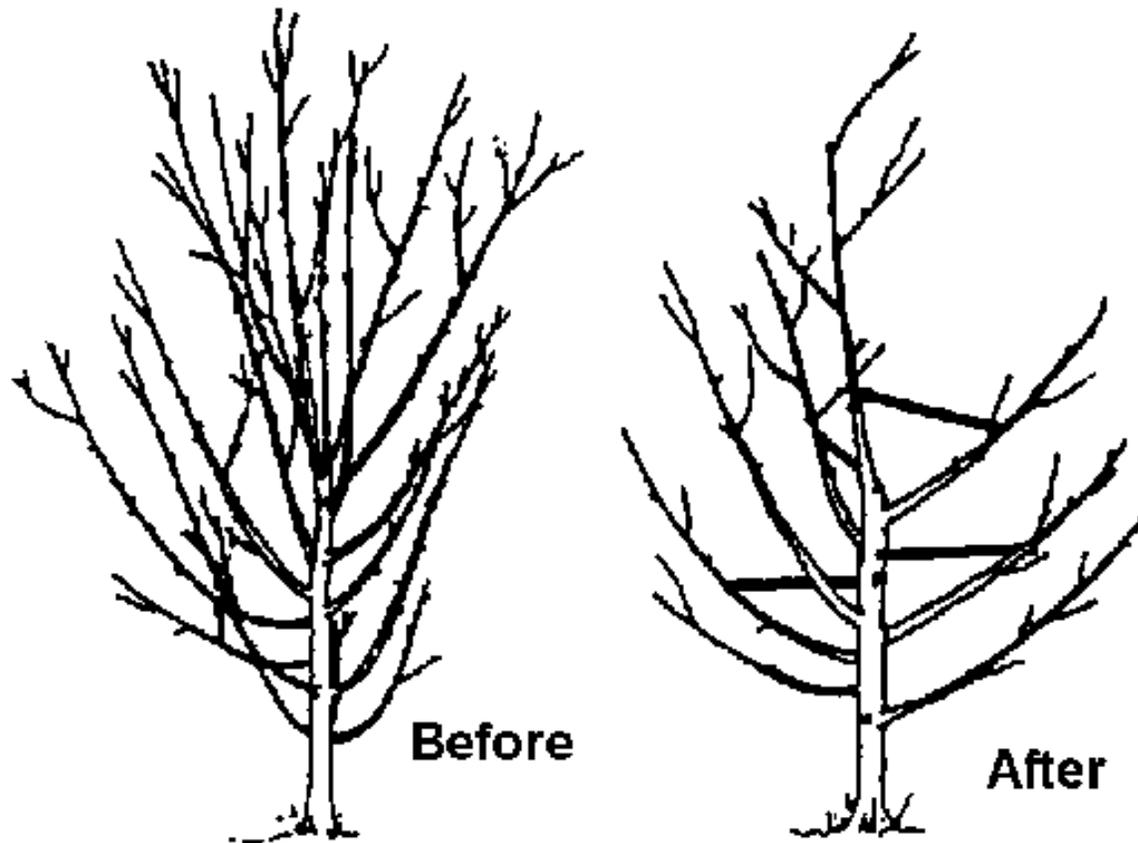
- Reduce incidence and spread of certain diseases
- Facilitate other horticultural practices, such as spraying, thinning and harvesting

# When to Prune

- Generally during the dormant period
- Late winter or early spring past chance of freezing temperatures
- Summer pruning usually minor

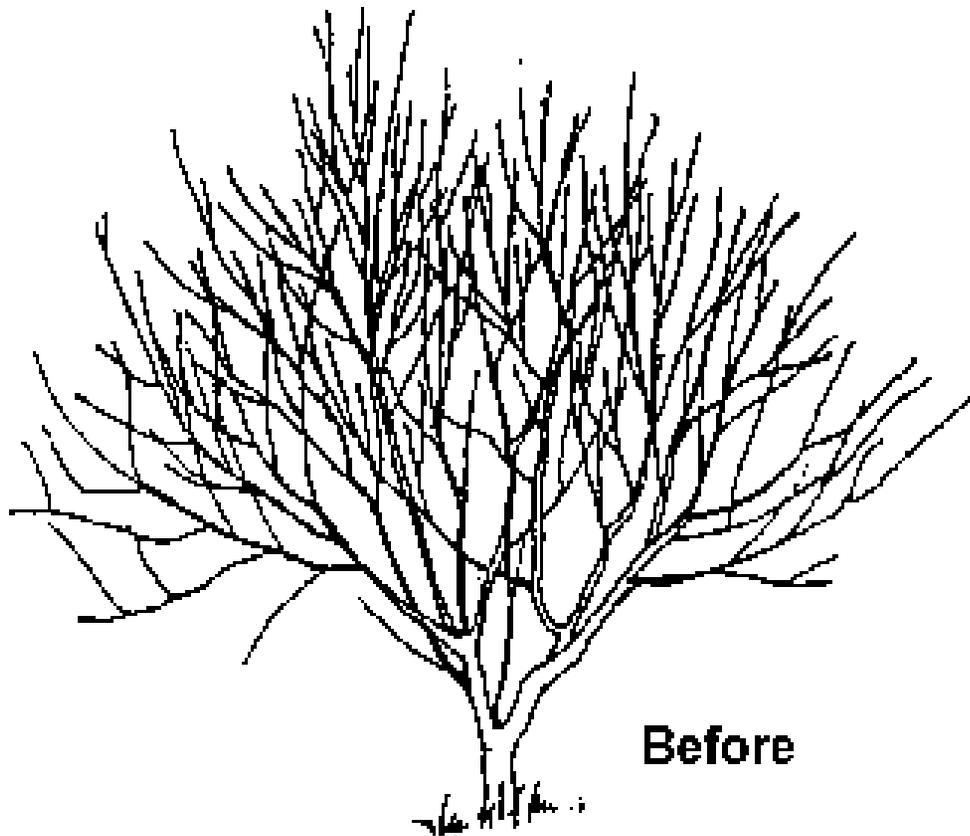
# Training Systems

- Modified Central Leader

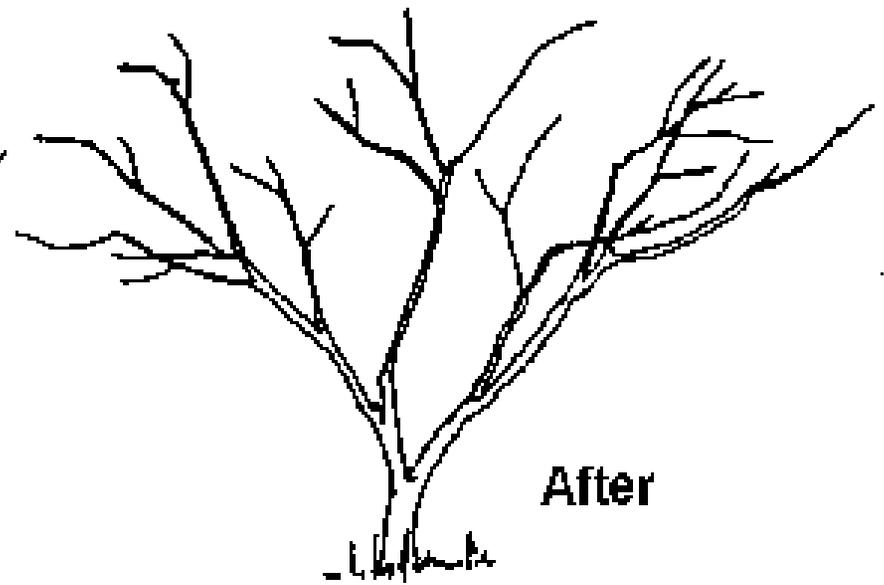


# Training Systems

- Open-Center (Vase)

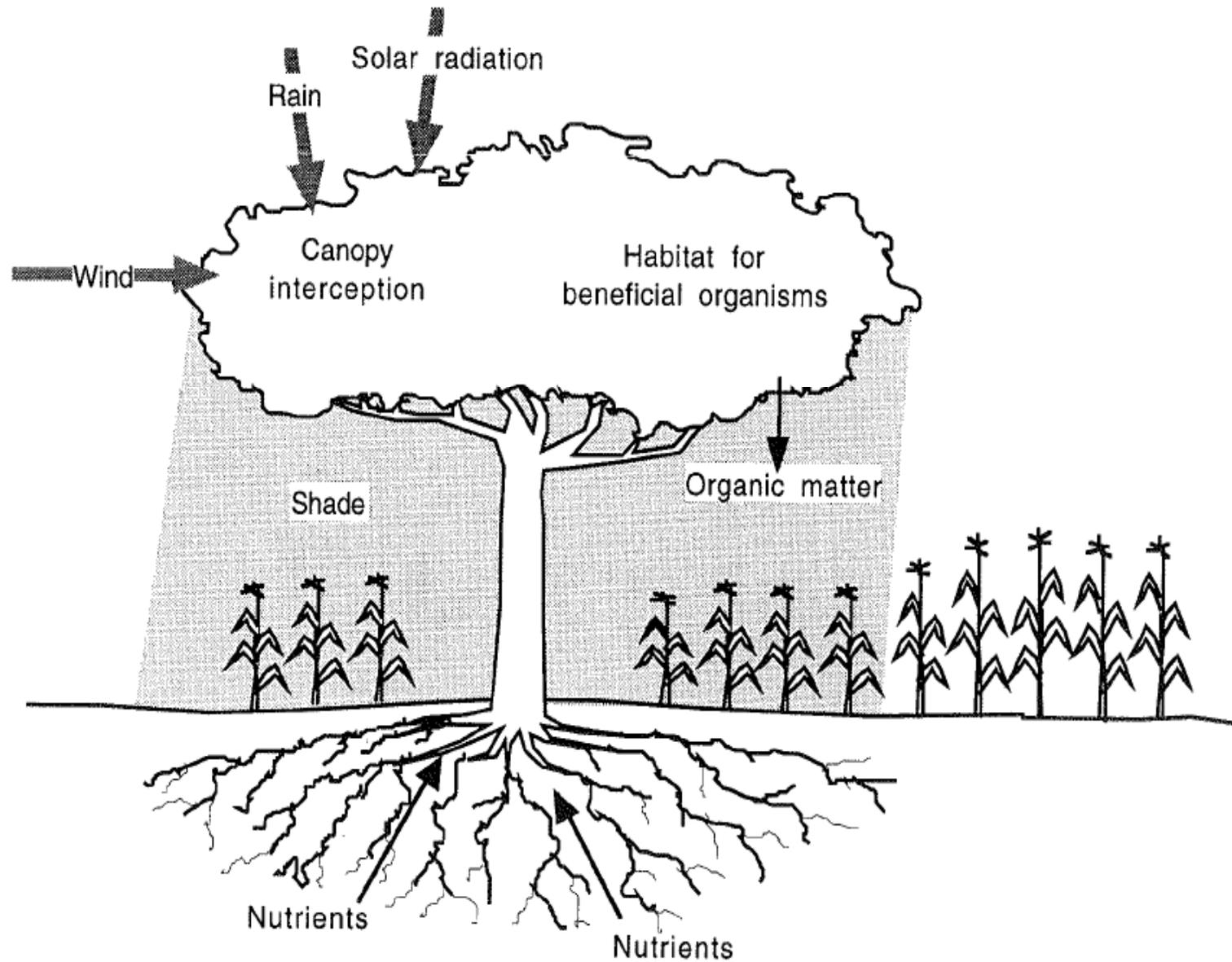


**Before**



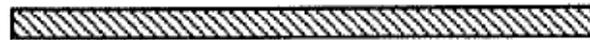
**After**

# Fruit Trees In An Agroecosystem



# Fruit Trees In An Agroecosystem

Early  
Succession  
Stages



1. Bare soil



2. Annual monoculture



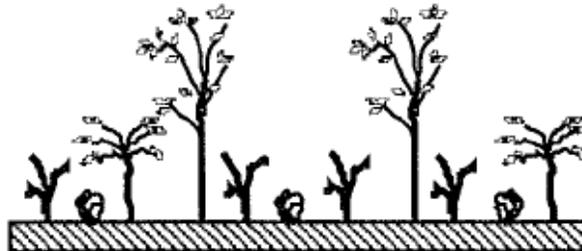
3. Annual polyculture



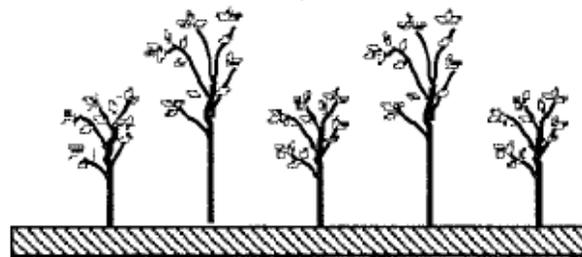
4. Polyculture of mixed annuals and short-lived perennials



5. Annual/perennial polyculture with tree seedlings



6. Agroforestry

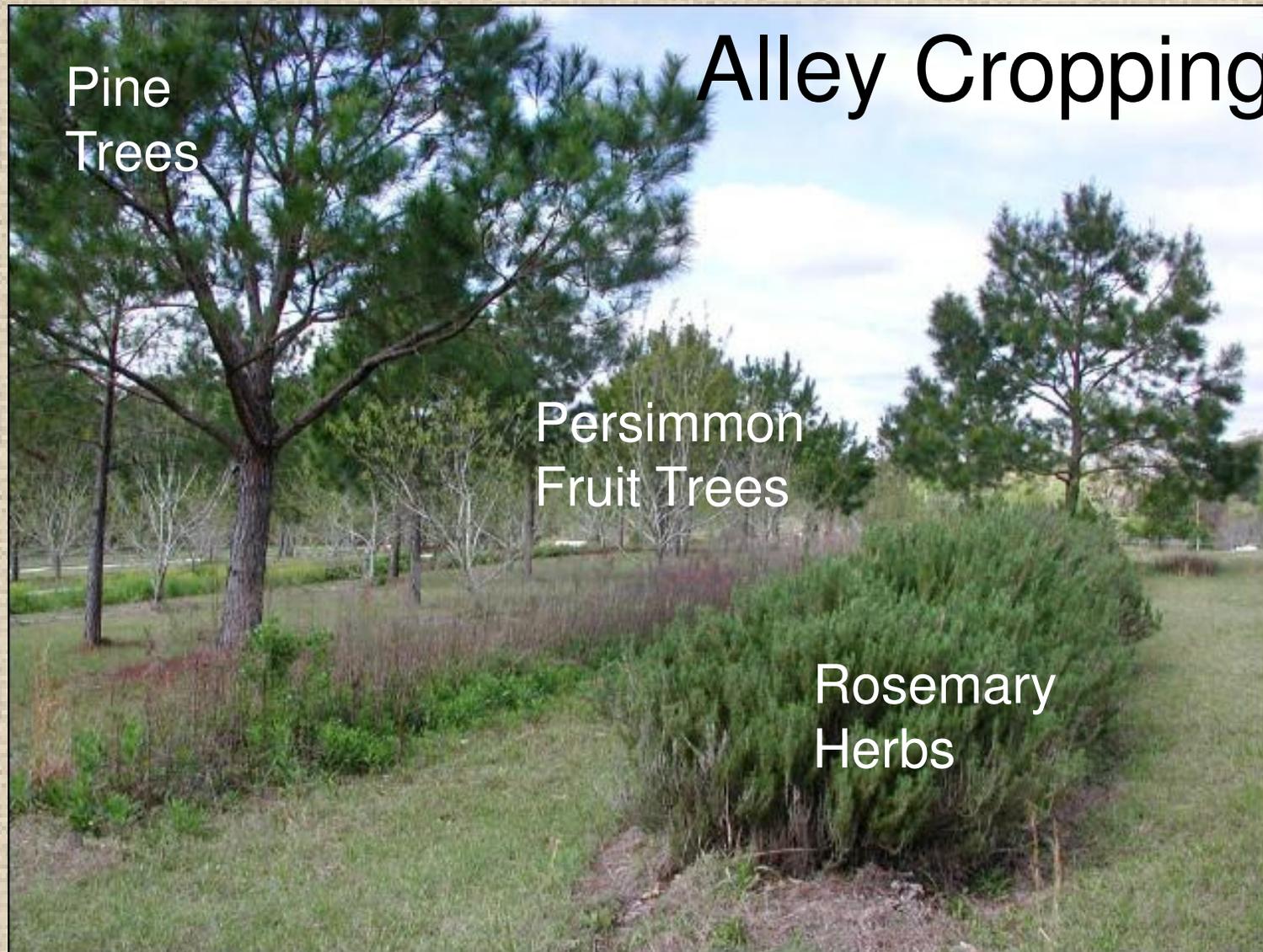


7. Tree crop agroecosystem

Late  
Succession  
Stages

Benefits  
of Fruit  
Trees  
As  
Multi-  
Storey  
Inter-  
Crop

# Fruit Trees In An Agroecosystem



# **Fruit tree examples for the garden/home landscape**



# Mango (*Mangifera indica*)

- **Limited cold tolerance (25-28°F). Does not acclimate to cold temperatures.**
- **Does best on well drained soil – plant on mounds if necessary.**
- **Highly sensitive to salt intrusion/poor quality water.**
- **Periodic application of micronutrients (manganese, zinc, iron) is important.**



# Mango (*Mangifera indica*)



- Do not over-water trees especially during the winter. Water trees during extended dry periods only.
- **Recommend cultivars include 'Tommy Atkins', 'Keitt', 'Kent', 'Glenn', 'Cogshall', 'Irwin' and many others.**

# 'Sapodilla' (*Manilkara zapota*)

- Limited cold tolerance (26-32°F).
- **Moderately tolerant of flooded/wet soil conditions.**
- **Moderately tolerance of salt spray and saline soil/water conditions.**
- **No major nutrient problems although iron should be applied regularly in calcareous soils.**



## ‘Sapodilla’ (*Manilkara zapota*)



- Some cultivars appear more susceptible to Caribbean fruit fly than others.
- **No major diseases.**
- Fruit available Feb. – June.

# Papaya (*Carica papaya*)

- Not cold tolerant (~31-32°F).
- Not salt and flood tolerant.
- Fast growing, plant seeds in Dec., plant seedling in March, harvest in Sept.-Oct.
- Numerous cultivars but most not available to home owners.
- Take seed from fruit, clean, dry, plant in artificial media, when seedlings 8 – 12 inches high, plant.
- Plant at least 3 plants (8-12 ft apart).



**Bisexual plant**



**Male plant**

# Lychee (*Litchi chinensis*)



- Do not apply nitrogen containing fertilizers from Sept.-March.
- Irrigate well from March through Aug., then cut back or stop watering from Nov.-Feb.
- Numerous cultivars to choose from, however, 'Mauritius' is more reliable bearing than others.

# Carambola (*Averrhoa carambola*)

- Limited cold tolerance – (26-28°F).
- Requires well drained soil – plant on mounds if necessary.
- Highly sensitive to wind – plant only in a wind protected area of the landscape.
- Moderately shade tolerant and may be planted in areas of light shade.



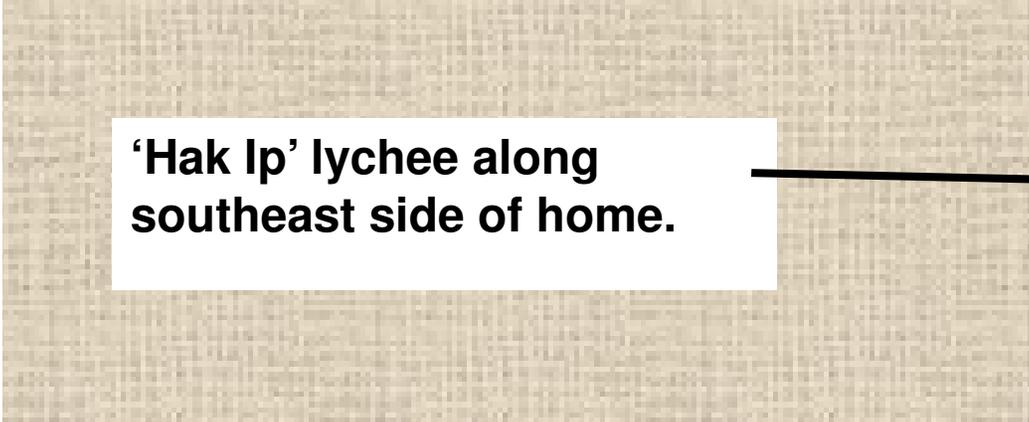
# Carambola (*Averrhoa carambola*)



- Requires frequent light applications of fertilizers.
- Iron should be applied in chelated form 2-4 times during the warm part of the year.
- Recommended trees are mulched with 4-6 inches of clean organic matter (6" away from trunk).
- Water trees well during dry periods.



**Star fruit tree with *Alocasia odora* border in eastern side of landscape.**



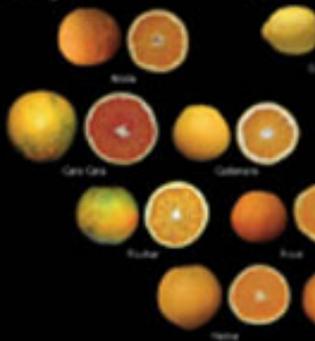
**'Hak Ip' lychee along southeast side of home.**



# Citrus



## Oranges



## Lemons



## Pummelo



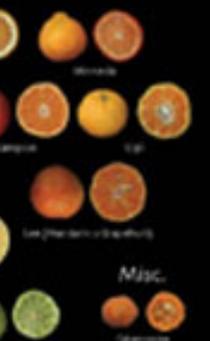
## Tangerine / Mandarin



## Limes



## Tangelos



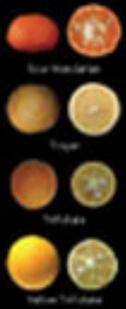
## Misc.



## Grapefruit



## Rootstocks



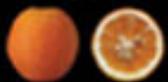
## Kumquats



## Misc.



The First Hawaiian Orange  
Valencia



From the tree planted in Kona by  
Archibald Menzies in 1792

Tangerine, from seeds  
and graft in Hawaii and other  
islands in 1900

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Dr. Todd Park, Margaret Schumann, Dr. E. Thomas, Virginia Garcia Smith,  
Dr. Francisco Palencia, Harold Kooze, Chris & Ray, Shirley, Dr. Thomas Lee  
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www.hawaii-florist.com

# Pros for Citrus

- Long successful history in Florida.
- No need for chilling hours.
- Very familiar fruit, easy to share, if necessary
- Relatively easy to grow.



# Pros for Citrus

- Adapted to a wide variety of soils
- Stores on the tree
- Has been success
- High level of expertise in the area.



# Cons for Citrus

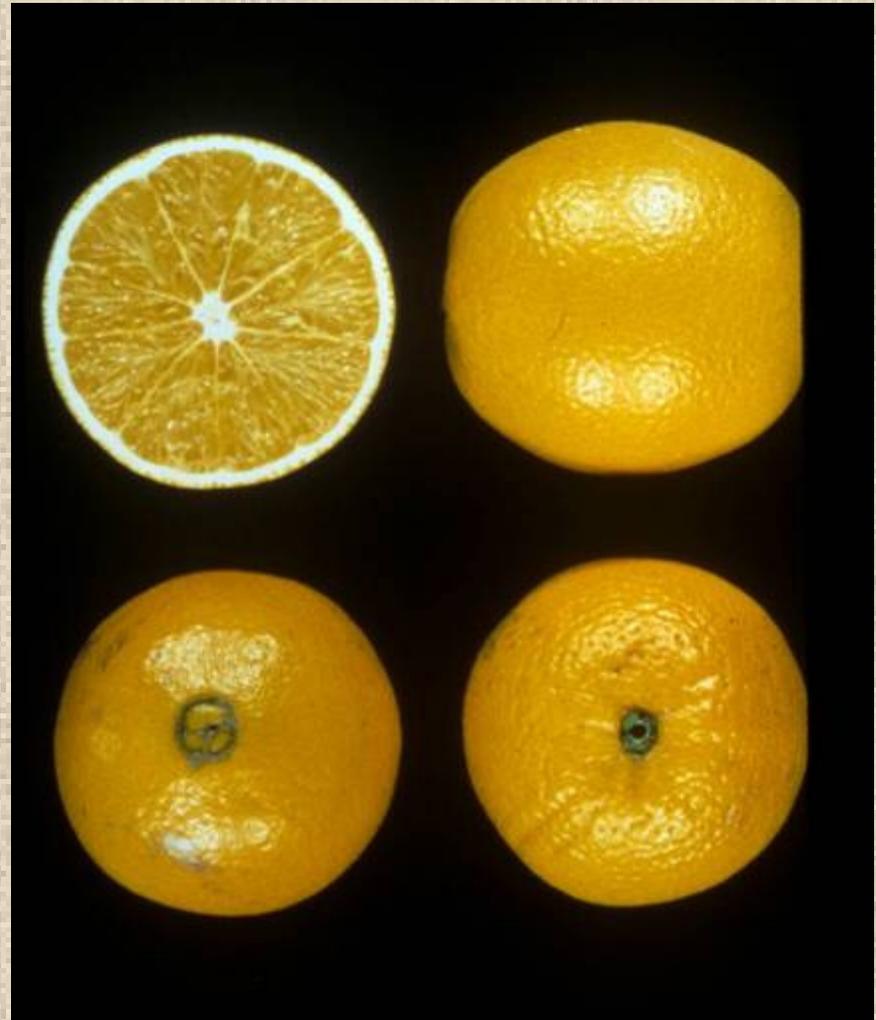
- Sensitive to cold weather.
- **Overabundant & common**
- Current problems getting trees from the nurserymen.
- **Citrus Greening potential devastating disease.**



# Citrus Varieties

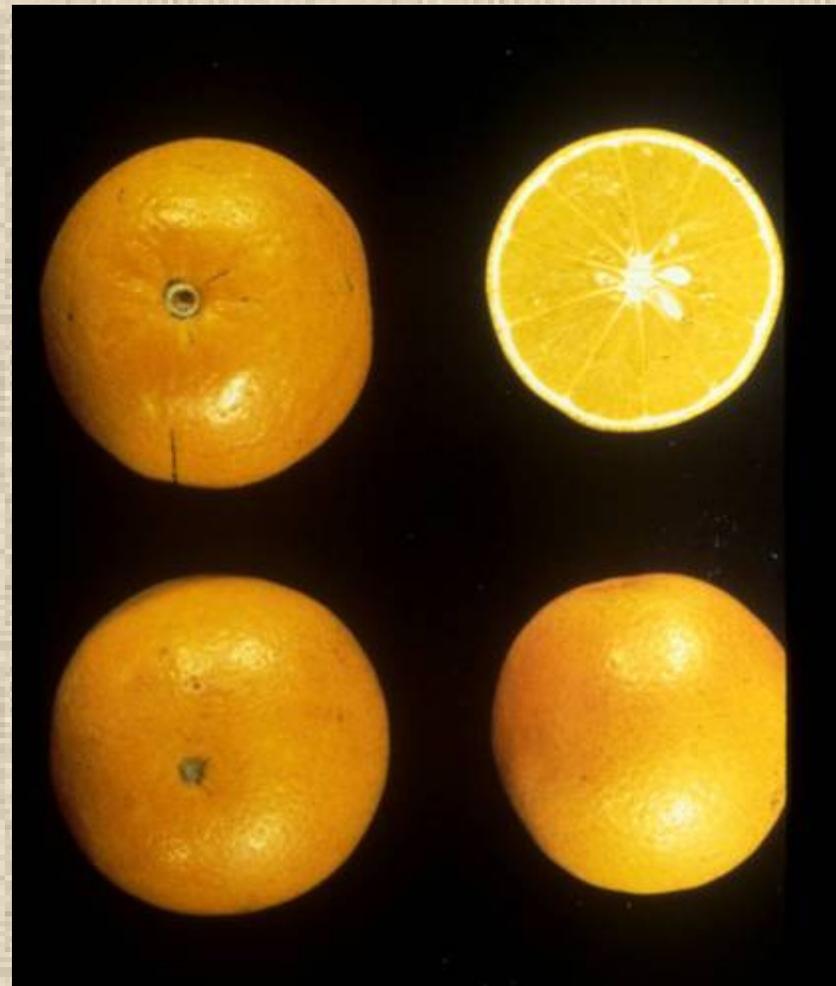
## Navel Orange

- Season: Oct. – Jan.
- Seeds per fruit:  
seedless
- Average diameter:  
3-3.5 inches
- Use: fresh



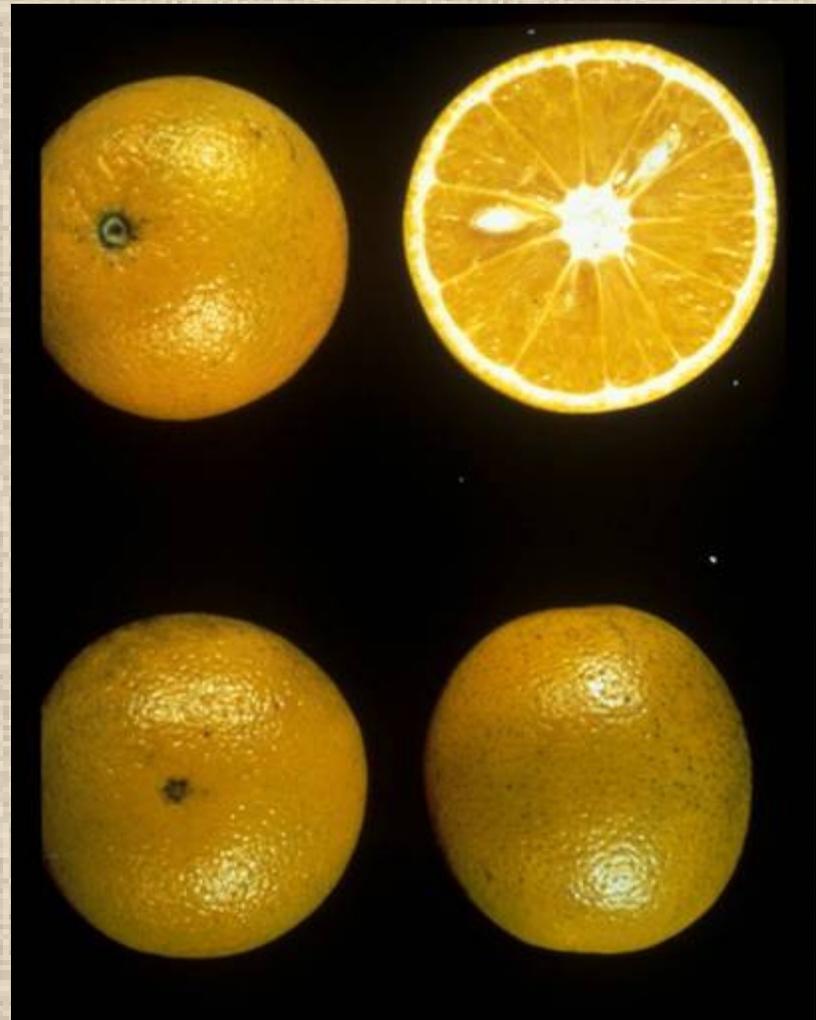
# Hamlin Orange

- Season: Oct.-Jan.
- **Seeds per fruit: 0-6**
- Average diameter:  
2.75-3 inches
- **Peel texture:  
somewhat smooth**
- Use: fresh and  
processing

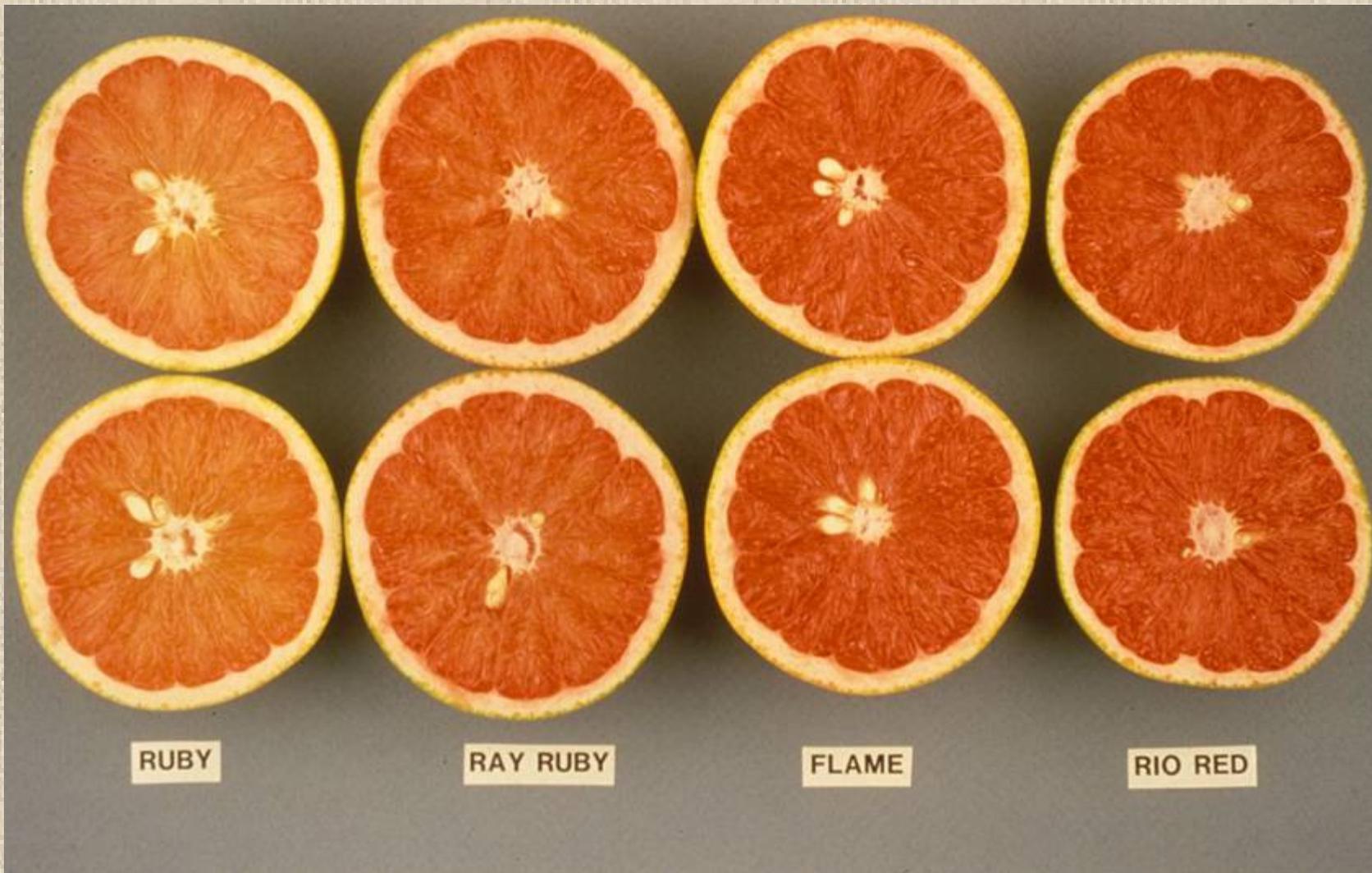


# Valencia Orange

- Season: Mar.- June
- Seeds per fruit: 0-6
- Average diameter: 2.75-3 inches
- Most widely planted citrus variety in FL
- Use: fresh and processing



# Red Grapefruit Selections



RUBY

RAY RUBY

FLAME

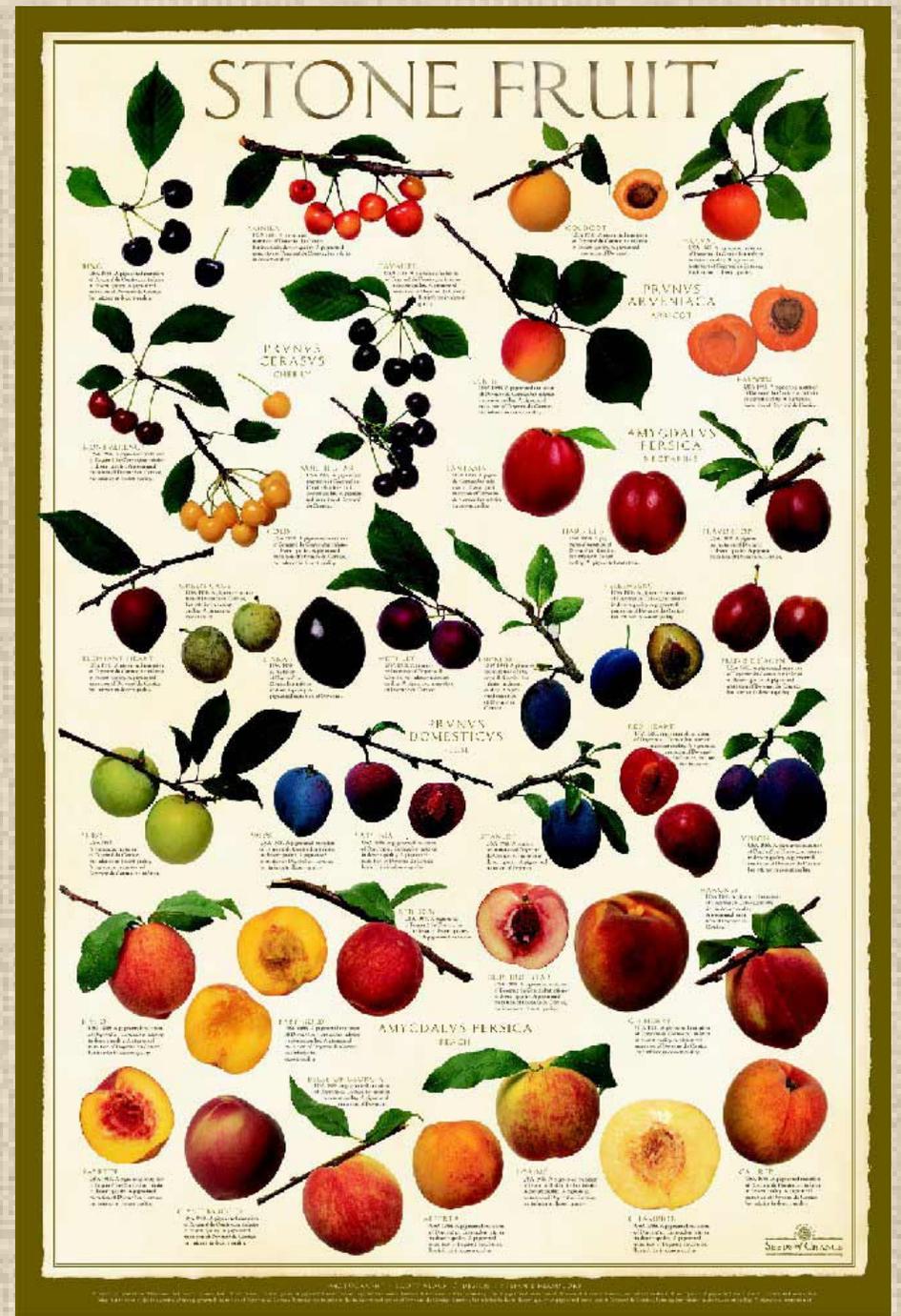
RIO RED

# Tangerines

- Season: Nov. – Dec.
- **Seeds: 1-20**
- Size: 2.5 – 3 inches in diameter
- **Use: Fresh**
- Comments: self-incompatible and must be cross pollinated, green internal seed color
- **Example cvs: Murcot (Honey Tangerine); Fallglo)**



# Temperate Fruits



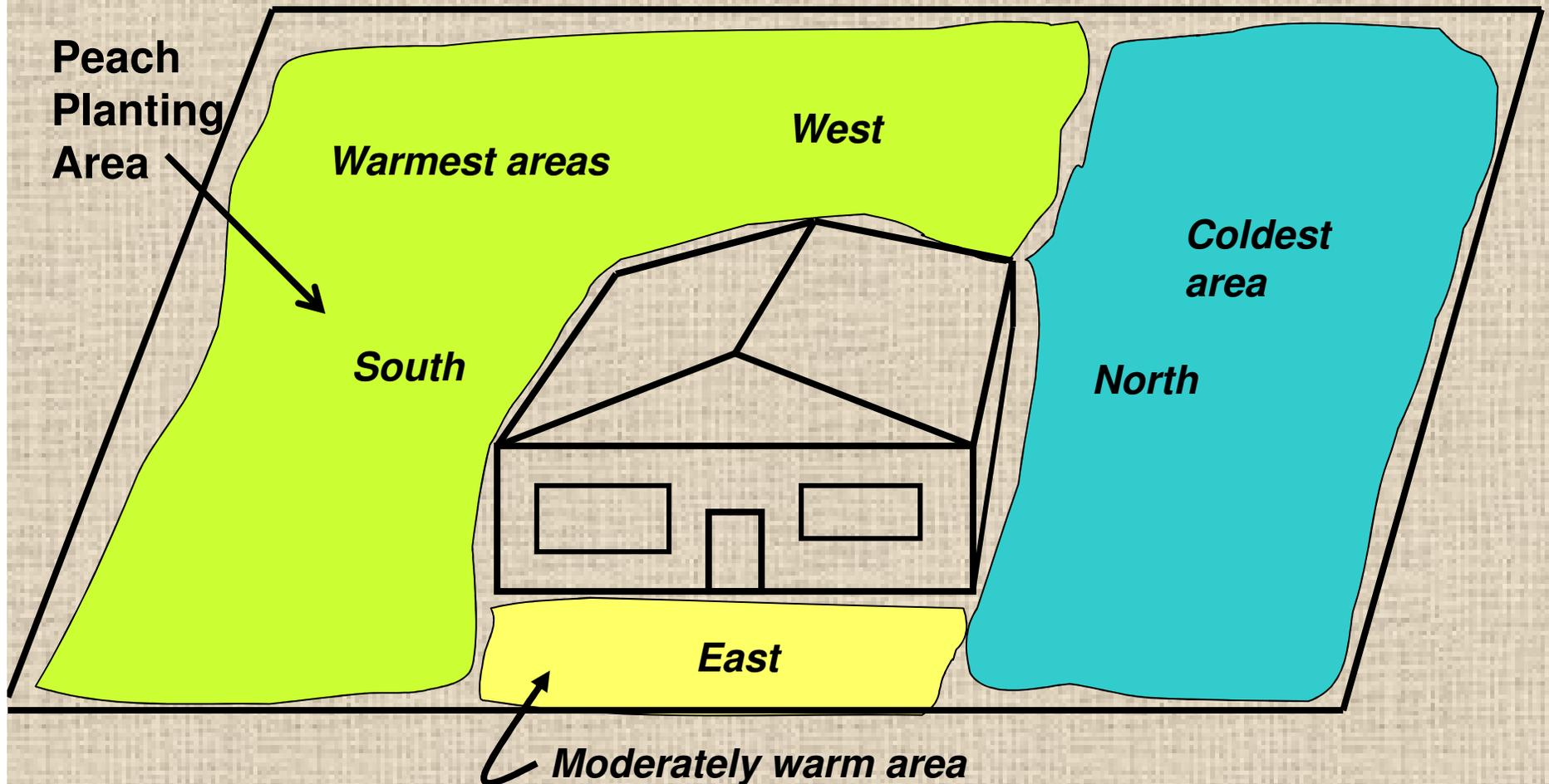
# Stone Fruits



- Make sure you have a variety adapted for Florida (low chill)
- Thinning of fruit for proper sizing
- Irrigation is important as stone fruits have shallow root systems. 2"/10-14 days
- Still can have cold weather problems
  - ✓ Cold damage to young trees
  - ✓ Frost damage to bloom and young fruit



# ***Peach Site selection - temperature***



# Stone Fruits & Cultivars

- **Peaches**

- Florida prince
- Floridaglo
- Tropic sweet
- Rayon

- **Nectarines**

- Sunracer
- Sunmist

- **Plums**

- Gulf ruby
- Gulf blaze
- Gulf gold



# Pros of Stone Fruits

- New varieties with low chill requirements are available
- Florida is early season for stone fruit production



# Cons Stone Fruits

- Require frequent use of pesticides for production.
- Insect (e.g., fruit fly damage can be problematic.
- Nursery stock is limited.



# Summary

- Fruit trees are an excellent addition to your organic garden and/or edible landscape
- Sarasota County can grow tropical, subtropical and temperate fruit trees
- There are many alternative fruit trees to citrus
- Careful management is needed to provide desired benefits

# Acknowledgements

- Atwood, R. Selecting Fruit Crops for Small Acreage. UF/IFAS Lake County Extension, FL
- Crane, J.H. Tropical Fruit Trees for the Home Landscape. University of Florida, IFAS Tropical Research and Education Center Homestead
- Culbert, D. Dooryard Fruits of South-Central Florida. UF/IFAS Okeechobee Extension, FL

# Local Fruit Tree Info Resources

- Manatee Rare Fruit Society  
<http://www.mrfc.org/>
- Sarasota Fruit & Nut Society – Monthly Meetings 2<sup>nd</sup> Wednesday  
<http://www.sarasotafruitandnutsociety.org/>

# Online Resources

- Elevitch, C. & K. Wilkinson. 1999. A Guide to Orchard Alley Cropping For Fertility, Mulch and Soil Conservation  
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- Hamlin, T. 2002. Arboricultural Site Analysis & Preparation.  
<http://www.docstoc.com/docs/69327591/Arboriculture>
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<http://css.wsu.edu/project2020/TreeFruit/TFfarmscaping.htm>
- UF/IFAS Fruits, Vegetables & Herbs  
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- UF/IFAS Fruitscape Program  
<http://trec.ifas.ufl.edu/fruitscapes/>