Southern California Fruit Trees 101

How to Irrigate Your Home Orchard With Greywater

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Webinar Series
Ty Teissere

- Lover of Fruit ~ California Rare Fruit Grower
- Lover of Trees ~ ISA Certified Arborist
- Lover of Water ~ Greywater Action Educator and Certified Installer Rainwater Harvesting Certified
- Lover of Plants ~ LBCC Horticulture Degree
- Lover of Patterns ~ Permaculture Design Certificates
The Road Map:

- Success with Fruit
- Understand our climate
- Tap into water
- Basins of relations
- Plan the orchard
- More Fruits in less space
- Resources
Why some people fail with fruit

- Typical backyard gardener pattern:
  - Buy a tree
  - Dig a hole
  - Place the plant
  - Backfill hole (maybe with amendments)
  - Water (when they remember)
  - Fertilize (with chemicals)
  - Prune when too tall or in the way (if the tree survived)
How I’ve succeeded with fruit

- Identify water source(s)
- Tap into the flow
- Dig basins
- Identify microclimates
- Select awesome plants
- Dig hole, plant and backfill

  - Add Compost and MULCH
  - Prune based on a plan
  - Harvest

Repeat ->
Some FRUIT to get your juices flowing!
Mulch

- Wood chips
  - Filter and absorb water before it soaks into the soil
  - Feeds the soil food web and plants
  - 4” minimum depth
Mulch Basin

- A shallow basin filled with mulch (wood chips)
- The basin spreads water out, provides surge capacity, and prevents pooling or runoff

Image Credit: Greywater Action
Mediterranean Climates

Image Credit: http://gimcw.org/climate/map-world.cfm
Mediterranean Climates

- **Hot Dry Summers**: Little to no frost
- **Cool Wet Winters**: Not much water

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**Key Leverage Point:**
- Little to no frost

**Achilles Heel:**
- Not much water
Tropical Climates

- Moderate seasonal temperature change
- Seasons defined by rain
- LOTS of rain
- So what really separates us from the Tropics?
Tapping into Drops from the Sky

Rain water is where we start

• Who doesn’t like FREE?
• Lots of it
• Great quality
• Problems downstream if not used
So you think we’re dry eh?

**Modest 1000 square foot house**

- 1” of rain
  - = 600 gallons

**Downtown LA**

- July 2012- June 2013 (lowest in last 5-years)
  - 5.85 inches of rain
    - > 3,000 gallons of rain water from roof!
Two Rain Harvesting Strategies

Active Harvesting
- (what most people think of)
- Barrels, Tanks, Cisterns
  - Bigger up front cost
  - Best suited for veggies or compost tea

Passive Harvesting
- Simple hand dug earthen basins
- Guide downspouts and runoff to basins
  - Cheap
  - Great for Fruit trees and greywater!
Tapping into Rivers in Black Pipes: **Greywater!**

- Greywater is gently used wash water from tubs, washing machines and sinks.
- 100+ gallons per household per day.
- Fruit trees don’t require perfectly clean water.
Where to tap in?

- **Washing Machine**
  - **PROS:**
    - No permit needed
    - Has a pump built in for pressure
    - Relatively easy to install
    - DIY is cheap
  - **CONS:**
    - Front loaders have less flow and smaller pumps
Where to tap in?

- **Bath Tub**
  - **PROS:**
    - Generally large volume of water
    - High quality water
    - Well suited to trees
  - **CONS:**
    - Permit needed
    - Gravity flow can be impossible with slab or long runs
    - Can be a PITA
Basins of Relations

- Remember the Achilles Heal!
- WATER!
- Convex to Concave
- If you have a lawn, don’t be a GRassHOLE
 Remove it!
Basins of Relations

- Think of the Soil Food Web
- Mulch = Soil Food
  - Soil Waste = Plant Food
  - Plant Fruit = People Food
  - People Waste = Soil Food

Image Credit:
Soil and Water Conservation Society
The Road Map Revisited:

- Success with Fruit
- Understand our climate
- Tap into water
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- Plan the orchard
- More Fruits in less space
- Resources
Plan the Orchard

- **List of Fruits you love**
  - Research details about each one

- Ask around to try fruits you’re curious about
  - CRFG is a fantastic resource!
  - Ethnic markets are a wonder of exotic galore

- Travel to fruit tastings to find specific varieties
- Travel the world to and see what other people eat
This is How I Travel
Fruit Tastings

- University of California, South Coast Research and Extension Center, Irvine
Map your Site

- Water sources
- Sun and Shade
- Place Trees where needs are met by water and sun
- **Where no water:**
  - Dry-adapted fruits
- **Where less sun:**
  - Shade-tolerant fruits
  - Social space/storage space/hammock
More Fruit in Less Space

- Quantity vs Variety
- Big vs Small
- 3D vs 2D

Photo Credit: Dave Wilson Nursery
Pruning for Size Control

- Summer prune for size control
  - Keep it to your height!
    - Easier pruning
    - Easier harvest
    - More fruit in less space
    - More variety in less space

- Winter prune for 4 D’s (How to Prune Fruit Trees)
Layers in the Forest

The Forest Garden: A Seven Level Beneficial Guild

1. Canopy (Large Fruit & Nut Trees)
2. Low Tree Layer (Dwarf Fruit Trees)
3. Shrub Layer (Currants & Berries)
4. Herbaceous (Comfreys, Beets, Herbs)
5. Rhizosphere (Root Vegetables)
6. Soil Surface (Ground Cover, e.g., Strawberry, etc)
7. Vertical Layer (Climbers, Vines)

Image Credit: Graham Burnett
Fruits for Southern California

Subtropical Fruits:

- Avocados
- Citrus
- **Feijoa (Pineapple Guava)**
- Kiwis
- Mulberries
- Cherimoya
- Lychee
- Mamey
Fruits for Southern California

Tropical Fruits:

- Bananas
- Papayas
- Mangos!
- Passion Fruit
- Guavas
- Jack Fruits (jury is still out)
Fruits for Southern California

Temperate Fruits:

- **Paw Paw** (*Asimina triloba*)
  - Part Shade adapted, likes water
- Apples (Anna, Pettingill, King David, Fuji…)
  - Kuffle Creek in Riverside
- Stone Fruits (Peach, Plums…)
  - They do okay some years
  - depends on microclimates
Fruits for Southern California

Dry-Adapted Fruits

- Peruvian Apple Cactus
- Blueberry and Plum Cactus
- Prickly Pears
- Pomegranates
- Figs
- Carob
- Mesquite
Resources

- California Rare Fruit Growers [www.crg.org](http://www.crg.org)
- Mediterranean Climate Region Info
- Dave Wilson Nursery
- How to Prune Fruit Trees ~R. Sanford Martin
- Holistic Orchard (Book/DVD) ~Michael Phillips
- Permaculture Orchard (DVD) ~Stefan Sobkowiak
- The Water Wise Home ~Laura Allen
- Rainwater Harvesting for Drylands and Beyond ~Brad Lancaster
Questions or Concerns?

- Q/A (Now)
- Ty.Teissere@gmail.com (Later)