

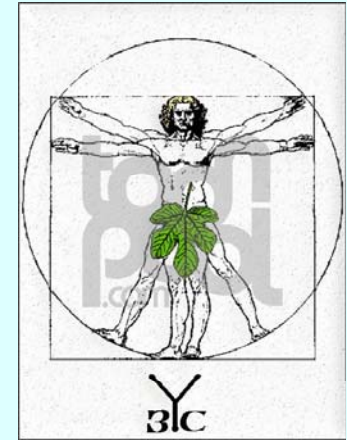
# The Incredible Edible Fig



*Ficus carica*



# History



- The fig is believed to be indigenous to Western Asia and to have been distributed by man throughout the Mediterranean area. It has been cultivated for thousands of years, remnants of figs having been found in excavations of Neolithic sites traced to at least 5,000 B.C.
- Figs were introduced into England some time between 1525 and 1548. It is not clear when the common fig entered China but by 1550 it was reliably reported to be in Chinese gardens. European types were taken to China, Japan, India, South Africa and Australia.
- The first figs in the New World were planted in Mexico in 1560. The fig reached Virginia in 1669.
- Figs were introduced into California when the San Diego Mission was established in 1769. Later, many special varieties were received from Europe and the eastern United States.

# The Fig Ficus carica

- The fig is a picturesque deciduous tree, typically to a height of 10 - 30 ft. and spreading wider than they are tall. Fig trees often grow as a multiple-branched shrub.
- Fig wood is weak and decays rapidly. The twigs are pithy rather than woody.
- The succulent trunk and branches are unusually sensitive to heat and sun damage, and should be whitewashed if particularly exposed.
- Roots are invasive and greedy, traveling far beyond the tree canopy.
- The sap contains copious milky latex that is irritating to human skin.



# The Fig Ficus carica

- Fig trees thrive on a wide range of soils from light sand to heavy clay.
- Regular fertilizing is necessary only on sands and on potted trees. Excess nitrogen encourages rank growth.
- Fully dormant trees are hardy to 12° - 15° F, but plants in active growth can be damaged at 30° F.
- Chilling requirements for the fig are less than 300 hours.
- The fig grows best and produces the best quality fruit in Mediterranean and dryer warm-temperate climates. Rains during fruit development and ripening can cause the fruits to split.
- In coastal climates, grow in the warmest location, against a sunny wall or in a heat trap.

# The Fig Ficus carica

- The skin of the fig “fruit“ is thin and tender, the fleshy wall is whitish, pale-yellow, or amber, or more or less pink, rose, red or purple; juicy and sweet when ripe, gummy with latex when unripe.



- Seeds may be large, medium, small or minute and range in number from 30 to 1,600 per fruit. The edible seeds are generally hollow, unless pollinated. Pollinated seeds provide the characteristic nutty taste of dried figs.

# The Fig Synconium

- The syconium is what most people associate with the tasty fruit of a fig, but technically it is not a true fruit. It is a complex inflorescence (flower cluster) consisting of a hollow, fleshy, flask-shaped modified stem lined on the inside with numerous tiny unisexual flowers.
- **Ficus carica** has 2 sexual forms, the "male" caprifig and the "female" tree which produces the edible fig.
- The caprifig is monoecious [i.e. with separate male (staminate) flowers and separate female short-style (pistillate) flowers. It is functionally male because it produces pollen.
- Edible figs contain only long-style female flowers.
- Since functional male trees are hermaphroditic, **Ficus carica** is usually considered gynodioecious rather than dioecious.

# Breba Crop Versus Main Crop Synconia

- Brebas are the first figs of the season, setting on wood from the previous year. These typically mature in June in California.
- Brebas tend to be larger than main crop figs, are relatively scarce on the market, and tend to get a high price as fresh fruit.
- The main crop is produced on the current season's wood, maturing fruit from August through November or even later in a warm year.
- Maturity in main crop fig fruits on a single tree is sequential, beginning with development of basal fruits and progressing toward the most distal fruits.



# Horticultural Categories or Fig Types

- Cultivars of *Ficus carica* are classified into four categories or “types” based on sex and the need to be pollinated or “caprifigged” in order to set a crop. These are:
  1. Caprifig-type: Has male and female flowers enclosed in the synconiom and is generally considered the “male” fig. All caprifigs are placed in this class without regard to whether the synconia persist or not.
  2. Smyrna-type: Has only female flowers and needs cross-pollination by Caprifigs in order to develop normally. This crop sets virtually no breba crop.
  3. San Pedro-type: Has only female flowers. Its breba crop needs no pollination to produce fruit like the common fig. Its second crop is commonly dependent on pollination.
  4. Common-type: The flowers are all female and need no pollination to produce fruit (parthenocarpic fruit set). Some cultivars in this class set no breba crop, some set a moderate crop and some set a good breba crop.



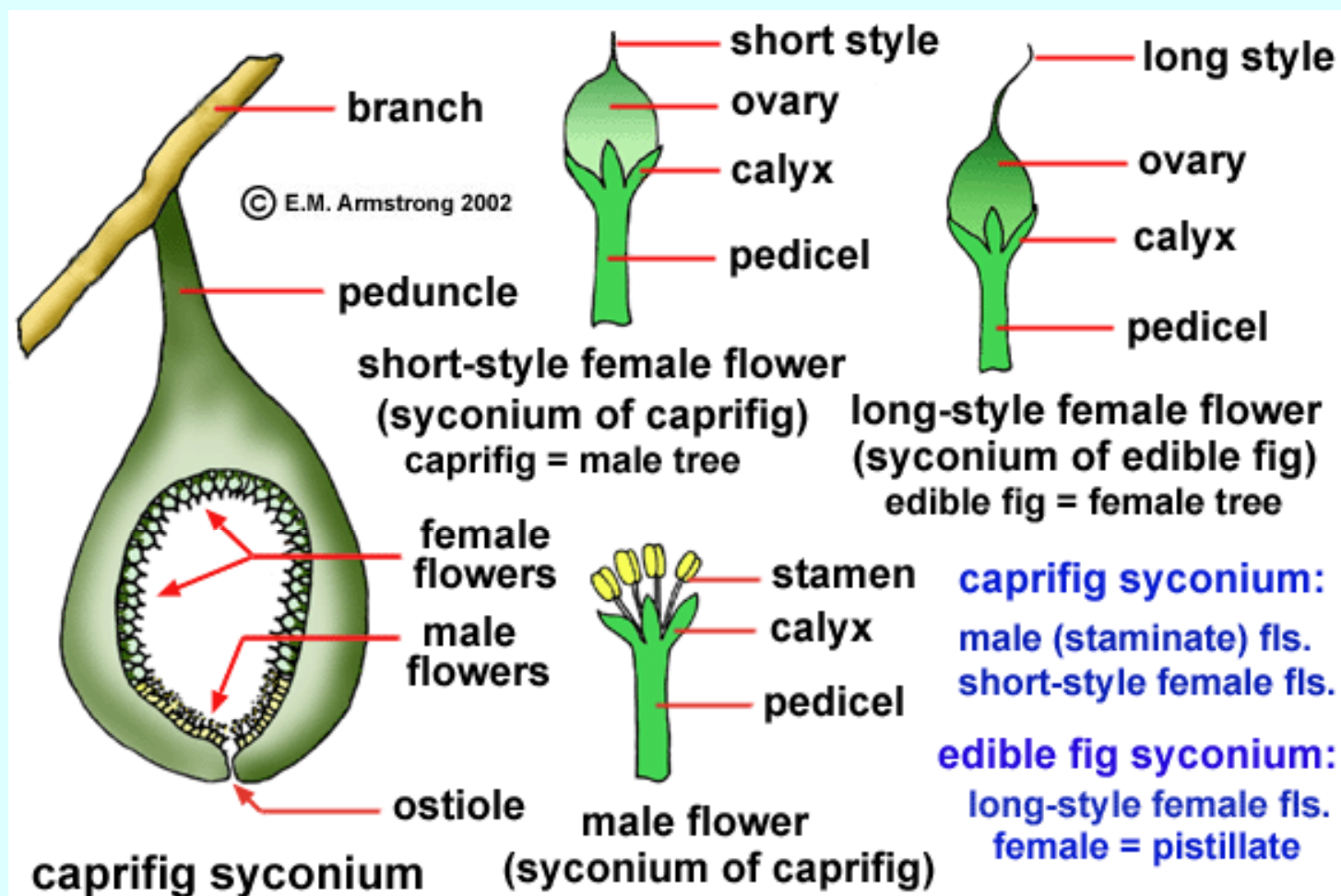
# Caprifig-type:

- Caprifigs are native to Asia Minor and are grown in California for pollination (caprification) of Smyrna-type figs. Caprifigs were imported to California from Algiers in 1899.
- Caprifigs are naturalized in moist riverbeds and creeks of southern California. They occasionally appear as seedling volunteers in urbanized areas, probably dispersed by birds.
- The most common cultivars of caprifigs grown in California are: 'Brawley', 'Croisic', 'Roeding #3', and 'Stanford'.
- Several cultivated varieties of caprifigs are sweet and palatable, including the 'Cordelia', 'Brawley', 'Enderud' and 'Saleeb'.

# The Synconium of the Caprifig:

- The Caprifig normally produces a small non-edible fruit; however, the flowers inside the Caprifig fruit produce pollen. This pollen is essential for fertilizing fruit of the Smyrna and San Pedro types of fig.

## Synconium of the Caprifig (Male Tree)



# Caprifig-type:

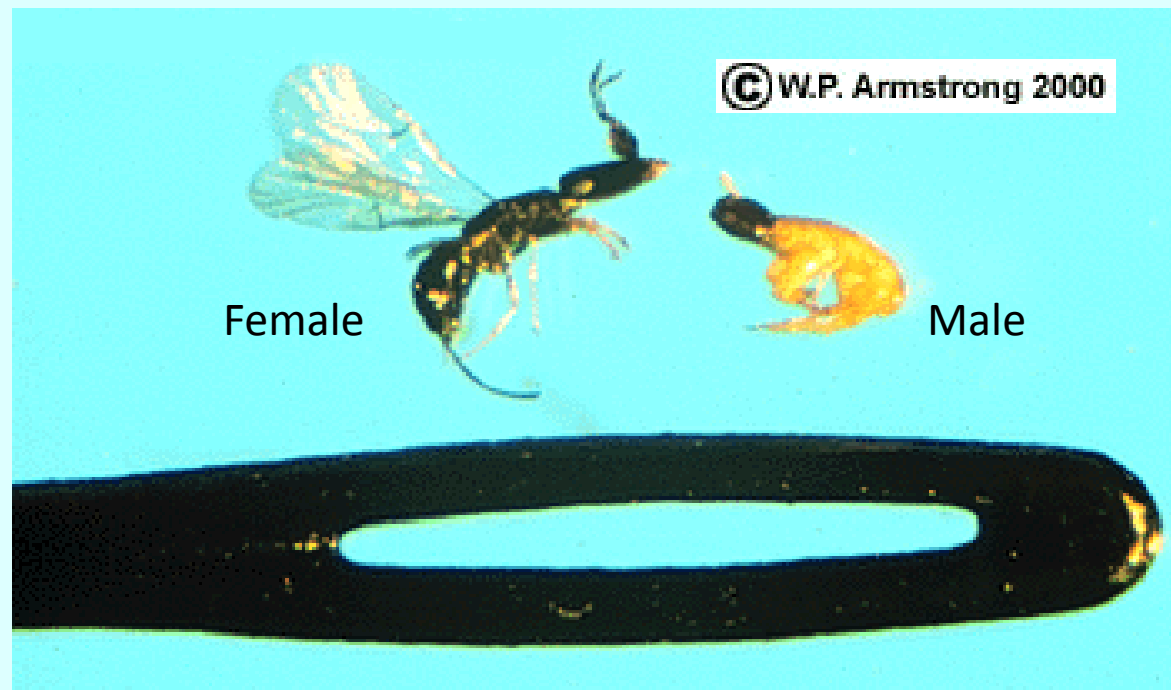
- Functional male caprifigs of **Ficus carica** produce three crops of syconia per year: the summer profichi, fall mammoni and overwintering mamme that mature the following spring. **Only the profichi crop produces pollen.**
- The profichi syconia contain clusters of pollen-bearing male flowers in the ostiolar region and wasps that develop from eggs laid inside the ovaries of the short-style female flowers . Wasp eggs are not laid in long-style flowers.
- Fig pollen is transferred from male flowers (stamens) on the profichi crop of caprifigs to female flowers (pistils) on the Smyrna-type figs and the second crop of figs on San Pedro-type figs by an insect called a fig wasp (*Blastophaga*).



Profichi  
Synconia

# The Story of the Fig Wasp (*Blastophaga*)

- Entomologists have learned that fig wasps overwinter as larvae in the pistils (as galls) of the fruit from the winter (mammae) crop of caprifigs.
- In April, the larva changes into an adult. A male emerges from the pistil and promptly impregnates a female, while she is still in her pistil. Soon after the wingless male dies. The winged, gravid females emerge and leave the mammae fig through the ostiole.



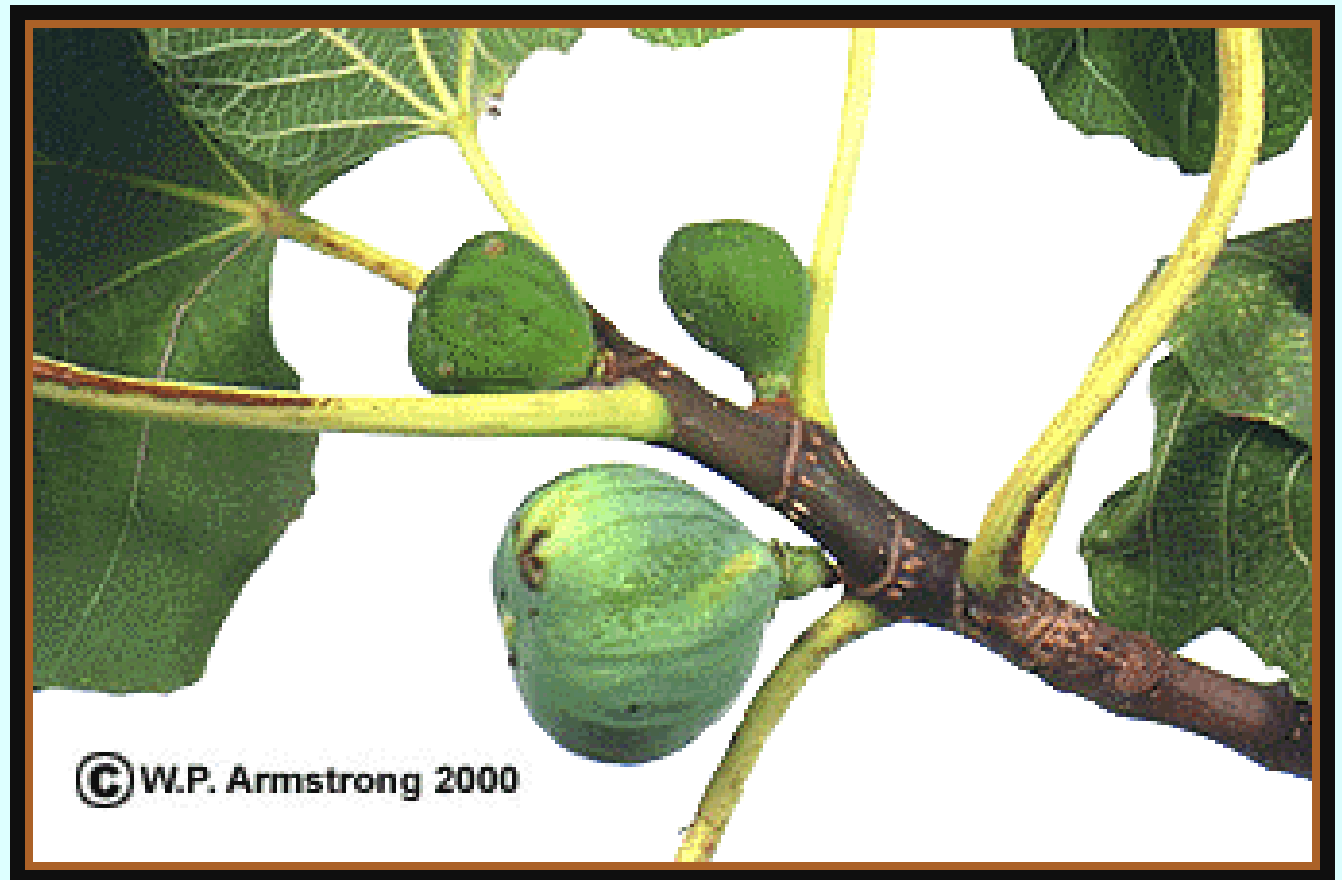
# The Story of the Fig Wasp (*Blastophaga*)

- Eventually a female flies to a new, young, flowering caprifig of the spring crop (profichi crop) and enters through the ostiole.
- The female oviposits eggs in the short-style pistils, one per ovary, and then carries pollen to the long-style pistils for seed set. This enables the fruit to mature, and her young therefore to receive nourishment. The female dies within the developing fruit.
- After a short period, the new generation of fig wasps emerges; males impregnate females and die while gravid females escape to colonize new flowering figs.
- The profichi caprifig has many male flowers near the ostiole, and the wasp thereby carries much pollen with her to the next syconium.

# Caprifig-type:

- The profichi crop resemble edible figs, except they are filled with wasps and pollen-bearing stamens.

Branch of caprifig in early summer with mature profichi syconia.



# Caprifig Profichi Syconia :

- During wasp exodus season in June profichi syconia are filled with black, winged female wasps and amber, wingless males, and literally "smoke" with pollen.



# Caprifig-type:

- The importation of Caprifigs to California in 1899 began the western Smyrna fig industry. Three to five caprifigs are grown at fig orchards for every 100 Smyrna-type fig plants, to provide the necessary pollen and fig wasps.
- Commercial growers often hang baskets of Blastophaga-infested Caprifigs in the trees of Smyrna-type figs so that the wasps can effectively fertilize the fruit. This process is often referred to as caprifigation.







## Smyrna-type:



- The Smyrna-type fig was brought to California in 1881-82 but it was not until 1900 that the wasp was introduced to serve as the pollinating agent and make commercial fig culture possible.
- The Smyrna-type fig varieties produce large edible fruit with true seeds. The Blastophaga wasp and Caprifigs are required for normal fruit development. If this fertilization process does not occur, fruit will not develop properly and will fall from the tree.
- Only one cultivar 'Sari Lop' ('Calimyrna') is cultivated extensively in California. Other cultivars include 'Marabout' and 'Zidi'.
- 'Calimyrna' is the commercial variety used to make Fig Newtons.

# Smyrna-type:

- Smyrna-type figs are considered to be the most desirable fig. They are judged better in flavor than the parthenocarpic fruits because the skin is more tender and the oil in the fertilized seeds give the fig extra flavor.
- It is true that the skeleton of a female wasp plus some dead larvae of the next generation fig wasps occur in Smyrna-type figs; however, the consumer hardly notices these inclusions. The "crunch" of the Smyrna-type fig is the oily seeds.
- Smyrna-type figs are commonly sold as dried figs.



# San Pedro-type:

- These figs can bear two crops of fruit in one season--one crop on last season's growth and a second crop on current growth.
- The first crop, called the Breba crop, is parthenocarpic and does not require pollination. The breba crop produces early in the spring. San Pedro-type cultivars are characterized by producing a good, persistent breba crop.
- Fruit of the second crop is the Smyrna type and requires pollination from the Caprifig. However, the second crop of the Smyrna type may fail to set because of lack of pollination from Blastophaga and Caprifig. This second crop fruit drop often discourages homeowners.
- The most important San Pedro-type cultivars in California include: 'King', 'Lampeira', and 'San Pedro'.

# San Pedro-type:

- Some San Pedro-type figs such as 'King' tend to retain most of their second crop without caprification.
- Without caprification, figs are light in weight, hollow in the center, with pulp that is seedless, gelatinous, and somewhat insipid in taste.
- When caprifried, the fruit increase in size and weight, the flesh becomes fleshy, juicy, rich in flavor and strawberry red in color.



# Common-type

- These figs develop parthenocarpically without pollination and are by far the most prevalent fig grown. The fruit does not have true seeds. The “fruit” is primarily produced on current season wood (main crop), however some varieties may produce a breba crop.
- At maturity the interior of the common-type fig contains only the remains of the flower structures, including the small gritty structures commonly called seeds. These so-called seeds usually are nothing more than unfertilized ovaries that failed to develop. They impart the resin-like flavor associated with figs.



- Over 160 cultivars of common figs are in the University of California at Davis's germplasm collection.

# Some of my Favorite Varieties

## **CELESTIAL**

**SYN: CELESTE**

### **DESCRIPTION**

**Purplish-brown skin, pink flesh. Widely adapted. Two crops per year - early summer and late summer to early fall. Very sweet.**



## **CONADRIA**

**SYN: ADRIATIC HYBRID**

### **DESCRIPTION**

**A medium to large yellow-green fig with light strawberry pulp and rich flavor. Best fig for drying.**



# Some of my Favorite Varieties

## **EXCEL**

**SYN: KADOTA HYBRID**

### **DESCRIPTION**

**A medium-sized yellow fig with amber pulp. Well-adapted in California. Superb flavor.**



## **FLANDERS**

**SYN: VERDONE HYBRID**

### **DESCRIPTION**

**A greenish-yellow, medium fig with violet stripes and amber pulp. Fine flavor. Good on the West Coast.**



# Some of my Favorite Varieties

## ITALIAN EVERBEARING

### DESCRIPTION

Large, reddish brown skin. Flesh pink to dark red, sweet. Similar to Brown Turkey. Bears two crops through summer into fall. Prolific bearer.



## OSBORN

### SYN: NEVERALLA

### DESCRIPTION

Large fruit. Produces both first and second crop figs. Purplish-bronze skin. Amber flesh, sweet flavor. Coastal areas only, avoid extreme heat. Bears well in Southern California.





# Some of my Favorite Varieties

## **PANACHEE**

**SYN: PANACHE, TIGER**

### **DESCRIPTION**

A chimera which produces green fruit with yellow stripes and strawberry pulp. Can produce excellent, fresh fruit but needs sufficient heat to ripen.



## **PASQUALE**

**SYN: NATALINO, VERNINO**

### **DESCRIPTION**

A small purple fig with strawberry pulp distinguished by its late ripening--often in December or January. Fruit is sweet and rich.



# Some of my Favorite Varieties

**PETER'S HONEY**

**SYN: ITALIAN HONEY**

## **DESCRIPTION**

A medium, very sweet, lemon yellow fig. Good tree for growing in a pot. Good breba crop. Often produces a drop of nectar at the ostiole that closes the “eye”



**TENA**

**SYN: TINA, TEEM**

## **DESCRIPTION**

A medium to large greenish-yellow fig with light strawberry pulp. Widely adapted, but likes hot, dry weather. Very sweet.



# The Fig Ostiole (Eye)

- The ostiole is the opening at the apex of the fig through which female fig wasp enter the fig to pollinate the flowers and to lay their eggs.
- Fresh figs for the consumer market usually centers on parthenocarpic cultivars. These varieties do not need pollination to produce fruit.
- The ostiole of fresh figs can be open or closed, depending on variety. Those fruit with closed ostiole have less problems with insect pests or diseases affecting the fruit.
- Some figs produce a drop of nectar at the ostiole that effectively blocks the opening to the “eye”.



# Fruit Ripening

- Many signs indicate that a fig is ripening. Getting to know your variety is critical, because each variety has different characteristics and, more important, progresses through the ripening process at a different rate.
- Generally, most of the flavor and sugars are developed in the last day or two of ripening, so just picking a day early can have a significantly negative impact on the enjoyment of the fruit.
- A cool period during ripening will delay ripening, and in some varieties, interrupt their maturation process, so that they will "ripen", but they will not develop the full sugars and flavors that they would have had if they ripened in warm weather.
- Some varieties will not ripen without sufficient heat and although fruit will form, the fruit remains hard or rubbery and may never mature to become an edible fruit.

# Fruit Ripening

- Figs exhibit a significant size increase when they begin to ripen. This usually happens concurrently with a marked color change. The color change is most noticeable in dark colored figs.



- Ripe figs no longer exude a milky sap when picked.

# Fruit Ripening

- As a fig ripens and increases in size and weight, it will usually soften, which will cause it to droop or sag.



# Fruit Ripening

- The skin of some figs will split as they increase in size.



- Some varieties when ripe will exude a drop of honey-like nectar from the eye.



# Nutrition Value

- Figs are one of the highest plant sources of calcium and fiber.
- According to USDA data for the Mission variety, dried figs are richest in fiber, copper, manganese, magnesium, potassium, calcium, and vitamin K, relative to human needs. They have smaller amounts of many other nutrients.
- Figs have a laxative effect and contain many antioxidants.
- They are good source of flavonoids and polyphenols.

## Nutrition Facts

Serving Size 40g/About 3-4 figs

### Amount Per Serving

**Calories** 110      Calories from Fat 0

**% Daily Value\***

**Total Fat** 0g      **0%**

Saturated Fat 0g      **0%**

Trans Fat 0g      **0%**

**Cholesterol** 0mg      **0%**

**Sodium** 0mg      **0%**

**Potassium** 240mg      **7%**

**Total Carbohydrate** 26g      **9%**

Fiber 5g      **20%**

Sugars 20g

**Protein** 1g

Vitamin A 0%      •      Vitamin C 0%

Thiamin 2%      •      Riboflavin 2%

Folic Acid 2%      •      Vitamin B6 6%

Niacin 2%      •      Calcium 6%

Copper 8%      •      Iron 6%

Magnesium 6%      •      Phosphorous 2%

Zinc 2%      •

\* Percent Daily Values are based on a 2,000 calorie diet.



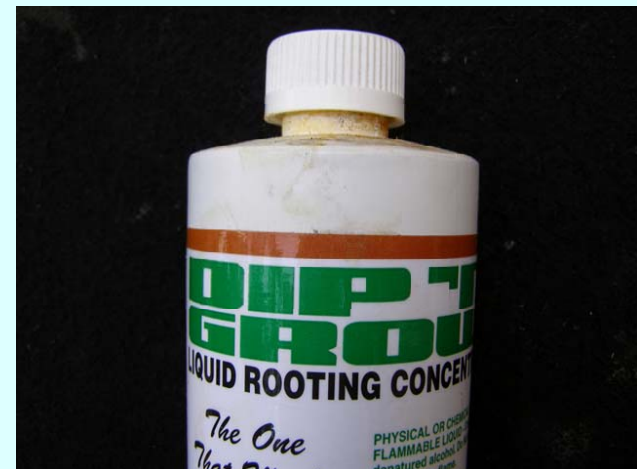
# Propagation

- There are many ways to propagate figs. They may be sprouted from seed, air-layered, grown from suckers , grafted or grown from rooted cuttings.
- Seeds do not produce trees that are true to type. The trees are often sterile or functionally male caprifigs.
- Air-layering requires access to a tree for 3-6 months. Air-layering a fig is easy and very successful. This method of propagation can produce a large plant in a very short period of time.
- Suckers are not always handy when you want them.
- Grafting: Cultivars may be propagated on rootstocks, or older trees, topworked by whip, cleft or crown grafting, or chip or patch budding.
- Cuttings: Fig plants are usually propagated by cuttings. The following slides are adapted from a presentation by Jon Verdick, owner of Encanto Farms.

# Propagation by Cuttings

I would like to gratefully acknowledge Jon Verdick of Encanto Farms and We Be Figs for the following slides and instructions on propagating figs by hardwood cuttings. Thank You, Jon!

- Cuttings can be rooted in water, in potting soil, directly in the ground, in a variety of rooting media (such as sand, vermiculite or perlite) or in a bag.
- Two things greatly improve rooting success: pre-rooting in a bag, and transplanting to a clear plastic cup containing specific media.
- Rooting is greatly speeded up when temperatures are 70F or higher. Providing a warm environment can be as simple as placing your cuttings in a bag on top of the refrigerator, or a shelf above the stove.
- The use of a rooting hormone is not necessary. Powdered hormone seems to actually encourage rotting of the cutting. Use a liquid hormone, if you use any, at all.



# Propagation by Cuttings

- **Rooting success is almost entirely dependent on controlling moisture, both in the potting media and in the atmosphere around your cuttings. Soil moisture and humidity are crucial.**
- The cuttings will rot if their soil is too wet. If it is too dry, the new roots will desiccate and die. Using a rooting media that maintains proper levels of air and moisture greatly increases rooting success.
- When choosing a rooting medium you need to have a mix which allows for moisture to be retained, but one which does not allow the water to completely saturate the medium so that there is no air (oxygen) in the medium.
- Texture or coarseness is an important factor in balancing these two requirements. The smaller particle sizes tend to allow the medium to become saturated, excluding all air and holding too much moisture. Larger particles will hold less moisture and allow air. Most sand is too fine to prevent saturation. Potting soils hold too much moisture.
- Coarse vermiculite produces very good results. The coarse texture allows for good air penetration in the media, while the vermiculite holds the moisture.
- A mix of 60% Perlite and 40% finer vermiculite also works well.

# Propagation by Cuttings

- If the humidity is too high, mold is a likely outcome, and if it is too low, the cuttings are at risk of desiccation before rooting occurs.
- Humidity can be controlled in a greenhouse, or using something simple like a plastic storage box with the lid substantially closed.
- Here I used a plastic bag over a black nursery pot.



# Propagation by Cuttings

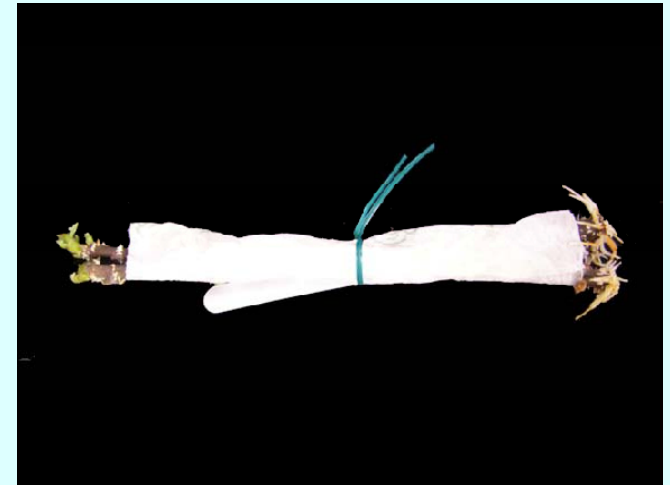
## Pre-rooting Cuttings

- Wrap dormant cuttings in lightly dampened paper towels or newspaper. ❖❖
- Then place them in a sealed plastic bag and put them in a warm place.
- In a few weeks, you will see root initials begin to form, and then roots. Be patient; each variety is different and each cutting, even when from the same tree, can differ in its response.



# Propagation by Cuttings

- Once the cuttings have formed roots they are removed from the bag for transfer to a clear cup.



- This "bag" technique can be used on all sizes of cuttings. I have done some as large as 2" in diameter.



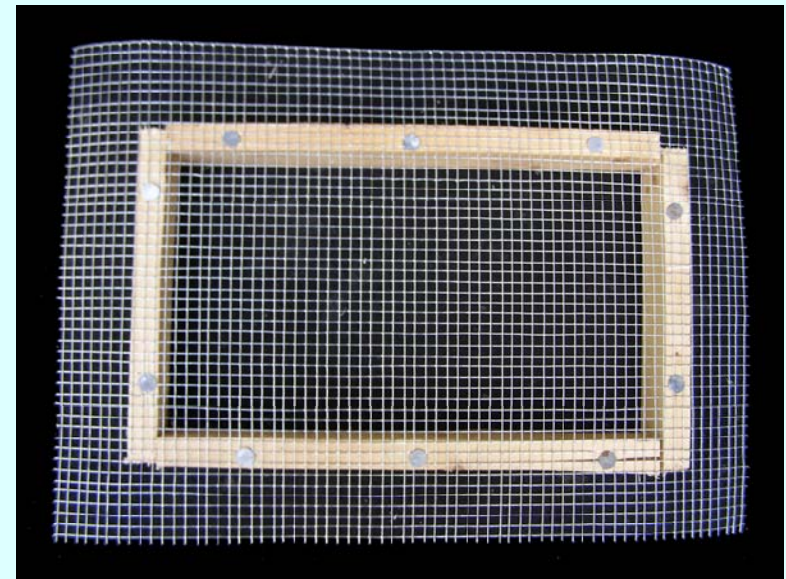
# Propagation by Cuttings

- Transfer the cuttings from bags to 26-oz. clear plastic cups containing a rooting medium and with holes drilled in their bottoms.
- The pre-rooted cuttings are placed in these clear cups for further root development. Remember that deeper cups are better than short, squat cups.



# Propagation by Cuttings

- The pre-rooted cuttings in clear plastic cups are placed on wire racks, in plastic storage boxes. These boxes hold 20 cuttings and can be used to control humidity.
- The screen "racks" are used to keep the cups above the water that collects at the bottom of the storage box. If the cups sit in water, the rooting media wicks up the water rotting the cuttings. But the water underneath the screen provides humidity to maintain moisture in the cutting.





# Propagation by Cuttings

- Place the box of cuttings in an area that receives filtered sunlight. Too much sun can heat up the box and “cook” your cuttings.
- Open the lid of the box a little bit. This allows fresh air to enter, which is important in controlling mold. If the lids are wide open, you lose too much humidity.
- The water at the bottom of the crate, under the screen, replenishes the humidity lost by having the lids open.



# Propagation by Cuttings

- Eventually the cuttings will develop roots. Each cutting may develop at a different rate.
- An important principle to remember is that roots and leaves have no relationship to each other.
- Under identical conditions, some cuttings will grow roots, some will grow leaves, and some will grow both.



# Propagation by Cuttings

- You cannot presume root development from observing leaf development. This is why clear cups are beneficial; they allow me to actually see whether roots are developing.
- Here is a cutting that looked strong and healthy but there was little root development. This is not a good candidate for transplanting and should be kept in a very high humidity environment.



# Propagation by Cuttings

- This cutting has very vigorous root development seen through the cup as well as good leaf development.
- It is now removed from the cup and ready for repotting into a 1 gallon pot.



# Propagation by Cuttings

- An advantage of vermiculite and perlite as a rooting medium is the ease of removing the rooted cutting for repotting. Mixes that contain organic materials tend to stick to the sides of the cups, which leads to root damage.



- If the roots stick to the sides of the cup, squeeze and flex the cup. The sides of the cup can bend at sharp angles, and the roots will not. The cup may crack, but even cracked cups can be reused because they don't need to hold water.



# Propagation by Cuttings

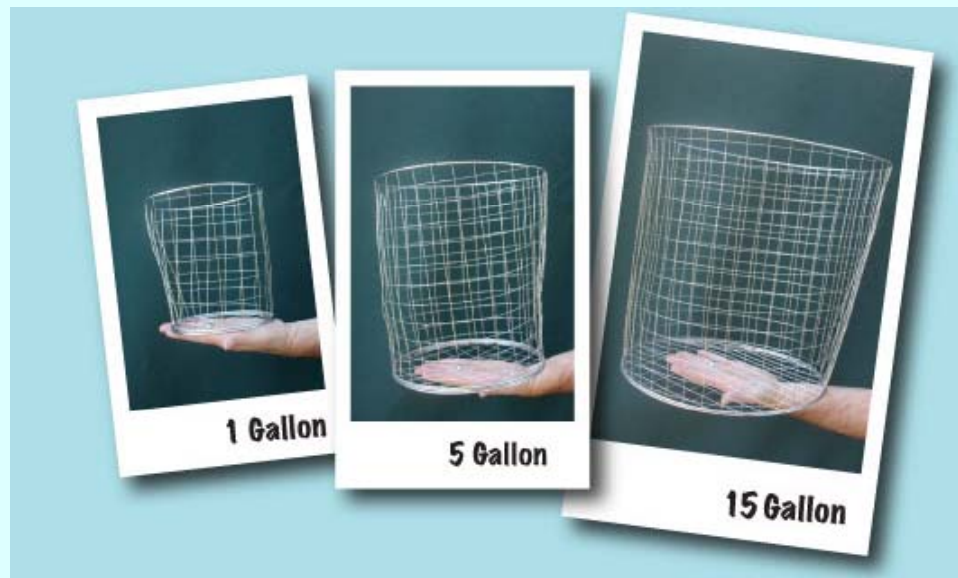
- Transfer the cuttings to 1-gallon pots containing a potting mix of 60% Perlite and 40% potting soil.
- Acclimate them to the outdoors, usually putting them in shade with augmented humidity for a few days, and gradually introducing them to more sunlight over a period of weeks.
- At this stage, potting mix moisture control is still critical. Too much moisture will still cause root rot and plant failure.
- When I see roots in the drain holes, I transfer the trees to 2-gallon pots while reversing the mix to 40% perlite and 60% potting soil.



# Pests and Diseases

## Pocket Gophers

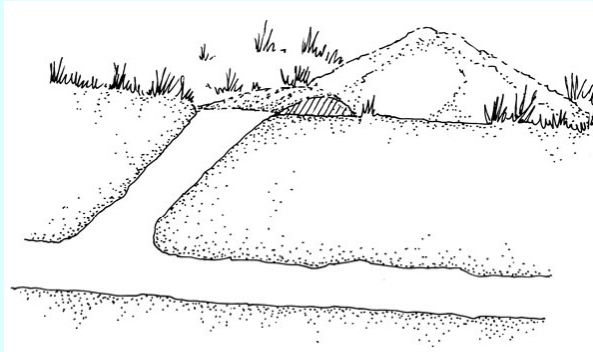
- Fig tree roots are a favorite food of gophers, who can easily kill a large plant. One passive method of control is to plant the tree in a large aviary wire basket.
- The wire should have openings no larger than  $\frac{1}{2}$ " and the top edge of the basket should extend at least 2"-3" above the surface of the soil.



# Gopher Control Products

## Traps, Baits and Gases

- Important in the effectiveness of these products is that they should be placed in a fresh tunnel or run.



- Traps are often the most effective. Use in pairs and place back to back.



- Baits work well if used properly. A bait injector tool is a useful tool.
- Gases are most effective when the soil is moist. Gases are often the least effective of these options.

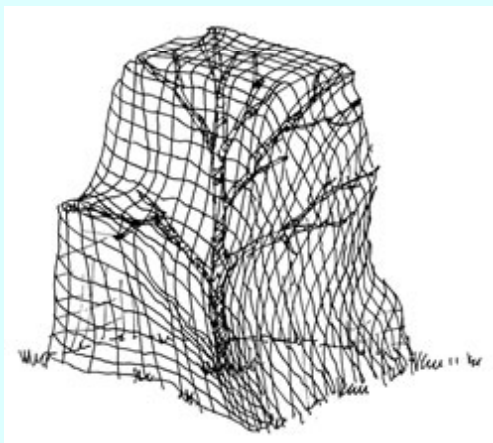




# Pests and Diseases

## Birds

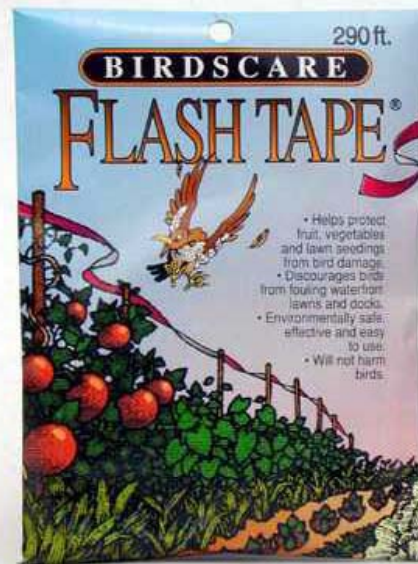
- The most effective bird deterrents are nets. Any size net which completely encloses the tree will be effective against birds.



# Pests and Diseases

## Birds

- Birds should be discouraged from your fruit, but never harmed or killed. There are several products available to protect your crop from birds.



# Pests and Diseases

## Fig Beetles

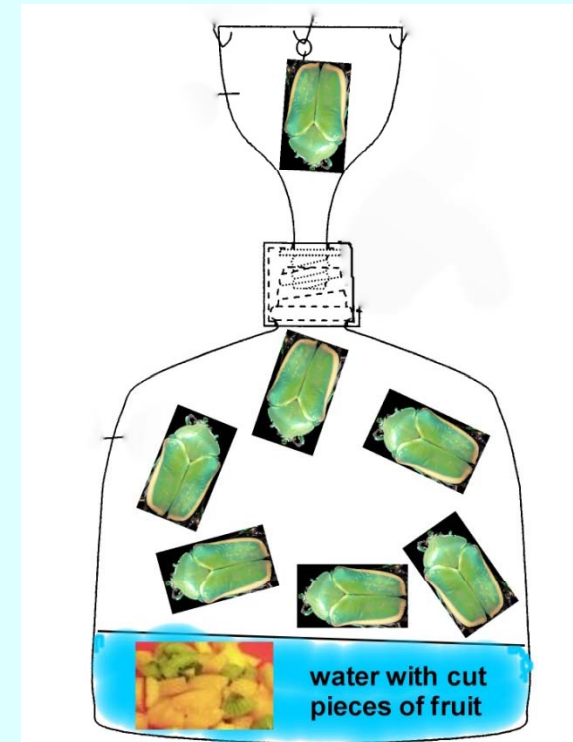
- Fig Beetles are a problem at least as serious as birds in San Diego. 1/2" bird mesh is too large to keep out fig beetles. I found that 1/4" mesh bird net from Bird-B-Gone was the perfect solution for both birds and Fig Beetles.



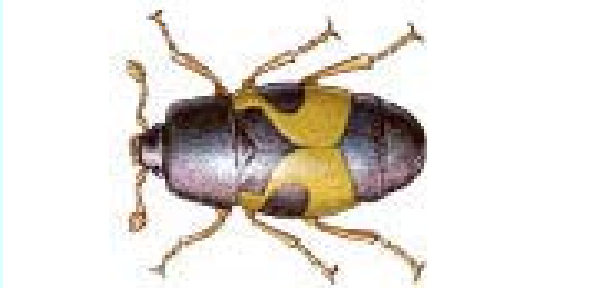
# Pests and Diseases

## Fig Beetles

- Large grubs (larvae) are frequently found in compost piles and in soil that is rich in organic material.
- Traps hung in trees during the summer can help reduce Fig Beetle populations and can help to reduce damage to the fig crop.



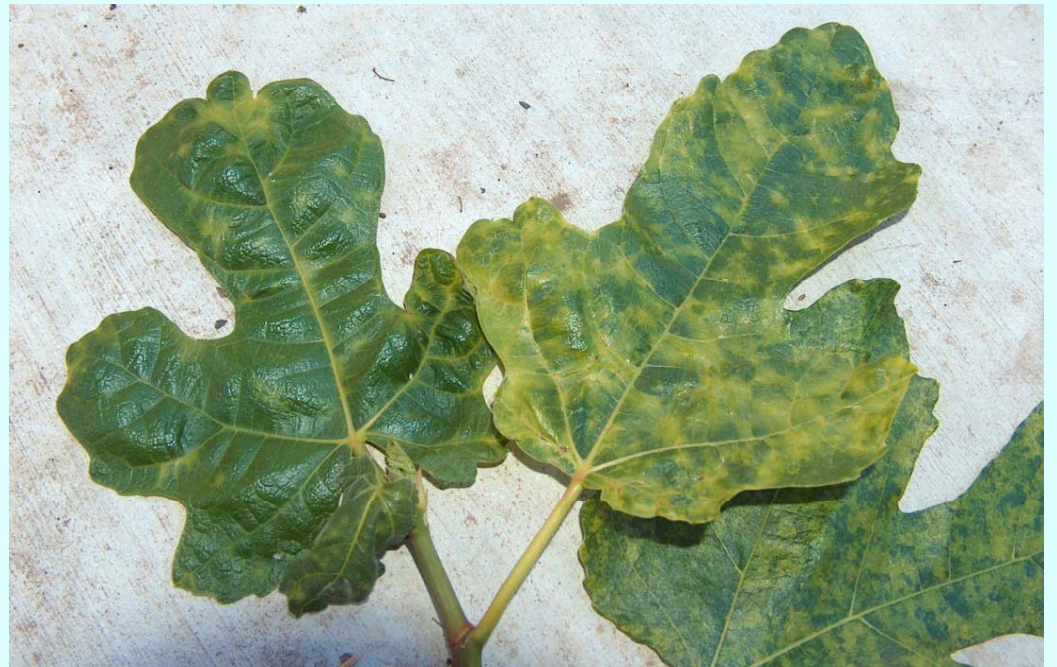
# Pests and Diseases



- Mitadulid and Carpophilus dried fruit beetles can enter ripening fruit through the eye and cause damage by introducing fungi and rots.
- They frequently breed in fallen citrus fruits. Keep a clean orchard by destroy fallen fruits and do not grow near citrus trees.

# Fig Mosaic Virus

- Host specific, only affects figs. Formerly considered benign, probably causes crop reduction.
- Symptoms resemble potassium deficiency. Leaves may be smaller than normal and deformed. Premature defoliation and fruit drop often occur.
- Virus spread by cuttings and by eriophyid mite.
- Black Mission is the most seriously damaged cultivar.
- There are no cures for virus diseases.



# Pests and Diseases

## Root Knot Nematodes

- Root knot nematodes are difficult to control and can be spread easily from garden to garden in soil (for example, on tools, boots, etc.) and plant parts.
- Root knot nematodes survive from season to season primarily as an egg in the soil. After the eggs hatch, the second stage juveniles invade roots, usually at root tips, causing some of the root cells to enlarge where the nematodes feed and develop.
- Root knot nematodes usually cause distinctive swellings, called galls, on the roots of affected plants.
- The nematodes feed and develop within the galls, which may grow to as large as 1-inch in diameter on some plants but are usually much smaller.



# Root Knot Nematodes

- Above ground symptoms of a root knot nematode infestation include wilting, loss of vigor, yellowing, and other symptoms similar to a lack of water or nutrients.
- Fewer and smaller leaves and fruits are produced, and plants heavily infested early in the season may die.
- Damage is most serious in warm, irrigated, sandy soils.
- **Some control** may be achieved by using fruit tree rootstocks that are resistant to nematode injury, increasing the organic material in the soil with the use of mulches or soil amendments, or by introducing beneficial *Steinernema feltiae* (Sf) nematodes.





# Pruning

- Fig trees are productive with or without heavy pruning.
- To protect the bark of the tree from sunburn, trees are generally pruned into the modified central leader shape.
- The modified central leader shape keeps the tree smaller and makes it easier to harvest the fruit as well as to protect the fruit from birds and fig beetles.
- The size of the mature fig tree can easily be controlled by pruning without sacrificing the fruit. Fig trees can be kept as small as 6 feet in height.



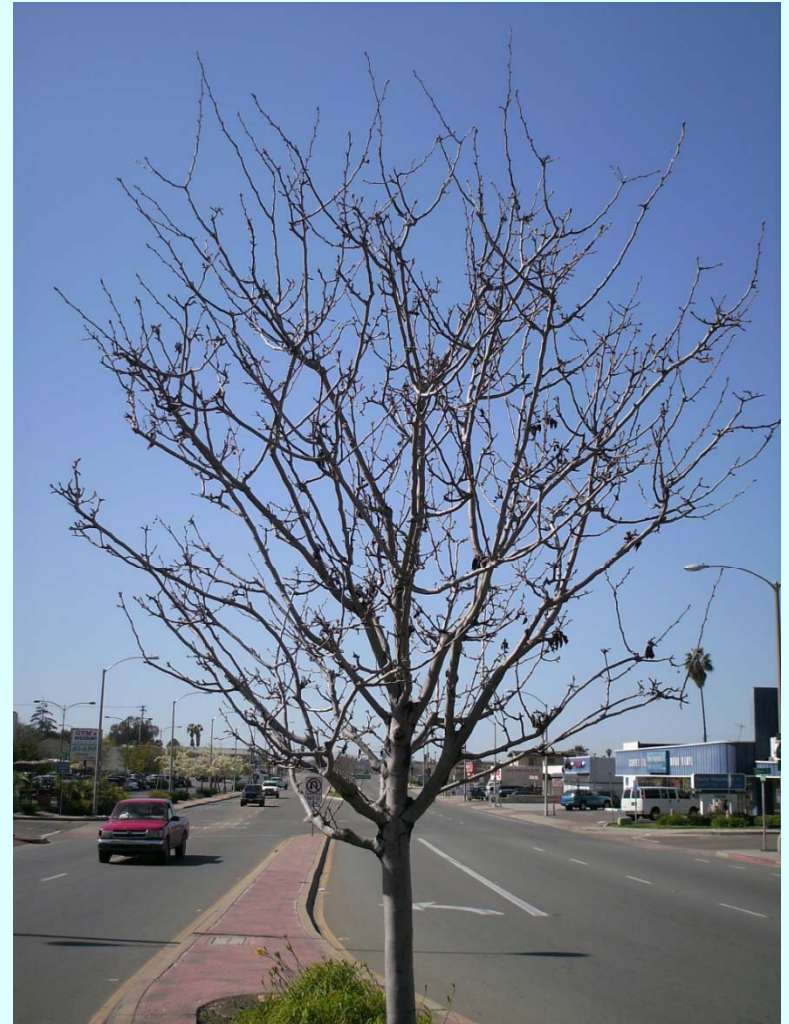
# Pruning

- Fig trees can also be espallied.
- If radical pruning is done, whitewash the entire tree.



# Modified Central Leader

- The modified central leader pruning style keeps branches in the center of the tree. This protects the bark of the tree from sunburn.
- Each scaffold branch and its attached branches and limbs should occupy their own space in the tree.
- Branches should not cross, touch, rub or be excessively crowded.
- Adequate spacing should be maintained between branches to allow sufficient light and air to penetrate through the tree so that fruiting wood is produced and so that insect and disease problems are reduced.



# Pruning

- Figs may produce two crops of fruit per year. The breba crop which is produced on the previous year's wood, and the main crop which forms figs on the new growth that appears this season.

Breba Crop



Main Crop



- Fig varieties differ in their ability to produce a breba crop. Common figs all produce a reliable main crop. Pruning must promote the correct fruiting wood for the desired crop.

# Pruning

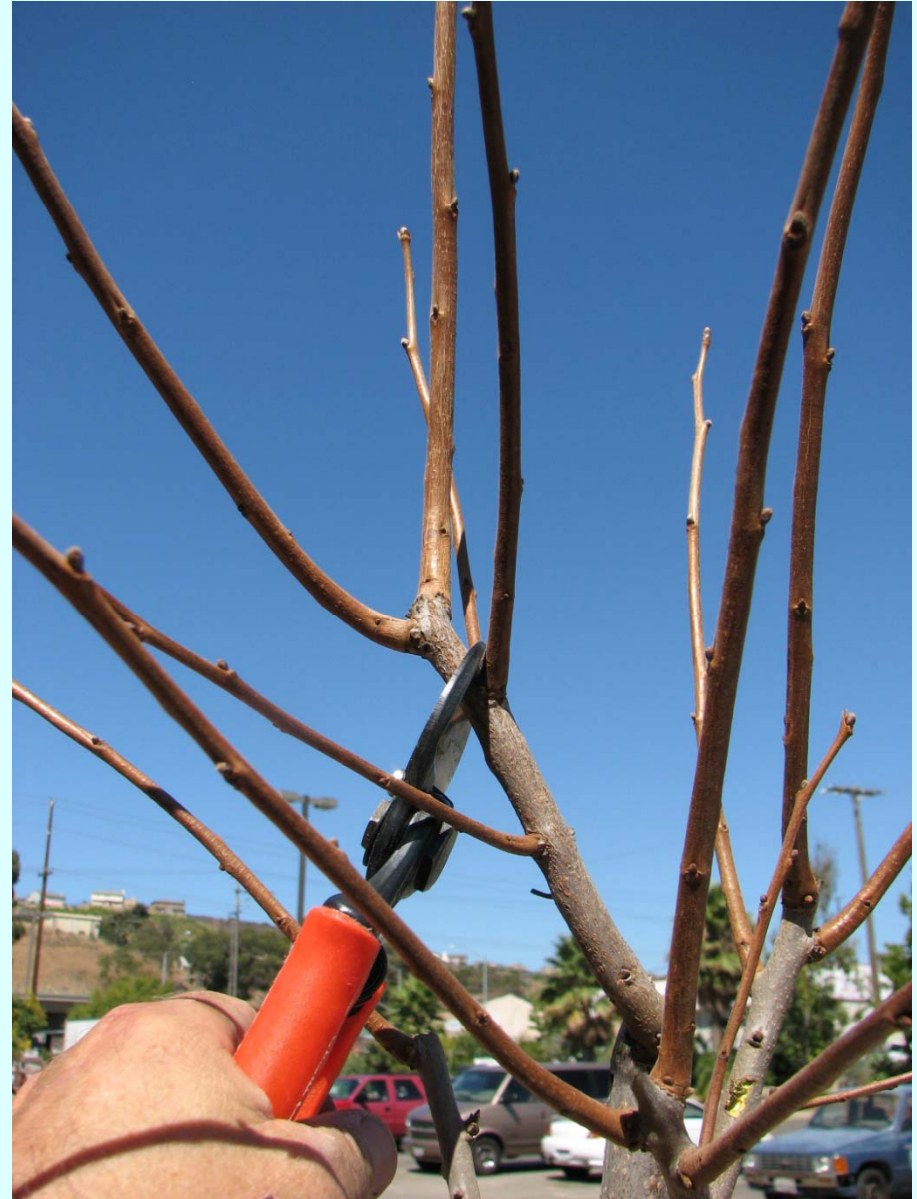
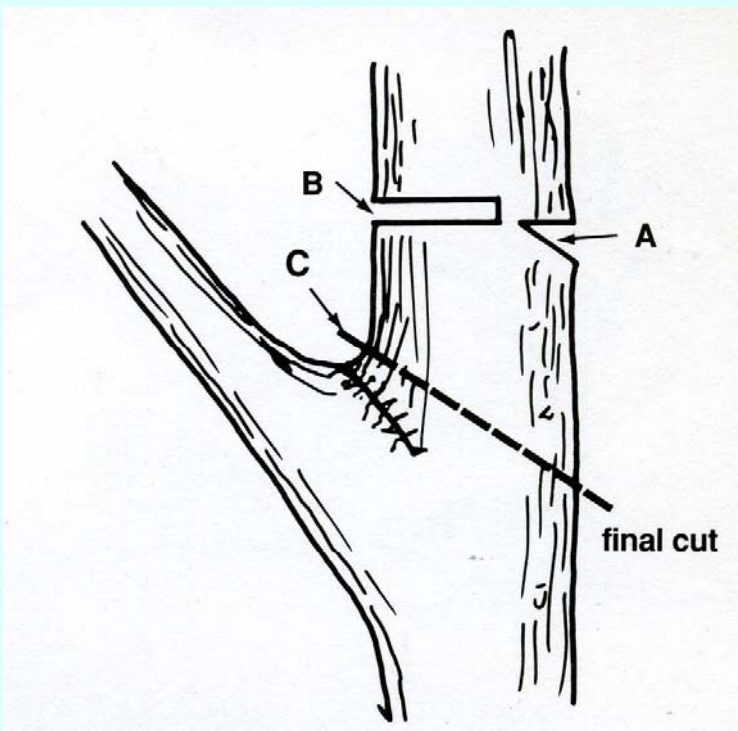
## For fig varieties that produce a breba crop:

- Since the crop is born on previous year's wood, once the tree form is established, avoid heavy winter pruning, which causes loss of the following year's crop. It is better to prune immediately after the main crop is harvested.
- When winter pruning, use drop-crotch pruning techniques to preserve last years growth which will produce the spring breba crop.



# Drop Crotch Pruning

- Drop crotch pruning is to prune a branch by dropping back from the apical tip to a lower lateral branch. This lateral branch should be at least  $\frac{1}{3}$  the diameter of the branch which is being removed.
- A pruning cut is then made at the top of the collar of the lateral branch.



# Pruning

For fig varieties that produce a main crop only:

- Since the crop is born current seasons wood, severe winter pruning has less affect on the production of fruit.
- Heading cuts can significantly reduce the size of last years growth. Heading a branch will result in the sprouting of all lower buds into branches and will necessitate the thinning of branches in subsequent years to prevent overcrowding.



# Pruning

- Topping or heading has many harmful effects on tree growth and tree health. The results include excessive, poorly attached branch growth, disease and decay, and sunburn among others and never results in reducing the size of the tree long term.



- Drop-crotch pruning can reduce the size of a tree without the harmful affects of topping. This results in a tree that is easier to maintain year to year.
- Drop-crotch pruning results in less excessive growth which means less pruning is required each year. Generally these pruning cuts are removing smaller branches, therefore making smaller wounds.



# Fig Tree Pruned to Modified Central Leader (Using Drop-crotch Pruning Techniques)



# Fig Tree Pruned to Modified Central Leader (Using Drop-crotch Pruning Techniques)



# Fig Tree Pruned to Modified Central Leader (Using Drop-crotch Pruning Techniques)



# Sources for Fig Trees

- The following nurseries offer medium to large assortments of fig varieties. Listing is not an endorsement.
- **Chestnut Hill Nursery**, 15105 NW 94 Avenue, Alachua, FL 32615. 800 669-2067. Free catalog.
- **Durio Nursery**, 5853 HIGHWAY 182, OPELOUSAS, LA 70570, PHONE: (337) 948-3696, FAX: (337) 942-6404
- **Edible Landscaping**, P. O. Box 77, Afton, VA 22920. 800 524-4156. URL: [www.EAT-IT.com](http://www.EAT-IT.com) Illustrated catalog free.
- **Encanto Farms, San Diego, CA., (619) 266-1770, URL: [www.encantofarms.com](http://www.encantofarms.com)**
- **Exotica, 2508-B E. Vista Way, Vista, CA. 92083, (619) 724-9093**
- **Fig Tree Nursery**, P. O. Box 124, Gulf Hammock, FL 32639. 352 486-2930. Catalog \$1.00.
- **Just Fruits**, Route 2, Box 4818, Crawfordville, FL 32327. 904 926-5644. Free catalog.
- **Louisiana Nursery**, Route 7, Box 43, Opelousas, LA 70570. 318 948-3696. Catalog \$6.00.
- **Oregon Exotics**, 1065 Messenger Road, Grants Pass, OR 97527. 503 846-7578. Illustrated catalog \$3.00.
- **Peter Bauwen**, Trompwegel 27, B9170 De Klinge, Belgium. Write for catalog information. (Figs can be legally imported in the U.S. with proper USDA import permits and quarantine.)
- **Raintree Nursery**, 391 Butts Road, Morton, WA 98356. 360 496-6400. Illustrated catalog free.
- **Read's Nursery**, Hales Hall, Loddon, Norfolk, NR14 6QW, Great Britain. 44 01508 548395. Write or call for catalog information. (Figs can be legally imported in the U.S. with proper USDA import permits and quarantine.)
- Several NAFEX Fig Interest Groups members also sell figs on an amateur or casual sales basis:
- **Fred W. Born**, 5715 W. Paul Bryant Drive, Crystal River, FL 34429-7523. 352 795-0489.
- **Bill Fogarty**, 1035 S.E. Bell Avenue, Corvallis, OR 97333 541 758-5272.
- **Ray Givan**, 2412 Lowground Road, Guyton, GA 31312. 912 728-4028. E-Mail to: [raygivan@earthlink.net](mailto:raygivan@earthlink.net)
- [National Clonal Germplasm Repository, USDA-ARS](#)
- University of California
- Davis, CA 95616916 752-6504 (voice) or 752-5974 (fax)

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*Advanced California Certified Nurseryman*

I would like to gratefully acknowledge Jon Verdick of Encanto Farms and We Be Figs for the slides and instructions on propagating figs by hardwood cuttings and for several of the fig pictures. Thank You, Jon!