



Fruit Tree Pruning

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UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

■ UC Master Gardener Program

OVERVIEW

A large, dense tree with pink blossoms, likely a cherry tree, in a field. The tree is the central focus, with its branches spreading out across the frame. The background is a soft-focus landscape with green grass and a pale sky.

- Why Prune?
- Pruning Sequence
- Tools
- Types of Cuts
- Fruitwood
- Q&A

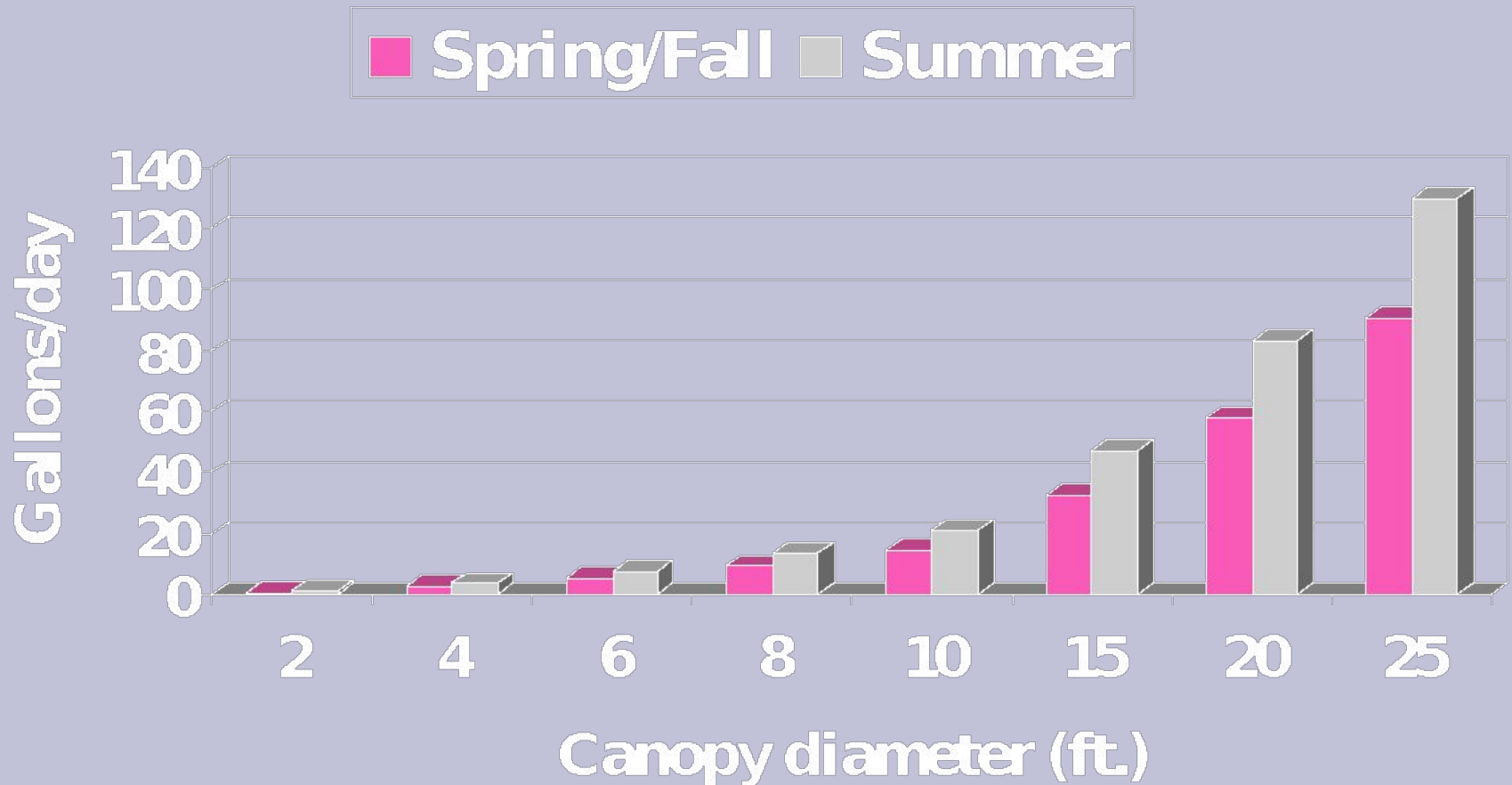
Why prune fruit trees?

- To keep them healthy and productive
- Remove hazards
- Control growth and development
- Control fruit load by removing fruitwood
- Stimulate formation of flowers and fruit buds
- Promote longer life

Why control growth?

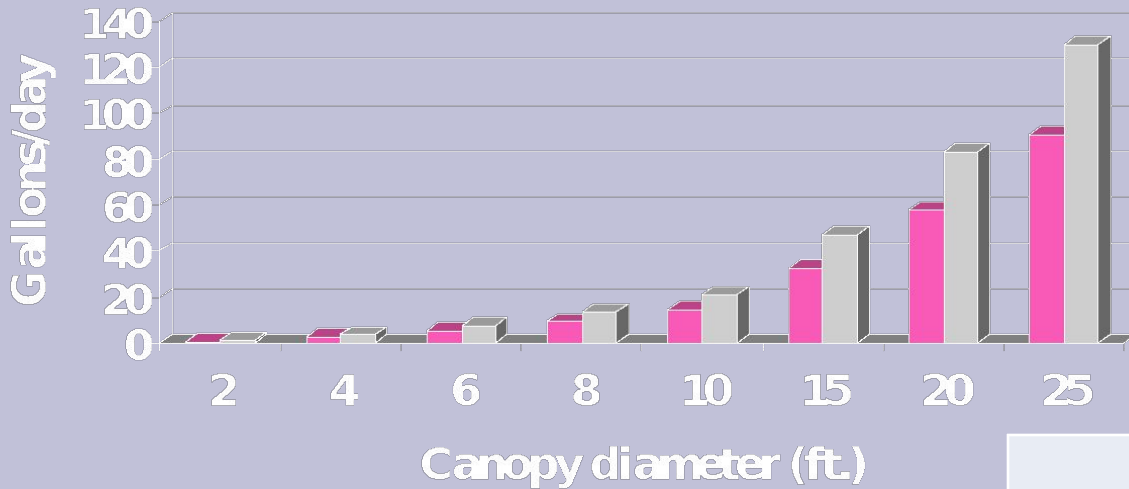
- More trees in the same amount of space
- Easier to manage and harvest
- Lower water use

FRUIT TREE WATER USE BASED ON TREE SIZE



HOW MUCH WATER???

Spring/Fall Summer



Canopy Diameter	Amount of Water Required			
	gal/ day	gal/ week	gal/ 2 weeks	gal/ month
8 feet	15	105	210	450
10 feet	20	140	280	600

BASIC PRUNING STEPS

1. Walk around the tree and look at it
2. Decide what you want to accomplish
3. Remove dead and diseased wood
4. Make the big cuts first
5. Remove crossing branches and those that are spaced too closely
6. Bring in branches that are too long, and branches that are spindly
7. For heading cuts, cut near a bud headed in the direction you want
8. Keep checking your progress/walking around the tree

BASIC PRUNING CONCEPTS

1. Pruning Types
2. Fruitwood
3. Tree Structure (what you want to maintain)
4. Types of Cuts
5. Pruning is iterative

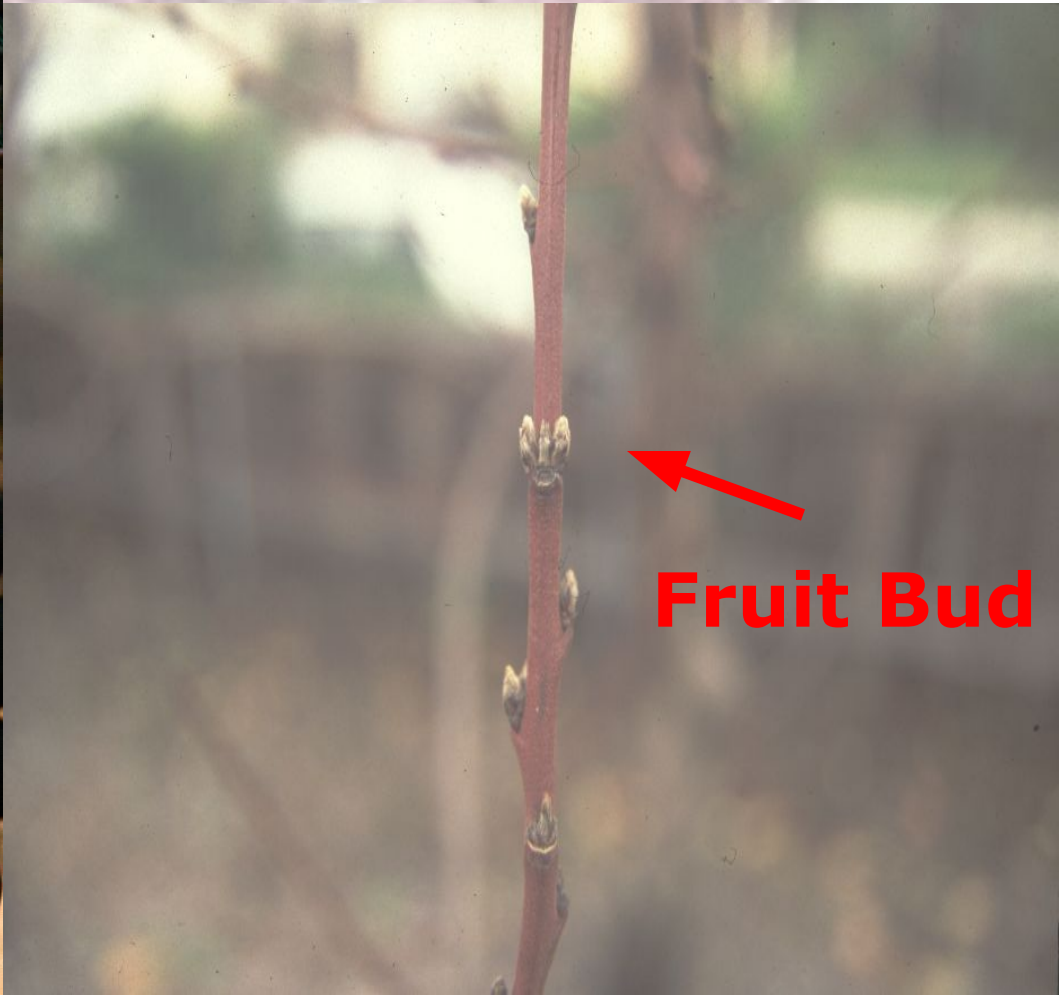
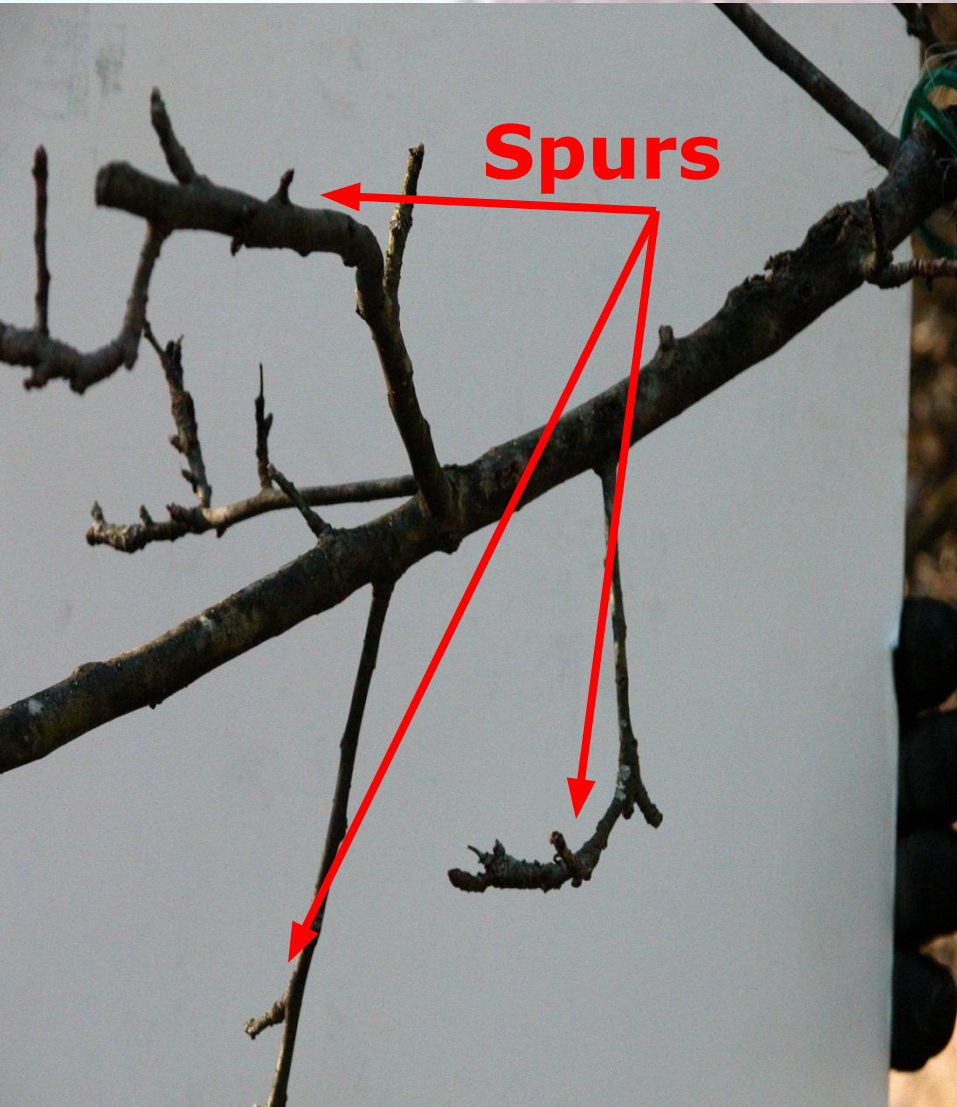
PRUNING TYPES

- Dormant season – when deciduous fruit trees are bare (cherries, apricots, and almonds in summer only)
- Summer – for deciduous fruit trees and citrus – **will be covered in May FGF**
- Training (young trees) – focus on structure – **late next Fall**

FRUITING WOOD

- Spurs:
 - Apple, pear (Asian and European)
 - Cherries, plums (and hybrids), apricots, almonds, pomegranates
- 1st Year Wood
 - Figs, persimmons, mulberries, citrus
- 2nd Year Wood
 - Peaches, nectarines

FRUITING WOOD



Apricot

SPURS



**Asian
pear**



**European
pear**



Cherry



Plum - spurs



Second Year Wood (Nectarine)



Bud Spacing: Dwarf vs. Semi-Dwarf



Leaf Spacing



Standard Peach

Genetic Dwarf Peach

Dwarf Trees Can Look Shaggy



TERMINOLOGY

- Rootstock/Stock: tree below graft union
- Scion: above union; bud or shoot grafted onto rootstock
- Spur: short fruiting twig
- Shoot: current season elongated growth
- Tree size
 - Standard – 15-35 ft.
 - Semi-dwarf - 12-20 ft. (2/3 of standard)
 - Dwarf - 6-12 ft.

TERMINOLOGY

- Leader: Main/central branch of tree or a portion of a tree
- Watersprout: vigorous shoot from branch with large internodes and minimal branching
- Sucker: shoot from rootstock or roots

GRAFT UNION



PRUNING FORMS

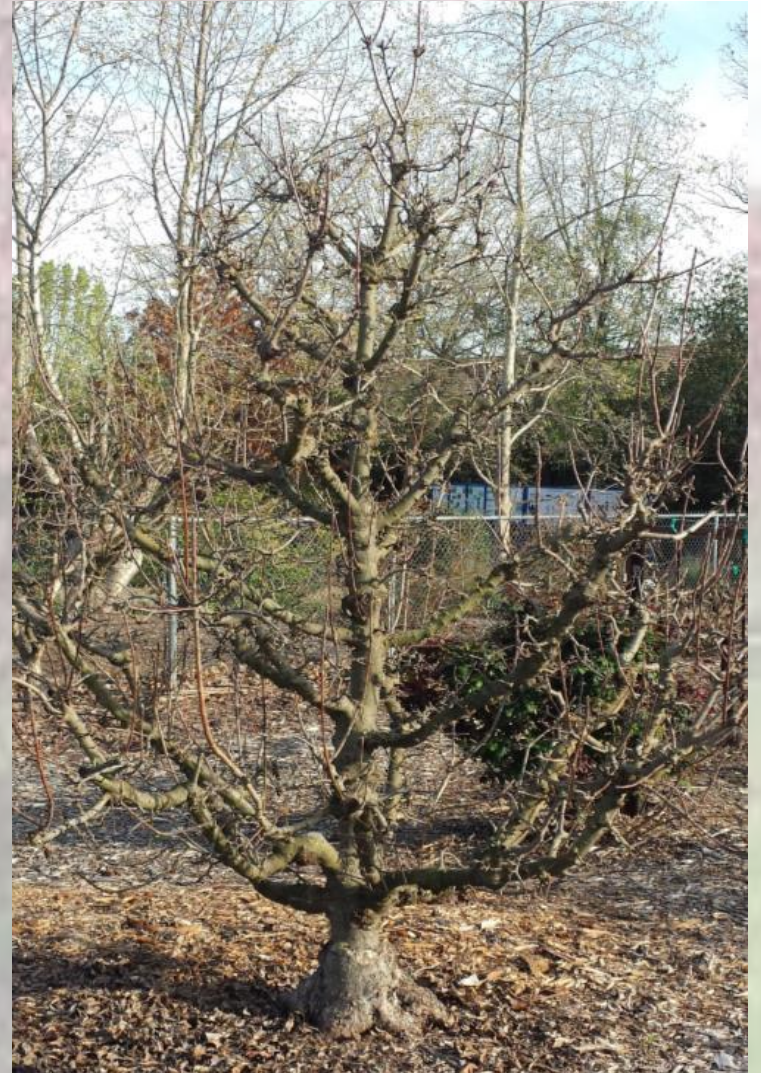
- Central leader
- Modified central leader
- Open center
- Perpendicular “V” (or “Y”)
- Fruit bush
- Espalier

Central Leader Apple

(Genetic Dwarf, planted 2000)

2004

2016



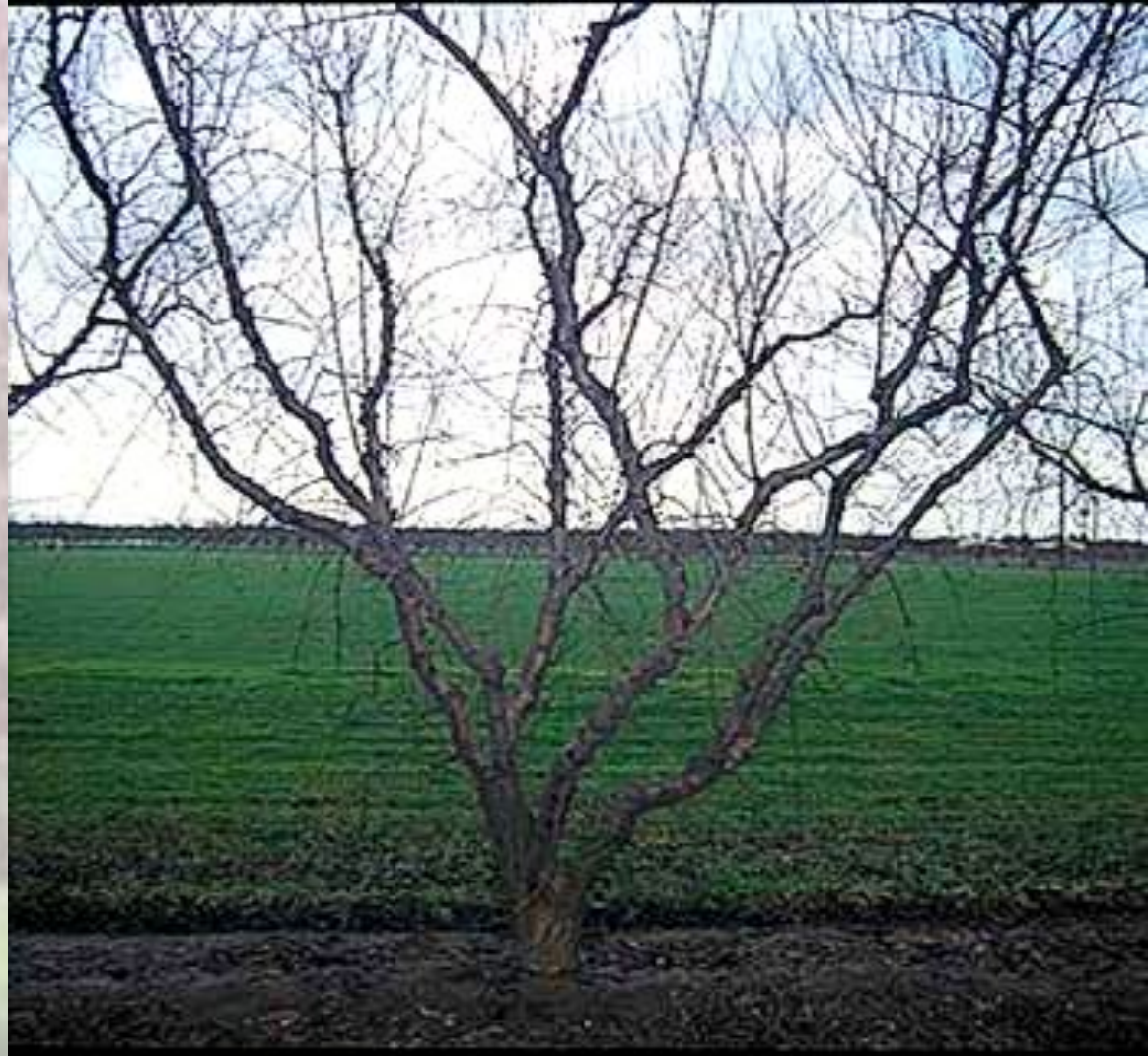
CENTRAL LEADER

- Used for apples, pears, Asian pears, persimmons
- Maintain leader, remove at certain height
- 3-4 whorls of branches
- Branches offset from those below



OPEN CENTER

- Most common method
- Stone fruits and almonds; can also use for apples, pears, figs



OPEN CENTER





NECTARINE (needs pruning)

WALNUT



ALMOND



V-Shape



Fruit Bushes





FRUIT TREE HEDGE



FRUIT TREE HEDGE

TOOLS

- Pruners/Clippers – rotating handle is easiest on wrists: up to $\frac{3}{4}$ " branch
- Loppers – consider weight, reach: up to $1\frac{3}{4}$ " depending on design
- Pruning saws: everything over that

PRUNERS



LOPPERS



PRUNING SAW



BASIC PRUNING CUTS

- Thinning cut:
 - Remove a branch all the way back to the next larger branch
 - No future growth at this location
- Heading cut:
 - Remove part of a branch
 - Stimulates growth of buds below the cut

THINNING CUTS



HEADING CUTS





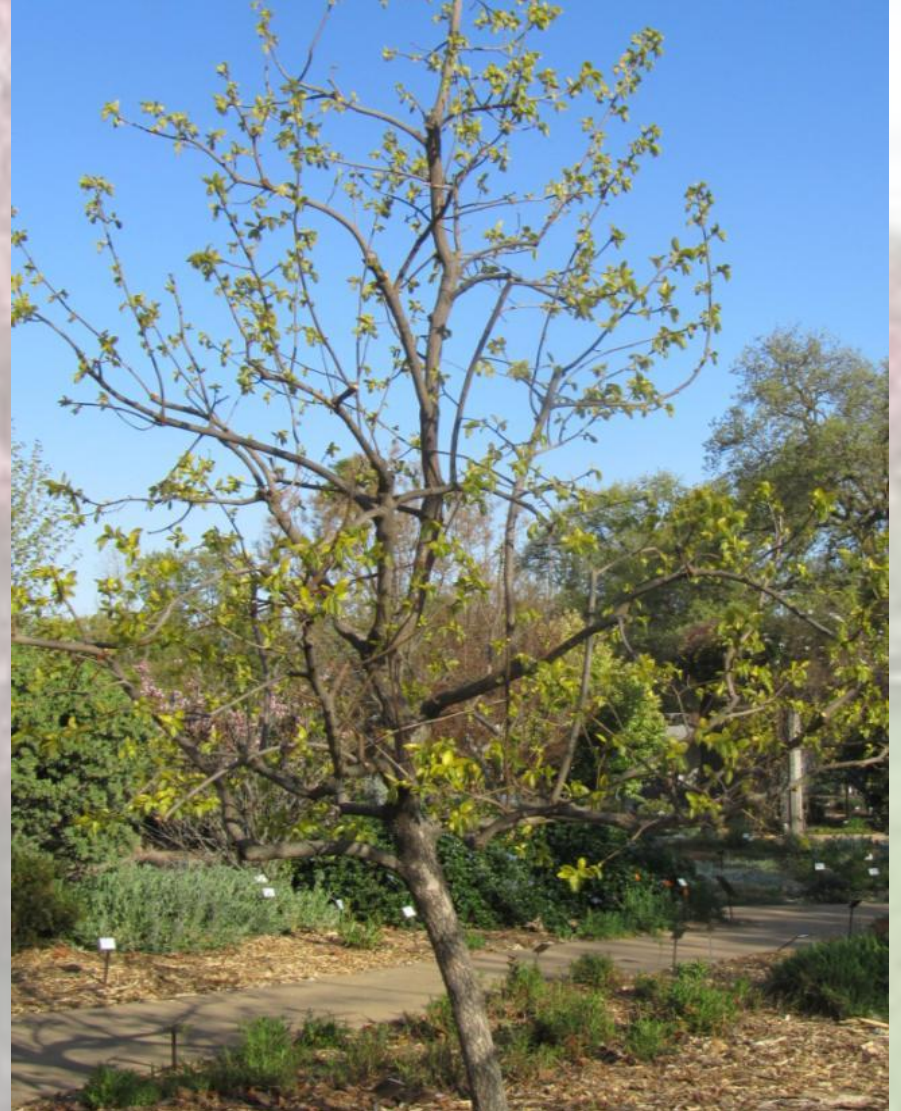


DORMANT SEASON PRUNING

- Typically in January
- Invigorates and focuses growth
- Remove 20 to 30% of what grew last summer
- Prune evenly, preserve leaf canopy
- Leave some fruiting wood/control fruit load
- Apricots, cherries and almonds should only be pruned June to August (driest weather is best) to avoid Eutypa
- Paint newly exposed branches white to prevent sunburn

PERSIMMON

Fair Oaks Horticultural Center



Pruning a Mature Peach





Dwarf Fruit Trees Need Pruning Even More



And now for the rest of the tree...



A large, full-canopied tree with dense pink blossoms stands in a green field under a bright sky. The tree is the central focus of the image. The text "Step 1 – Look at the Tree" is overlaid in the center in a large, bold, black font.

Step 1 – Look at the Tree

Looking southeast



A photograph of a bare tree in a field. The tree is the central focus, with its intricate, leafless branches spreading out. It is supported by several vertical stakes, some of which are wrapped in black plastic. The ground is covered in green grass and fallen brown leaves. In the background, there is a house with a brown roof, a white trailer, and a wooden structure. The sky is clear and blue, and distant mountains are visible on the horizon. The overall scene suggests a rural or agricultural setting in late autumn or winter.

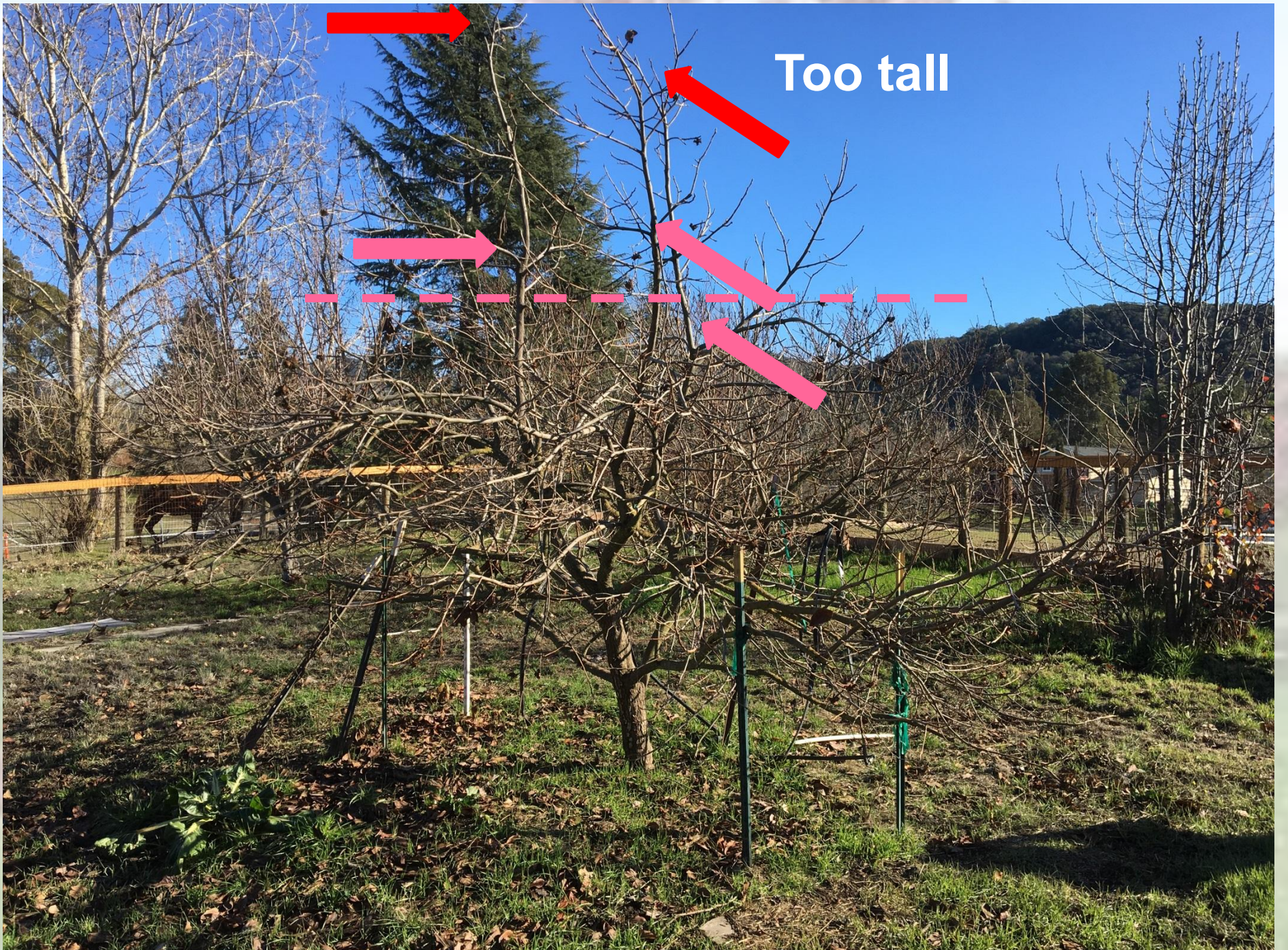
Looking northeast



Looking west

A large, full-bloomed tree with pink blossoms in a green field under a cloudy sky. The tree is the central focus, with its branches spreading out across the frame. The blossoms are a vibrant pink color, and the leaves are a soft green. The background shows a clear blue sky with some light clouds. The overall scene is bright and cheerful.

Step 2 – Decide What You Want to Do



Too tall


Branches come out too far

and down too far



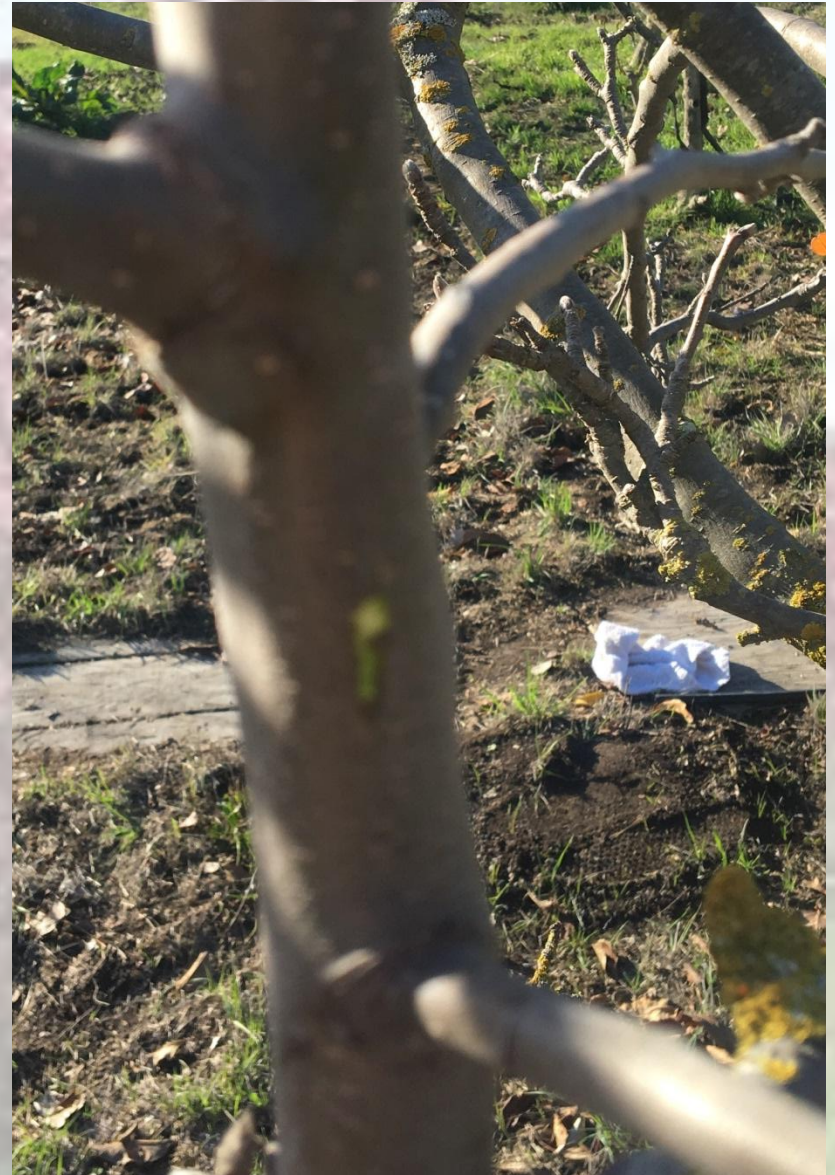
Needs thinning out

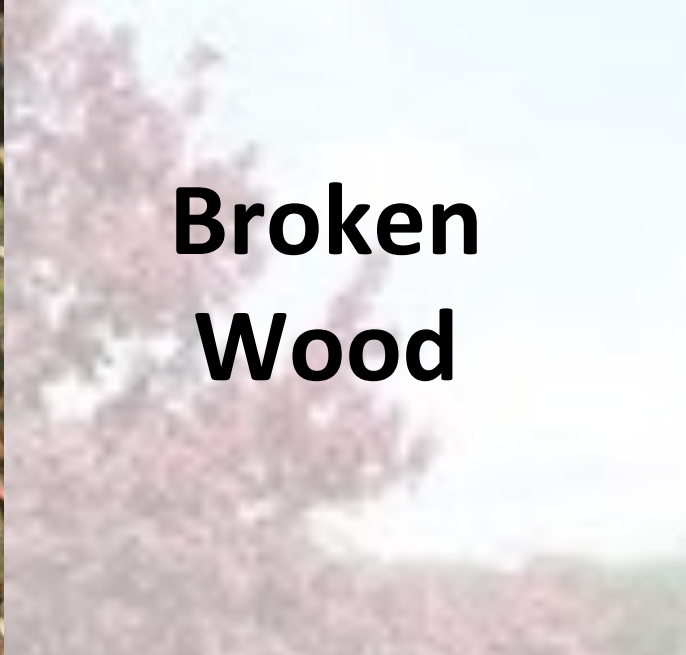


A large, dense tree with pink blossoms is the central focus of the image. The tree is in full bloom, with a thick canopy of small, light pink flowers. It stands in a green field under a bright, slightly overcast sky. The background shows more trees and a distant horizon line.

Step 3 – Remove Dead and Diseased Wood







Broken Wood



Diseased or Damaged





And Root Suckers



Step 4 – Make the Big Cuts First









(Step 8) Keep Looking at the Tree



**We've made
some progress**

A large, dense tree with pink blossoms is the central focus of the image. The tree is set in a grassy field with other trees in the background. The text "Step 5 – Remove Crossing Branches" is overlaid on the tree in a bold, black font.

Step 5 – Remove Crossing Branches







A large, dense tree with vibrant pink blossoms is the central focus of the image. The tree is situated in a grassy field, and the background shows a soft, overcast sky. The overall scene is peaceful and scenic.

Step 6 – Bring in Branches









A large, full-canopied tree with dense pink blossoms stands in a green field under a bright sky. The tree is the central focus of the image. The text "(Step 8) Keep Looking at the Tree" is overlaid in the center of the image.

(Step 8) Keep Looking at the Tree



Getting there

A large, dense tree with pink blossoms is the central focus of the image. The tree is in full bloom, with a thick canopy of light pink flowers. It stands in a grassy field under a bright, slightly overcast sky. The background shows a line of trees and a distant building. The overall scene is a peaceful outdoor setting during spring.

Step 7 – Cut By a Bud





Step 8 – Keep Looking at the Tree



Done for now
Next up: summer pruning

NEGLECTED TREES

- Is tree worth keeping?
 - Many considerations similar to choosing new tree, PLUS
 - Age
 - Vigor
 - Basic Structure

REDUCING OVERSIZE TREES

- **Method 1:** Cut to desired height in thirds over 3 years
- **Method 2:** “Radical retraining” (bring down height in 1 year)
 - Pome fruit only
 - Pay attention to new central leader

Pruning Overgrown Apple



**What else can
be done?**



Pruning Overgrown Apple – One Year



1999



2012



2012

CITRUS PRUNING

- Little required – control size, shape, & suckers
- Timing – spring after frost is best
- Usually thinning cuts
- Thin out strong upright shoots
- Keep “skirts” pruned up off ground
- Older trees respond well to shearing or rejuvenative pruning
- Whitewash exposed limbs to prevent sunburn

RESOURCES

UC Davis websites:

<http://homeorchard.ucdavis.edu>

<http://fruitsandnuts.ucdavis.edu>

www.ipm.ucdavis.edu

UC-Riverside:

<http://www.citrusvariety.ucr.edu>

California Rare Fruit Growers:

<http://www.crfg.org>





QUESTIONS?