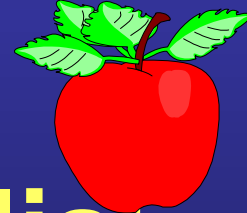


# PRUNING FRUIT TREES

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Marlin Bates



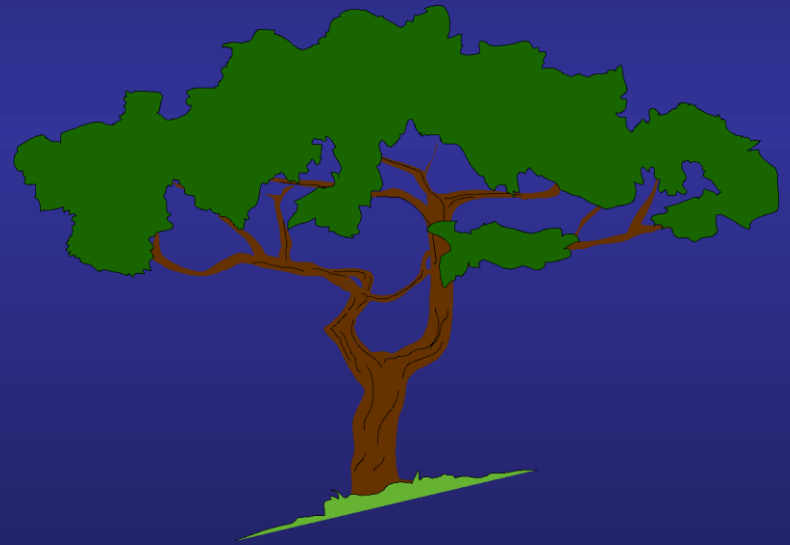
Horticulture Specialist

University of Missouri Extension

# PRUNING

---

A science  
and  
an art...



# PRUNING

---

The judicious removal of shoots or branches of a tree to increase its economic value.



# TRAINING

---

**Developing the structural framework by spreading, weighing, tying, or pruning the limbs of a tree.**

# **REASONS FOR TRAINING AND PRUNING**

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- **To enhance survival after transplanting**
- **To develop a strong structure**
- **To promote flowering and fruiting**

- To remove dead or diseased wood
- To direct growth and utilize space efficiently
- To rejuvenate old trees



# Espalier





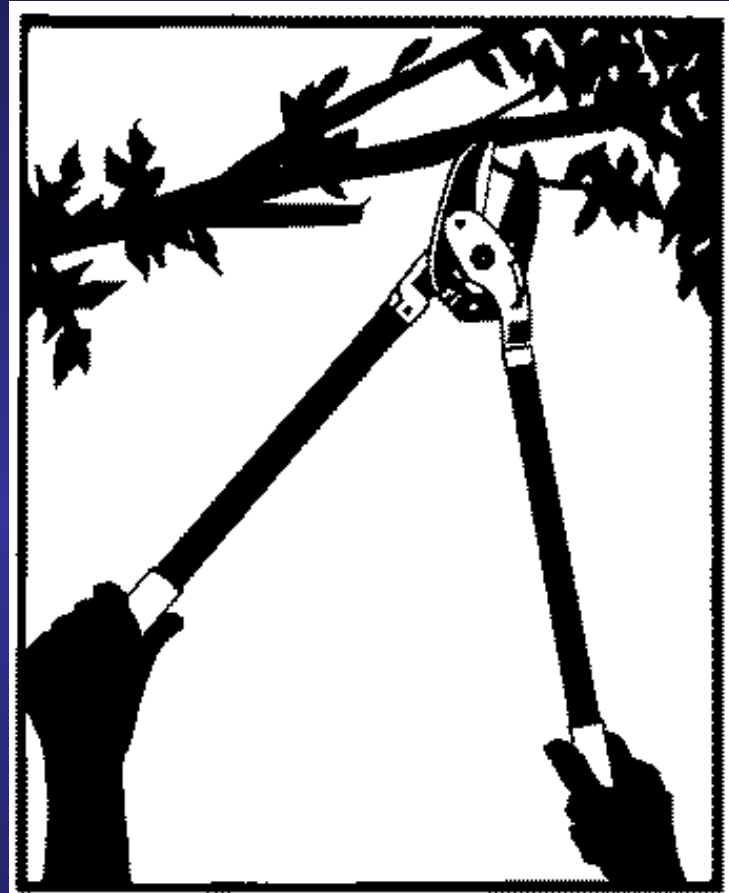




**Pruning  
stimulates  
vegetative  
growth  
behind the cut.**



**Heading  
cuts  
stimulate  
branching**



## Heading Cuts



Before heading



After heading

**Correct  
Pruning  
Cut**



**Too  
Close**



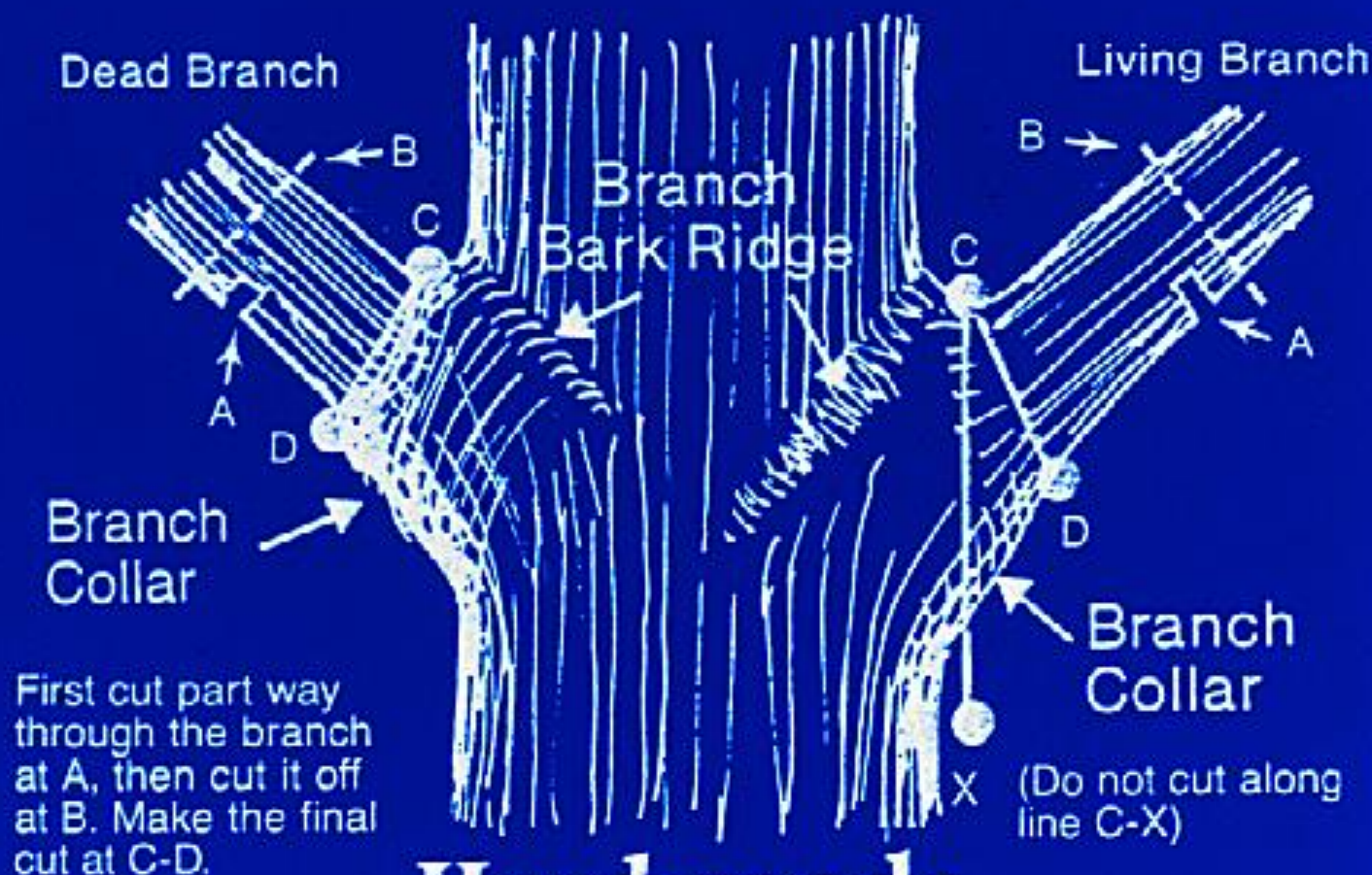
**Too  
Long**



**Too  
Slanted**



# Proper Pruning Principles



## Hardwoods











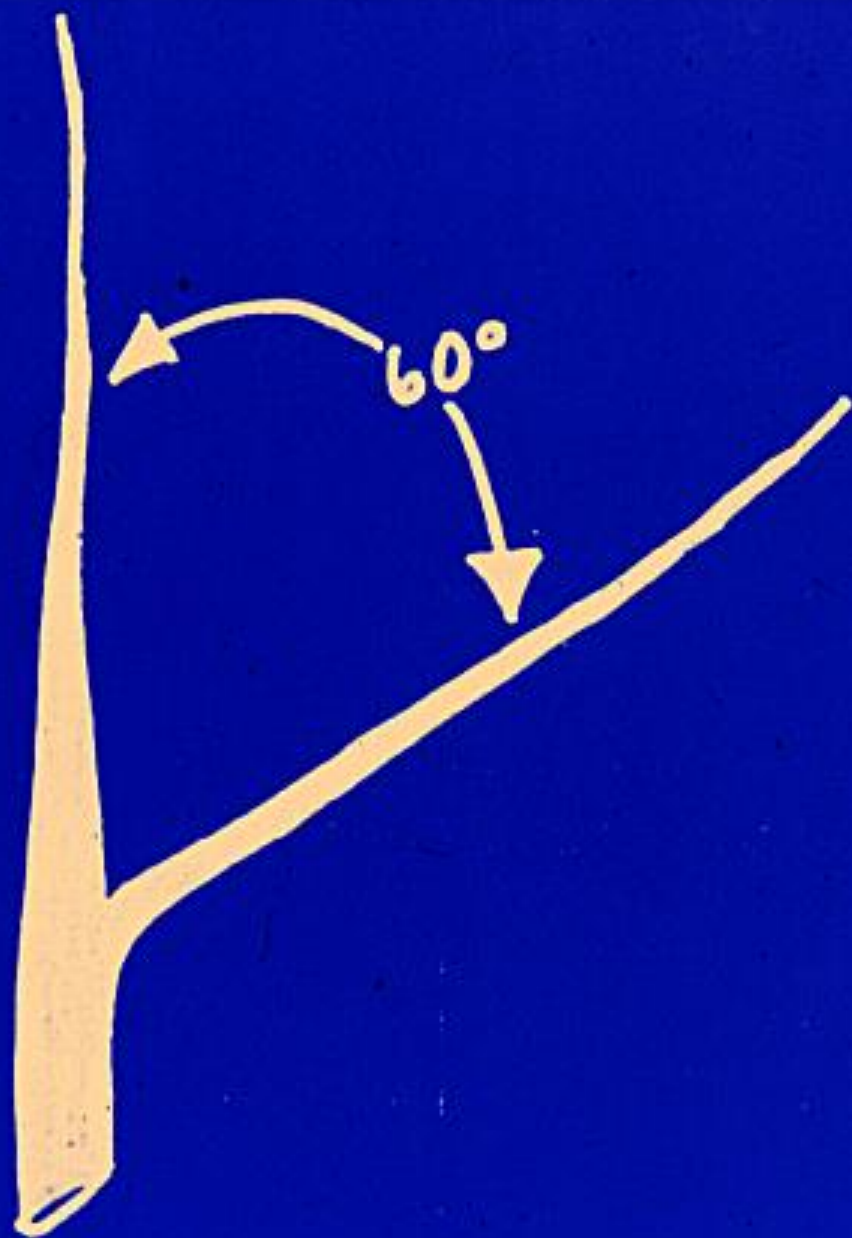
**Pruning  
apple  
trees**

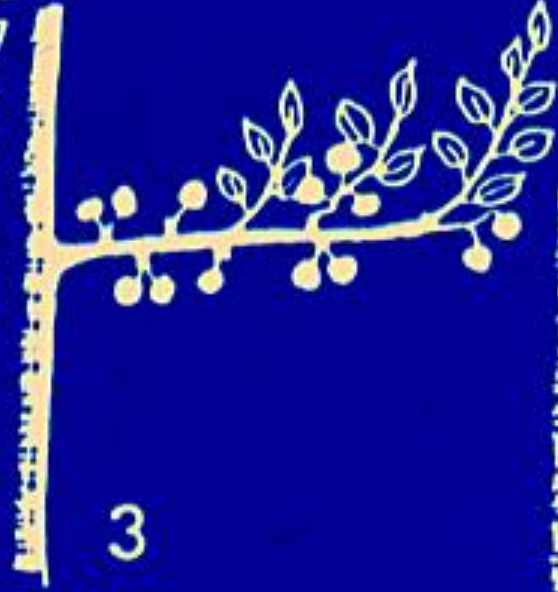
**Pruning a non-bearing  
apple tree delays the  
onset of production and  
reduces early fruit yield.**

**A shoot in a vertical  
position grows  
vegetatively.**



**A branch in a horizontal  
position produces  
upright  
sucker growth.**









Clothes  
pins to  
increase  
branch  
angles



A close-up photograph of a tree branch with green and yellowing leaves. A white plastic spreader is attached to the branch. The spreader has a long, thin stem and a wider, flat base. The word "Spreader" is written in yellow text on the left side of the image.

**Spreader**



**Spreader**







**Tree  
weight**



**Hanging  
tree  
weights**





**Little shade**



**Too much shade**

# CENTRAL LEADER TRAINING



In March of the third growing season, prune lower branches to maintain the narrow pyramidal form and any shoots growing vertically.





To limit the height of the tree, the central leader can be cut back to a less vigorous lateral branch to form a new leader.



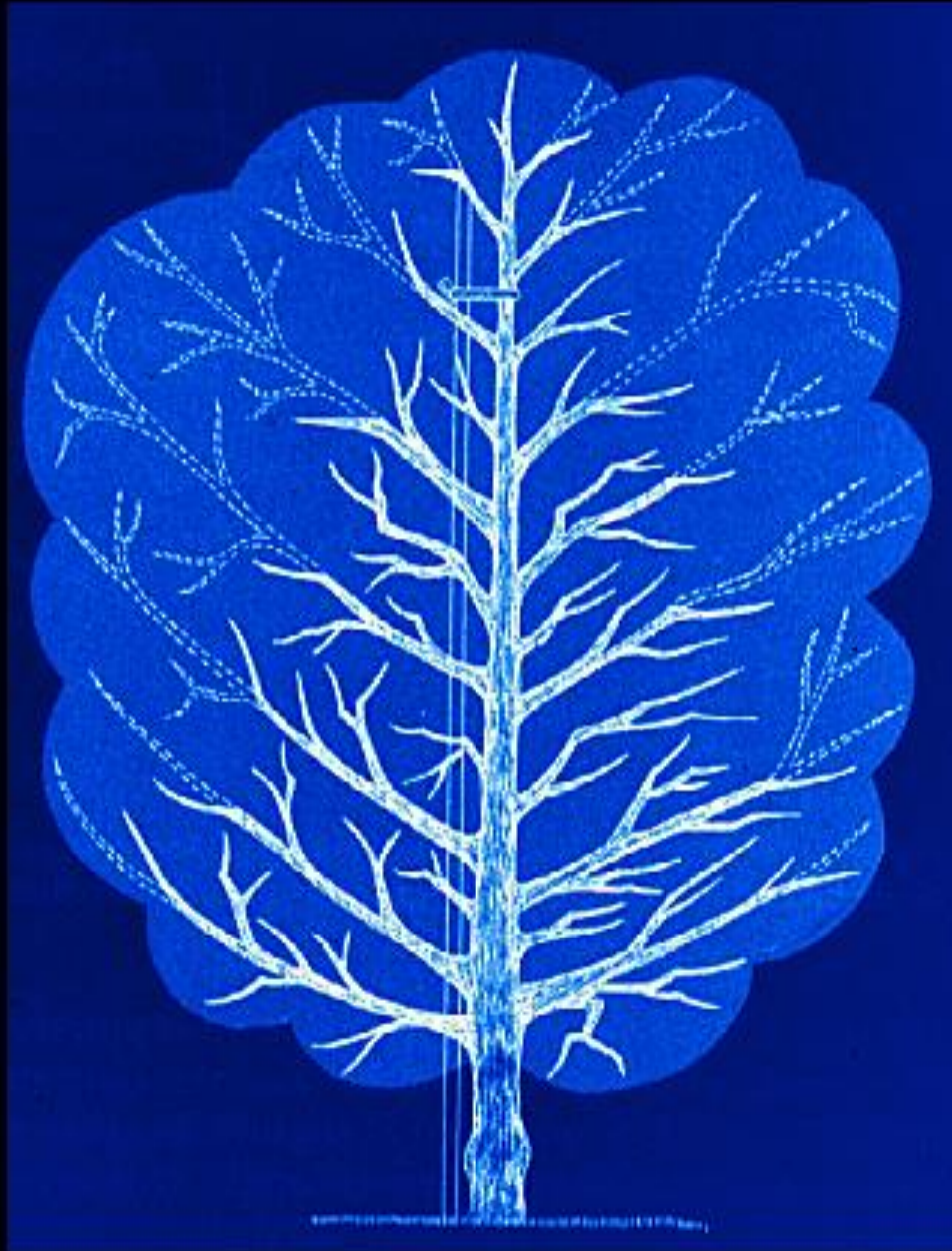
**Golden  
Delicious  
Third  
growing  
season**



**Central leader not maintained**







**Remedial pruning for a neglected tree**



# MAINTENANCE PRUNING

---

- Remove upright sucker growth
- Cut out broken or crossing branches
- Remove shoots growing back towards the center of the tree

- **Thin out crowded branches that shade others**
- **Remove branches at narrow angles from the trunk**
- **Cut back scaffolds to a lateral branch to restore the narrow pyramidal shape of the tree**



**Neglected tree**



**After pruning**



## TRAINING OPEN CENTER TREES

### At Planting

- \* head the leader back to 30"
- \* cut all branches back to 1-2"

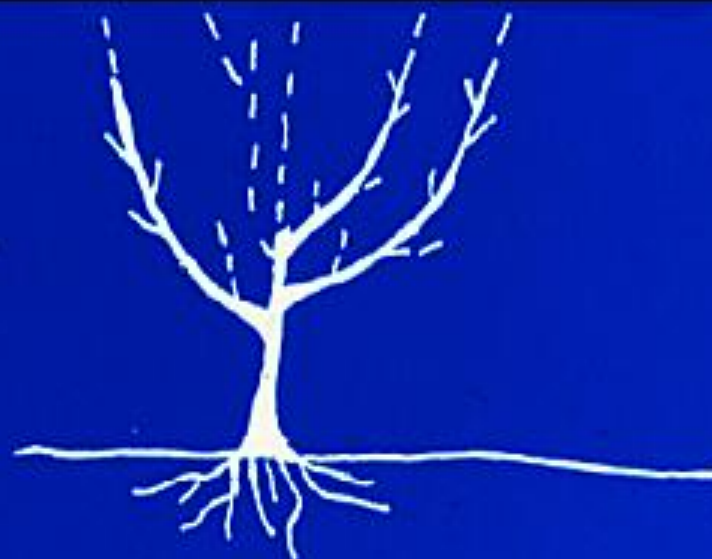






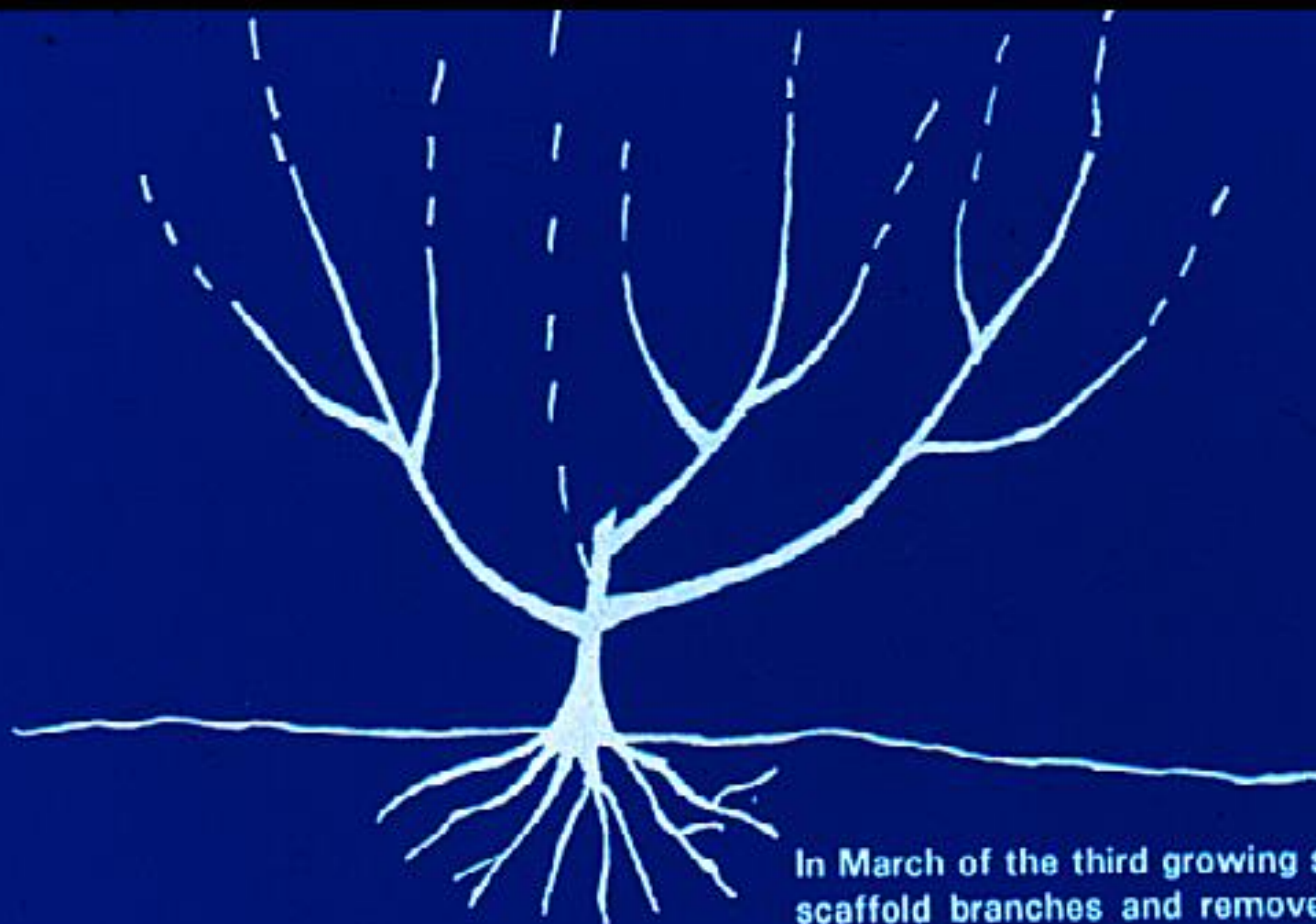
Select 3 or 4 that are evenly spaced around the trunk during the first growing season.

/

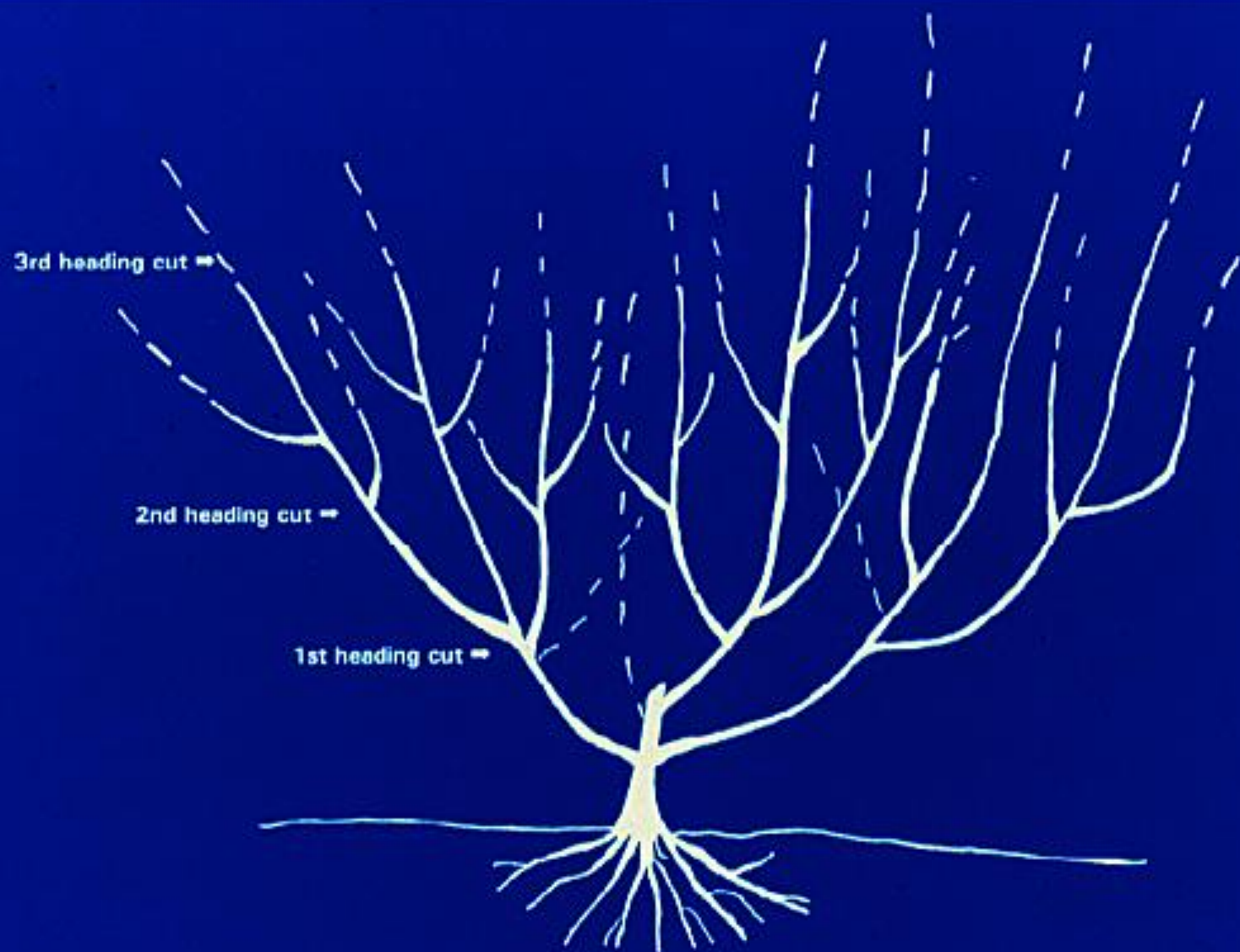


In March of the second growing season, cut back scaffold branches and remove shoots growing vertically.





In March of the third growing season, cut back scaffold branches and remove shoots growing vertically.



In March of the fourth growing season, cut back scaffold branches.  
Remove shoots growing vertically and those growing towards the center of the tree.





**Excellent!**





**Peach  
first  
growing  
season**



**2 year  
old  
peach  
tree  
before  
pruning**



A photograph of a young, bare tree in a field after pruning. The tree is the central focus, with several thin, dark branches reaching upwards and outwards. It stands in a field of dry, yellowish-brown grass. In the background, there are other bare trees, a line of dark foliage, and a clear blue sky. A utility pole is visible on the right side of the image. The text "After pruning" is overlaid in yellow at the bottom left.

**After pruning**





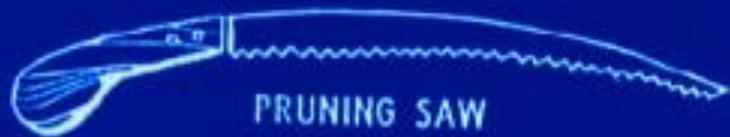
**Mature peach orchard**



## Pruning Tools



PRUNING  
SHEARS



PRUNING SAW



LOPPING SHEARS



Pole Pruner







# DISINFECTING PRUNING TOOLS

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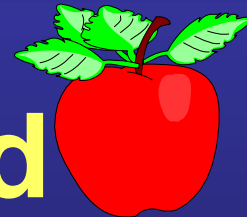
- Use 70% denatured alcohol; or
- 1 part bleach: 9 parts water
- Bleach is corrosive to metal so clean blades with soap and water after each use

# **Information taken from: PRUNING WOODY PLANTS**

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**By**

**Michele Warmund**



**Extension Fruit Specialist  
University of Missouri Extension**