Best Pruning Practices
Fruit Trees and Grapes

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Helpful Resources

- https://extension.usu.edu/yardandgarden/index
- https://extension.usu.edu/yardandgarden/monthly-tips
- http://growingwithstarkbros.com/
- https://pestadvisories.usu.edu/
- weberbasin.com/conservation- for more info and resources and this slide presentation.
Pruning and Training

Pruning is a Science and an Art...
Basic tree stuff...
Why prune...

1- To produce quality fruit
2- To control size
3- To solve problems.
4- To make care and harvest easier
5- Visual interests or design
When to prune…?

• Prune during the dormant season. Any month that doesn’t end in “r”.
• Prune during summer to control excessive growth and water sprouts.
What to use...

**Saw** – 2”+ large branches

**Hand Pruners** – ½”-1” branches

**Loppers** – 1 ½” branches
What to Cut…?

Dead, Diseased & Dumb

*It Depends Rule:

- Type of fruit tree
- Age of the tree
- What you want from the tree

First 3-4 years:
training & structure

After 4-5 years:
fruit & size control
For the tree you don’t love and don’t know how to manage

The one cut method!!
Usually you will cut closer to the ground 😊
The 3 Easy Rules...

1- Know where the fruit is or will be

2- Make the easy cuts first

3- Let the light in
Step 1

Know where the fruit is...
Apples & Pears

What about apples every-other year?

Fruit on spurs
2-5 years old.

Thin the fruit!
(double nickel rule)
Leaf bud

Fruit bud
Peaches/Nectarines

Fruit on 1 year old wood.

3 mixed buds

Heavy annual pruning

up to 50%
Apricots - Cherries - Plums

Produce fruit everywhere...
Step 2
Make the easy cuts first...

Dead – Diseased - Dumb
hanging branches
rubbing branches
bad angles
suckers
Only 2 Basic Pruning Cuts

**Heading cuts**
- shortening a branch or shoot
- encourages lateral growth

**Thinning cuts**
- remove entire branch or shoot back to a lateral branch or trunk
- directs growth
Figure 3. Basic Pruning Cuts

a. heading back

b. thinning out
Pruning doesn’t stop growth... it only directs it
Apical Dominance

- The growth regulator hormone
- "Auxins" create apical dominance
  - produced by terminal bud
  - suppresses lower/lateral buds
Step 3
Let in the Light...
Training Systems

There's no right or wrong training system. The worst thing to do is nothing!
Open Vase
(Peaches, Apricots, Nectarines, Japanese plums, Sour cherries)

- Select 3-4 primary scaffold branches
  - About 18-24” from the ground
  - Evenly distributed in a whorl.
  - 6 to 8” apart vertically

- Remove any growth 1 foot from the trunk

- When primary scaffold are 4 feet long, allow 2 secondary scaffolds to form.
Figure 7b. Vertical View

Showing desired distribution of scaffolds
DEVELOPING AN OPEN CENTER

MURSERY STOCK

18 in.
DEVELOPING AN OPEN CENTER
DEVELOPING AN OPEN CENTER
DEVELOPING AN OPEN CENTER
Scoring

- Forcing a bud to break
  - use a sharp knife
  - early before bud swell
  - disrupts apical dominance
Peach Tree – before pruning
Peach Tree – after pruning
Central Leader
(Apples, European plums, Sweet cherries, Pears)
Central Leader
(Apples, European plums, Sweet cherries, Pears)

- Select 4-5 primary scaffold branches
  - 18-24” from the ground
  - evenly distributed
  - 6-8” apart vertically

- Head terminal above where the 2\textsuperscript{nd} scaffold will be.

  \textbf{2-3 primary scaffolds}
  
  1\textsuperscript{st} – 4-5 branches 24-36” from ground
  2\textsuperscript{nd} – 3-4 branches 2 feet above the 1\textsuperscript{st}
  3\textsuperscript{rd} – 2-3 branches 2 feet above the 2\textsuperscript{nd}

- More horizontal branches control vigor.
DEVELOPING A CENTRAL LEADER

PRUNING AFTER THE FIRST WINTER

18 in.
DEVELOPING A CENTRAL LEADER

PRUNING AFTER THE FIRST WINTER

18 in.
Spreadsers

- Apples / Pears
  Love to grow straight up.
- Spreadsers
  - 1x1 wood with nails, wood stakes, baling twine, clothes pins, etc.
Directing Growth
DEVELOPING A CENTRAL LEADER

PRUNING FOLLOWING SECOND GROWING SEASON
DEVELOPING A CENTRAL LEADER

PRUNING FOLLOWING THE FOURTH GROWING SEASON
CENTRAL LEADER TREE TRAINING SYSTEM
Fruit Thinning – Why?

• Produces better *quality* fruit
• Promotes annual bearing
  – after “June drop”
  – nickel rule
• Protects tree from damage
Pruning Unruly Trees

• Decision Time...
  1 cut at ground level?

• Never prune more than 1/3 of the tree at one time.

• Don’t fertilize the tree during corrective pruning
Pruning Grapes

*Four-cane Kniffin System*

Fruit is found on shoots growing from year old canes.

One main trunk trained to a 2 wire trellis system (24-30” apart)

4 canes (year old)

- 10-15 buds on each cane or 40-60 per plant
  - Each bud will form 2-3 grape clusters

Renewal spurs

- 4 renewal spurs with 2 buds
- Next year’s fruiting wood
Figure 6.—The four-arm Kniffin training system is the most popular one for American bunch grapes.
Pruning Tips

- Select canes that are 1/4” in diameter
  - Avoid weak & “bull” canes
- Mark or tape the 4 “keepers” and tie them to wire first.
- Remove everything else!
  - (Except the renewal spurs)

*Correct pruning = removing 80-90% of the grape plant
Pruning Raspberries

- Perennial roots
- Biennial canes
  - 1st year canes – primocanes
  - 2nd year canes – floricanes
- Spread by suckering
- Two types of raspberries:
  - Summer-bearing
  - Fall-bearing (ever-bearing)
2 types of raspberries

Summer-bearing
  day-length sensitive
  set flowers in fall, produce fruit next June /July
  fruit on floricanes
  then they die

Fall-bearing (ever-bearing)
  not day-length sensitive
  fruit on primocanes (first fall, on the tips)
  fruit on floricanes (next summer, lower on cane)
  then they die
Before Pruning

After Pruning

Summer Bearing Red raspberries before and after late winter/early spring pruning.

*http://www.inberry.com/*