



# Growing Table Grapes

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# Four Genera in Vitaceae family

## \* **Vitis vinifera**

European – Origin Mediterranean

Upright growth – Ex: Cab, Black Monukka

## \* **Vitis labrusca**

American – Origin US

Trailing growth – Ex: Concord

## \* **Hybrid** varieties - cross

Varies – Ex: Foch, Himrod

## \* **Vitis rotundifolia**

SE U.S. – Ex: Muscadine



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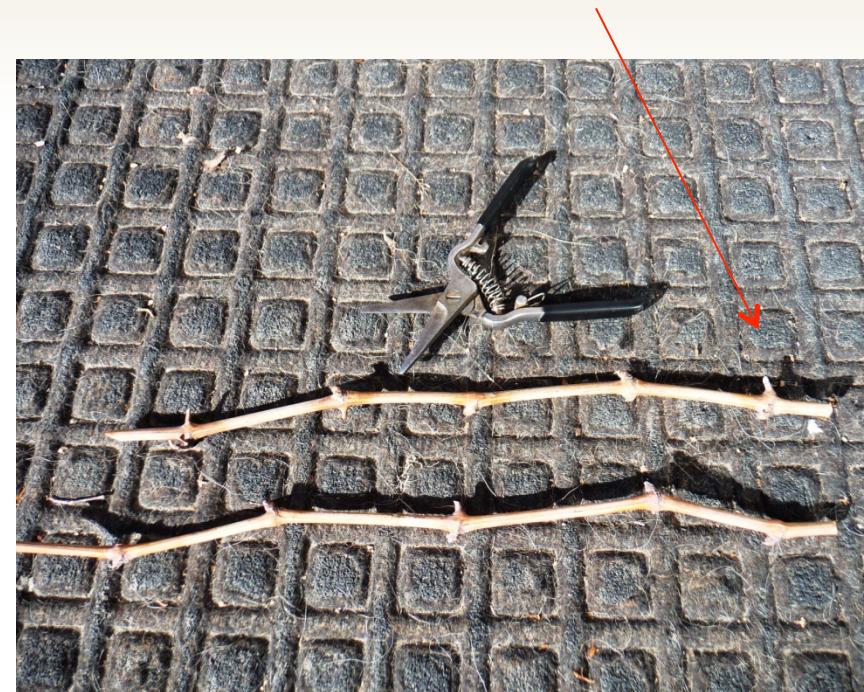
# Propogating grape plants

- During pruning take cuttings to use for propagation
- Note buds slant upward to tip of cane
- Made a flat cut between nodes at base



# Propagating grape plants

- Count 5 nodes up and make a diagonal cut half way between nodes
- Soak base end in rooting solution
- Place cuttings in potting soil with two nodes below and three nodes above soil level
- Root system will develop, best to leave for 2 years

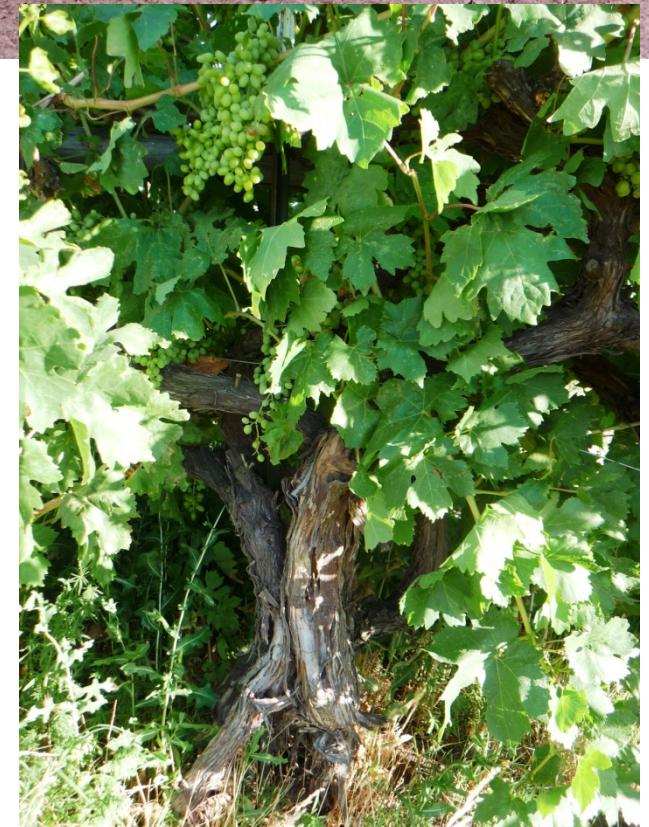


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# Characteristics

- Majority are self pollinating
- Grapes like full sun
  - Need 150+ frost-free days
  - S or SW exposure
  - North/south rows best
- Well drained sandy loam soil
  - Rocks are good – retain heat
- Prepare soil
  - Remove weeds
  - Add organic matter
  - Plant 10-14 " deep
- Use bare root plants or can be in container pots



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# Planting grapes

- Plant March-April if bare root, May-June greenhouse plants
- Place plants 4-8 feet apart
- Soak roots in water before planting
- Trim roots if longer than 10-14 “
- Spread roots over base of hole
  - If grafted - keep union above soil
- Firm soil around the plant
- Place stake next to plant
- Can place grow tube around each



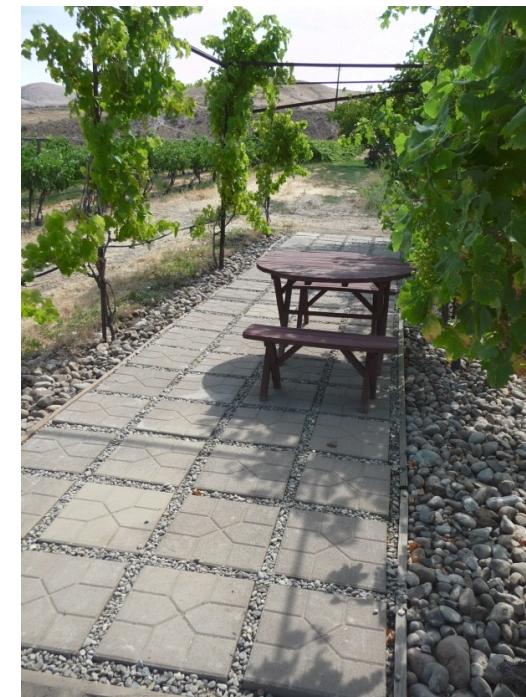
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# Growing 1st year

- Dig indentation around plant for water to settle
- Best to water deeply every 7-10 days (depends on heat)
- Allow to develop root base
- Fertilize with weak balanced nitrogen in early spring on new plants
- Weed around plant
- Can place fabric cloth & rocks around base of plant



# Drip Irrigation

- Drip irrigation best
- Emitters placed on each side of plant
- In line filter for irrigation water
- Can use soaker hose if house water
- Avoid overhead sprinkler system



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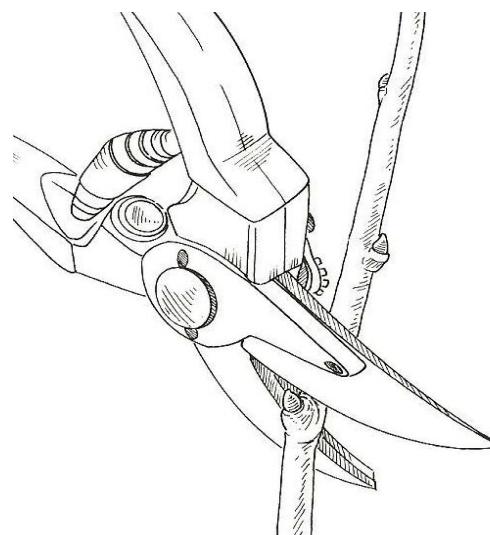
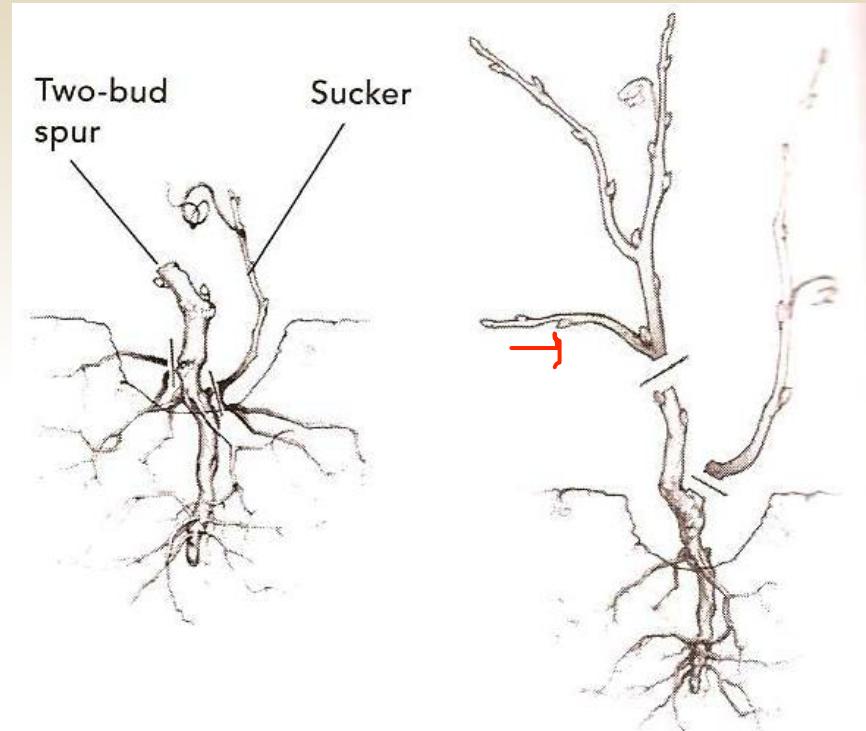
# Growing grapes

- Harden off in September by water stressing
  - Leaves change color & drop off - defoliate
  - Give thorough watering in October or after harvest
  - Can mulch around new plants to over winter
  - Most varieties are very cold tolerant



# Pruning 1<sup>st</sup> year

- Prune when dormant
  - February to March best
- Prune back to two bud spurs
- Prune before buds swell
- Make clean diagonal cuts above buds



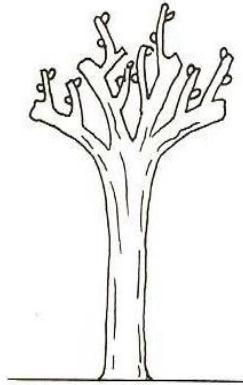
# Objectives of pruning

- Establish and maintain vines in a desired shape
- Distribute the proper amount of wood over the vine in order to yield high quality
- To regulate the amount of crop to lessen the need for thinning.
- Grapes won't ripen if over cropped.

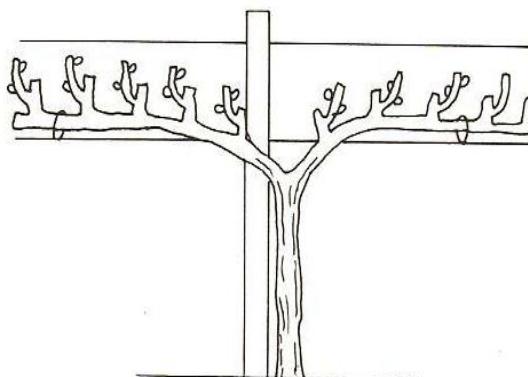


# Pruning Techniques

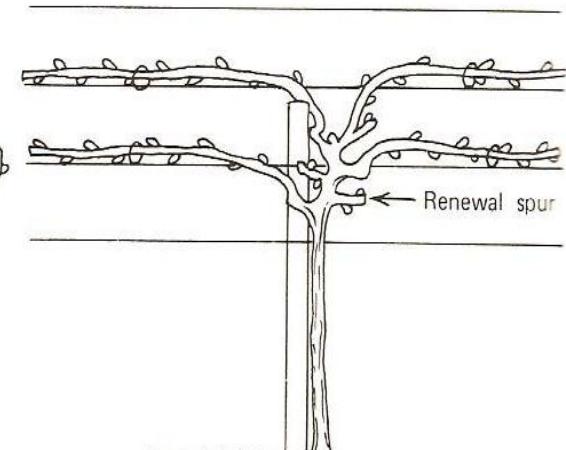
- Grapes are produced from spurs that develop from one year old wood
- Three types of pruning
  - \* Head pruning
  - \* Spur pruning
  - \* Cane pruning



Head – training,  
spur – pruning



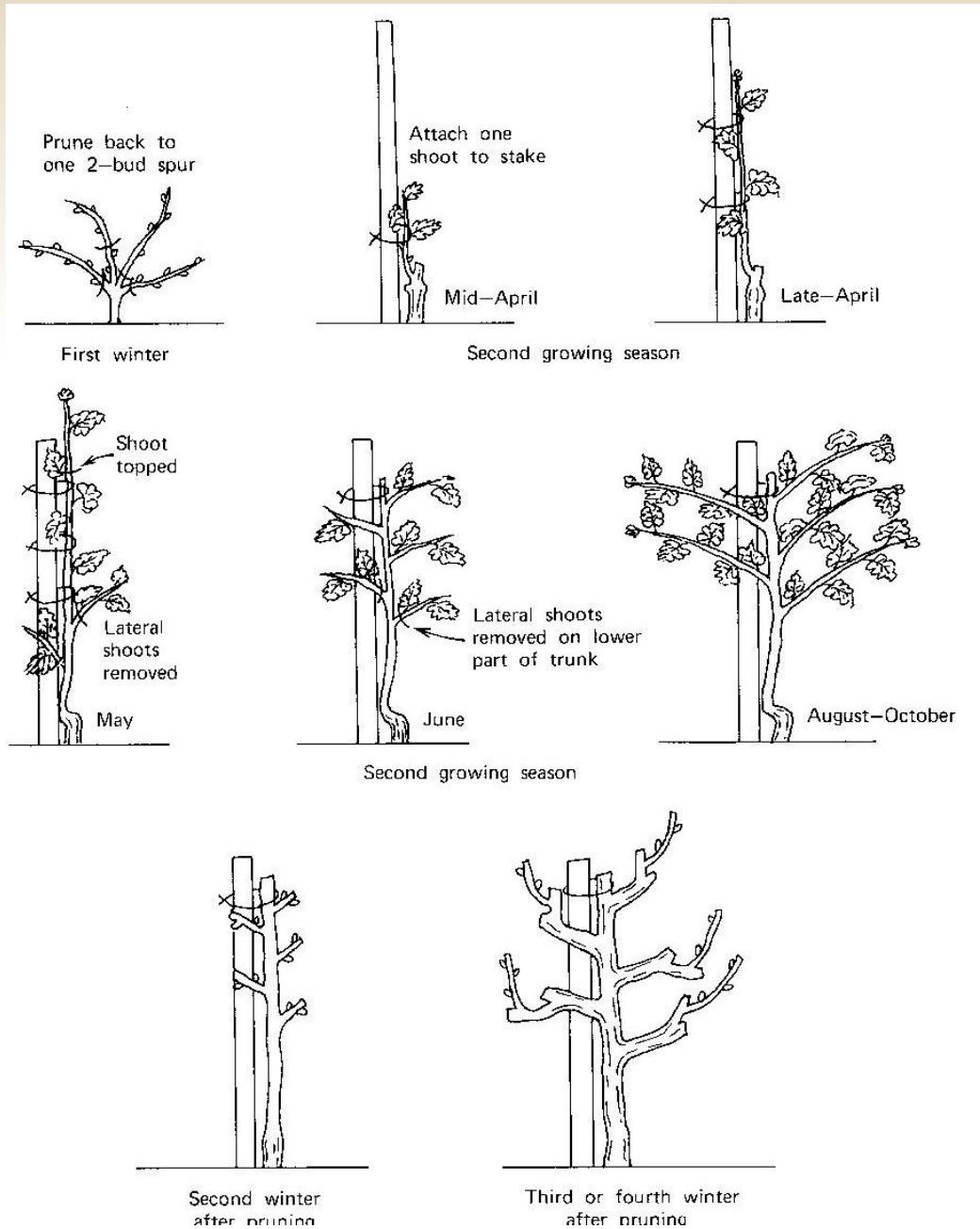
Cordon – training,  
spur – pruning



Head – training,  
cane – pruning

# Head Pruning

- Resembles upright shrub with vertical trunk
- Doesn't require wire trellis only sturdy stake



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# Head Pruning

- Very popular in Europe
- Used in CA vineyards



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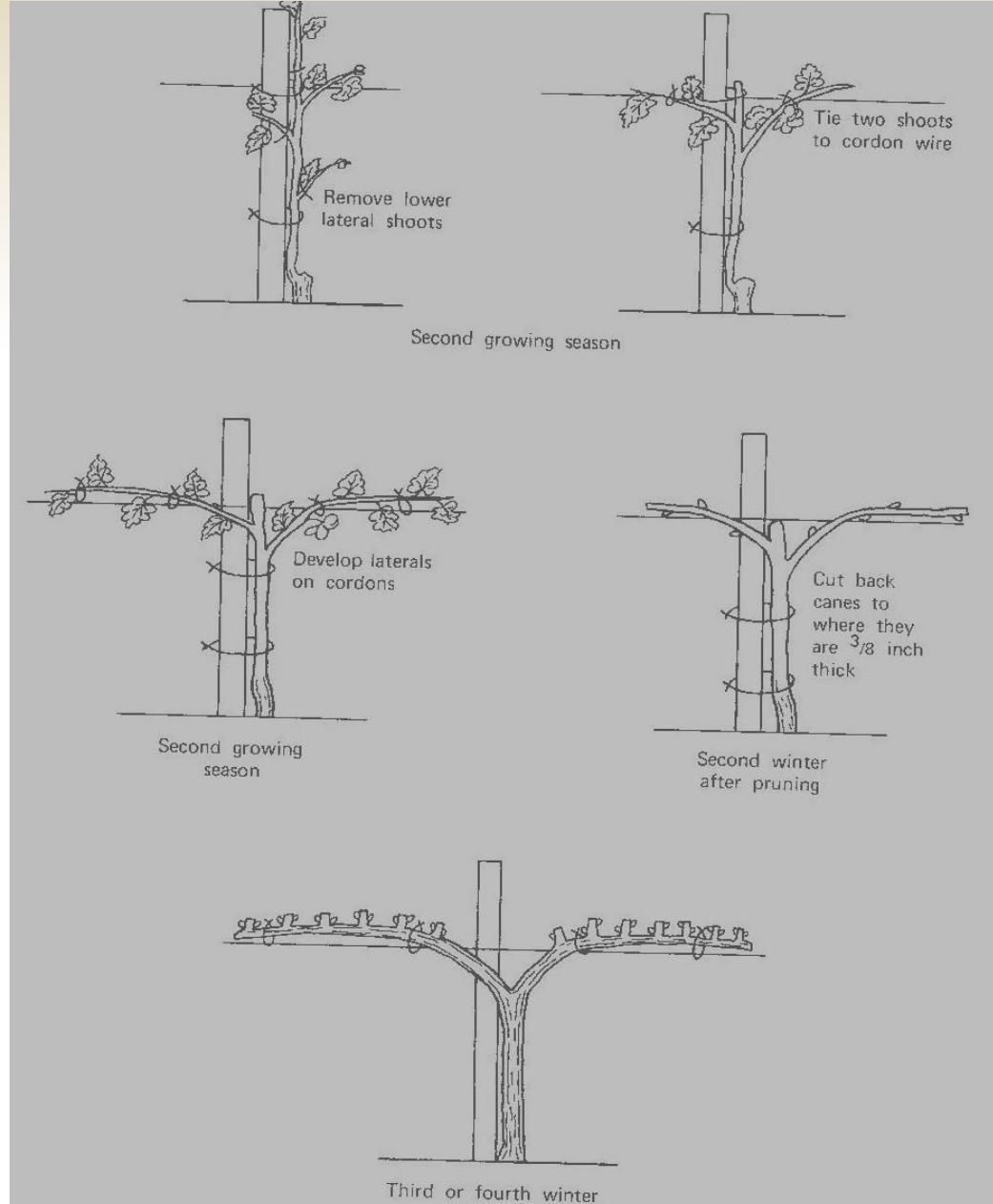
# Spur Pruning

- Bilateral Cordon
- Most popular system
- Does require trellising
- Labor intensive



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## Growing 2<sup>nd</sup> year

- Secure 1-2 strong vines to stake with ties every 8-12 “ for trunk
- Allow cordon to grow out onto main wire & tie at the end to secure
- When arms out on wire strip leaves on trunks
- Remove any suckers at base of plant



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# Pruning 3<sup>rd</sup> year

- Make cuts at ends of cordons to limit side growth
- Remove downward or right angle growth, leave vertical spurs

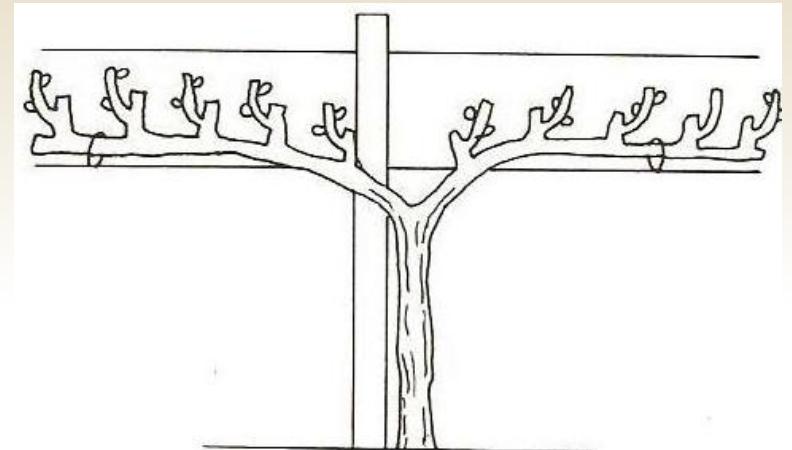


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# Pruning 3<sup>rd</sup> year

- Leave 5-6 renewal spurs evenly spaced
- Cut to 2-4 buds on each spur



Cordon – training,  
spur – pruning



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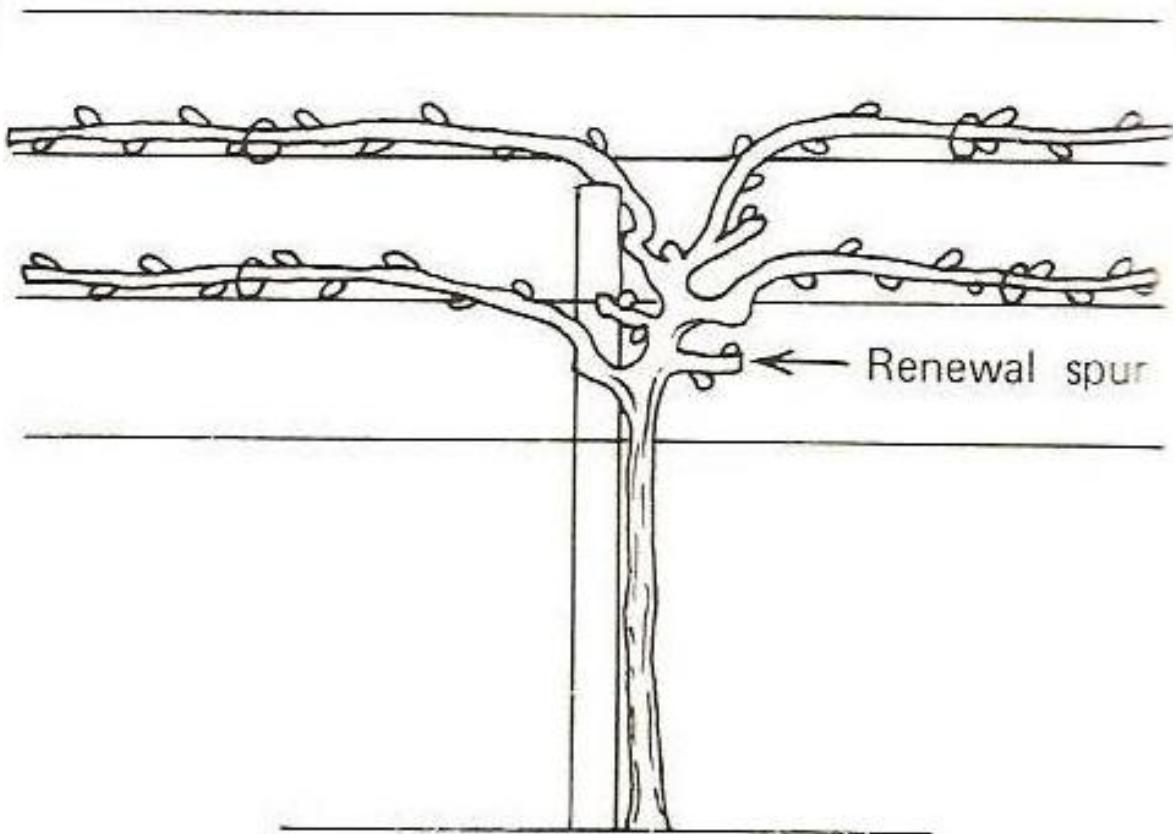
## Pruning 3<sup>rd</sup> year

- Assure all suckers are removed from base of plant
  - If plant dies new growth occurs from these suckers
- Assure growth from trunk is removed
- Old vines shed rough bark - can leave on



# Cane Pruning

- Remove old canes  
Have rough bark
- Use new canes  
with 8-15 buds  
Have smooth bark
- Following year  
keep 3-4 renewal  
spurs

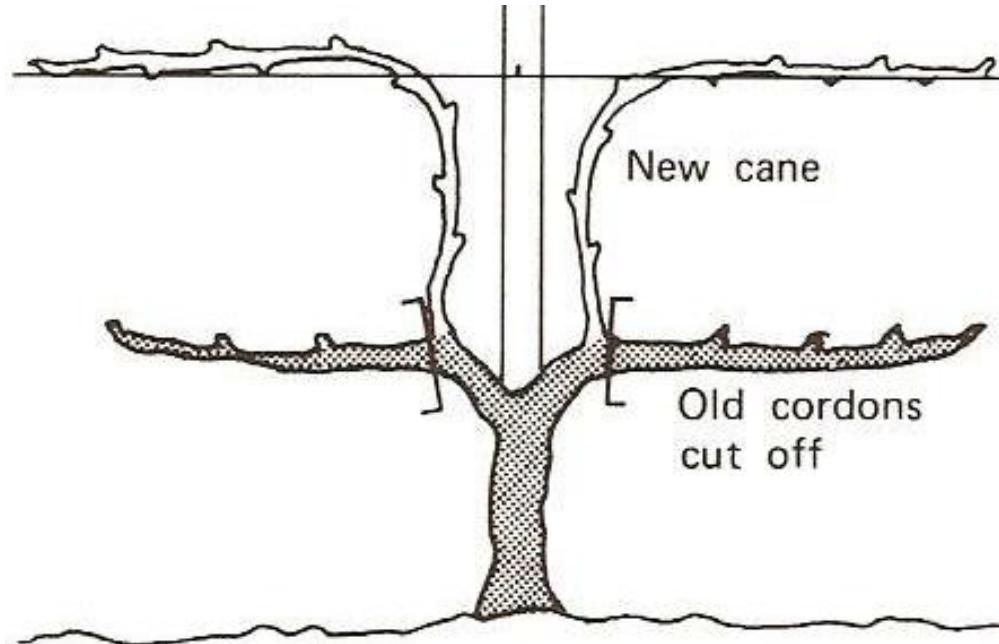


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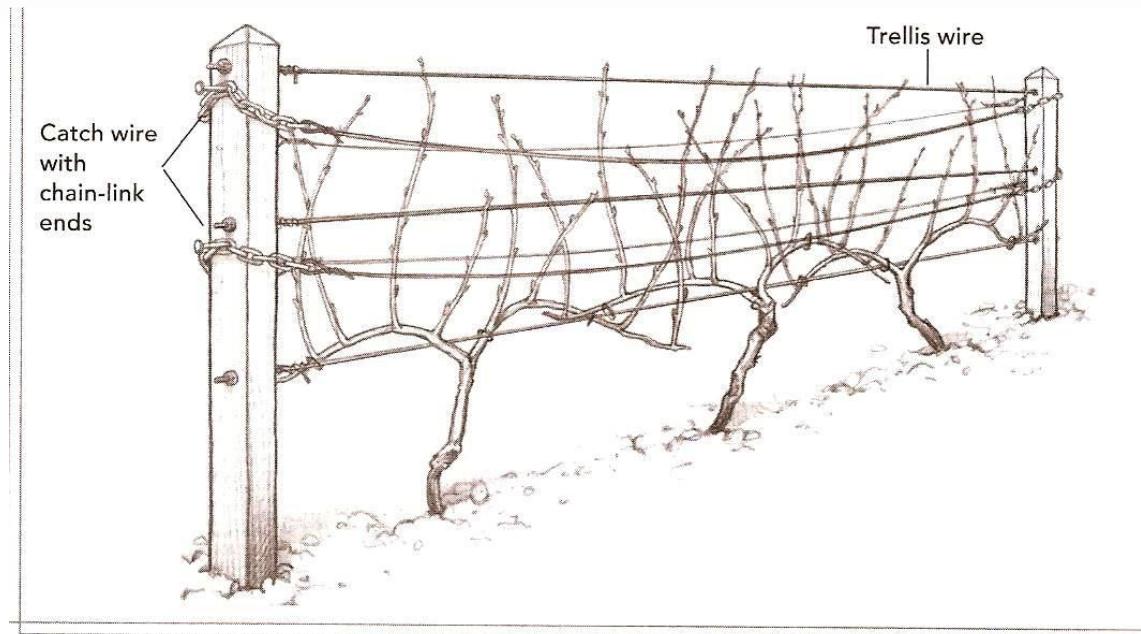
## Double Cordon

- Can combine with spur pruning for higher yield
- Use especially on vigorous plants
- Old canes have to be cut off & taken off wire each year
- New canes have to be retied
- Also can be used to raise older plants to new trellising



# Trellis system

- Best to put in before planting - won't disturb growing roots
- Set treated end posts deep into the ground
- Secure 3-4 #10-12 high tinsel wires
- Can use fence, stone wall or other natural objects
- Lean plant to 45 degree angle toward object when planting

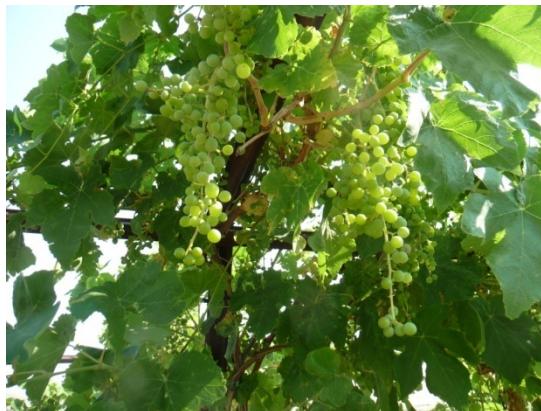


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# Trellis systems

- Free standing Grape Arbor
- Requires more attention to pruning and training canes onto support
- Canopy acts as source of shade as well as fruit



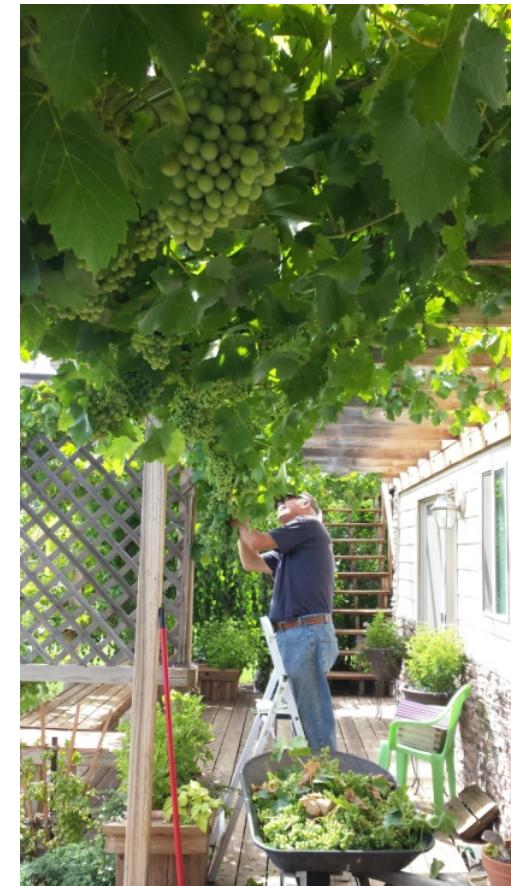
# Trellis Systems

- Use **pergola** over existing patio or deck
- Train 2-3 vines up posts & secure with ties
- Remove all lateral growth, retain leaves go for length



# Pergola

- Established cordon on perimeter wood
- Prune every spring back to 2 bud spurs
- When fully established need to thin grapes late spring



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# Pergola

- Can tie lateral branches to cross pieces of wood for shade
- Cut end of growth at cross pieces to contain lateral growth
- Trim as necessary to establish canopy



# Pergola Trellising

Enjoy the fruits of your labor!



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# Grape growth progression

- Spring bright green leaves emerge
- Tiny 'fetal grapes' appear
- White fragrant inflorescence
- Small hard green berries seen

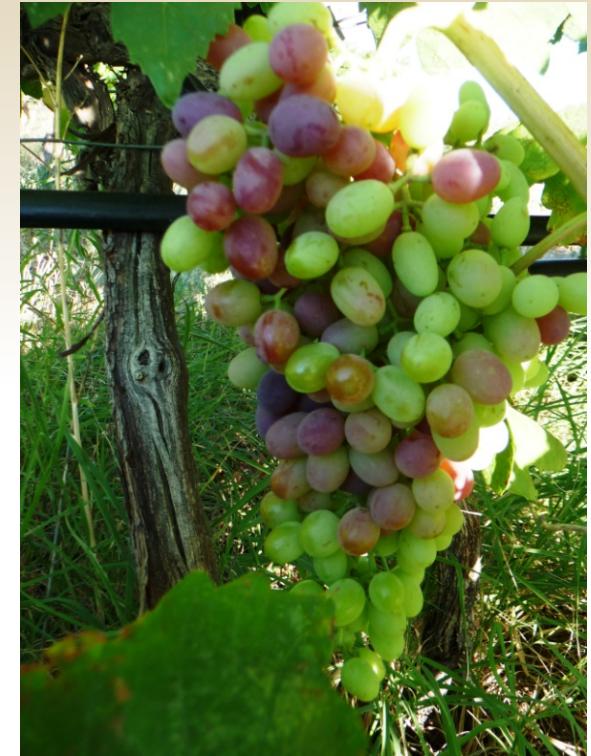
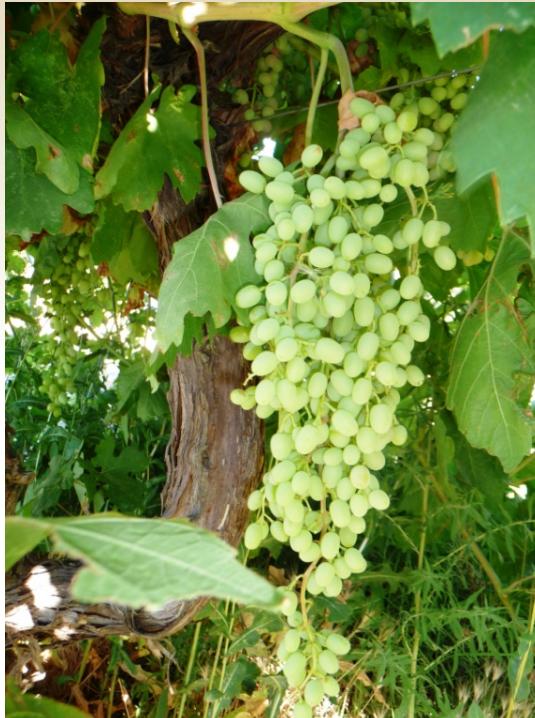


# Grape growth progression

- Green grapes grow in size
- Red grapes will start turning color

## Veraison

- Grapes continue to grow in size to fill out cluster
- Color gets deeper



# Bird control

- Many methods available
- Used in fall of year
  - Owl predator
  - Glitter tape
  - Predator eye balloons
  - Distress call
  - Zon or cherry guns
  - Kestrel hawk nests



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- Vertebrate pests
  - Starlings/Robins
- Netting the grapes
  - Expensive
  - Time consuming
  - Used for big areas or individual plants
- OR Individually place knee high panty hose on each cluster at start of veraison
  - Expand as they grow

## Bird control



# Diseases of grapes

## Powdery Mildew - Fungus

- Spores carried by wind
- Fine web of white threads on older leaves and then on fruit
- Keep canopy open for good air circulation
- Use chemical control if extensive – prevention best



## Other disease of grapes

- |              |                   |
|--------------|-------------------|
| • Viruses    | Bunch rots        |
| • Root Rot   | Eutypa – dieback  |
| • Crown Gall | Verticillium wilt |



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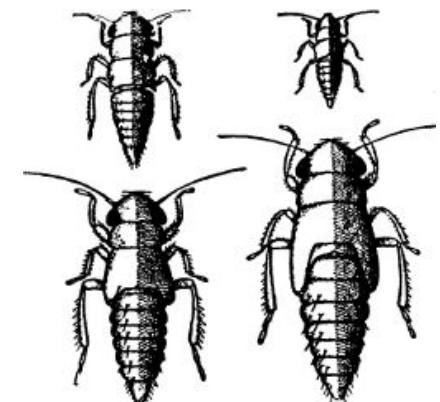
# Insects affecting grapes

## Leafhoppers

- Leaves stippled
- See castings under leaf
- Weeds harbor pests so weed control important
- Insecticidal soap can be used if necessary

## Other insects

- Phylloxera      Thrips
- Mealy bugs      Spider mites
- Cutworms      Leafroller



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# Many Varieties of Table Grapes

- **White varieties**

Himrod	Interlaken
Niagra	Perlet
Lakemont	Thompson
Chancellor	

- **Red varieties**

Concord	Flame
Crimson	Reliance
Canadice	Sulfolk Red
Einset	Delaware
Catawba	Black Monukka



# Black Monukka

- Vitus vinifera
  - 1910 from England
- Originally from India  
Not sure origin may be from Persia
- Mid season ripening
  - Grapes tend to easily fall off cluster
  - Berries easily shatter so difficult to ship to mass market



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# Black Monukka

- Blue black large grapes
  - Large loose clusters
  - Tender skins
  - Wonderful rich flavor
- “Eat like candy!”
- Few rudimentary seeds
  - Less ripe berries great to dry for raisins



# Harvest & Enjoy

- Harvest in the fall
- Spot taste for sweetness
- Berries at tip are last to ripen
- Pick cluster with sharp, clean snips
- Wash and ENJOY!
- Plants will live many years



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# Thank You Any Questions?



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