

# Growing Cold Climate Grapes

Leonard Perry, Extension Horticulturist

*“The secret to growing good grapes is pruning. Not pruning enough off each year is the main problem gardeners have growing grapes.”*



Marquette



Edelweiss

## Grape Types

- European: zones 6-9, early-ripening | 60 frost free days, others | 70-200, eg. Shiraz
- French-American: zones 5-9, eg. Seyval
- Native: zones: 4-9, “fox grapes”, Concord table grape, | 50 frost free days
- Hybrids of above, eg. Minnesota cultivars (zones 4-8)
- Muscadine: zones 7-10, 200 frost free days

## Grape Culture Facts

- Most self-fruitful, seldom need cross-pollination
- Grow on trellis/supports
- 3-4 years to bearing, remove flowers first two years
- 5-15 pounds yield per vine (30-60 bunches)
- Cold climate types: often need to keep less vigorous; tend to grow shoots down (vinifera tend to grow up)

## Culture- Year 1

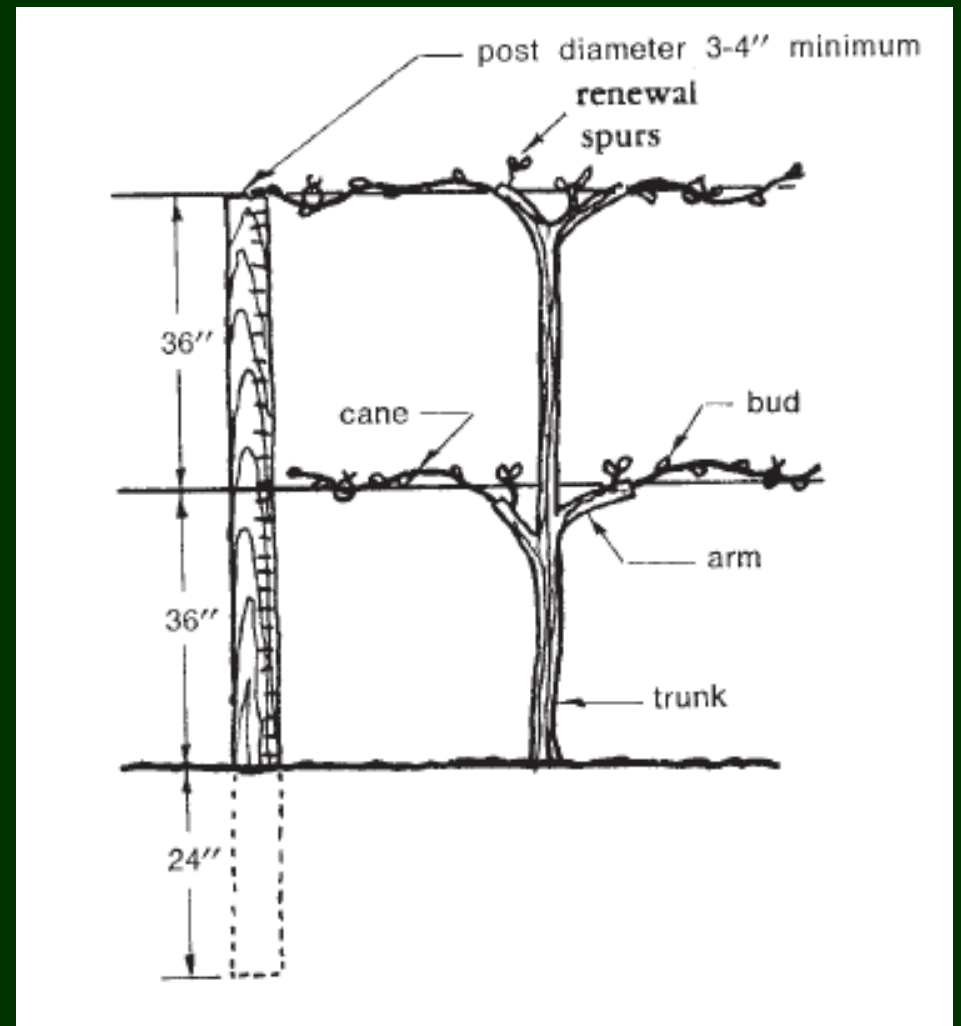
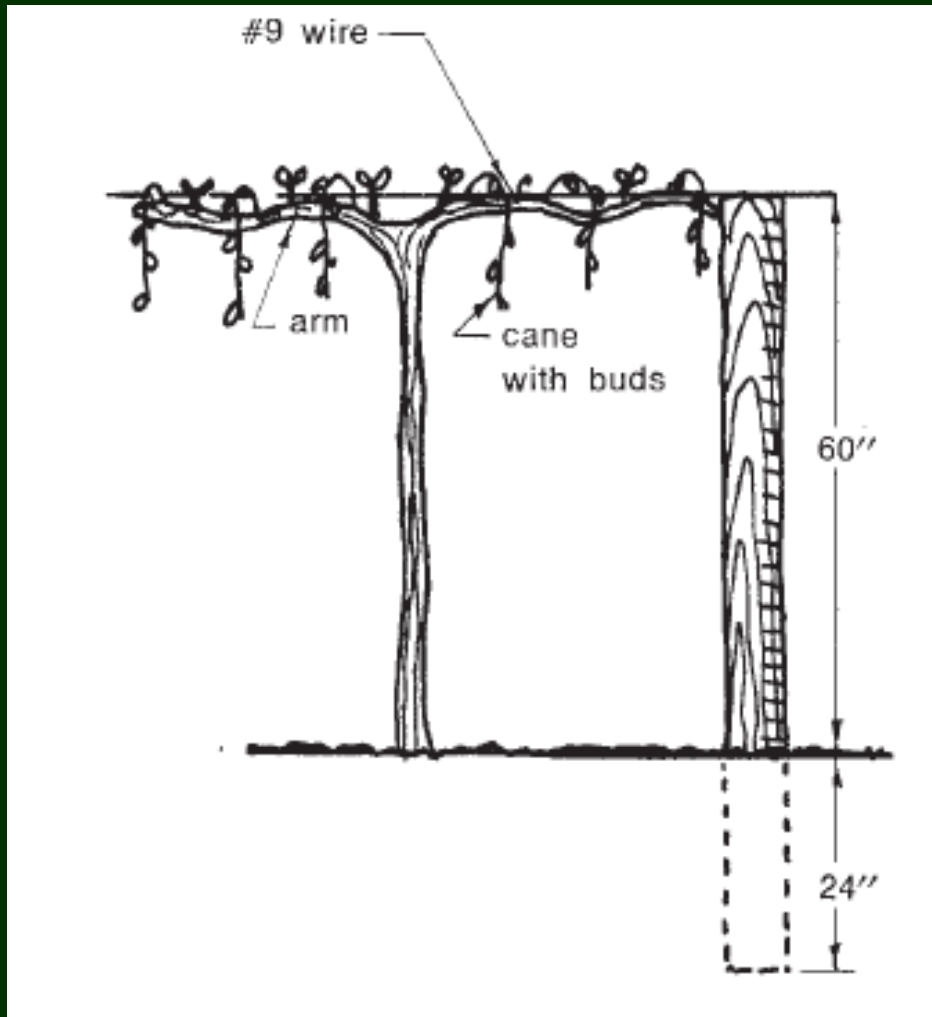
- Site: best are the warmest, slopes towards sun, light and sandy soils warm sooner; weed-free
- Soil: well-drained, pH 5.5-6.5, not too fertile
- Add compost before planting, no other fertilizer, water well first year
- Light: full sun
- 8 ft. apart, wire support post between plants
  - Rows 8 ft. apart, north-south best

## Culture—Year 2 on

- Late winter—dormant prune, thin fruit early season
- Only water if needed (drought), not overhead when fruits forming
- Fertilizer—fertile soils, only compost around
  - 10-20-20 or 10-4-10 or similar @ 2oz per plant
  - Each year double until year 5
- No mulch year 3 on (cool soils delay fruiting)

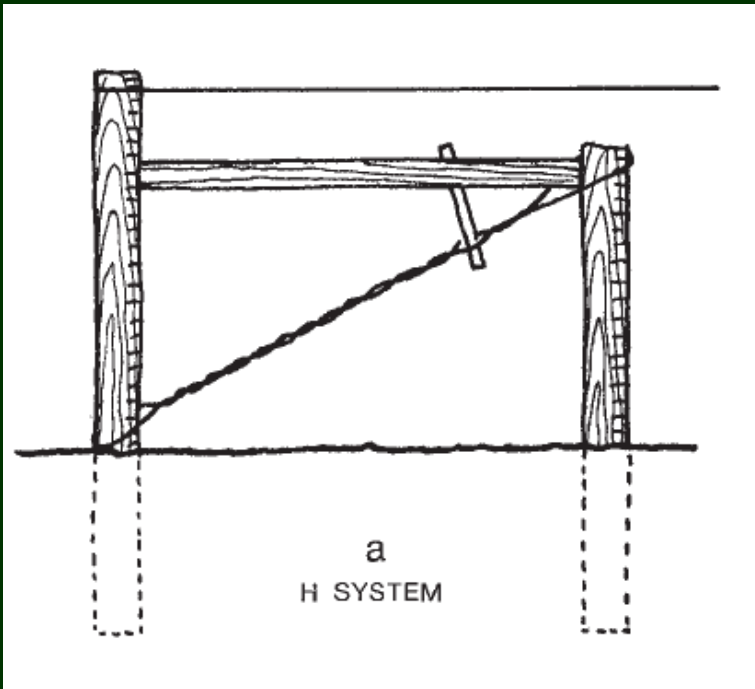
# Support Types

- 2-wire, 4-cane Kniffen system (many grapes, areas)
- **Single wire** (cordon)/ double wire bilateral cordon
  - High: muscadines, cold climates
  - Low: European, French-American
- Umbrella (head) training: containers
- Trellis/pergola

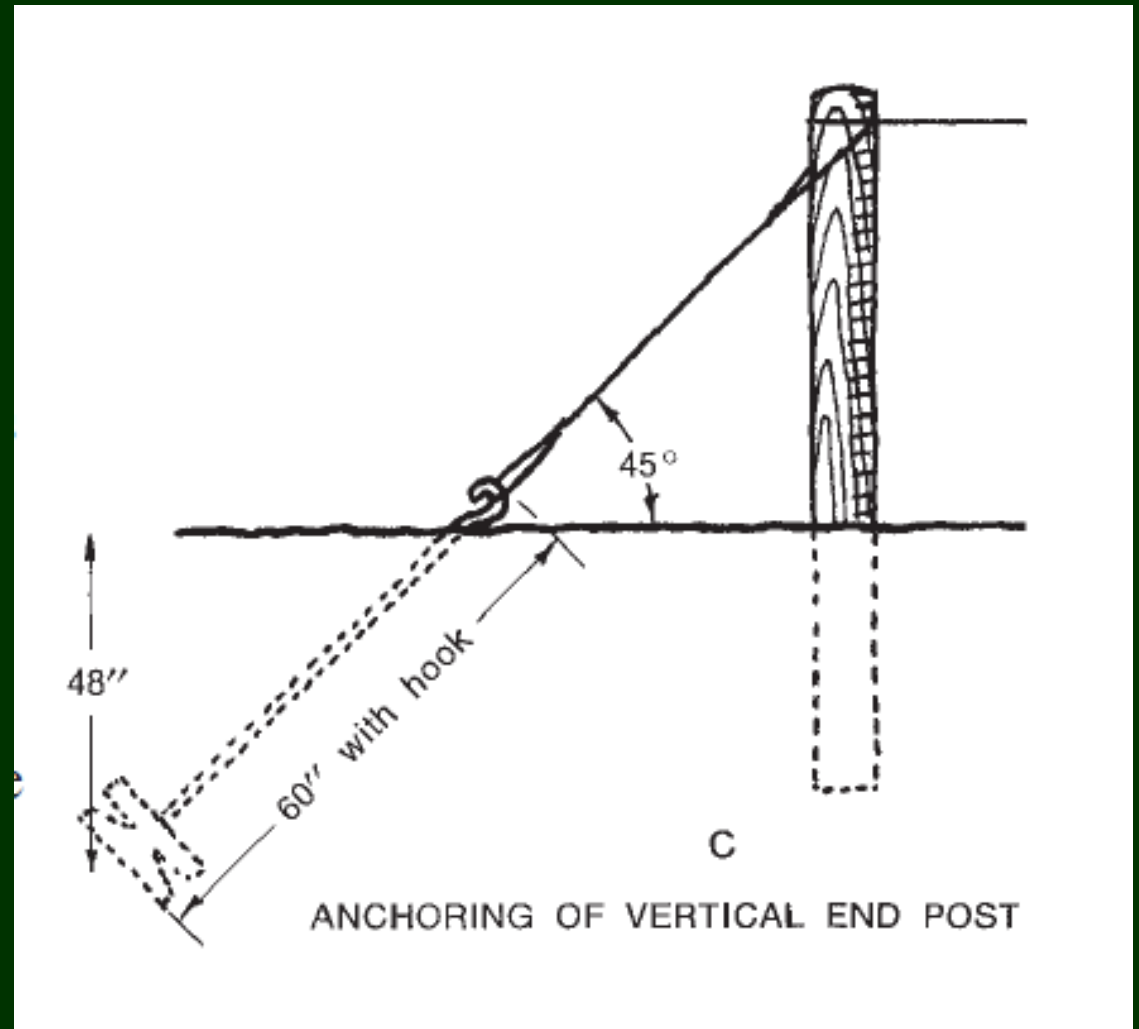


# Trellises

(courtesy WSU Extension, M. Ahmedullah)



# Trellis end anchors



(courtesy WSU Extension, M. Ahmedullah)

## Pruning Facts

- Grapes produce more tops than roots support
- Grapes form on current season's growth, in turn coming from last season's growth
  - Remove older wood
  - Keep new growth forming through pruning
- Prune out 70-90% of wood from previous year
- Prune vigorous vines more, weaker ones less

# Pruning times

- At planting: back to 5-6in., 2-3 good buds
- Early spring each year
- Summer, thin out clusters
  - When fruit 1/8-inch across
  - One cluster grapes per one foot of new shoot

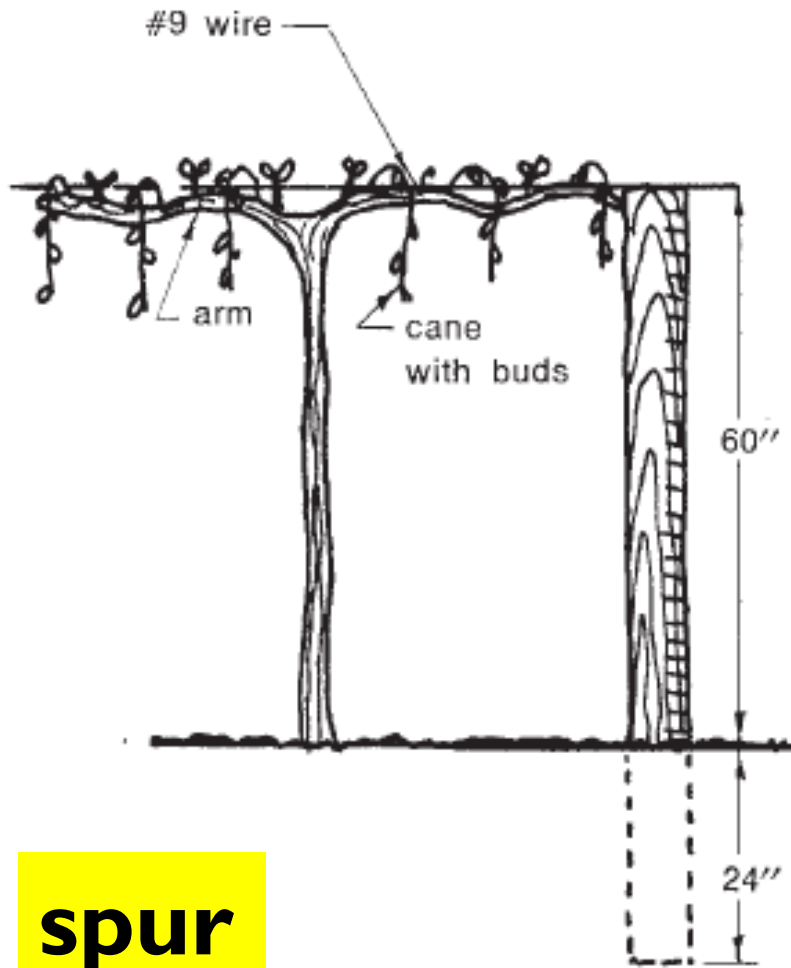


## Two main pruning types

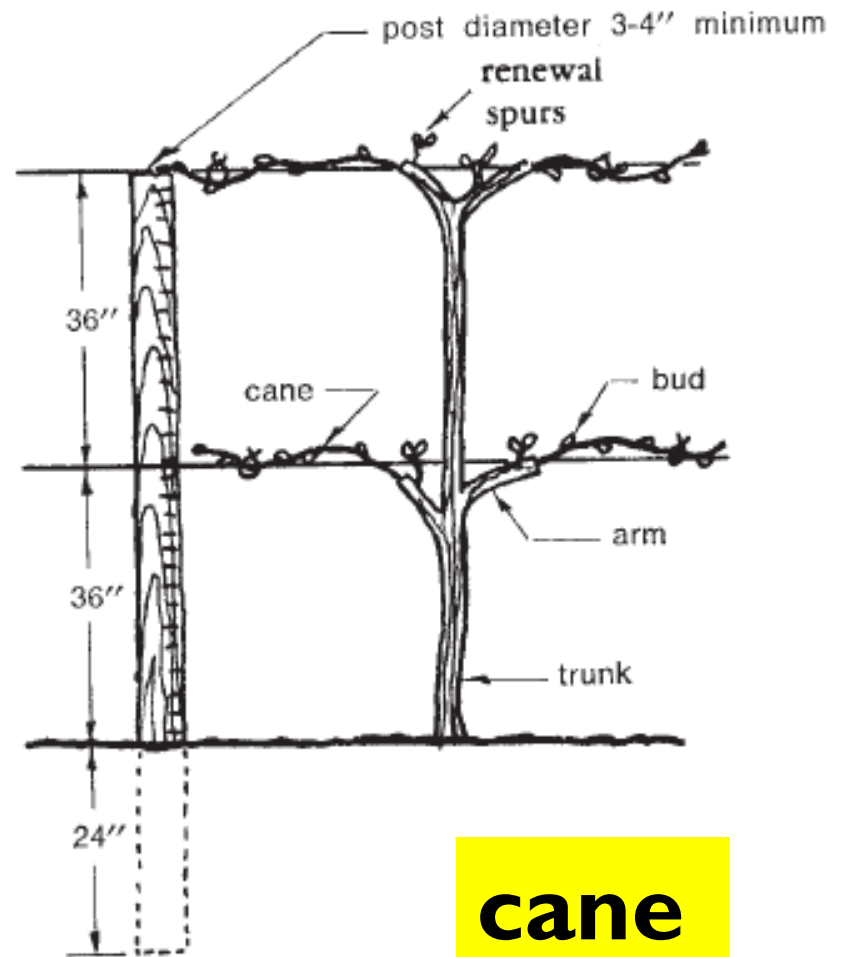
- “cane pruning” (many wine grapes, common in many areas, table grapes—better quality)
  - Prune canes (cordons) back to near trunk
- “spur pruning” (muscadines, some wine especially vigorous ones, cold climate, table—better yield)
  - leave cordons along wire, with many short shoots (spurs)

# pruning

(courtesy WSU Extension, M. Ahmedullah)



**spur**



**cane**

## Pruning—don't be afraid

- There is no one right way to prune
- If you make mistakes, plants will grow back
  - They are vigorous, forgiving

## Pruning—Year 1

- Allow shoots to grow from 2-3 buds
  - Train vertical with bamboo, string
- Remove flower buds

## Spring year 2

Remove  
sideshoots

twine

bamboo

2 trunks  
(safety)



9-11 gauge  
wires at  
3ft and  
5-6ft  
above  
ground

Lower  
shoot as  
backup

## Pruning—Year 2 (cold climate)

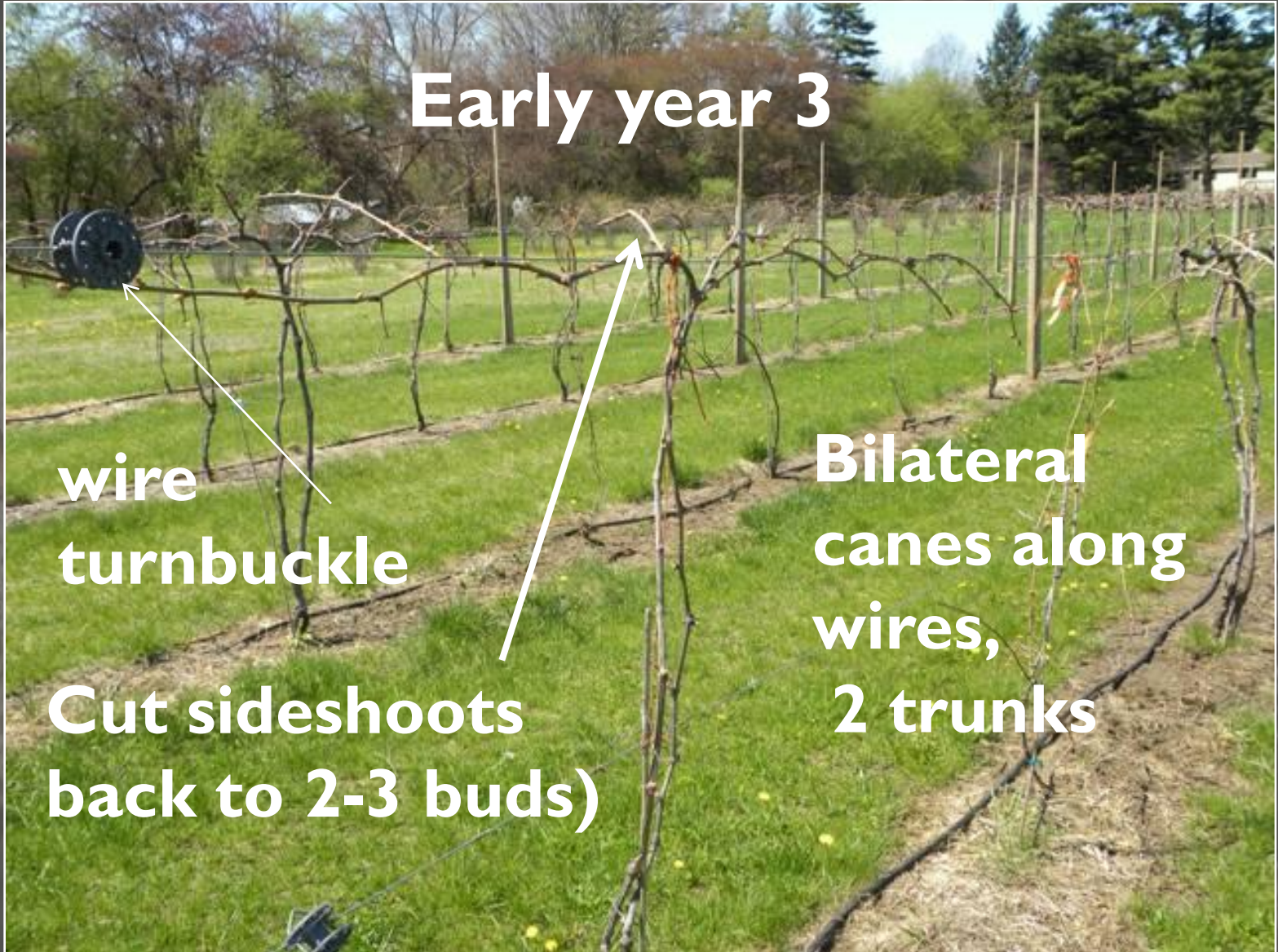
- Early spring: Leave 1-2 upright shoots, remove sideshoots and stem above top wire
- Train 2 shoots (“canes”), one each direction (“bilateral”) along top wire; affix with plastic ties
- Remove other first year shoots, any flower buds early
- Allow other sideshoots during the season

# Early year 3

wire  
turnbuckle

Cut sideshoots  
back to 2-3 buds)

Bilateral  
canes along  
wires,  
2 trunks



## Spur Pruning—Year 3 on

- Early spring: prune back sideshoots, leave 2-3 buds (which form the year 3 fruiting shoots)
  - 4-6 buds for safety, to slow growth—cut back in spring after growth starts
  - Leave fruiting canes from nearest cordon/wire
- thin clusters when first form (mid-summer)
- Remove some/most leaves shading clusters
- remove suckers from lower trunk, base

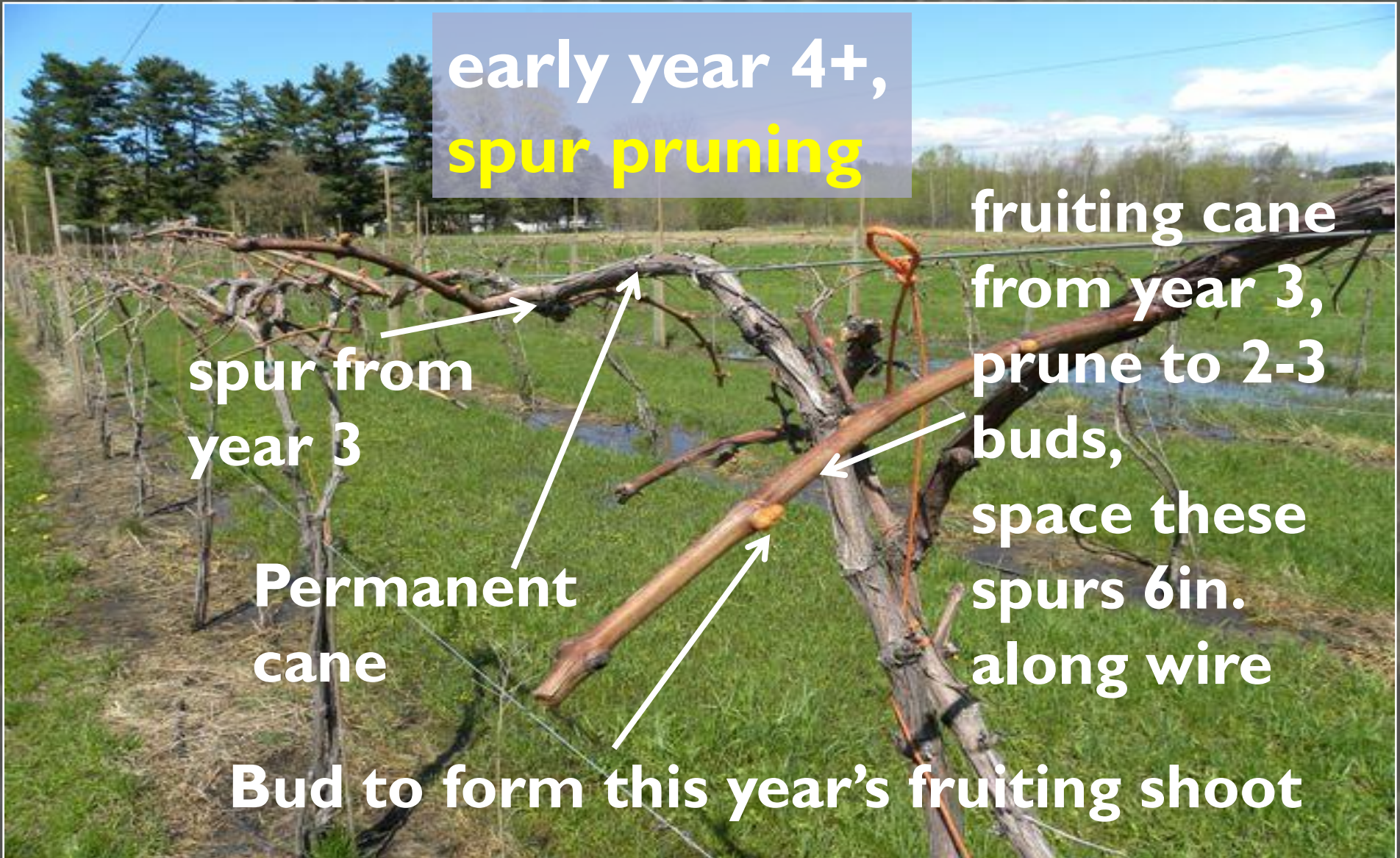
early year 4+,  
**spur pruning**

spur from  
year 3

Permanent  
cane

Bud to form this year's fruiting shoot

fruiting cane  
from year 3,  
prune to 2-3  
buds,  
space these  
spurs 6in.  
along wire



# Cold climate pruning summary

- Year 1—establish upright shoots, future trunks
- Year 2—establish bilateral canes (cordons) along wires
- Year 3 on--cut back last year's sideshoots (fruiting canes) to 2-3 buds, these will form this year's fruiting shoots
  - One sideshoot (spur) every 6 in. along cane
  - thin clusters, remove some leaves over clusters

## Pests

- Grape berry moth—brownish worms in young fruit
  - Early and mid-summer stages
  - Look for webbing, red spots on berries
  - Remove infected berries, pesticides, traps
- Japanese beetles, rose chafers

## Diseases

- Powdery mildew—white powdery dust
  - Fungicides, air circulation, sunlight into plant
- Downy mildew—gray downy growth, fruits rot
  - Bordeaux, sulfur, fungicides
- Black rot—leaves with spots, black pimples; fruit turn black, shrivel, rot; warm, wet favors
  - good sanitation, air circulation, cultivar resistance

## Other problems

- Herbicide damage (weed control nearby): stunted, deformed growth
- Birds—netting
- Raccoons, skunks, opossums— low (6in. off ground) electric fence

## Harvest

- 2 quarts grapes = 4 half-pints jelly; bushel = 16 quarts juice; 8 bunches = bottle wine, vine = 8 bottles +/-
- ripe: brown seeds, sweet (table), clusters pick easily, not skin color
- Wine grapes: sugar content 22% (Brix)
- Don't pick early, won't continue to ripen
  - Slightly green for jelly
- Not ripen <50F, or frost-killed leaves

# Resources



Home Fruit Growing  
[homefruitgrowing.info](http://homefruitgrowing.info)



Perry's Perennial Pages  
[perrysperennials.info](http://perrysperennials.info)