

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

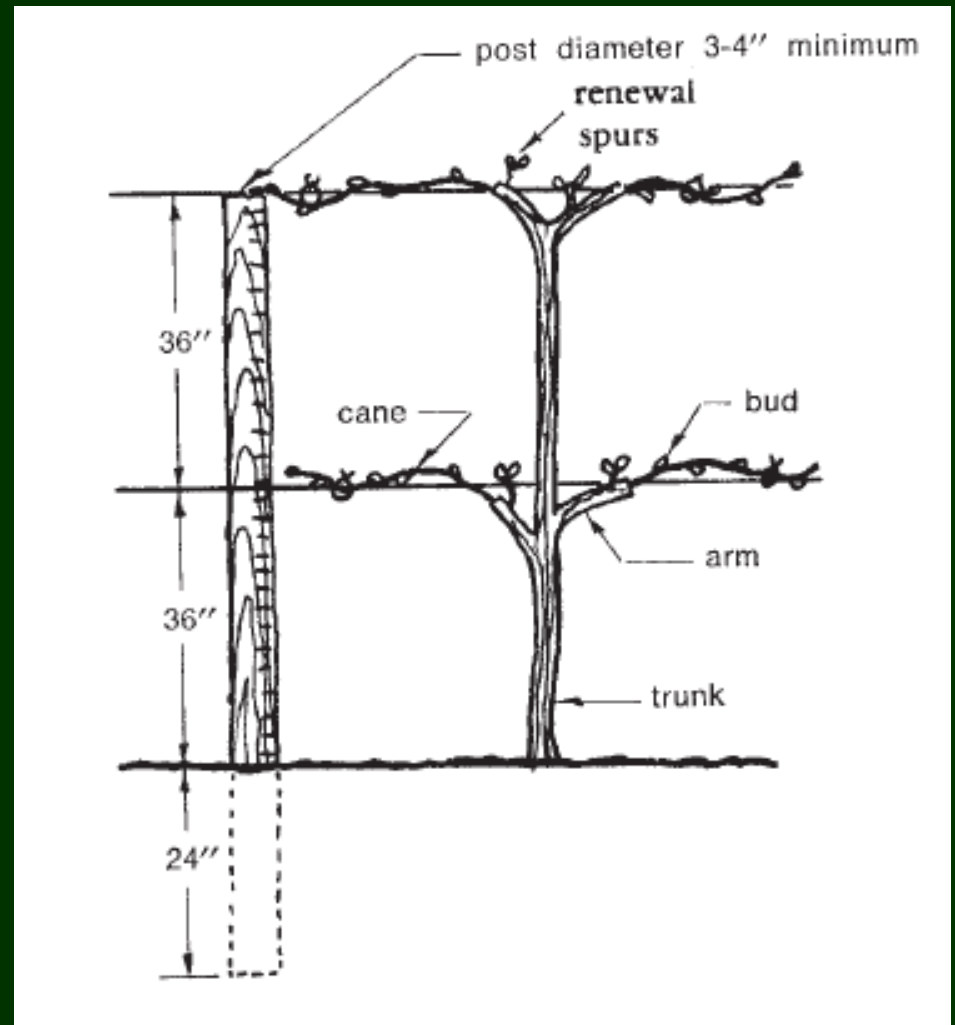
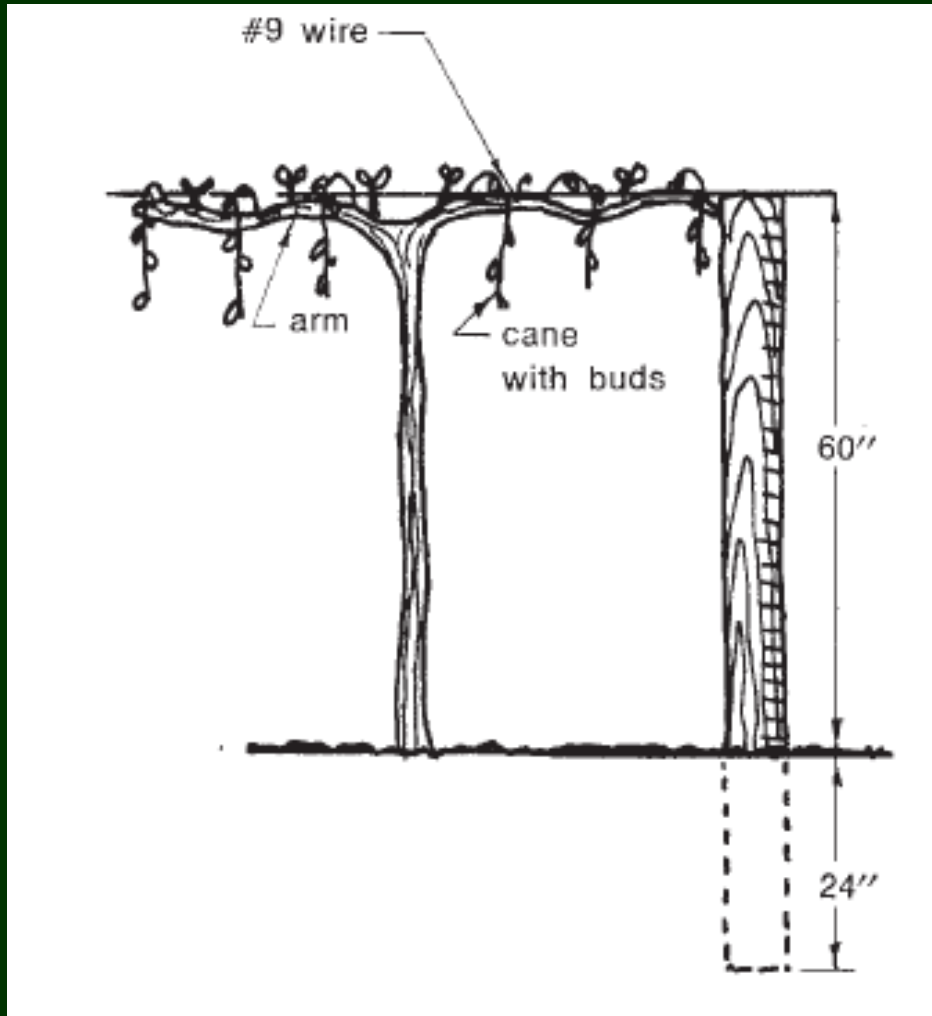
- Site: best are the warmest, slopes towards sun, light and sandy soils warm sooner; weed-free
- Soil: well-drained, pH 5.5-6.5, not too fertile
- Add compost before planting, no other fertilizer, water well first year
- Light: full sun
- 8 ft. apart, wire support post between plants
 - Rows 8 ft. apart,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

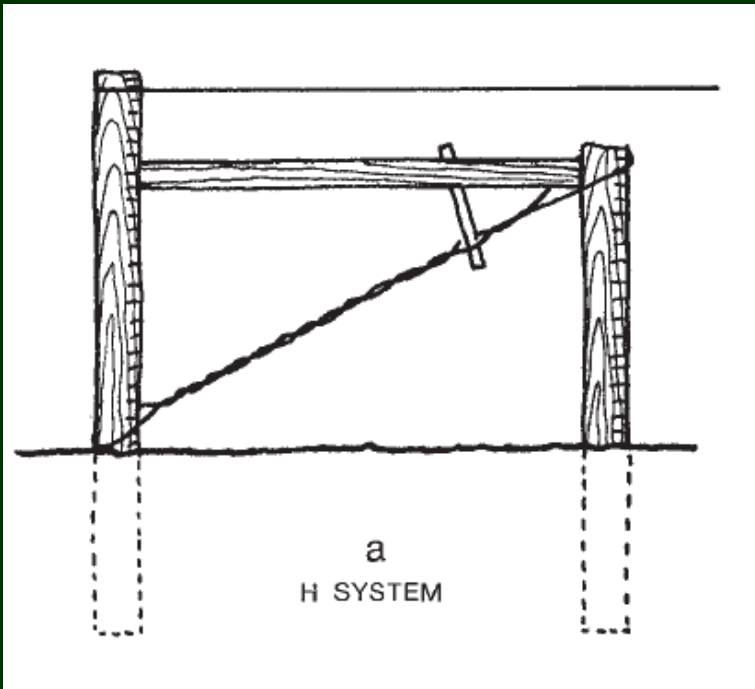
Support Types

- 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

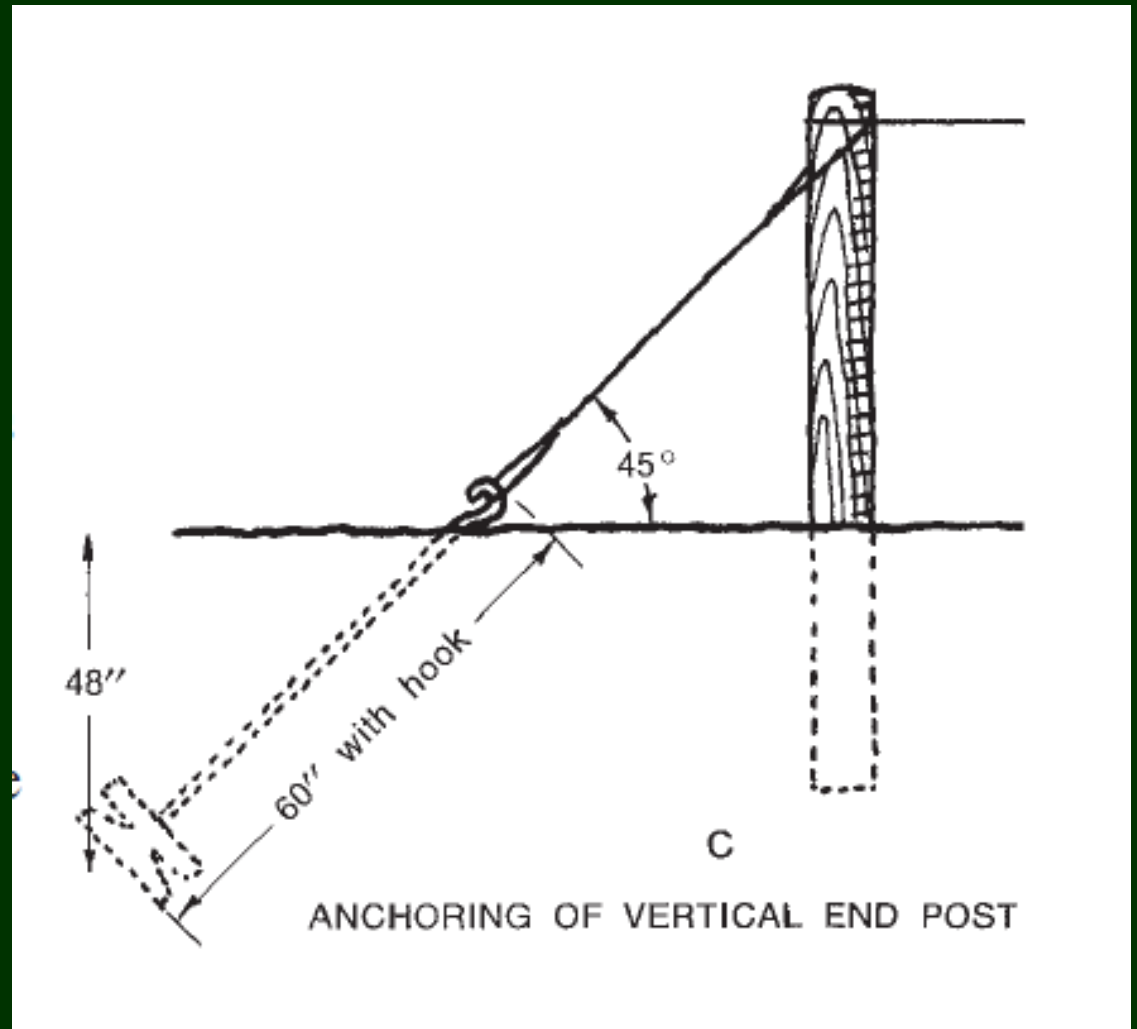


Trellises

(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

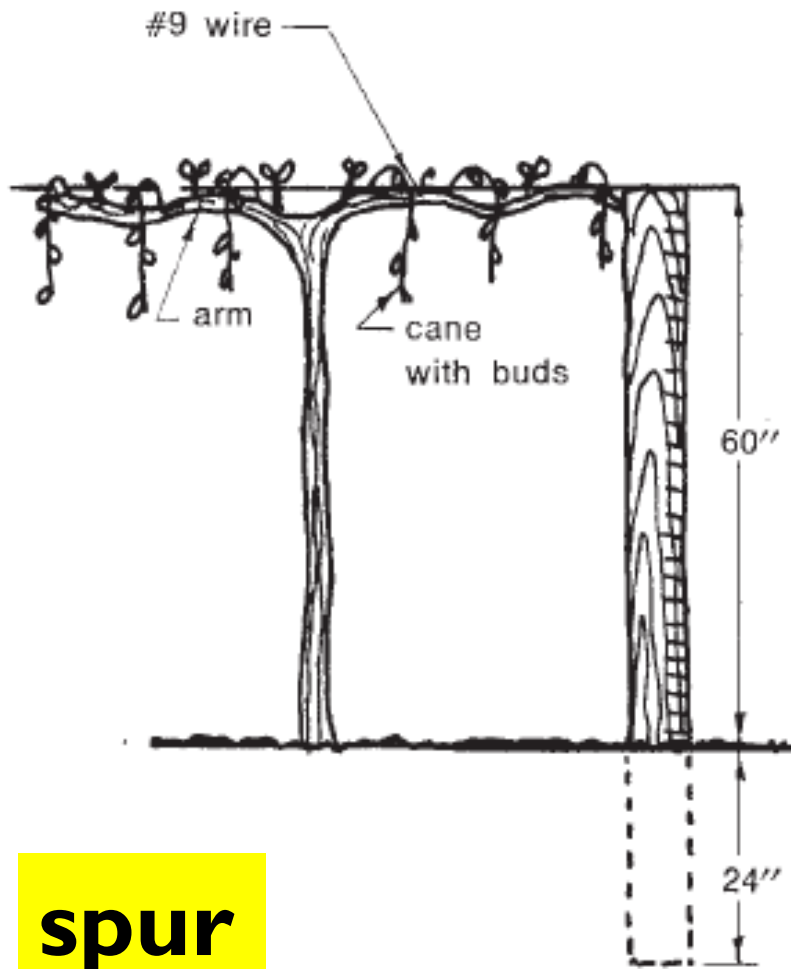


Two main pruning types

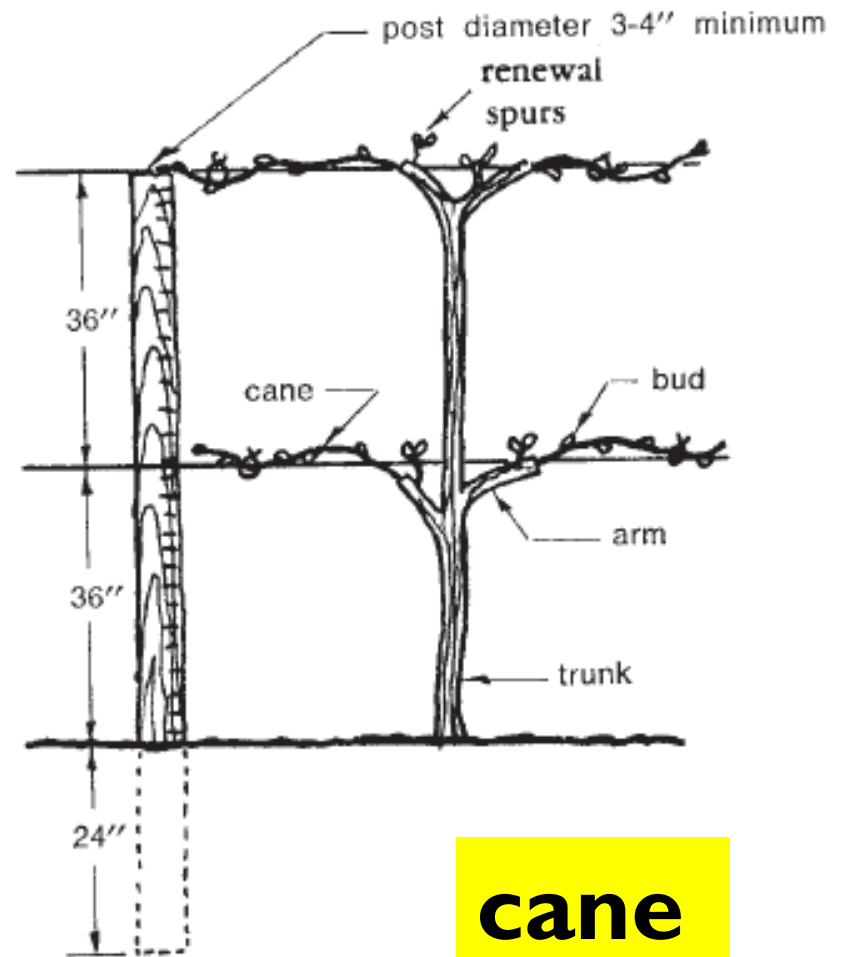
- “cane pruning” (many wine grapes, common in many areas, table grapes—better quality)
 - Prune canes (cordons) back to near trunk
- “spur pruning” (muscadines, some wine especially vigorous ones, cold climate, table—better yield)
 - leave cordons along wire, with many short shoots (spurs)

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 guage
wires at
3ft and
5-6ft
above
ground

Lower
shoot as
backup

Pruning—Year 2 (cold climate)

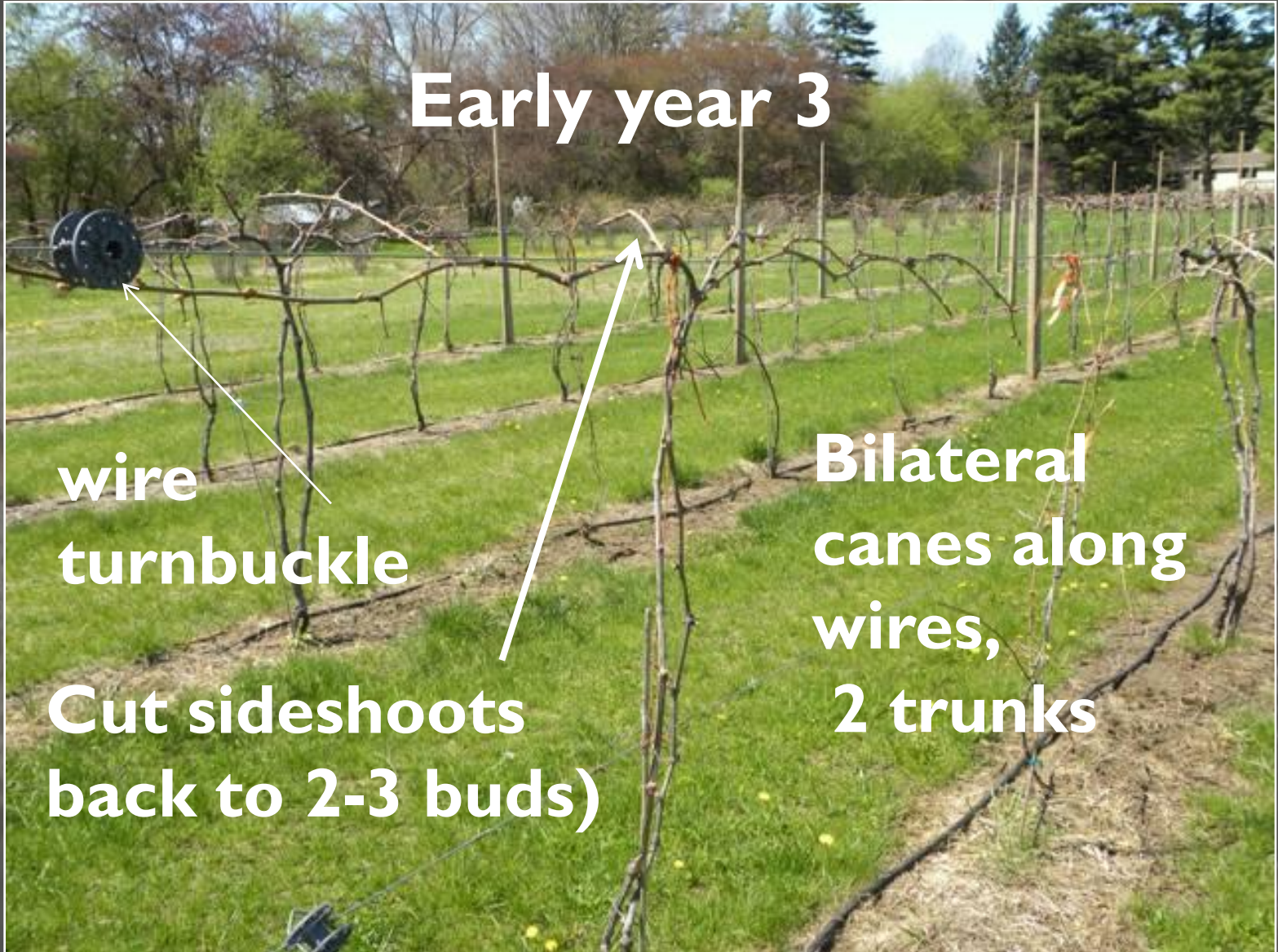
- Early spring: Leave 1-2 upright shoots, remove sideshoots and stem above top wire
- Train 2 shoots (“canes”), one each direction (“bilateral”) along top wire; affix with plastic ties
- Remove other first year shoots, any flower buds early
- Allow other sideshoots during the season

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

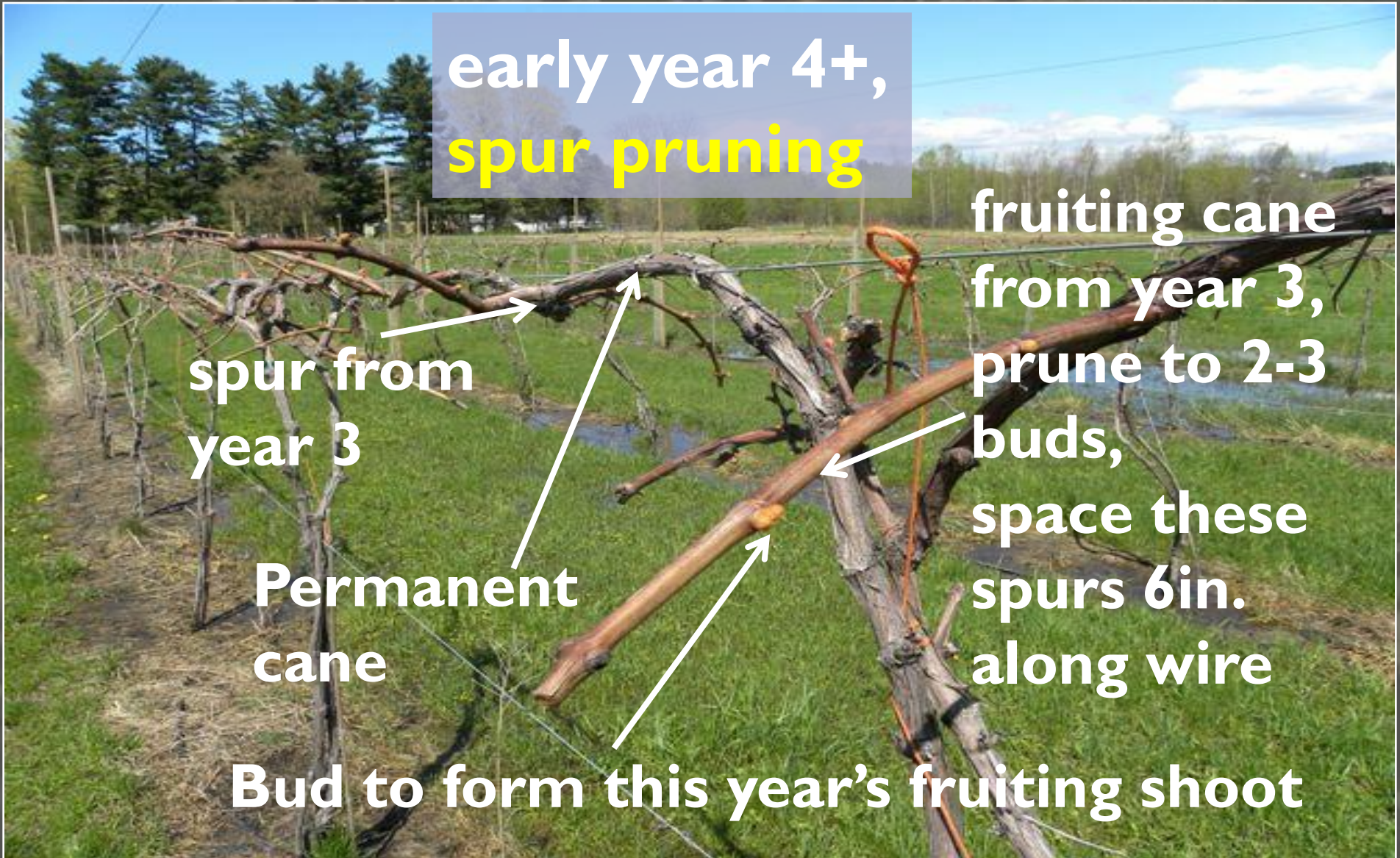
early year 4+,
spur pruning

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



Perry's Perennial Pages
perrysperennials.info