

Growing Grapes



This is part of a series on growing fruit!

March 20th @6pm - Small Fruits and Berries

April 3rd @6pm - Holistic Spray Program

April 10th @6pm - Orchard Companions

April 24th @6pm - Fruit Propagating

Slides will be available on the resources tab of our website



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Class PDF files & Handouts

[FRUIT TREE BASICS](#)

[FRUIT TREE MAINTENANCE CLASS](#)

Soil Summit Presentations

[CROP ROTATION](#)

[MULCHING](#)

[NUTRIENT MANAGEMENT](#)

Growing Summit!

UNITY GARDENS
GROWING
SUMMIT 2024

Unity  Gardens

Free Garden
Classes

MARCH 9TH 2024
9:00AM TO 4:00PM
MAIN BRANCH LIBRARY
DOWNTOWN SOUTH BEND

**Public
Library**
ST. JOE COUNTY

Join us for this fun and educational event
With over 20 free classes, vendor booths,
and demos
at the Community Learning Center
305 South Michigan St.
South Bend IN 46601

www.theunitygardens.org

CLASSES

schedule and room number information available on our website

Sustainability Classes

Reinvent Your Waste
Basics of Solar
Watersheds & Ways to understand water quality using
Macroinvertebrates
Climate Action Planning
Food Waste and Greenhouse Gases
Off Grid Solar

Gardening Classes

Shade Gardening
All About Strawberries
Ask the Expert- Small Fruit Growing
Organic Gardening
Basic Tree Pruning
Plant Propagation
Seed Saving 101
The Dirty Truth: Unearthing the Secrets of Healthy Soil

Kid's Classes

Digging into plants and Nutrition For Kids
It is Tough Being Green: Smelling
Fishing For Family Fun / by Reelin Family Fun
Butterflies and Pollination

Native Plant Classes

Invasive Plants
Gardening with Native Shrubs and Flowers for Wildlife
How To Be Really Cool When Growing Native Plants
How Small Inclusions Of Native Plants Can Have a Big Impact

And More:

Making Krauts & Kombucha
Regenerate Indiana: Land and People Made Whole
Documentary and Discussion

Site Requirements

Full Sun

- at least 8 hours of sun
- Less will not get you full ripening on fruit
- Sun also helps dry off grape vines



Healthy Soil

- good drainage (limits root growth if not)
 - can lower your water table if you don't have good drainage
- loose texture & good aeration
- fertile (especially high in Potassium) (can be amended with compost)
- Soil test if you're not sure!
- (neutral pH to slightly acidic)

Good Airflow

- this will help dry off your grapes which is very important
- and prevent frost from settling on your grapes (many grapes can be injured easily in the winter)

Trellis System

- you will need to trellis your grapes!
 - this improves structure and support
- usually trellises run north to south for full sun exposure
- arbors are pretty but difficult to maintain and not the best shape for plant health



Varieties

Use

- generally table, juice, and wine are the uses that grapes may fall into
- some varieties are suitable for multiple uses

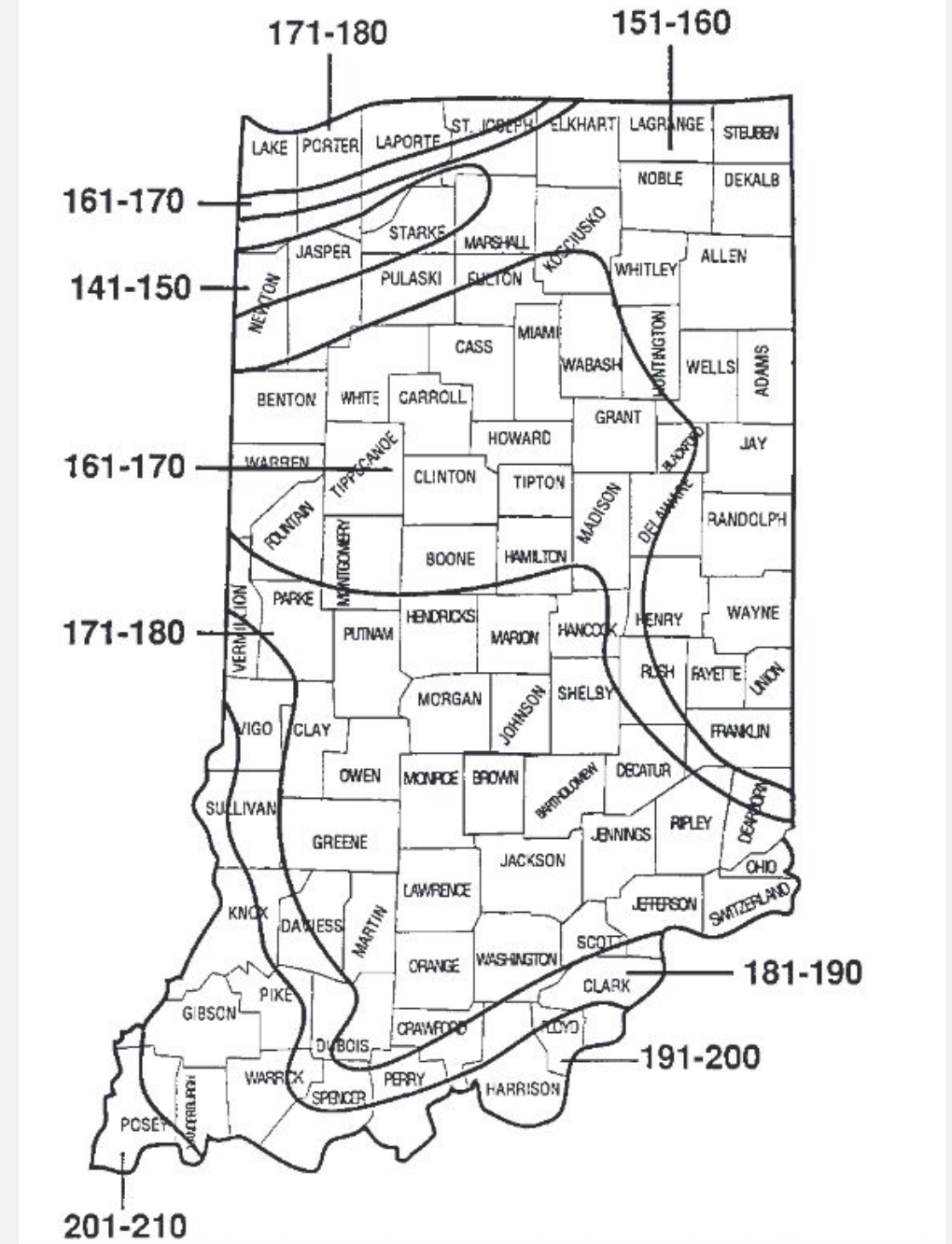


Cold Hardiness

- three varieties (American, French-American, European)
- choose cultivars that are adapted to Indiana's lower temperatures (American, French-American)
- our average low temperature is 0 to -10 degrees F (zone 6)
 - your actual average low temperature may differ based on your microclimate
- frost pockets: low-lying areas where frost collects
 - elevated areas/sloping areas are good for grape growing

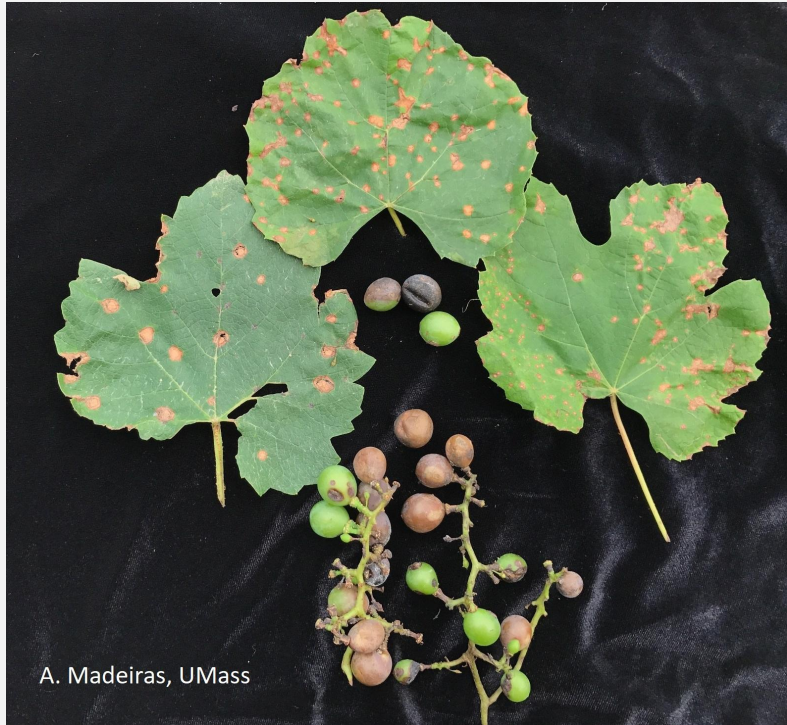
Frost Free Days

- this is generally the length of your growing season
- grapes need at least 150 frost free days, but prefer around 180
- most spots in St. Joe County are anywhere from 150-180
- (this map may be outdated considering climate change)



Disease Resistance

- unless you are spraying your grapes, buy disease resistant cultivars!



Cultivar	Color ¹	Principle Use ²	Approx. Season	Cold Hardiness ³	Relative Disease Susceptibility ⁴				
					BR ⁵	DM	PM	Bot	CG
American									
Concord	B	J-W-T	Late	1	++	+	++	+	+
Catawba	R	J-W	Late	1	+++	+++	++	+	+
Delaware	R	J-W-T	Midseason	2	++	+++	++	+	+
Niagara	W	J-W-T	Late Midseason	2	+++	+++	++	+	++
Steuben	B	J-W-T	Late	1	++	+	+	+	+
St. Pepin	W	J-W	Midseason	1	+	++	++	+	+
French-American Hybrids									
Cayuga White	W	W	Midseason	3	+	++	+	+	++
Chambourcin (JS 26-205)	B	W	Late	4	+++	+	+++	+	++
Chancellor (Seibel 7053)	B	W	Early Midseason	2	+	+++	+++	+	+++
DeChaunac (Seibel 9549)	B	W	Midseason	2	+	++	++	+	++
Leon Millot (Kuhlman 194-2)	B	W	Early	1	+++	++	+++	++	+
Marechal Foch (Kuhlman 188-2)	B	W	Early	1	++	+	++	+	+
Seyval Blanc (S.V. 5-276)	W	W	Early Midseason	3	++	++	+++	+++	++
Vidal Blanc (Vidal 256)	W	W	Late Midseason	4	+	++	+++	+	++
Vignoles (Ravat 51)	W	W	Midseason	2	+	++	+++	+++	++

Planting

Planting

- Plant in spring, after ground is workable and frost has broken but before your grapes have broken dormancy (as soon as they arrive)
- Leave LOTS of space between grapes, usually they're planted about 8 feet apart
- Plant under your trellis system
- If grafted (hybrids) keep graft union above soil level
- Make sure to water them afterwards!
- And you can soak in water for 24 hours before if they're looking dry

Pruning

Pruning is one of the most important parts of cultivating grapes but also the most intimidating!

Why do you need to prune?

- clean it out! grapes need airflow to stay healthy
- develop a structure that makes it easy to maintain
- maintain enough energy in the plant to develop good fruit
- organize your grapevines for maximum sunlight
- grapes are very vigorous (pruning often removes up to 90% of the plant!)

When to Prune?

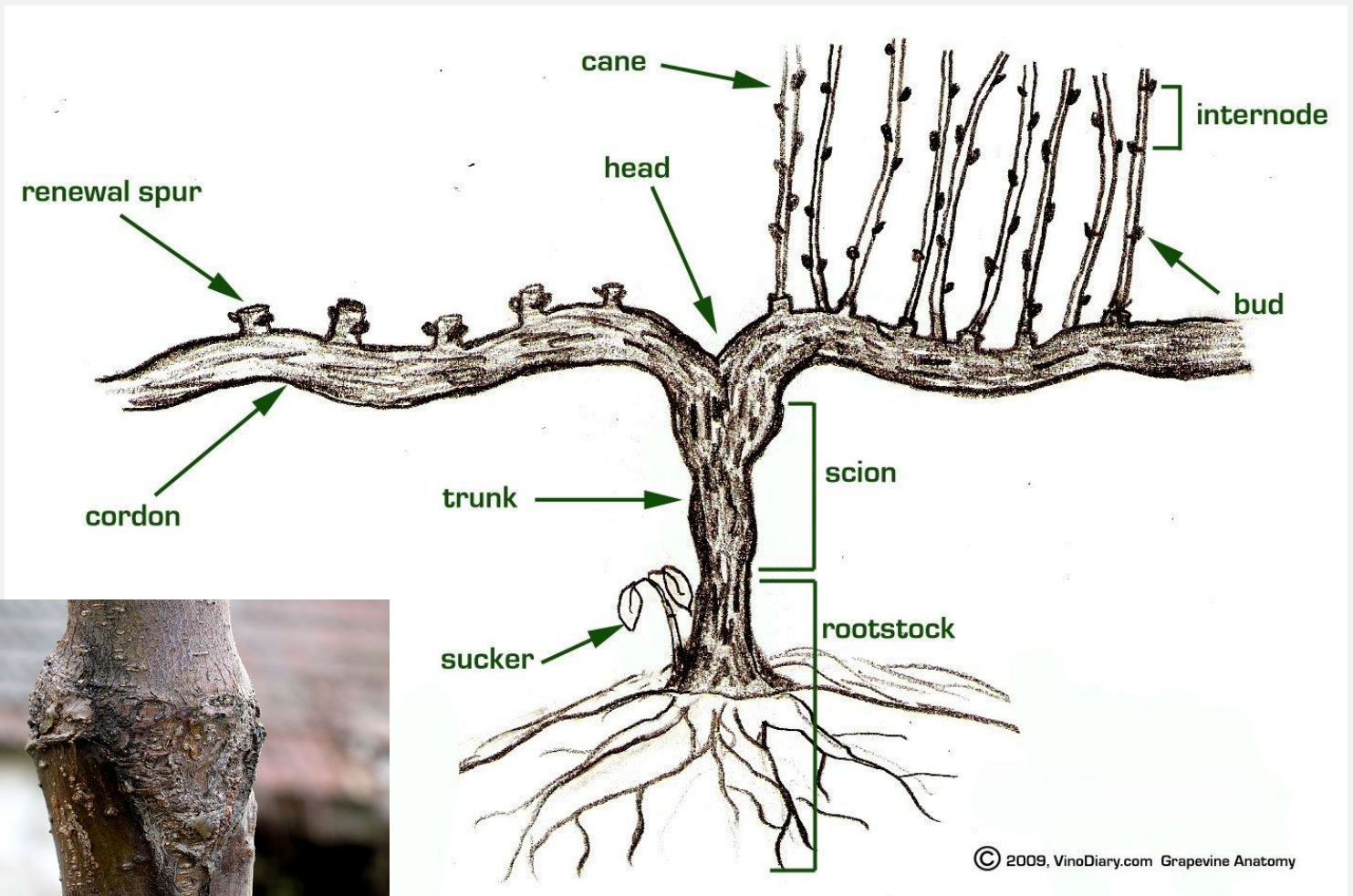
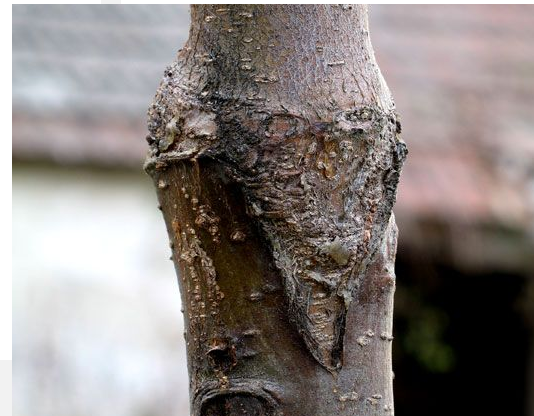
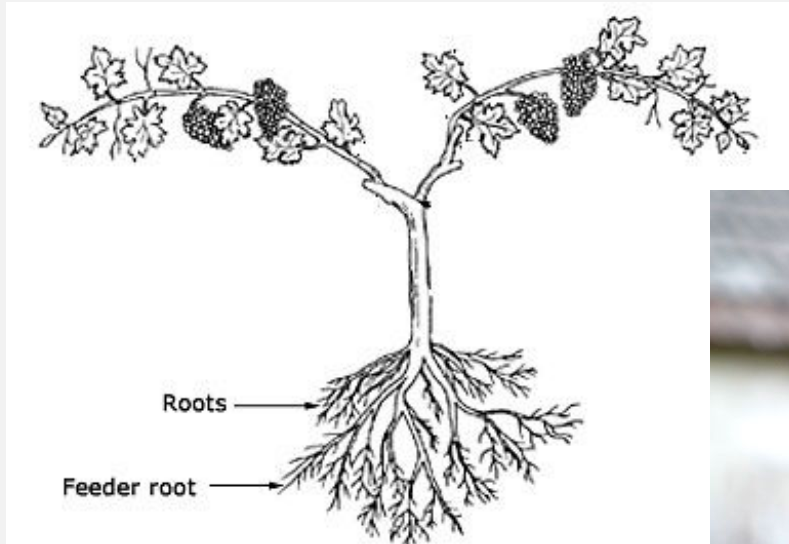
- During dormant period
- Dormant period is hopefully after the most of the cold weather but before breaking dormancy
- it's easiest to see the structure before all the leaves come in and it won't change your fruit set for the year
- Prune as late as you can for tender varieties
- Can also leave more than planned in case of later winter injury if you're pruning early

Important Pruning Concepts

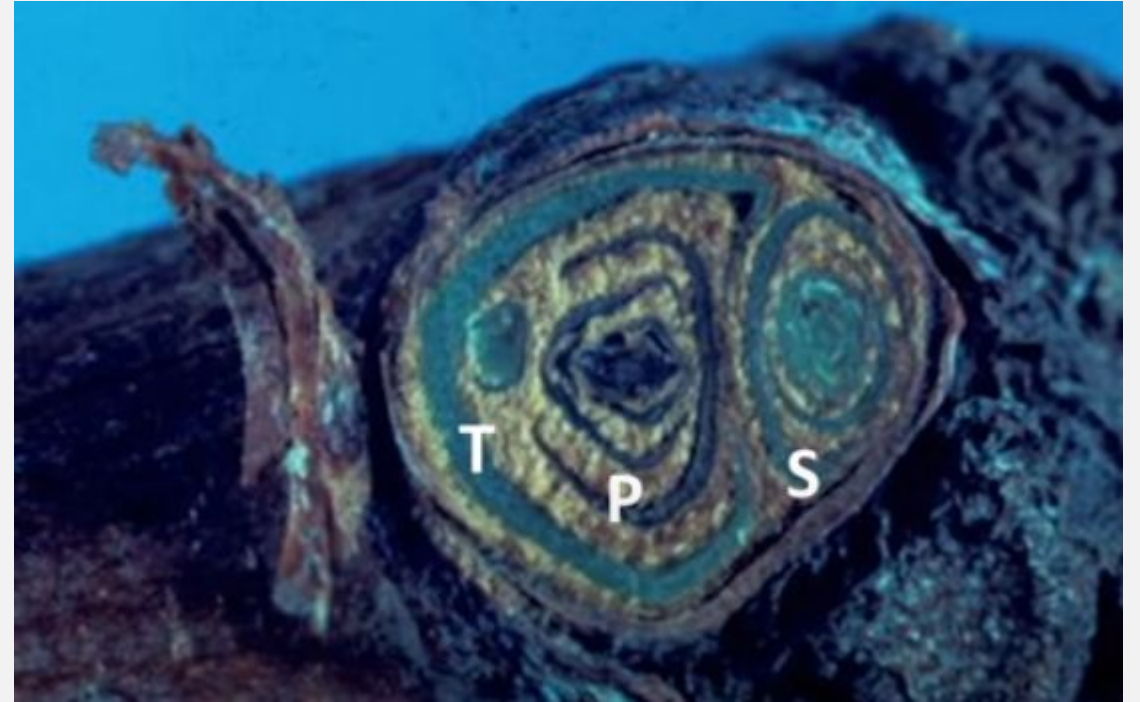
1. Grape Anatomy
2. Balance pruning
3. Renewal Zones

Grape Anatomy

- (this is a grafted grapevine)
- head is also called crown



More Grape Anatomy



(Even) More Grape Anatomy



Balance Pruning

Depending on how vigorous the variety is, you leave a different amount of buds if you leave too many, all your fruit will be smaller, there won't be enough energy in the plant to make good marketable fruit

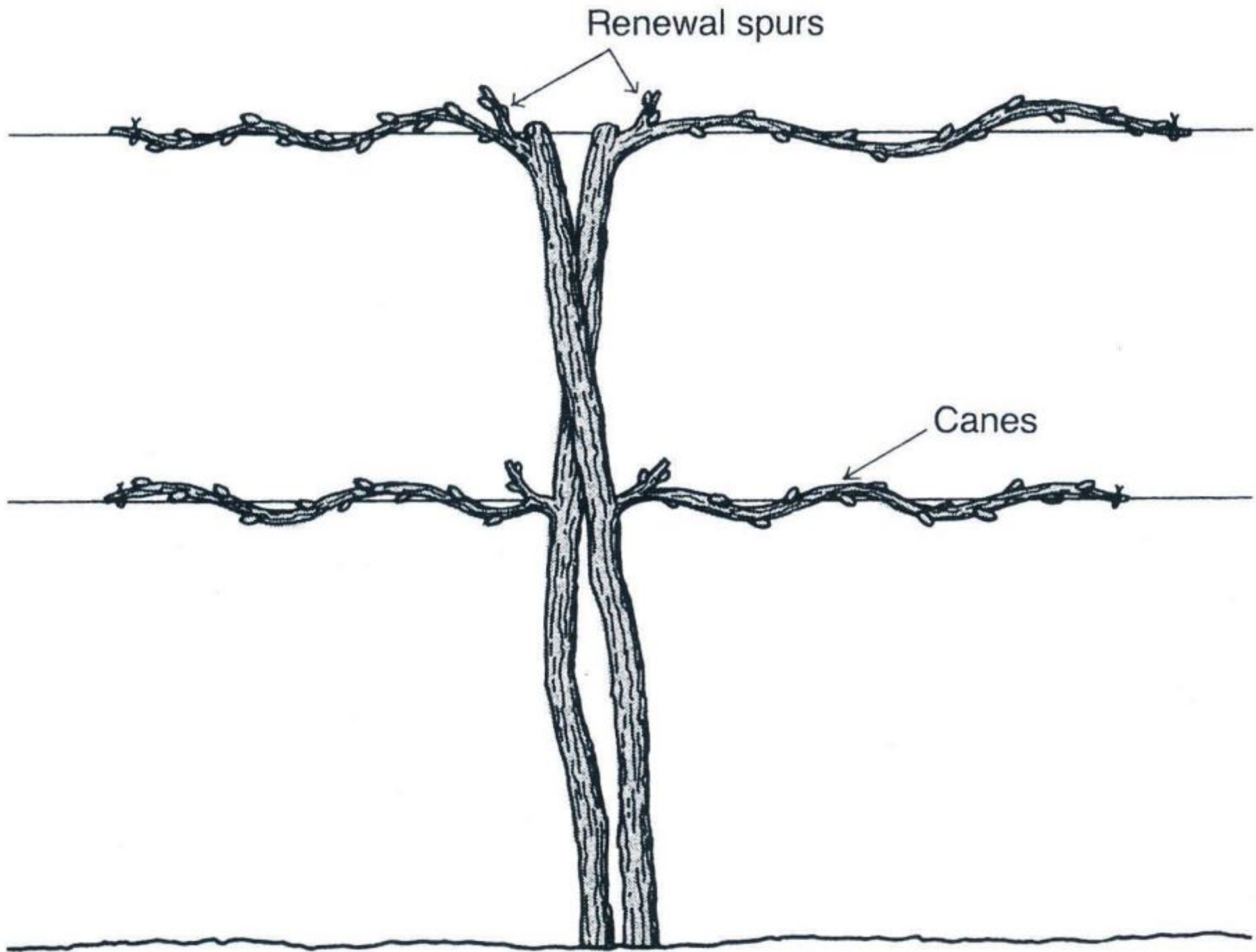
this is called "balance pruning" if you'd like to deep dive, there are formulas for each variety

not as effective for hybrids, which fruit on the first bud, so you're leaving a little bit more

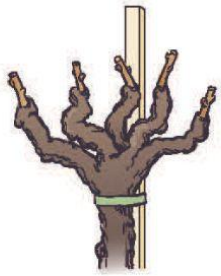
concord is usually about 40-70 buds

Renewal Zone

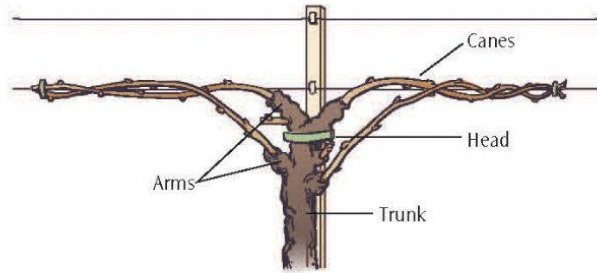
- this is how you set yourself up for good fruiting canes next season!
- this looks a little different in different pruning systems



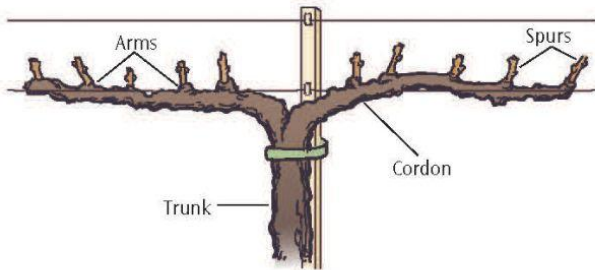
Other Structures for Pruning!



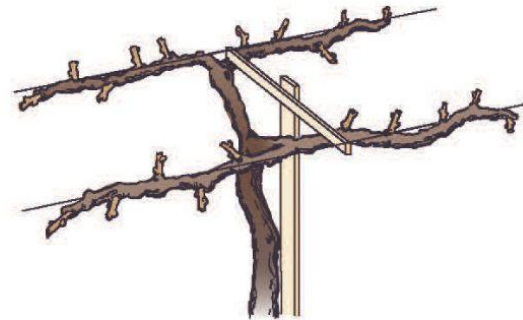
A head-trained vine with spur pruning



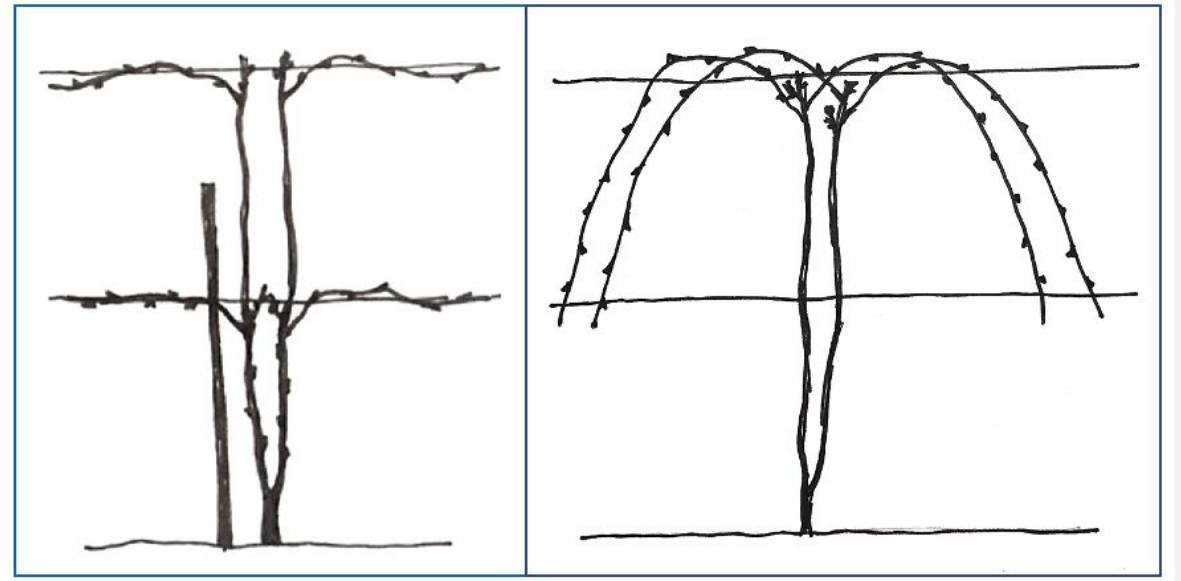
A head-trained vine with cane pruning



Bi-lateral cordon training with spur pruning



Quadra-lateral cordon training with spur pruning



Heading Cuts



Correct

Water runs off easily. Wound heals quickly



Wrong direction

Water will run onto bud causing rotting



Too close to bud

The bud may die



Too flat

Holds water which can rot bud



Too much stub

Die back occurs as wound doesn't heal easily. Infection can occur



Too large a wound

Infection enters wound easily

Pruning Neglected Grapes

- bring tape to mark the canes you want to keep (it gets confusing out there)
- prune all dead canes and old canes
- may have to cut old canes in sections



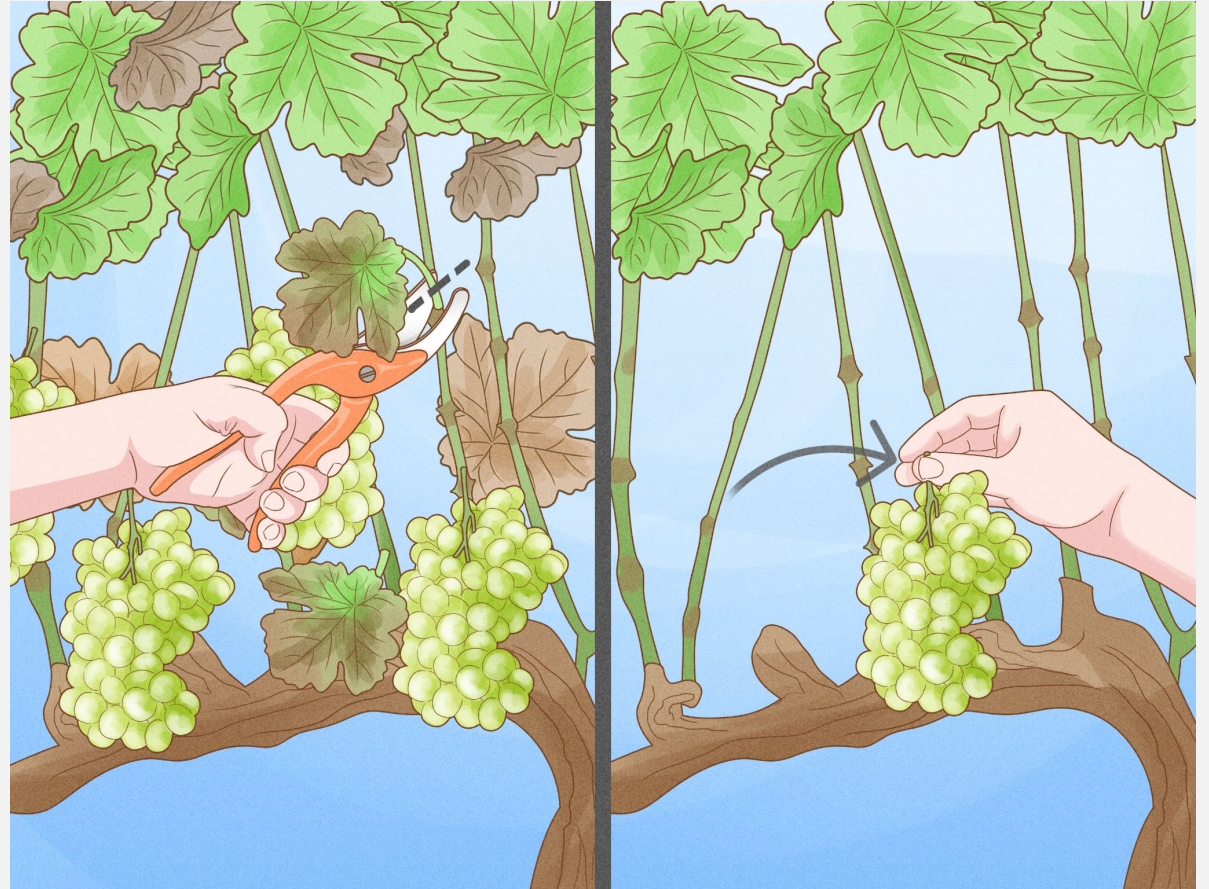
Dead/Live Canes



Other Maintenance

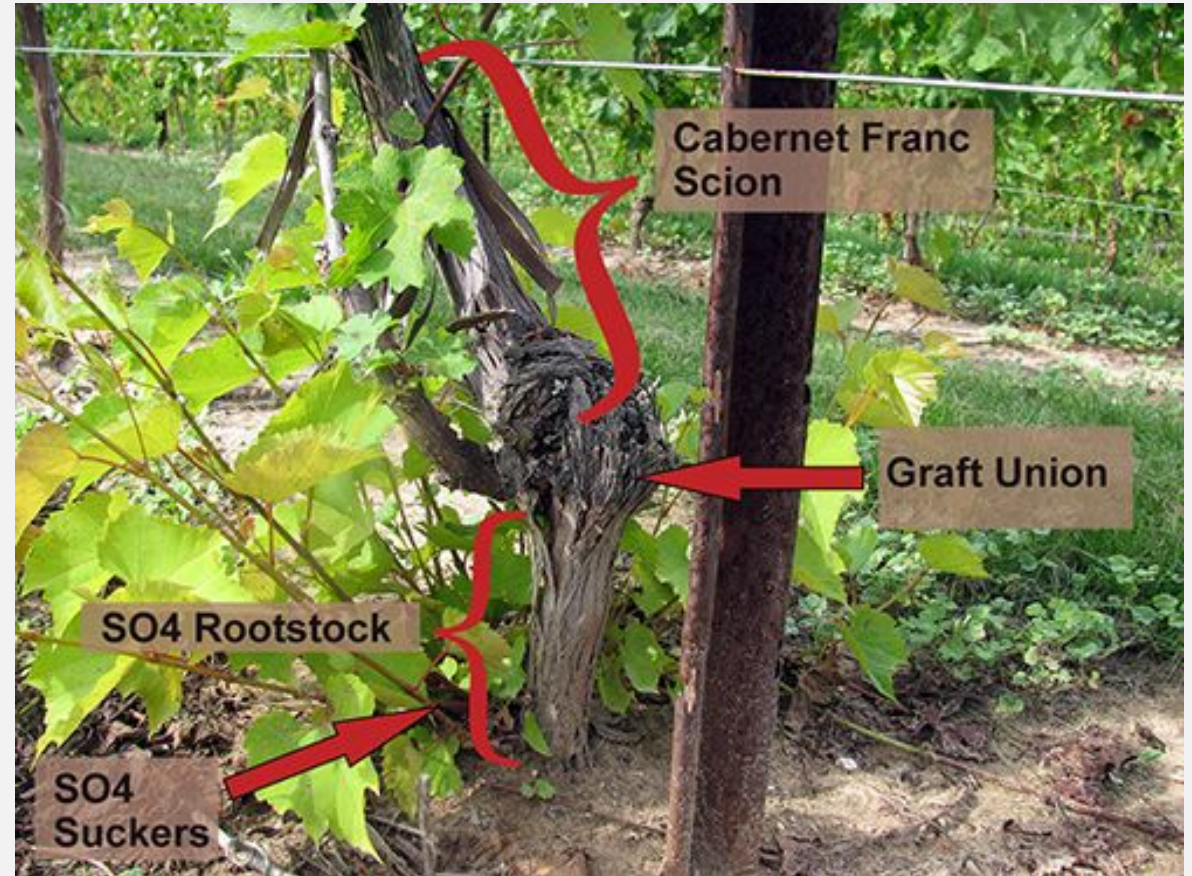
Summer Thinning

- remove secondary/tertiary shoots off of buds
 - come out at 90 degree angle instead of 45 and are usually smaller
- remove leaves around fruit clusters if you lack full sunlight and your vines are crowded



Remove root suckers

- especially on grafted varieties!
- but also on grapes that are pruned to a structure you like



Mulch

- Control for weeds!
- Mulching will help control weeds and retain water in soil
 - straw mulching in the winter can help protect tender varieties from cold

Grape Problems

Best Disease Solutions

1. Get Resistant Cultivars
2. Prune and maintain airflow/structure
3. Sanitize your vineyard
4. Spray if you like

Black Rot

- Fungus
- Attacks canes, vegetation, fruit, & tendrils
- most destructive in warm, humid temperatures
- If you notice it, immediately remove affected parts of plant
- Can apply fungicide



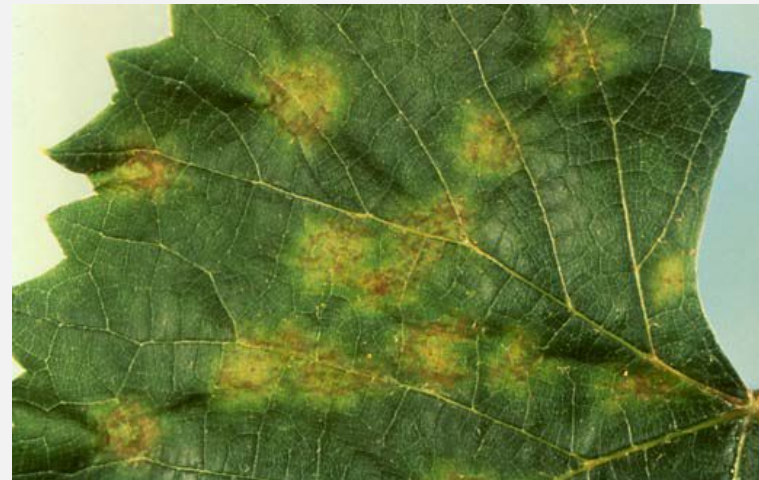
Powdery Mildew

- fungus
- cultural control is most important if gardening holistically
- early infection can rot/split grapes
- fungicide can curb an infection or horticultural oil after washing grape vines



Downy Mildew

- fungus
- cultural practices are best at prevention
- fungicides can be used



Pests

Japanese Beetles

- mostly feed on foliage
- chickens
- hand pick into soapy water
 - (pheromone traps may actually lure more beetles to your area)
- also attack raspberries, roses, and cherry trees
- beneficial control: parasitic wasps (similar support as pollinators)
- can also control with neem and milky spore (for next year's population)



Grape Flea Beetle

- spring, adults feed on buds
- summer/end summer, larvae feed on foliage
- prevention: sanitation, early detection
- can use insecticide



Resources

General Overview of Grapes: HO-45-W

<https://www.purdue.edu/hla/sites/yardandgarden/wp-content/uploads/sites/2/2016/10/HO-45.pdf>

On thinning grapes in summer:

<https://www.youtube.com/watch?v=TnPMztfK44>

Identifying grape problems:

https://www.canr.msu.edu/grapes/integrated_pest_management/diseases

Many, many videos on pruning!

https://www.youtube.com/watch?v=_WfR2tT4l-k