

North Carolina
Muscadine
GRAPE
Association



VIRTUAL MUSCADINE CONFERENCE 2021

Cultivars, Pruning, and Spring Production Chores

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Mark Hoffmann, NC State University

Cultivars

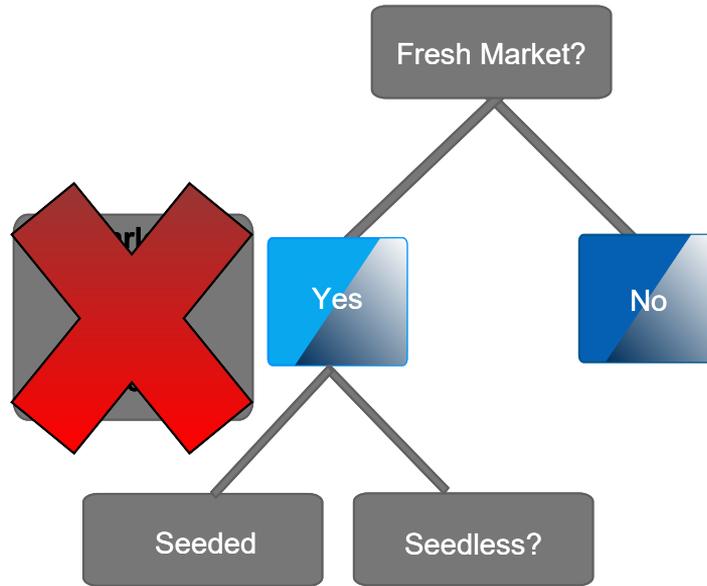
Pruning

Spring Production Chores

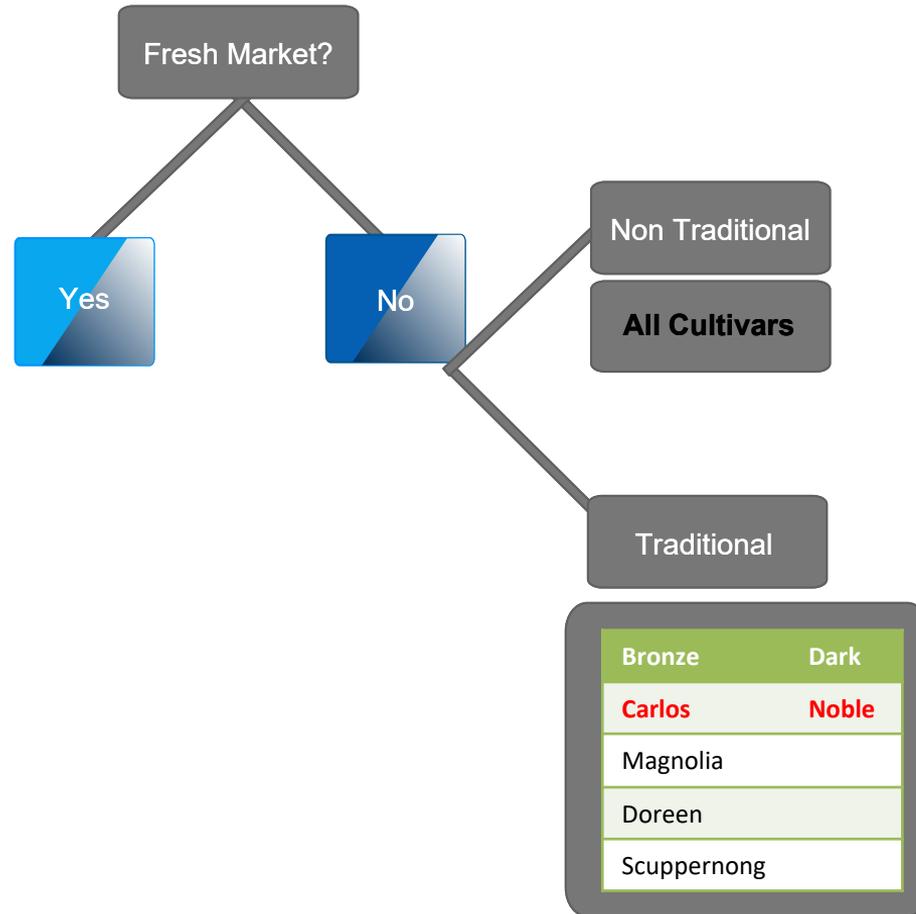


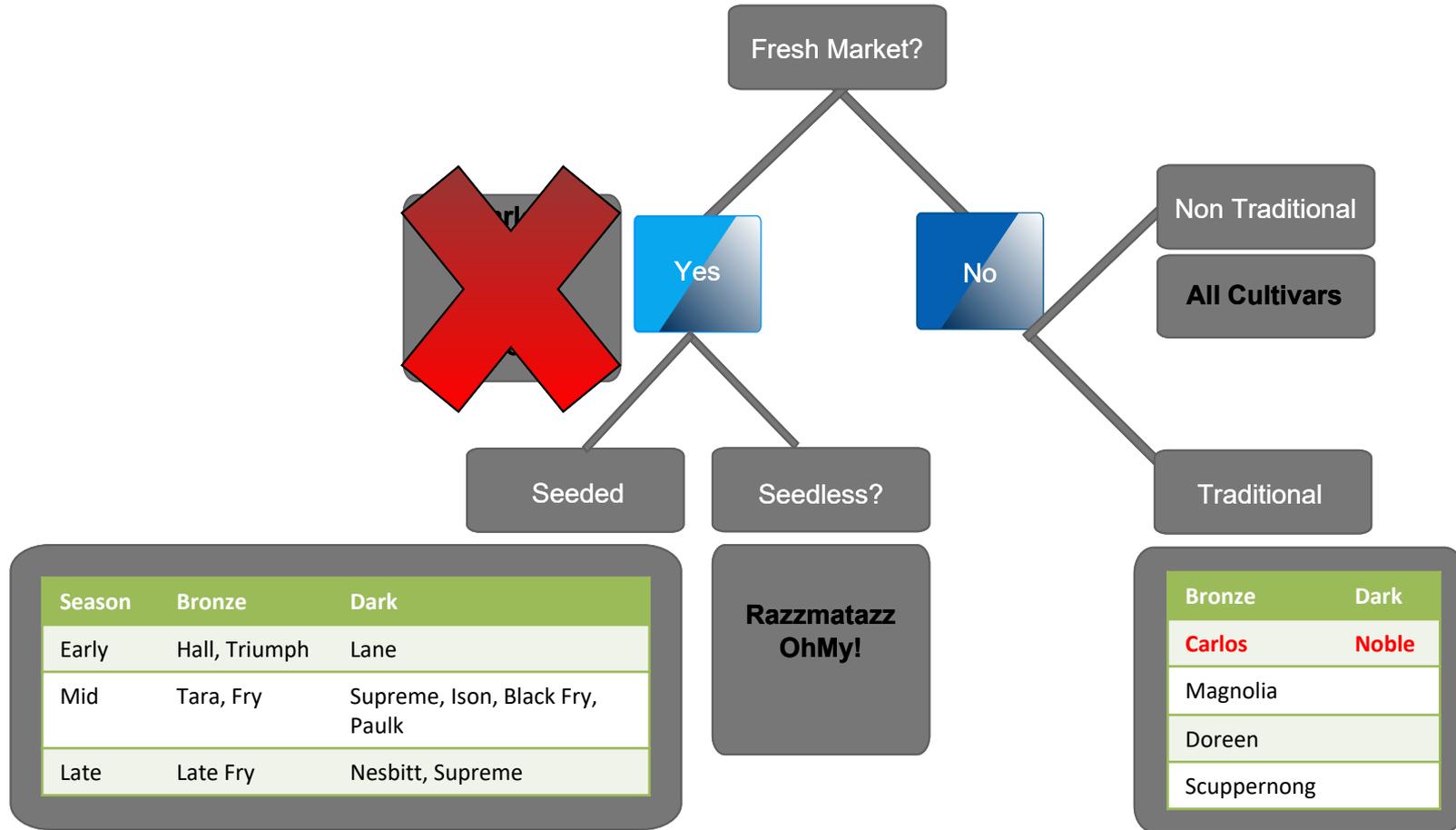
Cultivars

- The choice of cultivars is a market choice!
- You need to know your market before planting
- Do a market analysis!!
- Have a business model!!!!



Season	Bronze	Dark
Early	Hall, Triumph	Lane
Mid	Tara, Fry	Supreme, Ison, Black Fry, Paulk
Late	Late Fry	Nesbitt, Supreme





Don't sell wine/juice cultivars for fresh consumption

- **Wine/juice Cultivars:** High yields, high sugar, small berry size, wet picking scar, poor eating quality!
- **Fresh-Market:** large, firm, dry picking scar, high eating quality! Can also be used for wine/juice.

Photo
courtesy:
Dr. Patrick
Conner,
University
of Georgia



Dark Fresh-Market

Season	Cultivar	Flower type
Early	Lane	Self-fertile
Mid	Supreme	Female
Mid	Ison	Self-fertile
Mid	Black Fry	Female
Mid	Paulk	Self-fertile
Late	Nesbitt	Self-fertile

Bronze Fresh-Market

Season	Cultivar	Flower type
Early	Hall	Self-fertile
Early	Triumph	Self-fertile
Mid	Tara	Self-Fertile
Mid	Fry	Female
Late	Late Fry	Self-fertile

Bronze Fresh-Market

- **More prone to disease (esp. Late Fry)**
- **Can look less attractive in a shelf**

Processing Cultivars

Color	Cultivar	Flower type
Dark	Noble	Self-fertile
Bronze	Carlos	Self-fertile
Bronze	Doreen	Self-fertile
Bronze	Magnolia	Self-fertile



Photo courtesy:
Dr. Patrick Conner, University of Georgia

Table 2. Characteristics of evaluated muscadine cultivars. Seasonal fruit development can differ depending on location.

Cultivar	Type	Fruit Color	Fruit Size	Cold-hardy	Season
Wine and Juice					
Carlos	Self-fertile	Bronze	Small-Medium	+	Mid
Doreen	Self-fertile	Bronze	Small-Medium	+	Late
Magnolia	Self-fertile	Bronze	Small-Medium	+	Mid
Noble	Self-fertile	Dark	Small-Medium	++	Mid
Fresh Market					
Black Beauty	Female	Dark	Large	++	Early-Mid
Black Fry	Female	Dark	Large	++	Mid
Darlene	Female	Bronze	Large	-	Early-Mid
Early Fry	Female	Bronze	Large		Early
Fry	Female	Bronze	Large	++	Mid
Granny Val	Self-fertile	Bronze	Large		Late
Hall	Self-fertile	Bronze	Medium-Large	-	Early
Ison	Self-fertile	Dark	Medium-Large		Mid
Lane	Self-fertile	Dark	Medium-Large	-	Early
Late Fry	Self-fertile	Bronze	Large	++	Late
Nesbitt	Self-fertile	Dark	Medium-Large	-	Mid-Late
Oh My!	Self-fertile	Bronze	Medium, seedl.	?	?
Paulk	Self-fertile	Dark	Large	-	Mid-Late
RazzMatazz	Self-fertile	Pink/Red	Small, seedl.	-	All year
Summit	Female	Bronze	Medium	+	Early-Mid
Supreme	Female	Dark	Large	-	Mid
Tara	Self-fertile	Bronze	Medium-Large	-	Early-Mid
Triumph	Self-fertile	Bronze	Medium	+	Early

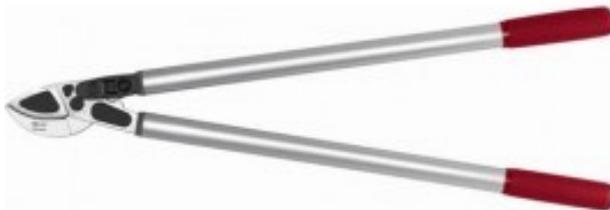
Muscadine Production Guide for the Southeast

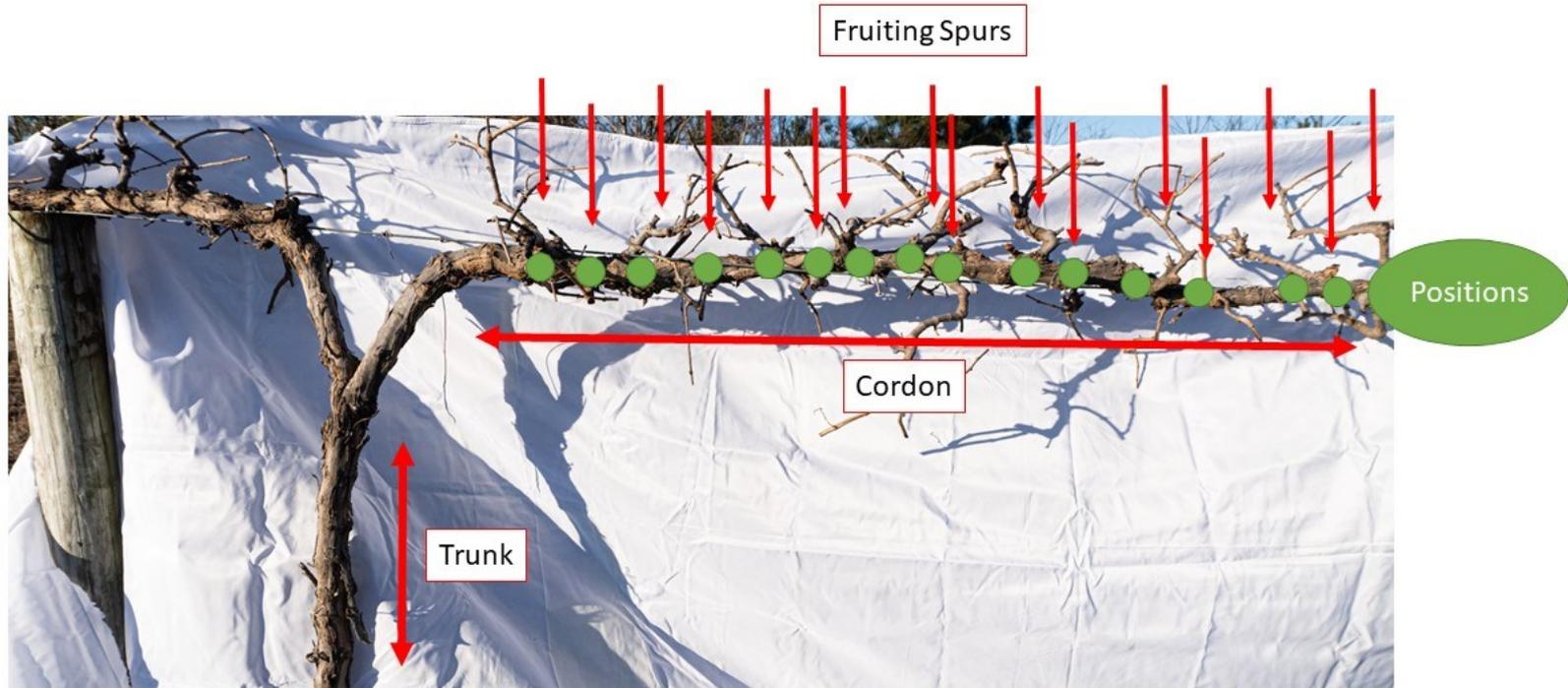
<https://content.ces.ncsu.edu/muscadine-grape-production-guide>

Pruning

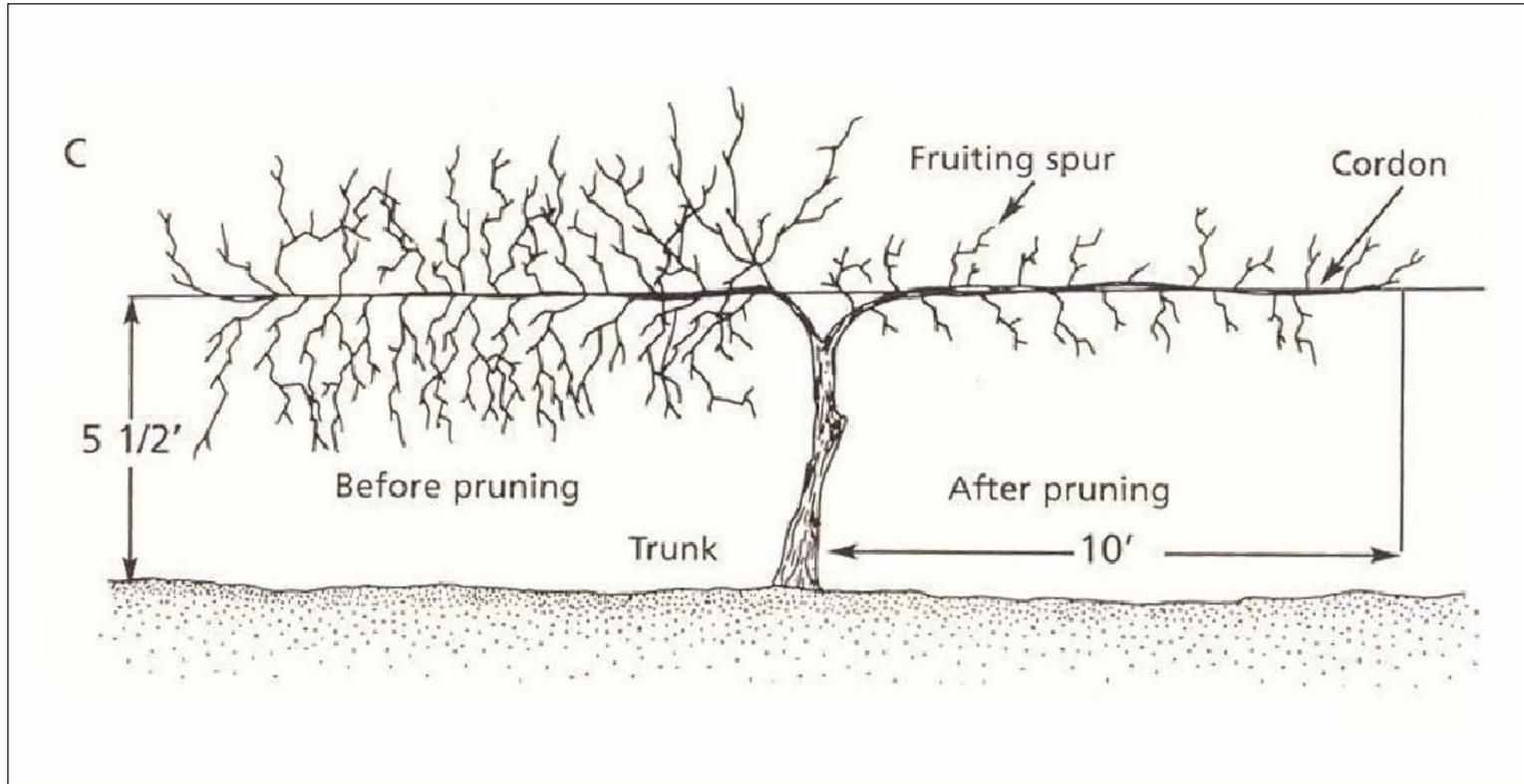


Photos by Emma Volk and Mark Hoffmann

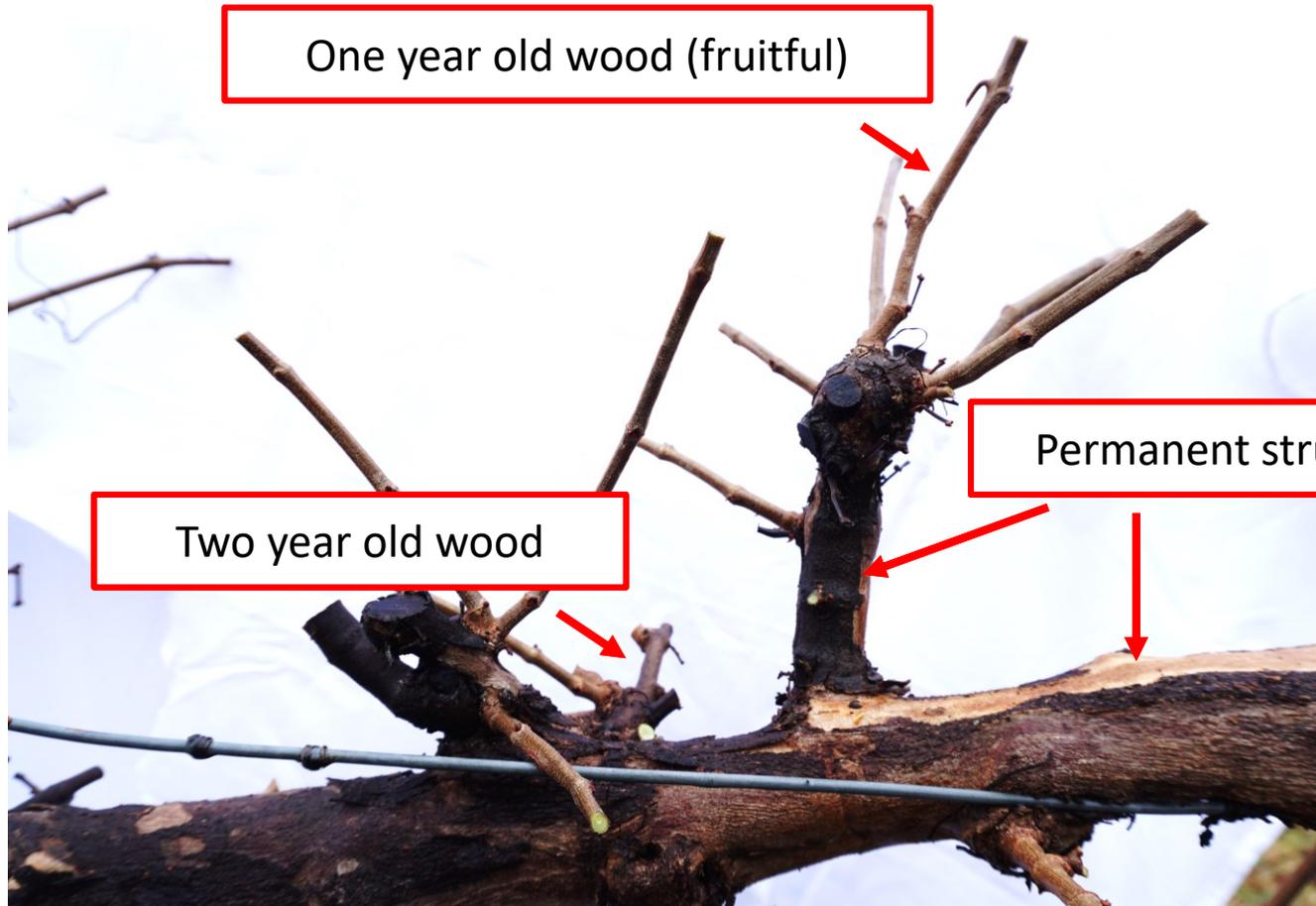




- Trunk: Structure from root system to wire
- Cordon: Arm along the wire
- Spurs: Structures established on positions along the cordon, bearing one-year old wood



Poling et al. (2016)



One year old wood (fruitful)

Two year old wood

Permanent structure

Pruning Goals

- Maintain fruiting positions
- Maintain permanent structures
- Remove dead and diseased wood
- Remove old fruit
- Balance vine (bud counts)

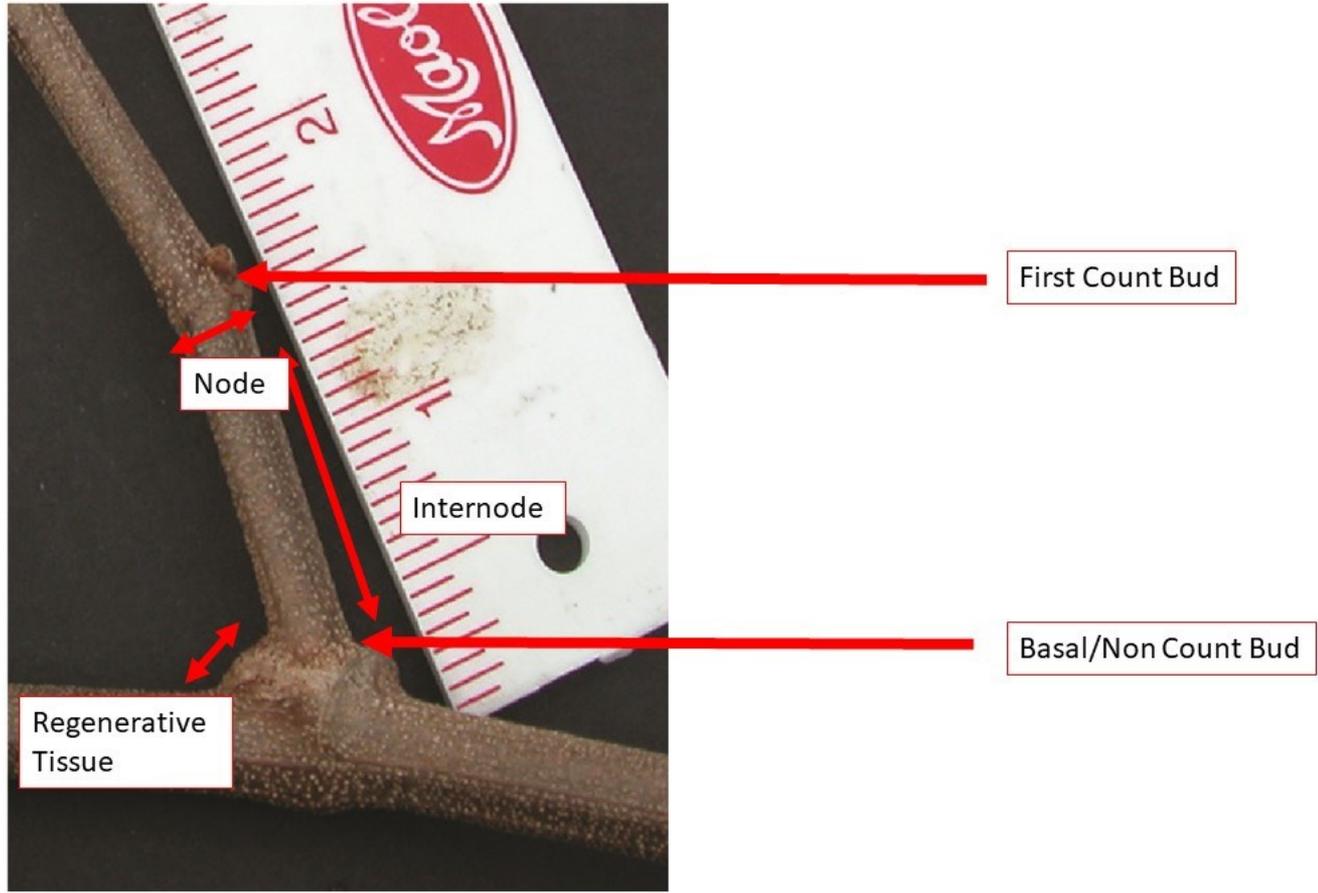
Pruning Goals

- Often we do both: Renovation (replace / remove permanent wood) and pruning (bud balancing on one-year old wood)

SPUR DEVELOPMENT



- **Keep positions and let spurs grow SLOWLY!**
- Keep one-year old wood on base of spurs, if they need to be replaced



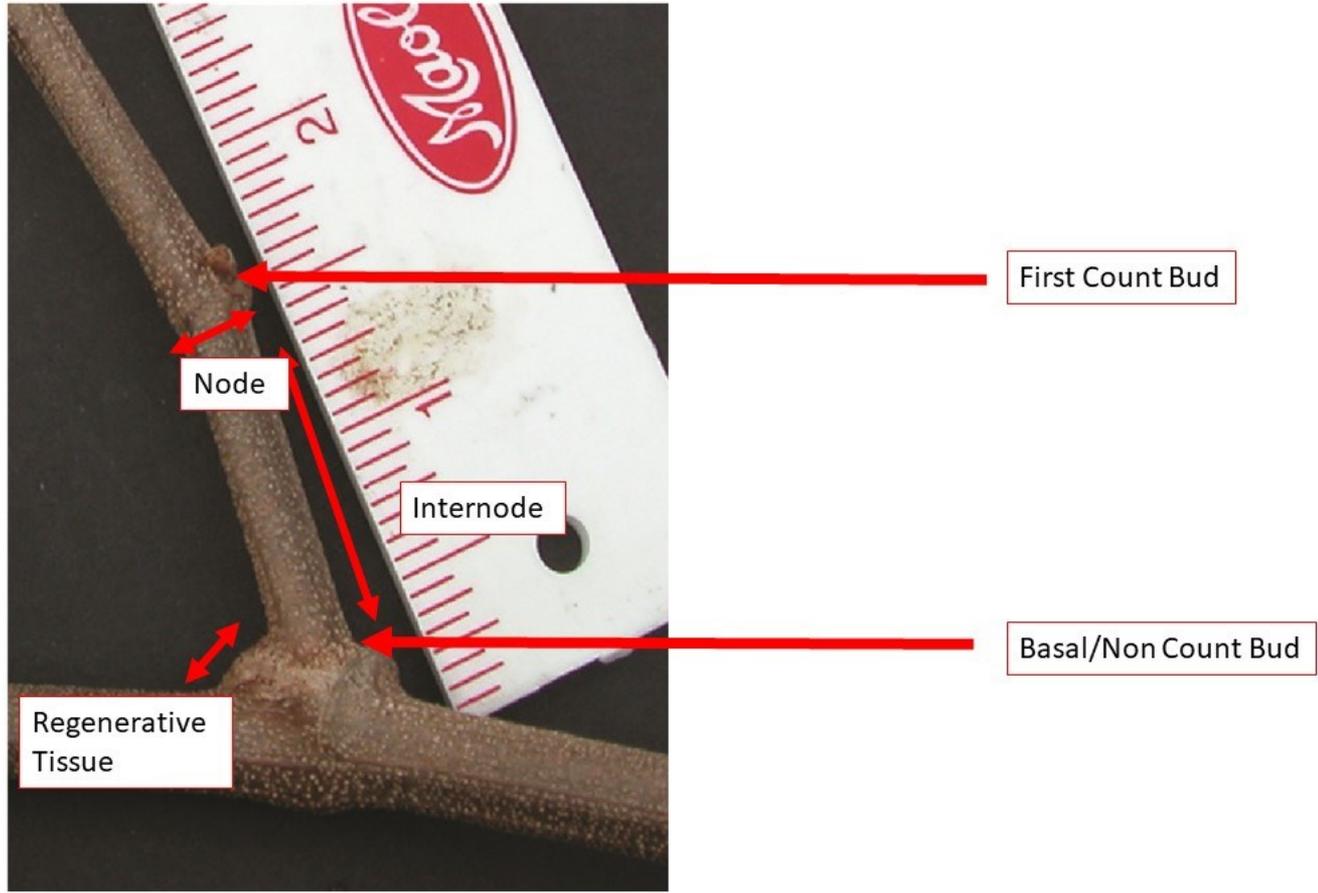


- Never cut through a node
- Make cuts through internode
- Leave length of wood related to the diameter of the cut.
- Healthy wood is brown, pencil thick. Internode are about 2 inches apart

Photo
Courtesy:
Barclay
Poling



Bud counts





- Low vigor means: Keep less buds
- High vigor means: Keep more buds



Vigor	Number of buds/foot of cordon	Number of buds/vine (20ft)	Typical Cultivar Examples
++	30-40	600-800	Carlos, Noble
+	20-30	400-600	Supreme

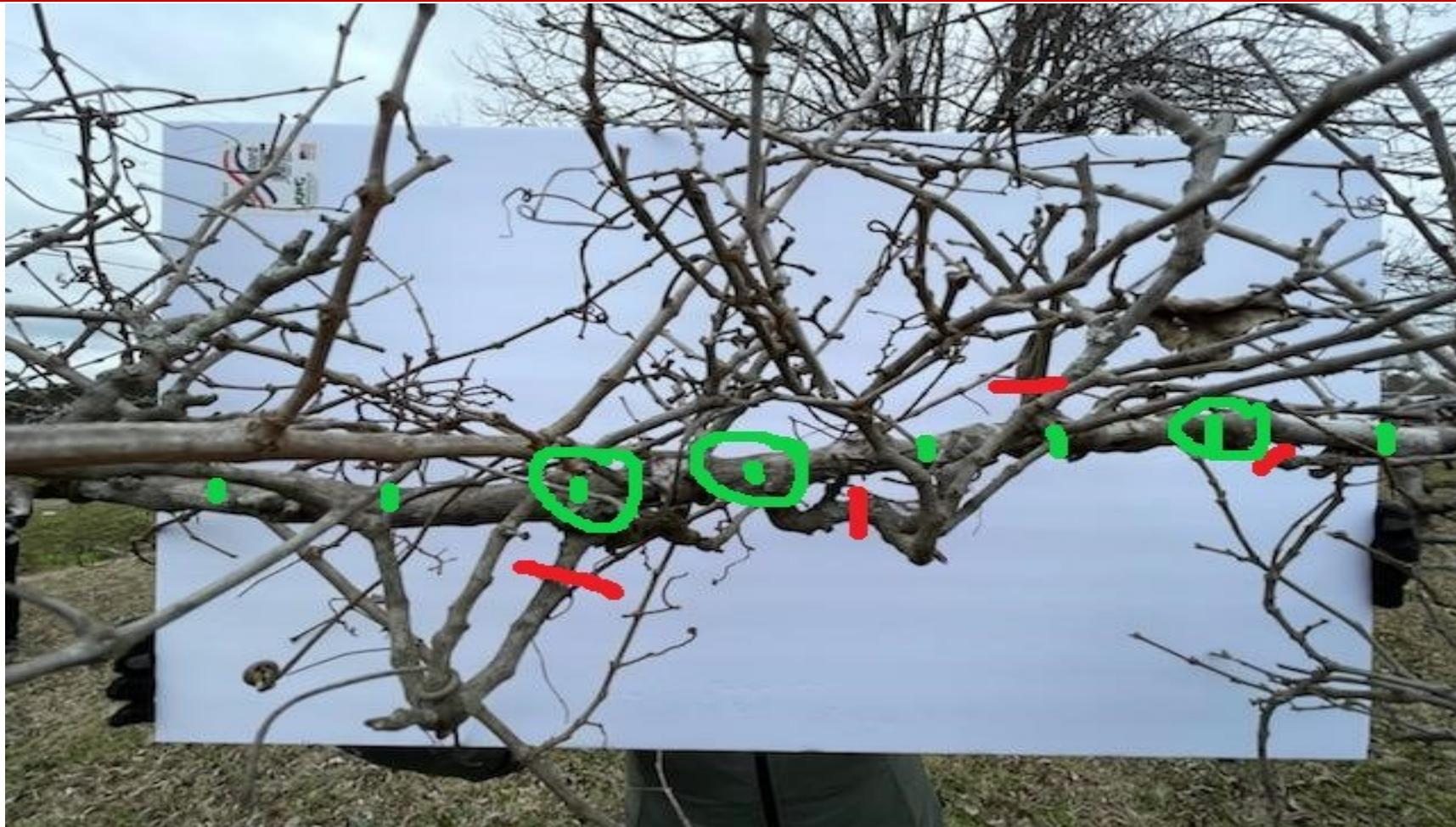


- Do I have to replace parts of the structure?
 - Vine Renovation (next chapter)

Removing dead wood and fruit is important

- In many cases, vine renovation cuts are important to remove dead wood
- However, the goal is eventually not to have to make a lot of those large cuts





Spring Production Chores



Spring (Mar-May)

- Early disease control
- Planting/Replanting
- Fertilization
- Weed control: Herbicides under vine
- Weed control: Frequent mowing
- Put vine-shelter ('grow tubes') back on the new plants

Spring disease and weed control

- EBDCs (e.g. Mancozeb or Manzate) are early season to control black rot, bitter rot, powdery Mildew etc. 66 days PHI!
- Weed control (3 years or older): Glyphosate + Simazine + Otyzalin; Karmex + Glyphosate;

Fertilization

- First fertilizers after bud break
- Depending on your region and soil conditions.

Other chores

- Planting after last freeze!!
- Vine shelter back on the vines.

<https://grapes.ces.ncsu.edu/>

<https://smallfruits.org/>

<https://content.ces.ncsu.edu/muscadine-grape-production-guide>



Thank You

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