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PERIMENT STATION

STATE FRUIT EX

Getting Started with Table Grapes



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Resource People

Thanks to:

Leslie Akers, Missouri State University

Dr. John Clark, University of Arkansas

Jackie Harris, GWI University of Missouri

Mars, Neptune, Jupiter, Faith, Hope, Gratitude, Joy, Marquis
under evaluation @ HARC in New Franklin, MO.

Mike Rippelmeyer, 4M Vineyards and Farms

Dr. Dean Volenberg, GWI University of Missouri

Table Grapes in Missouri

- Can table grapes be profitable for you?
- Challenges are high cost of establishment, long time to break even, labor availability and wet/humid climate
- California model not an option
- Local production for local markets best approach with most potential

Economics of Midwestern Grape Production

Dr. Bruce Bordelon, Purdue

<https://ag.purdue.edu/hla/fruitveg/Documents/GrapEcon.pdf>



Why Missouri Table Grapes?

- Local food movement
- Better flavor
- New tastes and textures
- Multi-use grapes for jelly, juice, home wine makers
- Vines and vineyards might add interest to entertainment farming, sales area



Grocery store green

Thompson Seedless
Grown in California



Ripe with more aroma and flavor

Table Grape Characteristics

- Seedless or seeded
- Slipskin or non
- Resistant or susceptible to cracking
- Winter Hardiness
- Productivity
- Disease resistance
- Grapes are harvested all at once – long term storage not worked out for Midwest cultivars
- If you want to spread the harvest out, need to plant early, mid and late season cultivars

MSU fruit sales

- Recent increased interest in grapes for fresh eating
- Usually buy 2 – 3 pounds at a time for fresh use
- Seeded or seedless
- If buying for jelly, usually 10 pounds or more
- Sell at about 50 cents/pound
- Home winemakers often ask if we sell juice

4M Vineyards – Successful Model

- 3 farms, 20 ac grapes with 3 ac in seedless
- Concord, Mars, Fredonia, Sunbelt
- Grapes for fresh eating, juice, jelly and home winemaking
- Grape plants and cuttings
- Value added products
- Other fruits and vegetables
- Located on I-44 (mile marker 199.9)
- “Concord Grape Pies!”



4M story

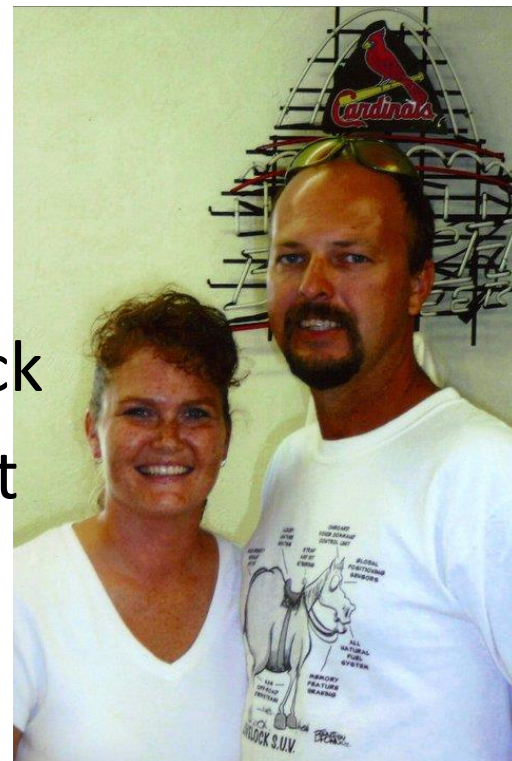
- Historically Concord for juice – Concord Corridor
- Produces grapes and buys from other growers
- Diverse markets – Soulard Farmers' Market, wineries, juice, fresh fruit
- Some mech harvest of Concord
- Diverse products – juice, jelly, jam, grape pie, home winemaking supplies
- Trends – young like seedless grapes, older folks like Concord.



Mike saw trend toward seedless in the early 90s. Twenty years ago, there were 22 stands in the grape corridor, now there are only 3. Trend is moving away from Concord.

4M Advice to New Growers

- Consider cost of establishment
- Consider each acre consumes 150 man hours per season
- Consider you are 4 years from a paycheck
- Have a marketing plan BEFORE you plant
- Don't plant too many acres at one time
- Mars is a good seedless cultivar and Concord is a good seeded cultivar (old standby) to get started with.
- Never put all your eggs in one basket with just one cultivar.



Gallery of Grapes

- Clusters

- <0.25 lb. (<114 g.) = small
- 0.25 – 0.5 lb. (114 – 227 g.) = medium
- 0.5 - >0.85 lb. (227 - >386 g.) = large

- Berries

- <1.4 g. = small
- 1.4 – 2.0 g. = medium
- 2.0 - >3 = large

Early mid and late season descriptions:
Descriptions relative from different regions
from Arkansas to Wisconsin.

- Yield*

- < 4 tons per acre or <15 lbs./vine = low
- 4 – 6 tons per acre or 15 – 22 lbs./vine = moderate
- > 6 tons per acre or > 22 lbs./vine = high

* *lbs./vine based on an 8 X 10 foot vine spacing*

Concord



- Ephraim Bull 1849
- Seeded, multi-purpose
- Slipskin
- Labrusca flavor
- Mid season
- Med clusters
- Large blue black berries
- Thick skin, crack susceptible
- Moderate to high yield
- Disease and bird resistant
- Winter cold hardy

Sunbelt



- Arkansas
- Seeded, juice and jelly
- Slipskin
- Labrusca flavor
- Mid season
- Small clusters
- Large blue black berries
- Thick skin
- Yield moderate
- Moderate disease and bird resistant
- Moderate winter cold hardy
- Ripens evenly in warmer areas

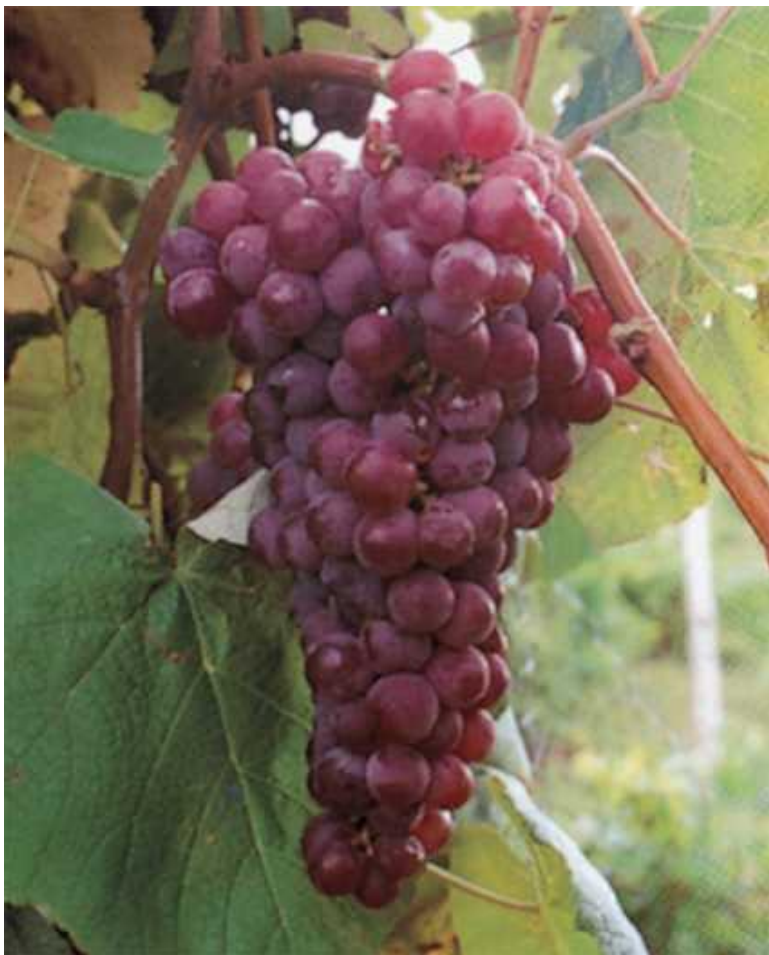
Mars*



Dr. John Clark, U of Arkansas

- Arkansas 1984
- Seedless table
- Slipskin
- Mild Labrusca flavor*
- Early season
- Medium clusters
- Medium- large berries
- Thick skin, crack resistant
- Yield high
- Disease and bird resistant
- Winter cold hardy (-15F)
- One of the best consistent performers @ New Franklin MO (Harris)

Reliance



Dr. John Clark, U of Arkansas

- Arkansas 1983
- Seedless table
- Tender slipskin
- Best flavor
- Early season
- Medium - large clusters (CT)
- Medium pink berries
- Thin Skin
- Yield moderate
- Susceptible to cracking, birds, coloring up, diseases
- Winter cold hardy (-15 to -25F)
- Long storage potential

Jupiter



Dr. John Clark, U of Arkansas

- Arkansas 1999
- Seedless table
- Non-slipskin, edible, med. thin
- Labrusca and Muscat flavor*
- Early season (late July in WC Ark)
- Medium clusters, may require cluster thinning
- Large, semi-crisp berries
- Resists cracking (some in wet years)
- High yield
- Disease
- Susceptible to downy mildew (winter injury assoc), June beetles
- Winter cold hardy -15 - 20F (<Mars, Reliance; >Inspiration)

Neptune*



Dr. John Clark, U of Arkansas

*Neptune is adequate but some don't
Care for the tough skin. (Harris)

- Arkansas 1998
- Seedless table
- Non-slipskin, edible thick skin and firm texture
- Fruity flavor*
- Late season (late August AR)
- Large Clusters
- Medium berries
- Resists cracking
- Moderate yield
- Moderate Winter Hardiness
- One of the best consistent performers @ New Franklin MO (Harris)

Faith*



Dr. John Clark, U of Arkansas

One of the best consistent performers
@ New Franklin and HARC (Harris)

- Arkansas 2012
- Seedless table
- Non-slipskin
- Flavor neutral
- Early season (first of the Inspiration series) complements Jupiter
- Medium clusters
- Large berries
- Edible skin and crack resistant
- Thin skin vulnerable to SWD (Harris)
- Moderate yield
- Winter cold hardiness less than Jupiter. Hope and Faith > cold hardy than Joy and Gratitude (Strang, KY)

Hope



Dr. John Clark, U of Arkansas

- Arkansas 2012
- Seedless table
- Non-slipskin
- Light fruity
- Mid season (mid August in AR, but stores till early Sept)
- Large clusters
- Large berries
- Crack resistant
- Consistently high yield
- Winter cold hardiness less than Jupiter. Hope and Faith > cold hardy than Joy and Gratitude (Strang, KY). Hope, Gratitude, Joy winter injury in New Franklin -18F. (Harris, MO)

Joy



Dr. John Clark, U of Arkansas

- Arkansas 2012
- Seedless table
- Non-slipskin
- Fruity flavor*
- Midseason (Aug 10-15 WC AR)
- Large clusters
- Large berries
- Thin skin, crack resistant
- Moderate to high yield
- Winter cold hardiness less than Jupiter. Hope and Faith > cold hardy than Joy and Gratitude (Strang, KY). Hope, Gratitude, Joy winter injury in New Franklin -18F. (Harris, MO)

Gratitude



Dr. John Clark, U of Arkansas

- Arkansas 2012
- Seedless table
- Non-slipskin
- Neutral flavor – grocery store
- Late season (near Neptune)
- Large clusters
- Large berries
- VERY thin skin, crisp texture and crack resistant
- Moderate yield
- Winter cold hardiness less than Jupiter. Hope and Faith > cold hardy than Joy and Gratitude (Strang, KY). Hope, Gratitude, Joy winter injury in New Franklin - 18F. (Harris, MO)

Marquis



- Cornell NY, 1996
- Seedless table
- Slipskin
- Fruity to Labrusca
- Midseason
- Large clusters
- Large berries
- Tough skin and somewhat crack resistant
- Moderate to high yield
- Susceptible to black rot and phomopsis
- Moderately winter cold hardy (<Reliance)
- Fruit storage only 1 week at best

Canadice



- Cornell NY
- Seedless table
- Slipskin
- Light labrusca flavor
- Early season
- Small-medium clusters
- Small-medium berries
- Edible thin skin and prone to cracking
- High yield
- Moderately winter cold hardy (< = Reliance)
- Cluster thinning recommended
- Good where Concord will grow
- Good storage potential

Vanessa



- Ontario
- Seedless table
- Flesh firm and crisp texture
- Mild fruity flavor
- Early-mid season
- Medium clusters
- Small-medium berries
- Resists cracking, clinging skin
- Winter cold hardy (probably hardest of the seedless table grapes)
- Good storage life

Buffalo



Dr. Dean Volenberg, UMC

- Geneva NY
- Seeded juice
- Slipskin
- Spicy Labrusca flavor
- Earlier than Concord
- Medium clusters
- Medium berries
- Medium thick skin
- High yield
- Susceptible PM
- Winter cold hardy

Catawba



- Early 1800s
- Seeded multi-purpose
- Slipskin
- Spicy labrusca flavor
- Very late season
- Medium clusters
- Medium – large berries
- Thick skin and crack resistant
- High yield
- Susceptible DM
- Winter cold hardy

Steuben



- New York 1947
- Seeded table
- Slipskin
- Spicy sweet flavor
- Late season
- Medium clusters
- Large berries
- Very disease resistant
- Winter cold hardy -10+F

Fredonia



www.hort.cornell.edu

- New York 1927
- Concord type
- Slipskin
- Not as well flavored as Concord
- Season is 2 weeks earlier than Concord
- Medium – large clusters
- Large berries
- Tough, thick skin
- DM susceptible
- Yield may approach Concord
- Winter cold hardy (-15 – 20F)

Trollhaugen



- Elmer Swenson WI 2000
- Seedless table
- Thin skinskin
- Mild Concord-like flavor
- Early season but can hand
- Small clusters
- Small to medium berries
- Susceptible to cracking
- Good disease resistance
- Very Winter cold hardy -38F

Somerset



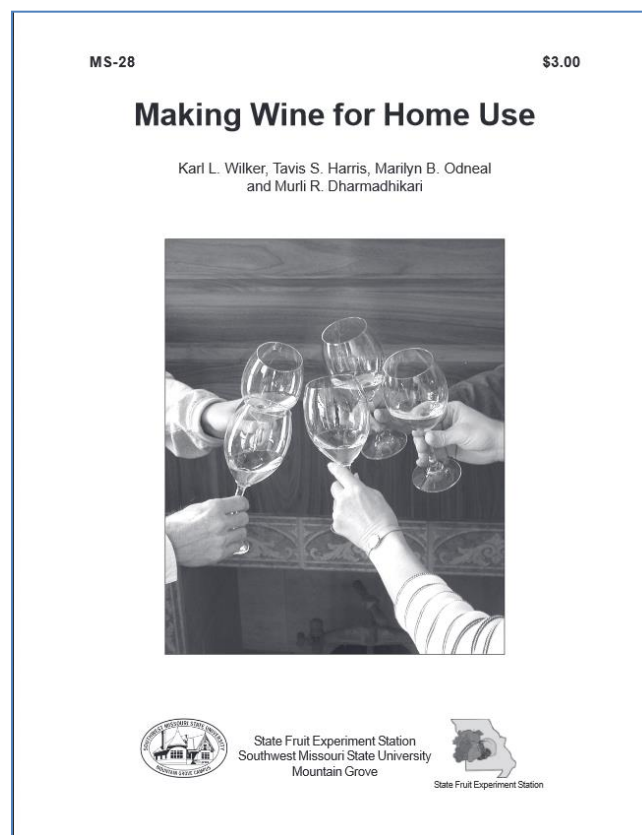
Dr. Dean Volenberg, UMC

- Elmer Swenson WI 2002
- Seedless table
- Adherent skin
- Strawberry flavor
- Early season
- Small – medium clusters
- Medium berries
- Susceptible to DM
- Very winter cold hardy -30F

Home Winemakers

- If you wish to sell grapes or juice to home wine makers, you might consider planting some wine grapes or multi-purpose grapes.
- Acid may be too low in table grapes to make good wine.
- Home wine workshop in Mountain Grove in July, 2016

- <https://mtngrv.missouristate.edu/assets/publications/MS28MWFHUweb.pdf>



Growing grapes

- Pre-plant preparation and trellis construction
- Plant in Spring
- Training years 1-2; first crop in year 3
- Canopy management – some practices specific to table grapes – GA, girdling, brushing to improve berry size
- Insects and diseases – pesticide sprays
- Birds
- Hand harvest
- Dormant pruning

pre-plant

- Site selection
- Soil analysis
- Row orientation
- Pre-plant prep
- Trellis installation
 - Height of trellis
 - In-row and between row vine spacing
 - End of row turning radius
- Irrigation?



air and water drainage

- Cold air drainage
- Internal water drainage
- Surface water drainage
- Berms?

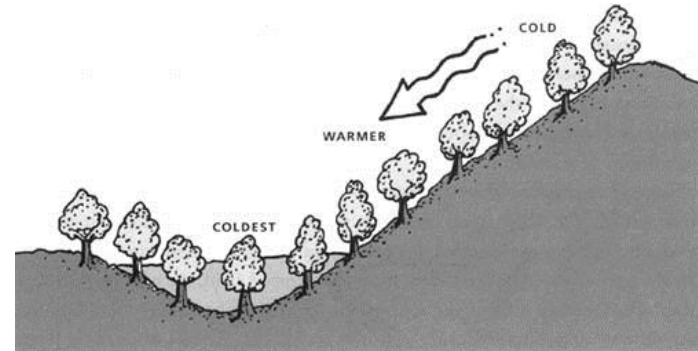


Photo source: U of Vermont



planting new vines, early care of established vines, pest management (spring)



canopy management flowering, fruit set and veraison (spring and summer)



continue canopy and pest management



harvest (Late July – October in Southern Missouri)



fall



pruning late fall, winter, early spring



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