



# Hybrid Varietal Winemaking: Cellar Production Methods

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# Introduction:

- ▶ BSc Biology, Univ. Missouri – Columbia 1997
- ▶ MSc Viticulture & Enology, UC Davis 2001
- ▶ Napa Valley, Sonoma Mountains, Central Valley
- ▶ Republic of Malta – Enologist
- ▶ Virginia – Winemaker, Vineyard Manager
- ▶ September 2017 – Burrus Wine Consulting LLC
- ▶ 20 years in the industry

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# Development of hybrids

- ▶ Original hybrids developed to address phylloxera
- ▶ Modern hybridization focuses on other issues
  - ▶ Cold hardiness
  - ▶ Pierce's Disease resistance
- ▶ Ancillary benefits of hybridization
  - ▶ High yield
  - ▶ Disease resistance
  - ▶ More acidity
    - ▶ Perfect for continental climate with war night time temperatures

# Good harvest / fermentation practices

- ▶ Ripe fruit
  - ▶ Proper fruit chemistry
    - ▶ TA/pH
- ▶ Managing hydrogen sulfide (H<sub>2</sub>S)
  - ▶ Yeast nutrition
    - ▶ Low/no H<sub>2</sub>S producing yeast
- ▶ Fermentation management
  - ▶ Proper vessels
    - ▶ Heat management
      - ▶ Remove / add heat
- ▶ Barrel considerations

# Good harvest / fermentation practices

- ▶ Inert gas
  - ▶ Argon
  - ▶ Nitrogen
  - ▶ Carbon Dioxide
- ▶ Wine surfaces
  - ▶ Barrel topping
  - ▶ Tank surface monitoring
- ▶ Chemical analyses
  - ▶ Free SO<sub>2</sub>
  - ▶ Volatile acidity

# Norton

- ▶ Parentage uncertain
  - ▶ *V. aestivalis*, *V. vinifera*, *V. labrusca*
- ▶ Small, loose clusters
- ▶ Susceptible to Downy Mildew
- ▶ Reduced fruitfulness from spur pruning
  - ▶ Cane prune to renew an arm
- ▶ Traditionally grown on Geneva Double Curtain (GDC)
- ▶ Can train shoots to grow up – Lyre
- ▶ Cannot spray Sulfur or Copper sulfate
- ▶ Late ripening
  - ▶ Typically last to get harvested



# Norton

- ▶ Intensely colored juice
  - ▶ Red juice / wine from whole-cluster-pressed fruit
- ▶ Very little tannin
- ▶ Wines meant for aging benefit from tannin addition
  - ▶ Tannin powder
  - ▶ Oak alternatives
    - ▶ Mesh bag of oak cubes
  - ▶ Barrels
    - ▶ American oak
  - ▶ Blending
- ▶ Strange acid composition
  - ▶ Mostly malic acid
    - ▶ Risk of excessively high pH after malolactic fermentation
    - ▶ Can taste excessively acidic if wine is dry (and ML blocked)



# Chambourcin

- ▶ Highly productive vine
- ▶ Dark red wine
  - ▶ compared to East Coast *V. vinifera*
- ▶ Lacks the “foxy” character of native varieties
  - ▶ But also lacks the fruit character of *V. vinifera*
- ▶ Responds well to experimentation with oak
- ▶ Also high in acidity and low in tannin
- ▶ Slight black pepper character when made in absence of oak





# Vidal Blanc

- ▶ Hybrid of Trebbiano and another hybrid
- ▶ Very productive
  - ▶ Often the most productive variety in the vineyard
- ▶ Large clusters and berries
  - ▶ Heavy clusters that hang down and are susceptible to sun burn



# Vidal Blanc

- ▶ Thick skins
- ▶ Aromatic – Sweet Tarts
- ▶ Plenty of acidity
  - ▶ Good variety for bottling with residual sugar
- ▶ Has tendency to lose vibrancy and freshness soon after fermentation
  - ▶ Lots of inert gas
  - ▶ Stirring of fine lees
  - ▶ Retain residual CO<sub>2</sub>
  - ▶ Early bottling
- ▶ Tank fermentation
- ▶ Good to blend with other varieties that need focus / aroma

# Seyval Blanc

- ▶ Hybrid of two hybrid parents
- ▶ Early ripening
  - ▶ Often the first variety to be harvested
  - ▶ Doesn't produce a lot of sugar
- ▶ Simple citrus, fruit-forward aromas
- ▶ Less aromatic than Vidal Blanc
  - ▶ Winemaking tends to show more in less aromatic varieties like Seyval
- ▶ Not receptive to aging at the winery
  - ▶ Freshness / vibrancy is key quality parameter, goal
  - ▶ Early bottling
- ▶ Tank fermentation or low-aroma impact barrels
  - ▶ Tannin addition can improve texture / freshness
  - ▶ Tendency to resemble Chardonnay due to older barrels





# Chardonel

- ▶ Seyval Blanc x Chardonnay hybrid
- ▶ Pierce's Disease resistant
- ▶ Productive vine
- ▶ Later ripening than Seyval Blanc
- ▶ Character similar to Chenin Blanc
- ▶ Amenable to wide range of winemaking styles
  - ▶ Barrel and tank fermentation
  - ▶ Hyper-oxygenation
    - ▶ Popular with Chardonnay
- ▶ Barrel considerations
  - ▶ Old barrels are rarely a positive attribute to a wine



# Traminette

- ▶ Hybrid of Gewurztraminer and another hybrid
- ▶ Defining characteristic - intense aroma
- ▶ Crisp, fruit-forward wine
- ▶ Strive for clean, focused wine
  - ▶ Moderate-high acid
  - ▶ Low pH
  - ▶ Tannin
    - ▶ Seed tannin
- ▶ Tank fermentation
  - ▶ Low temperature (~60° F)
- ▶ Consider residual sugar



*Thank you*

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