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Welcome to
The New Grape Growers Workshop for Maryland and the Mid-Atlantic

Joseph A. Fiola, Ph.D.
Specialist in Viticulture and Small Fruit
New Growers Workshop Speakers

Shannon Dill
Extension Educator - UME - Talbot County

David Myers
Extension Educator - UME – PG/AA County

Ben Beale
Extension Educator - UME - St. Mary's County
New Grower Workshop

Booklet
- Program
- Hardcopy of Point Presentations
- “Timely Viticulture” (email topical) Examples
- Program Evaluation

Supplemental Materials
  - $70 ($95 direct from NREAS)
- Grape IPM Scouting Handbook - $23
- Beneficial Insect Handbook - $15
- MGGA Pamphlet and Membership form
- MWA Booklet
New Grower Workshop Objectives

• Replace romanticism with objective reality!
• Control irrational exuberance! Substitute with an intensive, measured, thoughtful, information-based approach
• Give a real sense of the economic and time demands of vineyard ownership
• Provide a very superficial but thorough overview of what is involved with starting a winegrape vineyard
• Alert you to some of the hazards of developing a vineyard
• Offer additional resources that can help you to succeed

Adopted from Mark Chien, Wine Grape Agent PSU
Overview of the Maryland, US, and Global Wine Industry

Joseph A. Fiola, Ph.D.
Specialist in Viticulture and Small Fruit
Grape Market Overview

U.S. VS. The World (2011)

- 3rd in world in grape Production (9.9%)
  - after Italy, Spain
- 6th in world in vineyard acreage (2.2%)
- 4th in world in wine Production (10.6%) (up 5.6%)
  - after Italy, France, Spain
  - US production = 752,4310,000 g
- 7th in world in exports
- 1st in World in Wine Consumption (13.5% - up 14%)
  - ranks 60th per capita! (10.46 liters/person/year - up 14%)
  - 30% of wine sold in US is imported
Grape Market Overview

U.S. Wine Industry

- Over 5,000 bonded wineries across the U.S.
- Wineries in every US state.
- California = 90% of US production.
- Consumption Trends/Factors
  - Boomers?
  - Gen X/Y/Z?
  - Wine health benefits
Grape Market Overview

Wine Sales in the U.S.

Volume of U.S. and foreign wines entering U.S. distribution

Source: Wine Institute
# Grape Market Overview

## Number of Wineries (75-2012)

<table>
<thead>
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<tr>
<td>MD</td>
<td>4</td>
<td>15</td>
<td>12</td>
<td>49</td>
<td>62</td>
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<tr>
<td>DE</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<td>32</td>
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<td>149</td>
<td>142</td>
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<td>PA</td>
<td>14</td>
<td>52</td>
<td>52</td>
<td>159</td>
<td>166</td>
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<tr>
<td>VA</td>
<td>34</td>
<td>46</td>
<td>210</td>
<td>222</td>
<td></td>
</tr>
<tr>
<td>WV</td>
<td>6</td>
<td>10</td>
<td>22</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td><strong>Total US</strong></td>
<td><strong>579</strong></td>
<td><strong>1,367</strong></td>
<td><strong>1,817</strong></td>
<td><strong>6,672</strong></td>
<td><strong>7,498</strong></td>
</tr>
</tbody>
</table>

Source: AVA from BATF data
## Grape Market Overview

### Production by State (2000 vs. 2012)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>California</td>
<td>509,000,000</td>
<td>667,552,033</td>
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<tr>
<td>Washington</td>
<td>12,000,000</td>
<td>24,506,226</td>
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<tr>
<td>New York</td>
<td>30,000,000</td>
<td>26,404,066</td>
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<tr>
<td>Virginia</td>
<td>800,000</td>
<td>1,033,191</td>
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<tr>
<td>Pennsylvania</td>
<td>565,000</td>
<td>3,589,603</td>
</tr>
<tr>
<td>Maryland</td>
<td>65,000</td>
<td>316,842</td>
</tr>
</tbody>
</table>

Source: AVA from BATF data
# Grape Market Overview

## Growth of Industry (2001-2014)

<table>
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<tr>
<th></th>
<th>2001</th>
<th>2014</th>
<th>%+</th>
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</thead>
<tbody>
<tr>
<td>Acres of Grapes</td>
<td>200</td>
<td>1000+</td>
<td>500</td>
</tr>
<tr>
<td>Number of Wineries</td>
<td>13</td>
<td>64</td>
<td>492</td>
</tr>
<tr>
<td>Production in Gallons</td>
<td>60,000</td>
<td>345,000</td>
<td>575</td>
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<tr>
<td>Sales</td>
<td>$6.5M</td>
<td>$25.2M</td>
<td>388</td>
</tr>
</tbody>
</table>

Source: AVA from BATF data
Always consume responsively and in moderation!!!
Grape Market Overview

Recent Stats 2014 – Vineyards

- 211 Vineyards
  - 28 Commercial (not including wineries)
- In 23 Counties
- 1000+ acres of grapes
Grape Market Overview

Current Stats – Wineries

- 74 Licensed Wineries
  - Boordy – 1945
- In 22 Counties
  - and Baltimore City
- 2.16% of all wine sold in Maryland
Grape Market Overview

Current Stats – MD Wineries

• MD wineries sold 344,680 gallons (2013)
  – 1,739,637 bottles
  – 8.8% increase over 2012
• Annual sales of MD wine est. at $26 million.
• MD wineries produce over 420 different wines.
• MD wine is sold at more than 800 retailers
• MD wine is sold at over 300 restaurants.
Grape Market Overview

More Grapes Needed

• For every 1 ton grown, MD wineries import 1.4 tons from other states’ vineyards.
Grape Market Overview

Governor’s Commission on Wine and Grape Growing

Maryland Wine: *The Next Vintage*

A Report by the Maryland Wine and Grape Advisory Committee to Maryland Secretary of Agriculture Lewis R. Riley and Maryland Governor Robert L. Ehrlich.
Grape Market Overview

Partners

- Maryland Grape Growers Association
- Maryland Wineries Association
- Maryland Center for Agro-Ecology
- Maryland Department of Agriculture
- Maryland Department of Planning
- Comptroller of Maryland
- Dept of Business and Economic Dev.
- MARBIDCO
- So. MD Ag Development Council
- Upper Shore Regional Council
- State Legislators
Grape Market Overview

**Education, Marketing, and Incentive Grants**
($150,00 for 3 years)

- Vineyard and Winery Educational Programs
- UM Plant Pathologist – budget line item
- Suitability mapping
- Labor for Research Vineyards

- Vineyard Survey
- Capital Improvement – Vine Matching Funds
- MGGA and MWA Website improvement
- MARBIDCO Loan Program

- “Ask for MD Wine” Marketing Program
- Frederick and other Regional Wine Trails
- Marketing materials
Grape Market Overview

Entrepreneurship/Enabling Legislation

- 2005  Governor’s Grape & Wines Commission
  » 3 years of Grants
- 2007  SoMD Vineyard Cooperative Created
- 2009  Vineyard Management Companies
  • Schmidt VMC and Maryland VMC
- 2010  Cooperative Winery Opens
  » State, county, and local funding
- 2010  “The Maryland Wineries Modernization Act” passes
- 2011  Direct to Consumer Wine shipping enacted
- 2013  Attend farmer’s markets/off-site events; Tax credit
Grape Market Overview

Maryland Wineries Association Promotion
“To Winery or not to Winery... that is the question.”

Source: 16th century British vineyard owner?
## “Rough” Economics

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<table>
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<tbody>
<tr>
<td><strong>Independent Vineyard</strong></td>
<td></td>
</tr>
<tr>
<td>Harvest = 4T</td>
<td></td>
</tr>
<tr>
<td>Gross profit 4T @ $1500/T</td>
<td>$6,000</td>
</tr>
<tr>
<td><strong>Winery</strong></td>
<td></td>
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<tr>
<td>Harvest = 4T = 3000 bottles</td>
<td></td>
</tr>
<tr>
<td>Gross profit 4T @ $15.00/bottle</td>
<td>$45,000</td>
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Grape Market Overview

An Important Decision

- Viticulture vs. Marketing/sales
- In both cases:
  - Quality, quality, quality!
  - Never stop learning!
Grape Market Overview

“Landmark” Series

Wine Marketing: Top Quality Inside and Out!

“Just for Fun”

“Icons of Maryland”

Boordy Vineyards
Grape Market Overview

Wine Marketing:

Know your clientele
Grape Market Overview

Variety R&D: Vineyard Locations

- WMREC - Keedysville
- CMREC – Upper Marlboro
- WyeREC - Queenstown
- LESREC - Salisbury
- “Summerseat” – Lusby
- “Golden Run Vineyard” – Sudlersville

Hardy Russian Varieties

European Varieties
Grape Market Overview

Enology (Winemaking) R&D
Grape Market Overview

Solving Problems: BMSB in Grape

Research on stink bug damage in the vineyard

Research on stink bug taint in juice/wine

Photo courtesy of Doug Pfeiffer and Dean Polk

2 - decanone – cilantro aroma
Grape Market Overview

Building the Industry: New Growers/Workshops

NGW Team
Ben Beale
Dave Myers
Herb Reed
Shannon Potter
Cass Swett
Kelly Hamby
Dave Martin

Regional On-site Programs
Grape Market Overview

Grower Resources: Web Site
Grape Market Overview

Grower Resources: “Timely Viticulture”

Balanced Pruning I - A Critical Step in Maintaining and Adjusting Vine Balance

By Joseph A. Pate, Ph.D., Extension Specialist in Viticulture and Small Fruit
University of Maryland Extension

A major theme of viticulture is that for a vine to consistently produce high quality fruit it must be “in balance.” That means that the amount of vegetative growth (shoots and leaves) is just right to properly open the reproductive growth (fruit load). Too little fruit may lead to an over-vigorous vine, shaded fruit and lower quality. Too much fruit may decrease vigor to a point where there is not enough photosynthetic area to properly open the crop leading to under-ripe fruit and reduced quality.

The first step in achieving proper vine balance is choosing the proper training system for that variety on that site. The next step is to adjust and maintain that balance is through dormant pruning. Mature grapevines require annual pruning to remain productive and manageable. An average grapevine will have 200 to 1000 buds on mature canes capable of producing fruit. If all of the buds were retained it would result in the over-cropping scenario described above.

To avoid this situation, researchers have developed a method of pruning to balance the fruit productivity and vegetative growth that will give maximum yields without reducing vine vigor or wood maturity. This procedure is appropriately referred to as “Balanced Pruning,” as the amount of pruning is based on the vigor of the vine.

Here are some of the specifics of proper balanced pruning:

• The way to quantify vigor is through vine size, which is determined by the weight of one-year-old cane pruning.
• To balance a prune a grapevine and estimate the vine size, roughly prune the vine, leaving enough buds to provide a margin of error.
• Then weigh the one-year-old cane prunings (small spring scales) so that you cut off and apply the weight of the pruning formula to determine the number of buds to retain per vine.
• For Concord vines, the pruning formula is 30 per 10, which means leave 30 buds for the first point of pruning plus 10 buds for each additional point. A vine with three pounds of pruning would require a total of 50 buds, 30 for the first point plus 10 for each additional point.
• There are some other variety examples and their typical bud count formula. Remember, each vineyard is different and will need its own specific pruning schedule.

Balanced Pruning 2: Timing

By Joseph A. Pate, Ph.D., Extension Specialist in Viticulture and Small Fruit

Timing a vine causes it to de-acclimate similarly to a warm spell, so do not prune (especially very severe varietals) when you know you will experience very antilatic cold shortly afterward.

The best thing to do is to try to delay pruning as long as practically possible. If you could accomplish all of your pruning in the last two weeks of March that would probably be best, although that is typically not enough time to do the size and labor limitations of most commercial vineyards.

Delayed pruning also allows for better estimation of winter injury to buds so that adjustments in bud load can be made.

If your pruning is not enough time it is sometimes best to “rough prune,” maybe down to 12-15 inch spurs initially and down to your final 2-3 bud spurs.

This “rough pruning” will inhibit the development of the critical bud buds on the spur you are marking compared to cutting directly to a 2-3 bud spur.

For early budding varieties (Chardonnay) pruning to final 2-3 bud spur is accomplished only after the late frosts are passed.

As much as possible, prioritize your pruning schedule according to the relative susceptibility to winter in each variety.

• Prune vines on the best sites first and the worst sites last
• Prime American varieties first
• Followed by the cold resistant hybrids (Fox, Baco Noir, Seyval)
• Followed by the more cold sensitive hybrids (Ries, Traminer Chambourcin)
• And the more sensitive vinifera (Mataro) for very last:
  - You may have developed a feel for the “relative” cold sensitivity of the various vines at your vineyard, and region and varied to do this.
• Also early budding varieties (Chardonnay) should be pruned a bit late to allow bud break without frosts. Rough prune first as described above, and only make final cuts down to count buds after all danger of frost has passed.

50+ topical “timely” email and web based factsheets/newsletters
Grape Market Overview

Wineries: Your customers, friends, and antagonists

- Quality, quality, quality
- The current grape price and wine quality relationship
- It all starts with bottle price: the trickle down from retail effect
- Get to know your wine makers and winery owners
- Cultivate a strong working relationship
- Find wineries that share your philosophy and quality goals
- Figure out how to make the relationship work both quality and financial
- Communicate, often!
- Taste grapes and wines together, understand each others products and production methods.
- Utilize grape contracts and work hard to develop long term relationships – personal and business
- Start doing all of these things right away

(Mark Chien)
Always consume responsively and in moderation!!!
No Nation is drunken where wine is cheap, and none sober, where the dearness of wine substitutes ardent spirits as the common beverage...

Thomas Jefferson
Joseph A. Fiola, Ph.D.
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