Wine Making...Weather...Geology...Climate Change

Making good wine is a skill...

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Oregon AMS dinner meeting (Elmer's-Parkrose), May 15, 2019
INTEREST IN WINE...START EARLY!

Thanks, Mom! - a.k.a., “Mama Wizard”
What are the strengths and weaknesses of the process?
Why is Temperature important for grapes?
How can GDD be used to test grape quality?
WINE-MAKING...THE WEATHER:

Seasonal accumulated GDD – year to year variability. Cause?
How will CC impact grape production?

Prof. Jones: https://www.linfield.edu/wine/greg-jones.html
Global warming could shift western U.S. wine regions

Grape varieties grow best in specific climates. Rising temperatures could change the regions in which certain grapes will flourish.

Ideal growing regions, by climate:

- Non-viable
- Hot
- Warm
- Intermediate
- Cool

1971-2000 climate normals vs. 2000-2049 projections

Source: Gregory V. Jones, Southern Oregon University

How does soil-type affect the grape quality?
What is “Terroir” and is it real?
Which hazard is the top concern for local vineyards?
How can GDD be used to predict grape harvest?

GDD and harvest: 1800 Chardonnay, 2000 Pinot Gris, 2300-2400 Pinot Noir
10 HEALTH BENEFITS
OF DRINKING WINE

- Lowers risk of cancer
- Promotes mental health
- Increases bone density
- Protects teeth
- Fosters good eyesight
- Healthy Heart
- Encourages Longevity
- Anti-aging effects
- Reduces stress
- Reduces risk of diabetes

BENEFITS OF Red Wine

- Consume 4 to 8 ounces of red wine a day to enjoy multiple health benefits.

- Heart Health: Reduces the risk of a heart attack by 30%.
- Brain Benefits: Lowers the risk of a stroke by 50%.

- Longevity: 34% lower mortality rate than drinkers of other alcohol.

THE GOOD STUFF

- Resveratrol: Lowers the risk of heart disease and protects against Alzheimer's and dementia.
- Antioxidants: Contain anti-aging and cancer preventive properties.
- Melatonin: Helps you sleep by regulating your body clock.

OREGON WINE...WHY IT MATTERS

SPARKY SAYS: “TIME FOR A POP QUIZ! “

“What are economic impacts of Oregon wine sales?”

(A) $30-50 million per year
(B) $250 million per year
(C) $830 million per year
(D) $5.7 billion per year

(D) $5.7 billion per year (2016)

Oregon ranks 3rd in number of wineries and 4th in production in the USA – wow, wow!! 😊

https://en.wikipedia.org/wiki/Oregon_wine
OREGON WINE...WHY IT MATTERS

Higher DTC sales margins responsible for half of total revenue at Oregon wineries

Case Sales (1000s) for Oregon Wineries by Destination Market

Source: SOURCE/OASS winery census 2006-2016; DTC includes tasting room, club, web and mail sales

“Oregon wineries sell 23% of their bottled wine direct to consumers, via tasting rooms, wine clubs, events, catalog/mail or website sales. Slightly more than 1/3rd of all club and mailed sales go to out of state consumers.”

In addition, and unknown but substantial portion of tasting room sales go to tourists from other states. Direct sales realize higher prices for wineries than sales to distributors, due both to capturing the retail margin and the greater demand for wineries’ high-end wines in this channel. Therefore they account for over half of total revenue from wine sales at Oregon wineries.”

OREGON WINE INDUSTRY’S IMPACT GROWS

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2013</th>
<th>2016</th>
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<tbody>
<tr>
<td>Total Economic Impact</td>
<td>$2.7 billion</td>
<td>$3.35 billion</td>
<td>$5.76 billion</td>
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<tr>
<td>Winery Revenues</td>
<td>$252 million</td>
<td>$365 million</td>
<td>$592 million</td>
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<tr>
<td>Wine Tourism</td>
<td>$158.5 million</td>
<td>$207.5 million</td>
<td>$787 million</td>
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<tr>
<td>Winery employment</td>
<td>2,046</td>
<td>2,497</td>
<td>2,993</td>
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<tr>
<td>Vineyard employment</td>
<td>571</td>
<td>749</td>
<td>1,053</td>
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</tbody>
</table>

Source: Full Glass Research

Total Wine Sales in Oregon 1989-2016

2,973, 3,358, 3,465, 3,807, 4,276, 4,678, 4,962, 5,553, 6,049, 7,278

OREGON vs. WASHINGTON WINE

OREGON

- 1.8 Million cases of wine
- Olympic-sized swimming pools of wine (in volume) produced every year.
- 6.5
- 5 Most popular varieties
- PINOT NOIR
  - 12,560 acres
- PINOT GRIS
  - 2,829 ac.
- CHARDONNAY
  - 950 ac.
- RIESLING
  - 1,750 ac.
- CABERNET SAUVIGNON
  - 640 ac.
- SYRAH
  - 310 ac.
- KING ESTATE
  - Largest continuous organic vineyard in the world.

WASHINGTON

- 11.2 Million cases of wine
- Olympic-sized swimming pools of wine (in volume) produced every year.
- 40
- PINOT GRIS
  - 8,240 ac.
- MERLOT
  - 7,650 ac.
- CHARDONNAY
  - 6,320 ac.
- RIESLING
  - 3,103 ac.
- CABERNET SAUVIGNON
  - 20,290 ac.
- SYRAH
  - 6,180 ac.
- WASHINGTON
  - is the 2nd largest premium wine producer in the United States.

- 290 SUNNY DAYS on AVERAGE in YAKIMA, WA
- 165 SUNNY DAYS on AVERAGE in DUNDEE, OR

HOW IMPORTANT are grapes as a crop?

PEARS
APPLES
PLUMS
GRAPES

APPLES
CHERRIES
GRAPES

WINE-MAKING...THE WINERIES:

Please visit a local Washington County winery...SOON!

Thank you – what are your questions? 😊