

Harvest Considerations and Quality Management

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Beginner Grape School

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Relationships with your buyer

- There is the ideal harvest parameters and then there is reality
 - Weather can dictate harvest time
 - Disease or other pest pressures can dictate harvest time
 - Labor availability can dictate harvest time
- Ideal harvest parameters
 - Dictated by the winemaker often based on the wine style being made

Quantitative measures

- Brix or % soluble solids
- pH
- TA
- YAN
- Phenolic maturity

Brix or % soluble solids

- Refractometer
- Brix should be quantified weekly once veraison begins
- Collecting weekly data helps you predict harvest time

pH

- Strength of dissociated acids present – free hydrogen ions in solution
- pH plays a role in:
 - Wine stability
 - Microorganism stability
 - Impacts sulfur dioxide additions
 - Impacts wine color and oxidation

Titrateable acidity - TA

- Total amount of hydrogen ions
- In grape must the major organic acids are
 - Tartaric
 - Malic
 - Citric
 - (Malic and Tartaric are more than 90% of acids)
- Titrated with 0.1 N NaOH to pH endpoint 8.2

Visual observations

- Are the seeds brown, green, tan?
- Berry integrity

Taste

- Seeds
- Skin
- Pulp
- Juice

Sampling

- Sample weekly starting at 15 Brix. As you approach harvest sample every day
- Should/Need to sample 10% of vines
- Collect samples from both sides of trellis
- Random: collect samples from low, middle, top of trellis
- Avoid end-row plants and border rows
- Sample at same time of day of each week if tracking brix, pH, TA

Sampling cont.

- Two-one hundred berry samples needed to be within 1 brix. To be within 0.5 brix, collect five-one hundred berry samples needed
- Samples collected in morning can typically be 1 brix lower than samples collected in the afternoon
- Most variation comes from fruit location and sun exposure
- Brix increases approximately 1 brix per week

Food Safety Modernization Act FSMA

- What you need to know as grape growers
- If you average more than \$25,000 in sales, then Produce Safety Rule applies
 - If wine grapes sold for eating PSR applies
 - If wine grapes sold for fermentation (wine production), grapes are exempt from PSR if
 - Letter needed from winery/processing facility to grower that states how the grapes will be processed to kill pathogens (i.e. fermenting, filtration)



Missouri Farm Survey

- FSMA and PSR will protect your business and your customers
- Survey will determine if your farm is covered by PSR
- Please complete the survey



- Resources
- Statement of Assurance (needed for processing exemption):
<https://www.ksre.k-state.edu/foodsafety/produce/fsma/docs/Verification-Commercial-Processing.pdf>
- MDA Online Farm Inventory Survey:
<https://stateofmissouri.wufoo.com/forms/produce-grower-inventory-registration/>
- The Produce Safety Alliance also has good information for anyone interested about the rule and produce safety.
<https://producesafetyalliance.cornell.edu/>
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Harvest Tracking and Communication

- Keep buyers/winemakers informed about harvest parameters
- Keep buyers/winemakers informed of pest issues, especially as harvest nears
- Important to keep good records
 - Brix stalls out
 - pH of must/juice increasing



Grape and Wine Institute

University of Missouri

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