



Critical Harvest Decisions in the Vineyard

UC Davis V&E Extension

Cakebread
Cellars



“Ideal” Decision Process

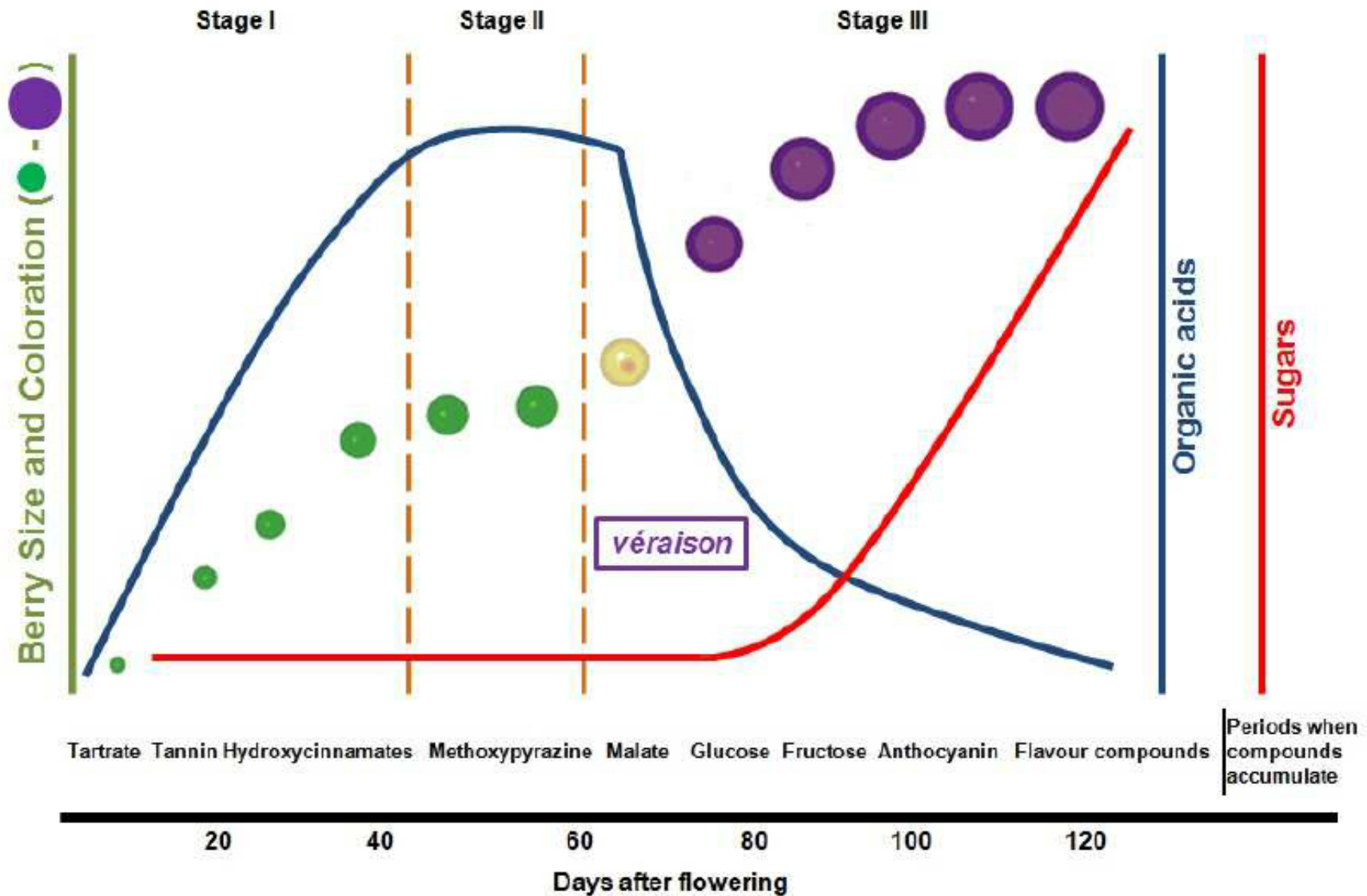
Cakebread
Cellars



- ▶ Vineyard Investigation
- ▶ Sampling
- ▶ Scheduling



Review: Berry ripening





► Timing and Frequency

- Start at bloom
 - Every major phenological event (bloom, lag phase, veraison)
- Weekly visits → Daily visits

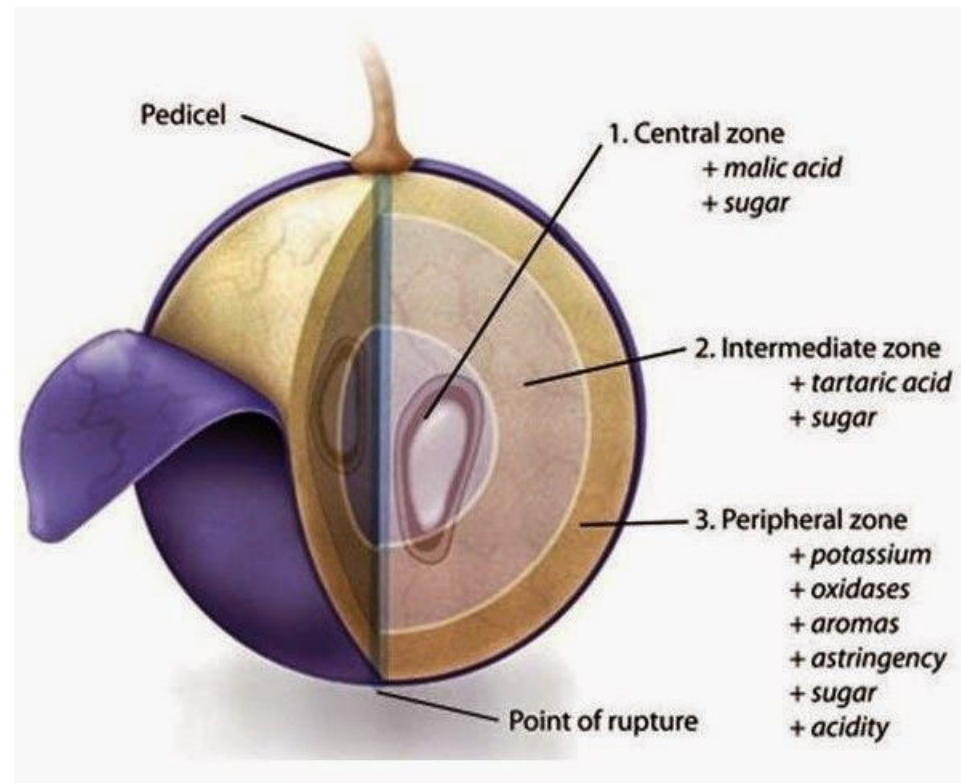
► Vine physiology

- Physiological clues
 - Signs of vine balance
 - Timing and duration of bloom → “Quality”
 - Even distribution of berry “age”
 - Irrigation regime conducive to ripening
 - Cane lignification and stopped shoot tips by veraison

In Field Tasting



- ▶ Oriented towards the goal wine
- ▶ Flavor
 - Time of day
 - Diet
- ▶ Color
- ▶ Skin
 - Maceration in mouth
 - Extraction
- ▶ Seed
 - Ripeness?
 - Green coffee bean → roasted cacao
- ▶ Rachis
 - Indicative of commitment to ripening



Factors to Consider



► Phenology

- Comparison
- Bloom to harvest interval (90- 150+)
- Veraison to harvest interval (25- 60+)

► Plant Material

- Rootstock
 - Phenology early or late
- Clone
 - Cluster architecture
 - Acid profile
 - Flavor profile
- Cleanliness of stock?

► Site Factors

- Soil type
- Aspect
- Topography

Harvest Time Issues: Fungi



- ▶ Powdery Mildew
- ▶ Botrytis
- ▶ Esca/ Phaeoacromonium/ Measles
- ▶ Molds:
 - Cladysporium
 - Aspergillus
 - Penicillium
- ▶ Solution: leave in field
 - Thin fruit
 - Treat with appropriate PHI



Harvest Time Issues: Virus



- ▶ Leaf Roll Complexes
- ▶ Red Blotch
- ▶ Solution: leave in field
 - Identify areas and flag to monitor spread
 - Aerial imagery to track and record
 - Thin fruit

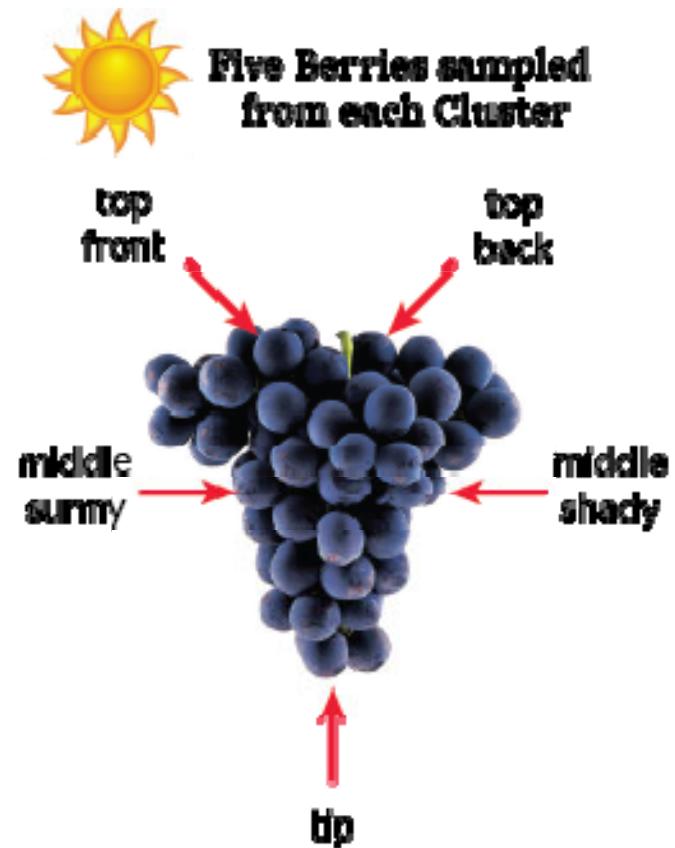


► Method

- Cluster vs. berry → effectiveness depends on vintage
 - Berry: 2 X 100 berries = +/- 1.0 B (5 X 100 berries = +/- 0.5 B)
 - Cluster:
- Physical position must be varied
 - Each side of canopy, each part of cluster
 - RANDOM
- “Avoid the Ends” (Rule of 5)

► Chemistry

- Brix, TA, pH
- MA (vine balance and health)
- Phenolics
 - Reserve blocks
 - Gauge of how much more to push
- Pyrazines
 - Only for problem blocks



Results Analysis



- ▶ Sampling Data
- ▶ Tasting Data
- ▶ Vine Data
- ▶ Weather
- ▶ Tank/ Press Availability
- ▶ Crew/ Machine Availability
- ▶ Truck Availability

Scheduling Considerations



- ▶ Method
 - Machine or hand?
 - Optical sorting
 - Hand sorting
- ▶ Delivery Vessel
- ▶ Timing
 - Night or day pick?
- ▶ Time of year
 - Early season- warmer
 - Late season- colder
 - Switch to day picks?





► Shifted Phenological Timing

- Budgets, timing of vineyard operations, harvest

► Wildfires

- Smoke Exposure Clause
- Evaluate the impact of smoke exposure on the grapes:
 - (a) (20) vine berry sample → fermented → ETS analysis guaiacol and 4-methylguaiacol and “any other smoke markers that can be reliably detected by the third party laboratory processes”;
 - (b) (20) vine berry sample → ETS analysis guaiacol and 4-methylguaiacol
 - At winery’s cost
 - Grower agrees to not harvest the grapes until testing is complete
 - Winery has the right to reject the grapes and shall be relieved of any payment obligations with respect to the grapes.



Thank you!

Cakebread
Cellars

