

Terroir and the Winemaker: Winemaking Variations in Response to Vintage and Vineyard Conditions

Dan Goldfield: Dutton-Goldfield Winery

Winemaking is nothing but a series of simple steps in response to what nature gives us. The complication comes in the number of steps, the uncertainty of actual details and future conditions, the number of lots one is dealing with, and the allocation of limited resources.

Following is an abbreviated list of the decisions a winemaker faces for each lot. Remember, perfection is a Socratic ideal, never a reality – all decisions are colored by the thought, “If (when) I screw it up, in what direction would I prefer that be?”

1. Picking Decision (the most important decision after choosing the vineyard itself): picking decisions are hugely influenced by the progression of a given vintage, and season conditions all year long, not just at harvest.
 - a. White Wine
 - i. Juice flavor
 - ii. Sugar level
 - iii. Acid balance and trajectory
 - iv. Belief in upcoming weather (same for reds, of course)
 - v. Skin condition
 - vi. Rot conditions
 - vii. Current date (relevant for day length for future ripening, practical winery and grower realities,)
 - b. Red Wine (in addition to the previous for whites)
 - i. Skin tannin perception, color, thickness, ease of color extraction
 - ii. Seed ripeness – re. Brown and nutty vs. green and bitter
2. White fruit pressing and fermentation
 - a. Press cuts depend on
 - i. condition of fruit
 - ii. target program for fruit
 - iii. skin thickness
 - iv. Possible rot.
 - v. Juice yield
 - b. So₂ at pressing?
 - c. Yeast/indigenous fermentation choices
 - d. Preferred fermentation rate and temperature
 - e. Stuck fermentation management
 - f. Malolactic fermentation; yes/no, strain and timing
 - g. Barrel choices
 - h. Timing of blending
3. Red Crushing and fermentation
 - a. Sorting?
 - b. Crushing vs. just destemming (we only destem)
 - c. SO₂ at crusher?
 - d. Bleed
 - e. Sugar correction?
 - f. Acid correction (look at pH, TA, malate, varietal, vineyard history) ?
 - g. Whole cluster (%)?
 - h. Cold soak
 - i. Yeast types / indigenous

- j. Punch down, pumpover regimen varies throughout fermentation – **cap management is the crux of the biscuit for red wine production.**
- k. Fermentation temperature profile and management
 - l. Tank heating and timing thereof
- m. Pressing decision
 - i. Tannin perception
 - ii. Depth of flavor, not color (color is extracted early)
 - iii. Condition of cap
 - iv. Change from day to day upon tasting
 - v. History of vineyard in winery
 - vi. Press wine in with free run depends on
 - 1. timing of pressing
 - 2. varietal
 - 3. program destination
 - 4. type of press
 - 5. time in fermenter
- n. Barrels, blending timing etc.
- o. Time in barrel/racking/blending/bottling (we'll save this discussion for next year).

All of the above factors are greatly affected by the conditions of the season and the vineyard – a few of the issues:

- 1. Set conditions and yield
 - a. Low yield gives small berries, high tannins, cap management and barrel choice issues
 - b. Higher yield requires more extractive winemaking
- 2. Vineyard water status
 - a. Affects picking decisions
 - b. Nutrient levels in fruit, therefore fermentation management
 - c. Plumpness of berries affects winemaking decisions
- 3. Summer weather conditions
- 4. Harvest weather
 - a. Heat spells vs. cool, long season tempers all picking and winemaking decisions (2004 vs. 2006 are total opposite ends of the spectrum, but both very good years for the right people)

There are many confounding and influencing factors in making winemaking decisions. In the end, it is experience, gut feel, and **execution** that win out. Here are some of the confounding factors:

- 1. Sampling any natural product
- 2. Unmixed samples – the analytical numbers in the cap of a red fermenter are very different than those in the body of the wine
- 3. Lab mistakes (happens all the time – ask any hospital, let alone a winery) – it's the watchful eye that notices incongruities
- 4. Changing conditions in cold soaking reds due to time on the skins; so decisions need to be made at a prearranged time for historical comparisons
- 5. Practical realities of labor and equipment in the vineyard and winery
- 6. Karmic ripples (in still waters)