When Should I Harvest?

Ideally grapes will have a good ratio of sugar to acid and good flavor. Too much acid and the wine will taste tart. Too little acid and the wine may taste flabby and be prone to microbial contamination. High sugar content will yield a high alcohol wine or the fermentation may not finish creating a sweet finished product. Predicting what time is optimal for harvest is one of the hardest things to do. Traditionally the time to harvest was decided by tasting the fruit: this is subjective, especially for the untrained palate. Because it is a ratio of sugar to acid, it is sometimes hard to taste the acids due to the high sugar content overpowering the taste, or the sugars may taste high due to low acid content. The only way to know for sure is to take cluster samples from the vineyard and measure the sugars and acids. To accurately predict harvest for the entire vineyard it is important pick sample clusters representing average size clusters, from an average size plant, with an average trunk and canopy. Sugar and acid content tend to differ from inside to outside of the cluster and canopy. Berries will vary within the cluster, so it is important to sample a whole cluster. Pick several clusters from different places in the vineyard. Place them all into a gallon size zip lock bag; crushing the grapes in the bag on a counter top with your palm is best. Pour the juice from the bag into a container such as a glass or cup; avoid getting the pulp into the glass. A drop of juice placed onto the window of a refractometer will give the sugar units in Brix°. Brix is the measure of soluble solids in the grape given in degrees; this number is closely related to the percent of sugars in the fruit. A refractometer can be purchased online for from $50 to $1000. Depending on the variety, sugars are ideal between 20 to 24 Brix°. Acids should be between 6 and 8 mg/L measured by titratable acidity (TA). Ideally the ratio of the two will be around 3.4 for harvest. The pH should not be higher than 3.5 to avoid microbial contamination.
A false spring in April this year followed by a 24°F freeze damaged many varieties in the vineyard. All varieties were in the process of coming out of dormancy when the freeze hit. This allowed for varietal differences in cold hardiness to be observed. Some varieties died back to the ground from this damage while others sustained little damage. The varieties that sustained the least amount of damage were Lemberger, Riesling, Merlot and Gewürztraminer with 70-93% plants fruiting. Gewürztraminer has a larger fruit load than last year and is ripening at a steady even pace, making for a good vintage. Merlot, although younger than the Gewürztraminer and therefore still in the process of being established also fared well and will yield a fruit crop at least equal to last year if not larger. The most damaged were the Pinot Noir, Pinot Gris, and Syrah with 12-18% fruiting plants remaining. Chardonnay and Semillon also sustained damage with decreased fruit load of 35% and 40% plants fruiting. Some Chardonnay and Semillon, which appeared dead in early summer, have repaired vascular tissue damaged from the freeze via hormones released from canes on the vine. We expect repair on a large percentage of these plants allowing us to keep the old trunk, however it is not clear what the winter survival rates of the repaired cordons will be. Pinot Meunier had 56% fruiting plants. The fruit crop is still significant although smaller in total yield and cluster size. Cabernet Franc has 41% fruiting plants. Plants that have received Regulated Deficit Irrigation have 60% of the plants fruiting, while well-watered plants have 40% of the plants in fruit production, indicating that RDI improved survival of these vines.

At the end of August it is time to start thinking about harvest and what is needed for fermentation.

1) Nets (if being used) need to be on the vines early, ensuring the birds do not get your crop before you do. Birds tend to eat the grapes days before harvest.
2) Gather clean buckets or containers for harvest.
3) Gather clippers that are scrubbed, sharpened and oiled prior to use.
4) If you are storing the fruit in a cooler over night make sure it is scrubbed clean as well to prevent contamination.
5) Purchase your yeast, diammonium phosphate (DAP or yeast nutrients), and sulfur dioxide in advance so it is on hand.
6) Clean and sterilize fermentation tanks and replace or repair parts as needed. (do not use bleach; remove ALL soap residue; sulfite or alcohol are good sterilizing solutions)
7) Clean and sterilize crush/press equipment.
8) Purchase a hydrometer at a home brewing supply for about $8.00 to measure sugars as the fermentation progresses.
9) Test sugars and acids on a regular basis for harvest prediction.

After harvest, give the plants one good watering and then stop all irrigation. This along with cooler temperatures and shorter daylight hours will signal the plants to move into dormancy. Continued watering will delay dormancy, risking damage from cold winter weather.