Crop Development Sampling
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It is critical to properly monitor and assess the fruit characteristics and maturity to make the appropriate management, harvesting, and winemaking decisions to produce the best quality grapes and wine possible. The first step to assess ripeness and quality is to take a proper sample that best represents the actual ripeness stage of the variety in that vineyard. The best way to achieve this is to collect a sample that is random, unbiased, and representative.

- Pointers to collect a good sample:
  - Avoid edge rows and first two vines in row;
  - Collect samples from both sides of vine;
  - For each row, estimate the proportion of shaded clusters and sample accordingly;
  - Only one berry per plant should be sampled;
  - Collect berries from top, middle, and bottom of cluster and all sides of clusters;
  - Maximum sample area should be < 2A.
  - The most consistent sampling is when the same person does the sampling each time.

- Remember, about 90% of the variation in berry sampling is believed to come from variation in the position of the cluster and degree of fruit exposure.

- The greater the number of berries in the sample, the more representative the sample will be.
  - To be within +/- 1.0 °Brix, you need 2 samples of 100 berries;
  - To achieve +/- 0.5 °Brix, 5 samples of 100 berries are required.
  - If you are cluster sampling, 10 clusters are needed to be with +/- 1.0 °Brix of actual.
  - Depending on stage of ripeness, blocks are sampled every second to third week and more intensively as harvest approaches.
  - pH, titratable acidity, and Brix are the common “objective” measurements practiced.