Welcome Wine Enthusiasts

Welcome to the second issue of the CABNR experimental wine program newsletter. Jason Evans has gone on to pursue entrepreneurial interests of his own and we wish him the best in his endeavors. I would like to introduce myself as the new assistant wine maker and lab technician for the program.

My name is Monica Keady. I was born and raised in Northern Nevada and graduated from UNR with a BS in Biology this winter. I began volunteering and eventually working for Dr. Cramer as a student in the summer of 2003 after taking his plant physiology class. The class was given a tour of the vineyard and I have been excited about grapes and wine ever since. My responsibilities include maintaining the North and South Vineyards, conducting drought experiments on those vines, producing wine, and wine analysis. I will also be maintaining the website, and planning fun events such as tastings, tours, workshops, and other fundraisers for the program. I look forward to engaging the public and raising awareness and interest in the program along with the emerging local wine economy.

Bountiful 2006 Harvest

We harvested twelve varieties from our 1.2-acre vineyard this year. We are growing six varieties of white grapes, including Chardonnay, Gewurztraminer, Semillon, White Riesling, Pinot Blanc, and Pinot Gris. Lemberger, Cabernet Franc, Pinot Meunier, Pinot Noir, Merlot, and Syrah make up the six varieties of red grapes that are currently being harvested. These plants were part of our well-watered versus drought-stressed experiments for evaluating changes in quality from each variety. Fruit yield continues to increase each year as the plants age and develop more expansive root and vascular systems. This year we fermented, racked and bottled 118 cases of wine. The Syrah and Merlot were planted relatively recently to replace other varieties that did not survive well. These plants are now old enough to harvest although they only produced a few precious bottles. The Merlot gave a large enough yield this year to separate the drought-stressed and well-watered varieties rather than combining them, allowing for comparative analysis on that variety for the first time. The Syrah is still young but has a beautiful color and bold taste, promising a better quality grape as the plants age.

The North Vineyard is a one-acre plot and contains Cabernet Sauvignon and Chardonnay. These were planted in 2003 and have now developed sufficiently for harvest this coming year, which will make for a busy and exciting growing season. Keep your eye out for future wine tastings coming in February 2007.
Brix-Acidity Changes in Fruit

Grapes have 3 developmental stages. In stage 1, organic acids are synthesized and then decline by stage 3. Sugars largely accumulate in stage 3. The balance of these two metabolites is very important for fruit quality. Various environmental factors such as sunlight, water, and temperature of the fruit at night and during the day can affect the amounts of organic acids and sugars in the fruit. The figure below shows the Brix (% soluble solids; mostly sugar) and TA (titratable acidity; mostly measures malate and tartrate) of the fruit of Pinot Noir as they changed through last growing season. This graph was used to track changes in the fruit and anticipate harvest dates. We shoot for a Brix/TA ratio of 3 to 3.5. This year was particularly unusual; many of the harvest dates came later than expected.

Stem Water Potentials of Pinot Noir in 2007

Drought-stress can improve grape and wine quality. Stem water potentials are used to measure the water status of the vine. The target range for the well-watered treatment is -0.6 MPa, not to drop below -0.8 MPa. The target range for the drought stressed plants is -1.2 MPa, not to drop below -1.4 MPa. Early spring brought rain showers to the area that kept all the plants relatively well-watered as can be seen in the early data points of the graph. The grapes were harvested over the season at different time points and will be analyzed for specific effects of drought on fruit and wine quality characteristics. The wines from this study will be available to taste sometime in late Spring.

Varietal Differences in Growth and Yield

In our climate, with drought, cold, and salty soils some plants grow better than others. Our South Vineyard is no exception. There are definitely some varieties that have a higher vegetative and fruit yield than others. The more vigorous varieties include Gewurztraminer, Semillon, and White Riesling to name a few whites. Chardonnay, although a large producer of vegetative growth has an average fruit load. Some reds that show high yield are Lemberger and Cabernet Franc. However, higher yield does not necessarily translate to better fruit quality. Other varieties that produce less fruit may have more complex combinations of flavor components that offer a higher quality grape.