Vintage 2007: Umpqua Valley Reference Vineyard Report

Summary:
The 2007 vintage started off with a relatively warm spring with plenty of soil moisture due to adequate late winter rains. The majority of the season was cooler than average with few heat spikes and seemingly ideal ripening conditions. Growing degree-day totals averaged a low 2144 with a range of over 800 degree-days across the reference vineyards driven mostly by variations in elevation and north-south location. The ripening period was dramatically slowed due to a cool down in mid September and combined with the ensuing wet weather, made harvest timing very important. The main phenological events of the observed varieties was near average in 2007 and in spite of the cooler than average vintage, fruit composition in mid-September achieved similar °Brix levels as in past years. This indicates that excess heat is not necessarily beneficial and moderate temperatures likely produce adequate ripening without stress. While the harvest period saw a rapid and sustained cool-down, overall the harvested fruit achieved slightly lower than average °Brix levels with slightly higher acidity, intermediate pH levels, and moderate yields.

Project Overview:
The goals of the project were to set up a suite of reference vineyards that monitor temperature, phenology, and composition of important varieties grown in the Umpqua Valley AVA. The purpose of the research is to provide an in depth look at spatial variations in important weather, plant, and yield parameters in the region.

During 2003-04 nine reference vineyards were established across a north-south transect throughout the Umpqua Valley AVA at elevations ranging from 335 ft to 1154 ft (642 ft average). The spatial and elevation makeup of the reference vineyards is intended to capture a range of site variability typically found in the Umpqua Valley.

The initial varieties chosen for the trial plantings (in 2003-04) were Tempranillo clone 01, Tempranillo clone 02, Syrah clone 01, Grenache clone 04, Malbec clone 04, and Viognier clone 01. During 2004-05, Pinot Noir (Pommard clone), Pinot Gris (clone 2), and Riesling (Wente clone) where added to the trial. These trial plantings are in various stages of development with four locations contributing observations from the third leaf of the plantings. However, due to the time needed for growth, the project participants decided to monitor phenology and composition of five existing varieties: Pinot Noir, Pinot Gris, Syrah, Tempranillo, and Merlot. While not all of the reference vineyards have every interim variety, those chosen provide a reasonable suite of variety/site combinations that can be monitored as the trial plants become established.

To measure temperature at each site, HOBO® H8 Pro-Temperature Loggers were installed at each of the reference vineyards. The sensors record at 15 minute intervals and the data is collected from each site just after the growing season is over (after Oct 31). The temperature

data is then aggregated to hourly and daily average, maximum, and minimum values and finally summarized by site for the dormant (Nov 1 – Mar 31) and growing season (Apr 1 – Oct 31).

Phenological observations for bud break, flowering, véraison, and harvest for the interim varieties are submitted by each reference vineyard. The phenological data is then examined for average dates and intervals between dates for the entire region and by variety.

For composition information, varietal samples are taken on September 13 each year from the interim varieties observed (this year was the second year the trial varieties were also sampled in the same manner). The date was chosen as it represents a "snapshot" of fruit maturity that is not dependent on the subjective determination of ripeness for a given wine style. This date also represents an estimated mid-point of the véraison to harvest period leaving roughly 2-4 weeks before picking. One hundred berry samples are collected and then analyzed for °Brix, titratable acidity, pH, and berry weights using standard industry methods. From the sampling, a report is sent out during the last week of September to all members of the Umpqua Valley Winegrowers Association. In addition, the reference vineyards submit harvest composition at the end of the season (°Brix, titratable acidity, pH, and yields). In most cases the data came from the wineries where the fruit was processed, while in other cases the values came from field observations. Therefore, the harvest composition data is not as consistent in terms of measuring techniques or devices. The composition data are then summarized by region and variety.

Results:

Climate

The weather and climate of 2007 saw conditions that were more normal than previous years although still with significant fluctuations about the long term average (Figure 1). A cooler than average January was followed by a period of generally warmer than average temperatures in the first half of February then colder than normal in the second half of the month. March and the first half of April were warmer than normal and hastened bud development (described in the phenology section below), but was followed by cool period with some frost in the second and third weeks in April. Temperatures from May through the end of August were moderate with few heat spikes as compared to the last few years (Figure 1). Bloom occurred just after a warm period in late May and early June and was followed by a slightly cool and wet period during the second week of June, but without major fruit set issues. The period leading up to véraison was moderate with no heat spikes. The ripening interval from véraison to harvest was punctuated by a rapid cool down that started at the end of the second week in September and continued through to the end of October. During the growing season daily temperature departures observed at the Roseburg weather station were much lower than those observed over the last five years. The growing season ended up with May and July being the only months with above normal temperatures and overall the growing season ended up -0.5°F below the long-term average. Of the four main wine

growing regions in Oregon (Willamette, Rogue, and Umpqua valleys and eastern Oregon), the Umpqua Valley was the coolest in 2007.

Rainfall from January to April was similar to the long term average for the Umpqua region and was followed by a growing season (Apr-Oct) that was normal at 9.91" at the Roseburg weather station (Figure 1). Two extreme precipitation events during the summer, nearly 0.4" on July 18th and nearly 1.0" on August 19th, were atypical for the region. The cool period that started during mid-September occurred without much rainfall initially, but was following by a reasonably wet end of September and continued through much of October (Figure 1). From a heat accumulation standpoint the spring started off with fairly normal degree-days (April 1st through October 31st using a base of 50°F with no upper cut-off) and continued to be average across the moderate summer (Figure 2). The cool down in mid-September brought a near cessation to degree-day accumulation for the season resulting in 2659 degree-days observed at the Roseburg weather station. This value is warmer than the period of record for Roseburg, but cooler than the last seven years (Figure 2). The 2007 growing season ended up very similar to 2001, although 2001 had a cool summer and warm fall, while 2007 had a moderate summer and a cool fall.

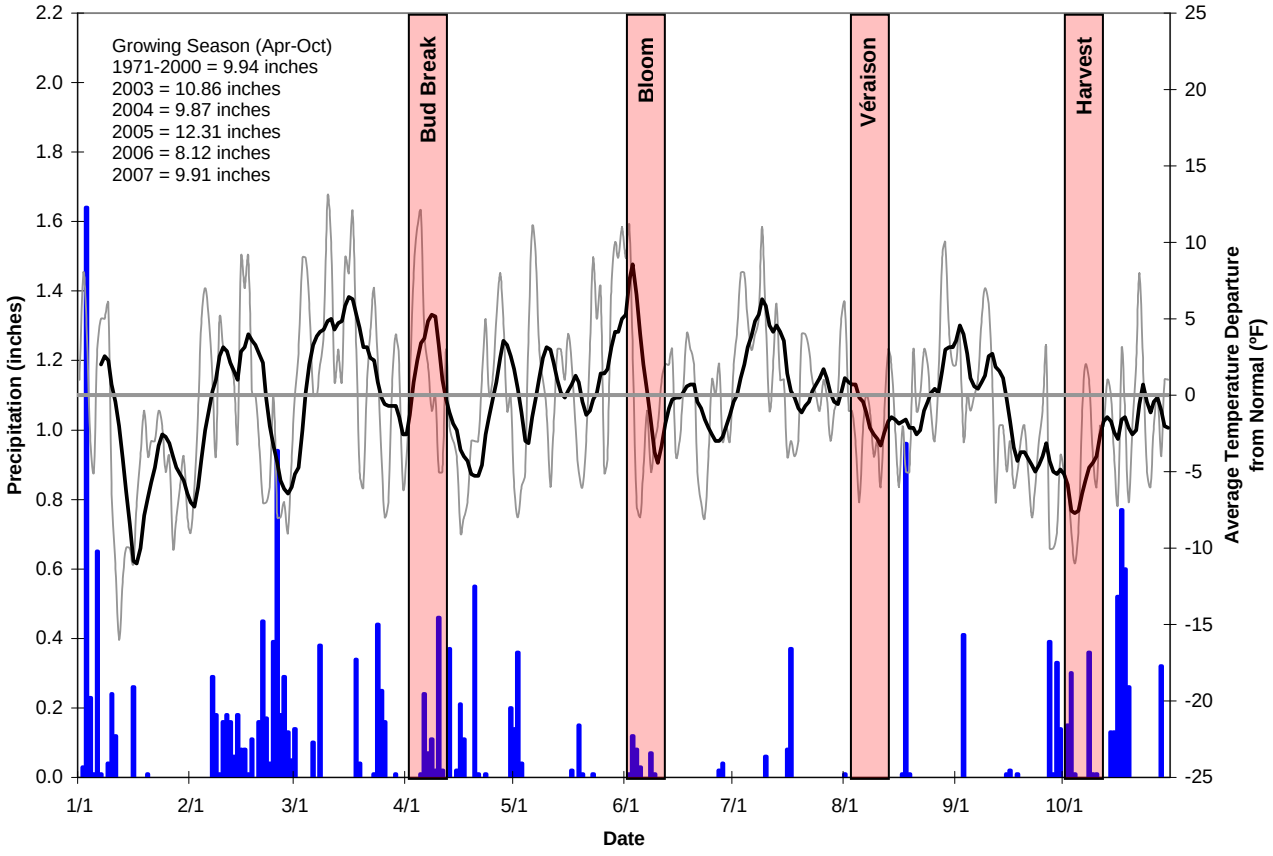

Figure 1 – Daily average temperature departures from normal and precipitation for January-October, 2007 from the Roseburg weather station. The vertical red bars represent the variation in region-wide average phenology (see text for more details). The long-term average is derived from the 1971-2000 climate normals.

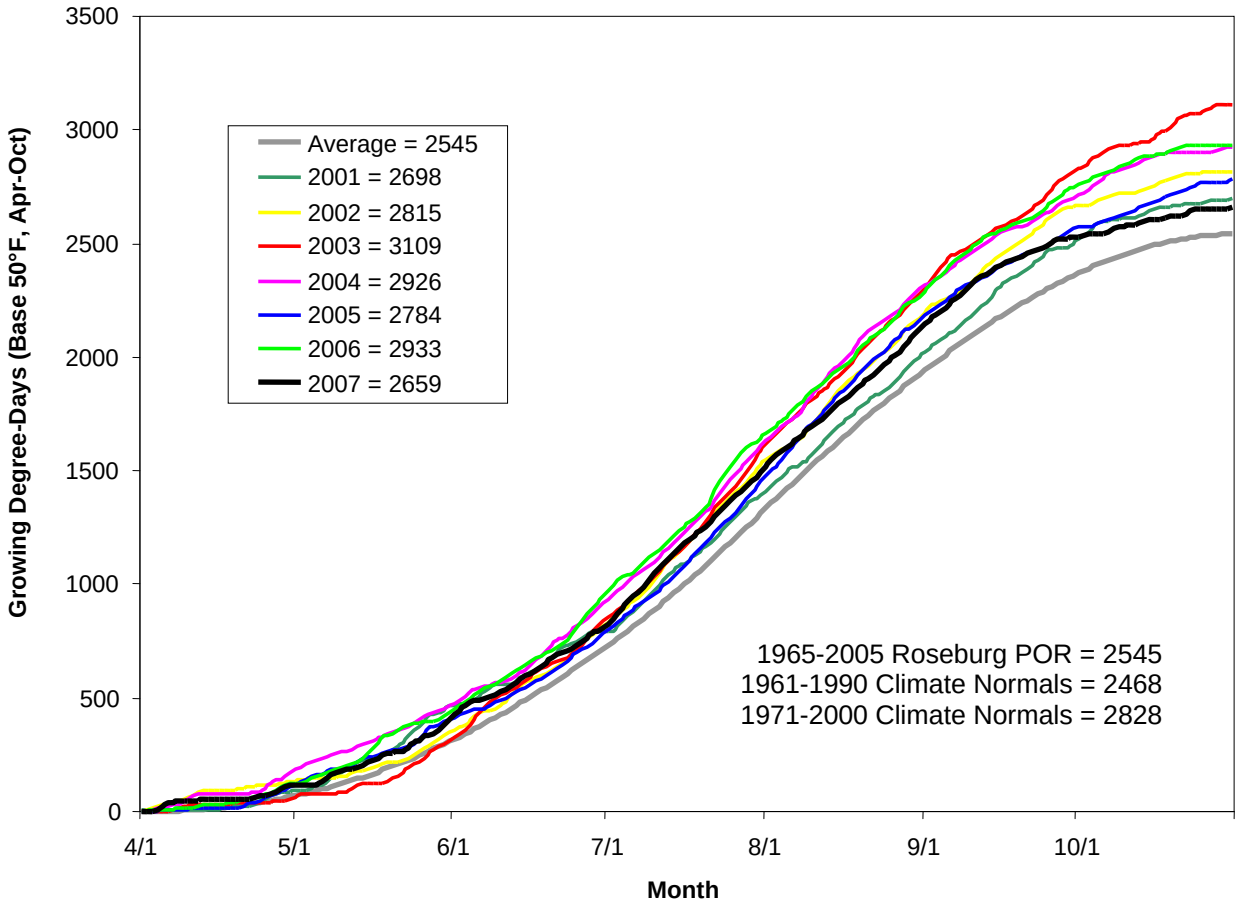

Figure 2 – Growing degree-day accumulation during April-October, 2007 from the Roseburg weather station (base 50°F). The long-term averages are derived from the period of record values (POR), or the 1961-1990 and 1971-2000 climate normals.

Reference Vineyard Climate Observations:

Dormant Period

The winter of 2006-07 (Nov 1 through Mar 31), was characterized by relatively cool conditions (Table 1). The eight sites observed varied more in terms of maximum temperatures than minimum temperatures. The absolute low temperatures for the reference vineyards during the winter reached into the upper teens during the second week of January with the lowest observation being 15.9°F. The number of days below 32°F, averaged across all reference vineyards was 52 with a range of 47 to 59 due to elevation, which was significantly more than the last two winters.

Table 1 – Reference vineyard dormant period (November 1-March 31) climate characteristics for 2006-07.

Variable	*Mean*	*Standard Deviation*	*Maximum*	*Minimum*
Average Temperature (°F)	42.7	0.4	43.2	42.1
Average Maximum Temperature (°F)	52.3	1.3	54.1	50.3
Average Minimum Temperature (°F)	35.8	0.5	36.4	34.8
# of Days < 32°F	52	3.8	59	47

Growing Season

The 2007 growing season average degree-day accumulation from the eight sites was 2144 with a standard deviation of 290 units (Table 2). Maximum accumulation was 2484 degree-days while the minimum was 1626 degree-days. Average growing season temperatures ranged from 56.8 to 61.2°F, while average maximum temperatures ranged from 71.5 to 78.8°F and average minimum temperatures from 45.8 to 47.7°F. The variation in site maximum temperatures was three times greater than that for minimum temperatures (standard deviation of 0.6 vs. 2.2°F), which is similar to past years. Growing season temperature extremes summarized from the reference vineyards saw fewer and lower than normal heat spikes with the two most evident around the first of June and the second week in July (Figure 1). The absolute maximum temperature observed of 103.7°F occurred on Jul-10. Site differences were clearly seen in absolute maximum temperatures with a range of nearly 10°F over the reference vineyards. The number of days over 95°F averaged 11, but ranged from 4 to 20 (note that in a normal year, the Roseburg weather station observes 27).

Table 2 – Reference vineyard growing season temperature characteristics (April-October 2007).

Variable	*Mean-Median*	*Standard Deviation*	*Maximum*	*Minimum*
Growing Degree Days (base 50°F with no upper cut-off)	2144	290	2484	1626
Average Temperature (°F)	59.5	1.5	61.2	56.8
Average Maximum Temperature (°F)	75.9	2.2	78.8	71.5
# of Days > 95°F	12	7	28	4
Average Minimum Temperature (°F)	46.6	0.6	47.7	45.8
# of Days < 32°F	2	1.5	4	0
Last Spring Frost	Apr-2	10 days	Apr-20	Mar-28
First Fall Frost	Oct-27	0 days	> Oct-31	Oct-27

Frost dates are given as the median date.

In terms of minimum temperatures and frost frequency, the 2007 growing season saw absolute minimum temperatures dip into the low 30s April 19-20 at a few sites. However the lowest temperatures during the growing season occurred during the last 10 days of October (lowest observed was 28.5°F). Overall the maximum number of days below 32°F was four, while some sites did not drop below freezing at all (Table 2). During the periods of the coolest nighttime temperatures, the range between the reference vineyards was less than 2.0°F. The median last spring frost date was Apr-2 for the reference vineyards with the earliest occurring on Mar-28 and most other sites occurring in early to mid-April (Table 2). The first fall frosts did not occur until the last few days of October, with an average of Oct-27.

Comparison to Previous Years

Comparing the three dormant periods for which data was available shows that 2006-07 was similar to prior years, although with a lower absolute minimum temperature and more days below 32°F (Table 3). For the growing season, 2007 proved to be much cooler than 2004-06

with an average of 2144 growing degree-days observed over the eight sites (Table 3). The lower degree-days were a result of the lower maximum temperatures, on average and in the days over 95°F. The range in values between reference vineyards was larger for 2007 that the previous three years indicating greater spatial and elevational differences in climate during a cool vintage. During 2007, the reference vineyards experienced lower absolute maximum temperatures and a substantially lower number of days above 95°F compared to 2006. The 2007 vintage also saw average frost potential with higher absolute minimums compared to 2006 and an average number of days below 32°F. The last spring frost in 2007 was recorded on April 19-20 at few sites, while the first fall day below 32°F came on the same day (Oct-27) for the majority of the reference vineyards (Table 3). The spring last frost date was later than average, while the first fall frost was near normal.

Table 3 – Reference vineyard climate comparisons across the dormant and growing seasons (November 1-October 31) for each year of the project.

Season/Variable	*Year or Period*				
Dormant Season	***2003-04***	***2004-05***	***2005-06***	***2006-07***	***Average***
Average Temperature (°F)	NA	43.7	42.3	42.7	42.9
Minimum Temperature (°F)	NA	23.3	16.0	15.9	18.4
# of Days < 32°F	NA	34	32	52	39
Growing Season	***2004***	***2005***	***2006***	***2007***	***Average***
Growing Degree-Days	2636	2302	2458	2144	2385
Maximum Temperature (°F)	107.7	106.7	110.2	103.7	107.1
# of Days > 95°F	17	10	24	11	16
Minimum Temperature (°F)	33.9	30.1	23.3	28.5	29.0
# of Days < 32°F	0	2	4	2	2
Last Spring Frost	Apr-1*	Apr-14	Mar-27	Apr-20	Apr-7
First Fall Frost	Nov-5	Nov-4	Oct-26	Oct-27	Oct-31

The maximum and minimum temperatures are the absolute values recorded for the entire region for that year. Frost dates are the absolute latest and earliest observed over the entire region for that year. Note that the last spring frost in 2004 is from the Roseburg KQEN station observation.

Phenology

Summarizing phenological observations across all varieties (including both the interim and trial varieties) and the region shows a median bud break of Apr-9 with a one week standard deviation (Table 4). Bud break was observed as early as Mar-28 and as late as Apr-27. Bloom averaged Jun-9 with a range of May-30 to Jun-28 across the reference vineyards. Véraison averaged Aug-12 occurring over a month long window from early August to early September. Harvest dates occurred from the third week in September to the last week in October, with a median of Oct-7. Across the interim varieties, the phenological observations reveal minor to moderate differences in bud break, flowering, and véraison, while harvest showed the greatest variation due largely due to varietal differences and the weather at the end of the year (Table 4). The median bud break dates were very similar across the varieties while the median flowering dates were earliest for Pinot Noir and Pinot Gris (Jun-5 or 6) and latest for Tempranillo (Jun-14). The median véraison dates occurred during mid-August with Pinot Gris the earliest (Aug-8) and Tempranillo the latest the latest (Aug-19).

Table 4 – Umpqua Valley reference vineyard phenological dates for 2007. The data come from 25-35 observations for each event; however note that some of the varieties are only observed at a few sites.

Variety	*Bud Break*	*Flowering*	*Véraison*	*Harvest*
Average for all Varieties				
Median	4/9	6/9	8/12	10/7
Standard Deviation	7 days	7 days	9 days	10 days
Maximum	4/27	6/28	9/2	10/25
Minimum	3/28	5/30	8/1	9/20
Interim Varieties				
Merlot				
Median	4/10	6/4	8/9	10/23
Standard Deviation	8 days	8 days	7 days	9 days
Pinot Noir				
Median	4/9	6/6	8/10	10/6
Standard Deviation	5 days	10 days	9 days	8 days
Tempranillo				
Median	4/11	6/14	8/10	9/30
Standard Deviation	10 days	6 days	4 days	5 days
Syrah				
Median	4/12	6/9	8/19	10/22
Standard Deviation	7 days	7 days	8 days	9 days
Pinot Gris				
Median	4/9	6/5	8/8	9/26
Standard Deviation	6 days	4 days	7 days	8 days
Trial Varieties				
Tempranillo Clone 1				
Median	4/11	6/16	8/12	9/28
Standard Deviation	10 days	5 days	5 days	6 days
Tempranillo Clone 2				
Median	4/11	6/13	8/8	10/3
Standard Deviation	11 days	8 days	5 days	6 days
Syrah Clone 1				
Median	4/4	6/13	8/19	10/16
Standard Deviation	9 days	6 days	8 days	12 days
Grenache Clone 4				
Median	4/4	6/16	8/19	10/8
Standard Deviation	9 days	5 days	9 days	7 days
Malbec Clone 4				
Median	4/2	6/9	8/19	NH
Standard Deviation	8 days	7 days	6 days	
Viognier 1				
Median	4/5	6/12	8/21	9/29
Standard Deviation	5 days	4 days	9 days	9 days
Pinot Noir Pommard				
Median	4/5	6/6	8/10	10/6
Standard Deviation	7 days	8 days	8 days	9 days
Pinot Gris 3				
Median	4/6	6/8	8/8	9/26
Standard Deviation	7 days	6 days	7 days	9 days
Riesling Wente				
Median	4/7	6/9	8/19	10/13
Standard Deviation	4 days	8 days	9 days	9 days

NH = not harvested due to low quantities.

Harvest dates by variety are more widely spread (Table 4) due to grower or winemaker flavor, composition, or style characteristics, and this year was accentuated by the decisions based on the rapid cool down in September. On average, optimum ripeness appears to have been achieved earliest with Pinot Gris and Tempranillo (Sept-26 and 30, respectively), while Syrah and Merlot were the latest (Oct-22 and 23, respectively).

For the trial varieties second year of phenological data, bud break was reasonably consistent in the first week of April except for the Tempranillo clones which occurred on Apr-11. Bloom across the trial varieties and sites occurred over a ten day window from Jun-6 (Pinot Noir) to Jun 16 (Grenache). Observations for véraison varied by eleven days with Pinot Gris and Tempranillo clone 2 the earliest (Aug-8) while Viognier was the latest (Aug-21). Harvest dates for the trial varieties come from fewer observations due to the low volume of the crop (some sites did not harvest the fruit), however the numbers indicate that Pinot Gris and Tempranillo clone 1 came in first (Sept-26 and 28, respectively), while Syrah was the latest (Oct-16). In addition, observed phenological events over the trial varieties where consistent with the interim varieties.

Interval lengths between phenological events (an important measure of vine and berry development timing) show that during 2007 bud break to flowering was 61 days on average; that flowering to véraison was 63 days on average; and that véraison to harvest was 56 days on average (Table 5). The intervals had an 8-11 day variation across both sites and varieties. To ripen fruit to the desired level, required an median bud break to harvest period of 175 days with some varieties requiring as few as 158 days, while others needed over 200 days.

Table 5 – Umpqua Valley reference vineyard average intervals between phenological dates for 20076.

Interval	*Median*	*Standard Deviation*	*Maximum*	*Minimum*
Bud Break to Flowering	61 days	8 days	81 days	50 days
Flowering to Véraison	63 days	8 days	85 days	55 days
Véraison to Harvest	56 days	11 days	80 days	43 days
Bud Break to Harvest	175 days	13 days	206 days	158 days

Comparison to Previous Years

During the four years of the project bud break has averaged Apr-4 with a seven day variation across both sites and varieties (Table 6). The 2007 growing season experienced a bud break that was later than average, but earlier than the delayed bud break in 2006. Bloom has averaged Jun-10 over the time period with +/- six day variation and 2007 experienced a relatively average bloom date compared with the three previous years. While véraison has exhibited a relatively large (9 days) variation across varieties and sites, the average dates have been very consistent of the four years of the project (Aug-13 on average, Table 6). Harvest dates also show large site and variety variations (9-12 days) but on average has occurred within the first ten days of October each year.

The bud break to flowering interval has ranged from 54 to 76 days during the last four years, with a median of 64 days and varying nine days across sites and varieties (Table 6). The

length of time between flowering and véraison has also averaged 64 days, but has been more consistent from year to year. While the véraison to harvest period has varied 10-15 days across sites and varieties, on average it has been 53 days during 2004-07. The median bud break to harvest period in the Umpqua Valley has been 181 days, varying by +/- 12 days due to site or variety differences (Table 6).

Table 6 – Reference vineyard average phenology comparisons for each year of the project.

Region	*2004*	*2005*	*2006*	*2007*	*Average*
Bud Break					
Median	4/1	4/2	4/22	4/9	4/4
Standard Deviation	7 days	11 days	4 days	7 days	7 days
Flowering					
Median	6/5	6/13	6/14	6/9	6/10
Standard Deviation	5 days	7 days	5 days	7 days	6 days
Véraison					
Median	8/13	8/14	8/14	8/12	8/13
Standard Deviation	7 days	10 days	9 days	9 days	9 days
Harvest					
Median	10/5	10/10	10/8	10/7	10/7
Standard Deviation	9 days	12 days	9 days	10 days	10 days
Bud Break to Flowering					
Median	65 days	76 days	54 days	61 days	64 days
Standard Deviation	7 days	14 days	6 days	8 days	9 days
Flowering to Véraison					
Median	68 days	61 days	62 days	63 days	64 days
Standard Deviation	6 days	8 days	8 days	8 days	8 days
Véraison to Harvest					
Median	55 days	51 days	51 days	56 days	53 days
Standard Deviation	11 days	15 days	10 days	11 days	12 days
Bud Break to Harvest					
Median	185 days	194 days	168 days	175 days	181 days
Standard Deviation	13 days	13 days	8 days	13 days	12 days

Composition

Reference vineyard varietal sampling on September 13, 2007 resulted in a "snapshot" of ripening parameters commonly observed by growers and winemakers. A total of 30 samples across all interim and trial varieties were collected and analyzed. °Brix levels averaged 20.6 across all of the samples with the highest °Brix values observed in Tempranillo and Pinot Noir and the lowest in Merlot, Grenache, and Syrah (Table 7). Titratable acidity averaged 8.8 g/L with the highest values seen for Syrah and Grenache, while Pinot Noir, Pinot Gris, and Tempranillo levels where the lowest. Average sample pH values were 3.08 with the highest values for Tempranillo (clone 1) to low values for Riesling, Grenache, and Syrah. Varietal berry weights (per 100 berries) averaged 143.6 grams with Pinot Noir, Pinot Gris, and Riesling having the lowest weights and Tempranillo and Grenache the highest weights. Across the varieties, Merlot, Syrah, and Grenache were clearly physiologically behind the other varieties (Table 7).

Harvest composition data submitted by growers or wineries (24-32 observations depending on the variable) indicates an average °Brix of 23.5 with a range from 21.8 for Riesling to 24.6

for Tempranillo clone 1 (Table 7). For the 2007 vintage titratable acidity averaged 7.1 g/L with a low of 5.9 g/L for Tempranillo clone 2 to a high of 9.0-9.1 g/L for Grenache, Pinot Noir, and Pinot Gris. Harvest pH numbers averaged 3.33 with a spread of 0.63 from Merlot (3.51) to Riesling (2.88). Harvest yields averaged 2.8 tons per acre across all reference vineyards and interim varieties only. Lowest average yields were reported for Merlot (2.0 tons/acre), while highest average yields where seen with Pinot Gris (4.3 tons).

Table 7 – Umpqua Valley reference vineyard °Brix, titratable acidity (TA, g/L), pH, and 100 berry weights (g) statistics from the sampling conducted on September 13, 2007 and from harvest numbers submitted. Note that in some cases the values come from small samples and should be considered carefully.

Variety(Clone)	*September 13th Sample*				*Harvest Numbers*			
	°Brix	*TA*	*pH*	*Weight*[1]	*°Brix*	*TA*	*pH*	*Yield*[2]
Average	**20.6**	**8.8**	**3.08**	**143.6**	**23.5**	**7.1**	**3.33**	**2.8**
Interim Varieties								
Merlot	19.8	8.0	3.24	141.2	23.2	7.8	3.51	2.0
Pinot Noir	21.1	8.4	3.13	126.6	22.8	7.4	3.29	2.5
Tempranillo	22.6	6.9	3.36	197.3	24.5	6.4	3.35	2.6
Syrah	19.2	11.7	3.04	172.6	23.5	6.9	3.40	2.8
Pinot Gris	22.3	7.5	3.08	148.3	23.5	7.0	3.12	4.3
Trial Varieties								
Grenache (4)	19.3	10.4	2.97	198.8	22.4	9.0	3.02	NA
Malbec (4)	21.0	8.8	3.24	160.8	23.6	NA	NA	NA
Pinot Gris (3)	22.5	6.7	3.14	135.7	23.2	9.1	2.98	NA
Pinot Noir (P)	23.1	6.6	3.26	135.5	23.2	9.0	3.18	NA
Riesling (W)	21.2	8.9	2.87	123.5	21.8	NA	2.88	NA
Syrah (1)	20.1	9.7	3.06	172.6	23.8	6.9	3.29	NA
Tempranillo (1)	23.2	7.0	3.40	188.3	24.6	6.7	3.40	NA
Tempranillo (2)	21.8	6.8	3.25	204.9	23.7	5.9	3.30	NA
Viognier (1)	21.7	8.7	3.13	156.5	23.4	8.1	3.24	NA

[1] Weight of 100 berries, [2] Tons per acre (however yields not applicable for trial varieties)
Note that the number of vineyards with viable trial vine fruit is only three and that the samples come from the 4th leaf.

Comparison to Previous Years

For the sampling conducted on September 13th, the four years were very similar in terms of °Brix, pH, and weights but with 2007 having substantially higher acidity levels (Table 8). °Brix has averaged 20.4 over the four years with 2006 and 2007 achieving the same average value. The TA values from the sampling have averaged 7.7 g/L during the four years while pH levels have been very consistent from year to year with an average of 3.07. Berry weights varied by less than 10 grams per 100 berries during the four years, averaging 141.6 g (Table 8).

Table 8 – Comparison of the overall ripening sample values (interim and trial varieties) for the four years of the project.

Parameter	*Ripening Sample*				
	2004	*2005*	*2006*	*2007*	*Average*
°Brix	20.2	20.0	20.6	20.6	20.4
TA (g/L)	7.1	7.9	7.1	8.8	7.7
pH	3.05	3.06	3.09	3.08	3.07
Weight (g and t/a)	142.2	136.4	144.0	143.6	141.6

Similar to the sampling, average harvest composition over the four years of the project was very comparable with differences in 2007 coming in the slightly lower °Brix, higher acid, and lower pH (Table 9). Yields across the four years where the lowest in 2004, but have been reasonably consistent the last three years. While the four years were different in terms of heat accumulation (Table 3) and phenological timing (Table 6), composition levels appeared to have reached similar values over the three years.

Table 9 - Comparison of the overall harvest composition values (interim and trial varieties) for the four years of the project.

Parameter	*Harvest Numbers*				
	2004	*2005*	*2006*	*2007*	*Average*
°Brix	24.1	24.0	24.4	23.5	24.0
TA (g/L)	6.6	6.9	6.5	7.1	6.8
pH	3.50	3.38	3.46	3.33	3.42
Weight (g and t/a)	1.7	2.4	2.8	2.8	2.4

Conclusions and Future Issues

The 2007 vintage saw a relatively cool growing season with few heat spikes and quite low heat accumulation, punctuated by an early cool and wet fall. The phenology of the observed varieties appears to have been near average for each event. In spite of the cool vintage, fruit composition in mid-September achieved similar ripeness levels as in past years, indicating that excess heat is not necessarily beneficial and moderate temperatures likely produce adequate ripening without stress.

The fourth year of the project has added to a longitudinal set of climate, phenology, and compositional information for the Umpqua Valley AVA. This year the initial varieties chosen for the trial plantings have also become a bigger contributor to the information in terms of phenology and composition. These varieties include Tempranillo clone 01, Tempranillo clone 02, Syrah clone 01, Grenache clone 04, Malbec clone 04, and Viognier clone 01. Furthermore third leaf data from Pinot Noir (Pommard clone), Pinot Gris (clone 2), and Riesling (Wente clone) are being accumulated as well.

Funding for the 2008 vintage (fifth year) has been obtained and proposals will be submitted for subsequent years with the hope that the project and the potential understanding it can

provide will continue. In the meantime, the following items are being addressed and/or planned:

- An overview presentation will be given at the February 6th Umpqua Valley Winegrowers Association meeting (see email announcements from the association for further details).
- The results will also be used to provide a Southern Oregon component to the Oregon Wine Industry Symposium's "Vintage Overview" during February 10-12, 2008 in Eugene.

Overall, the first four years of the project has provided a spatial overview of climate for the Umpqua Valley AVA. In addition, the initial observations of phenology and composition have helped establish and document the regional and site similarities and differences for the area. The project is intended to be a long-term collaborative effort that better documents and develops a sound understanding of some of the most important factors that influence high quality grape and wine production. As time unfolds the information will provide more insights into the potential and character that are Southern Oregon wines.

Acknowledgements
This research was made possible by funding from the Oregon Wine Board. In addition, acknowledgement goes to all of the participating vineyards, whose collaborative support provides the framework for the research. Thanks also go to Jack Day who provided the lab space at Roxy Ann Winery, and James Epperson, Marika Belew, and Ali Mostue for their time analyzing the samples.

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