

THE 2001 VINTAGE

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The first major meteorological feature to affect the 2001 vintage was the extremely wet winter. From October 2000 to March 2001, 1,004 mm of precipitation were recorded at the Grande Ferrade weather station in Villenave d'Ornon. This was double the average for the past twenty years (556 mm), even exceeding the normal amount of rainfall for an entire year (886 mm). There has not been anywhere near as much rain in the Bordeaux region since the winter of 1982-1983 (944 mm).

On top of the abundant rainfall, the winter of 2000/2001 was also relatively warm. The following table shows temperatures as compared to seasonal norms:

October 2000	+ 0.5°	January 2001	+ 1.8°
November 2000	+ 0.8°	February	+ 1.1°
		2001	
December 2000	+ 3.3°	March 2001	+ 3.1°

The warm winter led to an early start to the growing season.

Like the previous six months, April was also rainy (+ 58 mm above average). However, the mean monthly temperature (11.8°) was very close to the monthly average (11.9°). There was nevertheless a short period around April 20th when the temperature dropped significantly. There were frosts on this occasion which did serious crop damage in certain areas, but they did not have a noteworthy effect on the overall yield in Bordeaux.

In May and June, temperatures were higher than normal (+1.6° in May and + 1.5° in June) and there was markedly less precipitation than usual (total rainfall over these two months was 66 mm compared to an average of 129 mm).

The vines began to flower in the last week of May. Flowering was quick and even for all grape varieties throughout Bordeaux. Peak flowering occurred on June 7th in red wine reference vineyards we have been monitoring since the middle of the last century. This was a week earlier than the thirty year average, but slightly later (4 days) compared to the past decade.

Table I

Comparison of weather conditions from the 35th – 55th day after *demi-véraison* (peak colour change) in red wine grape vineyards for the last few years.

(ripening theoretically occurs on the 45th day)

		1997	1998	1999	2000	2001
Total temperatures (°C)	minimum	280	268	298	295	262
	maximum	551	464	512	523	471
	average	415	366	405	409	366
Number of days	T ≥ 25°C	16	5	9	11	5
	T ≥ 30°C	1	0	3	1	0
Sunshine	(h)	141	119	123	140	109
Precipitation	(mm)	8	168	131	41	99
Number of days	P ≥ 0,5 mm	1	15	14	5	10
	P ≥ 10 mm	0	6	5	2	2

Table II

Average composition of red wine grapes,
from reference vineyards (last sampling before picking)

	2001	2000	1999	1998
	Merlot			
Weight of 100 grapes (g)	182	173	153	175
Sugar (g/l)	225	245	219	215
Probable degree of alcohol*	12,5	13,6	12,2	11,9
Total acidity (gH ₂ SO ₄ per l)	3,5	3,5	3,3	3,5
	Cabernet Sauvignon			
Weight of 100 grapes (g)	143	147	136	149
Sugar (g/l)	202	220	202	200
Probable degree of alcohol*	11,2	12,2	11,2	11,1
Total acidity (gH ₂ SO ₄ per l)	4,5	3,8	3,6	3,8

* expressed in % by vol., calculated on the basis of 1% alc. from 18 g of sugar per litre

After a dry period in May and June, it began to rain again in July. There were 103 mm of precipitation, or twice the normal amount. 90% of this rain fell during the first twenty days of the month, when it was also fairly cool. However, the last ten days in July were hot and dry. A hailstorm on July 22nd caused serious damage to certain vineyards in several communes in the Entre-Deux-Mers.

August was hot (+ 1.9° greater than average) and not very rainy (– 8 mm as compared to the monthly norm).

The grapes began to ripen fairly slowly due to alternating rain and heat. Shoot growth did not go on as long as in 1999, but the vine's growth cycle did not stop until late August.

Peak *véraison* (colour change) in red wine varieties took place on August 12th. The delay in ripening (as compared to the previous ten-year average) that started with flowering, persisted in our reference vineyards, and the grapes ripened one week later than the 2000 vintage. *Véraison* was much more spread out than flowering. Water supply, the number of bunches, and the vigour of each vine are well-known factors in determining the duration of *véraison* in a given vineyard plot.

Grape size and sugar levels were close to the twenty-year average at peak colour change, but acidity was slightly higher.

The average temperature in September was 1.1° cooler than usual. The maximum temperature only exceeded 25° on six days, and at no time was it extremely hot (equal to or greater than 30°). Precipitation was close to normal and there were several heavy showers on and around September 22nd. The grapes finished ripening at the end of a long, cool and fairly dry spell. It is widely recognised that this sort of weather favours the ripening of grapes likely to produce complex, elegant, and fruity wines: "Although a high degree of ripeness is a quality factor for a given grape variety in a given vineyard, and although it takes ripe grapes to make good wine, this ripening must not take place too quickly, nor veer towards overripeness". (J. Ribereau-Gayon and E. Peynaud, Handbook of Enology, Vol. I, 1960).

Table I shows weather information ten days before and after the theoretical ripening date (i.e. 45 days after peak colour change) for the past five vintages. This is the period during which most red wine varieties are harvested. In 2001, the temperature and the number of hot and very hot days during this period were similar to 1998, but lower than in 2000, 1999, and 1997. There was also less rainfall in 2001 as compared to 1998 and 1999, but more than in 2000. Records also show that the weather at the end of the ripening season was not particularly special in 2001.

Table III

Comparison of the weather in September and October by ten-day periods
for the last four vintages

Month	Ten-day period	Year	Average temperature (°C)	Number of days $T \geq 25^\circ$	Sunshine (h)	Precipitation (mm)	Number of days $P \geq 0,5$ mm
September	1 – 10	1998	21.4	5	56	37	5
		1999	22.2	10	92	4	1
		2000	20.0	6	91	3	3
		2001	18.1	3	89	2	2
	11 – 20	1998	17.0	2	63	42	5
		1999	18.6	3	54	114	7
		2000	19.6	5	64	18	2
		2001	15.9	0	74	10	3
	21 – 30	1998	18.3	3	56	76	9
		1999	18.9	4	53	34	9
		2000	18.9	5	64	23	3
		2001	17.0	3	46	76	6
October	1 – 10	1998	13.8	0	23	74	10
		1999	13.7	0	69	20	6
		2000	14.5	0	61	84	7
		2001	18.2	2	59	33	4
	11 – 20	1998	14.0	0	58	14	4
		1999	15.1	0	32	52	6
		2000	13.8	0	29	48	8
		2001	17.9	1	53	50	6
	21 – 31	1998	14.3	0	45	49	7
		1999	16.0	0	61	13	3
		2000	15.0	0	44	27	7
		2001	16,6	2	69	5	5

Table II shows the composition of must made from red wine grapes in reference vineyards a few days before picking in 2001 compared with 2000, 1999, and 1998. The acidity of the Merlot grapes was the same as in the other vintages, whereas Cabernet Sauvignon's acidity was significantly higher. Sugar levels (and therefore alcoholic degree) for Cabernet Sauvignon in 2001 were comparable to 1998 and 1999, while slightly higher for Merlot. However, these sugar levels still fell short of 2000, which were 1° higher for both grape varieties.

There were no obvious health problems in the vineyards as the vines had been carefully looked after and protected. Admittedly, there were some attacks of mildew early in the season due to the very wet winter. This caused a certain amount of crop damage, but only came about because of inadequate protective measures by winegrowers. There were very few problems with mildew as the year went on. Although botrytis appeared quite early in some locations, it did not develop. Grapes were picked not only quite ripe, but also in a perfectly healthy state.

The weather during the harvest is a major factor in grape composition and therefore wine quality. Table III shows the weather, by ten-day period, for September and October. This enables us to explain the organoleptic profiles of different types of wine (dry and sweet white wine, red wine) in the 2001 vintage.

Red wines

Thanks to the good weather during the summer and early autumn, the red wine grapes ripened very well, although perhaps not exceedingly well. It is important to point out that quality is more inconsistent than in 2000. The role of *terroir* and the choice of viticultural methods had a very important influence on sugar and acidity levels, as well as phenolic compounds. In some cases, picking had to be put back due to cool temperatures. Of course, the grapes needed to be very healthy in order to wait. The 2001 red wines have marked freshness and fruit, which makes them very attractive. In addition, the wines have a beautiful colour and tight-knit tannin which gives them good tannic structure and balance. The finest wines come from great soils producing low yields. These have the richness and complexity typical of the very best Bordeaux can produce.

Dry white wines

Throughout the ripening period, and particularly during the last two weeks, the white wine grapes benefited from extremely favourable weather. The drop in temperature which started on August 28th locked in the grapes' aromatic compounds, as well as impeding malo-lactic fermentation. The first Sauvignon Blanc grapes were picked in early-maturing vineyards at the end of the first week of September. In most instances, the most prestigious vineyards were ready to be harvested by September 20th, at which time the weather was dry and cool.

Overall, the grapes were very healthy with a perfect balance between acidity and sugar. Sauvignon Blanc and Sémillon were very successful. The 2001 dry white wines reflect the qualities of the grape varieties from which they were made. There have a strong aromatic bouquet with a freshness and structure rarely achieved in Bordeaux.

Sweet white wines

Botrytis spread very quickly on ripe grapes with high sugar levels. The weather in October (marked by widely separated brief showers, high temperatures, and a slight dry wind during sunny afternoons) produced concentrated musts with great aromatic complexity and a lovely bouquet of botrytis or "noble rot". Most sweet white Bordeaux from this vintage is remarkably successful. 2001 is definitely an exceptional vintage for this type of wine.

March 15th 2002