

## The 2013 Vintage in Bordeaux

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The decade 2000-2010 produced an unparalleled series of good and great vintages. Everyone familiar with the frequent cold, wet years in the 1960s and 70s will be able to relate to the challenges and uncertainties of weather in the Gironde department and the oceanic depressions that can inundate the vines and jeopardise quality at all times of year.

Those of you who are used to reading this vintage report will recall the 5 prerequisites for a great red wine vintage in Bordeaux:

- 1- quick, early flowering conducive to good fertilization, satisfactory yields, and even ripening
- 2- the onset of water stress during fruit set to limit the swelling of young berries and define future tannin content
- 3- the definitive stop to vegetative growth before *véraison* (colour change) due to significant water stress
- 4- completely ripe grapes thanks to optimum photosynthesis in the leaves up until harvest, without any noteworthy resumption of vegetative growth
- 5- mild weather during the harvest making it possible to pick late-ripening plots and varieties without running the risk of dilution or rot

The 2013 vintage did not conform to any of the five essential factors for a fine red wine vintage due to three reasons: wet spring weather causing late flowering and widespread *coulure* (shot berries), as well as the violent and sometimes destructive storms in late July/early August that prevented vegetative growth from stopping, and the wet, mild weather in September and October propitious to the development of grey rot both before and during the harvest.

Although a great year was out of the question due to the weather, certain *terroirs* – thanks to winemaking expertise and a pragmatic, commonsense approach – nevertheless produced small quantities of pleasant red wines i.e. able to please Bordeaux wine lovers.

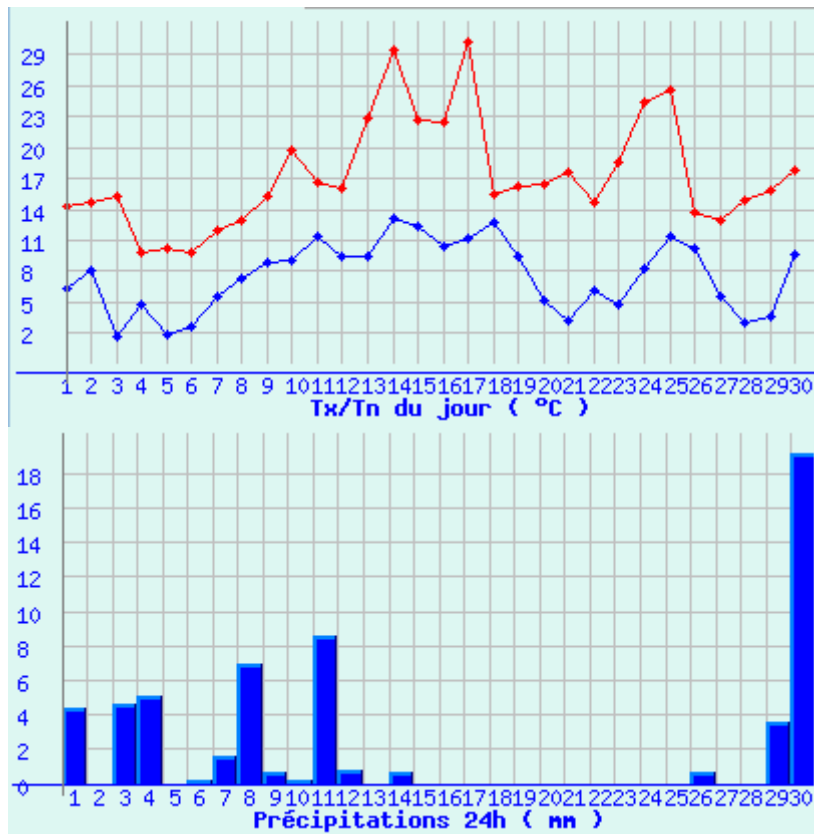
High quality white wine grapes need different conditions to grow from their red wine counterparts, so 2013 met the parameters for a very good dry white wine vintage thanks to fine weather in July and August, without excessive dryness. Great sweet white wines were also successful in 2013 thanks to the wet, mild autumn, much more favourable to the early, widespread development of *Botrytis cinerea* than 2012.

**Bud break was late, but even, after an extremely cold, wet winter.**

While December temperatures were close to seasonal averages, the first three months of 2013 were cold and wet, especially January, with 51 mm more precipitation than average (Table I). The winter of 2013 will be remembered as one of the longest greyist in recent years. With precipitation 70 mm greater than the thirty-year average from October to March, including 91 days with rain (9 more than in 2012, 10 more than in 2009, and 26 more than in 2008 – but 14 less than in 2010), the soil was cold and waterlogged for a long time, preventing an early start to the growing season.

Winter weather continued into early April (Figure 1): 35 mm of rain and temperatures once again below average for the first half of the month. However, the weather turned warmer and dryer on the 13th of April, prompting bud burst. This began on the 15th of April, i.e. 2 weeks later than the preceding year. However, this was much more regular than in 2012, with a goodly number of buds.

Frost on the nights of the 27th and 28th of April hit certain plots in Sauternes, Blaye, the northern Médoc, the Libourne region, the Entre deux Mers, and the Graves. This had a greater impact on vines with green cover.

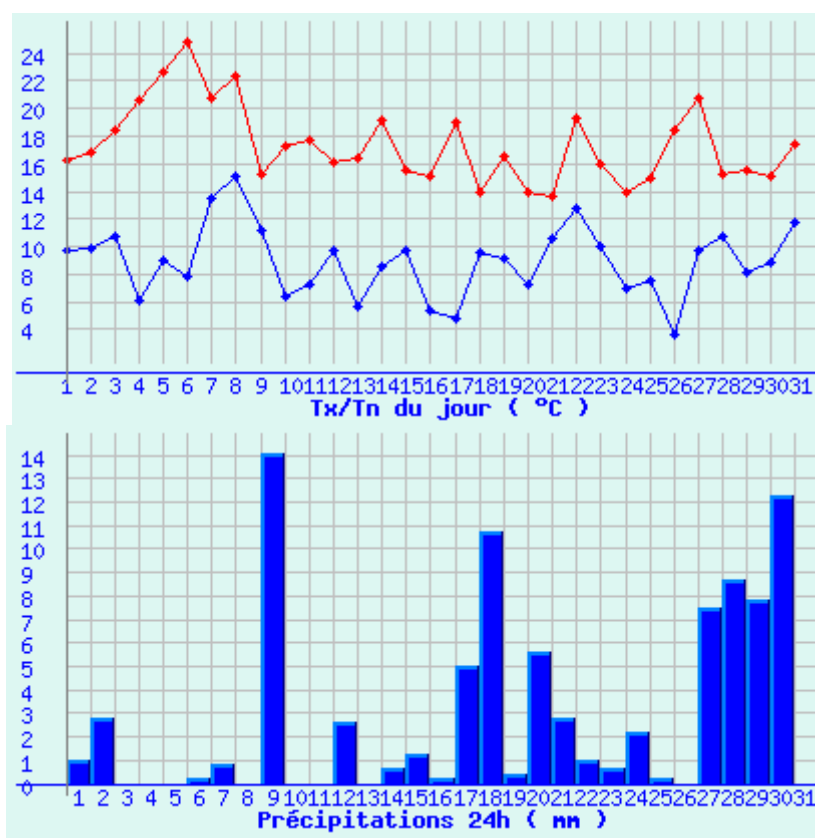


**Figure 1**  
*Daily variations in temperature and precipitation in April 2013*  
*Data from Mérignac (Météo France)*

## Winter weather in late spring made vine growth slow and difficult

Unfortunately, spring weather took a very long time to manifest itself: the month of May was one of the wettest in the past 20 years (22 days with rain) and the coolest since 1984 – below the seasonal average, except for the maximum temperatures from the 5th to the 8th and the minimum temperatures from the 7th to the 9th (Figure 2).

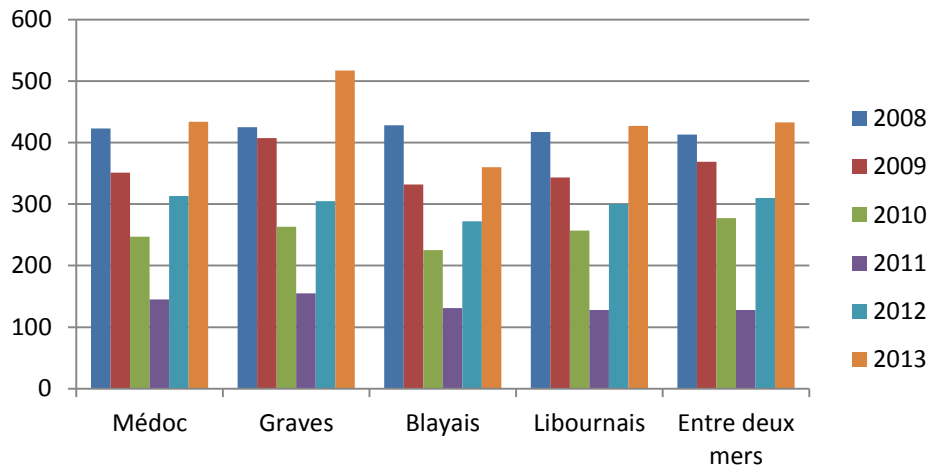
Vine growth was extremely slow. There were an average of 9-10 unfolded leaves per vine in late May, whereas development was at the "separate floral bud" stage in 2010 and 2012, and the "end of flowering" stage in 2011, where 80% of calyptra had fallen off. Vegetation was paler than usual during this cold, wet spring due to below-average photosynthesis, and also often manifested symptoms of root asphyxia and various mineral deficiencies.



**Figure 2**

*Daily variations in temperature and precipitation in May 2013  
Data from Mérignac (Météo France)*

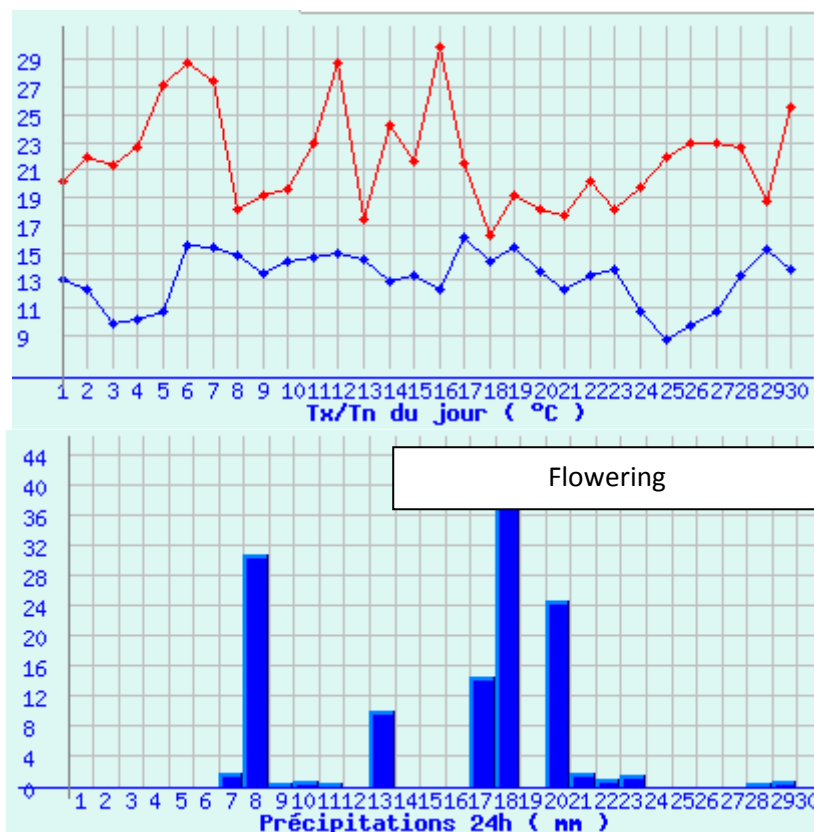
Average accumulated rainfall from January to May reached 434 mm in the Gironde, i.e. 196 mm more than in 2012 and 296 mm more than in 2011, which makes 2013 one of the wettest years in the past decade (Figure 3).



**Figure 3**  
*Accumulated precipitation (mm) from January to May from 2008 to 2013*  
*Data from BSV Aquitaine*

The sunshine deficit continued into the month of June, which was dramatically cold and rainy, with average maximum temperatures 7°C lower than usual and precipitation amounting to over twice the thirty-year average. June 2013 in the Gironde was, after June 1992, the wettest in the past 50 years. Temperatures were on a par with averages in the 1980s/early 1990s, with minimum and maximum readings respectively 1 and 2.6°C less than usual (Table I).

Temperatures from the 17th to the 29th of June, in the middle of flowering, were systematically below average (Figure 4). Mid-flowering occurred on about the 18th of June, or 15 days later than the 10 year average. Flowers in the most early-ripening plots, especially Merlot, bloomed during very unfavourable weather (heavy rain and cool temperatures), causing a degree of *coulure* (shot berries) and *millerandage* (abnormal fruit set) rarely seen in the Gironde. Late-ripening plots and Cabernet Sauvignon vines were least affected. There was a thermal deficit of over 3 weeks compared to the average of the previous 15 years, and more than a week compared to 2012 (Figure 6).



**Figure 4**  
*Daily variations in temperature and precipitation in September 2013*  
*Data from Mérignac (Météo France)*

**Table I**  
*Weather indicators for 2013: rainfall, temperature (compared to the 1981-2010 average), and hours of sunshine (compared to the 1991-2010 average)*  
*Data from the Météo-France weather station in Mérignac*

	Hours of sunshine (h)		Precipitation (mm)		T°C average minimum (°C)		T°C. average maximum (°C)	
	2013	<i>Average 1991-2010</i>	2013	<i>Average 1981-2010</i>	2013	<i>Average 1981-2010</i>	2013	<i>Average 1981-2010</i>
January	56	95	138	87	3.9	3.1	9.5	10.0
February	129	115	76	71	2.2	3.3	10	11.7
March	164	170	71	65	5.2	5.4	14.5	15.1
April	190	182	57	78	7.6	7.4	17.3	17.3
May	137	217	88	80	8.9	11.0	17.4	21.2
June	179	239	132	62	13.1	14.1	21.9	24.5
July	331	249	82	50	18.3	15.8	30.4	26.9
August	276	241	36	56	15.6	15.7	26.9	21.7
September	170	203	95	84	14.2	12.9	23.8	24.0
October	140	147	87	93	12.5	10.4	20.7	19.4

**Table II**

*Mid-flowering and mid-véraison dates in 2013 compared to 2012, 2011, 2010, 2009, 2008, 2007, 2006, and the average of the last 10 years*

<b>Period</b>	<b>Mid-flowering</b>	<b>Mid-véraison</b>
2002-2012	3 June	6 August
2006	4 June	6 August
2007	26 May	3 August
2008	11 June	15 August
2009	5 June	3 August
2010	9 June	9 August
2011	17 May	21 July
2012	11 June	12 August
<b>2013</b>	<b>18 June</b>	<b>22 August</b>

*Thus, the first two conditions for a good red wine vintage – flowering and fruit set that are both early and well grouped together during fine, dry weather – were far from being satisfied. Coulure (abnormal fruit set) and millerandage (shot berries) were extremely widespread among Merlot vines, leading to expectations of very low yields.*

**Despite the arrival of fine weather and a remarkably warm, sunny summer, heavy showers in late July and early August did not bring vine growth to a halt before *véraison*.**

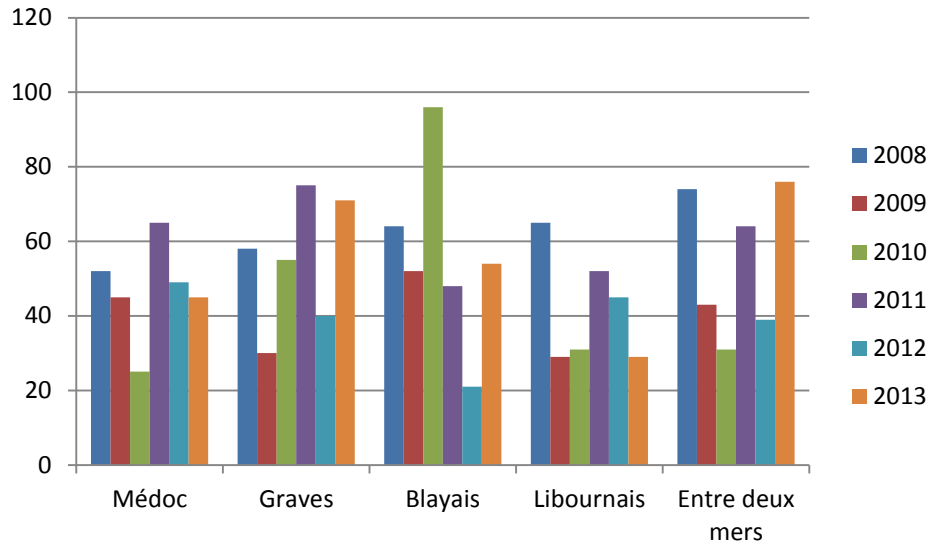
The much-hoped for summer weather did not appear until the first week of July, which was exceptionally hot and sunny (Table I). With average readings of 2-3.5°C above average, the month of July 2013 was one of the two hottest in the past 60 years, largely due to diurnal temperatures. There were 331 hours of sunshine, compared to 247 in 2012, 233 in 2010, 262 in 2009, and an average of 248.

Starting on July 20th, winegrowers began to hope that this beautiful summer weather would last long enough to make up for the awful conditions at the start of the growing season and end up producing a fine vintage. In fact, the vines did grow well, making up somewhat for the late start and attenuating the threat of mildew, which nearly destroyed the crop in June.

Unfortunately though, the high temperatures were accompanied by violent storms with exceptionally heavy rains as well as localised hailstorms on the 25th and the 26th in the Médoc, Graves, Entre-Deux-Mers, and Libourne regions. Other than Sauternes and Barsac, spared by the storms, there were from 35 to 90 mm of rain throughout the rest of the Bordeaux vineyards. Pessac-Léognan received the most precipitation. The strong gusts of wind during these storms caused damage to vegetation and it was often necessary to tie the vines up again. This stormy weather continued during the first week of August. Hail on the night of 2nd August did a great deal of damage to the Entre-Deux-Mers, destroying over 80% of the crop on nearly 10,000

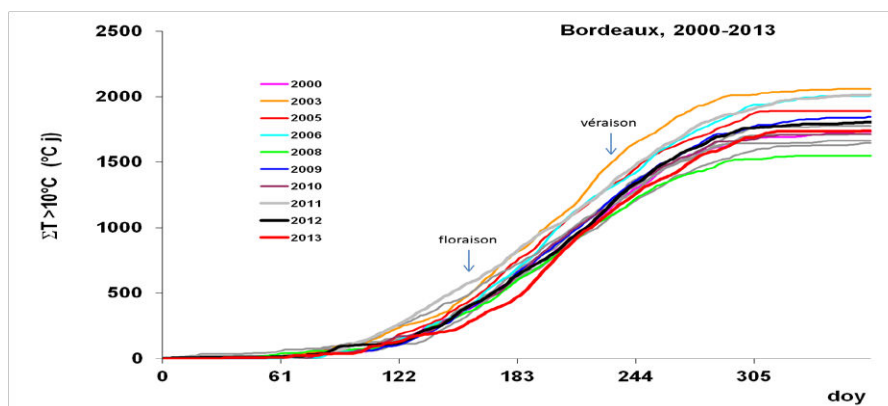
hectares.

There was more rainfall than usual in July, but this was very unevenly distributed (Figure 5), and thus had a variable impact on the beginning of water stress necessary to stop vegetative growth (Figure 7).



**Figure 5**  
*Accumulated precipitation (mm) in July from 2008 to 2013*  
*Data from BSV Aquitaine*

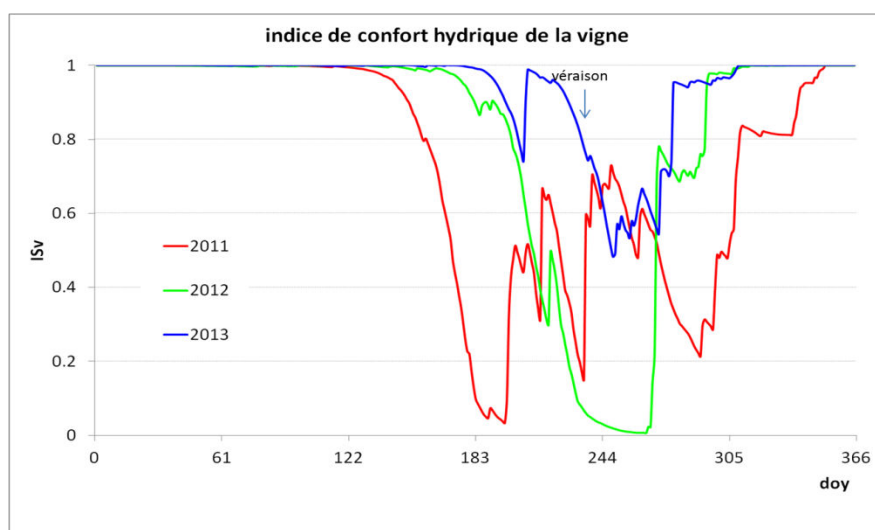
After the chaotic weather in the early part of the month, the rest of August was in keeping with usual summer weather patterns, with seasonal temperatures and plenty of sunshine. Although the first day of August was the warmest all summer, the month featured average temperatures on the whole, with slightly higher maximum temperatures and slightly lower minimum temperatures at night (Table I). These were conducive to enhancing aromatic potential and acidity in white wine grapes. The generous sunshine was above average everywhere despite some brief stormy interludes. The heat deficit at the beginning of the season was thus partly made up for, and meant that the 2013 vintage was comparable to the 2008 and 2011 vintages during the first two weeks of August (Figure 6).



**Figure 6**

*Variation in accumulated temperatures throughout 2013*  
*Data from INRA (Philippe PIERI)*

But the damage had been done... After the dramatically wet spring, it would have taken an extraordinarily dry summer to stop vegetative growth before ripening on *terroirs* propitious to making good red wines. Despite the relatively dry weather in August, the degree of water stress necessary to slow down vine growth before *véraison*, and for the synthesis of phenolic compounds, was insufficient (Figure 7), except on shallow soils. Therefore, vine growth continued practically until the end of August in most instances. *Véraison* (colour change) began on about August 7th-8th for white wine grapes, several days later for Merlot and Cabernet grapes, and at the end of the month for Petit Verdot. Although the white wine grapes changed colour quickly, this was not the case for the reds. Mid-*véraison* for Merlot and the Cabernets occurred around August 22nd, i.e. 15 days later than the 10-year average. Due to difficulties during fruiting at the beginning of the season, this was slow and laborious, especially for Merlot. In late August, it was necessary to remove bunches that had not changed colour. This was a major sacrifice, considering that expected yields were already very low.



**Figure 7**

*Variation in the water stress index in 2013 compared to 2012 and 2011*  
*Data from INRA (Philippe PIERI)*

*The third and most important condition for a great vintage was thus not at all fulfilled in 2013. Due to storms in late July and early August, the beautiful warm sunny summer weather was not enough to limit water supply to the vines in order to stop vegetative growth during ripening. However, the worst had been avoided. The two summer months in 2013 were essential for the success of the white wines, as well as the production of honourable red wines worthy of interest.*

The wet, mild weather in September and October was conducive to the development of botrytis, and not propitious to the ripening of red wine grapes.

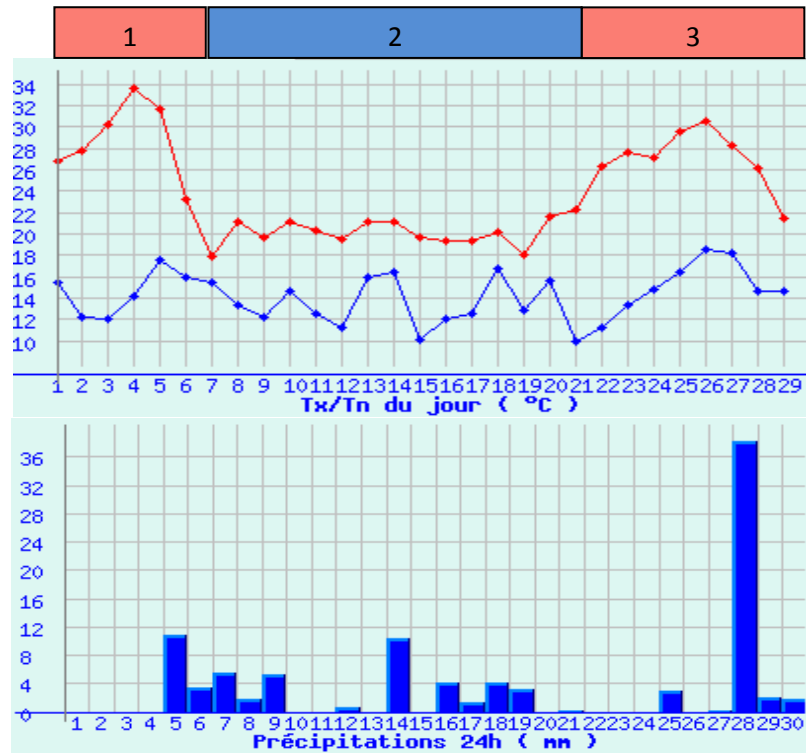


Unfortunately, conditions in September did not make for the slow, complete ripening of all grapes, which is an essential factor in the quality of great red wines. Even though average monthly weather data were close to normal (Table I), there were three distinct periods (Figure 8):

1- The first week was warm, sunny, and dry – a continuation of summer. This was favourable to the synthesis of coloured compounds.

2- This was followed by two weeks of awful (wet and fairly cool) weather that led to the quick degradation of grape skins.

3- As for the last week of September, despite an influx of warm air, the weather was inclement and rainy on the 28th. This made the grapes sensitive to grey rot, which became increasingly aggressive and uncontrollable as time went on.



**Figure 8**

*Daily variations in temperature and precipitation in September 2013  
Data from Mérignac (Météo France)*

*In 2013, due to rain in September, the fourth parameter for a good red wine vintage – slow, complete ripening thanks to warm, dry weather – was no more successful than the previous three.*

Even later than in 2012, the harvest was subject to widespread *Botrytis cinerea*. In short, weather conditions did not leave enough time for the red wine grapes to attain optimum ripeness.

The picking of grapes for dry white wines in the Graves and Pessac-Léognan appellations began a week later than in 2012 and three weeks later than in 2011 (Table III). The harvest lasted from September 10th to the 25th. The weather was fairly cool until the 22nd, with light showers

from the 14th to the 19th (Figure 8). This was conducive to the spread of grey rot that had been latent since flowering and increasingly threatening starting on the 18th. It was obviously necessary to pick quickly to cope with this dangerous situation.

Sauvignon Blanc grapes were bursting with fruitiness in 2013. Sugar levels were lower than in 2012 (table IV), although comparable to 2010, accompanied by higher acidity and a lower pH than in the past few years. The Sémillon grapes also did well thanks to the summer rainfall, producing fruity grapes that were a little less sweet than in 2012, but with good acidity. Their balance recalls 2007, which augurs well for very fine dry white wines in the 2013 vintage. Yields were satisfactory and higher than in 2012 for Sauvignon Blanc, but somewhat lower for Sémillon.

**Table III**

*Harvest dates for grapes in the Graves region used to make dry white wines in 2010, 2011, 2012, and 2013*

	Sauvignon Blanc	Semillon
2010	2 - 15 September	15 - 20 September
2011	22 - 31 August	1 - 5 September
2012	3 - 10 September	10 - 18 September
<b>2013</b>	<b>10 - 22 September</b>	<b>21 - 25 September</b>

**Table IV**

*Composition of Sauvignon Blanc grapes from a plot with limestone soil in the Graves region in 2010, 2011, 2012, and 2013*

	Potential alcohol (%)	Total acidity (g/l)	pH
2010	12.6	4.6	3.15
2011	11.6	5.6	3.05
2012	12.9	5.3	3.05
<b>2013</b>	<b>12.4</b>	<b>6.0</b>	<b>2.92</b>

Merlot grapes were the first to suffer from the poor weather in September. Most of these had difficulty reaching desired sugar levels and the acidity was late in degrading (Table V). Therefore, they were picked quickly in most instances due to the increasingly worrying spread of grey rot.

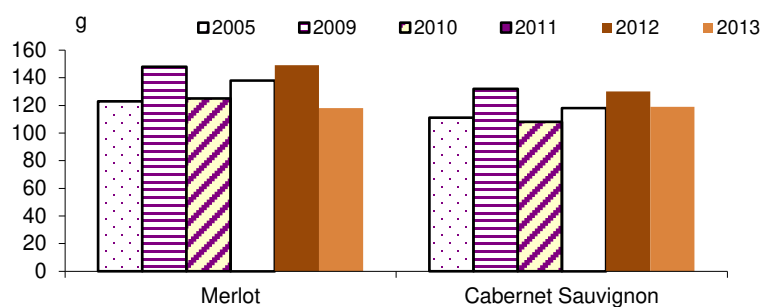
The first grapes were picked in the last week of September, practically at the same time of year as in 2012 but, objectively, ten days earlier than they should have been considering the *véraison* dates. The harvest was spread over 4 weeks, according to the state of the grapes. Grey rot had affected all grape varieties by the end of the first week in October. Entire plots of Cabernet rotted from one day to the next without any warning. Such a total shut-down of the vine's natural defences against *Botrytis cinerea* is rare. Cabernet and Petit Verdot grapes were picked after Merlot i.e. until October 25th. From beginning to end, and with very few exceptions, the choice of when to pick in 2013 was dictated by the risk of grey rot. Vines growing on permeable sandy or gravel and sand soils suffered the most violent attacks of *Botrytis*. Clay and/or limestone soils and subsoils on both the left and right banks offered greater resistance. It must be said that the Saint-Estèphe appellation received only 25 mm of rain from October 1st to 25th, three times less than the other communes in the Médoc (and most of the rest of Bordeaux).

**Table V***Variations in grape sugar content and acidity during ripening*

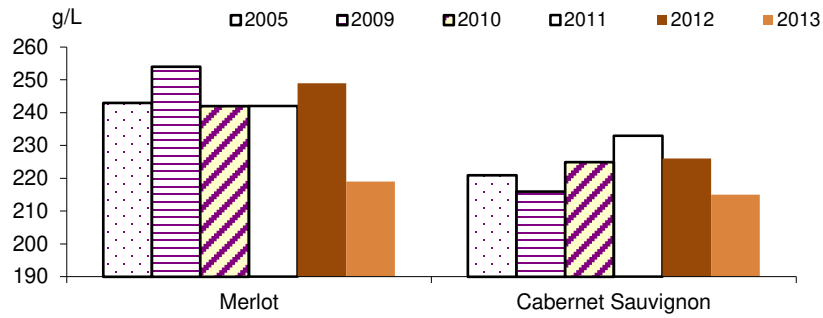
	Weight per 100 berries (g)	Sugars (g/l)	TA (g/L H <sub>2</sub> SO <sub>4</sub> )
<b>2013</b>			
10/9 Merlot	118	207	5.2
Cabernet Sauvignon	100	188	6.8
30/9 Merlot	118	219	4
Cabernet Sauvignon	119	215	3.5
<b>2012</b>			
3/9 Merlot	155	203	4.3
Cabernet Sauvignon	149	178	5.7
24/9 Merlot	113	249	2.4
Cabernet Sauvignon	130	226	3.5
<b>2010</b>			
30/8 Merlot	120	198	4.3
Cabernet Sauvignon	101	171	6.1
22/9 Merlot	125	242	3
27/9 Cabernet Sauvignon	108	225	3.6

Despite berries that weighed less than in previous vintages, the grapes had significantly lower sugar levels as well as much greater total acidity (Figures 9, 10, and 11) because picking needed to take place earlier than originally hoped.

Alternating cool nights and warm days nevertheless led to the sufficient synthesis of anthocyanins, whose content was slightly lower than in 2010 or 2011, but similar to 2009 for both grape varieties (the Cabernets and Merlot), and to 2012 for the Cabernets (Figure 12). It was thus possible to make deeply-coloured, fruity wines so long as the following conditions were met: the right *terroir*, as previously described, meticulous green pruning, relatively low yields, ripe, carefully-sorted grapes, quick picking, and precision winemaking.

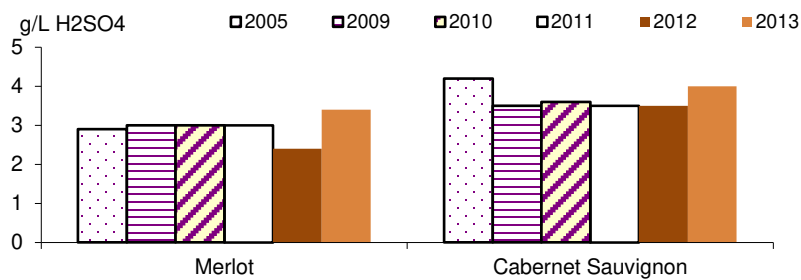
**Figure 9**

*Average weight of 100 ripe berries in 2013 compared to 2012, 2011, 2010, 2009 and 2005*



**Figure 10**

*Sugar content in 2013 compared to 2012, 2011, 2010, 2009 and 2005*



**Figure 11**

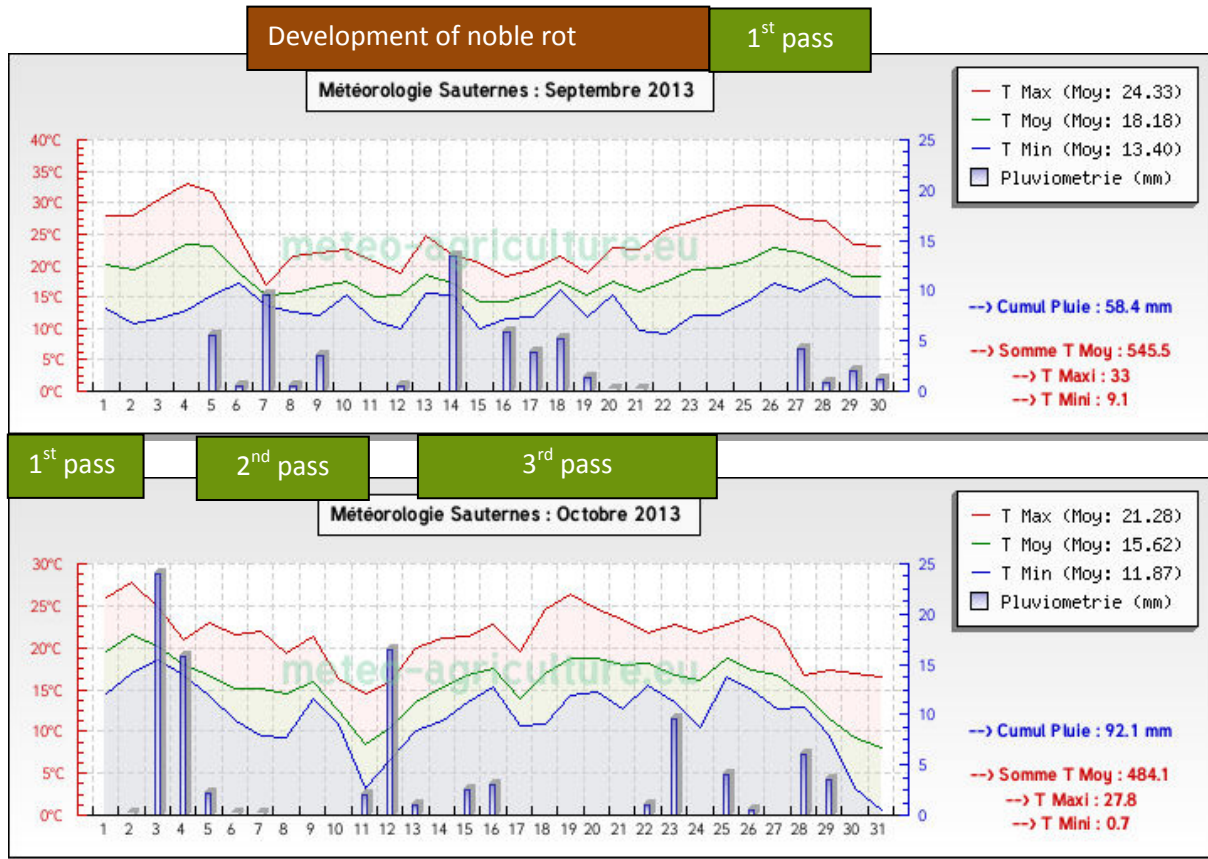
*Total acidity in 2013 compared to 2012, 2011, 2010, 2009 and 2005*



**Figure 12**

*Total anthocyanin content (A<sub>ph1</sub>) of the 2013 vintage compared to 2012, 2011, 2010, and 2009*

The Indian summer of 2013 was much more prone to rot than in 2012. The rain in early September brought on the widespread incursion of *Botrytis cinerea* and high temperatures from September 22nd to 26th fostered the rapid concentration of grapes affected by "noble rot". The harvest in Sauternes and Barsac (Figure 13) began the last week in September. The second and third passes in the vineyard took place from the October 8th to 25th. Picking was disrupted by several rainy periods, making it more complicated than in 2011 and 2009, years with a much less rainy month of October. Yields in 2013 were slightly higher than in 2012, but lower than in 2009.



**Figure 13**  
*Daytime temperatures and precipitation in September and October 2013 in Sauternes  
 Chronology of the development of noble rot and progression of passes (example).*

**Very successful white wines and red wines of variable quality, some of which are very pleasant, although rarely great**

The 2013 white wines are of unquestionably good quality. The dry white wines have intense, complex fruit and remarkable acidity, making them seem more like cold climate wines. When well made, they will undoubtedly age well.

The grapes used to make the great wines of Sauternes and Barsac were more difficult than usual to pick because the "windows of opportunity" in the weather for the grapes to become concentrated were fairly short. However, botrytis spread very quickly in the warm, wet autumn of 2013, bringing about the widespread proliferation of very pure noble rot. The wines are aromatic and less sweet than in 2009 and 2011, with all the richness and finesse of a very good vintage.

Unfortunately, however, red wine grapes do not benefit from noble rot... 2013 was unquestionably the most difficult vintage in the past thirty years. It is always risky to make predictions about the future development of red wines at the very beginning of barrel ageing, especially in a late-ripening vintage. It is nevertheless clear that the weather in 2013 was not conducive to producing a great vintage. However, thanks to a warm, very sunny summer, it was possible to make small quantities of pleasant, charming, fairly deep-coloured, Bordeaux wines with the smooth tannin and freshness that Bordeaux lovers appreciate.