

Table 1: Blenheim Weather Data – June 2005

	June 2005	June LTA	Period of LTA	Deviation from or % of LTA	June 2004
Growing Degree Days for month	4.0	8.6	(1947-1978)	–	37.8
Growing Degree Days Total from July onwards	1274.4	1310.6	(1947-1978)	97%	1324.9
Mean Maximum (°C)	13.2	13.0	(1932-1980)	+0.2°C	15.0
Mean Minimum (°C)	2.5	1.9	(1932-1980)	+0.6°C	5.2
Mean Temp (°C)	7.9	7.7	(1932-2000)	+0.2°C	10.1
Grass Frosts (<= -1.0°C)	12	17.7 12.3	(1932-1980) (1986-2004)	-5.7 equal	6
Air Frosts (<0.0°C)	6	10.8 5.3	(1932-1980) (1986-2004)	-4.8 +0.7	4
Sunshine hours	140.3	151	(1930-2000)	93%	146.5
Sunshine hours – lowest		91.8	1981		
Sunshine hours – highest		205.2	1959		
Sunshine hours total - 2005	1234.3	1210	(1930-2000)	102%	1167.1
Rainfall (mm)	14.6	57	(1930-2000)	26%	59.6
Rainfall (mm) – lowest		8.0	1974		
Rainfall (mm) – highest		154.9	1943		
Rainfall total (mm) – 2005	286.6	316	(1930-2000)	91%	328.0
Evapotranspiration – mm	30.8	31.8	(1996-2004)	97%	36.6
Avg. Daily Windrun (km)	205.7	232.5	(1996-2004)	88%	276.7
Mean soil temp – 10cm	5.9	5.6	(1986-2004)	+0.3°C	7.1
Mean soil temp – 30cm	8.3	8.0	(1986-2004)	+0.3°C	9.0

Temperature

The mean temperature for June 2005 was 0.2°C warmer the long-term average for June. However June 2005 was actually the coolest June that Blenheim has experienced since 1996. All June averages from 1997 to 2004 were well above average. The three years 2002 – 2004 were quite remarkable for their June temperatures.

June 2004 is the 4th warmest June on record at 10.1°C.

June 2003 is the warmest June on record for Blenheim at 10.9°C, (records began in 1932).

June 2002 is the 2nd warmest June on record at 10.6°C.

So although June 2005 was close to the long-term average temperature it was quite a departure from what we have experienced over recent years.

Rainfall

14.6mm of rainfall for June 2005 was in stark contrast to May 2005, which recorded 97mm. June 2005 is now the 6th driest June on record for the period 1930-2005. 1974 is the driest on record with 8.0mm rain. The monthly rainfall that Blenheim has experienced thus far in 2005 seems to be oscillating between a low month and then a high month.

Sunshine

Given that rainfall was far lower than average you would expect sunshine hours to be above average, as less rainfall normally means less cloud cover and therefore more sun. However that was not the case for June 2005.

The first and last weeks of June 2005 recorded well above average sunshine hours. The 2nd and 3rd weeks were overcast with little rain and only three or four days with a respectable amount of sun.

The seven days from 12th to 19th June were especially dull, only recording 3.6 hours sunshine in total. The normal daily average for June is 5 hours, or 35 hours for seven days.

Wind

Included in Table 1 is the average daily windrun for June. For those of you not familiar with the term windrun, it is measured by an anemometer and is basically the distance in km that a balloon would be blown in a 24 hour period. Since the Blenheim meteorological station was automated in 1996 windrun has been measured at the top of a 10 metre high tower, as this is the worldwide standard height for measuring wind. June 2005 was a lot less windy than June 2004 and the long-term average.

You may be asking the question, what is the range of Blenheim's daily windrun? The two extremes of windrun for Blenheim over the past 10 years are as follows. Lowest recorded is 76km on 20 May 2005 and highest recorded is 757km on 2 Dec 2004. There is always quite a spread of daily windrun in any one month. The lowest daily total for June 2005 was 103km on the 17th and the highest was 476 km on the 29th.

Contrasting windrun for the Wairau and Awatere valleys

Those of you who either live or work in the Awatere valley will be aware that it is often far windier in the Awatere valley than it is in the Wairau valley. The question is by how much?

Table 2: Windrun in the Wairau and Awatere Valleys for the period 2000-2005

	Blenheim Windrun Daily km	Dashwood Windrun Daily km	Dashwood as % of Blenheim
January	287.2	376.6	131%
February	280.3	397.7	142%
March	270.1	375.4	139%
April	225.3	331.0	147%
May	244.5	341.6	140%
June	259.1	364.8	141%
July	231.4	323.6	140%
August	250.6	358.0	143%
September	305.6	409.4	134%
October	301.0	402.5	134%
November	314.5	419.1	133%
December	318.4	417.4	131%
Mean	274.0	376.4	137%
Mean Sept-April	287.8	391.1	136%
Average annual total windrun	100,010 km	137,386 km	

Table 2 indicates that over the past five years the Dashwood met station (located on the corner of SH1 and the Awatere Valley Road) has recorded 137% of the daily average windrun of the Blenheim met station. The ratio is the same for the growing season (Sept-April). However the monthly totals are slightly higher, especially from September to December.

Blenheim receives an annual average of 100,000 km total windrun, whereas the Dashwood receives 137,386km.

I have previously mentioned that a sub regional Sauvignon Blanc research study is being conducted in Marlborough contrasting vineyards in the various parts of the Wairau plains and also one vineyard in the Awatere valley. One of the aims of this research program is to develop a better understanding of what leads to various wine styles in these sub regions. I think we already know that differences in the growing degree-day totals for the season between the Wairau and the Awatere are not large enough to explain the later maturity of grapes in the Awatere. What other differences in Terroir contribute to the later maturity in the Awatere valley? I am interested to find out what effect wind plays in contributing to the later maturity.

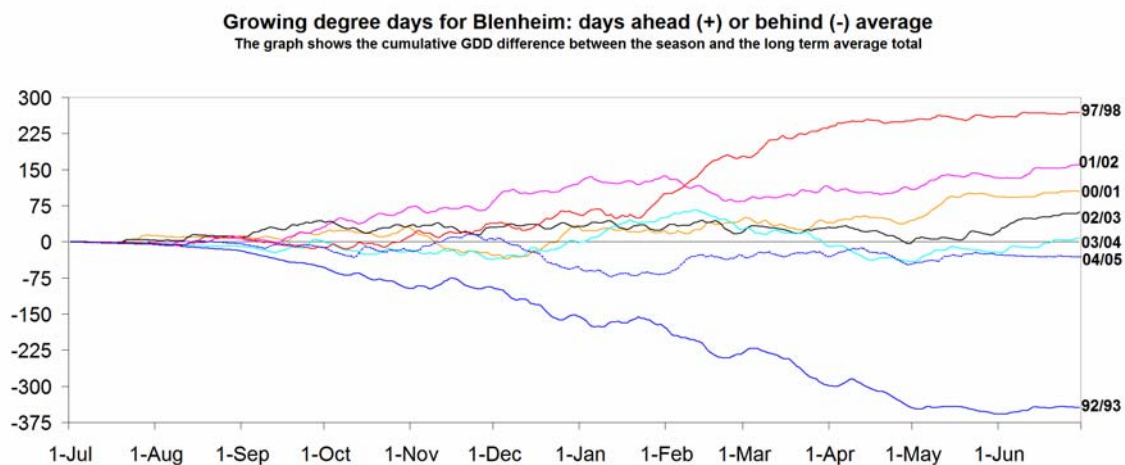
Growing Degree Days

As graphs are printed in black and white in Winepress it often makes the detail hard to see. Hopefully the labels on the end of each line will help you to identify each individual year.

The graph of growing degree-days is slightly different to those I have presented over the past year. Previous graphs have only included the GDD lines over the past five seasons (2001-2005). By doing so it has highlighted the differences between the individual seasons, as the y axis scale was a lot smaller (-75 to +175). However it is sometimes helpful to remind ourselves what the extremes are, especially when the past season may not have been quite what we had hoped for.

The graph shown includes the very hot season of 1997/1998 and the very cold season of 1992/1993. The effect of this is to push the other lines quite close together on the graph.

It is interesting to note that for the immediate past season, 2004/2005, apart from a brief warm spell in November 2004 the GDD total for the season never got above the long term average (the line through zero). The exceptionally cold December made the growing degree-day line plummet rapidly and although February 2005 was well above average the GDD total still did not make up the deficit. The flat line during June 2005 indicates that the temperature was almost average, in contrast to the GDD lines for the other Junes 2001-2004 shown on the graph and as previously explained in regard to the average June temperatures.



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