

Table 1: Blenheim Weather Data – July 2005

	July 2005	July LTA	Period of LTA	Deviation from or % of LTA	July 2004
Growing Degree Days for month	24.5	5.5	(1947-1978)	445%	0.2
Growing Degree Days Total from July onwards	24.5	5.5	(1947-1978)	445%	0.2
Mean Maximum (°C)	14.1	12.4	(1932-1980)	+1.7°C	12.7
Mean Minimum (°C)	5.3	1.5	(1932-1980)	+3.8°C	1.6
Mean Temp (°C)	9.7	7.2	(1932-2000)	+2.5°C	7.2
Grass Frosts (<= -1.0°C)	10	19.0	(1932-1980)	9 fewer	18
Air Frosts (0.0°C)	2	12.4	(1932-1980)	10 fewer	11
Sunshine hours	126.7	158	(1930-2000)	80%	176.2
Sunshine hours – lowest		119.6	1996		
Sunshine hours – highest		230.8	1952		
Sunshine hours total - 2005	1361.0	1368	(1930-2000)	99.5%	1337.9
Rainfall (mm)	87.8	66	(1930-2000)	133%	92.2
Rainfall (mm) – lowest		9.9	1930		
Rainfall (mm) – highest		174.1	1998		
Rainfall total (mm) – 2005	374.4	382	(1930-2000)	98%	420.2
Evapotranspiration – mm	33.7	31	(1996-2003)	92%	31.5
Avg. Daily Windrun (km)	228.7	233.2	(1996-2004)	98%	206.2
Mean soil temp – 10cm	7.0	4.5	(1986-2003)	+2.5°C	4.6
Mean soil temp – 30cm	8.6	6.9	(1986-2003)	+1.7°C	6.8

Temperature

July 2005 has entered the record books as the warmest July that Blenheim has experienced in the 74 years 1932-2005. The mean temperature of 9.7°C was a massive 2.5°C above the long-term average for July of 7.2°C.

What is also quite remarkable is that four of the five warmest July's on record for Blenheim have occurred since 1997, given that the comparison is for a 74 year period.

July 2005 9.7°C

July 1998 9.6°C

July 2000 9.4°C

July 1949 9.2°C

July 1997 9.0°C

Soil Temperatures for July were also well above average and similar to 1998 and 2000. Continued warm air and soil temperatures during August 2005 would mean an early bud burst for the grapes.

Sunshine

Total sunshine for July of 126.7 hours is the sixth lowest total on record for the period 1930-2005. The lowest total was recorded in 1996 with 119.6 hours. The final two days of July 2005 rescued the sunshine total from being the lowest on record. The 30th and 31st recorded 9.0 and 8.2 hours sunshine respectively. However the average daily sunshine for July 2005 was only 4.1 hours.

Rainfall

The rainfall total for July 2005 of 87.8mm was very close to the July 2004 total of 92.2mm. Two days during July recorded most of the month's rainfall. July 14th recorded 36.8mm and July 28th recorded 26.4mm.

So far during 2005 Blenheim's rainfall has oscillated between a high monthly total followed by a low monthly total.

Table 2: Blenheim's monthly rainfall January-July 2005

	Rainfall (mm)	% of LTA
January	65.2	130%
February	27.6	61%
March	76.8	167%
April	5.4	10%
May	97.0	149%
June	14.6	26%
July	87.8	133%
Total	374.4	98%

Although the monthly rainfall totals have been up and down the total rainfall to date for 2005 is very close to the long-term average.

Growing Degree Days

The consequence of July's mean temperature being the warmest on record is that the growing degree-day total is also the highest ever recorded. However as I have discussed in previous articles growing degree-days recorded in the early part of the season have little direct effect on the seasonal total and consequently the date of harvest. The effect of a warm period in July – September is more directly related to the date of bud burst. To this effect I thought that it would be interesting to compare the growing degree-days received from July to September over recent seasons and the date of bud burst in those seasons (Table 3).

Thank you to Andrew Naylor of Allied Domecq Wines for supplying the bud burst information. The dates given are specific to the block of grapes from which the information was collected. However it is the differences between seasons that I wish to highlight.

The trend is that with higher growing degree-days that bud burst occurs earlier, e.g. 2002 with highest GDD has the earliest bud burst. However as with all data sets there is always one result that doesn't fit the trend. Date of bud burst in 2004 is relatively early with low growing degree-days, whereas 1997 with similar growing degree-days to 2004 reached bud burst 16 days later. No answer for that dilemma.

If the average temperatures for August and September are above average then we could be in for an early bud burst in 2005. However it is very early days yet to be speculating.

Table 3: Growing degree days July to September over recent seasons and date of bud burst for Pinot Noir grapes

	July	Aug	Sept	Total	Date of BB Pinot Noir
1997	1.6	26.5	19.3	47.4	9 Oct 97
1998	24.1	15.5	55.0	94.6	21 Sept 98
1999	8.6	7.1	64.1	79.8	28 Sept 99
2000	18.5	10.6	48.9	78.0	26 Sept 00
2001	3.2	21.2	63.3	87.7	24 Sept 01
2002	9.1	18.7	73.3	101.1	16 Sept 02
2003	2.2	5.8	52.2	60.2	26 Sept 03
2004	0.2	13.6	32.5	46.3	23 Sept 04
2005	24.5	?	?	?	?