

Met Data summary for September 2017 for the Blenheim Meteorological station located at the Grovetown Park campus of the Marlborough Research Centre.

September 2017 recorded above average temperature, average rainfall, average number of frosts, slightly below average sunshine and well below average wind-run.

Table 1: Weekly weather data during September 2017

	Mean Max (°C)	Mean Min (°C)	Mean (°C) Deviation	Ground Frosts	Air Frosts	Rainfall (mm)	Sunshine (hours)
1 st - 7 th	15.0	5.7	10.4 (-0.7)	1	0	5.4	49.2
8 th - 14 th	17.3	5.0	11.2 (+0.1)	3	0	0.6	51.0
15 th - 21 st	15.6	8.2	11.9 (+0.8)	0	0	36.2	24.8
22 nd - 28 th	18.2	9.7	14.0 (+2.9)	0	0	7.4	42.9
29 th - 30 th (2 days)	18.5	7.8	13.1 (+2.0)	0	0	0.2	15.4
1 st - 30 th September 2017	16.66 (+0.46)	7.22 (+1.22)	11.94 (+0.84)	4 (0.7 less)	0 (0.8 less)	49.8 (98%)	183.3 (95%)
September LTA (1986 - 2016)	16.2	6.0	11.1	4.7	0.83	50.9	193.0

LTA – Long Term Average

Temperature

Mean temperature of 11.94°C was 0.84°C above the long-term average temperature for September (1986-2016) of 11.1°C. The ninth warmest September on record for the 87 years 1932-2017. The warmest September on record is 1988 with 13.1°C.

September 2016 mean temperature was 11.6°C.

September 2015 mean temperature was 9.7°C.

September 2014 mean temperature was 11.8°C.

September 2013 mean temperature was 11.9°C.

The average daily maximum temperature for September 2017 was 16.66°C; 0.46°C above average. The average daily minimum temperature was 7.22°C; 1.22°C above average; i.e. the overnight minimum temperatures were well above average.

September 2017 started out cool in the first week and warmed up considerably as the month progressed.

The coldest day was the 3rd September with an air minimum of 1.4°C and a grass minimum of -2.5°C.

The warmest day was 24th September with a maximum air temperature of 24.4°C.

9am Soil Temperatures

10 cm mean temperature was 11.3°C; 2.1°C above the long-term average for September

20 cm mean temperature was 11.9°C; 1.8°C above the long-term average for September

30 cm mean temperature was 12.2°C; 1.5°C above the long-term average for September

100 cm mean temperature was 11.8°C; 0.6°C above the long-term average for September

Warm overnight air temperatures helped to boost the 9am soil temperatures during September. These warm temperatures throughout the soil profile have been ideal for boosting growth of both shallow and deeper rooted plants.

Frosts

4 ground frosts were recorded during September 2017 and no air frosts (close to average).

7 ground frosts were recorded during September 2016 and 1 air frosts

6 ground frosts were recorded during September 2015 and 2 air frosts

2 ground frosts were recorded during September 2014 and no air frosts

4 ground frosts were recorded during September 2013 and no air frosts

The long-term average (1986-2016) is 4.7 ground frosts and 0.8 air frosts

Sunshine

183.3 hours sunshine for September is 95% of the long term average for September of 193 hours.

September 2016 recorded 164.9 hours sunshine.

September 2015 recorded 225.3 hours sunshine.

September 2014 recorded 196.7 hours sunshine.

September 2013 recorded 169.4 hours sunshine.

Total sunshine for January to September 2017 was 1791.5 hours; 102% of the long-term average.

Sunniest town for 2017 update

Current sunshine totals and rankings to the end of September 2017 are:

Whakatane 1815 hours (23.5 hours ahead of Blenheim)

Richmond 1798.5 hours (7 hours ahead of Blenheim)

Blenheim 1791.5 hours

Napier 1743.7 hours

Appleby 1696.5 hours

Tekapo 1683.4 hours

Nelson 1593.9 hours

At the end of August Blenheim was in second place, 32 hours behind Whakatane. At the end of September Blenheim has closed that gap and is now only 23.5 hours behind Whakatane. However, Richmond recorded 19.2 hours more sunshine than Blenheim in September and has leap frogged into second place. So at the end of September Whakatane, Richmond and Blenheim are all in the running to be sunniest town in NZ for 2017.

Rainfall

Rainfall total of 49.8 mm is 98% of the long-term average for September of 50.9 mm.

September 2016 rainfall was 26.4 mm.

September 2015 rainfall was 54.4 mm.

September 2014 rainfall was 41.0 mm.

September 2013 rainfall was 67.7 mm.

Many people have commented that they have felt that July, August and September have been wetter than 'normal'. However, the stats indicate that all three months have recorded very close to average rainfall. Each of these three months has recorded rainfall on 13 days. It is the number of rain days, rather than the total amount of rain that has made these months feel wetter than normal.

It is worth pointing out that the lower Wairau Valley (Blenheim) and the lower Awatere Valley (Dashwood) weather stations record much lower rainfall than elsewhere in Marlborough. The Marlborough District Council has an extensive network of environmental monitoring sites that can be accessed on their website. <http://hydro.marlborough.govt.nz/environmental> Thanks to MDC for the following data.

Rainfall totals from a selection of the MDC monitoring sites for September provides a stark contrast with Blenheim's rainfall:

Blenheim = 45.0 mm (MDC building in Seymour Square, whereas MRC site is at Grovetown Park)

Dashwood = 75.6 mm

Branch River = 122 mm

Waikawa = 155.5 mm (346% of the Blenheim total)

Onamalutu = 167.5 mm

Rai Valley = 272.8 mm (606% of the Blenheim total)

Rainfall total from July to September 2017 for Blenheim was 178.0 mm, almost the same as the LTA total of 176.4 mm. In contrast July to September 2016 recorded only 100.4 mm, 57% of the LTA.

Total rainfall for January to September 2017 was 521.0 mm. This is 107% of the long-term average total (Jan-Sep) of 488 mm. In contrast January to September 2016 only recorded 426 mm (87% of LTA) and January to September 2015 only recorded 355.4 mm (73% of LTA).

Wind

Average daily wind-run for Blenheim during September 2017 was 249.5 km compared to the long-term average of 278.4 km.

Average wind speed for September 2017 was 10.4 km/hr, compared to the long-term average of 11.6 km/hr. January is the only month in 2017 to have recorded above average wind-run; i.e. been windier than normal

Soil Moisture

Moisture in the topsoil at the Grovetown Park weather station was above average during September at 37.5%. This is very close to field capacity for this soil; i.e. above field capacity excess moisture drains through the soil. This is an ideal situation to be in at the beginning of October with warm air and soil temperatures and good soil moisture ensuring ideal conditions for continued spring pasture growth.

However, as is always the case in October and November, the evapotranspiration quickly increases (September average = 71.6 mm. October average = 101.8 mm, November = 123.3 mm). In order for pasture growth to be maintained regular rainfall is required in October and November.

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