

Weather Data summary for May 2021 for the Blenheim Meteorological station located at the Grovetown Park campus of the Marlborough Research Centre.

Table 1: Weekly temperatures, rainfall and sunshine during May 2021

	Mean Max (°C)	Mean Min (°C)	Mean (°C)	Ground Frosts	Rainfall (mm)	Sunshine (hours)	Wind-run (km)
1 st - 7 th	18.5 (+1.9)	5.6 (-0.2)	12.1 (+0.9)	3	0.0	61.6	196.3
8 th - 14 th	17.7 (+1.1)	9.0 (+3.2)	13.3 (+2.1)	0	8.0	26.9	202.3
15 th - 21 st	16.8 (+0.2)	5.8 (=)	11.3 (+0.1)	2	36.2	43.7	256.4
22 nd - 28 th	13.6 (-3.0)	3.4 (-2.4)	8.5 (-2.7)	4	25.2	29.5	188.4
29 th - 31 st (3 days)	13.3 (-3.3)	6.7 (+0.9)	10.0 (-1.2)	0	18.8	1.0	138.3
1 – 31 May	16.3 (-0.3°C)	6.0 (+0.2°C)	11.2 (= LTA)	9 +3.6	88.2 (151%)	162.7 (92%)	203.8 95%
LTA 1986-2020	16.6	5.8	11.2	5.4	58.6	176.6	215.1

May 2021 was a month of two distinct halves. The first half was warm and relatively dry. The second half was wet and cold.

Sunshine

162.7 hours sunshine for May was 92% of the long-term average of 176.6 hours (1986-2020). This is the lowest sunshine total in May since 2011, which recorded 161.8 hours.

May 2020 recorded 187.5 hours sunshine

May 2019 recorded 214.6 hours sunshine (highest May total on record 1932-2020)

May 2018 recorded 171.2 hours sunshine

Blenheim has recorded 1154.9 hours sunshine for the five months January to May 2021; 106% of the long-term average of 1092.2 hours.

Rainfall

Rainfall total of 88.2 mm was 151% of the long-term average for May of 58.6 mm (1986-2020). Slightly higher (+6.6 mm) than the total recorded in May 2020.

May 2020 rainfall was 81.6 mm.

May 2019 rainfall was 55.0 mm.

May 2018 rainfall was 85.2 mm.

The first 15 days of May only recorded 8.0 mm rain. The second half of May from 16th to 31st recorded 80.2 mm rain.

Total rainfall for the five months January to May 2021 was 205.8 mm; 86% of the long-term average of 240 mm.

Total rainfall for the five months January to May 2020 was 125.8 mm; 52% of the long-term average of 240 mm.

Total rainfall for the five months January to May 2019 was 241.6 mm; 101% of the long-term average of 240 mm.

At the end of April the rainfall deficit for the first 4-months of 2021 was 63.7 mm. With the above average rainfall in May 2021 the rainfall deficit for the first 5-months of 2021 has been reduced to 34.2 mm.

Soil Moisture

Shallow soil moisture (5-35 cm depth) was 26.9% on 1 May. It dropped to 24.7% by 14 May. However, with the high rainfall on the 16th and again from the 28th to the 31st it rose steadily. On 31 May the shallow soil moisture was 39.0%, slightly above field capacity; i.e. water would be draining through the topsoil and helping to recharge the soil moisture lower down in the soil profile.

Temperature

Mean temperature of 11.2°C was equal to the long-term average temperature for May of 11.2°C (1986-2020).

May 2020 mean temperature was 10.9°C
May 2019 mean temperature was 12.85°C (second warmest on record)
May 2007 mean temperature was 13.1°C (warmest on record)

The first two weeks of May 2021 recorded well above average temperatures and it appeared as if May was on track to match the very warm temperatures in May 2019. However, the third and fourth weeks of the month were much cooler than the first two weeks and they dragged the overall mean for the month down; e.g. the second week of May had a mean temperature of 13.3°C, which was 4.8°C warmer than the mean temperature of 8.5°C in the fourth week of May.

Frosts

May 2021 - 9 ground frosts and 0 air frosts. This is the highest number of ground frosts since May 2011, which recorded 11 ground frosts

May 2020 - 6 ground frosts and 0 air frosts.

May 2019 - 2 ground frosts and 0 air frosts.

The coldest ground frost of -1.9°C was recorded on the morning of 27 May and the coldest air minimum temperature of +0.3°C was also recorded on 27 May.

May 2021 recorded 3 more ground frosts than May 2020. However, the ground frosts in May 2021 were not as cold as those in May 2020. The average ground frost temperature in May 2021 was -1.3°C, compared to an average ground frost temperature of -2.1°C in May 2020.

Wind Run

May 2021 recorded average daily wind run of 203.8 km; slightly lower than the long-term average of 215.1 km (1996-2020).

Autumn Summary– March to May

Sunshine

March to May 2021 recorded 582.1 hours sunshine, 97% of the long-term average. This is well below the March to May sunshine totals in 2019 and 2020.

Autumn 1994 = 695.8 hours - Highest

Autumn 2007 = 655.6 hours – 2nd

Autumn 2020 = 654.9 hours – 3rd

Autumn 2019 = 651.5 hours – 4th

Autumn LTA = 598.7 hours

Rainfall

March to May 2021 recorded 175.2 mm rain, 117% of the long-term average. 58.2 mm higher than Autumn 2020.

Autumn 2020 = 117.0 (78% of LTA)

Autumn 2019 = 229.8 (153% of LTA)

Autumn LTA = 150.2

Temperature

March 2021 – 16.2°C (+0.1°C); April 2021 – 14.5°C (+1.0°C); May 2021 – 11.2°C (= LTA)

Autumn 2021 = 13.9°C (+0.3°C LTA); Autumn 2020 = 13.4°C (-0.2°C LTA); Autumn 2019 = 14.6°C (+1.0°C LTA)

Rob Agnew

Plant & Food Research /Marlborough Research Centre



**MARLBOROUGH
RESEARCH
CENTRE**

Te Rito Hiranga o Wairau