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RESEARCH

## Rothamsted Meteorological Data

### Monthly and Annual Summary 2021

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**Description:** Contains the annual and monthly summaries for daily weather data collected at Rothamsted Met Station 2021. Each month includes a general summary and summaries of rainfall (mm), sunshine (total hours), temperature mean, maximums and minimums (°C) and numbers of ground frosts;

Page 1 Weather summary for year 2021

Pages 1- 6 Weather summaries for months January-December

**Site:** Rothamsted Meteorological Station, Rothamsted Research, West Common, Harpenden, Hertfordshire, AL5 2JQ, UK. Latitude 51.8066 N, Longitude -0.3602 E, 128m asl.

#### Related Resources:

- Month and Annual Summaries for current and other years: <http://www.era.rothamsted.ac.uk/Met/monthly>
- 30-year Mean Weather Data for Rothamsted Met Station: <http://www.era.rothamsted.ac.uk/Met/R30YrMeans9120>

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## **Weather summary for 2021**

2021 was warm, dry, and not very sunny.

### **Rainfall**

2021 had below average rainfall with 702.9 mm recorded; the annual average is 763.5 mm. It rained (0.2 mm or more) on 188 days. The most on one day was 25.6 mm on 13th January. The wettest month was January with 113.6 mm. The driest month was April with 1.6 mm. Of the twelve months, seven had below average rainfall.

### **Sunshine**

2021 was a rather dull year with 1442.4 hours of sunshine (210.13 hours below the annual average). April was the 'sunniest' month with 215.8 hours. Of the twelve months only April and November had above average sunshine.

### **Temperature**

The overall mean air temperature for the year was above average at 10.3 °C (The annual average is 10.22 °C). The mean maximum air temperature was just below average at 14.0 °C (-0.03 °C). The mean minimum air temperature was above average at 6.6 °C (+0.19 °C). The hottest day was the 20th July reaching 29.4 °C and the coldest night was the 11th February which dropped to -4.9 °C. We had 108 ground frosts.

**Note:** the averages refer to the 30 year means 1991-2020.

## **Monthly summaries for 2021**

**January 2021:** January was cold, wet and had below average sunshine.

Rainfall was above average with 113.6 mm (+39.48 mm). We had 23 days with 0.2 mm or more of rain and 10 had more than 5.0 mm. The most on one day was 25.6 mm on the 13th. Snow fell and settled on 24th.

Sunshine was below average with 52.0 hours (-11.91 hours); the most was 7.0 hours on the 25th. We had 9 days with no sunshine.

January's mean maximum and minimum temperatures were below average at 5.8°C (-1.20°C) and 0.4°C (-1.22°C) respectively. The highest day temperature was 11.7°C on the 28th and the lowest minimum was -4.9°C on the 25th.

We had 17 air frosts and 18 ground frosts.

**February 2021:** February was warm with below average sunshine and rain with some snow.

Rainfall was below average with 45.8 mm (-11.15 mm). We had 15 days with over 0.2 mm, and 4 days with more than 5.0 mm. The greatest rainfall was 9.0 mm on the 4th. Precipitation fell as snow on 8th with a very slight flurry on afternoon of 10th.

Sunshine was below average with 80.8 hrs. (-5.38 hrs). We had 3 days without any sunshine and the most was 9.1 hrs on the 26th.

The mean maximum and the mean minimum temperatures were above average with 8.1 °C (+0.56°C) and 2.2°C (+0.73°C) respectively. The lowest minimum was -4.9°C on the 11th, and the highest maximum was 16.0°C on the 24th.

We had 8 air frosts and 14 ground frosts.

**March 2021:** March was relatively warm and cloudy with below average rainfall.

Rainfall was below average with 27.6 mm recorded, (-19.47 mm). We had 13 days with 0.2 mm or more of rain, and 1 day with more than 5 mm. The most recorded was 5.0 mm on the 10th.

Sunshine was below average with 112.0 hrs (-16.36); the most recorded was 10.9 hours on the 30th. There were 2 days without sunshine.

The mean maximum and minimum temperatures were above average with 10.7°C (+0.42) and 3.5°C (+0.62) respectively. The highest maximum temperature was 22.5°C on the 30th and the lowest minimum was -1°C on the 6th.

We had 1 air frost and 18 ground frosts.

**April 2021:** April was sunny, cold, and mainly dry.

Rainfall was 1.6 mm which is 52.40 mm below average. We had 4 days with 0.2 mm or more of rain. The wettest day was the 9th with 1.0 mm. April was the driest since records began in 1853.

Sunshine was above average with 215.8 hours (+43.79 hours); the most was 12.9 hours on the 22nd and there was only 1 day without sunshine.

The average maximum and minimum temperatures were below average at 11.5°C (-1.84°C) and 1.1°C (-3.36°C). The warmest day was the 19th which reached 16.2°C, and the coldest night was on the 7th when it dropped to -3.0°C.

We had 11 air frosts and 22 ground frosts.

**May 2021:** May was a cold, dull and wet month with below average temperatures and sunshine hours, and above average rainfall.

Rainfall was 94.4 mm, which is 41.14 mm above average. We had 24 days with 0.2 mm or more of rain, of which 9 days had more than 1.0 mm. The greatest fall of rain was 11.2 mm on the 21st of May.

Sunshine was below average with 150.4 hrs. (-52.92 hrs); the most was 10.1 hours on the 31st. There was one day without sunshine.

The average maximum and minimum temperatures were below average at 14.7°C (-1.78°C) and 6.2°C (-1.10°C). The highest (max) temperature was 22.3 °C on the 31st and the lowest (min) temperature was 0.2°C on the night of the 6th.

We had 0 air frosts and 10 ground frosts.

**June 2021:** June 2021 was warm, wet and relatively cloudy.

Rainfall was 77.6 mm, which is 22.78 mm above average. We had 11 days with 0.2 mm or more of rain, of which 5 days had more than 5.0 mm. The most rainfall in a single day was 23.6 mm collected on the 18th.

Sunshine was 184.7 hours, which is 21.09 below average.

The mean maximum and minimum temperatures were both above average with 20.3°C (+0.77°C) and 11.8 °C (+1.62°C) respectively. The hottest day reached 26.2°C on the 13th. The coolest night dropped to 5.1°C on the 23rd. The June 2021 average air temperature was the 8th warmest in our records (started 1878).

There were no frosts.

**July 2021:** July 2021 was warm, relatively dry and dull.

Rainfall was 51.0 mm, which is 4.46 mm below average. We had 17 days with 0.2 mm or more of rain with 2 days having more than 5 mm. The greatest rainfall was 21.4 mm recorded on the 5th.

Sunshine was below average with 195.6 hrs (-11.18 hours). The most was 14.4 hours on the 16th and there was 0 days where no sunshine was recorded.

The average maximum air temperature was 22.3 °C (+0.29 °C) and the average minimum air temperature was 13.4 °C (+1.04 °C). The warmest day reached 29.5 °C on the 20th. The lowest minimum air temperature was 10.0 °C on the 16th.

There were no frosts.

**August 2021:** August was cool, dry and dull with below average temperature, rainfall and sunshine.

Rainfall was below average with 37.0 mm (-34.99 mm). We had 13 days with 0.2 mm or more of rain, of which 3 days had more than 5.0 mm; the most was 16.8 mm on the 21st.

The mean maximum air temperature was below average with 19.9 °C (-1.69 °C) and the mean minimum air temperature was just above average with 12.3 °C (+0.02 °C). The highest temperature was 23.3 °C on the 14th. The lowest temperature was 8.1 °C on the 29th.

Sunshine was below average with 114.2 hours (-75.21 hours). There were two days without sun and the sunniest day was the 4th with 9.4 hours.

There were no frosts.

**September 2021:** The month of September was warm and dull with below average rainfall.

Rainfall was 54.1 mm, which is 3.60 mm below average. We had 11 days with 0.2 mm or more of rain and 4 days with over 5 mm. The most was 24.2 mm on the 28th.

The mean maximum and minimum temperatures were above average at 20.6 °C (+2.08 °C) and 11.5 °C (+1.32 °C) respectively. The highest (daytime) temperature was 27.9 °C on the 7th. The lowest (night) temperature was 4.6 °C on the 30th.

Sunshine was 136.2 hrs which is 14.46 hrs below average. There was 1 day without sunshine and the most recorded was 11.7 hours on the 7th.

There were no frosts.

**October 2021:** October was relatively cloudy, mild and wet for the time of year.

Rainfall was 104.8 mm which is 23.51 mm above average. We had 17 days with 0.2 mm or more of rain and 6 with over 5.0 mm. The greatest rainfall was 23.0 mm which fell on the 20th.

The October mean maximum and minimum temperatures were above average with 15.2 °C (+0.94) and 8.6 °C (+1.01) respectively. The highest temperature was 19.3 °C on the 19th and the lowest was 3.7 °C on the 22nd.

Sunshine was below average with 95.1 hrs (-17.97 hours); the most was 7.9 hours on the 6th. There was 1 day without sunshine.

There were four ground frosts.

**November 2021:** November was sunny, cold and noticeably dry.

Rainfall was 19.2 mm which is 62.02 mm below average. We had 16 days with 0.2 mm or more of rain, and 1 day with over 5 mm. The most was 6.7 mm on the 26th. Precipitation fell as snow on 28th.

The maximum and minimum mean air temperatures were both below average with 10.0 °C (-0.07 °C) and 3.9 °C (-0.37 °C) respectively. The warmest day reached 14.7 °C on the 9th and the lowest minimum was -2.6 °C on the 29th.

Sunshine was above average with 82.1 hours (+9.89 hours); the most was 7.7 hours on the 1st. There were 5 days without sunshine.

There were four ground frosts.

**December 2021:** December was warm for the time of year with above average rainfall and below average sunshine.

Rainfall was 76.2 mm, which is 0.58 mm above average. We had 24 days where at least 0.2 mm of rain was recorded, 5 of these with at least 5 mm. The most was 20.8 mm on the 24h.

There were above average mean maximum and minimum temperatures. The mean maximum was 8.6°C (+1.16) and the mean minimum was 3.9°C (+1.94). The highest maximum temperature was 14.2°C on the 29th and the lowest minimum was -2.5°C on the 22nd.

Sunshine was below average with 23.5 hrs which is 37.31 hrs below average. The most sunshine was 5.8 hours on the 2nd. We had 14 days with no sunshine recorded.

We had 5 air frosts and 9 ground frosts.