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Rothamsted Meteorological Data

Monthly and Annual Summary 2019

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Description: Contains the monthly and annual summaries for daily weather data collected at Rothamsted Met Station 2019. 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;

Pages 1- 12 Weather summaries for months January-December 2019.

Page 13 Weather summary for year 2019.

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 1981-2010:
[10.23637/OARES30YrMeans8180](https://doi.org/10.23637/OARES30YrMeans8180)

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Weather summary for 2019:

Rainfall

Total rainfall was above average with 742.6 mm recorded; the annual average is 733.0 mm. It rained (0.2 mm or more) on 204 days. The most on one day was 28.6 mm on 23rd of September. The wettest month was December with 111.6 mm and the driest month was April with 13.2 mm. Of the twelve months, six had below average rainfall.

Sunshine

Total Hours of Sunshine was above average with 1746.6 hours. The average is 1592.3 hours. The 'sunniest' month was August with 215.3 hours.

Temperature

The overall mean temperature for the year was above average at 10.5°C (The average is 9.80). The mean maximum and minimum temperatures were above average with 14.6°C(+0.97) and 6.3°C (+0.33) respectively. The hottest day was the 25th of July reaching 36.7°C and the coldest night was the 31st January which dropped to -6.8°C. We had 112 ground frosts (102 in 2018).

Overall, 2019 was wetter, sunnier and warmer than average. A reading of 36.7°C on 25th July 2019 was the highest temperature ever recorded at Rothamsted since temperature records began in 1878. February was the warmest ever recorded with a monthly mean maximum of 10.9°C. Winter (December - February) 2019 was the sunniest on record since records began in 1890. It was the tenth warmest year on record at Rothamsted since 1878 (after 2014, 2006, 2011, 2018, 2002, 2017, 2003, 1999 and 2007) .

Note. The last decade 2010-2019 was the second warmest mean annual average temperature but it was the warmest maximum daily average temperature ever recorded at Rothamsted since records began fourteen decades ago. See Extreme Weather Events at Rothamsted.

Note: The average refers to the 30 year means 1981-2010.

Monthly summaries 2019:

December 2019: December was mild for the time of year as well as having above average sunshine and rainfall.

Rainfall was 111.6 mm, which is 42.08 mm above average. We had 26 days where at least 0.2 mm of rain was recorded, 9 of these with at least 5 mm. The most was 19.2 mm on the 12th.

Sunshine was above average with 74.9 hrs which is 21.13 above average. The most sunshine was 6.3 hours on the 2nd. We had 7 days with no sunshine recorded.

December had above average mean maximum and minimum temperatures.

The mean maximum was 8.8°C (+1.88) and the mean minimum was 2.8°C (+1.13). The highest maximum temperature was 12.3°C on the 6th and the lowest minimum was -2.3°C on the 5th.

We had 7 air frosts and 14 ground frosts.

Note: The average refers to the 30 year means 1981-2010.

November 2019: November was relatively cloudy, cool and wet.

Rainfall was 91.0 mm which is 14.37 mm above average. We had 24 days with 0.2 mm or more of rain, and 7 days with over 5 mm. The most was 15.2 mm on the 13th.

Sunshine was below average with 56.9 hours (-13.85); the most was 6.4 hours on the 29th. There were 6 days without sunshine.

The maximum and minimum mean air temperatures were both below average with 8.9°C (-0.80) and 3.4°C (-0.45) respectively. The warmest day reached 14.7°C on the 1st and the lowest minimum was -2.8°C on the 19th.

We had 5 air frosts and 11 ground frosts.

Note: The average refers to the 30 year means 1981-2010.

October 2019: October was cloudy and wet with close to average temperatures.

Rainfall was 109.6 mm which is 27.92 mm above average. We had 25 days with 0.2 mm or more of rain and 7 with over 5.0 mm. The greatest fall was 18.2 mm which fell on the 5th.

Sunshine was below average with 91.1 hrs (average for October is 111.7); the most was 8.5 hours on the 2nd. There were 6 days without sunshine.

The October mean maximum temperature was below average at 13.8 °C (-0.21) and mean minimum was above average at 7.1°C (+0.02). The highest temperature was 17.0°C on the 1st and the lowest was 0.8°C on the 28th.

There were 7 ground frosts.

Note: The average refers to the 30 year means 1981-2010.

September 2019: September 2019 was sunny and warm along with above average rainfall! There was a thunderstorm in the area during the afternoon of Friday the 27th.

Rainfall was 75.0 mm, which is 17.37 mm above the average. We had 14 days with 0.2 mm or more of rain and 4 with over 5 mm. The most was 28.6 mm on the 23rd. Most of this rain fell in the last 8 days of the month.

Sunshine was 173.4 hrs which is 30.02 hrs above average. There was only 1 day without sunshine and the most recorded was 11.4 hours on the 13th. The mean maximum and minimum temperatures were above average at 19.5 °C (+1.18°C) and 10.3 °C (+0.39°C)

respectively. The highest (daytime) temperature was 24.3 °C on the 15th and the lowest (night) temperature was 4.9 °C on the 18th.

There were 3 ground frost recorded.

Note: The average refers to the 30 year means 1981-2010.

August 2019: August was sunny and very warm with below average rainfall for the time of year.

Rainfall was below average with 45.2 mm (-18.53 mm). We had 14 days with 0.2 mm or more of rain, 4 of which had more than 5.0 mm; the most was 9.6 mm on the 14th and 16th.

Sunshine was 19.1 hours above average with 215.3 hours. There was two days without sun and the sunniest day was the 26th with 12.0 hours.

The mean maximum and minimum temperatures were below average with 23.2 °C (+1.59 °C) and 12.4 °C (+0.54 °C) respectively. The highest temperature was 31.5 °C on the 26th (Bank Holiday Monday). The hottest August Bank Holiday Monday and 26th August since records began. The lowest temperature was 7.8 °C on the 13th.

There were no frosts.

Note: The average refers to the 30 year means 1981-2010.

July 2019: July was a relatively dry, warm but dull month.

Rainfall was below average with 45.0 mm, which is 4.87 mm below average. We had 10 days with 0.2mm or more of rain with 3 days having more than 5 mm. The greatest rainfall was 12.0 mm recorded on the 19th.

Sunshine was below average with 189.5 hrs (+15.64 hours). The most was 13.9 hours on the 4th and there was two days where no sunshine was recorded.

The average maximum air temperature was 23.1 °C (+1.36 °C) and the average minimum air temperature was 13.0 °C (+1.07 °C). The warmest day reached 36.7 °C on the 25th. This is the hottest day recorded since records began in 1878. The lowest minimum air temperature was 7.8 °C on the 4th.

We had no air or ground frosts.

Note: The average refers to the 30 year means 1981-2010.

June 2019: June 2019 was relatively warm but wet.

Rainfall was above average with 70.8 mm, which is 17.54 mm above the mean. We had 17 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 22.0 mm collected on the 10th.

Due to a fault we have not been able to record sunshine from the 19th of June. Up to the 19th we had recorded 92.8 hours of sunshine which was below average for those first 19 days.

The mean maximum and minimum temperatures were both above average with 19.3°C (+0.16°C) and 10.2 °C (+0.41°C) respectively. The hottest day reached 32.7°C on the 29th which became the second warmest June day in our records (since 1878). The coolest night dropped to 4.9°C on the 9th.

There were 3 ground or air frosts

Note: The average refers to the 30 year means 1981-2010.

May 2019: May was sunny and dry for the time of year with close to average temperatures. There was a thunder storm with hail at Rothamsted on the 8th.

Rainfall was 42.8 mm, which is 11.89 mm below the mean. We had 15 days with 0.2 mm or more of rain and 2 days with more than 5.0 mm. The greatest fall of rain was 14.6 mm on the 8th of May.

Sunshine was above average with 206.4 hrs. (+11.81 hrs.); the most was 14.5 hours on the 14th. There was sunshine recorded on each day.

The average maximum temperature was above average at 16.3°C (+0.24°C) while the minimum was below average at 6.4°C (-0.52°C). The highest (max) temperature was 22.2°C on the 30th and the lowest (min) temperature was 0.7°C on the night of the 5th. We had 9 ground frosts but no air frosts.

Note: The average refers to the 30 year means 1981-2010.

April 2019: April was sunny, dry and warm for the time of year.

Rainfall was 13.2 mm which is 41.86 mm below average. We had 13 days with 0.2 mm or more of rain, and no days with more than 5mm. The wettest day was the 2nd with 2.6 mm.

Sunshine was above average with 191.6 hours (+30.40); the most was 13.2 hours on the 20th and there was only 1 day without sunshine.

The average maximum temperature was above average at 13.9 °C (+1.30) while the average minimum was below average at 3.6 °C (-0.41). The warmest day was the 22nd which reached 22.9°C, and the coldest night was on the 13th when it dropped to -1.5°C.

We had 7 air frosts and 16 ground frosts.

Note: The average refers to the 30 year means 1981-2010.

March 2019: March was relatively sunny and warm but with above average rainfall. Almost all the rain fell before day 18 leaving the last 2 weeks virtually rain-free! There were some hail showers reported in the area on the 17th.

Rainfall was above average with 60.4 mm recorded, (+9.60) mm). We had 19 days with 0.2 mm or more of rain, and 3 days with more than 5 mm. The most recorded was 9.4 mm on the 5th.

Sunshine was above average with 148.0 hrs (average for March is 114.9); the most recorded was 11.6 hours on the 29th. There were 2 days without sunshine.

The mean maximum and minimum temperatures were above average with 11.4°C (+1.50) and 4.3°C (+1.67) respectively. The highest maximum temperature was 16.8°C on the 30th and the lowest minimum was -1.4°C on the 26th. The overall average daily temperatures were significantly high it the 8th warmest March in our records (since 1878)

We had 1 air frost and 11 ground frosts.

Note: The average refers to the 30 year means 1981-2010.

February 2019: After a cold wintery start with snow on the ground, February warmed up to become especially warm and sunny for the time of year with a record breaking average maximum temperature. It was also relatively dry for the time of year.

Rainfall was below average with 43.2mm (-6.94). We had 17 days with over 0.2 mm, and 3 days with more than 5.0 mm. The greatest rainfall was 8.2 mm on the 28th.

Sunshine was above average with 137.7 hrs. (+57.44). We had 4 days without any sunshine and the most was 9.8 hrs on the 27th. February 2019 was the 2nd sunniest in our records (since 1891)

The mean maximum and the mean minimum temperatures were above average with 10.9°C (+3.97) and 1.5°C (+0.62) respectively. The lowest minimum was -5.1°C on the 1st, and the highest maximum was 18.0°C on the 26th. The average maximum was the highest in our records for February and the highest daily maximum was the 3rd highest. (records began in 1878)

We had 11 air frosts and 21 ground frosts.

Note: The average refers to the 30 year means 1981-2010.

January 2019: January was relatively cold and dry, with above average sunshine. There was snow fall on 5 separate occasions during the second half of the month.

Rainfall was below average with 34.8 mm (-35.17 mm). We had 10 days with 0.2 mm or more of rain and 4 had more than 5.0 mm. The most on one day was 6.7 mm on the 29th. Some of this precipitation fell as snow on 17th (as a brief dusting just after sunrise), 22nd (late afternoon), 29th (evening), 30th (light snow shower early evening) and 31st when we had a more prolonged spell overnight into the next day.

Sunshine was above average with 83.6 hours (+21.53); the most was 7.5 hours on the 28th. We had 5 days with no sunshine. It was the 6th sunniest January in our records (since 1891).

January's mean maximum and minimum temperatures were below average at 6.2°C (-0.54) and 0.7°C (-0.55) respectively. The highest day temperature was 11.4°C on the 24th and the lowest minimum was -6.8°C on the 19th.

We had 15 air frosts and 17 ground frosts.

Note: The average refers to the 30 year means 1981-2010.