

MARCH DATA.

With the arrival of spring on the 1st March everyone looked forward to warmer days with more in the way of sunshine and an end to the biting cold easterly winds that had plagued much of the winter season. Air temperatures over the first few days were relatively mild, and nights were frost-free until the 3rd when clear skies led to the only air frost of the week, temperatures falling as low as $-1.4^{\circ}\text{C}/29.5^{\circ}\text{F}$ in the air and $-3.6^{\circ}\text{C}/25.5^{\circ}\text{F}$ over grass. It was, however, clear enough at night to give 3 ground frosts over the same period.

Black bulb radiation temperatures remained high, a maximum of $35.9^{\circ}\text{C}/96.6^{\circ}\text{F}$ occurring on the 1st with relatively clear skies, this leading to 9.3 hours of bright sunshine on the 2nd, sufficient to make this a "sunny" day. The weather did remain unsettled with rain on 5 days of the week totalling 21.4mm/0.84in and lasting for a total of 16.7 hours. Against this sunshine amounted to a total of 20.1 hours raising global radiation levels and black bulb temperatures appreciably in the clearer air.

Days were cloudy on the whole with a mean cover of 86% at 9am during the week, the mean humidity reaching the rather high value of 90%. As a consequence evaporation was low with a total of just 7.2mm over the week and a daily maximum of only 1.6mm on both the 2nd and 6th. Until the pressure distribution over the U.K. becomes anticyclonic we are not likely to see really settled weather and the arrival of those wonderfully clear, crisp and warm days that herald spring. That said, daylight hours are now much extended with lighter nights and mornings, in itself a good sign that the dark and dismal days of winter are for the most part, passed.

Early March ended with a mean daily temperature of $7.5^{\circ}\text{C}/45.5^{\circ}\text{F}$, the maximum of $13.3^{\circ}\text{C}/55.9^{\circ}\text{F}$ occurring on the 9th with the 3rd producing the minimum of $-1.4^{\circ}\text{C}/29.5^{\circ}\text{F}$. With the sun now getting ever higher in the noon sky the maximum global radiation level peaked at 0.658 kilowatt per square metre on the 6th coinciding with the black bulb maximum of $46.9^{\circ}\text{C}/116.4^{\circ}\text{F}$. Both rainfall and sunshine produced almost the same figures, the rain at 23.6mm/0.93in and the sun 25.7hours, roughly in line with the averages.

Winds were predominantly westerly with a frequency of 6/10 days, the mean speed reaching 7.5knots/8.7mph with a maximum gust of 33knots/38mph on March 7th. Despite it now being well into March, evaporation levels remain depressed, the total for the period amounting to no more than 13.3mm with a peak of just 2.1mm on the 10th, poor for the time of the year and brought about by the high humidities under a cloudy anticyclone and Atlantic depressions. Let us hope for better things mid-month!

Mid-March showed every sign of providing some warm, spring-like weather as pressure rose over the country with a developing high from the Azores taking control. This was to last from the 12th onwards with no measurable rain falling from the 11th. Days became progressively warmer with winds predominantly from an easterly quarter and light at 4.9knots/5.7mph. Over the 10-day period until the 20th winds gusted no higher than 28knots/32mph on the 11th giving black bulb radiation temperatures chance to peak at $47.3^{\circ}\text{C}/117.1^{\circ}\text{F}$ on the 19th though the peak solar radiation level was 0.696 kilowatt per square metre on the 13th.

Air temperatures rose appreciably with the maximum ranging from $16.1^{\circ}\text{C}/61^{\circ}\text{F}$ on the 17th to $7.6^{\circ}\text{C}/45.7^{\circ}\text{F}$ on the 13th. Over the same 10 day period the minimum night temperature ranged from a high of $8.1^{\circ}\text{C}/46.6^{\circ}\text{F}$ on the 11th to a low of $-2.8^{\circ}\text{C}/27^{\circ}\text{F}$ on the 16th and 17th. The absolute grass minimum of $-5.6^{\circ}\text{C}/21.9^{\circ}\text{F}$ occurred on the 16th. Days were predominantly dry, sunny and warm, almost spring-like in conditions, giving the best spell of weather seen so far this year. Sunshine totalled 68.7 hours with 4 days producing over 9 hours daily and peaking at 11.2 hours on the 19th, excellent figures for March. However, evaporation totals at 21.5mm showed nothing exceptional, the highest level of a mere 3.1mm occurring on the 16th. The effect of this was seen in mist, haze or fog on a number of occasions.

The spell of spring-like weather continued unabashed with prolonged sunshine and high daytime maximum temperatures for the time of year, passing through $17.4^{\circ}\text{C}/63.3^{\circ}\text{F}$ by March 23rd. The high-pressure centre migrated only slowly and never moved far from the U.K. This gave almost wall-to-wall sunshine on several days, though this was ameliorated by sharp night frosts. On the 22nd nighttime

temperatures fell as low as $-2.6^{\circ}\text{C}/27.3^{\circ}\text{F}$ in the air and $-4.0^{\circ}\text{C}/24.8^{\circ}\text{F}$ over grass. Sunshine was excellent with 3 days between the 22nd and 27th producing over 9 hours daily. Over the entire period from the 12th no rain at all fell giving a period of "absolute drought". There ensued a period of 20 days from the 12th to 31st inclusive which were rain-free giving a spell of beautiful weather not seen in the area for almost a decade. There was ample sunshine, many warm or very warm days, and a total absence of rain with clear skies on many mornings leading to some mist and fog, and a good few ground frosts. By the end of the month this spell was showing signs of breakdown as the prevailing anticyclone began to collapse letting in Atlantic frontal systems.

SUMMARY FOR MARCH

March ended as one of the best for many years giving an excellent start to spring. It was exceptionally sunny, dry and warm by day, though night frost was more of a problem than usual due to the influence of anticyclonic conditions giving clear night skies.

Temperatures were exceptional, the mean maximum of $12.6^{\circ}\text{C}/54.7^{\circ}\text{F}$ being 2.9°C above the 30-year mean and the highest since 1990 [12.8°C]. The mean minimum at $1.9^{\circ}\text{C}/35.4^{\circ}\text{F}$ was, however, down on the mean by 0.5°C due to the preponderance of night frost. The highest temperature attained, $17.4^{\circ}\text{C}/63.3^{\circ}\text{F}$ on the 23rd was the best since 1999 [19.7°C], well below the record of $21.7^{\circ}\text{C}/71.1^{\circ}\text{F}$ set on March 29th 1965! As a result of the prolonged sunshine, all soil and earth temperatures were well up on average by amounts varying from $+0.1^{\circ}\text{C}$ [10cm soil] to $+0.7^{\circ}\text{C}$ [30cm earth].

Black bulb maximum radiation temperatures were unusually high for March despite the many days having either haze or mist. The mean maximum of $49.2^{\circ}\text{C}/120.6^{\circ}\text{F}$ was 9.1°C above the 30-year mean and the highest since 1961. The mean of $39.2^{\circ}\text{C}/102.6^{\circ}\text{F}$ was up by an astonishing 11.2°C giving a set of data that is going to take many years to better.

Because nights, as well as days, were cloud-free, the temperature ranges experienced were unusually high. The 23rd produced a range of $19.7^{\circ}\text{C}/35.5^{\circ}\text{F}$ from a day max. Of $17.4^{\circ}\text{C}/63.3^{\circ}\text{F}$ to a night low of $-2.3^{\circ}\text{C}/27.9^{\circ}\text{F}$. Many days showed similar ranges though not quite so extreme as this one. As a result of the clear skies the month produced 10 air frosts, the highest since 1995[13] and 17 on the ground also the highest since 1995[23], both sets of figures being well above the 30-year means despite the high daytime temperatures.

Sunshine was the highest on records in data extending to 1956 with a total of 176.3 hours for the month, some 176% of the normal and 76 hours above expectation. Just 3 days were sunless, the same as in 1997 and 4 better than average. An astonishing 10 days produced in excess of 9 hours daily, the previous record being 6 in 1995! No day managed 12 hours but the total of 11.2 hours on the 19th was a mere 36 minutes below the all time record of 11.8 hours set in 1997.

Rainfall was very sparse with an absolute drought from the 12th to 30th inclusive [19 days], rain attributed to the 31st actually falling between 07.10 and 09.00 on April 1st. The month's total of 25.2mm/0.99in was the lowest since 1997 [17.1mm] and well below the expected 59.6mm/2.35ins. Only 10 days saw rain, none of that heavy, with a maximum fall of 9.2mm/0.36in on the 7th. Just 4 days saw in excess of 1mm/0.04in with 2 days signified as "wetter" with in excess of 5mm/0.20in daily giving a good, dry month though what rain did fall was all during the first 11 days.

There was no incidence of snow, sleet, hail or thunder with fog on just 2 days, the 4th and 28th. Winds were predominantly easterly on 9 days, and light, averaging no more than 5.4knots/6.5mph. There were no gale force gusts, the maximum wind strength being 33knots/40mph as a cold front passed on the 7th. By now daylight has expanded considerably from 10.0 hours on the 1st to 12.8 hours on the 31st. Over the month as a whole we had 360.7 hours of ground, and 44.6 hours of air frost with a total evaporation from water surfaces of 61.2mm. This March was a truly memorable month.