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## Rothamsted Experimental Station Report for 1986

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### Broom's Barn Weather 1985-86

#### Rothamsted Research

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**BROOM'S BARN WEATHER 1985-86**

Latitude 52° 16' N; Longitude 0° 34' E; Altitude 75 m

|  | 1986 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|  | Oct  | Nov  | Dec  | Jan  | Feb  | Mar  | Apr  | May  | June | July | Aug  | Sept | Oct  | Nov  | Dec  | Year |
| <b>TEMPERATURE (°C)</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Mean screen maximum  | 15.1 | 6.6  | 8.6  | 5.8  | 0.4  | 8.6  | 9.6  | 16.0 | 19.9 | 20.9 | 18.5 | 16.3 | 15.1 | 10.6 | 8.4  | 12.5 |
| Difference from average  | +0.9 | -2.6 | +1.9 | -0.3 | -5.8 | -0.4 | -2.0 | +0.4 | +0.8 | -0.1 | -2.7 | -2.0 | +0.8 | +1.4 | +1.7 | -0.7 |
| Mean screen minimum  | 7.4  | 1.0  | 4.7  | 0.6  | -3.5 | 1.2  | 2.6  | 7.4  | 9.7  | 12.0 | 10.3 | 7.1  | 7.6  | 4.8  | 2.9  | 5.2  |
| Difference from average  | 0.0  | -2.6 | +2.9 | +0.2 | -4.4 | -0.9 | -0.9 | +0.8 | 0.0  | +0.4 | -1.4 | -3.0 | +0.2 | +1.2 | +1.1 | -0.6 |
| Soil at 10 cm  | 10.2 | 3.4  | 5.8  | 2.2  | -0.1 | 3.1  | 5.7  | 11.9 | 15.8 | 18.2 | 14.9 | 11.2 | 10.3 | 6.5  | 4.0  | 8.7  |
| Dew point  | 8.8  | 1.4  | 5.2  | 0.8  | -3.3 | 2.4  | 3.3  | 7.6  | 10.2 | 12.1 | 10.2 | 8.5  | 9.1  | 5.7  | 3.0  | 5.8  |
| No. of days with ground frost  | 9    | 19   | 4    | 20   | 26   | 20   | 10   | 0    | 1    | 0    | 0    | 2    | 1    | 5    | 15   | 100  |
| Difference from average  | +6   | +11  | -9   | +6   | +11  | +8   | +1   | -2   | +1   | 0    | 0    | +2   | -2   | -3   | +2   | +24  |
| <b>RADIATION</b>   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Sunshine (h per month <sup>-1</sup> )                                | 132  | 103  | 35   | 72   | 63   | 132  | 138  | 219  | 243  | 186  | 155  | 174  | 127  | 70   | 61   | 1640 |
| Difference from average  | +23  | +35  | -14  | +21  | +1   | +26  | -6   | +29  | +42  | +2   | -22  | +29  | +18  | +2   | +12  | +154 |
| Mean daily radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )         | 6.4  | 3.7  | 1.7  | 2.6  | 4.9  | 8.5  | 11.6 | 16.5 | 19.9 | 16.5 | 13.1 | 11.6 | 6.5  | 3.3  | 1.9  | 9.5  |
| Difference from average  | +0.3 | +0.7 | -0.1 | +0.3 | +0.6 | +0.2 | -1.1 | -1.3 | +1.0 | 0.0  | -1.0 | +2.0 | +0.4 | +0.3 | +0.1 | -0.1 |
| Mean daily diffuse radiation (MJ m <sup>-2</sup> day <sup>-1</sup> ) | 3.2  | 1.7  | 1.3  | 1.5  | 2.8  | 4.6  | 5.9  | 8.7  | 8.9  | 10.3 | 8.1  | 5.8  | 3.7  | 2.1  | 1.2  | 5.3  |
| <b>WIND (km day<sup>-1</sup>)</b>                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Wind run at 2 m  | 124  | 167  | 249  | 283  | 258  | 249  | 192  | 253  | 205  | 139  | 164  | 119  | 188  | 230  | 269  | 213  |
| Difference from average  | -73  | -72  | +1   | +30  | +25  | -2   | -37  | +48  | +22  | -34  | -8   | -74  | -9   | -9   | +21  | -1   |
| <b>WATER (mm per month<sup>-1</sup>)</b>                             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Rainfall (5 inch gauge)  | 13   | 42   | 72   | 57   | 12   | 57   | 55   | 42   | 23   | 64   | 87   | 25   | 80   | 67   | 71   | 640  |
| Difference from average  | -39  | -20  | +18  | +9   | -24  | +14  | +13  | -11  | -30  | +21  | +36  | -31  | +28  | +5   | +17  | +47  |
| Rain days  | 7    | 15   | 19   | 19   | 7    | 20   | 20   | 18   | 8    | 14   | 15   | 4    | 15   | 20   | 17   | 177  |
| Difference from average  | -6   | -2   | +2   | 0    | -7   | +4   | +6   | +4   | -3   | +4   | +3   | -8   | +2   | +3   | 0    | +9   |
| Open water evaporation Class 'A' pan                                 | 39   | 20   | 14   | 20   | 19   | 43   | 52   | 91   | 135  | 103  | 98   | 64   | 41   | 21   | 19   | 707  |
| Difference from average  | 0    | 0    | +4   | +11  | +2   | +3   | -15  | -16  | +9   | -28  | -27  | -22  | +2   | +1   | +9   | -70  |
| Potential transpiration  | 18   | 2    | 2    | 4    | 10   | 29   | 44   | 84   | 106  | 92   | 73   | 44   | 21   | 7    | 5    | 519  |

NOTES ON THE TABLE

1. Except for potential transpiration, all quantities are measured.
2. Long term averages are 1965-84 except evaporation—1970-84, wind 1969-84.