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ROTHAMSTED  
RESEARCH

## Report for 1976 - Part 1

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### Weather Tables Rothamsted; Woburn; Broom's Barn; Saxmundham

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## WEATHER TABLES

ROTHAMSTED WEATHER 1975-76

Latitude 51° 48' 30" N; Longitude 0° 21' 10" W; Altitude 128 m

|               | Temperature (°C) |                 |                           |                      |                  | Radiation         |   | Wind<br>Run at 2 m<br>km day <sup>-1</sup> | Water (mm) |              |             |     |     |
|---------------|------------------|-----------------|---------------------------|----------------------|------------------|-------------------|---|--|------------|--------------|-------------|-----|-----|
|               | Mean<br>maximum  | Mean<br>minimum | Soil at<br>10 cm Dewpoint |                      | Ground<br>frosts | Sunshine<br>hours | mWh<br>cm <sup>-2</sup> day <sup>-1</sup> |  | Rain       | Rain<br>days | Evaporation |     |     |
|               |                  |                 | Open<br>water trans.      | Pot.<br>water trans. |                  |                   |   |  |            |              |             |     |     |
| <b>1975</b>   |                  |                 |                           |                      |                  |                   |   |  |            |              |             |     |     |
| October       | 13.2             | 5.6             | 8.9                       | 7.2                  | 9                | 115               | 163                                       | 165  | 18         | 9            | 3           | 37  | 16  |
| November      | 8.9              | 2.0             | 4.9                       | 3.9                  | 17               | 76                | 80  | 206  | 52         | 15           | 33          | 18  | 3   |
| December      | 6.7              | 1.3             | 3.5                       | 2.6                  | 19               | 37                | 50  | 201  | 37         | 12           | 30          | 7   | 1   |
| <b>1976</b>   |                  |                 |                           |                      |                  |                   |   |  |            |              |             |     |     |
| January       | 7.6 (+1.8)       | 2.2 (+2.0)      | 4.1                       | 2.3                  | 17               | 63 (+12)          | 73  | 345  | 27 (-36)   | 12           | 16          | 11  | 11  |
| February      | 6.6 (+0.2)       | 1.3 (+0.9)      | 3.0                       | 2.0                  | 21               | 41 (-27)          | 95  | 215  | 23 (-28)   | 14           | 14          | 9   | 10  |
| March         | 8.1 (-1.0)       | 1.0 (-0.3)      | 3.7                       | 1.1                  | 17               | 118 (+2)          | 241                                       | 270  | 17 (-29)   | 8            | 4           | 40  | 37  |
| April         | 12.1 (0.0)       | 3.1 (-0.1)      | 7.4                       | 3.8                  | 16               | 159 (+8)          | 369                                       | 245  | 21 (-26)   | 4            | —           | 64  | 61  |
| May           | 17.3 (+1.4)      | 6.8 (+0.6)      | 12.4                      | 8.1                  | 8                | 195 (+2)          | 478                                       | 215  | 20 (-32)   | 15           | Trace       | 90  | 89  |
| June          | 23.7 (+4.8)      | 10.7 (+1.5)     | 18.3                      | 11.6                 | 1                | 269 (+66)         | 586                                       | 155  | 17 (-39)   | 2            | Trace       | 140 | 119 |
| July          | 25.1 (+4.5)      | 12.0 (+0.9)     | 20.1                      | 11.9                 | 0                | 245 (+54)         | 533                                       | 170  | 42 (-12)   | 7            | Trace       | 152 | 124 |
| August        | 23.7 (+3.4)      | 11.3 (+0.4)     | 18.0                      | 10.9                 | 1                | 254 (+74)         | 473                                       | 180  | 9 (-54)    | 5            | —           | 124 | 103 |
| September     | 17.7 (0.0)       | 9.2 (+0.1)      | 13.1                      | 10.0                 | 0                | 118 (-27)         | 265                                       | 175  | 106 (+45)  | 15           | 42          | 59  | 38  |
| October       | 13.6 (+0.3)      | 7.5 (+1.7)      | 10.3                      | 9.0                  | 6                | 46 (-57)          | 128                                       | 185  | 123 (+64)  | 24           | 101         | 25  | 19  |
| November      | 8.7 (-0.2)       | 2.7 (0.0)       | 5.0                       | 4.3                  | 23               | 61 (-1)           | 85  | 170  | 82 (+8)    | 19           | 71          | 15  | 3   |
| December      | 4.1 (-2.4)       | -1.0 (-2.0)     | 1.4                       | -0.1                 | 28               | 60 (+15)          | 59  | 185  | 87 (+24)   | 15           | 79          | 11  | -2  |
| Total or mean | 14.0 (+1.1)      | 5.6 (+0.5)      | 9.7                       | 6.2                  | 138              | 1629 (+121)       | 3385                                      | 209  | 574 (-115) | 140          | 327         | 740 | 612 |

NOTES ON THE TABLE

1. Except for the last column, all quantities are measured.
2. Drainage and evaporation were measured in inches.
3. Drainage is through 50 cm bare undisturbed soil.
4. Departures from long-period averages (in brackets) are for different periods; Air temperature, 1878-1975; Sunshine, 1882-1975; Rain, 1948-75.

### WOBURN WEATHER 1975-76

Latitude 52° 1' 5" N; Longitude 0° 35' 35" W; Altitude 89 m

|               | Temperature (°C) |                 |                  |          |                  | Radiation<br>Sunshine<br>hours | Wind<br>Run at 2 m<br>km day <sup>-1</sup> | Water        |              |
|---------------|------------------|-----------------|------------------|----------|------------------|--------------------------------|--|--------------|--------------|
|               | Mean<br>maximum  | Mean<br>minimum | Soil at<br>10 cm | Dewpoint | Ground<br>frosts |                                |  | Rain<br>(mm) | Rain<br>days |
| <b>1975</b>   |                  |                 |                  |          |                  |                                |  |              |              |
| October       | 13.7             | 5.9             | 8.7              | 7.6      | 10               | 123                            | 151  | 19           | 10           |
| November      | 8.9              | 2.1             | 5.0              | 4.1      | 18               | 61                             | 183  | 35           | 15           |
| December      | 6.9              | 1.3             | 3.8              | 2.8      | 14               | 26                             | 197  | 32           | 10           |
| <b>1976</b>   |                  |                 |                  |          |                  |                                |  |              |              |
| January       | 7.9 (+1.9)       | 2.8 (+2.3)      | 4.4              | 3.1      | 11               | 49 (-2)                        | 330  | 24 (-30)     | 11           |
| February      | 6.9 (+0.5)       | 1.5 (+1.1)      | 3.2              | 2.5      | 15               | 42 (-24)                       | 196  | 17 (-22)     | 13           |
| March         | 8.3 (-1.1)       | 0.7 (-0.7)      | 3.7              | 2.1      | 18               | 106 (-10)                      | 235  | 19 (-24)     | 7            |
| April         | 12.3 (-0.2)      | 3.3 (-0.3)      | 7.3              | 4.0      | 14               | 143 (+1)                       | 199  | 16 (-30)     | 6            |
| May           | 17.3 (+1.3)      | 7.2 (+1.1)      | 12.0             | 7.9      | 4                | 161 (-23)                      | 221  | 28 (-27)     | 15           |
| June          | 24.0 (+4.7)      | 10.7 (+1.5)     | 18.6             | 11.1     | 1                | 262 (+62)                      | 168  | 14 (-36)     | 3            |
| July          | 25.2 (+4.3)      | 11.5 (+0.3)     | 20.1             | 12.1     | 3                | 233 (+53)                      | 151  | 24 (-31)     | 5            |
| August        | 23.8 (+3.1)      | 9.9 (-1.1)      | 17.8             | 11.5     | 5                | 227 (+55)                      | 133  | 7 (-54)      | 3            |
| September     | 17.5 (-0.5)      | 9.2 (0.0)       | 13.1             | 10.3     | 4                | 105 (-31)                      | 146  | 93 (+40)     | 14           |
| October       | 13.7 (-0.1)      | 7.8 (+1.7)      | 10.2             | 9.0      | 2                | 46 (-57)                       | 170  | 108 (+55)    | 25           |
| November      | 9.0 (-0.2)       | 2.9 (-0.3)      | 5.1              | 4.2      | 16               | 59 (-1)                        | 164  | 50 (-14)     | 17           |
| December      | 4.3 (-2.5)       | -1.1 (-2.4)     | 1.4              | 0.3      | 25               | 59 (+14)                       | 153  | 98 (+47)     | 14           |
| Total or mean | 14.2 (+0.9)      | 5.5 (+0.3)      | 9.7              | 6.5      | 118              | 1492 (+37)                     | 189  | 498 (-126)   | 133          |

#### NOTES ON THE TABLE

1. Standard long period is 1930-75. Departures are in brackets.

**BROOM'S BARN WEATHER 1975-76**  
 Latitude 52° 16' N; Longitude 0° 34' E; Altitude 75 m

|               | Temperature (°C) |              |               |          | Ground frosts | Radiation      |  | Wind<br>Run at 2 m<br>km day <sup>-1</sup> | Water (mm) |           |            |            |
|---------------|------------------|--------------|---------------|----------|---------------|----------------|--|--|------------|-----------|------------|------------|
|               | Mean maximum     | Mean minimum | Soil at 10 cm | Dewpoint |               | Sunshine hours | mWh cm <sup>-2</sup> day <sup>-1</sup> |  | Rain       | Rain days | Open water | Pot. trans |
| <b>1975</b>   |                  |              |               |          |               |                |  |  |            |           |            |            |
| October       | 13.5             | 6.3          | 9.1           | 7.3      | 3             | 124            | 159                                    | 172  | 11         | 7         | 37         | 17         |
| November      | 8.8              | 2.3          | 4.7           | 3.8      | 13            | 73             | 75                                     | 208  | 56         | 17        | 15         | 3          |
| December      | 6.8              | 1.8          | 3.2           | 2.7      | 13            | 35             | 44                                     | 216  | 31         | 11        | 7          | 3          |
| <b>1976</b>   |                  |              |               |          |               |                |  |  |            |           |            |            |
| January       | 7.3 (+1.0)       | 2.5 (+1.0)   | 4.1           | 2.1      | 10            | 43 (-2)        | 62                                     | 371  | 46 (+2)    | 12        | —          | 13         |
| February      | 6.8 (+0.4)       | 1.6 (+0.6)   | 2.7           | 1.9      | 15            | 49 (-14)       | 95                                     | 228  | 22 (-12)   | 10        | —          | 12         |
| March         | 7.8 (-0.9)       | 1.4 (-0.3)   | 3.4           | 0.4      | 17            | 115 (+6)       | 190                                    | 300  | 13 (-23)   | 10        | 45         | 31         |
| April         | 12.1 (+0.5)      | 3.9 (+0.1)   | 7.9           | 4.2      | 6             | 165 (+28)      | 325                                    | 212  | 12 (-35)   | 6         | 79         | 50         |
| May           | 17.3 (+1.3)      | 7.8 (+0.9)   | 12.6          | 7.7      | 1             | 193 (+48)      | 396                                    | 229  | 46 (+4)    | 14        | 112        | 81         |
| June          | 24.0 (+4.9)      | 11.8 (+2.3)  | 19.3          | 11.4     | 0             | 286 (+72)      | 550                                    | 179  | 7 (+46)    | 3         | 166        | 116        |
| July          | 24.9 (+4.2)      | 12.3 (+0.7)  | 21.0          | 11.7     | 0             | 278 (+100)     | 490                                    | 192  | 32 (-17)   | 6         | 212        | 114        |
| August        | 23.5 (+2.4)      | 11.2 (-0.4)  | 18.4          | 12.0     | 0             | 245 (+69)      | 403                                    | 179  | 23 (-27)   | 6         | 156        | 84         |
| September     | 18.0 (-0.3)      | 10.3 (+0.6)  | 13.6          | 11.1     | 0             | 135 (-12)      | 241                                    | 183  | 48 (-9)    | 18        | 61         | 39         |
| October       | 13.9 (-0.3)      | 8.3 (+1.2)   | 10.6          | 9.8      | 0             | 55 (-52)       | 112                                    | 188  | 97 (+55)   | 24        | 30         | 13         |
| November      | 8.7 (-0.2)       | 3.6 (+0.4)   | 5.2           | 4.6      | 5             | 74 (+6)        | 70                                     | 177  | 78 (+12)   | 19        | 12         | -1         |
| December      | 4.1 (-2.7)       | -0.3 (-2.1)  | 1.4           | 0.6      | 22            | 69 (+27)       | 53                                     | 199  | 55 (+4)    | 15        | —          | -4         |
| Total or mean | 14.0 (+0.8)      | 6.2 (+0.4)   | 10.0          | 6.5      | 76            | 1707 (+232)    | 249                                    | 220  | 479 (-93)  | 143       | —          | 548        |

NOTES ON THE TABLE

1. Except for the last column all quantities are measured.
2. Departures from averages (in brackets) are for different periods.
3. Air temperature and rainfall 1964-75, sunshine 1965-75.

### SAXMUNDHAM WEATHER 1976

Latitude 52° 13' N; Longitude 1° 28' E; Altitude 37 m

|               | Temperature (°C) |                  |          |                  | Radiation<br>mWh<br>cm <sup>-2</sup> day <sup>-1</sup> | Wind<br>Run at 2 m<br>km day <sup>-1</sup> | Water (mm) |              |                           | Accumulated<br>Day-degrees F |     |
|---------------|------------------|------------------|----------|------------------|--|--|------------|--------------|---------------------------|------------------------------|-----|
|               | Mean air         | Soil at<br>10 cm | Dewpoint | Ground<br>frosts |  |  | Rain       | Rain<br>days | Evaporation<br>open water | A                            | B   |
| January       | 5.2              | 4.2              | 3.9      | 10               | 63   | 383  | 35         | 10           | —                         | 85                           | 102 |
| February      | 4.3              | 3.4              | 3.3      | 16               | 90   | 235  | 22         | 8            | —                         | 127                          | 212 |
| March         | 4.6              | 3.6              | 2.2      | 15               | 198  | 296  | 15         | 8            | —                         | 181                          | 323 |
| April         | 7.8              | 7.8              | 3.9      | 9                | 367  | 277  | 12         | 6            | 92                        | 333                          | 354 |
| May           | 12.5             | 12.4             | 7.8      | 3                | 447  | 248  | 22         | 9            | 100                       | 726                          | 356 |
| June          | 16.9             | 17.9             | 12.2     | 2                | 598  | 182  | 9          | 3            | 155                       | 1343                         | 358 |
| July          | 18.1             | 19.5             | 13.9     | 0                | 592  | 196  | 65         | 6            | 175                       | 2044                         | 358 |
| August        | 17.1             | 18.5             | 14.4     | 0                | 449  | 208  | 52         | 7            | 127                       | 2693                         | 358 |
| September     | 14.0             | 13.6             | 12.2     | 0                | 257  | 201  | 128        | 18           | 92                        | 3154                         | 358 |
| October       | 11.3             | 11.3             | 10.6     | 1                | 122  | 252  | 109        | 19           | 13                        | 3481                         | 358 |
| November      | 6.9              | 5.9              | 5.5      | 12               | 75   | 239  | 70         | 16           | 45                        | 3588                         | 388 |
| December      | 2.7              | 2.2              | 1.7      | 16               | 53   | 270  | 46         | 13           | —                         | 3595                         | 562 |
| Total or mean | 10.1             | 10.0             | 7.6      | 84               | 276  | 249  | 585        | 123          | —                         | —                            | —   |

#### NOTES ON THE TABLE

1. Except for the last two columns all quantities are measured.
2. Temperatures were measured in °F.
3. 'Soil at 10 cm' and 'Dewpoint' are at 09.00 GMT.
4. Radiation was measured with a Kipp Solarimeter.
5. Rain and evaporation were measured in inches.
6. 'Evaporation' is the mean of two open water tanks installed on 23 March 1976. They are 56 cm diameter, 30 cm deep and set 15 cm in the ground. Water level is about 6 cm below the rim.
7. Calculated values of accumulated temperature are: A. Day-degrees above 42°F. B. Day-degrees below 42°F.