



AGROMETEOROLOGICAL BULLETIN

The Weather of January 1989

Summary

A high extending from the Azores to Europe and frontal troughs to northwest of Ireland dominated conditions. Temperature was well above normal. Rainfall was well above normal and sunshine was well below in the west, while the reverse position occurred in the east.

Meteorological Situation

High pressure over mainland Europe, and a deep depression in the Atlantic advancing towards Iceland, resulted in mild southwest winds over Ireland with frontal troughs from 1st to 4th and changeable conditions from 5th to 7th. As pressure declined into Europe, further rainbelts passed down over Ireland on 8th/9th. The recovery of the Azores-European high and active deepening Atlantic depressions, steered towards Iceland, resulted in strong southwest winds and frontal troughs over the country on 11th, 13th and 14th.

Subsequently a broad band of mild southwesterly winds dominated to 21st although interrupted by a ridge of high pressure on 17th, active frontal troughs on 20th, and a westerly airflow followed by a ridge on 21st. Further mild southwest winds dominated to 27th in a period when rainbelts were most active in the west and southwest. From 28th to end of month, with high pressure centered along 48°N to 50°N from eastern Atlantic into Europe, the weather over Ireland was mainly dry and mild.

Precipitation

There was a significant contrast in precipitation amounts between western and eastern regions. Values varied from 147% of normal at Ballinrobe (Creagh) to 36% at Kinsealy (*see Table 1 and attached figures on anomalies*). Wettest days were 4th/5th, 11th, 13th, 20th, 24th/25th and 27th. The regional contrast also extended to the number of very wet days — up to 9 in the west and only 1 in the east.

Temperature

Mean air temperature was exceptionally high during the month, varying from 3.1°C above normal at Dublin Airport and Claremorris to 2.2°C at a number of southern stations. Both the day maximum and minimum values contributed about equally to the high values (*see attached Figures on differences from average*). Coldest nights were the 10th, 17th and 22nd, when a little air and sharp ground frost formed.

Sunshine and Radiation

As with rainfall there was also considerable regional (but contrary) contrast from east to west with respect to sunshine hours. Values varied from 141% at Casement Aerodrome to 53% at Claremorris (*see attached figure*). The dullest spell generally was from the 1st to 9th. Global radiation varied from 101% of normal at Dublin Airport to 84% of normal at Valentia.

Wind

Strong winds with gale gusts occurred on 3rd to 5th and gale to storm gusts (over 60 knots) on 10th/11th, 13th to 15th and 20th to 27th, especially 26th - 27th.

NOTE: The data contained in this bulletin are provisional. Some of the material in Table 1 will be published in its final form in the Monthly Weather Report; final values of Global Radiation at stations in Table 2 will be published in the annual Solar Radiation Observations.

TABLE 1

JANUARY 1989

| STATION | PERIOD | RAINFALL (mm) | | | | TEMPERATURE (°C) | | | | | | | | | | | | | | BRIGHT SUNSHINE | | WIND | | | | | |
|-------------------------------------|--------|---------------|--------------|-----------|----------|------------------|-----------|------------|-------------------------|-------------|------|---------------------|-------------------------|--------------|--------------------------|--------------|--------------------|--------------------|--------------|--------------------------------|----------------------|--------------------|------|------------------------|------------|-------------------------|---|
| | | AMOUNT | % OF AVERAGE | RAIN DAYS | WET DAYS | AIR | | | | | | | GROUND | | | SOIL (10cm) | | TOTAL NO. OF HOURS | % OF AVERAGE | MEAN SPEED (ms ⁻¹) | DAYS WITH GALE GUSTS | P.E. (PENMAN) (mm) | | | | | |
| | | | | | | MEAN MAX. | MEAN MIN. | MEAN DAILY | DIFFERENCE FROM AVERAGE | LOWEST MIN. | DATE | DAYS WITH AIR FROST | DEGREE DAYS ABOVE 4.4°C | % OF AVERAGE | DEGREE DAYS ABOVE 10.0°C | % OF AVERAGE | LOWEST "GRASS-MIN" | | | | | | DATE | DAYS WITH GROUND FROST | MEAN DAILY | DIFFERENCE FROM AVERAGE | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carlow (Oak Park) Co. Carlow | 1-10 | 12.5 | - | 5 | 5 | 9.5 | 4.4 | 7.0 | - | 0.0 | 9 | 0 | 29 | - | 1 | - | -5.0 | 10 | 3 | - | - | N/A | - | 4.2 | - | - | - |
| | 11-20 | 26.0 | - | 6 | 5 | 10.0 | 2.5 | 6.2 | - | -2.0 | 17 | 2 | 25 | - | 1 | - | -5.6 | 18 | 6 | - | - | N/A | - | 4.8 | - | - | - |
| | 21-END | 23.0 | - | 5 | 4 | 9.9 | 3.8 | 6.8 | - | -1.7 | 21 | 1 | 32 | - | 1 | - | -5.5 | 22 | 3 | - | - | N/A | - | 5.0 | - | - | - |
| | MONTH | 61.5 | 76 | 16 | 14 | 9.8 | 3.6 | 6.7 | - | -2.0 | 17 | 3 | 85 | - | 4 | - | -5.6 | 18 | 12 | - | - | N/A | - | 4.7 | - | N/A | - |
| Shannon Airport Co. Clare | 1-10 | 26.0 | - | 5 | 4 | 10.4 | 6.0 | 8.2 | - | 2.4 | 10 | 0 | 39 | - | 2 | - | -2.3 | 10 | 2 | 7.5 | - | 9.6 | - | 4.6 | 3 | - | - |
| | 11-20 | 35.4 | - | 6 | 5 | 10.5 | 4.7 | 7.6 | - | 0.6 | 17 | 0 | 34 | - | 2 | - | -5.1 | 18 | 3 | 6.5 | - | 18.8 | - | 5.4 | 6 | - | - |
| | 21-END | 22.8 | - | 7 | 6 | 11.1 | 5.6 | 8.3 | - | 0.7 | 22 | 0 | 45 | - | 4 | - | -4.2 | 22 | 4 | 7.3 | - | 16.3 | - | 5.0 | 4 | - | - |
| | MONTH | 84.2 | 91 | 18 | 15 | 10.7 | 5.4 | 8.1 | +3.0 | 0.6 | 17 | 0 | 118 | 157 | 8 | - | -5.1 | 18 | 9 | 7.1 | +2.4 | 44.7 | 85 | 5.0 | 13 | 12 | - |
| Cork Airport Co. Cork | 1-10 | 26.0 | - | 6 | 5 | 9.6 | 4.9 | 7.3 | - | 0.6 | 10 | 0 | 31 | - | 1 | - | -1.7 | 10 | 1 | 7.3 | - | 12.7 | - | 6.5 | 5 | - | - |
| | 11-20 | 44.1 | - | 8 | 7 | 9.4 | 3.8 | 6.6 | - | 0.0 | 18 | 0 | 27 | - | 1 | - | -4.6 | 18 | 4 | 6.4 | - | 16.7 | - | 8.1 | 5 | - | - |
| | 21-END | 30.1 | - | 7 | 5 | 10.0 | 5.5 | 7.7 | - | 1.3 | 22 | 0 | 39 | - | 1 | - | -5.4 | 22 | 2 | 7.2 | - | 18.6 | - | 7.8 | 7 | - | - |
| | MONTH | 100.2 | 68 | 21 | 17 | 9.7 | 4.8 | 7.2 | +2.2 | 0.0 | 18 | 0 | 96 | 143 | 3 | - | -5.4 | 22 | 7 | 7.0 | +2.7 | 48.0 | 84 | 7.5 | 17 | 7 | - |
| Fermoy (Coolnakilla) Co. Cork | 1-10 | 24.8 | - | 5 | 4 | 9.1 | 4.7 | 6.9 | - | 0.6 | 10 | 0 | 28 | - | 1 | - | -1.2 | 10 | 1 | - | - | N/A | - | N/A | - | - | - |
| | 11-20 | 36.4 | - | 9 | 7 | 9.2 | 2.3 | 5.8 | - | -0.5 | 13 | 1 | 20 | - | 1 | - | -3.2 | 18 | 5 | - | - | N/A | - | N/A | - | - | - |
| | 21-END | 42.2 | - | 7 | 5 | 9.4 | 3.6 | 6.5 | - | -0.7 | 22 | 1 | 27 | - | 1 | - | -3.4 | 22 | 3 | - | - | N/A | - | N/A | - | - | - |
| | MONTH | 103.4 | - | 21 | 16 | 9.3 | 3.6 | 6.4 | - | -0.7 | 22 | 2 | 75 | - | 2 | - | -3.4 | 22 | 9 | - | - | N/A | - | N/A | - | N/A | - |
| Fermoy (Moore Park) Co. Cork | 1-10 | 23.0 | - | 5 | 4 | 19.9 | 5.4 | 12.7 | - | -3.6 | 10 | 1 | 86 | - | 50 | - | -8.6 | 10 | 2 | - | - | 9.7 | - | 3.9 | - | - | - |
| | 11-20 | 27.0 | - | 7 | 6 | 10.5 | 1.1 | 5.8 | - | -3.5 | 18 | 6 | 26 | - | 2 | - | -8.0 | 18 | 7 | - | - | 16.3 | - | 0.0 | - | - | - |
| | 21-END | 35.2 | - | 6 | 5 | 10.4 | 3.3 | 6.9 | - | -2.7 | 22 | 3 | 34 | - | 2 | - | -7.0 | 22 | 6 | - | - | 11.9 | - | 3.4 | - | - | - |
| | MONTH | 85.2 | 75 | 18 | 15 | 13.5 | 3.3 | 8.4 | - | -3.6 | 10 | 10 | 146 | - | 54 | - | -8.6 | 10 | 15 | - | - | 37.9 | - | 2.4 | - | 7 | - |
| Roches Point Co. Cork | 1-10 | 17.2 | - | 6 | 4 | 10.4 | 6.4 | 8.4 | - | 1.8 | 10 | 0 | 41 | - | 2 | - | -1.0 | 10 | 1 | 8.1 | - | 14.9 | - | 7.1 | 5 | - | - |
| | 11-20 | 23.0 | - | 8 | 7 | 10.2 | 5.9 | 8.1 | - | 2.2 | 18 | 0 | 37 | - | 2 | - | -3.1 | 18 | 2 | 7.4 | - | 19.6 | - | 8.3 | 6 | - | - |
| | 21-END | 25.4 | - | 7 | 4 | 10.6 | 6.8 | 8.7 | - | 2.9 | 22 | 0 | 48 | - | 3 | - | -3.4 | 22 | 2 | 8.1 | - | 17.1 | - | 7.5 | 7 | - | - |
| | MONTH | 65.6 | 64 | 21 | 15 | 10.4 | 6.4 | 8.4 | +2.2 | 1.8 | 10 | 0 | 126 | 145 | 6 | - | -3.4 | 22 | 5 | 7.9 | +2.0 | 51.6 | 83 | 7.6 | 18 | 10 | - |
| Glencolumbkille Co. Donegal | 1-10 | 84.0 | - | 9 | 8 | 9.8 | 6.0 | 7.9 | - | 2.2 | 10 | 0 | 36 | - | 1 | - | -0.6 | 10 | 1 | - | - | N/A | - | 4.8 | - | - | - |
| | 11-20 | 52.2 | - | 9 | 6 | 10.2 | 5.2 | 7.7 | - | 1.2 | 13 | 0 | 35 | - | 2 | - | -1.6 | 13 | 2 | - | - | N/A | - | 4.9 | - | - | - |
| | 21-END | 64.7 | - | 8 | 6 | 10.8 | 6.0 | 8.4 | - | 2.0 | 22 | 0 | 45 | - | 3 | - | -3.5 | 22 | 2 | - | - | N/A | - | 5.1 | - | - | - |
| | MONTH | 200.9 | - | 26 | 20 | 10.3 | 5.8 | 8.0 | - | 1.2 | 13 | 0 | 116 | - | 6 | - | -3.5 | 22 | 5 | - | - | N/A | - | 4.9 | - | N/A | - |

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JANUARY 1989

| STATION | PERIOD | RAINFALL (mm) | | | | TEMPERATURE (°C) | | | | | | | | | | | | | | BRIGHT SUNSHINE | | WIND | | P.E. (PENMAN) (mm) | | | | | | | | | | | |
|--|--------|---------------|--------------|-----------|----------|------------------|-----------|------------|-------------------------|-------------|------|---------------------|-------------------------|--------------|--------------------------|--------------|--------------------|------|------------------------|--------------------|--------------|--------------------------------|----------------------|--------------------|------------|-------------------------|---|---|---|---|---|---|---|---|---|
| | | AMOUNT | % OF AVERAGE | RAIN DAYS | WET DAYS | AIR | | | | | | | GROUND | | | | SOIL (10cm) | | | TOTAL NO. OF HOURS | % OF AVERAGE | MEAN SPEED (ms ⁻¹) | DAYS WITH GALE GUSTS | | | | | | | | | | | | |
| | | | | | | MEAN MAX. | MEAN MIN. | MEAN DAILY | DIFFERENCE FROM AVERAGE | LOWEST MIN. | DATE | DAYS WITH AIR FROST | DEGREE DAYS ABOVE 4.4°C | % OF AVERAGE | DEGREE DAYS ABOVE 10.0°C | % OF AVERAGE | LOWEST "GRASS-MIN" | DATE | DAYS WITH GROUND FROST | | | | | | MEAN DAILY | DIFFERENCE FROM AVERAGE | | | | | | | | | |
| Glenties Co. Donegal | 1-10 | N/A | - | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 11-20 | N/A | - | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 21-END | N/A | - | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | MONTH | N/A | N/A | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Malin Head Co. Donegal | 1-10 | 28.8 | - | 7 | 6 | 10.5 | 6.4 | 8.5 | - | 3.0 | 10 | 0 | 41 | - | 3 | - | 0.7 | 10 | 0 | 7.3 | - | 3.7 | - | 9.7 | 9 | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 32.2 | - | 7 | 6 | 10.3 | 5.6 | 7.9 | - | 2.2 | 13 | 0 | 36 | - | 3 | - | -0.4 | 13 | 1 | 6.5 | - | 8.8 | - | 12.9 | 9 | - | - | - | - | - | - | - | - | - | |
| | 21-END | 17.2 | - | 5 | 4 | 10.7 | 6.6 | 8.6 | - | 1.5 | 22 | 0 | 48 | - | 3 | - | -2.2 | 22 | 2 | 7.2 | - | 15.4 | - | 11.4 | 10 | - | - | - | - | - | - | - | - | - | |
| | MONTH | 78.2 | 74 | 19 | 16 | 10.5 | 6.2 | 8.3 | +3.0 | 1.5 | 22 | 0 | 125 | 202 | 8 | - | -2.2 | 22 | 3 | 7.0 | +2.5 | 27.9 | 68 | 11.3 | 28 | 30 | - | - | - | - | - | - | - | - | |
| Casement Aerodrome Co. Dublin | 1-10 | 8.2 | - | 5 | 3 | 9.9 | 4.9 | 7.4 | - | 1.2 | 10 | 0 | 32 | - | 1 | - | -0.8 | 10 | 1 | 6.7 | - | 15.7 | - | 8.3 | 6 | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 17.8 | - | 5 | 3 | 9.5 | 3.9 | 6.7 | - | 0.0 | 17 | 0 | 27 | - | 1 | - | -3.4 | 18 | 3 | 5.5 | - | 26.5 | - | 10.8 | 7 | - | - | - | - | - | - | - | - | - | |
| | 21-END | 12.6 | - | 4 | 3 | 10.4 | 5.3 | 7.8 | - | -0.8 | 22 | 1 | 40 | - | 2 | - | -3.7 | 22 | 3 | 6.3 | - | 35.4 | - | 9.0 | 9 | - | - | - | - | - | - | - | - | - | |
| | MONTH | 38.6 | 58 | 14 | 9 | 9.9 | 4.7 | 7.3 | +2.9 | -0.8 | 22 | 1 | 100 | 156 | 5 | - | -3.7 | 22 | 7 | 6.2 | - | 77.6 | 141 | 9.4 | 22 | 17 | - | - | - | - | - | - | - | - | |
| Dublin Airport Co. Dublin | 1-10 | 3.9 | - | 4 | 2 | 10.3 | 4.9 | 7.6 | - | 0.6 | 10 | 0 | 35 | - | 2 | - | -1.6 | 10 | 3 | 6.7 | - | 12.9 | - | 5.7 | 3 | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 12.4 | - | 4 | 3 | 10.2 | 4.2 | 7.2 | - | 0.7 | 17 | 0 | 31 | - | 2 | - | -2.4 | 19 | 4 | 5.6 | - | 25.1 | - | 7.3 | 6 | - | - | - | - | - | - | - | - | - | |
| | 21-END | 11.2 | - | 3 | 2 | 11.0 | 5.9 | 8.5 | - | 0.4 | 22 | 0 | 46 | - | 5 | - | -3.5 | 23 | 4 | 6.6 | - | 32.3 | - | 6.2 | 3 | - | - | - | - | - | - | - | - | - | |
| | MONTH | 27.5 | 40 | 11 | 7 | 10.5 | 5.0 | 7.8 | +3.1 | 0.4 | 22 | 0 | 112 | 181 | 9 | - | -3.5 | 23 | 11 | 6.3 | +2.2 | 70.3 | 121 | 6.4 | 12 | 16 | - | - | - | - | - | - | - | - | |
| Kinsealy Co. Dublin | 1-10 | 2.5 | - | 3 | 1 | 10.2 | 4.6 | 7.4 | - | 0.7 | 10 | 0 | 32 | - | 2 | - | -5.6 | 1 | 4 | - | - | N/A | - | 4.0 | - | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 13.2 | - | 4 | 4 | 11.0 | 3.5 | 7.2 | - | 0.4 | 17 | 0 | 32 | - | 3 | - | -7.0 | 19 | 8 | - | - | N/A | - | 5.3 | - | - | - | - | - | - | - | - | - | - | |
| | 21-END | 8.3 | - | 2 | 2 | 11.0 | 3.8 | 7.4 | - | 0.0 | 31 | 0 | 37 | - | 4 | - | -6.9 | 22 | 7 | - | - | N/A | - | 4.8 | - | - | - | - | - | - | - | - | - | - | |
| | MONTH | 24.0 | 36 | 9 | 7 | 10.7 | 3.9 | 7.3 | - | 0.0 | 31 | 0 | 102 | - | 10 | - | -7.0 | 19 | 19 | - | - | N/A | - | 4.7 | - | N/A | - | - | - | - | - | - | - | - | |
| Galway Co. Galway | 1-10 | 42.6 | - | 5 | 4 | N/A | N/A | N/A | - | N/A | | | | | | N/A | | | N/A | - | 10.5 | - | 5.6 | 3 | - | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 44.6 | - | 7 | 7 | N/A | N/A | N/A | - | N/A | | | | | | N/A | | | N/A | - | 15.9 | - | 6.7 | 7 | - | - | - | - | - | - | - | - | - | - | |
| | 21-END | 52.5 | - | 7 | 6 | N/A | N/A | N/A | - | N/A | | | | | | N/A | | | N/A | - | 20.9 | - | 5.7 | 4 | - | - | - | - | - | - | - | - | - | - | |
| | MONTH | 139.7 | 123 | 19 | 17 | | | | - | N/A | | | | | | N/A | | | N/A | - | 47.3 | 87 | 6.0 | 14 | 18 | - | - | - | - | - | - | - | - | - | |
| Killarney (Muckross House) Co. Kerry | 1-10 | 61.9 | - | 8 | 5 | 40.9 | 6.2 | 23.5 | - | -1.0 | 10 | 1 | 193 | - | 153 | - | -3.9 | 10 | 1 | - | - | 6.3 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 79.5 | - | 9 | 8 | 21.2 | 4.7 | 12.9 | - | -0.5 | 11 | 1 | 89 | - | 55 | - | -3.1 | 18 | 4 | - | - | 7.9 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 21-END | 103.6 | - | 8 | 6 | 11.4 | 6.4 | 8.9 | - | 2.0 | 29 | 0 | 51 | - | 6 | - | -3.0 | 22 | 3 | - | - | 11.4 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | MONTH | 245.0 | 118 | 25 | 19 | 24.1 | 5.8 | 14.9 | - | -1.0 | 10 | 2 | 333 | - | 213 | - | -3.9 | 10 | 8 | - | - | 28.6 | - | - | - | - | - | - | - | - | - | - | - | - | |

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TABLE 1 (CONTINUED)

JANUARY 1989

| STATION | PERIOD | RAINFALL (mm) | | | | TEMPERATURE (°C) | | | | | | | | | | | | | | BRIGHT SUNSHINE | | WIND | | | | |
|--|--------|---------------|--------------|-----------|----------|------------------|-----------|------------|-------------------------|-------------|------|---------------------|-------------------------|--------------|--------------------------|--------------|--------------------|------|------------------------|--------------------|--------------|--------------------------------|----------------------|--------------------|------------|-------------------------|
| | | AMOUNT | % OF AVERAGE | RAIN DAYS | WET DAYS | AIR | | | | | | | GROUND | | | | SOIL (10cm) | | | TOTAL NO. OF HOURS | % OF AVERAGE | MEAN SPEED (ms ⁻¹) | DAYS WITH GALE GUSTS | P.E. (PENMAN) (mm) | | |
| | | | | | | MEAN MAX. | MEAN MIN. | MEAN DAILY | DIFFERENCE FROM AVERAGE | LOWEST MIN. | DATE | DAYS WITH AIR FROST | DEGREE DAYS ABOVE 4.4°C | % OF AVERAGE | DEGREE DAYS ABOVE 10.0°C | % OF AVERAGE | LOWEST "GRASS-MIN" | DATE | DAYS WITH GROUND FROST | | | | | | MEAN DAILY | DIFFERENCE FROM AVERAGE |
| Cahirciveen (Valentia Obsy.) Co. Kerry | 1-10 | 42.4 | - | 7 | 5 | 11.0 | 6.8 | 8.9 | - | 2.0 | 10 | 0 | 46 | - | 3 | - | -0.9 | 10 | 1 | 8.5 | - | 9.2 | - | 6.4 | 6 | - |
| | 11-20 | 62.9 | - | 7 | 5 | 11.0 | 6.3 | 8.7 | - | 1.0 | 17 | 0 | 44 | - | 3 | - | -1.0 | 17 | 1 | 7.7 | - | 9.9 | - | 7.7 | 8 | - |
| | 21-END | 80.1 | - | 8 | 5 | 11.3 | 6.2 | 8.8 | - | 1.4 | 22 | 0 | 49 | - | 5 | - | -1.6 | 22 | 1 | 8.2 | - | 12.7 | - | 6.7 | 7 | - |
| | MONTH | 185.4 | 114 | 22 | 15 | 11.1 | 6.4 | 8.8 | +2.2 | 1.0 | 17 | 0 | 138 | 135 | 11 | 122 | -1.6 | 22 | 3 | 8.1 | +2.2 | 31.8 | 66 | 6.9 | 21 | 13 |
| Ardfert (Liscahane) Co. Kerry | 1-10 | 45.2 | - | 8 | 6 | 10.9 | 5.9 | 8.4 | - | 0.9 | 10 | 0 | 41 | - | 3 | - | -2.6 | 10 | 1 | - | - | 8.4 | - | - | - | - |
| | 11-20 | 47.8 | - | 7 | 5 | 11.7 | 4.9 | 8.3 | - | 1.1 | 17 | 0 | 41 | - | 4 | - | -3.2 | 18 | 3 | - | - | 20.6 | - | - | - | - |
| | 21-END | 53.2 | - | 5 | 5 | 11.6 | 5.5 | 8.6 | - | 0.6 | 22 | 0 | 48 | - | 6 | - | -3.6 | 22 | 3 | - | - | 16.2 | - | - | - | - |
| | MONTH | 146.2 | - | 20 | 16 | 11.4 | 5.4 | 8.4 | - | 0.6 | 22 | 0 | 130 | - | 13 | - | -3.6 | 22 | 7 | - | - | 45.2 | - | - | - | - |
| Lullymore Co. Kildare | 1-10 | N/A | - | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | N/A | - | - | N/A | - | N/A | - | - | - |
| | 11-20 | N/A | - | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | N/A | - | - | N/A | - | N/A | - | - | - |
| | 21-END | N/A | - | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | N/A | - | - | N/A | - | N/A | - | - | - |
| | MONTH | N/A | N/A | N/A | N/A | N/A | N/A | N/A | - | N/A | N/A | N/A | - | N/A | - | N/A | N/A | N/A | - | - | N/A | - | N/A | - | N/A | N/A |
| Kilkenny Co. Kilkenny | 1-10 | 8.1 | - | 5 | 2 | 10.3 | 4.4 | 7.3 | - | -1.5 | 10 | 1 | 34 | - | 2 | - | -8.3 | 10 | 3 | 6.6 | - | 11.0 | - | 3.2 | 3 | - |
| | 11-20 | 19.0 | - | 7 | 5 | 10.0 | 1.9 | 5.9 | - | -4.0 | 18 | 4 | 26 | - | 2 | - | -9.3 | 18 | 6 | 5.2 | - | 19.8 | - | 4.2 | 4 | - |
| | 21-END | 21.6 | - | 7 | 5 | 10.6 | 4.6 | 7.6 | - | -3.6 | 22 | 1 | 40 | - | 3 | - | -9.7 | 22 | 7 | 6.3 | - | 19.7 | - | 3.9 | 2 | - |
| | MONTH | 48.7 | 55 | 19 | 12 | 10.3 | 3.6 | 7.0 | +2.8 | -4.0 | 18 | 6 | 100 | 154 | 7 | - | -9.7 | 22 | 16 | 6.1 | +2.2 | 50.5 | 92 | 3.8 | 9 | 5 |
| Mooncoin (Silverspring) Co. Kilkenny | 1-10 | 9.0 | - | 4 | 4 | 10.5 | 5.6 | 8.0 | - | -1.5 | 10 | 1 | 39 | - | 2 | - | -4.4 | 10 | 2 | - | - | 12.1 | - | - | - | - |
| | 11-20 | 21.5 | - | 8 | 6 | 10.6 | 1.0 | 5.8 | - | -5.0 | 18 | 5 | 27 | - | 2 | - | -6.5 | 18 | 8 | - | - | 17.8 | - | - | - | - |
| | 21-END | 30.9 | - | 8 | 4 | 17.7 | 2.3 | 10.0 | - | -3.4 | 22 | 3 | 70 | - | 39 | - | -5.5 | 22 | 7 | - | - | 18.8 | - | - | - | - |
| | MONTH | 61.4 | 55 | 20 | 14 | 13.1 | 2.9 | 8.0 | - | -5.0 | 18 | 9 | 136 | - | 44 | - | -6.5 | 18 | 17 | - | - | 48.7 | - | - | - | - |
| Ballinamore Co. Leitrim | 1-10 | 40.5 | - | 8 | 4 | 9.1 | 3.8 | 6.4 | - | -1.0 | 10 | 1 | 25 | - | 1 | - | -6.7 | 10 | 7 | - | - | 1.3 | - | 3.0 | - | - |
| | 11-20 | 41.5 | - | 7 | 5 | 9.5 | 2.0 | 5.8 | - | -1.7 | 17 | 4 | 23 | - | 1 | - | -8.1 | 17 | 8 | - | - | 8.3 | - | 4.1 | - | - |
| | 21-END | 37.2 | - | 7 | 6 | 10.1 | 2.6 | 6.3 | - | -3.2 | 22 | 2 | 30 | - | 2 | - | -7.4 | 22 | 6 | - | - | 14.2 | - | 4.1 | - | - |
| | MONTH | 119.2 | 101 | 22 | 15 | 9.6 | 2.8 | 6.2 | - | -3.2 | 22 | 7 | 77 | - | 4 | - | -8.1 | 17 | 21 | - | - | 23.8 | - | 3.7 | - | 2 |
| Ardee (Boharnamoe) Co. Louth | 1-10 | 12.9 | - | 5 | 3 | 10.2 | 4.4 | 7.3 | - | -0.7 | 10 | 1 | 32 | - | 2 | - | -1.0 | 10 | 2 | - | - | - | - | - | - | - |
| | 11-20 | 20.8 | - | 5 | 4 | 10.5 | 2.9 | 6.7 | - | -0.2 | 13 | 2 | 28 | - | 3 | - | -4.9 | 18 | 7 | - | - | - | - | - | - | - |
| | 21-END | 14.0 | - | 4 | 2 | 10.5 | 3.5 | 7.0 | - | -2.2 | 22 | 1 | 33 | - | 3 | - | -4.0 | 22 | 3 | - | - | - | - | - | - | - |
| | MONTH | 47.7 | 55 | 14 | 9 | 10.4 | 3.6 | 7.0 | - | -2.2 | 22 | 4 | 94 | - | 8 | - | -4.9 | 18 | 12 | - | - | - | - | - | - | - |

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JANUARY 1989

| STATION | PERIOD | RAINFALL (mm) | | | | TEMPERATURE (°C) | | | | | | | | | | | | | | BRIGHT SUNSHINE | | WIND | | P.E. (PENMAN) (mm) | | |
|------------------------------------|--------|---------------|--------------|-----------|----------|------------------|-----------|------------|-------------------------|-------------|------|---------------------|-------------------------|--------------|--------------------------|--------------|--------------------|------|------------------------|--------------------|--------------|--------------------------------|----------------------|--------------------|------------|-------------------------|
| | | AMOUNT | % OF AVERAGE | RAIN DAYS | WET DAYS | AIR | | | | | | | GROUND | | | | SOIL (10cm) | | | TOTAL NO. OF HOURS | % OF AVERAGE | MEAN SPEED (ms ⁻¹) | DAYS WITH GALE GUSTS | | | |
| | | | | | | MEAN MAX. | MEAN MIN. | MEAN DAILY | DIFFERENCE FROM AVERAGE | LOWEST MIN. | DATE | DAYS WITH AIR FROST | DEGREE DAYS ABOVE 4.4°C | % OF AVERAGE | DEGREE DAYS ABOVE 10.0°C | % OF AVERAGE | LOWEST "GRASS-MIN" | DATE | DAYS WITH GROUND FROST | | | | | | MEAN DAILY | DIFFERENCE FROM AVERAGE |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ballinrobe (Creagh) Co. Mayo | 1-10 | 58.6 | - | 6 | 5 | 10.4 | 4.7 | 7.5 | - | 0.1 | 10 | 0 | 34 | - | 2 | - | -5.3 | 10 | 4 | - | - | 10.2 | - | 4.2 | - | - |
| | 11-20 | 70.9 | - | 9 | 8 | 10.3 | 3.9 | 7.1 | - | 0.0 | 17 | 0 | 31 | - | 1 | - | -5.6 | 17 | 6 | - | - | 8.1 | - | 4.9 | - | - |
| | 21-END | 78.7 | - | 6 | 6 | 11.0 | 3.7 | 7.4 | - | -2.0 | 22 | 1 | 38 | - | 3 | - | -7.5 | 22 | 7 | - | - | 12.1 | - | 4.9 | - | - |
| | MONTH | 208.2 | 147 | 21 | 19 | 10.6 | 4.1 | 7.3 | - | -2.0 | 22 | 1 | 102 | - | 6 | - | -7.5 | 22 | 17 | - | - | 30.4 | - | 4.7 | - | 2 |
| Belmullet Co. Mayo | 1-10 | 40.7 | - | 6 | 6 | 10.6 | 6.9 | 8.8 | - | 4.4 | 4 | 0 | 44 | - | 3 | - | 1.1 | 10 | 0 | 8.5 | - | 7.6 | - | 8.8 | 8 | - |
| | 11-20 | 53.4 | - | 9 | 6 | 10.6 | 6.1 | 8.4 | - | 2.9 | 13 | 0 | 40 | - | 3 | - | -1.2 | 13 | 2 | 7.5 | - | 7.0 | - | 11.4 | 9 | - |
| | 21-END | 48.5 | - | 6 | 6 | 10.8 | 6.5 | 8.6 | - | 0.9 | 22 | 0 | 48 | - | 3 | - | -4.9 | 22 | 4 | 7.8 | - | 16.4 | - | 10.2 | 10 | - |
| | MONTH | 142.6 | 120 | 21 | 18 | 10.7 | 6.5 | 8.6 | +2.9 | 0.9 | 22 | 0 | 132 | 176 | 9 | - | -4.9 | 22 | 6 | 7.9 | +2.9 | 31.0 | 64 | 10.1 | 27 | 19 |
| Claremorris Co. Mayo | 1-10 | 32.8 | - | 6 | 5 | 9.9 | 4.3 | 7.1 | - | 0.2 | 10 | 0 | 30 | - | 1 | - | -5.5 | 10 | 3 | 7.0 | - | 7.7 | - | 5.7 | 4 | - |
| | 11-20 | 56.4 | - | 8 | 6 | 9.6 | 3.7 | 6.6 | - | 0.5 | 17 | 0 | 26 | - | 1 | - | -5.0 | 17 | 3 | 6.2 | - | 7.4 | - | 7.4 | 6 | - |
| | 21-END | 46.5 | - | 6 | 6 | 10.3 | 4.6 | 7.4 | - | -1.6 | 22 | 1 | 37 | - | 2 | - | -7.0 | 22 | 6 | 6.8 | - | 11.4 | - | 6.9 | 6 | - |
| | MONTH | 135.7 | 117 | 20 | 17 | 9.9 | 4.2 | 7.1 | +3.1 | -1.6 | 22 | 1 | 94 | 171 | 4 | - | -7.0 | 22 | 12 | 6.7 | +2.9 | 26.5 | 53 | 6.7 | 16 | 6 |
| Glenamoy Co. Mayo | 1-10 | 61.6 | - | 8 | 8 | 10.5 | 5.8 | 8.1 | - | 0.8 | 10 | 0 | 39 | - | 3 | - | -1.4 | 10 | 1 | - | - | 5.7 | - | 4.7 | - | - |
| | 11-20 | 79.8 | - | 8 | 7 | 10.7 | 4.8 | 7.8 | - | 0.6 | 13 | 0 | 37 | - | 2 | - | -1.1 | 13 | 2 | - | - | 4.5 | - | 6.2 | - | - |
| | 21-END | 60.8 | - | 7 | 5 | 10.8 | 4.0 | 7.4 | - | -1.8 | 22 | 1 | 38 | - | 3 | - | -4.8 | 22 | 4 | - | - | 12.3 | - | 5.6 | - | - |
| | MONTH | 202.2 | 134 | 23 | 20 | 10.7 | 4.9 | 7.8 | - | -1.8 | 22 | 1 | 113 | - | 8 | - | -4.8 | 22 | 7 | - | - | 22.5 | - | 5.5 | - | -1 |
| Dunsany (Grange) Co. Meath | 1-10 | 15.1 | - | 6 | 4 | 9.0 | 4.8 | 6.9 | - | -0.6 | 10 | 1 | 28 | - | 1 | - | -3.7 | 10 | 2 | - | - | 6.6 | - | - | - | - |
| | 11-20 | 21.7 | - | 7 | 5 | 9.3 | 1.3 | 5.3 | - | -1.7 | 17 | 3 | 19 | - | 1 | - | -7.6 | 17 | 5 | - | - | 12.7 | - | - | - | - |
| | 21-END | 19.0 | - | 7 | 4 | 9.6 | 3.1 | 6.4 | - | -1.6 | 22 | 2 | 28 | - | 1 | - | -6.5 | 22 | 4 | - | - | 19.8 | - | - | - | - |
| | MONTH | 55.8 | 70 | 20 | 13 | 9.3 | 3.1 | 6.2 | - | -1.7 | 17 | 6 | 75 | - | 3 | - | -7.6 | 17 | 11 | - | - | 39.1 | - | - | - | - |
| Clones Co. Monaghan | 1-10 | 21.3 | - | 5 | 4 | 9.6 | 4.1 | 6.9 | - | -0.4 | 10 | 1 | 29 | - | 1 | - | -3.6 | 10 | 3 | 6.9 | - | 9.8 | - | 5.5 | 3 | - |
| | 11-20 | 29.6 | - | 8 | 5 | 9.0 | 3.2 | 6.1 | - | -0.3 | 17 | 1 | 23 | - | 1 | - | -4.9 | 13 | 4 | 5.7 | - | 13.0 | - | 7.4 | 6 | - |
| | 21-END | 19.4 | - | 8 | 6 | 9.9 | 4.8 | 7.3 | - | -1.7 | 22 | 1 | 36 | - | 1 | - | -7.8 | 22 | 5 | 6.6 | - | 18.4 | - | 7.0 | 5 | - |
| | MONTH | 70.3 | 80 | 21 | 15 | 9.5 | 4.1 | 6.8 | +3.0 | -1.7 | 22 | 3 | 88 | 180 | 3 | - | -7.8 | 22 | 12 | 6.4 | +2.9 | 41.2 | 86 | 6.7 | 14 | 8 |
| Birr Co. Offaly | 1-10 | 23.1 | - | 5 | 5 | 10.1 | 4.9 | 7.5 | - | 0.2 | 10 | 0 | 34 | - | 2 | - | -3.3 | 10 | 2 | 7.0 | - | 8.9 | - | 3.7 | 3 | - |
| | 11-20 | 22.3 | - | 6 | 4 | 9.6 | 3.5 | 6.6 | - | -1.0 | 17 | 2 | 27 | - | 2 | - | -5.4 | 17 | 6 | 5.8 | - | 16.2 | - | 4.8 | 3 | - |
| | 21-END | 14.6 | - | 6 | 4 | 10.3 | 5.0 | 7.7 | - | -0.9 | 22 | 1 | 39 | - | 2 | - | -6.0 | 22 | 4 | 6.8 | - | 19.0 | - | 4.4 | 3 | - |
| | MONTH | 60.0 | 79 | 17 | 13 | 10.0 | 4.5 | 7.2 | +2.8 | -1.0 | 17 | 3 | 100 | 159 | 6 | - | -6.0 | 22 | 12 | 6.5 | +2.5 | 44.1 | 80 | 4.3 | 9 | 5 |

TABLE 1 (CONTINUED)

JANUARY 1989

| STATION | PERIOD | RAINFALL (mm) | | | | TEMPERATURE (°C) | | | | | | | | | | | | | | BRIGHT SUNSHINE | | WIND | | | | | | | | | | | | | | | |
|---|--------|---------------|--------------|-----------|----------|------------------|-----------|------------|-------------------------|-------------|------|---------------------|-------------------------|--------------|--------------------------|--------------|--------------------|------|------------------------|--------------------|--------------|--------------------------------|----------------------|--------------------|------------|-------------------------|---|---|---|---|---|---|---|---|---|---|---|
| | | AMOUNT | % OF AVERAGE | RAIN DAYS | WET DAYS | AIR | | | | | | | GROUND | | | | SOIL (10cm) | | | TOTAL NO. OF HOURS | % OF AVERAGE | MEAN SPEED (ms ⁻¹) | DAYS WITH GALE GUSTS | P.E. (PENMAN) (mm) | | | | | | | | | | | | | |
| | | | | | | MEAN MAX. | MEAN MIN. | MEAN DAILY | DIFFERENCE FROM AVERAGE | LOWEST MIN. | DATE | DAYS WITH AIR FROST | DEGREE DAYS ABOVE 4.4°C | % OF AVERAGE | DEGREE DAYS ABOVE 10.0°C | % OF AVERAGE | LOWEST *GRASS-MIN* | DATE | DAYS WITH GROUND FROST | | | | | | MEAN DAILY | DIFFERENCE FROM AVERAGE | | | | | | | | | | | |
| Dundrum (Knockavilla) Co. Tipperary | 1-10 | 24.3 | - | 5 | 4 | 9.7 | 4.6 | 7.1 | - | -1.9 | 10 | 1 | 31 | - | 1 | - | -7.1 | 10 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | 11-20 | 29.2 | - | 6 | 5 | 10.3 | 1.6 | 5.9 | - | -4.4 | 18 | 5 | 27 | - | 2 | - | -7.3 | 18 | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | |
| | 21-END | 18.3 | - | 6 | 5 | 10.4 | 2.9 | 6.6 | - | -3.5 | 22 | 2 | 31 | - | 2 | - | -7.4 | 22 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | MONTH | 71.8 | - | 17 | 14 | 10.2 | 3.0 | 6.6 | - | -4.4 | 18 | 8 | 89 | - | 6 | - | -7.4 | 22 | 16 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Dungarvan (Carriglea) Co. Waterford | 1-10 | 19.3 | - | 6 | 4 | 11.0 | 3.9 | 7.5 | - | -1.6 | 10 | 1 | 36 | - | 3 | - | -7.1 | 10 | 4 | - | - | 10.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | 11-20 | 31.5 | - | 8 | 6 | 10.8 | 1.6 | 6.2 | - | -4.1 | 18 | 4 | 28 | - | 2 | - | -9.2 | 18 | 7 | - | - | 18.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | 21-END | 40.3 | - | 7 | 4 | 10.9 | 2.7 | 6.8 | - | -4.4 | 22 | 4 | 35 | - | 3 | - | -7.2 | 29 | 6 | - | - | 15.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | MONTH | 91.1 | 72 | 21 | 14 | 10.9 | 2.7 | 6.8 | - | -4.4 | 22 | 9 | 99 | - | 8 | - | -9.2 | 18 | 17 | - | - | 44.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Mullingar Co. Westmeath | 1-10 | 22.9 | - | 5 | 4 | 9.5 | 4.0 | 6.8 | - | -1.0 | 10 | 1 | 28 | - | 1 | - | -4.3 | 10 | 2 | 6.2 | - | 9.6 | - | 4.3 | 3 | - | - | - | - | - | - | - | - | - | - | - | |
| | 11-20 | 26.5 | - | 8 | 5 | 9.1 | 2.4 | 5.8 | - | -2.1 | 17 | 3 | 22 | - | 1 | - | -4.7 | 17 | 5 | 5.0 | - | 16.0 | - | 5.6 | 4 | - | - | - | - | - | - | - | - | - | - | - | |
| | 21-END | 14.3 | - | 7 | 6 | 9.7 | 4.5 | 7.1 | - | -2.8 | 22 | 1 | 34 | - | 1 | - | -5.8 | 22 | 5 | 6.1 | - | 25.4 | - | 5.2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| | MONTH | 63.7 | 70 | 20 | 15 | 9.4 | 3.7 | 6.6 | +2.8 | -2.8 | 22 | 5 | 84 | 165 | 3 | - | -5.8 | 22 | 12 | 5.8 | +2.2 | 51.0 | 89 | 5.0 | 9 | 4 | - | - | - | - | - | - | - | - | - | - | - |
| J.F.K. Park Co. Wexford | 1-10 | 11.7 | - | 4 | 3 | 10.3 | 4.8 | 7.6 | - | -0.7 | 10 | 1 | 35 | - | 2 | - | -8.2 | 10 | 5 | - | - | 11.9 | - | 5.6 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 11-20 | 18.8 | - | 5 | 4 | 10.2 | 2.7 | 6.4 | - | -0.1 | 11 | 1 | 26 | - | 1 | - | -8.2 | 18 | 8 | - | - | 23.1 | - | 5.8 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 21-END | 34.7 | - | 6 | 4 | 10.3 | 4.0 | 7.1 | - | -1.2 | 22 | 1 | 34 | - | 2 | - | -7.9 | 22 | 8 | - | - | 18.5 | - | 6.1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | MONTH | 65.2 | 60 | 15 | 11 | 10.3 | 3.8 | 7.0 | - | -1.2 | 22 | 3 | 95 | - | 5 | - | -8.2 | 18 | 21 | - | - | 53.5 | - | 5.9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Clonroche Co. Wexford | 1-10 | 16.3 | - | 5 | 4 | 9.6 | 5.3 | 7.5 | - | -1.5 | 10 | 1 | 34 | - | 2 | - | -7.5 | 10 | 2 | - | - | 14.6 | - | 2.3 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 11-20 | 21.4 | - | 6 | 5 | 9.7 | 2.1 | 5.9 | - | -1.0 | 18 | 4 | 23 | - | 1 | - | -8.0 | 18 | 7 | - | - | 22.1 | - | 2.8 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 21-END | 36.6 | - | 4 | 3 | 9.5 | 4.1 | 6.8 | - | 0.3 | 29 | 0 | 30 | - | 1 | - | -7.1 | 22 | 6 | - | - | 18.4 | - | 2.5 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | MONTH | 74.3 | 59 | 15 | 12 | 9.6 | 3.8 | 6.7 | - | -1.5 | 10 | 5 | 86 | - | 3 | - | -8.0 | 18 | 15 | - | - | 55.2 | - | 2.5 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Johnstown Castle Co. Wexford | 1-10 | 18.1 | - | 4 | 4 | 10.4 | 5.4 | 7.9 | - | -0.8 | 10 | 1 | 37 | - | 2 | - | -4.4 | 10 | 2 | - | - | 14.9 | - | 1.9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 11-20 | 26.2 | - | 7 | 5 | 10.4 | 3.4 | 6.9 | - | 0.4 | 11 | 0 | 29 | - | 2 | - | -4.2 | 18 | 6 | - | - | 22.6 | - | 2.3 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | 21-END | 31.8 | - | 5 | 4 | 10.7 | 4.5 | 7.6 | - | 0.2 | 22 | 0 | 38 | - | 3 | - | -4.1 | 22 | 4 | - | - | 18.3 | - | 2.3 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | MONTH | 76.1 | 70 | 16 | 13 | 10.5 | 4.4 | 7.5 | - | -0.8 | 10 | 1 | 105 | - | 6 | - | -4.4 | 10 | 12 | - | - | 55.8 | - | 2.2 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rosslare Co. Wexford | 1-10 | 16.6 | - | 5 | 2 | 10.3 | 5.7 | 8.0 | - | 0.7 | 10 | 0 | 38 | - | 2 | - | -1.4 | 10 | 1 | 7.6 | - | 17.9 | - | 5.4 | 3 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 11-20 | 21.2 | - | 6 | 5 | 10.4 | 5.7 | 8.1 | - | 2.7 | 18 | 0 | 37 | - | 2 | - | -2.8 | 18 | 4 | 6.7 | - | 27.9 | - | 7.1 | 6 | - | - | - | - | - | - | - | - | - | - | - | - |
| | 21-END | 22.4 | - | 5 | 4 | 10.6 | 6.5 | 8.6 | - | 1.2 | 22 | 0 | 47 | - | 3 | - | -1.9 | 22 | 3 | 7.5 | - | 27.7 | - | 6.3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| | MONTH | 60.2 | 63 | 16 | 11 | 10.5 | 6.0 | 8.2 | +2.2 | 0.7 | 10 | 0 | 122 | 156 | 6 | - | -2.8 | 18 | 8 | 7.3 | +2.0 | 73.5 | 116 | 6.3 | 13 | 10 | - | - | - | - | - | - | - | - | - | - | - |

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

| STATION | PERIOD | AMOUNT MJ/m ² |
|---|--------|-----------------------------|
| Malin Head Co. Donegal | 1-10 | 10.74 |
| | 11-20 | 15.46 |
| | 21-end | 25.24 |
| | Month | 51.44 |
| Dublin Airport Co. Dublin | 1-10 | 17.33 |
| | 11-20 | 26.34 |
| | 21-end | 33.22 |
| | Month | 76.89 |
| Cahirciveen (Valentia Obs.) Co. Kerry | 1-10 | 17.49 |
| | 11-20 | 19.58 |
| | 21-end | 25.58 |
| | Month | 62.65 |
| Kilkenny Co. Kilkenny | 1-10 | 18.22 |
| | 11-20 | 25.21 |
| | 21-end | 31.14 |
| | Month | 74.57 |
| Belmullet Co. Mayo | 1-10 | 13.33 |
| | 11-20 | 14.01 |
| | 21-end | 22.91 |
| | Month | 50.25 |
| Clones Co. Monaghan | 1-10 | 14.34 |
| | 11-20 | N/A |
| | 21-end | 27.62 |
| | Month | N/A |
| Birr Co. Offaly | 1-10 | 16.72 |
| | 11-20 | 22.82 |
| | 21-end | 29.11 |
| | Month | 68.65 |

Notes on the tables in January issue

TABLE 3 POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE

| STATION | PERIOD | SOIL MOISTURE (mm) | | | |
|---|--------|--------------------|---------|---------------------|---------|
| | | P.E. (mm) | Deficit | Accumulated Deficit | Surplus |
| Carlow (Oak Park) Co. Carlow | 1-10 | 3.9 | - | 0 | 9 |
| | 11-20 | 4.4 | - | 0 | 22 |
| | 21-end | 0.7 | - | 0 | 22 |
| | Month | 8.0 | - | - | - |
| Kinsealy Co. Dublin | 1-10 | 2.0 | - | 0 | 1 |
| | 11-20 | 6.1 | - | 0 | 7 |
| | 21-end | 4.7 | - | 0 | 4 |
| | Month | 12.8 | - | - | - |
| Cahirciveen (Valentia Obs.) Co. Kerry | 1-10 | 3.8 | - | 0 | 37 |
| | 11-20 | 3.4 | - | 0 | 57 |
| | 21-end | (-4.7) | - | 0 | 86 |
| | Month | - | - | - | - |
| Ballinamore Co. Leitrim | 1-10 | 4.5 | - | 0 | 36 |
| | 11-20 | 6.7 | - | 0 | 35 |
| | 21-end | (-1.0) | - | 0 | 38 |
| | Month | - | - | - | - |
| Glenamoy Co. Mayo | 1-9 | 5.4 | - | 0 | 42 |
| | 10-20 | 15.9 | - | 0 | 75 |
| | 21-end | 11.7 | - | 0 | 49 |
| | Month | 33.0 | - | - | - |
| Johnstown Castle Co. Wexford | 1-10 | 3.3 | - | 0 | 15 |
| | 11-20 | 10.6 | - | 0 | 16 |
| | 21-end | 2.7 | - | 0 | 29 |
| | Month | 16.6 | - | - | - |

- 7 -

TABLE 4 SOIL CLIMATE (MULLINGAR)

| BARE SOIL TYPE | PERIOD | MEAN TEMPERATURE (°C at 100mm) | | | TEMPERATURE GRADIENT (to 200mm) | SOIL WATER POTENTIAL (hPa) (at depths) | |
|----------------|--------|-----------------------------------|-------|------|---------------------------------------|---|-------|
| | | Max. | Daily | Min. | | 75mm | 200mm |
| | | Peat | 1-10 | 7.7 | 6.8 | 5.6 | .51 |
| | 11-20 | 6.3 | 5.4 | 3.9 | .83 | 56.9 | 59.5 |
| | 21-end | 7.1 | 6.5 | 5.2 | .22 | 53.6 | 56.4 |
| Mineral | 1-10 | 7.5 | 6.3 | 5.0 | .15 | 48.6 | 52.9 |
| | 11-20 | 6.5 | 5.0 | 3.3 | .18 | 51.7 | 55.7 |
| | 21-end | 7.4 | 6.3 | 4.2 | -.13 | 52.7 | 54.8 |

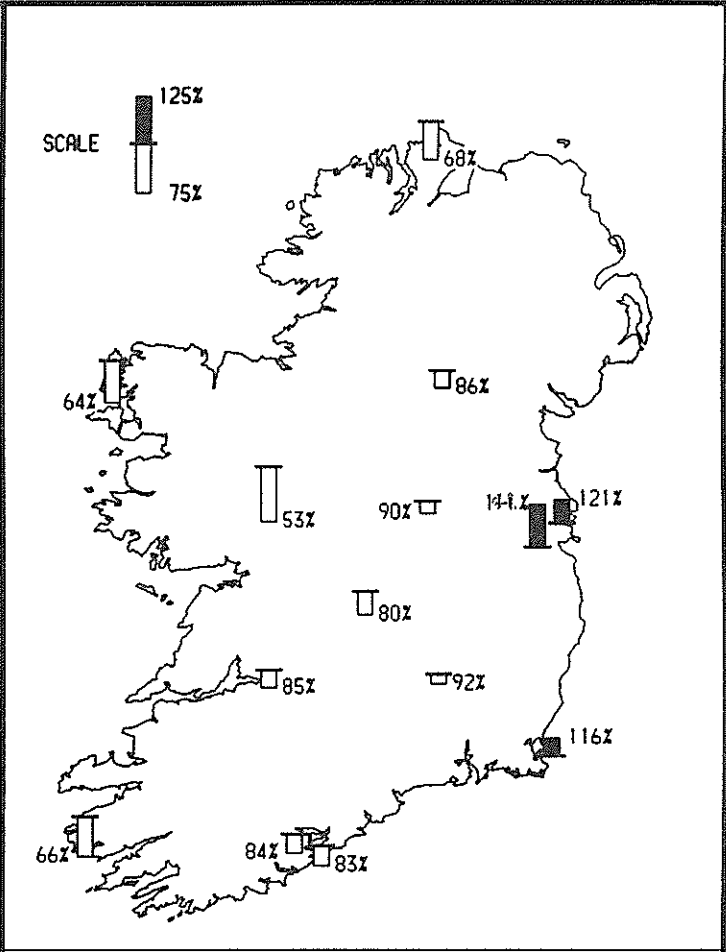
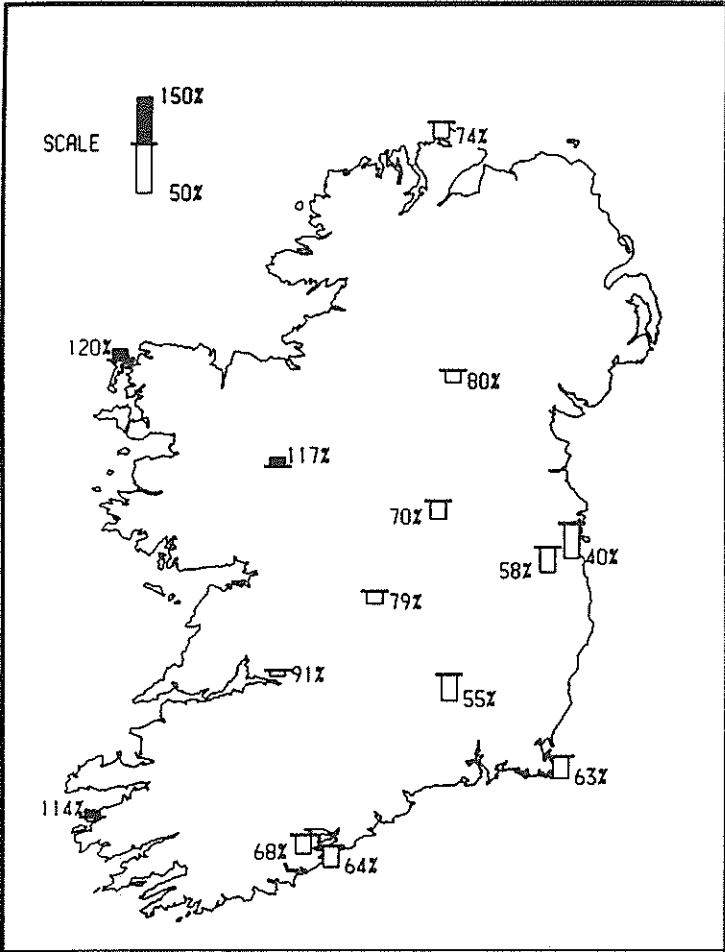
PRECIPITATION VALUES FOR JANUARY 1989

| MARKREE (CO. SLIGO) | | | | | LETTERKENNY (CO. DONEGAL) | | | |
|-----------------------|--------|-----------------|------------------|-----------------|-----------------------------|-----------------|------------------|-----------------|
| PERIOD | AMOUNT | % OF AVERAGE | RAIN DAYS NO. | WET DAYS NO. | AMOUNT | % OF AVERAGE | RAIN DAYS NO. | WET DAYS NO. |
| 1 - 10 | 26.4 | | 7 | 6 | 33.5 | | 7 | 6 |
| 11 - 20 | 48.0 | | 7 | 5 | 52.4 | | 7 | 5 |
| 21 - END | 32.7 | | 8 | 6 | 28.3 | | 8 | 6 |
| MONTH | 107.1 | 93 | 22 | 17 | 114.2 | 84 | 22 | 17 |

Outlook for February 13th - 22nd

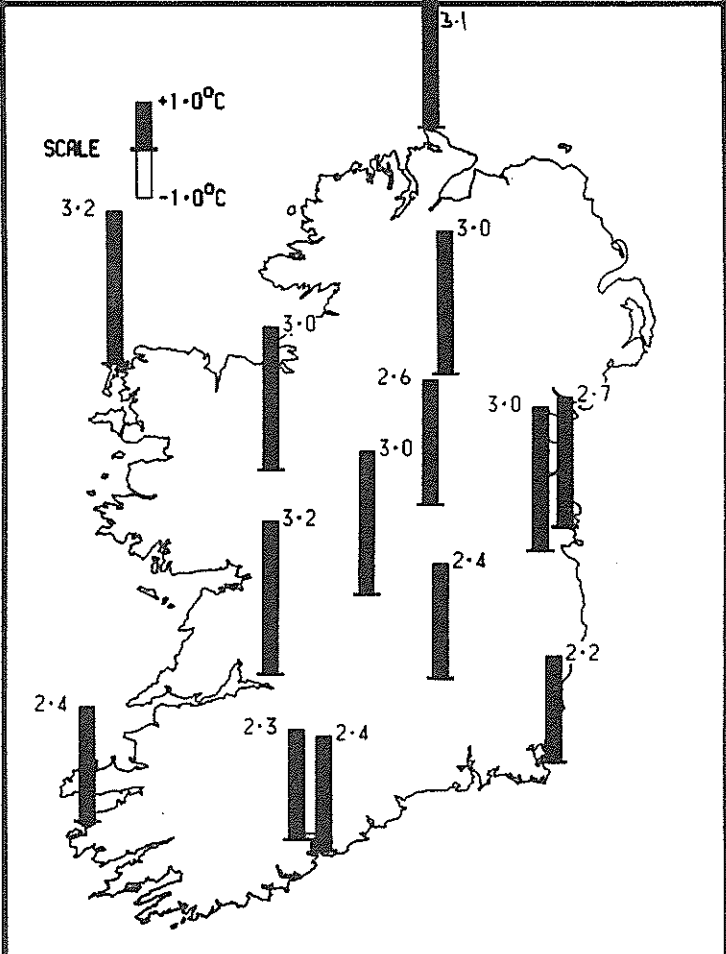
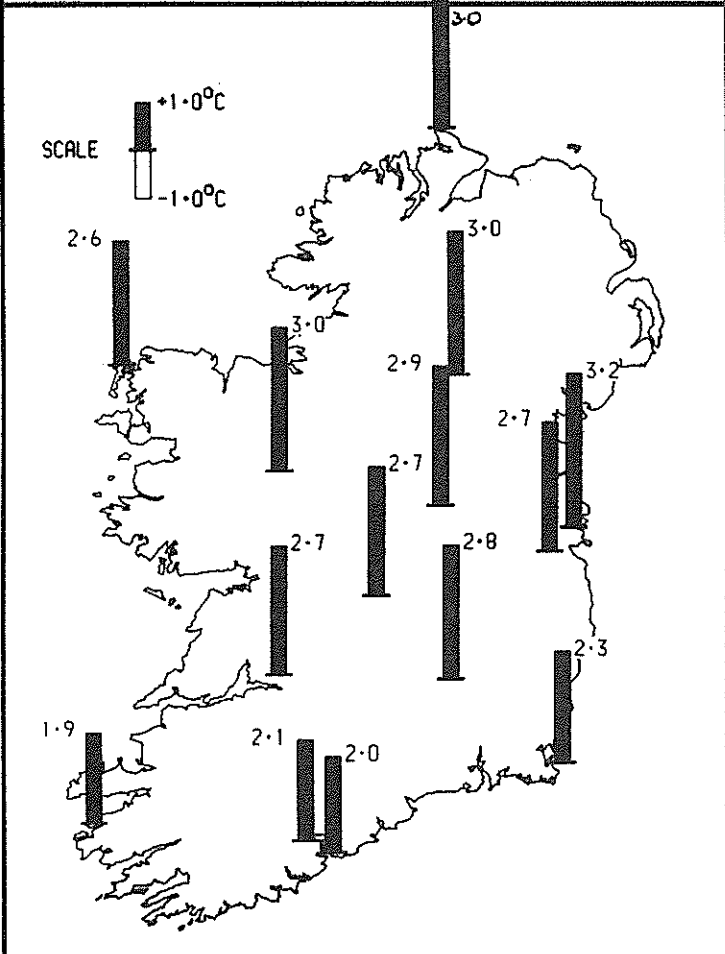
A pressure of 1030 hPa early in the period should give way to one of about 1000 - 1010 hPa generally, although a recovery towards the end of the period is indicated. Fresh to strong winds , northwest at first, but mainly from southwest to west, lightest about the middle of the period. Rain most days , drying conditions are likely to be variable. Despite some frost, the temperature overall should still remain above normal, although nearer to normal than recently

Differences from average



RAINFALL (Percentage of 1951-1980 normals)

SUNSHINE (Percentage of 1951-1980 normals)



MEAN MAX. TEMPERATURE (Deviation from 1951-1980 normals)

MEAN MIN. TEMPERATURE (Deviation from 1951-1980 normals)

NOTES ON AGROMETEOROLOGICAL BULLETIN

1. The term rainfall includes all forms of precipitation (snow,hail,dew)measured as equivalent rain
2. "Rain days" and "wet days" are days during which the total rainfall is not less than 0.2mm and 1.0mm respectively.
3. The mean daily air temperature over a period is taken as the mean of the daily maxima and daily minima (averaged separately over the period).
4. Degree day totals are calculated using the method set out in an article by I.F.C. McVicker in the Journal of Heating and Ventilating Engineers (Vol. 14 No. 18, Nov-Dec 1946).
5. Monthly averages of degree days at stations marked "e" refer to the 25-year period 1958-1982 except at Casement Aerodrome (1964-1982) and Cork Airport (1962-1982). Percentages are not calculated for degree day totals less than 10.
6. Days with air frost are those during which the minimum air temperature was below 0.0°C.
7. "Ground" temperatures refer to temperatures measured with a thermometer placed horizontally on pegs just above the tips of short grass.
8. Days with ground frost are those during which the minimum "ground" temperature was below 0.0°C.
9. The mean daily soil temperature (at 100mm depth under a bare soil surface) over a period is taken as the average of the mean of four daily readings (at 0300,0900,1500 and 2100 GMT) over the period.
10. Mean daily wind speed over a period (ms⁻¹) is taken as the average of hourly values during the period at stations marked "e". Days with gale-gusts are those during which the wind speed exceeded 17.4 ms⁻¹ at any time during the day. At other stations, mean daily wind speeds computed from once-daily readings of run-of-the-wind.
11. All wind speeds refer to the wind at an effective height of 10 metres above the ground. Where measurements are made at other heights, the wind speed readings are corrected to a height of 10 metres.
12. Deviations of monthly values of rainfall, soil temperature and bright sunshine from long-term averages are shown in Table 1 in the case of stations for which those averages are known. Averages of air temperature,bright sunshine and rainfall refer to the period 1951-1980. Averages of soil temperature refer to the period 1958-1982.
- 13 * .Figures showing the differences from average at synoptic stations of precipitation, sunshine, mean maximum and mean minimum temperature have been added to the Bulletin beginning January 1989.
14. Potential Evapotranspiration (P.E.) values given in Table 1 are calculated from values of temperature, sunshine, wind speed and vapour pressure using the Penman Formula. Because of formula limitations, negative values can occur in winter; these are replaced in Table 1 by zero. P.E. values given in Table 3 are those measured by means of soil-filled tanks sunk into the ground with their upper grass-covered ends at surface level.
15. Soil moisture deficits and surpluses (in Table 3) are computed from the differences between rainfall and actual evapotranspiration (A.E.). Estimates of A.E. are derived from measured values of P.E. (See Agmet. Memo No.1,1968). Soil moisture surpluses are assumed to be removed by drainage and surface run-off and are not, therefore, carried forward from one period to the next. Soil moisture deficits are, however, regarded as being cumulative. Where heavy rain occurs near the end of the fixed period, the date of cut-off may be adjusted to avoid error due to insufficient run-off time; dates of the end/beginning of such adjusted periods are circled.
- 16 * . Figures, showing progressive changes in cumulative soil moisture deficits derived from calculated P.E. and rainfall amounts at Claremorris and Kilkenny are included from February 1989.
17. In cases where elements are not normally measured or where long-term averages are not available, a dash (-) is inserted in the appropriate space in the tables.If, in a particular month, some data which are normally given are not included in the Bulletin, this omission will be indicated by the letters N/A in the appropriate space in the tables.
18. Data on the soil climate of Mullingar is included in Table 4. Temperature (°C) and soil water potential (hPa) are measured daily in peat and mineral bare soil patches to depths of up to 200mm. The mean daily temperature is readings (0300,0900,1500, and 2100 GMT) taken at 100mm depth. The temperature gradient is given in °C/100mm, positive values increasing with depth.
19. Global Radiation is given in MJm⁻¹ correct to two decimal places (3.6MJ=1kWh)
- 20 * . Precipitation values (as in Table 1) for Letterkenny and Markee Castle are included from January 1989.
- 21 * . From January 1989 a ten-day outlook will be given beginning date of going to press.

* Indicates the changes made to notes