

# METEOROLOGICAL SERVICE



## AGROMETEOROLOGICAL BULLETIN

JANUARY 1984

### The Weather of January

The month will be remembered for the frequency and severity of its gales, accompanied by spells of rain or squally showers, some of hail and snow. The first 12 days were mildest. Although west to northwest winds were predominant, nevertheless southwest winds occurred most frequently in this period. Temperatures generally decreased subsequently as a very strong west to northwest airflow was established.

The month was punctuated by strong to severe gale gusts on almost all days. In particular there were widespread and prolonged gales or severe gales on 1st and 2nd, from 11th to 16th, and in many areas from 21st to 23rd. Apart from storm force gusts on many other occasions, full storms were in force on 11th/12th and on 16th. Some short quiet interludes occurred in places on 9th and 10th and 18th to 20th.

There were also frequent snow showers or longer snowfalls during the month from the 14th. These were especially heavy on high ground, the strong winds causing snowdrifts, or in the northwest and north where the snow remained lying longest. The most significant of the snowfalls occurred on 14th to 17th and 21st to 24th.

Monthly Amounts of Precipitation were well above normal in almost all areas. Values varied from 208% of normal at Ballinrobe, Creagh to 93% of normal at Rosslare. Rainfall (or rainfall equivalent of snow) was almost uniformly distributed through the month except in the west and south, where falls were heaviest in the last ten days. Wettest days generally were 1st-3rd, 11th-12th, 16th, 21st-23rd, 25th in the southwest, 26th, 28th and 30th.

Mean Monthly Air Temperature was below normal everywhere, varying from 1.1°C below at Malin Head to 0.2°C below at Shannon Airport. Degree days, threshold 4.4°C, varied from 57% of average at Malin Head to 81% at Valentia. The lowest air temperatures occurred on the 19th/20th; -10.0°C was recorded at Clones. Grass minima were below zero almost throughout the month, falling to -15.1°C at Clones, and -13.2°C at Kilkenny and Casement Aerodrome on 20th. Soil temperatures (100mm) were also below normal everywhere. However they varied from about 1.0°C above over the first five days to 3.0°C below about the 20th.

Mean Duration of Bright Sunshine was very variable over the country. Values varied from over 110% of normal in the south, southeast and south midlands, to only some 50% in the north. Global radiation varied correspondingly but to a much lesser extent.

Gales were widespread on almost all days. Strong or very strong gales occurred frequently and full storms developed on the 11th/12th and 16th.

Summary Strong winds throughout, the month was also cold and wet, and dull apart from southern and southeastern.

The data contained in this Bulletin are Provisional. Some of the material in Table 1 will be published in its final form later in the Monthly Weather Report; final values of Solar Radiation at stations in Table 2 will be published in the Annual Summary of Solar Radiation.

TABLE 1

JANUARY 1984

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)																BRIGHT SUNSHINE		WIND		P.E. (PENMAN) (mm)
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR								GROUND				SOIL (10cm)				MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	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					
Carlow (Oak Park) Co. Carlow	1-10	31.2	-	6	4	8.4	2.2	5.3	-	-2.7	9	2	18	-	1	-	-8.0	9	4	-	-	1.66	-	14.7	-	-
	11-20	46.0	-	7	6	6.2	-0.5	2.8	-	-5.5	20	6	10	-	1	-	-13.0	20	9	-	-	2.68	-	14.5	-	-
	21-END	54.7	-	10	10	6.0	-0.3	2.9	-	-5.0	21	4	6	-	0	-	-8.0	21	10	-	-	1.43	-	12.9	-	-
	MONTH	131.9	155	23	20	6.8	0.5	3.6	-	-5.5	20	12	34	-	2	-	-13.0	20	23	-	-	1.91	-	14.0	-	16
Shannon Airport Co. Clare	1-10	55.9	-	8	7	9.4	3.7	6.6	-	0.1	3	0	26	-	1	-	-5.4	9	4	5.5	-	0.94	-	6.2	5	-
	11-20	69.8	-	8	7	7.3	0.6	3.9	-	-3.8	20	3	14	-	1	-	-6.0	20	6	3.4	-	1.20	-	8.2	7	-
	21-END	64.4	-	10	9	7.0	1.4	4.2	-	-0.3	25	1	9	-	0	-	-3.8	25	10	2.9	-	1.29	-	6.9	9	-
	MONTH	190.1	202	26	23	7.9	1.9	4.9	-0.2	-3.8	20	4	49	75	3	-	-6.0	20	20	3.9	-0.8	1.15	68	7.1	21	14
Fermoy (Coolnakilla) Co. Cork	1-10	35.1	-	7	6	8.0	1.1	4.6	-	-4.8	9	4	14	-	0	-	-4.8	9	4	-	-	1.28	-	6.4	-	-
	11-20	63.3	-	7	6	6.4	-1.0	2.7	-	-4.5	20	8	10	-	1	-	-9.5	20	9	-	-	1.91	-	7.6	-	-
	21-END	97.7	-	10	10	5.8	-1.1	2.4	-	-5.7	26	5	6	-	0	-	-9.5	21	11	-	-	N/A	-	7.9	-	-
	MONTH	196.1	-	24	22	6.7	-0.3	3.2	-	-5.7	26	17	31	-	1	-	-9.5	21	24	-	-	N/A	-	7.3	-	N/A
Fermoy (Moore Park) Co. Cork	1-10	32.4	-	7	5	9.3	2.6	6.0	-	-3.2	9	1	23	-	2	-	-8.9	9	6	-	-	1.35	-	4.0	-	-
	11-20	53.2	-	9	8	7.6	-0.2	3.7	-	-6.6	20	3	16	-	2	-	-13.1	20	9	-	-	1.76	-	5.1	-	-
	21-END	89.1	-	11	9	7.1	-0.5	3.3	-	-3.6	21	5	9	-	0	-	-10.1	25	11	-	-	N/A	-	4.7	-	-
	MONTH	174.7	156	27	22	8.0	0.6	4.3	-	-6.6	20	9	49	-	4	-	-13.1	20	26	-	-	N/A	-	4.6	-	N/A
Mallow Co. Cork	1-10	30.6	-	7	5	9.9	3.1	6.5	-	-2.0	9	1	26	-	2	-	N/A	N/A	-	-	-	0.91	-	-	-	-
	11-20	68.8	-	7	7	8.5	0.4	4.4	-	-6.0	20	3	20	-	3	-	N/A	N/A	-	-	-	1.49	-	-	-	-
	21-END	123.5	-	10	10	6.5	0.0	3.2	-	-4.0	21	4	9	-	1	-	N/A	N/A	-	-	-	1.54	-	-	-	-
	MONTH	222.9	180	24	22	8.2	1.1	4.7	-	-6.0	20	8	55	-	5	-	N/A	N/A	-	-	-	1.32	-	-	-	-
Roches Point Co. Cork	1-10	28.3	-	8	5	9.5	4.6	7.0	-	1.2	9	0	29	-	1	-	-1.9	9	2	6.5	-	1.39	-	7.6	6	-
	11-20	45.1	-	7	7	8.1	1.3	4.7	-	-0.1	19	1	16	-	2	-	-4.3	18	6	4.6	-	2.87	-	9.6	7	-
	21-END	97.3	-	9	8	8.4	2.6	5.5	-	0.3	25	0	18	-	0	-	-3.9	25	7	4.3	-	2.45	-	9.7	11	-
	MONTH	170.7	176	24	20	8.6	2.8	5.7	-0.8	-0.1	19	1	62	79	3	-	-4.3	18	15	5.1	-0.8	2.24	112	9.0	24	12
Glencolumbkille Co. Donegal	1-10	61.6	-	10	9	11.6	3.9	7.7	-	1.0	3	0	36	-	4	-	-3.5	9	3	-	-	0.62	-	6.8	-	-
	11-20	95.3	-	8	8	7.5	0.6	4.1	-	-3.0	20	4	12	-	0	-	-9.0	20	9	-	-	1.03	-	8.6	-	-
	21-END	91.8	-	11	9	6.2	1.0	3.6	-	-1.3	21	2	7	-	0	-	-3.5	28	9	-	-	1.09	-	4.7	-	-
	MONTH	248.7	-	29	26	8.4	1.8	5.1	-	-3.0	20	6	55	-	5	-	-9.0	20	21	-	-	0.92	-	6.7	-	13

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JANUARY 1984

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)															BRIGHT SUNSHINE		WIND			
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR										GROUND			SOIL (10cm)		MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	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
Glenties Co. Donegal	1-10	60.9	-	9	9	8.0	2.3	5.2	-	-1.0	3	3	15	-	0	-	-3.5	9	3	-	-	0.46	-	-	-	-
	11-20	91.7	-	8	8	5.3	-0.7	2.3	-	-5.4	19	7	5	-	0	-	-8.9	20	7	-	-	0.79	-	-	-	-
	21-END	93.6	-	10	9	5.2	0.1	2.6	-	-2.4	28	4	3	-	0	-	-5.4	28	8	-	-	1.07	-	-	-	-
	MONTH	246.2	162	27	26	6.1	0.5	3.3	-	-5.4	19	14	23	-	1	-	-8.9	20	18	-	-	0.78	-	-	-	-
Malin Head Co. Donegal	1-10	46.7	-	10	8	8.6	3.1	5.9	-	0.5	2	0	20	-	1	-	-3.4	9	4	4.9	-	0.35	-	13.4	10	-
	11-20	88.7	-	8	7	6.3	0.2	3.3	-	-2.9	20	3	7	-	0	-	-8.6	20	8	2.7	-	0.98	-	12.4	9	-
	21-END	48.4	-	9	8	5.4	0.9	3.2	-	-1.2	25	2	3	-	0	-	-4.2	21	9	2.1	-	0.72	-	9.8	9	-
	MONTH	183.8	170	27	23	6.7	1.4	4.1	-1.1	-2.9	20	5	30	57	1	-	-8.6	20	21	3.2	-1.3	0.68	51	11.8	28	27
Casement Aerodrome Co. Dublin	1-10	32.8	-	7	6	7.8	2.1	4.9	-	-3.4	9	3	18	-	1	-	-7.3	9	6	4.4	-	1.35	-	9.1	7	-
	11-20	32.5	-	6	5	6.5	-1.6	2.5	-	-7.6	20	6	10	-	1	-	-13.2	20	9	2.4	-	2.24	-	9.1	7	-
	21-END	37.5	-	10	7	6.3	0.7	3.5	-	-1.0	25	2	6	-	0	-	-4.6	21	10	2.1	-	1.55	-	7.9	9	-
	MONTH	102.8	158	23	18	6.9	0.4	3.6	-0.6	-7.6	20	11	34	61	2	-	-13.2	20	25	2.9	-	1.71	84	8.7	23	14
Dublin Airport Co. Dublin	1-10	26.3	-	7	5	7.9	2.7	5.3	-	-1.3	9	1	18	-	1	-	-3.5	9	4	4.3	-	1.82	-	8.0	5	-
	11-20	29.0	-	7	6	6.8	-0.4	3.2	-	-3.7	19	4	11	-	2	-	-9.1	20	9	2.6	-	3.14	-	8.8	7	-
	21-END	38.6	-	9	8	6.1	1.2	3.6	-	-0.4	25	2	6	-	0	-	-5.3	28	9	2.3	-	1.92	-	7.3	8	-
	MONTH	93.9	134	23	19	6.9	1.2	4.0	-0.7	-3.7	19	7	35	65	3	-	-9.1	20	22	3.0	-1.1	2.28	111	8.0	20	13
Kinsealy Co. Dublin	1-10	38.6	-	8	6	8.2	N/A	N/A	-	N/A		N/A	N/A	-	N/A	-	-4.1	9	7	-	-	1.78	-	6.3	-	-
	11-20	24.1	-	7	6	7.5	-0.7	3.4	-	-5.5	20	6	13	-	2	-	-9.9	15	9	-	-	3.09	-	5.8	-	-
	21-END	41.9	-	9	9	6.2	-0.3	2.9	-	-5.7	29	5	6	-	0	-	-8.6	29	10	-	-	1.72	-	5.8	-	-
	MONTH	104.6	156	24	21	7.3	N/A	N/A	-	N/A		N/A	N/A	-	N/A	-	-9.9	15	26	-	-	2.18	-	6.0	-	N/A
Galway Co. Galway	1-10	49.9	-	9	7	8.8	3.5	6.1	-	-0.5	3	2	23	-	1	-	-3.7	9	4	5.6	-	1.32	-	6.4	7	-
	11-20	60.1	-	8	7	7.1	0.1	3.6	-	-4.7	20	4	12	-	1	-	-6.1	20	7	3.2	-	2.31	-	7.6	7	-
	21-END	68.7	-	10	9	6.5	1.0	3.8	-	-1.9	25	1	9	-	0	-	-6.0	25	8	2.7	-	1.66	-	6.3	10	-
	MONTH	178.7	170	27	23	7.4	1.5	4.5	-0.6	-4.7	20	7	43	-	1	-	-6.1	20	19	3.8	-	1.76	92	6.7	24	7
Killarney (Muckross House) Co. Kerry	1-10	69.0	-	10	7	10.2	4.2	7.2	-	-0.5	9	1	32	-	3	-	-2.3	9	3	-	-	0.38	-	-	-	-
	11-20	105.1	-	8	8	8.6	0.8	4.7	-	-2.4	20	4	18	-	2	-	-7.3	20	4	-	-	1.32	-	-	-	-
	21-END	125.8	-	11	10	8.3	1.2	4.8	-	-1.2	26	3	18	-	1	-	-3.2	25	8	-	-	0.52	-	-	-	-
	MONTH	299.9	-	29	25	9.0	2.0	5.5	-	-2.4	20	8	67	-	6	-	-7.3	20	15	-	-	0.73	-	-	-	-

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NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JANUARY 1984

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)																BRIGHT SUNSHINE		WIND		
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR								GROUND				SOIL (10cm)				MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	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 4.0°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	57.7	-	10	10	10.5	4.9	7.7	-	1.0	9	0	35	-	3	-	-0.4	9	1	7.1	-	0.51	-	8.1	7	-
	11-20	52.4	-	8	8	9.2	1.6	5.4	-	-2.0	19	2	20	-	2	-	-3.9	20	3	4.9	-	1.63	-	10.0	8	-
	21-END	139.2	-	11	11	8.3	2.3	5.3	-	0.2	25	0	18	-	1	-	-0.5	25	1	4.5	-	0.68	-	8.9	11	-
	MONTH	249.3	155	29	29	9.3	2.9	6.1	-0.9	-2.0	19	2	73	81	6	-	-3.9	20	5	5.4	-0.5	0.93	59	9.0	26	19
Ardfert (Liscahane) Co. Kerry	1-10	53.8	-	9	8	9.8	4.5	7.2	-	0.0	9	0	30	-	2	-	-5.4	9	5	-	-	0.52	-	-	-	-
	11-20	72.1	-	9	8	8.3	0.7	4.5	-	-4.3	19	4	16	-	2	-	-10.6	19	7	-	-	1.92	-	-	-	-
	21-END	77.1	-	11	10	7.9	0.1	4.0	-	N/A	N/A	15	-	1	-	N/A	N/A	-	-	-	-	0.94	-	-	-	-
	MONTH	203.0	-	29	26	8.6	1.7	5.2	-	N/A	N/A	61	-	4	-	N/A	N/A	-	-	-	-	1.12	-	-	-	-
Lullymore Co. Kildare	1-10	48.1	-	7	5	7.6	1.4	4.5	-	-2.5	9	4	14	-	1	-	-7.5	9	6	-	-	1.42	-	5.6	-	-
	11-20	27.8	-	7	5	5.8	-1.8	2.0	-	-8.0	20	8	9	-	1	-	-11.6	20	9	-	-	2.63	-	6.4	-	-
	21-END	46.9	-	9	9	5.6	-0.1	2.8	-	-3.0	25	4	5	-	0	-	-5.5	28	10	-	-	1.35	-	5.5	-	-
	MONTH	122.8	155	23	19	6.3	-0.2	3.1	-	-8.0	20	16	27	-	1	-	-11.6	20	25	-	-	1.79	-	5.8	-	3
Kilkenny Co. Kilkenny	1-10	33.8	-	6	5	8.7	2.6	5.6	-	-3.4	9	1	21	-	1	-	-8.7	9	6	4.8	-	2.00	-	5.0	4	-
	11-20	61.6	-	7	7	7.1	-0.7	3.2	-	-6.1	20	5	12	-	2	-	-13.2	20	9	2.8	-	2.80	-	5.6	7	-
	21-END	57.5	-	9	8	6.7	0.0	3.4	-	-3.1	25	3	7	-	0	-	-9.2	21	10	1.7	-	1.84	-	4.8	6	-
	MONTH	152.9	174	22	20	7.5	0.6	4.0	-0.4	-6.1	20	9	40	74	3	-	-13.2	20	25	3.0	-0.9	2.20	112	5.1	17	8
Mooncoin (Silverspring) Co. Kilkenny	1-10	28.7	-	7	6	9.2	2.3	5.7	-	-3.0	9	1	22	-	2	-	-7.0	9	7	-	-	1.83	-	-	-	-
	11-20	42.7	-	7	7	8.0	-0.3	3.8	-	-5.6	20	5	17	-	3	-	-9.9	20	8	-	-	2.49	-	-	-	-
	21-END	104.0	-	10	9	7.2	-1.6	2.8	-	N/A	N/A	8	-	0	-	N/A	N/A	-	-	-	-	1.84	-	-	-	-
	MONTH	175.4	164	24	22	8.1	0.1	4.1	-	N/A	N/A	47	-	4	-	N/A	N/A	-	-	-	-	2.05	-	-	-	-
Ballinamore Co. Leitrim	1-10	76.4	-	9	8	8.0	1.7	4.9	-	-1.8	9	3	14	-	1	-	-5.2	9	6	-	-	1.15	-	4.9	-	-
	11-20	75.3	-	9	8	5.1	-1.3	1.9	-	-6.8	20	7	7	-	1	-	-11.7	20	8	-	-	1.47	-	4.8	-	-
	21-END	68.1	-	9	8	5.3	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	-	-	-	-	-	1.69	-	3.2	-	-
	MONTH	219.8	202	27	24	6.1	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	-	-	-	-	-	1.45	-	4.3	-	N/A
Ardee (Boharnamoe) Co. Louth	1-10	23.4	-	9	5	8.6	1.7	5.2	-	-1.9	9	2	16	-	1	-	-4.0	9	6	-	-	-	-	-	-	-
	11-20	44.3	-	8	8	N/A	-1.1	N/A	-	-9.3	20	6	N/A	-	N/A	-	-9.6	20	8	-	-	-	-	-	-	-
	21-END	40.8	-	8	6	N/A	-0.6	N/A	-	-3.1	21	7	N/A	-	N/A	-	-4.0	26	9	-	-	-	-	-	-	-
	MONTH	108.5	-	25	19	N/A	0.0	N/A	-	-9.3	20	15	N/A	-	N/A	-	-9.6	20	23	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JANUARY 1984

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)														BRIGHT SUNSHINE		WIND		P.E. (PENMAN) (mm)		
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR							GROUND			SOIL (10cm)				MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	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	67.0	-	10	7	9.2	3.6	6.4	-	0.9	9	0	24	-	1	-	-5.2	9	6	-	-	1.00	-	4.7	-	-
	11-20	103.5	-	8	7	7.1	-0.1	3.5	-	-7.3	20	2	11	-	1	-	-12.4	20	9	-	-	1.72	-	6.7	-	-
	21-END	100.1	-	11	10	6.1	0.0	3.1	-	-5.0	21	3	7	-	0	-	-9.1	21	10	-	-	1.02	-	4.7	-	-
	MONTH	270.6	208	29	24	7.4	1.1	4.3	-	-7.3	20	5	42	-	2	-	-12.4	20	25	-	-	1.24	-	5.4	-	1
Belmullet Co. Mayo	1-10	45.9	-	10	9	9.5	3.8	6.7	-	0.0	2	0	27	-	1	-	-2.1	9	2	6.3	-	0.88	-	9.4	9	-
	11-20	61.1	-	8	7	7.6	1.0	4.3	-	-1.0	20	3	13	-	1	-	-4.0	19	6	4.1	-	1.57	-	10.2	7	-
	21-END	95.9	-	9	9	7.2	1.2	4.2	-	-0.4	25	1	10	-	0	-	-2.0	26	5	3.5	-	1.06	-	7.6	8	-
	MONTH	202.9	181	27	25	8.0	2.0	5.0	-0.8	-1.0	20	4	50	78	2	-	-4.0	19	13	4.6	-0.4	1.17	72	9.0	24	21
Claremorris Co. Mayo	1-10	54.5	-	9	7	8.7	2.7	5.7	-	-0.1	9	1	19	-	1	-	-3.6	9	4	5.0	-	0.98	-	7.1	8	-
	11-20	66.3	-	8	7	6.3	-1.3	2.5	-	-7.5	20	6	10	-	1	-	-10.0	20	8	2.7	-	1.55	-	7.9	7	-
	21-END	76.1	-	9	9	5.6	-0.2	2.7	-	-1.9	25	6	6	-	0	-	-10.4	25	9	1.8	-	1.29	-	6.2	9	-
	MONTH	196.9	174	26	23	6.8	0.4	3.6	-0.6	-7.5	20	13	34	74	2	-	-10.4	25	21	3.1	-0.7	1.27	75	7.0	24	7
Glenamoy Co. Mayo	1-10	77.9	-	10	9	8.8	3.2	6.0	-	-0.3	3	1	21	-	1	-	-0.9	9	3	-	-	0.75	-	6.1	-	-
	11-20	83.3	-	8	8	6.4	0.6	3.5	-	-1.6	20	3	8	-	0	-	-4.4	20	9	-	-	1.36	-	8.0	-	-
	21-END	113.8	-	9	9	6.5	0.4	3.5	-	-1.7	25	3	7	-	0	-	-4.6	25	10	-	-	0.97	-	5.6	-	-
	MONTH	275.0	191	27	26	7.2	1.4	4.3	-	-1.7	25	7	36	-	1	-	-4.6	25	22	-	-	1.03	-	6.6	-	11
Dunsany (Grange) Co. Meath	1-10	28.3	-	9	6	7.5	1.4	4.5	-	-3.2	9	2	13	-	1	-	-7.6	9	5	-	-	1.27	-	-	-	-
	11-20	34.8	-	7	6	5.4	-1.8	1.8	-	-8.9	20	9	8	-	1	-	-12.0	20	9	-	-	2.26	-	-	-	-
	21-END	46.9	-	9	9	5.3	-0.8	2.3	-	-4.7	21	6	4	-	0	-	-6.8	28	10	-	-	1.71	-	-	-	-
	MONTH	110.0	141	25	21	6.0	-0.4	2.8	-	-8.9	20	17	26	-	1	-	-12.0	20	24	-	-	1.75	-	-	-	-
Clones Co. Monaghan	1-10	39.6	-	9	6	7.8	2.0	4.9	-	-1.8	9	2	15	-	1	-	-4.4	9	5	4.9	-	0.81	-	5.1	6	-
	11-20	62.1	-	7	7	5.5	-2.0	1.8	-	-10.0	20	7	8	-	1	-	-15.1	20	8	3.1	-	1.13	-	5.4	7	-
	21-END	35.8	-	8	8	5.1	-0.5	2.3	-	-2.0	25	8	4	-	0	-	-7.4	21	10	2.2	-	1.67	-	4.1	6	-
	MONTH	137.5	154	24	21	6.1	-0.2	3.0	-0.8	-10.0	20	17	27	66	1	-	-15.1	20	23	3.4	-0.1	1.22	73	4.8	19	7
Birr Co. Offaly	1-10	40.0	-	7	4	8.5	2.8	5.7	-	-1.5	9	1	21	-	1	-	-6.2	9	5	4.9	-	1.22	-	6.1	4	-
	11-20	46.8	-	8	7	6.6	-1.3	2.7	-	-7.7	20	6	12	-	1	-	-12.1	20	9	2.6	-	1.76	-	6.3	7	-
	21-END	41.8	-	10	8	6.5	0.5	3.5	-	-1.9	25	3	8	-	0	-	-6.5	25	10	1.9	-	1.55	-	6.1	9	-
	MONTH	128.6	163	25	19	7.2	0.7	3.9	-0.5	-7.7	20	10	40	74	2	-	-12.1	20	24	3.1	-0.9	1.51	85	6.2	20	11

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JANUARY 1984

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)														BRIGHT SUNSHINE		WIND							
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR										GROUND		SOIL (10cm)		MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	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	44.8	-	7	6	8.7	-0.7	4.0	-	-8.2	9	4	17	-	1	-	-13.8	9	9	-	-	-	-	-	-	-	-	-	-
	11-20	67.0	-	8	8	5.0	-2.9	1.0	-	-7.8	15	7	6	-	1	-	-12.6	20	10	-	-	-	-	-	-	-	-	-	-
	21-END	90.6	-	11	9	6.3	-1.1	2.6	-	-6.2	21	4	7	-	0	-	-11.6	25	11	-	-	-	-	-	-	-	-	-	-
	MONTH	202.4	-	26	23	6.7	-1.6	2.5	-	-8.2	9	15	30	-	2	-	-13.8	9	30	-	-	-	-	-	-	-	-	-	-
Dungarvan (Carriglea) Co. Waterford	1-10	30.2	-	7	6	9.2	2.8	6.0	-	-2.8	9	1	23	-	1	-	-3.9	9	3	-	-	1.71	-	3.1	-	-	-	-	-
	11-20	52.6	-	8	7	8.2	-0.1	4.0	-	-5.9	20	6	18	-	3	-	-6.4	20	7	-	-	2.25	-	3.5	-	-	-	-	-
	21-END	107.5	-	10	10	7.7	-0.0	3.9	-	-3.9	25	3	12	-	0	-	-4.6	25	8	-	-	2.25	-	3.7	-	-	-	-	-
	MONTH	190.3	157	25	23	8.4	0.9	4.6	-	-5.9	20	10	53	-	4	-	-6.4	20	18	-	-	2.08	-	3.4	-	-	0	-	-
Mullingar Co. Westmeath	1-10	36.3	-	8	5	7.8	2.3	5.1	-	-1.8	9	2	17	-	1	-	-5.1	9	6	4.3	-	1.35	-	6.4	4	-	-	-	-
	11-20	51.9	-	7	7	5.9	-1.7	2.1	-	-7.1	20	7	9	-	1	-	-10.3	20	9	2.3	-	2.71	-	6.9	7	-	-	-	-
	21-END	34.9	-	10	7	5.4	-0.5	2.5	-	-3.2	25	6	4	-	0	-	-6.0	28	10	1.7	-	1.93	-	6.1	3	-	-	-	-
	MONTH	123.1	132	25	19	6.3	0.0	3.2	-0.7	-7.1	20	15	30	71	2	-	-10.3	20	25	2.8	-0.8	1.99	103	6.4	14	4	-	-	-
J.F.K. Park Co. Wexford	1-10	22.4	-	5	5	8.5	2.4	5.5	-	-1.1	9	2	18	-	0	-	-8.3	9	9	-	-	1.85	-	N/A	-	-	-	-	-
	11-20	33.1	-	7	7	6.3	0.4	3.3	-	-1.8	20	4	9	-	1	-	-9.9	18	9	-	-	2.68	-	N/A	-	-	-	-	-
	21-END	94.3	-	10	9	7.0	-0.0	3.5	-	-2.2	25	5	8	-	0	-	-10.1	25	10	-	-	1.85	-	N/A	-	-	-	-	-
	MONTH	149.8	131	22	21	7.2	0.9	4.1	-	-2.2	25	11	35	-	1	-	-10.1	25	28	-	-	2.12	-	N/A	-	N/A	-	-	-
Clonroche Co. Wexford	1-10	25.4	-	7	6	8.1	2.1	5.1	-	-1.9	9	2	17	-	0	-	-7.6	9	7	-	-	1.96	-	3.3	-	-	-	-	-
	11-20	40.9	-	8	7	6.8	-0.2	3.3	-	-3.1	20	6	11	-	1	-	-10.0	20	9	-	-	2.58	-	3.2	-	-	-	-	-
	21-END	96.4	-	10	10	6.4	-0.4	3.0	-	-3.2	25	5	6	-	0	-	-8.7	25	10	-	-	1.52	-	3.1	-	-	-	-	-
	MONTH	162.7	126	25	23	7.1	0.5	3.8	-	-3.2	25	13	34	-	1	-	-10.0	20	26	-	-	2.00	-	3.2	-	N/A	-	-	-
Johnstown Castle Co. Wexford	1-10	28.9	-	7	7	8.5	2.6	5.6	-	-0.2	9	1	18	-	1	-	-5.2	9	9	-	-	2.19	-	5.3	-	-	-	-	-
	11-20	29.8	-	7	7	7.1	0.5	3.8	-	-2.7	20	4	13	-	1	-	-7.0	20	9	-	-	3.28	-	5.9	-	-	-	-	-
	21-END	64.2	-	9	9	7.2	0.9	4.0	-	-0.9	28	2	9	-	0	-	-6.5	28	10	-	-	2.16	-	6.0	-	-	-	-	-
	MONTH	122.9	107	23	23	7.6	1.3	4.5	-	-2.7	20	7	41	-	1	-	-7.0	20	28	-	-	2.53	-	5.7	-	2	-	-	-
Rosslare Co. Wexford	1-10	17.7	-	8	5	8.9	3.9	6.4	-	0.6	9	0	24	-	1	-	-3.8	9	5	5.5	-	2.03	-	6.7	6	-	-	-	-
	11-20	28.9	-	8	7	7.8	1.3	4.6	-	-0.4	15	2	14	-	1	-	-3.3	18	9	3.7	-	3.37	-	7.6	7	-	-	-	-
	21-END	49.4	-	0	7	7.8	2.2	5.0	-	0.0	25	0	14	-	0	-	-3.4	25	7	3.7	-	1.95	-	7.2	9	-	-	-	-
	MONTH	96.0	93	24	19	8.2	2.5	5.3	-0.9	-0.4	15	2	52	79	2	-	-3.8	9	21	4.3	-1.0	2.43	110	7.2	22	11	-	-	-

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NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL SOLAR RADIATION

STATION	PERIOD	AMOUNT
		Joule/cm <sup>2</sup>
Malin Head Co. Donegal	1-10	1124
	11-20	1754
	21-end	2028
	Month	4906
Dublin Airport Co. Dublin	1-10	2015
	11-20	2917
	21-end	2651
	Month	7583
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	1448
	11-20	2654
	21-end	2361
	Month	6463
Kilkenny Co. Kilkenny	1-10	2165
	11-20	3098
	21-end	3062
	Month	8325
Belmullet Co. Mayo	1-10	1579
	11-20	2292
	21-end	2421
	Month	6292
Clones Co. Monaghan	1-10	1506
	11-20	2358
	21-end	2811
	Month	6675
Birr Co. Offaly	1-10	1922
	11-20	2723
	21-end	3039
	Month	7684

Notes on the tables in January issue

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

STATION	PERIOD	P.E.(mm)	SOIL MOISTURE (mm)		
		Amount	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	-1.6	-	0	2
	11-20	-1.9	-	0	38
	21-end	3.2	-	0	52
	Month	-0.3	-	-	-
Kinsealy Co. Dublin	1-10	12.6	-	0	27
	11-20	7.3	-	0	24
	21-end	7.9	-	0	34
	Month	27.8	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	0.1	-	0	44
	11-20	-7.9	-	0	77
	21-end	25.2	-	0	107
	Month	17.4	-	-	-
Ballinamore Co. Leitrim	1-10	6.9	-	0	61
	11-20	6.3	-	0	68
	21-end	11.3	-	0	57
	Month	25.1	-	-	-
Glenamoy Co. Mayo	1-10	-6.5	-	0	81
	11-20	-0.3	-	0	84
	21-end	-1.1	-	0	93
	Month	-7.9	-	-	-
Johnstown Castle Co. Wexford	1-10	7.7	-	0	23
	11-20	0.4	-	0	28
	21-end	13.3	-	0	51
	Month	21.4	-	-	-

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TABLE 4 SOIL CLIMATE (MULLINGAR)

BARE SOIL TYPE	PERIOD	MEAN (at 100mm)			TEMPERATURE GRADIENT (to 200mm)	SOIL WATER POTENTIAL (hPa) (at depths)	
		Max.	Daily	Min.		75mm	200mm
		Peat	1-10	5.1	4.4	3.7	+1.1
	11-20	3.8	2.9	2.5	-2.9	59	58
	21-end	2.0	1.6	1.2	-1.5	55	62
Mineral	1-10	6.0	4.8	3.6	+0.7	92	55
	11-20	4.3	3.1	2.5	-1.6	82	45
	21-end	3.0	2.3	1.4	-1.1	82	58

AGROMETEOROLOGICAL BULLETIN - NOTES ON TABLES

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 average of the daily maximum and daily minimum temperature 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 (1946-1982). 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 10cm depth under a bare soil surface) over a period is taken as the average of four daily readings (at 0300, 0900, 1500 and 2100 GMT) over the period.
10. Mean daily wind speed over a period ( $\text{ms}^{-1}$ ) 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  $17.4 \text{ ms}^{-1}$  at any time during the day. At other stations, mean daily wind speed is computed from once-daily readings of run-of-the-wind.
11. All wind speeds refer to the wind at 10 metres effective height above the ground 0. 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 and bright sunshine refer to the period 1931 - 1960. Averages of soil temperature refer to the period 1956-1975. Averages of rainfall refer to the period 1941-1970.
13. 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.  
  
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.
14. Soil moisture deficits and surpluses 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. 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.
15. 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.
16. Starting in January 1983, stations at Fermoy (Coolnakilla), Co. Cork, and Dundrum (Knockavilla), Co. Tipperary are included in the bulletin. The former is a hill station (height 210m).
17. \*Starting in January 1984, 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 derived from the average of four daily readings (0300, 0900, 1500 and 2100 G.M.T.) taken at 100mm depth. The temperature gradient is given in °C/100mm, positive values increasing with depth.

\* denotes changes in 1984 notes.