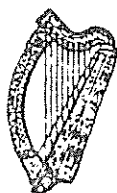


# METEOROLOGICAL SERVICE



## AGROMETEOROLOGICAL BULLETIN

JANUARY 1977

### The Weather during January

The month got off to a cold start. There was sleet and snow in the east and south early on 1st and severe air frost in places on 2nd and 3rd. Southwesterly winds brought mild weather on 4th and 5th. From 6th to 8th it was mostly dry but as winds turned westerly temperatures dropped to about normal. As winds veered from westerly to northerly, between 9th and 12th, there were scattered snow and hail showers and temperatures continued to fall. Air frost was severe in some areas on 12th and early on 13th. On 13th a low pressure area, making its way eastwards near the south coast, gave widespread snow in the east and south. The accompanying strong easterly or northeasterly winds caused drifting in hilly areas. The weather remained cold from 14th to 16th with scattered wintry-type showers. During 17th and 18th temperatures rose gradually as we came under the influence of the Atlantic southerlies. This influence remained dominant until 26th, giving spells of rain with temperatures about normal. On 27th an easterly airflow developed and between 28th and 31st it was cold and frosty with scattered outbreaks of sleet or snow.

Monthly Rainfall amounts ranged from 60% to 85% of normal in most areas. Near the south coast and on parts of the east coast amounts were about normal generally but exceeded 110% of normal in a few places. The heaviest daily rainfall during the month was 38.3 mm (1½ inches) at Cahirciveen on 20th.

Mean Monthly Air Temperatures ranged from 2.4°C to 5.4°C. It was the coldest January since 1963 when air temperatures were some 3.0°C lower. While air temperatures were from 0.6°C to 1.7°C below normal, four inch soil temperatures ranged from 0.5°C to 1.0°C below normal. At Lullymore, Co. Kildare air frost occurred on as many as eighteen days. The lowest air temperature recorded was -9°C at Warrenstown but minima of -6°C were common in inland areas.

Mean Daily Duration of Bright Sunshine was between 75% and 100% of normal generally but ranged from 105% to 115% of normal in the northwest and on parts of the south coast. Totals for the month varied from seventy one hours at Roches Point to less than forty hours in parts of the east.

Strong Winds affected some areas on 4th, 9th, 13th, 20th, 21st and 25th. The range of gusts recorded was from 40 to 55 kts. Malin Head and Rosslare experienced gusts of 61 kts early on 21st.

Summary. January was cold and frosty but rainfall was below normal.

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; marked "e" in Table 2 will be published in the Annual Summary of Solar Radiation.

TABLE 1.

## RAINFALL, TEMPERATURE, SUNSHINE AND WIND

January, 1977.

STATION	PERIOD	RAINFALL				TEMPERATURE										BRIGHT SUNSHINE		WIND			
		Amount	Percentage of Average	No. of Rain Days	No. of Wet Days	AIR					GROUND			SOIL(10cm)		Mean Daily	Percentage of Average	Mean Speed	No. of Days with Gale Gusts		
						Mean Daily	Difference from Average	Lowest Minimum	Day	No. of Days with Air Frost	Degree Days Above 4.4°C	Degree Days Above 10.0°C	Lowest Grass Minimum	Day	No. of Days with Ground Frost					Mean Daily	Difference from Average
Carlow (Oak Park) Co. Carlow	1-10	10.8	-	5	3	3.3	-	-4.2	03	6	7	0	-9.0	03	6	-	-	1.55	-	6	-
	11-20	35.7	-	6	5	1.3	-	-6.2	13	7	1	0	-8.7	17	8	-	-	0.65	-	9	-
	21-end	16.7	-	8	5	4.5	-	-3.3	30	2	12	0	-7.6	30	5	-	-	1.81	-	6	-
	Month	63.2	-	19	13	3.1	-	-6.2	13	15	20	0	-9.0	03	19	-	-	1.35	-	7	-
Shannon Airport e Co. Clare	1-10	15.7	-	5	4	4.1	-	-4.4	02	4	12	0	-10.1	02	6	3.4	-	2.03	-	7	1
	11-20	18.5	-	5	4	2.4	-	-5.2	12	5	5	0	-8.8	16	8	2.2	-	1.27	-	10	2
	21-end	16.3	-	6	4	5.5	-	-4.2	29	2	19	0	-9.2	29	6	4.6	-	1.73	-	8	2
	Month	50.5	53	16	12	4.0	-1.1	-5.2	12	11	36	0	-10.1	02	20	3.4	-0.9	1.68	99	8	5
Fermoy (Moore Park) Co. Cork	1-10	16.0	-	3	3	3.3	-	-5.6	03	5	7	0	-11.4	03	7	-	-	2.21	-	6	-
	11-20	48.2	-	6	5	2.1	-	-4.0	13	7	2	0	-8.0	16	8	-	-	1.46	-	9	-
	21-end	24.1	-	8	7	4.9	-	-3.5	30	2	14	0	-9.8	30	6	-	-	NA	-	5	-
	Month	88.3	-	17	15	3.5	-	-5.6	03	14	23	0	-11.4	03	21	-	-	-	-	7	-
Mallow Co. Cork	1-10	17.1	-	3	3	3.3	-	-4.0	03	6	8	0	-10.8	01	7	-	-	1.37	-	-	-
	11-20	54.9	-	7	5	2.3	-	-3.7	16	6	5	0	-6.2	11	8	-	-	1.34	-	-	-
	21-end	30.4	-	6	6	5.2	-	-2.7	30	3	16	0	-6.6	30	5	-	-	1.56	-	-	-
	Month	102.4	96	16	14	3.7	-	-4.0	03	15	29	0	-10.8	01	20	-	-	1.43	-	-	-
Roche's Point e Co. Cork	1-10	18.3	-	4	4	5.0	-	-1.0	03	2	12	0	-4.6	03	5	4.4	-	2.12	-	13	3
	11-20	57.7	-	6	5	3.9	-	-2.0	12	4	10	0	-3.5	12	8	3.4	-	2.60	-	17	6
	21-end	36.4	-	8	5	6.4	-	0.4	29	0	23	0	-4.4	30	2	5.9	-	2.15	-	11	3
	Month	112.4	113	18	14	5.1	-1.4	-2.0	12	6	45	0	-4.6	03	15	4.6	-0.9	2.28	114	14	12
Glencolumbkille Co. Donegal	1-10	49.1	-	10	9	6.0	-	-0.5	02	2	19	0	-3.3	01	3	-	-	0.67	-	9	-
	11-20	102.1	-	10	7	2.8	-	-4.0	13	4	3	0	-7.2	13	6	-	-	0.78	-	8	-
	21-end	26.8	-	6	5	4.6	-	-4.0	29	3	14	0	-6.5	29	6	-	-	1.69	-	6	-
	Month	178.0	-	26	21	4.5	-	-4.0	29	9	36	0	-7.2	13	15	-	-	1.07	-	8	-
Glenties Co. Donegal	1-10	43.1	-	10	8	4.6	-	-3.5	01	3	11	0	-8.0	02	7	-	-	0.60	-	-	-
	11-20	101.0	-	9	7	1.4	-	-5.0	16	7	2	0	-7.5	16	8	-	-	1.12	-	-	-
	21-end	36.4	-	7	6	3.6	-	-6.5	29	6	9	0	-11.0	29	7	-	-	1.70	-	-	-
	Month	180.5	113	26	21	3.2	-	-6.5	29	16	22	0	-11.0	29	22	-	-	1.16	-	-	-

TABLE 1. (Continued)

## RAINFALL, TEMPERATURE, SUNSHINE AND WIND

January, 1977.

STATION	PERIOD	RAINFALL				TEMPERATURE											BRIGHT SUNSHINE		WIND		
		Amount	Percentage of Average	No. of Rain Days	No. of Wet Days	AIR					GROUND			SOIL (10cm)		Mean Daily	Percentage of Average	Mean Speed	No. of Days with Gale Gusts		
						Mean Daily	Difference from Average	Lowest Minimum	Day	No. of Days with Air Frost	Degree Days Above 4.4°C	Degree Days Above 10.0°C	Lowest	Grass Minimum	Day					No. of Days with Ground Frost	Mean Daily
Malin Head Co. Donegal	1-10	23.9	-	9	7	5.9	-	1.2	03	0	17	0	-1.7	03	3	4.2	-	0.85	-	19	7
	11-20	30.1	-	5	5	3.2	-	-3.5	13	3	0	0	-5.8	13	5	2.3	-	1.13	-	18	8
	21-end	14.4	-	6	4	4.8	-	-2.4	29	3	12	0	-5.3	29	7	3.6	-	2.17	-	14	5
	Month	68.4	64	20	16	4.6	-0.6	-3.5	13	6	29	0	-5.8	13	15	3.4	-	1.41	106	17	20
Dublin Airport Co. Dublin	1-10	13.5	-	4	3	3.7	-	-2.5	02	5	7	0	-4.9	02	6	3.0	-	1.66	-	12	0
	11-20	27.7	-	6	3	1.4	-	-6.9	13	6	3	0	-8.5	17	8	1.4	-	1.38	-	13	3
	21-end	16.0	-	7	3	4.9	-	-1.9	29	3	14	0	-8.7	29	6	3.8	-	2.11	-	10	1
	Month	57.2	81	17	9	3.4	-1.3	-6.9	13	14	24	0	-8.7	29	20	2.8	-0.8	1.73	84	12	4
Kinsealy Co. Dublin	1-10	15.0	-	5	4	3.9	-	-2.4	02	4	6	0				-	-	1.89	-	9	-
	11-20	35.0	-	6	5	1.7	-	-6.9	13	6	1	0	NA	NA		-	-	1.34	-	11	-
	21-end	13.2	-	7	2	4.5	-	-2.9	29	2	11	0				-	-	2.01	-	7	-
	Month	63.2	-	18	11	3.4	-	-6.9	13	12	18	0				-	-	1.75	-	9	-
Lucan (U.C.D. Field Stn.) Co. Dublin	1-10	7.0	-	5	2	3.8	-	-6.4	03	4	8	0	-7.6	02	6	-	-	1.68	-	7	-
	11-20	27.3	-	6	6	NA	-	NA	NA	NA	NA	NA	NA	NA	NA	-	-	0.41	-	9	-
	21-end	25.9	-	8	5	4.1	-	-5.9	29	4	11	0	-10.1	29	8	-	-	1.74	-	6	-
	Month	60.2	-	19	13	-	-	-	-	-	-	-	-	-	-	-	-	1.29	-	7	-
Galway (Univ. Coll.) Co. Galway	1-10	13.7	-	4	3	5.0	-	-2.4	02	2	12	0	-11.0	02	6	-	-	2.59	-		
	11-20	42.9	-	5	3	2.6	-	-4.2	13	6	4	0	-12.8	12	8	-	-	1.65	-	NA	-
	21-end	29.0	-	7	4	4.9	-	-3.6	29	3	16	0	-13.5	29	7	-	-	1.59	-		
	Month	85.6	-	16	10	4.2	-	-4.2	13	11	32	0	-13.5	29	21	-	-	1.93	-		
Killarney (Nuckross Hse) Co. Kerry	1-10	31.2	-	8	4	4.2	-	-5.2	02	3	11	0	-10.2	02	6	-	-	0.80	-		
	11-20	94.8	-	10	8	3.0	-	-3.5	13	6	6	0	-5.6	11	8	-	-	0.44	-		
	21-end	44.7	-	7	6	5.5	-	-2.7	29	2	18	0	-8.9	29	4	-	-	1.39	-		
	Month	170.7	-	25	18	4.3	-	-5.2	02	11	35	0	-10.2	02	18	-	-	0.89	-		
Cahiriveen (Valentia Obsy.) Co. Kerry	1-10	42.8	-	7	5	5.2	-	-4.0	02	2	14	0	-5.6	02	4	4.8	-	1.35	-	11	3
	11-20	90.5	-	9	9	4.2	-	-1.3	16	3	11	0	-3.5	12	4	3.8	-	1.08	-	13	6
	21-end	39.8	-	9	7	6.5	-	-1.2	29	1	25	0	-4.1	29	3	5.8	-	1.75	-	10	3
	Month	173.1	105	25	21	5.3	-1.7	-4.0	02	6	50	0	-5.6	02	11	4.8	-0.8	1.41	89	11	12

TABLE 1. (Continued)

## RAINFALL, TEMPERATURE, SUNSHINE AND WIND

January, 1977

STATION	PERIOD	RAINFALL				TEMPERATURE										BRIGHT SUNSHINE		WIND			
		Amount	Percentage of Average	No. of Rain Days	No. of Wet Days	AIR					GROUND			SOIL(10cm)		Mean Daily	Percentage of Average	Mean Speed	No. of Days with Gale Gusts		
						Mean Daily	Difference from Average	Lowest Minimum	Day	No. of Days with Air Frost	Degree Days Above 4.4°C	Degree Days Above 10.0°C	Lowest Grass Minimum	Day	No. of Days with Ground Frost					Mean Daily	Difference from Average
mm	%	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	Hr	%	Kt					
Tralee (Caherweesheen) Co. Kerry	1-10	33.0	-	5	3	4.0	-	-5.5	02	6	12	0	-10.8	02	7	-	-	1.38	-	-	-
	11-20	66.5	-	10	8	2.5	-	-4.0	12	7	5	0	-6.7	11	8	-	-	1.08	-	-	-
	21-end	32.4	-	7	5	5.1	-	-3.5	29	3	17	0	-10.3	29	7	-	-	1.35	-	-	-
	Month	131.9	-	22	16	3.9	-	-5.5	02	16	34	0	-10.8	02	22	-	-	1.27	-	-	-
Lullymore Co. Kildare	1-10	12.9	-	5	4	2.8	-	-4.0	03	7	4	0	-10.9	03	7	-	-	1.69	-	8	-
	11-20	29.7	-	5	5	0.6	-	-7.0	13	8	1	0	-10.1	12	9	-	-	0.42	-	11	-
	21-end	22.0	-	6	4	3.6	-	-5.4	29	3	6	0	-11.4	29	7	-	-	1.49	-	9	-
	Month	64.6	-	16	13	2.4	-	-7.0	13	18	11	0	-11.4	29	23	-	-	1.21	-	9	-
Kilkenny e Co. Kilkenny	1-10	6.5	-	5	2	3.1	-	-6.9	03	5	8	0	-10.0	03	5	2.3	-	1.65	-	5	0
	11-20	29.7	-	5	5	1.5	-	-5.6	13	7	4	0	-7.4	16	7	1.5	-	1.21	-	8	4
	21-end	26.3	-	7	5	4.1	-	-5.4	30	4	10	0	-9.6	30	5	3.9	-	1.73	-	5	1
	Month	62.5	69	17	12	2.9	-1.5	-6.9	03	16	22	0	-10.0	03	17	2.6	-0.9	1.54	79	6	5
Mooncoin (Silverspring) Co. Kilkenny	1-10	8.8	-	4	3	3.4	-	-6.5	03	6	8	0	-9.5	03	7	-	-	1.54	-	-	-
	11-20	56.6	-	7	6	2.0	-	-5.4	13	7	2	0	-9.9	13	9	-	-	1.80	-	-	-
	21-end	35.2	-	7	7	5.1	-	-5.3	30	2	15	0	-8.5	30	7	-	-	1.76	-	-	-
	Month	100.6	-	18	16	3.5	-	-6.5	03	15	25	0	-9.9	13	23	-	-	1.70	-	-	-
Ballinamore Co. Leitrim	1-10	26.2	-	6	4	3.3	-	-5.3	03	5	5	0	-8.9	02	8	-	-	2.21	-	6	-
	11-20	41.1	-	5	5	1.5	-	-5.3	17	7	0	0	-9.0	17	10	-	-	1.23	-	7	-
	21-end	15.5	-	5	3	3.0	-	-6.9	29	4	5	0	-11.7	29	9	-	-	1.55	-	5	-
	Month	82.8	-	16	12	2.6	-	-6.9	29	16	10	0	-11.7	29	27	-	-	1.66	-	6	-
Ardee (Beharnamos) Co. Louth	1-10	11.9	-	5	3	3.1	-	-6.2	03	5	6	0	-9.9	02	8	-	-	-	-	-	-
	11-20	42.1	-	8	6	1.1	-	-6.9	12	7	2	0	-9.2	17	9	-	-	-	-	-	-
	21-end	N.A.	-	N.A.	N.A.	N.A.	-	N.A.	NA	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-
	Month	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ballinrobe (Creagh) Co. Mayo	1-10	23.6	-	5	5	4.8	-	-6.8	02	3	14	0	-8.9	02	7	-	-	1.77	-	6	-
	11-20	78.6	-	8	6	0.9	-	-8.2	13	6	2	0	-9.7	16	9	-	-	0.56	-	6	-
	21-end	29.4	-	6	6	4.3	-	-6.6	29	3	10	0	-9.6	31	9	-	-	1.31	-	6	-
	Month	131.6	-	19	17	3.3	-	-8.2	13	12	26	0	-9.7	16	25	-	-	1.22	-	6	-

See January issue of Bulletin for explanatory notes on the tables.

TABLE 1. (Continued)

## RAINFALL, TEMPERATURE, SUNSHINE AND WIND

January, 1977

STATION	PERIOD	RAINFALL				TEMPERATURE											BRIGHT SUNSHINE		WIND		
		Amount	Percentage of Average	No. of Rain Days	No. of Wet Days	AIR					GROUND			SOIL (10cm)		Hrs Daily	Percentage of Average	Mean Speed	No. of Days with Gale Gusts		
						Mean Daily	Difference from Average	Lowest Minimum	Day	No. of Days with Air Frost	Degree Days Above 4.4°C	Degree Days Above 10.0°C	Lowest Grass Minimum	Day	No. of Days with Ground Frost					Mean Daily	Difference from Average
mm	%			°C	°C	°C				°C			°C	°C	Hr	%	Kt				
Belmullet Co. Mayo	1-10	27.7	-	6	6	6.3	-	1.3	02	0	21	0	-1.1	02	1	4.9	-	1.63	-	15	5
	11-20	63.7	-	7	6	3.5	-	-3.4	13	3	6	0	-5.3	16	5	2.9	-	1.31	-	12	4
	21-end	17.7	-	6	5	5.1	-	-4.9	29	3	17	0	-8.0	29	3	4.5	-	2.43	-	9	2
	Month	109.1	84	19	17	4.9	-0.9	-4.9	29	6	44	0	-8.0	29	9	4.1	-0.6	1.81	112	12	11
Claremorris Co. Mayo	1-10	14.6	-	8	5	3.3	-	-7.8	02	3	5	0	-13.6	02	6	3.1	-	2.06	-	7	3
	11-20	56.1	-	7	6	1.3	-	-5.9	12	7	3	0	-8.7	12	8	1.7	-	0.91	-	8	1
	21-end	20.5	-	6	3	3.8	-	-6.1	29	5	8	0	-7.3	31	5	3.4	-	1.85	-	7	1
	Month	91.2	75	21	14	2.8	-1.4	-7.8	02	15	16	0	-13.6	02	19	2.8	-0.6	1.61	95	7	5
Glennamy Co. Mayo	1-10	47.6	-	9	5	5.1	-	-2.0	02	3	13	0	-3.5	02	3	-	-	1.25	-	-	-
	11-20	78.6	-	9	7	2.7	-	-4.8	13	5	3	0	-6.2	13	8	-	-	1.34	-	NA	-
	21-end	21.5	-	6	5	4.3	-	-6.5	29	4	12	0	-8.6	29	5	-	-	2.62	-	-	-
	Month	147.7	-	24	17	4.0	-	-6.5	29	12	28	0	-8.6	29	16	-	-	1.76	-	-	-
Dunsany (Grange) Co. Meath	1-10	11.4	-	5	3	2.5	-	-5.0	02	6	4	0	-11.7	02	8	-	-	1.82	-	-	-
	11-20	25.9	-	6	6	0.2	-	-9.0	13	7	0	0	-13.0	14	10	-	-	0.31	-	NA	-
	21-end	33.7	-	5	3	3.4	-	-6.5	29	2	7	0	-14.0	29	9	-	-	1.52	-	-	-
	Month	71.0	-	16	12	2.0	-	-9.0	13	15	11	0	-14.0	29	27	-	-	1.23	-	-	-
Clones Co. Monaghan	1-10	18.4	-	5	5	3.3	-	-3.5	03	3	5	0	-7.4	03	6	3.1	-	2.14	-	8	1
	11-20	27.7	-	5	4	1.3	-	-5.0	12	6	1	0	-9.2	12	7	1.8	-	1.08	-	10	4
	21-end	26.6	-	4	3	3.0	-	-6.6	29	5	7	0	-10.1	29	6	2.9	-	1.44	-	9	3
	Month	72.7	79	14	12	2.5	-1.3	-6.6	29	14	13	0	-10.1	29	19	2.6	-0.4	1.55	92	9	8
Birr Co. Offaly	1-10	11.6	-	5	4	3.5	-	-4.5	02	5	7	0	-8.4	02	7	2.8	-	2.00	-	7	0
	11-20	19.6	-	5	3	1.4	-	-7.3	13	6	4	0	-8.8	13	8	1.8	-	1.24	-	10	4
	21-end	19.4	-	5	4	4.5	-	-5.5	29	3	13	0	-10.2	29	7	3.9	-	1.91	-	8	3
	Month	50.6	60	15	11	3.2	-1.2	-7.3	13	14	24	0	-10.2	29	22	2.9	-0.7	1.72	97	8	7
Thurles Co. Tipperary	1-10	16.5	-	6	3		-														
	11-20	36.5	-	7	6		-														
	21-end	28.2	-	7	5		-														
	Month	81.2	81	20	14		-														

NOT AVAILABLE

TABLE 1. (Continued)

## RAINFALL, TEMPERATURE, SUNSHINE and WIND

January, 1977.

STATION	PERIOD	RAINFALL				TEMPERATURE										BRIGHT SUNSHINE		WIND			
		Amount	Percentage of Average	No. of Rain Days	No. of Wet Days	AIR					GROUND			SOIL (10 cm)		Mean Daily	Percentage of Average	Mean Speed	No. of Days with Gale Gusts		
						Mean Daily	Difference from Average	Lowest Minimum	Day	No. of Days with Air Frost	Degree Days Above 4.4°C	Degree Days Above 10.0°C	Lowest Grass Minimum	Day	No. of Days with Ground Frost					Mean Daily	Difference from Average
mm	%	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	Hr	%	Kt					
Dungarvan (Ballygagin) Co. Waterford	1-10	16.4	-	4	3	3.8	-	-4.7	03	5	9	0	-10.0	03	8	-	-	1.97	-	4	-
	11-20	67.4	-	5	5	NA	-	NA	NA	NA	NA	NA	NA	NA	NA	-	-	NA	-	6	-
	21-end	40.1	-	8	7	5.8	-	-3.3	30	2	21	0	-9.0	30	8	-	-	1.83	-	4	-
	Month	123.9	-	17	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-
Mullingar e Co. Westmeath	1-10	14.6	-	5	3	3.0	-	-4.4	03	4	4	0	-9.3	03	6	2.6	-	2.15	-	8	0
	11-20	23.4	-	5	4	0.8	-	-6.8	12	8	3	0	-9.7	12	8	1.2	-	0.56	-	9	3
	21-end	37.4	-	7	4	3.5	-	-5.1	29	3	5	0	-10.3	29	9	3.2	-	1.72	-	8	2
	Month	75.4	83	17	11	2.4	-1.5	-6.8	12	15	12	0	-10.3	29	23	2.3	-0.9	1.46	77	8	5
Campile (Ballysop) Co. Wexford	1-10	8.4	-	4	4	3.5	-	-3.4	04	4	6	0	-9.1	03	8	-	-	1.79	-	-	-
	11-20	65.9	-	8	7	1.9	-	-7.5	13	5	2	0	-11.1	13	9	-	-	1.72	-	NA	-
	21-end	47.8	-	8	8	5.4	-	-2.0	30	2	17	0	-8.2	30	5	-	-	1.52	-	-	-
	Month	122.1	-	20	19	3.7	-	-7.5	13	11	25	0	-11.1	13	22	-	-	1.67	-	-	-
Clonroche Co. Wexford	1-10	12.2	-	4	3	3.2	-	-3.6	03	7	6	0	-9.3	03	8	-	-	1.80	-	5	-
	11-20	51.1	-	6	6	0.9	-	-8.3	13	7	1	0	-12.9	13	8	-	-	1.46	-	7	-
	21-end	55.0	-	8	8	4.6	-	-4.4	30	2	11	0	-9.8	30	7	-	-	1.40	-	4	-
	Month	118.3	-	18	17	3.0	-	-8.3	13	16	18	0	-12.9	13	23	-	-	1.55	-	5	-
Jehnstown Castle Co. Wexford	1-10	14.0	-	5	2	4.1	-	-1.8	02	2	7	0	-8.2	03	8	-	-	2.18	-	8	-
	11-20	49.9	-	6	5	2.3	-	-5.6	13	5	3	0	-10.2	13	9	-	-	2.44	-	9	-
	21-end	45.3	-	9	8	5.6	-	-2.4	30	1	18	0	-10.5	30	6	-	-	1.42	-	6	-
	Month	109.2	91	20	15	4.1	-	-5.6	13	8	28	0	-10.5	30	23	-	-	1.99	-	8	-
Rosslare e Co. Wexford	1-10	12.4	-	7	2	4.8	-	0.0	02	0	9	0	-4.2	03	4	3.7	-	1.91	-	12	2
	11-20	42.5	-	5	5	3.2	-	-2.0	12	4	7	0	-4.8	17	6	2.5	-	2.41	-	15	6
	21-end	35.8	-	9	8	6.3	-	-0.4	30	1	25	0	-8.7	30	1	5.4	-	1.45	-	11	3
	Month	90.7	90	21	15	4.8	-1.4	-2.0	12	5	41	0	-8.7	30	11	3.9	-1.0	1.91	86	13	11

TABLE 2.

## SOLAR RADIATION (GLOBAL), POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE

January, 1977.

STATION	PERIOD	SOLAR RADIATION	P.E.	SOIL MOISTURE		
		Amount	Amount	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	-	0	-	0	11
	11-20	-	7	-	0	28
	21-end	-	-5	-	0	22
	Month	-	2	-	-	-
Kinsale* Co. Dublin	1-10	2182	3	-	0	12
	11-20	1971	3	-	0	32
	21-end	2926	2	-	0	11
	Month	7079	8	-	-	-
Cahiriveen e (Valentia Obsy.) Co. Kerry	1-10	2010	-8	-	0	49
	11-20	2156	11	-	0	68
	21-end	3396	-11	-	-	61
	Month	7562	-8	-	-	-
Kilkenny e Co. Kilkenny	1-10	2269	-	-	-	-
	11-20	2079	-	-	-	-
	21-end	3226	-	-	-	-
	Month	7574	-	-	-	-
Ballinamore Co. Leitrim	1-10		1	-	0	26
	11-20		5	-	0	37
	21-end	NA	-4	-	-	20
	Month		2	-	-	-
Glenamoy Co. Mayo	1-10	-	1	-	0	46
	11-20	-	0	-	0	79
	21-end	-	0	-	0	21
	Month	-	1	-	-	-
Birr e Co. Offaly	1-10	2519	-	-	-	-
	11-20	2214	-	-	-	-
	21-end	3303	-	-	-	-
	Month	8036	-	-	-	-
Johnstown Castle Co. Wexford	1-10	-	-5	-	0	19
	11-20	-	9	-	0	41
	21-end	-	3	-	0	43
	Month	-	7	-	-	-

See January issue of Bulletin for explanatory notes on the tables. \*Solar Radiation Values from Dublin Airport.

AGROMETEOROLOGICAL BULLETIN - NOTES

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 0.2 mm and 1.0 mm 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. For a given daily mean temperature of  $T^{\circ}\text{C}$  (See 3) the degree day total (DD) above the base temperature ( $B^{\circ}\text{C}$ ) is given by  $DD = (T - B)^{\circ}\text{C days}$  when  $T$  is greater than  $B$ . If  $T$  is less than  $B$  then  $DD = 0$  for that day.
5. Days with air frost are those during which the minimum air temperature is below  $0.0^{\circ}\text{C}$ .
6. "Ground" temperatures refer to temperatures measured with a thermometer placed horizontally on pegs just above the tips of short grass.
7. Days with ground frost are those during which the minimum "ground" temperature is below  $0.0^{\circ}\text{C}$ .
8. The mean daily soil temperature (at 10 cm depth) over a period is taken as the average of four daily readings (at 0300, 0900, 1500 and 2100 G.M.T.) over the period at stations marked "e" in the Tables.
9. Mean daily wind speed over a period is taken as the average of hourly values during the period at stations marked "e". At other stations, mean daily wind speed is computed from once-daily readings of run-of-the-wind.  
  
All wind speeds refer to the wind at 10 metres effective height above the ground; where measurements are made at other heights the wind speed readings are corrected to a height of 10 metres.
10. Days with gale-gusts are those (at stations marked "e") during which the wind speed exceeded 33 knots at any time during the day.
11. Potential evapotranspiration (P.E.) values given in Table 2 are those measured by means of soil-filled tanks sunk into the ground with their upper, grass-covered ends at surface level.
12. 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. Mem. 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.
13. Deviations of monthly values of rainfall, air temperature, 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. The averages of rainfall, air temperature and bright sunshine refer to the period 1931-1960; averages of soil temperature refer to the period 1954-1968.
14. 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, 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.