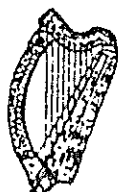


# eDeposit Ireland

## The Weather of June 1984

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# METEOROLOGICAL SERVICE



## AGROMETEOROLOGICAL BULLETIN

JUNE 1984

### The Weather of June

After the sunny and dry weather of May, an unsettled spell set in during the first week of June and troughs became slow moving over the country. Occluded troughs, lying northeast/southwest gave heavy rain in the extreme south on the 2nd and widespread spells of heavy rain on the 3rd, 5th and 6th. Pressure rose slowly over the following days and the weather became dry, sunny and warm with a light northeasterly airflow.

High pressure was established by the 10th but as it declined a moderate southwesterly airflow set in on the 11th and 12th. Warm and close conditions, and embedded frontal waves, affected the country over the following week. There were long periods of humid weather in all areas. The south and southeast were least affected by these humid conditions and continued to receive most sunshine. Drizzle and rain affected many areas on the 14th and 15th from a slow moving front lying across the country. Although high pressure again drifted towards Ireland, and centred over the country on 15th, the weather remained mostly cloudy and close until the 20th.

Fresher conditions set in, following the passage of weak fronts on the 20th, and the weather became a little changeable over the following days with spells of light rain or drizzle at times and northwest winds. By the 25th the high was again developing northeastwards over the country from the Azores, and apart from a weak frontal trough on the 27th, it dominated weather conditions to the end of the month.

Monthly Amounts of Precipitation were below normal almost everywhere and well below in the south-midlands and southeast. Amounts varied from 14% at Dungarvan (where 64mm fell on the 2nd) to 19% at Rosslare. The wettest spells occurred from 1st to 6th, 12th and 13th and to a lesser extent on 21st/22nd; little rain occurred in the south and southeast after the 6th. Soil moisture deficits at the end of the month varied in the range 80 to over 100mm in the midlands, east and south, and 50 to 70mm in most of the north and west. Values during the last ten days were particularly restrictive of growth, apart from extreme coastal areas of the west and northwest.

Mean Monthly Air Temperatures were mostly above normal except in the extreme west and north. Maximum departure from normal, 1.3°C occurred at Rosslare. The degree-day totals were also above normal except in the west and north. Ground frost occurred on 1st/2nd and again in some areas on 28th-30th.

Mean Duration of Bright Sunshine varied from 38% of normal at Belmullet to 108% at Rosslare and Roches Point. Conditions were exceptionally dull in the west and north.

Strong Winds with gale gusts were widespread on 12th/13th, and 21st to 23rd.

Summary Very dry and warm; dull in most areas except in the south and east, and it was very dull in the west and north.

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

JUNE 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
Carlow (Oak Park) Co. Carlow	1-10	19.7	-	5	5	17.0	6.4	11.7	-	0.8	2	0	74	-	28	-	-2.0	2	2	-	-	6.69	-	0.4	-	-
	11-20	0.4	-	1	0	20.4	12.5	16.5	-	9.0	11	0	121	-	65	-	6.5	11	0	-	-	2.09	-	0.4	-	-
	21-END	0.3	-	1	0	18.3	9.4	13.9	-	5.0	29	0	95	-	42	-	0.5	29	0	-	-	5.45	-	-0.8	-	-
	MONTH	20.4	42	7	5	18.6	9.5	14.0	-	0.8	2	0	290	-	135	-	-2.0	2	2	-	-	4.74	-	0.0	-	69
Shannon Airport Co. Clare	1-10	27.5	-	7	5	17.0	8.7	12.9	-	5.3	2	0	85	-	33	-	1.8	2	0	13.7	-	4.53	-	4.5	0	-
	11-20	3.2	-	2	1	18.5	13.1	15.8	-	11.8	12	0	114	-	58	-	10.0	12	0	16.9	-	1.82	-	4.0	2	-
	21-END	2.7	-	3	1	18.0	11.1	14.5	-	8.0	30	0	101	-	46	-	4.0	30	0	17.0	-	4.31	-	6.1	3	-
	MONTH	33.4	57	12	7	17.8	11.0	14.4	+0.3	5.3	2	0	300	103	137	105	1.8	2	0	15.8	-0.7	3.55	63	4.9	5	82
Fermoy (Coolnakilla) Co. Cork	1-10	55.5	-	7	5	15.4	6.7	11.0	-	2.9	1	0	67	-	22	-	-2.2	1	1	-	-	5.32	-	4.1	-	-
	11-20	1.2	-	2	1	N/A	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	-	N/A	N/A	-	-	N/A	-	4.0	-	-
	21-END	2.3	-	2	1	17.2	8.8	13.0	-	5.8	30	0	86	-	34	-	1.8	29	0	-	-	5.04	-	6.6	-	-
	MONTH	59.0	-	11	7	N/A	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	-	N/A	N/A	-	-	N/A	-	4.8	-	N/A
Fermoy (Moore Park) Co. Cork	1-10	50.1	-	5	5	16.4	7.4	11.9	-	2.8	1	0	75	-	27	-	-2.5	2	2	-	-	N/A	-	2.7	-	-
	11-20	0.2	-	1	0	19.9	12.8	16.4	-	10.0	20	0	120	-	64	-	5.0	20	0	-	-	3.52	-	3.0	-	-
	21-END	1.5	-	2	1	18.6	10.0	14.3	-	5.0	29	0	99	-	46	-	-1.1	30	2	-	-	5.31	-	4.0	-	-
	MONTH	51.8	94	8	6	18.3	10.1	14.2	-	2.8	1	0	294	-	137	-	-2.5	2	4	-	-	N/A	-	3.2	-	N/A
Mallow Co. Cork	1-10	36.1	-	8	5	16.8	6.8	11.8	-	2.0	1	0	75	-	28	-	N/A	N/A	-	-	-	4.54	-	-	-	-
	11-20	0.1	-	0	0	20.1	12.1	16.1	-	9.5	20	0	117	-	61	-	7.5	20	0	-	-	2.74	-	-	-	-
	21-END	3.7	-	4	2	18.3	9.8	14.0	-	5.5	29	0	96	-	43	-	1.0	29	0	-	-	4.60	-	-	-	-
	MONTH	39.9	74	12	7	18.4	9.6	14.0	-	2.0	1	0	287	-	132	-	N/A	N/A	-	-	-	3.96	-	-	-	-
Roches Point Co. Cork	1-10	39.2	-	5	5	15.7	9.2	12.5	-	7.0	1	0	81	-	28	-	3.8	5	0	13.8	-	7.07	-	6.0	3	-
	11-20	0.3	-	1	0	18.2	13.0	15.6	-	11.8	16	0	112	-	56	-	8.8	16	0	17.8	-	4.80	-	4.9	0	-
	21-END	0.0	-	0	0	19.1	11.2	15.2	-	8.7	29	0	108	-	52	-	5.9	29	0	17.9	-	8.87	-	8.3	3	-
	MONTH	39.5	79	6	5	17.7	11.1	14.4	+0.8	7.0	1	0	300	110	136	126	3.8	5	0	16.5	+0.5	6.91	108	6.4	6	112
Glencolumbkille Co. Donegal	1-10	16.0	-	5	3	16.5	9.1	12.8	-	7.0	3	0	84	-	31	-	1.0	2	0	-	-	7.20	-	2.6	-	-
	11-20	49.4	-	7	6	16.1	11.5	13.8	-	9.5	13	0	94	-	38	-	4.5	16	0	-	-	0.74	-	3.0	-	-
	21-END	27.6	-	9	4	13.8	10.0	11.9	-	8.6	21	0	75	-	20	-	5.2	28	0	-	-	N/A	-	5.0	-	-
	MONTH	93.0	-	21	13	15.5	10.2	12.8	-	7.0	3	0	252	-	88	-	1.0	2	0	-	-	N/A	-	3.5	-	N/A

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JUNE 1984

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)														BRIGHT SUNSHINE		WIND				
		AMOUNT	% OF AVERAGE	RAIN DAYS		AIR					GROUND				SOIL (10cm)		MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	DAYS WITH GALE GUSTS	P.E. (PENMAN) (mm)					
				WET	DAYS	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	-	-	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	-	-	-	-	-	-
	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	-	-	-	-	-	-
	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	-	-	-	-	-	-
Malin Head Co. Donegal	1-10	11.7	-	4	4	14.0	9.3	11.7	-	5.5	2	0	73	-	20	-	1.9	4	0	15.6	-	6.07	-	5.0	1	-
	11-20	24.9	-	6	4	15.7	11.6	13.7	-	10.3	14	0	93	-	37	-	10.0	11	0	16.2	-	1.92	-	5.9	2	-
	21-END	22.9	-	8	4	13.6	10.7	12.2	-	9.4	21	0	78	-	22	-	6.2	28	0	14.0	-	1.84	-	9.3	6	-
	MONTH	59.5	84	18	12	14.5	10.5	12.5	-0.1	5.5	2	0	243	99	78	93	1.9	4	0	15.3	+0.2	3.28	54	6.7	9	70
Casement Aerodrome Co. Dublin	1-10	28.2	-	5	5	17.5	7.6	12.6	-	3.4	2	0	82	-	32	-	-0.6	2	1	14.7	-	7.39	-	3.8	0	-
	11-20	5.0	-	3	2	19.9	12.7	16.3	-	8.7	11	0	119	-	63	-	4.6	11	0	17.2	-	1.74	-	4.5	2	-
	21-END	3.0	-	3	1	18.0	8.9	13.5	-	4.2	30	0	91	-	39	-	0.1	30	0	16.0	-	5.08	-	6.1	3	-
	MONTH	36.2	74	11	8	18.5	9.7	14.1	+0.8	3.4	2	0	292	109	135	118	-0.6	2	1	16.0	-	4.74	76	4.8	5	86
Dublin Airport Co. Dublin	1-10	30.7	-	5	5	16.8	9.1	13.0	-	5.7	2	0	86	-	33	-	2.3	2	0	16.0	-	8.36	-	3.5	0	-
	11-20	4.1	-	4	2	19.6	13.0	16.3	-	9.6	11	0	119	-	63	-	8.2	11	0	18.2	-	2.61	-	3.5	1	-
	21-END	3.3	-	3	1	18.1	9.8	14.0	-	6.3	29	0	96	-	43	-	4.8	29	0	17.6	-	6.94	-	5.8	3	-
	MONTH	38.1	72	12	8	18.2	10.6	14.4	+0.9	5.7	2	0	300	109	138	120	2.3	2	0	17.3	+0.7	5.97	93	4.3	4	97
Kinsealy Co. Dublin	1-10	28.4	-	4	3	16.7	8.2	12.4	-	1.8	2	0	81	-	31	-	-2.3	2	1	-	-	8.59	-	3.2	-	-
	11-20	3.7	-	1	1	19.4	12.1	15.8	-	7.0	11	0	114	-	59	-	4.5	11	0	-	-	2.14	-	3.0	-	-
	21-END	4.2	-	3	2	18.3	9.3	13.8	-	5.5	29	0	94	-	42	-	3.0	30	0	-	-	6.05	-	4.7	-	-
	MONTH	36.3	71	8	6	18.2	9.8	14.0	-	1.8	2	0	289	-	131	-	-2.3	2	1	-	-	5.59	-	3.6	-	88
Galway Co. Galway	1-10	35.0	-	7	4	16.3	7.8	12.0	-	3.0	2	0	77	-	27	-	0.0	2	0	14.2	-	4.76	-	4.2	1	-
	11-20	19.6	-	4	3	16.7	12.6	14.6	-	11.4	15	0	102	-	46	-	8.8	16	0	16.5	-	2.66	-	5.1	2	-
	21-END	4.6	-	1	1	17.5	10.6	14.1	-	7.7	23	0	97	-	42	-	4.5	23	0	17.0	-	5.23	-	6.0	3	-
	MONTH	59.2	81	12	8	16.9	10.3	13.6	+0.2	3.0	2	0	276	-	115	-	0.0	2	0	15.9	-	4.22	72	5.1	6	78
Killarney (Muckross House) Co. Kerry	1-10	36.1	-	5	4	16.0	8.2	12.1	-	4.9	5	0	77	-	27	-	0.3	2	0	-	-	3.49	-	-	-	-
	11-20	1.4	-	2	1	18.8	13.1	15.9	-	11.2	11	0	115	-	59	-	9.1	20	0	-	-	2.10	-	-	-	-
	21-END	3.1	-	3	2	17.8	10.6	14.2	-	7.4	28	0	98	-	43	-	1.5	28	0	-	-	2.85	-	-	-	-
	MONTH	40.6	56	10	7	17.5	10.6	14.1	-	4.9	5	0	290	-	130	-	0.3	2	0	-	-	2.81	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JUNE 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
Cahiriveen (Valentia Obsy.) Co. Kerry	1-10	39.5	-	5	4	15.1	8.5	11.8	-	5.7	1	0	74	-	24	-	2.0	1	0	14.5	-	3.34	-	3.8	1	-
	11-20	1.5	-	2	1	17.0	12.3	14.6	-	11.2	11	0	102	-	46	-	10.0	20	0	17.8	-	2.62	-	3.8	0	-
	21-END	1.4	-	2	0	16.5	10.8	13.6	-	8.7	30	0	92	-	37	-	4.4	30	0	17.9	-	5.82	-	5.3	1	-
	MONTH	42.4	56	9	5	16.2	10.5	13.4	-0.1	5.7	1	0	269	100	107	99	2.0	1	0	16.7	+0.5	3.93	72	4.3	2	69
Ardfert (Liscahane) Co. Kerry	1-10	17.2	-	5	4	15.4	7.4	11.4	-	3.4	5	0	70	-	23	-	0.1	5	0	-	-	3.69	-	-	-	-
	11-20	2.7	-	3	1	18.0	12.0	15.0	-	9.5	20	0	106	-	50	-	5.8	20	0	-	-	2.91	-	-	-	-
	21-END	6.6	-	4	2	16.4	9.7	13.1	-	3.7	28	0	87	-	33	-	-0.9	28	1	-	-	3.40	-	-	-	-
	MONTH	26.5	-	12	7	16.6	9.7	13.1	-	3.4	5	0	262	-	106	-	-0.9	28	1	-	-	3.33	-	-	-	-
Lullymore Co. Kildare	1-10	52.2	-	5	5	17.6	6.2	11.9	-	1.4	2	0	76	-	30	-	-3.6	2	2	-	-	7.03	-	2.8	-	-
	11-20	6.2	-	4	2	19.5	11.3	15.4	-	7.8	11	0	110	-	55	-	1.5	11	0	-	-	2.08	-	3.3	-	-
	21-END	4.2	-	3	3	18.4	8.0	13.2	-	2.7	30	0	89	-	38	-	-5.0	30	3	-	-	4.89	-	-9.6	-	-
	MONTH	42.6	72	12	10	18.5	8.5	13.5	-	1.4	2	0	275	-	123	-	-5.0	30	5	-	-	4.67	-	-0.9	-	63
Kilkenny Co. Kilkenny	1-10	21.6	-	4	4	17.5	6.7	12.1	-	1.1	2	0	79	-	31	-	-4.5	2	2	15.0	-	6.93	-	2.5	0	-
	11-20	0.2	-	1	0	21.0	12.8	16.9	-	8.9	11	0	125	-	70	-	3.6	11	0	19.0	-	2.20	-	2.3	0	-
	21-END	0.6	-	2	0	19.8	9.6	14.7	-	4.3	29	0	103	-	50	-	-3.0	29	2	18.3	-	6.35	-	4.2	1	-
	MONTH	22.4	48	7	4	19.5	9.7	14.6	+1.1	1.1	2	0	307	112	151	127	-4.5	2	4	17.4	+0.4	5.16	90	3.0	1	88
Mooncoin (Silverspring) Co. Kilkenny	1-10	30.2	-	7	4	17.0	7.2	12.1	-	1.7	1	0	78	-	30	-	-2.4	1	2	-	-	6.89	-	-	-	-
	11-20	3.2	-	2	1	20.5	12.5	16.5	-	9.5	11	0	121	-	65	-	3.3	17	0	-	-	3.21	-	-	-	-
	21-END	0.0	-	0	0	19.9	9.7	14.8	-	4.4	29	0	104	-	51	-	-3.3	29	3	-	-	7.04	-	-	-	-
	MONTH	33.4	63	9	5	19.1	9.8	14.5	-	1.7	1	0	303	-	146	-	-3.3	29	5	-	-	5.71	-	-	-	-
Ballinamore Co. Leitrim	1-10	25.1	-	6	5	18.7	7.1	12.9	-	0.8	2	0	86	-	37	-	-3.4	2	2	-	-	6.75	-	1.7	-	-
	11-20	16.9	-	4	4	18.7	11.8	15.3	-	10.5	17	0	109	-	53	-	6.4	21	0	-	-	1.52	-	2.3	-	-
	21-END	5.5	-	4	2	16.3	9.6	12.9	-	5.9	23	0	85	-	32	-	3.0	29	0	-	-	4.05	-	4.0	-	-
	MONTH	47.5	62	14	11	17.9	9.5	13.7	-	0.8	2	0	280	-	122	-	-3.4	2	2	-	-	4.11	-	2.7	-	69
Ardee (Boharnamoe) Co. Louth	1-10	32.5	-	5	5	18.8	7.2	13.0	-	0.2	2	0	87	-	38	-	-0.1	2	1	-	-	-	-	-	-	-
	11-20	2.0	-	3	1	20.8	12.0	16.4	-	7.3	11	0	120	-	65	-	5.9	11	0	-	-	-	-	-	-	-
	21-END	2.4	-	2	1	18.8	9.0	13.9	-	4.9	30	0	95	-	43	-	4.6	30	0	-	-	-	-	-	-	-
	MONTH	36.9	62	10	7	19.5	9.4	14.4	-	0.2	2	0	302	-	145	-	-0.1	2	1	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JUNE 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	37.7	-	6	6	17.7	6.3	12.0	-	1.6	2	0	78	-	31	-	-2.8	2	2	-	-	4.91	-	2.6	-	-
	11-20	14.2	-	3	3	18.2	11.8	15.0	-	9.2	17	0	106	-	50	-	4.1	17	0	-	-	1.98	-	2.4	-	-
	21-END	2.4	-	1	1	17.1	10.0	13.6	-	7.8	23	0	92	-	37	-	3.0	28	0	-	-	3.06	-	3.4	-	-
	MONTH	54.3	71	10	10	17.7	9.4	13.5	-	1.6	2	0	275	-	118	-	-2.8	2	2	-	-	3.32	-	2.8	-	54
Belmullet Co. Mayo	1-10	39.1	-	6	4	15.3	8.3	11.8	-	4.2	2	0	74	-	23	-	1.5	2	0	14.1	-	4.13	-	4.2	0	-
	11-20	28.4	-	6	4	15.8	11.6	13.7	-	10.2	20	0	93	-	37	-	10.3	14	0	15.5	-	0.95	-	5.7	1	-
	21-END	4.9	-	4	2	15.0	10.0	12.5	-	8.0	23	0	81	-	26	-	5.5	29	0	15.1	-	1.81	-	5.8	2	-
	MONTH	72.4	103	16	10	15.4	10.0	12.7	-0.3	4.2	2	0	248	98	86	93	1.5	2	0	14.9	-0.8	2.30	38	5.3	3	57
Clonmorris Co. Mayo	1-10	27.3	-	6	5	17.5	7.1	12.3	-	2.7	2	0	79	-	31	-	-0.7	2	1	13.5	-	4.40	-	4.1	1	-
	11-20	16.3	-	4	2	18.1	11.8	14.9	-	10.4	16	0	105	-	49	-	6.4	17	0	15.9	-	1.35	-	4.0	1	-
	21-END	4.7	-	3	1	16.8	9.5	13.1	-	5.1	23	0	87	-	34	-	1.1	29	0	15.8	-	2.90	-	6.0	3	-
	MONTH	48.3	65	13	8	17.5	9.4	13.5	+0.7	2.7	2	0	272	108	114	114	-0.7	2	1	15.1	-0.1	2.88	56	4.7	5	63
Glenamoy Co. Mayo	1-10	20.3	-	6	3	16.3	7.3	11.8	-	1.0	2	0	75	-	26	-	-1.4	2	1	-	-	4.86	-	1.9	-	-
	11-20	37.6	-	8	6	16.4	11.8	14.1	-	10.4	14	0	97	-	41	-	10.4	14	0	-	-	0.36	-	3.6	-	-
	21-END	11.1	-	6	3	15.0	10.1	12.5	-	5.8	23	0	81	-	27	-	3.9	23	0	-	-	1.17	-	4.0	-	-
	MONTH	69.0	78	20	12	15.9	9.7	12.8	-	1.0	2	0	253	-	94	-	-1.4	2	1	-	-	2.13	-	3.1	-	51
Dunsany (Grange) Co. Meath	1-10	37.3	-	4	4	17.6	7.2	12.4	-	0.9	2	0	81	-	32	-	-4.6	2	1	-	-	7.77	-	-	-	-
	11-20	3.8	-	3	1	19.5	12.2	15.8	-	8.4	11	0	114	-	59	-	2.0	11	0	-	-	N/A	-	-	-	-
	21-END	4.0	-	3	3	17.3	8.3	12.8	-	3.3	29	0	84	-	34	-	-1.5	29	2	-	-	4.14	-	-	-	-
	MONTH	45.1	78	10	8	18.1	9.2	13.7	-	0.9	2	0	279	-	124	-	-4.6	2	3	-	-	N/A	-	-	-	-
Clones Co. Monaghan	1-10	24.3	-	5	4	18.6	8.1	13.4	-	3.7	2	0	90	-	39	-	-1.3	2	1	14.3	-	7.92	-	2.5	0	-
	11-20	10.4	-	6	3	19.3	12.5	15.9	-	10.0	11	0	115	-	59	-	3.7	11	0	16.5	-	1.65	-	2.4	1	-
	21-END	10.5	-	4	3	16.3	9.9	13.1	-	7.0	23	0	87	-	33	-	4.2	23	0	15.0	-	4.70	-	4.9	2	-
	MONTH	45.2	66	15	10	18.1	10.1	14.1	+1.1	3.7	2	0	292	112	131	125	-1.3	2	1	15.3	-0.5	4.76	91	3.3	3	83
Birr Co. Offaly	1-10	20.7	-	4	4	17.7	6.7	12.2	-	1.8	2	0	79	-	31	-	-2.7	2	2	15.2	-	6.33	-	3.6	1	-
	11-20	3.6	-	5	1	18.8	12.5	15.6	-	10.4	12	0	112	-	56	-	5.8	20	0	17.7	-	1.62	-	3.3	2	-
	21-END	2.6	-	3	2	18.3	9.3	13.8	-	3.9	30	0	94	-	42	-	-1.1	30	1	17.5	-	4.23	-	5.2	3	-
	MONTH	26.9	52	12	7	18.3	9.5	13.9	+0.5	1.8	2	0	286	106	129	112	-2.7	2	3	16.8	+0.2	4.06	75	4.0	6	77

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JUNE 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 DRY ABOVE 4.4°C	% OF AVERAGE	DEGREE DRY 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	31.9	-	6	6	17.0	6.5	11.8	-	0.9	2	0	75	-	28	-	-3.8	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	4.5	-	1	1	19.7	12.5	16.1	-	8.2	12	0	117	-	61	-	2.2	12	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	21-END	6.8	-	5	1	18.1	9.9	14.0	-	5.4	29	0	96	-	42	-	0.4	30	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	43.2	-	10	8	18.3	9.6	13.9	-	0.9	2	0	288	-	132	-	-3.8	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dungarvan (Carriglea) Co. Waterford	1-10	81.0	-	6	6	17.5	7.5	12.5	-	1.4	1	0	82	-	33	-	1.1	1	0	-	-	7.62	-	2.2	-	-	-	-	-	-	-	-	-	
	11-20	0.0	-	0	0	21.3	12.7	17.0	-	8.6	11	0	126	-	70	-	8.4	11	0	-	-	3.83	-	2.0	-	-	-	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	19.6	9.9	14.8	-	4.0	29	0	104	-	50	-	3.0	29	0	-	-	8.02	-	3.0	-	-	-	-	-	-	-	-	-	-
	MONTH	81.0	147	6	6	19.5	10.0	14.8	-	1.4	1	0	312	-	154	-	1.1	1	0	-	-	6.49	-	2.4	-	-	-	-	-	-	-	-	-	86
Mullingar Co. Westmeath	1-10	37.1	-	5	4	17.5	7.1	12.3	-	0.7	2	0	80	-	32	-	-2.8	2	1	14.2	-	7.10	-	2.9	0	-	-	-	-	-	-	-	-	-
	11-20	9.6	-	4	2	18.7	12.1	15.4	-	9.1	11	0	110	-	54	-	7.2	11	0	16.7	-	2.16	-	3.0	2	-	-	-	-	-	-	-	-	-
	21-END	5.3	-	5	2	17.3	9.5	13.4	-	6.2	29	0	90	-	37	-	3.0	29	0	15.9	-	5.17	-	4.8	3	-	-	-	-	-	-	-	-	-
	MONTH	52.0	83	14	8	17.8	9.6	13.7	+0.8	0.7	2	0	280	105	123	110	-2.8	2	1	15.6	-0.4	4.81	87	3.6	5	80	-	-	-	-	-	-	-	-
J.F.K. Park Co. Wexford	1-10	23.4	-	6	5	16.7	8.1	12.4	-	3.0	1	0	81	-	31	-	-2.0	1	2	-	-	7.19	-	N/A	-	-	-	-	-	-	-	-	-	-
	11-20	3.7	-	3	1	20.6	12.9	16.7	-	10.1	11	0	123	-	67	-	4.0	11	0	-	-	4.15	-	N/A	-	-	-	-	-	-	-	-	-	-
	21-END	0.5	-	1	0	19.9	9.6	14.8	-	6.2	29	0	104	-	51	-	-1.6	30	3	-	-	6.94	-	N/A	-	-	-	-	-	-	-	-	-	-
	MONTH	27.6	49	10	6	19.1	10.2	14.6	-	3.0	1	0	308	-	149	-	-2.0	1	5	-	-	6.09	-	N/A	-	-	-	-	-	-	-	-	-	-
Clonroche Co. Wexford	1-10	17.9	-	6	5	17.1	6.7	11.9	-	2.3	1	0	76	-	29	-	-1.9	4	2	-	-	7.47	-	1.6	-	-	-	-	-	-	-	-	-	-
	11-20	2.1	-	1	1	21.3	11.9	16.6	-	8.9	11	0	122	-	66	-	3.5	11	0	-	-	3.81	-	1.8	-	-	-	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	19.8	8.9	14.3	-	4.5	29	0	99	-	47	-	-0.5	30	1	-	-	6.93	-	2.5	-	-	-	-	-	-	-	-	-	-
	MONTH	20.0	32	7	6	19.4	9.2	14.3	-	2.3	1	0	296	-	142	-	-1.9	4	3	-	-	6.07	-	1.9	-	-	-	-	-	-	-	-	-	80
Johnstown Castle Co. Wexford	1-10	18.0	-	7	5	15.9	8.2	12.0	-	3.5	1	0	77	-	26	-	-3.6	2	2	-	-	7.72	-	3.2	-	-	-	-	-	-	-	-	-	-
	11-20	0.2	-	1	0	19.6	12.5	16.0	-	8.2	11	0	116	-	61	-	2.0	11	0	-	-	N/A	-	3.1	-	-	-	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	19.4	10.3	14.9	-	8.0	29	0	105	-	51	-	1.2	29	0	-	-	N/A	-	4.1	-	-	-	-	-	-	-	-	-	-
	MONTH	18.2	31	8	5	18.3	10.3	14.3	-	3.5	1	0	298	-	138	-	-3.6	2	2	-	-	N/A	-	3.4	-	-	-	-	-	-	-	-	-	N/A
Rosslare Co. Wexford	1-10	8.9	-	2	2	15.4	9.8	12.6	-	7.4	1	0	82	-	28	-	0.0	1	0	16.0	-	9.04	-	4.4	0	-	-	-	-	-	-	-	-	-
	11-20	0.3	-	1	0	19.2	12.8	16.0	-	10.4	11	0	116	-	60	-	9.2	11	0	19.6	-	5.15	-	4.0	2	-	-	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	19.2	11.2	15.2	-	8.0	29	0	108	-	53	-	5.1	29	0	19.7	-	8.65	-	5.1	2	-	-	-	-	-	-	-	-	-
	MONTH	9.2	19	3	2	17.9	11.3	14.6	+1.3	7.4	1	0	306	115	141	137	0.0	1	0	18.4	+1.4	7.61	108	4.5	4	108	-	-	-	-	-	-	-	-

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	18289
	11-20	13858
	21-30	13811
	Month	45958
Dublin Airport Co. Dublin	1-10	20349
	11-20	14012
	21-30	18737
	Month	53098
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	15206
	11-20	15364
	21-30	19098
	Month	49668
Kilkenny Co. Kilkenny	1-10	17970
	11-20	13428
	21-30	17736
	Month	49134
Belmullet Co. Mayo	1-10	13810
	11-20	11720
	21-end	14012
	Month	39542
Clones Co. Monaghan	1-10	20365
	11-20	13332
	21-30	17314
	Month	51011
Birr Co. Offaly	1-10	16040
	11-20	10778
	21-30	15021
	Month	41839

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	21.4	-	67	9
	11-20	25.1	14	81	-
	21-30	39.3	17	98	-
	Month	85.8	-	-	-
Kinsealy Co. Dublin	1-10	26.2	-	48	10
	11-20	23.3	15	63	-
	21-30	46.8	25	88	-
	Month	96.3	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	12.5	-	7	42
	11-20	17.3	16	23	-
	21-30	21.2	20	43	-
	Month	51.0	-	-	-
Ballinamore Co. Leitrim	1-10	28.0	-	61	11
	11-20	22.0	2	63	-
	21-30	29.1	13	76	-
	Month	79.1	-	-	-
Glenamoy Co. Mayo	1-10	19.4	2	38	-
	11-20	10.5	-	14	24
	21-30	12.2	1	15	-
	Month	42.1	-	-	-
Johnstown Castle Co. Wexford	1-10	22.5	5	72	-
	11-20	31.6	17	89	-
	21-30	42.2	15	104	-
	Month	96.3	-	-	-

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TABLE 4 SOIL CLIMATE (MULLINGAR)

BARE SOIL TYPE	PERIOD				TEMPERATURE GRADIENT (to 200mm)	SOIL WATER POTENTIAL (hPa) (at depths)	
		Max.	Daily	Min.		75mm	200mm
		Peat	1-10	15.6	14.1	12.1	-0.5
	11-20	18.2	17.3	15.8	-0.8	103	94
	21-30	18.2	17.0	15.6	-0.4	166	133
Mineral	1-10	16.0	13.5	10.7	-0.3	226	193
	11-20	18.4	15.9	14.2	-0.4	238	173
	21-30	17.6	15.4	13.3	-0.5	546	378

## special topic

### Evaporation and Soil Moisture

The condition of the land is of major concern to farmers, particularly at certain times of the year. Because of this concern, agriculturists have become increasingly interested in evaporation and the state of moisture in the soil. Periods of drought cause serious loss of yields while soil compaction by the use of heavy machinery, poaching by cattle, disposal of effluent are but a few examples of the effect of excessive rainfall. A knowledge of the annual and short-term changes in the hydrologic balance between evaporation and rainfall is important, therefore, in the context of crop growth and most field work.

Evaporation takes place when liquid water is changed into water vapour and transferred from a water or soil surface in this form into the atmosphere. Evaporation from soils consists of two separate stages: the diffusion of water, as a liquid or vapour through the soil to the surface and the removal of the water from the surface. The first stage depends on the condition of the soil and subsoil, the second stage on the conditions of the overlying air and on solar radiation. Solar radiation is the main driving force for evaporation while the disposal of the vapour depends on the wind speed near the earth's surface, its variation with height and the vertical variation of vapour pressure or specific humidity.

A plant cover on the soil, such as grass, cereals, root crops, forests, etc. introduces an additional factor to the evaporation stream, namely, transpiration from the crop. The process of transpiration is concerned with the transport of water through the plants, which offer some resistance to the flow. Evaporation from a vegetative covered surface is known as evapotranspiration. Even with an optimum supply of water available, which allows evapotranspiration at the full potential rate, evaporation from a plant cover will be smaller than from a water surface.

For the purposes of crop production, potential evapotranspiration is the maximum quantity of water capable of being evaporated in a given climate from a continuous stretch of vegetation covering the whole ground and well supplied with water. It thus includes evaporation from the soil and transpiration from the vegetation of a specified region in a given time interval, expressed in millimetres. At times the soil water may be limited. Actual evapotranspiration is the quantity of water vapour evaporated from the soil and the plants, when the ground is at its actual moisture content. Actual evapotranspiration, therefore, may only be a fraction of the potential rate during long dry spells when the soil water is less than field capacity.

Soil water is necessary for the up-take of nutrients by plants and the process of transpiration attending plant growth. If the soil moisture is seriously lacking, growth is inhibited. Where large deficits continue over long spells, especially during the active growth of a crop, overall yields will be seriously curtailed.

Soil water depleted by run-off and evapotranspiration is replenished by rainfall. Precipitation is normally heaviest in winter, least in summer and moderately high in spring and autumn. Evaporation on the other hand, is least in winter and greatest in summer. The surplus of rainfall over evapotranspiration in the last and first months of each year is normally substantial, often exceeding greatly the low level of evaporation in winter. This surplus is gradually reduced during the spring months and when evaporation exceeds rainfall amounts, a small moisture deficit develops. This normally occurs in late April and May. As a result, field conditions improve and heavy machinery can be taken onto the lighter soils first without damage to the surface.

(To be continued)