

METEOROLOGICAL SERVICE

METEOROLOGICAL OFFICE,
ROSSLARE,
CO. WEXFORD

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JUNE 1986

AGROMETEOROLOGICAL BULLETIN

The Weather of June

A mild southwesterly airflow with embedded troughs on 1st/2nd gave way to a northwesterly airflow on 3rd. Despite a ridge of high pressure on 4th/5th, 7th and 11th, the somewhat unsettled conditions continued. In particular a deepening wave depression in the vicinity of Ireland affected a strong southern airflow on the 9th.

High pressure over northern Europe dominated conditions after 12th (except for a trough over the country on 16th) but as the centre moved to the north of Scotland an easterly airflow set in on the 20th. A series of troughs from the south or southwest of Ireland subsequently moved northwards over the country and these gradually became more active. Widespread and intense thundery activity prevailed over the country from the 27th-29th, the trough finally clearing the country on 30th.

Precipitation:

Amounts of precipitation were very variable over the country, the north receiving least and the midlands and south receiving most. Values varied from 25% at Mooncoin (Silverspring) to 55% at Malin Head. Wettest days were 8th-10th, 23rd/24th, and during the thundery spell 27th-30th. In general, however, except for 10th, the period to 19th was relatively dry, particularly in the west and north. The more significant spells of weather favouring blight occurred on 1st/2nd, 12th-15th, 22nd-24th, 28th-30th.

Temperature:

Mean air temperature varied close to normal, ranging from 0.5°C below at Roche's Point to 0.9°C above at Clones. Ground frost was widespread on 11th. The recovery in soil temperature took place after 10th but monthly values remained well below normal.

Sunshine and Radiation:

Sunshine hours were well below normal almost everywhere. Values varied from 60% of normal at Cork Airport to 92% at Dublin Airport. Solar radiation was well below normal in the southmidlands (Kilkenny 87%) and well above normal in the east (Dublin Airport 108%).

Wind:

Strong winds with gale gusts occurred on 8th (southern areas), 9th, 12th, 20th and 21st.

[Errata:

Correct number of hours with gale gusts at Casement Aerodrome for May to read 180]

Summary:

For much of the country it was generally very wet, dull and rather cold.

TABLE 1 (CONTINUED)

JUNE 1986

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	22.1	-	6	6	13.3	6.8	10.1	-	2.1	10	0	58	-	11	-	-0.1	10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	11.6	-	4	3	18.4	9.9	14.1	-	0.8	11	0	98	-	46	-	-0.9	11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	21-END	43.0	-	7	6	20.8	12.8	16.8	-	9.7	22	0	124	-	68	-	5.6	22	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	76.7	83	17	15	17.5	9.9	13.7	-	0.8	11	0	280	-	125	-	-0.9	11	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Malin Head Co. Donegal	1-10	15.6	-	7	3	12.2	8.0	10.1	-	4.4	10	0	57	-	8	-	0.0	10	0	13.0	-	52.2	-	7.3	3	-	-	-	-	-	-	-	-	-	-	
	11-20	6.0	-	3	2	16.0	10.2	13.1	-	7.0	11	0	87	-	32	-	4.0	11	0	16.1	-	70.3	-	6.4	2	-	-	-	-	-	-	-	-	-	-	-
	21-END	17.6	-	7	4	17.6	11.5	14.5	-	9.4	21	0	101	-	46	-	6.1	21	0	16.1	-	37.6	-	6.1	2	-	-	-	-	-	-	-	-	-	-	-
	MONTH	39.2	55	17	9	15.2	9.9	12.6	0.0	4.4	10	0	245	95	86	97	0.0	10	0	15.0	-0.1	160.1	88	6.6	7	89	-	-	-	-	-	-	-	-	-	-
Casement Aerodrome Co. Dublin	1-10	33.6	-	6	3	15.5	7.1	11.3	-	2.8	6	0	70	-	23	-	-2.0	5	2	13.5	-	46.6	-	5.3	1	-	-	-	-	-	-	-	-	-	-	
	11-20	0.8	-	2	0	19.0	9.5	14.2	-	2.9	11	0	99	-	48	-	-1.5	11	1	16.0	-	66.8	-	4.6	2	-	-	-	-	-	-	-	-	-	-	-
	21-END	57.0	-	7	4	19.6	12.1	15.9	-	9.9	23	0	115	-	59	-	5.6	23	0	17.3	-	51.1	-	3.9	0	-	-	-	-	-	-	-	-	-	-	-
	MONTH	91.4	187	15	7	18.0	9.6	13.8	+0.5	2.8	6	0	284	101	130	109	-2.0	5	3	15.6	-	164.5	88	4.6	3	90	-	-	-	-	-	-	-	-	-	
Dublin Airport Co. Dublin	1-10	23.3	-	6	3	15.6	8.3	12.0	-	4.6	6	0	76	-	26	-	1.6	5	0	15.0	-	50.1	-	4.9	1	-	-	-	-	-	-	-	-	-	-	-
	11-20	25.0	-	2	1	18.2	10.1	14.1	-	3.9	11	0	98	-	45	-	1.7	11	0	17.6	-	74.6	-	4.0	2	-	-	-	-	-	-	-	-	-	-	-
	21-END	33.1	-	7	6	18.8	11.8	15.3	-	10.0	24	0	109	-	53	-	9.3	26	0	18.4	-	51.9	-	3.3	0	-	-	-	-	-	-	-	-	-	-	-
	MONTH	81.4	154	15	10	17.6	10.1	13.8	+0.3	3.9	11	0	283	99	124	105	1.6	5	0	17.0	+0.4	176.6	92	4.1	3	103	-	-	-	-	-	-	-	-	-	-
Kinsealy Co. Dublin	1-10	63.0	-	4	3	15.9	8.4	12.2	-	4.1	6	0	78	-	28	-	-0.4	8	1	-	-	55.1	-	3.7	-	-	-	-	-	-	-	-	-	-	-	
	11-20	19.9	-	2	1	17.6	9.3	13.5	-	3.9	11	0	91	-	39	-	0.3	18	0	-	-	80.7	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	28.7	-	7	6	18.2	11.6	14.9	-	10.1	24	0	105	-	49	-	6.2	26	0	-	-	49.1	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	111.6	219	13	10	17.2	9.8	13.5	-	3.9	11	0	273	-	116	-	-0.4	8	1	-	-	184.9	-	3.2	-	89	-	-	-	-	-	-	-	-	-	-
Galway Co. Galway	1-10	6.5	-	6	1	13.9	8.6	11.3	-	6.0	10	0	69	-	17	-	2.5	10	0	13.2	-	31.5	-	4.8	1	-	-	-	-	-	-	-	-	-	-	-
	11-20	16.9	-	7	3	18.4	10.1	14.2	-	2.6	11	0	99	-	45	-	-1.1	11	1	16.4	-	53.5	-	4.0	0	-	-	-	-	-	-	-	-	-	-	-
	21-END	60.1	-	9	8	20.0	12.6	16.3	-	10.5	21	0	119	-	63	-	9.5	22	0	17.4	-	36.6	-	3.1	0	-	-	-	-	-	-	-	-	-	-	-
	MONTH	83.5	114	22	12	17.4	10.4	13.9	+0.5	2.6	11	0	287	-	125	-	-1.1	11	1	15.7	-	121.6	69	4.0	1	76	-	-	-	-	-	-	-	-	-	-
Killarney (Muckross House) Co. Kerry	1-10	25.1	-	5	5	14.1	9.6	11.9	-	7.0	10	0	75	-	21	-	1.5	8	0	-	-	27.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	10.3	-	5	4	17.4	10.8	14.1	-	4.4	18	0	97	-	43	-	-1.4	11	2	-	-	39.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	27.9	-	6	5	19.5	12.0	15.7	-	8.4	28	0	113	-	57	-	3.5	28	0	-	-	36.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	63.3	87	16	14	17.0	10.8	13.9	-	4.4	18	0	285	-	122	-	-1.4	11	2	-	-	103.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1 (CONTINUED)

JUNE 1986

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 4.0°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	17.0	-	6	5	13.3	9.4	11.4	-	7.2	10	0	70	-	15	-	6.2	10	0	13.8	-	29.0	-	4.3	2	-
	11-20	13.6	-	9	3	17.4	10.2	13.8	-	4.0	11	0	94	-	41	-	2.1	11	0	16.0	-	47.7	-	4.8	2	-
	21-END	26.0	-	4	3	19.4	12.0	15.7	-	10.3	24	0	113	-	57	-	6.6	28	0	18.2	-	66.0	-	3.5	1	-
	MONTH	56.6	74	19	11	16.7	10.6	13.6	+0.1	4.0	11	0	277	98	113	101	2.1	11	0	16.0	-0.2	142.7	87	4.2	5	78
Ardfert (Liscahane) Co. Kerry	1-10	13.0	-	6	5	14.2	8.9	11.6	-	6.2	10	0	72	-	19	-	2.4	8	0	-	-	39.7	-	-	-	-
	11-20	21.7	-	4	3	17.7	10.3	14.0	-	3.2	11	0	96	-	43	-	-0.6	11	1	-	-	50.7	-	-	-	-
	21-END	20.5	-	5	3	20.0	11.8	15.9	-	8.2	28	0	115	-	60	-	3.3	28	0	-	-	57.9	-	-	-	-
	MONTH	55.2	-	15	11	17.3	10.3	13.8	-	3.2	11	0	283	-	121	-	-0.6	11	1	-	-	148.3	-	-	-	-
Lullymore Co. Kildare	1-10	18.3	-	4	4	15.2	7.6	11.4	-	2.7	10	0	70	-	23	-	-2.5	6	2	-	-	41.8	-	4.3	-	-
	11-20	4.4	-	1	1	19.0	8.2	13.6	-	0.4	11	0	93	-	43	-	-2.7	18	3	-	-	61.7	-	3.8	-	-
	21-END	94.4	-	8	8	20.0	11.6	15.8	-	9.0	23	0	114	-	58	-	4.1	26	0	-	-	48.6	-	3.5	-	-
	MONTH	117.1	198	13	13	18.0	9.1	13.6	-	0.4	11	0	277	-	124	-	-2.7	18	5	-	-	152.1	-	3.9	-	80
Kilkenny Co. Kilkenny	1-10	10.1	-	3	2	15.8	7.9	11.9	-	4.0	8	0	75	-	25	-	-1.2	8	2	14.2	-	35.9	-	3.5	0	-
	11-20	7.1	-	3	2	19.1	9.0	14.1	-	1.0	11	0	98	-	46	-	-3.3	11	2	16.5	-	49.7	-	2.6	0	-
	21-END	67.3	-	8	7	20.0	12.6	16.3	-	9.7	26	0	119	-	63	-	5.3	23	0	16.9	-	33.1	-	2.1	0	-
	MONTH	84.5	180	14	11	18.3	9.9	14.1	+0.6	1.0	11	0	291	102	134	108	-3.3	11	4	15.9	-1.1	118.7	69	2.7	0	74
Mooncoin (Silverspring) Co. Kilkenny	1-10	10.3	-	3	1	15.9	8.4	12.1	-	4.4	8	0	77	-	27	-	-0.7	8	1	-	-	42.2	-	-	-	-
	11-20	40.5	-	3	2	18.2	8.5	13.3	-	1.1	11	0	90	-	39	-	-3.0	11	2	-	-	52.9	-	-	-	-
	21-END	85.4	-	10	9	19.4	12.1	15.8	-	9.2	26	0	114	-	58	-	5.9	26	0	-	-	26.0	-	-	-	-
	MONTH	136.2	257	16	12	17.8	9.7	13.7	-	1.1	11	0	281	-	124	-	-3.0	11	3	-	-	121.1	-	-	-	-
Ballinamore Co. Leitrim	1-10	10.3	-	6	3	14.8	7.4	11.1	-	4.0	8	0	67	-	19	-	-1.7	8	3	-	-	35.2	-	3.2	-	-
	11-20	5.7	-	4	2	19.0	8.9	14.0	-	1.0	11	0	97	-	45	-	-2.6	11	2	-	-	56.3	-	1.8	-	-
	21-END	90.7	-	8	8	20.9	11.8	16.4	-	8.5	21	0	120	-	64	-	6.0	21	0	-	-	38.2	-	1.2	-	-
	MONTH	106.7	139	18	13	18.2	9.4	13.8	-	1.0	11	0	284	-	128	-	-2.6	11	5	-	-	129.7	-	2.1	-	71
Ardee (Boharnamoe) Co. Louth	1-10	15.2	-	5	4	15.9	7.5	11.7	-	4.1	8	0	73	-	25	-	-0.2	8	2	-	-	-	-	-	-	-
	11-20	3.5	-	1	1	18.4	8.5	13.4	-	1.9	11	0	91	-	40	-	-2.7	11	2	-	-	-	-	-	-	-
	21-END	40.8	-	7	5	19.0	11.2	15.1	-	9.1	23	0	107	-	51	-	7.0	22	0	-	-	-	-	-	-	-
	MONTH	59.5	99	13	10	17.8	9.1	13.4	-	1.9	11	0	272	-	117	-	-2.7	11	4	-	-	-	-	-	-	-

TABLE 1 (CONTINUED)

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	11.8	-	4	1	14.4	8.1	11.3	-	4.6	10	0	69	-	19	-	1.2	10	0	-	-	28.6	-	2.8	-	-
	11-20	5.9	-	5	2	18.3	9.0	13.6	-	0.7	11	0	94	-	41	-	-1.6	18	2	-	-	59.8	-	3.4	-	-
	21-END	73.0	-	8	8	20.2	11.9	16.1	-	9.1	21	0	117	-	61	-	6.4	22	0	-	-	43.3	-	2.6	-	-
	MONTH	90.7	119	17	11	17.7	9.7	13.7	-	0.7	11	0	279	-	121	-	-1.6	18	2	-	-	131.7	-	2.9	-	75
Belmullet Co. Mayo	1-10	23.6	-	6	3	12.5	7.9	10.2	-	3.7	10	0	58	-	8	-	0.2	10	0	12.9	-	26.1	-	4.9	0	-
	11-20	11.5	-	7	6	17.3	9.0	13.2	-	1.4	11	0	89	-	36	-	-1.4	11	1	15.3	-	52.2	-	5.0	1	-
	21-END	60.5	-	8	8	18.6	11.9	15.2	-	10.4	22	0	108	-	52	-	6.5	22	0	16.9	-	48.4	-	3.9	0	-
	MONTH	95.6	137	21	17	16.1	9.6	12.9	-0.1	1.4	11	0	255	96	97	100	-1.4	11	1	15.0	-0.7	126.7	71	4.6	1	70
Claremorris Co. Mayo	1-10	11.3	-	5	3	14.1	7.5	10.8	-	4.4	10	0	64	-	16	-	1.6	8	0	13.1	-	18.4	-	3.9	1	-
	11-20	5.5	-	4	2	18.1	8.8	13.5	-	1.6	11	0	92	-	40	-	-2.0	11	1	15.0	-	44.6	-	4.5	1	-
	21-END	77.2	-	8	8	20.2	12.1	16.2	-	9.6	21	0	118	-	62	-	7.8	22	0	17.0	-	32.7	-	3.9	0	-
	MONTH	94.0	127	17	13	17.5	9.5	13.5	+0.7	1.6	11	0	274	103	117	111	-2.0	11	1	15.0	-0.2	95.7	62	4.1	2	68
Glenamoy Co. Mayo	1-10	23.4	-	6	3	12.8	9.1	10.9	-	6.7	10	0	65	-	12	-	-0.6	10	1	-	-	23.1	-	2.6	-	-
	11-20	10.5	-	5	4	17.8	10.5	14.1	-	4.5	11	0	97	-	43	-	-2.5	11	1	-	-	51.6	-	27.9	-	-
	21-END	49.4	-	7	6	19.6	12.7	16.2	-	10.1	21	0	118	-	62	-	6.4	22	0	-	-	45.3	-	2.1	-	-
	MONTH	83.3	94	18	13	16.7	10.7	13.7	-	4.5	11	0	280	-	117	-	-2.5	11	2	-	-	120.0	-	11.2	-	99
Dunsany (Grange) Co. Meath	1-10	32.9	-	5	3	15.4	7.5	11.5	-	3.6	6	0	71	-	24	-	-0.5	5	1	-	-	49.2	-	-	-	-
	11-20	4.4	-	2	1	18.1	8.7	13.4	-	1.4	11	0	91	-	40	-	-2.3	11	3	-	-	66.8	-	-	-	-
	21-END	52.1	-	7	6	18.9	11.7	15.3	-	9.5	24	0	109	-	53	-	8.9	21	0	-	-	45.1	-	-	-	-
	MONTH	89.4	154	14	10	17.5	9.3	13.4	-	1.4	11	0	271	-	117	-	-2.3	11	4	-	-	161.1	-	-	-	-
Clones Co. Monaghan	1-10	11.6	-	6	3	15.0	7.6	11.3	-	5.0	6	0	69	-	20	-	-0.4	8	1	12.9	-	42.1	-	4.2	1	-
	11-20	2.3	-	3	1	18.8	9.5	14.2	-	2.9	11	0	98	-	46	-	-2.5	11	2	14.8	-	53.6	-	3.1	0	-
	21-END	35.3	-	7	5	20.2	12.0	16.1	-	8.2	21	0	117	-	62	-	7.3	21	0	16.2	-	37.1	-	2.8	0	-
	MONTH	49.2	71	16	9	18.0	9.7	13.9	+0.9	2.9	11	0	285	105	128	117	-2.5	11	3	14.6	-1.2	132.8	85	3.3	1	78
Birr Co. Offaly	1-10	8.4	-	4	3	15.2	7.8	11.5	-	4.8	10	0	71	-	22	-	-0.2	10	1	13.7	-	26.2	-	2.7	1	-
	11-20	5.5	-	4	2	19.2	9.5	14.3	-	1.1	11	0	100	-	47	-	-3.5	11	1	16.3	-	48.4	-	2.4	0	-
	21-END	87.1	-	9	6	20.4	12.5	16.5	-	10.5	21	0	121	-	65	-	5.2	26	0	17.7	-	30.6	-	2.1	1	-
	MONTH	101.0	194	17	11	18.3	9.9	14.1	+0.7	1.1	11	0	291	103	134	113	-3.5	11	2	15.9	-0.7	105.2	65	2.4	2	70

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JUNE 1986

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										
Dundrum (Knockavilla) Co. Tipperary	1-10	6.1	-	6	1	15.1	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	34.0	-	3	2	18.6	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	21-END	74.5	-	8	8	18.9	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	114.6	-	17	11	17.5	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dungarvan (Carriglea) Co. Waterford	1-10	12.7	-	3	2	16.8	8.6	12.7	-	4.3	8	0	83	-	32	-	4.1	8	0	-	-	-	43.3	-	2.6	-	-	-	-	-	-	-	-	-	-	
	11-20	48.3	-	2	2	18.6	9.3	14.0	-	2.2	11	0	96	-	44	-	2.2	11	0	-	-	-	56.8	-	2.3	-	-	-	-	-	-	-	-	-	-	
	21-END	66.4	-	8	5	19.5	11.8	15.6	-	9.2	28	0	112	-	57	-	8.0	28	0	-	-	-	31.6	-	2.1	-	-	-	-	-	-	-	-	-	-	
	MONTH	127.4	232	13	9	18.3	9.9	14.1	-	2.2	11	0	291	-	133	-	2.2	11	0	-	-	-	131.7	-	2.3	-	-	-	-	-	-	-	-	-	-	67
Mullingar Co. Westmeath	1-10	22.6	-	5	4	15.0	7.4	11.2	-	3.6	6	0	68	-	21	-	0.1	6	0	13.2	-	-	35.1	-	4.2	2	-	-	-	-	-	-	-	-	-	-
	11-20	5.7	-	3	1	18.4	9.0	13.7	-	2.5	11	0	93	-	41	-	-0.7	11	1	15.2	-	-	53.3	-	3.7	1	-	-	-	-	-	-	-	-	-	-
	21-END	70.3	-	7	5	19.7	11.8	15.7	-	9.5	21	0	113	-	58	-	7.8	26	0	16.6	-	-	44.9	-	3.8	1	-	-	-	-	-	-	-	-	-	-
	MONTH	98.6	157	15	10	17.7	9.4	13.5	+0.6	2.5	11	0	275	99	120	103	-0.7	11	1	15.0	-1.0	-	133.3	80	3.9	4	78	-	-	-	-	-	-	-	-	
J.F.K. Park Co. Wexford	1-10	11.4	-	3	3	15.8	8.7	12.2	-	5.2	6	0	78	-	27	-	-2.0	6	3	-	-	-	40.0	-	3.3	-	-	-	-	-	-	-	-	-	-	-
	11-20	35.2	-	2	2	17.2	9.4	13.3	-	3.5	11	0	89	-	37	-	-4.1	11	3	-	-	-	52.6	-	4.0	-	-	-	-	-	-	-	-	-	-	-
	21-END	74.2	-	9	7	18.9	12.2	15.6	-	10.1	23	0	112	-	56	-	4.3	23	0	-	-	-	28.1	-	3.1	-	-	-	-	-	-	-	-	-	-	-
	MONTH	120.8	216	14	12	17.3	10.1	13.7	-	3.5	11	0	279	-	120	-	-4.1	11	6	-	-	-	120.7	-	3.5	-	-	-	-	-	-	-	-	-	-	72
Clonroche Co. Wexford	1-10	19.4	-	2	2	15.5	8.1	11.8	-	4.1	8	0	74	-	25	-	-2.9	8	3	-	-	-	49.0	-	2.1	-	-	-	-	-	-	-	-	-	-	-
	11-20	4.4	-	3	2	17.5	9.1	13.3	-	2.5	11	0	90	-	39	-	-3.9	11	1	-	-	-	58.7	-	2.2	-	-	-	-	-	-	-	-	-	-	-
	21-END	113.1	-	9	7	18.7	11.9	15.3	-	10.1	21	0	109	-	53	-	7.7	22	0	-	-	-	34.9	-	1.8	-	-	-	-	-	-	-	-	-	-	-
	MONTH	136.9	217	14	11	17.2	9.7	13.5	-	2.5	11	0	273	-	116	-	-3.9	11	4	-	-	-	142.6	-	2.0	-	-	-	-	-	-	-	-	-	-	70
Johnstown Castle Co. wexford	1-10	14.8	-	3	3	14.7	9.1	11.9	-	5.5	6	0	75	-	23	-	2.9	4	0	-	-	-	50.4	-	3.7	-	-	-	-	-	-	-	-	-	-	-
	11-20	2.3	-	3	1	16.5	9.6	13.0	-	5.5	11	0	86	-	34	-	-1.2	18	3	-	-	-	61.4	-	3.5	-	-	-	-	-	-	-	-	-	-	-
	21-END	75.1	-	9	8	17.5	11.9	14.7	-	10.3	24	0	103	-	47	-	3.9	28	0	-	-	-	31.1	-	2.8	-	-	-	-	-	-	-	-	-	-	-
	MONTH	92.2	159	15	12	16.3	10.2	13.2	-	5.5	11	0	265	-	105	-	-1.2	18	3	-	-	-	142.9	-	3.4	-	-	-	-	-	-	-	-	-	-	72
Rosslare Co. Wexford	1-10	17.3	-	4	3	14.8	9.6	12.2	-	6.9	4	0	78	-	25	-	2.6	6	0	15.3	-	-	54.4	-	4.7	2	-	-	-	-	-	-	-	-	-	-
	11-20	3.3	-	2	1	15.6	10.1	12.9	-	6.0	11	0	85	-	31	-	2.3	11	0	16.7	-	-	62.0	-	4.9	2	-	-	-	-	-	-	-	-	-	-
	21-END	66.2	-	8	6	16.4	12.1	14.2	-	10.5	24	0	98	-	42	-	8.9	28	0	16.2	-	-	35.0	-	4.6	0	-	-	-	-	-	-	-	-	-	-
	MONTH	86.8	177	14	10	15.6	10.6	13.1	-0.2	6.0	11	0	261	94	98	92	2.3	11	0	16.1	-0.9	-	151.4	71	4.8	4	80	-	-	-	-	-	-	-	-	

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	185.80
	11-20	201.16
	21-end	153.80
	Month	540.76
Dublin Airport Co. Dublin	1-10	171.71
	11-20	211.13
	21-end	169.44
	Month	552.28
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	156.31
	11-20	168.87
	21-end	195.60
	Month	520.78
Kilkenny Co. Kilkenny	1-10	166.82
	11-20	180.39
	21-end	143.58
	Month	490.79
Belmullet Co. Mayo	1-10	136.58
	11-20	173.75
	21-end	150.17
	Month	460.50
Clones Co. Monaghan	1-10	175.52
	11-20	176.31
	21-end	152.96
	Month	504.79
Birr Co. Offaly	1-10	159.70
	11-20	173.67
	21-end	147.02
	Month	480.39

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	27.8	20	22	-
	11-20	25.1	25	47	-
	21-end	26.3	-	0	59
	Month	79.2	-	-	-
Kinsealy Co. Dublin	1-11	24.7	-	0	38
	12-20	31.6	12	12	-
	21-29	24.0	3	15	-
	Month	80.3	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	10.9	-	0	5
	11-20	15.9	2	2	-
	21-end	19.2	-	0	7
	Month	46.0	-	-	-
Ballinamore Co. Leitrim	1-10	22.3	12	12	-
	11-20	28.2	23	35	-
	21-27	22.7	-	22	13
	Month	73.2	-	-	-
Glenamoy Co. Mayo	1-10	12.3	-	0	11
	11-20	16.9	6	6	-
	21-end	13.6	-	0	41
	Month	42.8	-	-	-
Johnstown Castle Co. Wexford	1-11	23.4	9	9	-
	12-20	18.9	17	26	-
	21-end	20.1	-	0	55
	Month	62.4	-	-	-

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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	15.1	12.8	10.4	-0.9
	11-20	16.7	14.5	11.8	-0.9	N/A	76
	21-end	18.1	16.0	13.2	-0.8	N/A	93
Mineral	1-10	15.7	12.8	10.1	-0.4	N/A	89
	11-20	17.4	14.7	11.4	-0.6	N/A	95
	21-end	19.4	16.2	13.4	-0.6	N/A	138

special topic

HEAVY RAIN IN IRELAND

Intense rainfall over short periods is of general interest as it can result in hazardous floods. For design and drainage purposes engineers are interested in the maximum amount of rainfall likely to be experienced over a specified duration once in a given interval of years. The highest rainfall amounts recorded in this country in a 1 hour, 24 hour and a 3 day period were measured in Co.Dublin. At a site in Mount Merrion 184.2mm (associated with a violent thunderstorm) was measured on 11th June 1963. Of this amount 82.6mm fell in a period of 1 hour and 5 minutes. Studies of rainfall in Ireland show that this intense rainfall was entirely exceptional.

This summer got off to a thundery start. Thunderstorms from 26th to 30th June gave heavy rain, and lightning caused damage to houses, and to electrical and electronic equipment. 111.0mm of rain was recorded in Aughnasheelan on 28th of June. The widespread and spectacular thunderstorm activity which occurred on 25th and 26th July 1985 was even more newsworthy than the storm of 1963 because of its extent and the scale of the damage caused. Flooding which accompanied the 1985 storm affected farm buildings, houses, supermarkets and stores in the worst hit areas, and hail and heavy rain caused extensive damage to crops.

However, not all heavy rainfall is associated with thunderstorm activity. An active front over the southwest of Ireland gave heavy and prolonged rainfall during the first two days of November 1980. 157.1mm was recorded at Valentia, the bulk of this rainfall 154.2 mm fell in a 36 hour period.

Number of Occurrences per Year of given Rates of Rainfall

RATES:	≥4mm/15mins	≥6mm/hr	≥20mm/6hrs	≥30mm/24hr
VALENTIA	3.9	11.6	4.6	4.9
ROSSLARE	4.0	7.4	2.1	2.5
BIRR	2.8	4.3	1.0	0.8
DUBLIN	2.9	5.2	1.2	1.5
CLONES	3.4	4.8	1.0	0.9

Periods of heavy rain are more likely in the southwest, south and southeast. For longer durations, say 12 to 24 hour, these areas have considerably more occurrences than the Midlands. At Birr a rainfall amount of 30mm or more in a 24 hour period occurs less than once per year, whereas at Valentia this type of intense rainfall occurs around 5 times per year on average. The number of occurrences of short duration falls in the Midlands are more comparable to the short duration falls at Valentia. Intense rainfall of short duration in the Midlands is usually associated with thunderstorm activity, whereas that at Valentia is associated with active frontal activity.

February, to May are the months with the least number of intense falls, while July to December are the months with the greatest number, with peak numbers around September.

A rainfall amount of 16 to 18mm in an hour has a return period of 5 years over most of the country. The duration of rainfall which is of interest depends on the characteristics of the catchment area in question. In the case of the drainage of a small area, rainfall of a few minutes duration may be critical for the production of floods, whereas the drainage from a large part of the country side is more dependent on rainfall amounts of several days duration.

G.O'Reilly
Meteorological Service