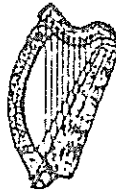


METEOROLOGICAL SERVICE



AGROMETEOROLOGICAL BULLETIN

APRIL 1984

The Weather of April

A ridge of high pressure on the 1st was followed by a southerly airflow on 2nd and frontal troughs with rain on 3rd. These troughs became slow moving, especially over eastern areas, but less active during the 4th and 5th as a ridge of high pressure extended from the west-northwest. High pressure then dominated to 9th and there were improved afternoon temperatures.

During the 10th a freshening southwesterly set in and a frontal trough crossed the country overnight followed by a short spell of northwesterly winds on 11th. A ridge of high pressure to the south of the country was however the more dominant influence for a short spell and troughs were confined to northern coastal areas. A moderate southwesterly airflow developed on 13th and there was some rain in all areas from the passage of a cold front on the 14th. Showers in the succeeding northwesterly airflow died out on 16th as a ridge of high pressure from the south crossed the country. The onset of a strong southwest to southeast airflow on 17th was accompanied by frontal troughs which gave widespread heavy rain. Rain was particularly heavy in the southwest. Further troughs in a southwesterly airflow gave cloudy weather with outbreaks of rain or drizzle in many areas up to 21st, but these outbreaks were generally very light.

High pressure, first centred to the west of Scotland and later drifting over the North Sea, dominated our weather from the 22nd to the end of the month. An easterly airflow developed during the fine spell. The period was bright, very warm and dry except for some rain in the extreme south late on 30th.

Monthly Amounts of Precipitation were well below normal in most areas, the rainfall on the 17th contributing greatly to the total. Values varied from 39% of normal at Ardee to 114% at Valentia Observatory, mostly contributed in the periods 3rd to 5th, 11th, and 14th to 18th. Wettest days were the 17th, and also 18th in parts of the west; the 3rd was very wet in the south and the 4th in some areas of the midlands. The weather became dry after 17th and soil moisture deficits reached 20-30mm by the end of the month.

Mean Monthly Air Temperature was above normal, varying from 1.2°C above at Shannon Airport to 0.1°C above at Rosslare. Soil temperatures (100mm) were near or generally below average until 20th after which they reached values some 3 to 4°C above average. Degree days were above average, those with base 10.0°C being well above average. Air frost amounting to 2.1°C occurred at Kilkenny on 12th and ground frost was widespread up to 17th; subsequently there were localised occurrences of ground frost.

Mean Duration of Bright Sunshine was above normal everywhere, varying from 117% at Roches Point and Kilkenny to 105% at Malin Head. The last ten days were considerably brighter than the previous ten day periods; a daily average of over ten hours sunshine was recorded at most stations in the last period. Solar radiation was about average at inland stations and above average at coastal stations.

Strong Winds with Gale Gusts occurred mainly on 3rd/4th, 14th and 17th with gusty conditions up to the 21st.

Summary Generally rather cold and cloudy with spells of rain to 17th, subsequently the weather improved and it was bright, dry and very warm during the last ten days.

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

APRIL 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 ⁻¹)	DAYS WITH GALE GUSTS						
						MEAN MAX.	MEAN MIN.	MEAN DAILY	DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.0°C	% OF AVERAGE	DEGREE DAYS ABOVE 10.0°C	% OF AVERAGE					LOWEST *GRASS-MIN*	DATE	DAYS WITH GROUND FROST		MEAN DAILY	DIFFERENCE FROM AVERAGE
Carlow (Oak Park) Co. Carlow	1-10	8.3	-	3	1	9.9	2.6	6.3	-	-2.8	2	1	25	-	3	-	-2.5	3	5	-	-	3.89	-	3.6	-	-
	11-20	21.1	-	6	3	11.8	4.3	8.0	-	-1.2	12	1	40	-	6	-	-5.5	12	3	-	-	2.56	-	4.9	-	-
	21-END	0.0	-	0	0	18.3	5.1	11.7	-	2.8	29	0	74	-	30	-	-3.0	29	4	-	-	10.99	-	2.4	-	-
	MONTH	29.4	63	9	4	13.3	4.0	8.7	-	-2.8	2	2	139	-	38	-	-5.5	12	12	-	-	5.81	-	3.7	-	59
Shannon Airport Co. Clare	1-10	12.6	-	4	3	11.5	3.9	7.7	-	0.1	1	0	36	-	6	-	-5.5	1	4	8.1	-	4.67	-	4.2	2	-
	11-20	33.2	-	4	4	12.2	6.3	9.2	-	2.6	15	0	49	-	8	-	-2.5	12	2	9.1	-	2.42	-	5.0	1	-
	21-END	0.2	-	1	0	19.3	7.5	13.4	-	5.7	23	0	90	-	40	-	0.9	27	0	13.8	-	9.66	-	4.0	0	-
	MONTH	46.0	81	9	7	14.3	5.9	10.1	+1.2	0.1	1	0	175	122	54	186	-5.5	1	6	10.3	+0.6	5.58	111	4.4	3	71
Fermoy (Coolnakilla) Co. Cork	1-10	18.1	-	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	-	4.4	-	-	-
	11-20	38.3	-	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	-	5.1	-	-	-
	21-END	4.9	-	1	1	15.8	6.0	10.9	-	1.0	28	0	66	-	21	-	-2.5	29	2	-	-	N/A	-	4.2	-	-
	MONTH	61.3	-	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	-	4.6	-	N/A
Fermoy (Moore Park) Co. Cork	1-10	12.7	-	4	3	11.5	2.4	6.9	-	-1.5	1	4	33	-	5	-	-9.5	1	6	-	-	5.17	-	2.3	-	-
	11-20	35.9	-	5	4	11.5	4.6	8.1	-	-2.4	12	1	41	-	5	-	-8.6	12	4	-	-	2.50	-	3.3	-	-
	21-END	1.8	-	1	1	17.2	4.3	10.8	-	-0.2	29	1	66	-	24	-	-8.0	29	8	-	-	10.74	-	2.3	-	-
	MONTH	50.4	88	10	8	13.4	3.8	8.6	-	-2.4	12	6	140	-	35	-	-9.5	1	18	-	-	6.14	-	2.7	-	57
Mallow Co. Cork	1-10	21.0	-	5	3	N/A	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	N/A	N/A	-	-	N/A	-	3.99	-	-	-
	11-20	15.1	-	5	3	11.7	3.1	7.4	-	-3.0	12	2	37	-	6	-	N/A	N/A	-	-	N/A	-	2.32	-	-	-
	21-END	2.0	-	2	2	19.2	2.0	10.6	-	-0.1	29	1	69	-	28	-	N/A	N/A	-	-	N/A	-	9.50	-	-	-
	MONTH	38.1	64	12	8	N/A	N/A	N/A	-	N/A	N/A	N/A	-	N/A	-	N/A	-	N/A	N/A	-	-	5.27	-	-	-	-
Roches Point Co. Cork	1-10	20.8	-	3	2	10.1	5.2	7.6	-	0.6	1	0	34	-	2	-	-1.4	1	1	8.9	-	5.22	-	4.7	1	-
	11-20	22.3	-	4	3	10.6	6.3	8.4	-	2.5	12	0	41	-	2	-	-1.6	12	1	9.6	-	2.93	-	6.4	3	-
	21-END	0.3	-	1	0	15.0	8.7	11.8	-	5.6	29	0	74	-	22	-	-0.4	29	1	12.8	-	10.83	-	6.3	2	-
	MONTH	43.4	82	8	5	11.9	6.7	9.3	+0.5	0.6	1	0	149	112	26	153	-1.6	12	3	10.4	+0.5	6.33	117	5.8	6	70
Glencolumbkille Co. Donegal	1-10	25.2	-	5	4	9.6	3.3	6.4	-	-0.6	1	1	24	-	1	-	-3.5	1	2	-	-	5.00	-	4.3	-	-
	11-20	53.4	-	9	8	10.8	5.0	7.9	-	1.8	17	0	37	-	3	-	-3.5	17	3	-	-	2.89	-	4.6	-	-
	21-END	0.0	-	0	0	18.5	7.8	13.2	-	3.0	22	0	88	-	38	-	0.0	28	0	-	-	10.75	-	3.1	-	-
	MONTH	78.6	-	14	12	13.0	5.3	9.2	-	-0.6	1	1	149	-	42	-	-3.5	17	5	-	-	6.21	-	4.0	-	64

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

APRIL 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 ⁻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	17.3	-	5	2	11.7	4.1	7.9	-	0.9	8	0	38	-	5	-	-0.6	8	2	9.3	-	6.61	-	4.7	3	-
	11-20	69.6	-	6	4	11.5	6.4	8.9	-	1.0	12	0	46	-	5	-	-0.7	12	1	10.4	-	2.74	-	6.1	1	-
	21-END	3.4	-	2	2	19.5	8.8	14.1	-	4.1	29	0	98	-	46	-	0.7	29	0	14.7	-	8.19	-	4.1	0	-
	MONTH	90.3	114	13	8	14.2	6.4	10.3	+1.1	0.9	8	0	182	126	57	238	-0.7	12	3	11.5	+1.2	5.85	114	5.0	4	74
Ardfert (Liscahane) Co. Kerry	1-10	25.7	-	4	3	11.3	3.3	7.3	-	0.0	1	0	34	-	4	-	-2.6	9	5	-	-	6.15	-	-	-	-
	11-20	25.7	-	7	4	12.1	6.4	9.2	-	1.4	15	0	50	-	9	-	-1.9	15	3	-	-	2.38	-	-	-	-
	21-END	2.2	-	2	2	19.5	7.6	13.5	-	4.6	27	0	91	-	42	-	0.6	27	0	-	-	9.32	-	-	-	-
	MONTH	53.6	-	13	9	14.3	5.7	10.0	-	0.0	1	0	174	-	55	-	-2.6	9	8	-	-	5.95	-	-	-	-
Lullymore Co. Kildare	1-10	17.0	-	4	4	9.4	1.2	5.3	-	-3.0	2	4	19	-	2	-	-8.9	2	7	-	-	2.49	-	2.8	-	-
	11-20	27.7	-	3	3	11.4	3.6	7.5	-	-3.0	17	3	37	-	5	-	-6.5	17	4	-	-	2.82	-	4.6	-	-
	21-END	0.0	-	0	0	18.4	3.4	10.9	-	-0.7	29	1	69	-	27	-	-5.6	29	8	-	-	10.86	-	3.1	-	-
	MONTH	44.7	83	7	7	13.1	2.7	7.9	-	-3.0	17	8	125	-	34	-	-8.9	2	19	-	-	5.39	-	3.5	-	52
Kilkenny Co. Kilkenny	1-10	11.0	-	3	2	10.5	3.1	6.8	-	-1.2	2	1	29	-	4	-	-10.8	2	6	7.1	-	4.08	-	2.6	0	-
	11-20	24.8	-	5	2	11.9	4.4	8.2	-	-2.1	12	1	42	-	7	-	-8.4	12	4	8.7	-	2.93	-	3.8	0	-
	21-END	0.0	-	0	0	18.5	4.4	11.4	-	0.8	29	0	72	-	30	-	-4.7	29	6	13.6	-	10.87	-	2.1	0	-
	MONTH	35.8	69	8	4	13.6	4.0	8.8	+0.6	-2.1	12	2	143	113	40	154	-10.8	2	16	9.8	+0.5	5.96	117	2.8	0	60
Mooncoin (Silverspring) Co. Kilkenny	1-10	22.7	-	4	2	10.2	2.6	6.4	-	-2.6	2	2	27	-	3	-	-4.6	2	5	-	-	3.07	-	-	-	-
	11-20	41.1	-	5	4	11.6	4.2	7.9	-	-2.0	12	2	39	-	5	-	-3.4	12	4	-	-	3.16	-	-	-	-
	21-END	0.0	-	0	0	17.6	3.7	10.6	-	0.0	29	0	66	-	24	-	-2.8	30	2	-	-	10.68	-	-	-	-
	MONTH	63.8	106	9	6	13.1	3.5	8.3	-	-2.6	2	4	132	-	32	-	-4.6	2	11	-	-	5.64	-	-	-	-
Ballinamore Co. Leitrim	1-10	21.5	-	3	3	10.4	1.6	6.0	-	-3.3	2	3	24	-	3	-	-9.9	2	7	-	-	2.20	-	2.4	-	-
	11-20	25.7	-	7	5	11.1	3.8	7.5	-	-2.5	17	3	36	-	4	-	-6.7	17	4	-	-	2.85	-	4.1	-	-
	21-END	0.0	-	0	0	19.1	4.6	11.9	-	1.1	29	0	77	-	33	-	-3.3	29	7	-	-	9.76	-	1.7	-	-
	MONTH	47.2	73	10	8	13.6	3.3	8.4	-	-3.3	2	6	137	-	40	-	-9.9	2	18	-	-	4.94	-	2.7	-	51
Ardee (Boharnamoe) Co. Louth	1-10	12.6	-	5	3	10.0	1.5	5.8	-	-2.7	2	2	22	-	2	-	-5.5	2	5	-	-	-	-	-	-	-
	11-20	8.2	-	3	2	12.9	3.3	8.1	-	-2.9	17	3	43	-	10	-	-5.5	17	4	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	16.1	4.3	10.2	-	0.2	29	0	60	-	18	-	-1.9	25	4	-	-	-	-	-	-	-
	MONTH	20.8	39	8	5	13.0	3.0	8.0	-	-2.9	17	5	125	-	30	-	-5.5	17	13	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

APRIL 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 (m/s)	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	18.9	-	6	2	10.7	1.9	6.3	-	-2.0	1	2	27	-	4	-	-5.8	1	7	-	-	3.31	-	3.2	-	-
	11-20	45.2	-	10	9	10.8	5.0	7.9	-	0.8	17	0	38	-	3	-	-5.6	17	4	-	-	2.40	-	4.0	-	-
	21-END	0.0	-	0	0	19.3	3.7	11.5	-	-2.2	23	1	74	-	31	-	-3.6	25	8	-	-	9.84	-	2.2	-	-
	MONTH	64.1	96	16	11	13.6	3.5	8.6	-	-2.2	23	3	139	-	38	-	-5.8	1	19	-	-	5.18	-	3.2	-	41
Belmullet Co. Mayo	1-10	8.6	-	5	2	10.2	3.6	6.9	-	-0.5	1	1	28	-	2	-	-2.7	1	2	8.1	-	4.67	-	5.8	1	-
	11-20	21.5	-	9	7	10.7	5.8	8.2	-	2.3	16	0	40	-	2	-	-1.5	17	2	9.5	-	3.23	-	8.0	5	-
	21-END	0.4	-	1	0	19.2	6.5	12.9	-	1.8	22	0	85	-	38	-	-1.1	22	1	13.9	-	10.07	-	3.8	1	-
	MONTH	30.5	54	15	9	13.4	5.3	9.3	+0.6	-0.5	1	1	153	121	42	247	-2.7	1	5	10.5	+0.9	5.99	110	5.9	7	68
Claremorris Co. Mayo	1-10	10.5	-	3	2	10.1	2.0	6.1	-	-1.9	1	2	25	-	3	-	-3.7	1	6	6.6	-	2.88	-	5.0	2	-
	11-20	24.3	-	9	5	11.1	4.3	7.7	-	-0.3	17	1	37	-	4	-	-2.9	15	4	8.4	-	2.45	-	6.7	6	-
	21-END	0.6	-	1	0	19.4	4.5	11.9	-	2.7	23	0	77	-	33	-	-1.9	23	4	13.0	-	9.66	-	4.2	0	-
	MONTH	35.4	57	13	7	13.6	3.6	8.6	+0.7	-1.9	1	3	139	119	40	190	-3.7	1	14	9.3	+0.6	5.00	107	5.3	8	55
Glenamoy Co. Mayo	1-10	13.5	-	6	4	10.1	1.8	6.0	-	-1.4	8	3	24	-	2	-	-4.6	1	4	-	-	3.87	-	4.3	-	-
	11-20	42.8	-	10	9	10.8	4.8	7.8	-	-0.1	15	1	37	-	2	-	-2.9	17	2	-	-	3.18	-	5.3	-	-
	21-END	0.0	-	0	0	20.1	5.7	12.9	-	0.0	22	0	87	-	41	-	-2.4	22	1	-	-	10.11	-	2.2	-	-
	MONTH	56.3	75	16	13	13.7	4.1	8.9	-	-1.4	8	4	147	-	46	-	-4.6	1	7	-	-	5.72	-	4.0	-	59
Dunsany (Grange) Co. Meath	1-10	26.3	-	5	4	9.4	1.6	5.5	-	-2.1	2	2	19	-	2	-	-9.1	2	6	-	-	2.45	-	-	-	-
	11-20	14.8	-	7	4	11.3	3.9	7.6	-	-2.0	17	2	37	-	6	-	-7.5	12	4	-	-	3.01	-	-	-	-
	21-END	0.0	-	0	0	16.3	4.0	10.2	-	1.3	29	0	60	-	18	-	-3.6	29	7	-	-	10.67	-	-	-	-
	MONTH	41.1	78	12	8	12.3	3.2	7.7	-	-2.1	2	4	117	-	25	-	-9.1	2	17	-	-	5.38	-	-	-	-
Clones Co. Monaghan	1-10	22.3	-	4	4	10.0	2.4	6.2	-	-1.0	1	2	25	-	2	-	-5.5	2	5	6.2	-	2.69	-	3.7	2	-
	11-20	17.3	-	6	6	10.9	4.0	7.4	-	-0.7	15	2	35	-	5	-	-6.0	15	4	7.4	-	2.52	-	5.5	3	-
	21-END	0.1	-	0	0	18.0	5.9	12.0	-	4.0	22	0	76	-	30	-	0.6	29	0	11.2	-	10.32	-	3.2	0	-
	MONTH	39.7	75	10	10	13.0	4.1	8.6	+0.9	-1.0	1	4	136	121	37	195	-6.0	15	9	8.3	-0.3	5.18	111	4.1	5	57
Birr Co. Offaly	1-10	12.3	-	5	5	10.4	2.6	6.5	-	-2.2	1	3	28	-	3	-	-7.6	1	5	7.7	-	3.45	-	3.7	3	-
	11-20	23.3	-	5	4	11.7	4.8	8.2	-	0.4	17	0	42	-	7	-	-3.6	17	4	8.8	-	2.41	-	5.0	1	-
	21-END	0.0	-	0	0	19.2	5.8	12.5	-	2.6	29	0	82	-	36	-	-2.0	29	4	14.4	-	9.75	-	3.2	0	-
	MONTH	35.6	65	10	9	13.7	4.4	9.1	+1.0	-2.2	1	3	151	122	45	188	-7.6	1	13	10.3	+0.9	5.20	106	4.0	4	61

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

APRIL 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 ⁻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	12.7	-	5	2	10.8	2.2	6.5	-	-4.0	2	2	30	-	4	-	-7.5	2	5	-	-	-	-	-	-	-	-	-
	11-20	35.3	-	7	4	11.6	4.2	7.9	-	-1.2	12	2	39	-	6	-	-4.3	12	4	-	-	-	-	-	-	-	-	-
	21-END	0.1	-	0	0	17.7	4.2	11.0	-	0.7	29	0	68	-	26	-	-3.5	29	6	-	-	-	-	-	-	-	-	-
	MONTH	48.1	-	10	6	13.4	3.6	8.5	-	-4.0	2	4	137	-	36	-	-7.5	2	15	-	-	-	-	-	-	-	-	-
Dungarvan (Carriglea) Co. Waterford	1-10	29.1	-	3	2	11.7	3.5	7.6	-	0.5	1	0	36	-	6	-	-2.3	1	2	-	-	3.49	-	2.4	-	-	-	
	11-20	43.8	-	5	4	12.1	4.8	8.5	-	-1.1	12	1	44	-	6	-	-1.7	12	1	-	-	3.39	-	3.2	-	-	-	
	21-END	0.0	-	0	0	16.5	4.6	10.6	-	-0.5	29	1	64	-	22	-	-0.9	29	1	-	-	11.07	-	2.2	-	-	-	
	MONTH	72.9	104	8	6	13.4	4.3	8.9	-	-1.1	12	2	145	-	34	-	-2.3	1	4	-	-	5.98	-	2.6	-	52	-	
Mullingar Co. Westmeath	1-10	16.5	-	4	4	9.7	2.1	5.9	-	-2.5	2	2	23	-	2	-	-6.1	2	5	6.5	-	2.93	-	4.4	1	-	-	
	11-20	24.8	-	7	5	10.9	4.4	7.7	-	-1.7	17	1	37	-	5	-	-3.9	17	4	8.0	-	2.30	-	5.8	1	-	-	
	21-END	0.0	-	0	0	17.8	5.4	11.6	-	1.7	29	0	73	-	28	-	0.9	29	0	12.3	-	10.69	-	3.9	0	-	-	
	MONTH	41.3	70	11	9	12.8	4.0	8.4	+0.7	-2.5	2	3	133	114	35	159	-6.1	2	9	8.9	+0.1	5.31	107	4.7	2	58	-	
J.F.K. Park Co. Wexford	1-10	20.3	-	2	2	9.9	3.1	6.5	-	-1.3	2	1	26	-	3	-	-6.1	2	7	-	-	3.52	-	N/A	-	-	-	
	11-20	41.2	-	5	3	11.0	4.6	7.8	-	-0.1	16	2	38	-	3	-	-6.6	16	4	-	-	2.70	-	N/A	-	-	-	
	21-END	0.0	-	0	0	16.9	8.5	12.7	-	4.8	30	0	83	-	33	-	-2.8	29	2	-	-	10.99	-	N/A	-	-	-	
	MONTH	61.5	101	7	5	12.6	5.4	9.0	-	-1.3	2	3	147	-	39	-	-6.6	16	13	-	-	5.74	-	N/A	-	N/A	-	
Clonroche Co. Wexford	1-10	22.2	-	3	2	9.6	1.4	5.5	-	-3.9	2	3	21	-	3	-	-11.1	2	7	-	-	4.04	-	1.6	-	-	-	
	11-20	33.5	-	4	2	11.1	4.0	7.5	-	-1.3	16	2	36	-	3	-	-8.0	16	5	-	-	2.82	-	2.5	-	-	-	
	21-END	1.3	-	1	1	17.1	7.0	12.1	-	3.1	30	0	77	-	29	-	-5.3	30	3	-	-	11.29	-	1.8	-	-	-	
	MONTH	57.0	84	8	5	12.6	4.1	8.4	-	-3.9	2	5	134	-	35	-	-11.1	2	15	-	-	6.05	-	2.0	-	54	-	
Johnstown Castle Co. Wexford	1-10	16.7	-	3	2	9.7	3.0	6.3	-	-0.6	2	1	24	-	2	-	-9.2	2	4	-	-	4.31	-	3.4	-	-	-	
	11-20	31.9	-	4	3	11.0	4.9	8.0	-	0.6	16	0	38	-	3	-	-5.2	17	4	-	-	3.65	-	4.5	-	-	-	
	21-END	0.0	-	0	0	14.6	6.7	10.6	-	4.3	29	0	62	-	16	-	-1.9	30	2	-	-	11.62	-	3.2	-	-	-	
	MONTH	48.6	77	7	5	11.8	4.8	8.3	-	-0.6	2	1	125	-	21	-	-9.2	2	10	-	-	6.53	-	3.7	-	60	-	
Rosslare Co. Wexford	1-10	12.4	-	3	2	8.9	4.7	6.8	-	2.7	2	0	25	-	1	-	-1.7	9	1	8.0	-	4.47	-	4.7	3	-	-	
	11-20	26.9	-	3	3	11.1	5.6	8.4	-	2.1	12	0	42	-	3	-	-3.3	17	3	9.6	-	3.75	-	5.9	2	-	-	
	21-END	0.0	-	0	0	12.8	8.6	10.7	-	7.8	21	0	63	-	11	-	1.4	28	0	13.5	-	11.72	-	5.1	0	-	-	
	MONTH	39.3	73	6	5	10.9	6.3	8.6	+0.1	2.1	12	0	129	102	14	100	-3.3	17	4	10.4	+0.4	6.65	112	5.2	5	68	-	

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL SOLAR RADIATION

STATION	PERIOD	AMOUNT
		Joule/cm ²
Malin Head Co. Donegal	1-10	11178
	11-20	10330
	21-end	21486
	Month	42994
Dublin Airport Co. Dublin	1-10	9305
	11-20	11645
	21-end	21797
	Month	42747
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	15156
	11-20	10738
	21-end	18413
	Month	44307
Kilkenny Co. Kilkenny	1-10	10587
	11-20	10303
	21-end	20760
	Month	41650
Belmullet Co. Mayo	1-10	15259
	11-20	14570
	21-end	25708
	Month	55537
Clones Co. Monaghan	1-10	10108
	11-20	10001
	21-end	20599
	Month	40708
Birr Co. Offaly	1-10	10791
	11-20	9994
	21-end	18036
	Month	38821

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

STATION	PERIOD	P.E.(mm)				SOIL MOISTURE (mm)			
		Amount	Deficit	Accumulated	Surplus	Deficit	Deficit	Surplus	
Carlow (Oak Park) Co. Carlow	1-10	8.1	-	0	0				
	11-20	13.7	-	0	7				
	21-end	27.5	28	28	-				
	Month	49.3	-	-	-				
Kinsealy Co. Dublin	1-9	4.9	-	0	5				
	10-16	8.4	4	4	-				
	20-end	26.4	26	30	-				
	Month	39.7	-	-	-				
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	14.7	-	0	3				
	11-20	17.1	-	0	48				
	21-end	21.8	19	19	-				
	Month	53.6	-	-	-				
Ballinamore Co. Leitrim	1-10	9.3	-	0	12				
	11-20	12.2	-	0	14				
	21-end	23.7	24	24	-				
	Month	45.2	-	-	-				
Glenamoy Co. Mayo	1-10	8.5	5	5	-				
	11-20	11.9	-	0	30				
	21-end	23.3	23	23	-				
	Month	43.7	-	-	-				
Johnstown Castle Co. Wexford	1-10	13.0	-	0	4				
	11-20	16.6	-	0	15				
	21-end	21.0	21	21	-				
	Month	50.6	-	-	-				

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	6.8	6.2	5.0	+0.1
	11-20	8.5	7.6	6.2	0.0	89	81
	21-end	13.3	12.0	10.3	-0.7	118	85
Mineral	1-10	7.8	6.1	4.2	+0.2	134	76
	11-20	8.8	7.6	6.1	+0.3	154	91
	21-end	15.2	11.6	8.4	-0.1	276	147

Notes on the tables in January issue

special topic

Potato Blight and the Weather

Some 40,000 hectares of potatoes are grown in the twenty six counties annually and late blight, caused by *Phytophthora infestans* (Mont.) de Bary, is the most serious form of disease to affect them almost every year. The primary outbreak of blight in the field comes from infected tubers and the fungus is spread by spores known as sporangia. When planted, the mycelium (vegetative part of the fungus) renews growth, passes into the sprouting tissues and sporulates on the haulm above ground in suitable conditions of temperature, humidity and moisture. The fungus which develops on the haulm produces innumerable lemon-shaped sporangia, or zoospores in the case of indirect germination, which are easily detached and disseminated by wind, rain and other vectors and serve to carry infection to healthy plants.

High relative humidities are conducive to the formation of sporangia. These become abundant at relative humidities exceeding 90% and are increasingly active as the temperature rises so that the fungus develops rapidly in very humid warm weather. Sporangia are vulnerable when they are on the foliage and a fungicide spray, if already protecting the foliage, will kill or prevent germination of sporangia which alight on plants.

The growing season for the main potato crop in Ireland extends over six months from April to September but there can be a substantial reduction in yield if the haulm is prematurely killed. The following table shows that the increase in potato crop yield, which results from a successful prolongation of the life of the green foliage, can be very great. Local and annual variations may result in states of development being reached different from that in the table.

MEAN LOSS (%) OF CROP WHERE 75% OF HAULM IS BLIGHTED

End of July	Mid August	End of August	Mid September	End of September
50	28	13	4	0

Blight control can be achieved by proper management. Apart from avoiding the planting of infected tubers, control is also achieved by the cultivation of resistant crops and by covering the haulm of the growing plants with a fungicide which will kill or prevent the germination of the zoospores which alight on the plant. As fungicides are primarily effective against the incoming inoculation it is prudent to have the plants protected before the initiation of a major blight spell. It is therefore important that the timing of the applications of fungicides is appropriate both from the point of view of effectiveness and economy.

Although the spread of potato blight is largely favoured by the same environmental conditions in all countries, the associated prevailing weather giving rise to these conditions may be different however. Various countries therefore have established their own simplified rules for the identification of such periods. For example, Beaumont periods, widely used in Britain up to recent times, occurred too frequently in Ireland to be a satisfactory basis for a blight warning system. The Irish rules proposed by Bourke (1953) have been found to have been more reliable over the last thirty years in this country. These rules state that once an unbroken period of 15 hours (if there is no precipitation present) or 11 hours (having precipitation near the end of the period of 11 hours) occurs with a relative humidity of at least 90% and a temperature of 10°C or more, then further continuation of the spell will favour the spread of potato blight.

(to be continued)