

METEOROLOGICAL SERVICE



JULY 1985

AGROMETEOROLOGICAL BULLETIN

The Weather of July

High pressure and mainly dry on 1st/2nd. A trough on 3rd brought drizzle and rain to western and northern areas on 3rd/4th and affected eastern regions early on 5th followed by showers, some thundery in the east. A ridge on 6th later declined allowing a moist southwest airflow and frontal troughs to affect northwestern areas in particular on 7th/8th. A clearance to the southeast on 9th was followed by some recovery of high pressure but the dominant influence in subsequent days was the cloudy and moist conditions in west to southwest winds. A changeable interlude occurred on 13th/14th, but with a deepening depression the southwesterly winds increased and conditions were wet and windy from 16th to 18th. Apart from fresher weather on 19th/20th the moist conditions in southwesterly winds continued to 24th.

A frontal trough approached the country from the west on 25th as the outflow from a thundery trough over Biscay preceded it and spread northwards over Ireland. On interaction, widespread and spectacular thundery activity enveloped the country on the evening of 25th and overnight into 26th. Greatest intensity was observed along a line from Kilkenny to Dundalk in which there were bursts of very heavy rain and severe hail activity. Parts of the southwest and west escaped the brunt of the thunderstorms. On the morning of 26th the thundery activity abated and cleared to the northeast.

Westerly winds and showery weather, particularly in northern areas, occurred on 27th but there was widespread heavy rain on 28th in eastern parts as a trough moved northwards over the Irish Sea, western and southern areas remaining dry. Apart from further overnight rain and drizzle on 29th the weather was fairly dry to the end of the month.

Precipitation:

Rainfall amounts were well above normal, mainly in the midlands, east and north but below normal in parts of the south and west. Amounts varied from 229% of normal at Kinsealy to 56% of normal at Killarney (Muckross). The number of both rain days (daily total exceeding 0.2mm) and wet days (daily total exceeding 1.0mm) was well above normal at many stations. Wettest days generally were 5th, 11th to 13th, 17th and 24th to 26th. However, soil moisture deficits still existed in the southeast at the end of the month. Spells of weather conducive to the spread of blight occurred from June 28th to July 5th, 8th to 14th, 22nd to 26th and 29th. The development of blight on crops was rapid and unusually severe in many areas (see Special Topic this issue). The broken conditions also militated against the saving of hay.

Temperature:

Mean daily temperature was near normal, varying from 0.3C° above at Casement Aerodrome to 0.7C° below at Roche's Point. Soil temperatures (100mm) were also near normal, the coldest spell occurring from 16th to 20th approximately.

Sunshine and Radiation:

Sunshine amount was below normal and varied from 64% of normal at Valentia Observatory to 83% of normal at Malin Head. Global radiation was a little below average at Dublin Airport and Birr (93% and 98% respectively) and well below average at Valentia Observatory and Kilkenny (85% and 87%).

Wind:

Strong winds with gale gusts occurred widely on 17th, 20th and 22nd.

Summary:

Generally very wet (except for some southern and western areas), dull and humid.

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

TABLE 1

JULY 1985

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 4.4°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	2.0	-	2	2	20.7	10.8	15.8	-	5.6	7	0	114	-	59	-	2.0	7	0	-	-	57.9	-	0.4	-	-	-	
	11-20	29.4	-	9	6	17.5	10.9	14.2	-	7.8	20	0	99	-	43	-	5.5	15	0	-	-	43.7	-	-0.6	-	-	-	
	21-END	81.0	-	4	4	18.8	11.4	15.1	-	6.8	23	0	118	-	58	-	3.2	23	0	-	-	30.3	-	0.8	-	-	-	
	MONTH	112.4	208	15	12	19.0	11.1	15.0	-	5.6	7	0	329	-	160	-	2.0	7	0	-	-	131.9	-	0.2	-	-	63	
Shannon Airport Co. Clare	1-10	12.3	-	5	4	19.5	12.3	15.9	-	9.3	7	0	115	-	59	-	6.0	7	0	17.4	-	39.7	-	3.0	0	-	-	-
	11-20	38.6	-	9	9	17.2	11.8	14.5	-	10.0	20	0	101	-	45	-	8.0	14	0	15.5	-	38.8	-	5.0	1	-	-	-
	21-END	43.9	-	5	3	18.3	12.7	15.5	-	9.6	28	0	122	-	61	-	7.1	28	0	16.4	-	21.2	-	3.4	1	-	-	-
	MONTH	94.8	144	19	16	18.3	12.3	15.3	-0.2	9.3	7	0	339	95	165	94	6.0	7	0	16.4	-1.0	99.7	69	3.8	2	71	-	-
Cork Airport Co. Cork	1-10	4.0	-	3	2	18.3	11.0	14.6	-	7.8	6	0	102	-	47	-	3.7	7	0	17.7	-	55.3	-	4.1	0	-	-	-
	11-20	37.4	-	7	6	16.5	11.0	13.7	-	8.5	20	0	93	-	38	-	5.4	16	0	15.4	-	39.1	-	6.6	3	-	-	-
	21-END	9.0	-	7	2	17.5	11.5	14.5	-	9.0	27	0	111	-	50	-	4.4	23	0	16.2	-	34.1	-	5.5	1	-	-	-
	MONTH	50.4	69	17	10	17.4	11.2	14.3	-0.5	7.8	6	0	307	93	136	91	3.7	7	0	16.4	-0.2	128.5	77	5.4	4	76	-	-
Fermoy (Coolnakille) Co. Cork	1-10	7.0	-	4	2	18.0	10.7	14.3	-	7.5	6	0	99	-	45	-	3.5	7	0	-	-	N/A	-	3.7	-	-	-	-
	11-20	36.0	-	10	7	16.0	10.1	13.1	-	7.2	20	0	87	-	33	-	7.0	18	0	-	-	38.6	-	4.6	-	-	-	-
	21-END	14.7	-	5	4	17.2	10.8	14.0	-	8.0	27	0	106	-	45	-	5.5	27	0	-	-	24.7	-	4.2	-	-	-	-
	MONTH	57.7	-	19	13	17.1	10.6	13.8	-	7.2	20	0	292	-	123	-	3.5	7	0	-	-	N/A	-	4.2	-	-	N/A	-
Fermoy (Moore Park) Co. Cork	1-10	7.4	-	4	3	19.6	10.8	15.2	-	5.0	6	0	108	-	54	-	1.4	6	0	-	-	50.5	-	2.2	-	-	-	-
	11-20	36.0	-	8	6	17.6	11.3	14.4	-	7.2	20	0	100	-	46	-	0.0	20	0	-	-	34.9	-	3.4	-	-	-	-
	21-END	10.8	-	4	3	18.6	11.4	15.0	-	6.4	23	0	117	-	57	-	1.0	21	0	-	-	19.2	-	2.8	-	-	-	-
	MONTH	54.2	90	16	12	18.6	11.1	14.9	-	5.0	6	0	325	-	157	-	0.0	20	0	-	-	104.6	-	2.8	-	-	52	-
Roches Point Co. Cork	1-10	1.8	-	1	1	17.5	11.5	14.5	-	7.5	6	0	101	-	46	-	3.3	6	0	17.6	-	56.5	-	4.0	0	-	-	-
	11-20	36.4	-	7	6	16.8	11.6	14.2	-	9.0	20	0	98	-	42	-	6.8	20	0	15.5	-	38.4	-	6.6	3	-	-	-
	21-END	43.7	-	5	4	17.2	12.0	14.6	-	9.9	23	0	112	-	51	-	5.3	23	0	16.0	-	37.1	-	5.6	1	-	-	-
	MONTH	81.9	137	13	11	17.2	11.7	14.4	-0.7	7.5	6	0	311	91	139	88	3.3	6	0	16.3	-0.8	132.0	76	5.4	4	77	-	-
Glencolumbkille Co. Donegal	1-10	61.2	-	9	5	17.0	11.6	14.3	-	9.1	6	0	99	-	43	-	1.5	7	0	-	-	28.7	-	3.0	-	-	-	-
	11-20	71.8	-	10	9	15.5	9.9	12.7	-	7.4	13	0	83	-	29	-	1.0	13	0	-	-	44.6	-	4.4	-	-	-	-
	21-END	37.5	-	11	6	17.4	11.5	14.5	-	8.3	23	0	111	-	50	-	3.0	28	0	-	-	33.0	-	2.9	-	-	-	-
	MONTH	170.5	-	30	20	16.7	11.0	13.8	-	7.4	13	0	293	-	122	-	1.0	13	0	-	-	106.3	-	3.4	-	-	59	-

- 2 -

TABLE 1 (CONTINUED)

JULY

1985

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 4.4°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	37.4	-	9	5	17.3	11.7	14.5	-	6.7	6	0	101	-	46	-	5.6	6	0	-	-	-	-	-	-	-	-	-	-
	11-20	61.2	-	9	9	15.1	9.7	12.4	-	5.5	13	0	80	-	27	-	4.4	13	0	-	-	-	-	-	-	-	-	-	-
	21-END	28.9	-	8	6	18.0	11.5	14.8	-	8.0	21	0	114	-	53	-	6.6	21	0	-	-	-	-	-	-	-	-	-	-
	MONTH	127.5	117	26	20	16.8	11.0	13.9	-	5.5	13	0	295	-	127	-	4.4	13	0	-	-	-	-	-	-	-	-	-	-
Malin Head Co. Donegal	1-10	33.6	-	7	6	16.5	11.9	14.2	-	9.7	7	0	98	-	42	-	6.9	6	0	15.9	-	27.6	-	5.9	0	-	-	-	-
	11-20	52.6	-	9	8	15.2	10.6	12.9	-	8.6	13	0	85	-	30	-	6.0	14	0	14.6	-	46.1	-	8.9	7	-	-	-	-
	21-END	66.1	-	8	7	16.3	12.2	14.2	-	10.4	21	0	108	-	47	-	6.9	30	0	16.0	-	38.9	-	5.9	1	-	-	-	-
	MONTH	152.3	190	24	21	16.0	11.6	13.8	+0.0	8.6	13	0	291	96	119	98	6.0	14	0	15.5	-0.1	112.6	83	6.8	8	69	-	-	-
Casement Aerodrome Co. Dublin	1-10	1.1	-	1	0	21.3	11.0	16.2	-	6.4	7	0	118	-	63	-	4.2	7	0	18.3	-	48.5	-	3.8	0	-	-	-	-
	11-20	28.1	-	8	5	17.7	10.7	14.2	-	7.4	15	0	98	-	43	-	5.4	15	0	15.6	-	37.1	-	6.5	3	-	-	-	-
	21-END	58.9	-	7	4	18.9	11.5	15.2	-	7.1	23	0	119	-	58	-	4.6	23	0	16.2	-	28.5	-	4.2	1	-	-	-	-
	MONTH	88.1	163	16	9	19.3	11.1	15.2	+0.3	6.4	7	0	334	99	164	101	4.2	7	0	16.7	-	114.1	75	4.8	4	78	-	-	-
Dublin Airport Co. Dublin	1-10	16.4	-	3	1	20.2	12.1	16.1	-	8.6	7	0	117	-	62	-	7.2	7	0	18.9	-	47.7	-	3.6	0	-	-	-	-
	11-20	30.2	-	8	6	17.6	11.0	14.3	-	7.8	15	0	99	-	44	-	6.2	15	0	16.3	-	39.1	-	5.2	1	-	-	-	-
	21-END	60.6	-	8	5	18.9	11.6	15.2	-	8.0	21	0	119	-	58	-	5.5	21	0	16.8	-	38.1	-	4.0	1	-	-	-	-
	MONTH	107.2	182	19	12	18.9	11.6	15.2	+0.2	7.8	15	0	336	99	164	103	5.5	21	0	17.4	-0.0	124.9	76	4.3	2	80	-	-	-
Kinsealy Co. Dublin	1-10	9.8	-	4	2	20.0	12.3	16.2	-	8.7	7	0	118	-	62	-	5.6	7	0	-	-	49.2	-	2.9	-	-	-	-	-
	11-20	30.2	-	9	7	17.8	11.6	14.7	-	8.1	15	0	103	-	48	-	5.4	20	0	-	-	39.1	-	3.5	-	-	-	-	-
	21-END	88.1	-	8	6	18.9	11.7	15.3	-	8.4	21	0	120	-	59	-	3.6	23	0	-	-	38.4	-	2.9	-	-	-	-	-
	MONTH	128.1	229	21	15	18.9	11.9	15.4	-	8.1	15	0	341	-	169	-	3.6	23	0	-	-	126.7	-	3.1	-	76	-	-	-
Galway Co. Galway	1-10	10.6	-	4	3	18.1	12.4	15.2	-	9.3	6	0	108	-	53	-	5.0	6	0	17.6	-	37.1	-	4.5	0	-	-	-	-
	11-20	31.5	-	8	7	16.8	11.4	14.1	-	9.1	20	0	97	-	41	-	4.9	14	0	15.5	-	44.8	-	6.2	3	-	-	-	-
	21-END	27.5	-	8	5	18.8	12.5	15.6	-	10.5	21	0	124	-	62	-	7.0	23	0	16.8	-	32.4	-	4.3	2	-	-	-	-
	MONTH	69.6	88	20	15	17.9	12.1	15.0	+0.2	9.1	20	0	329	-	156	-	4.9	14	0	16.6	-	114.3	78	5.0	5	78	-	-	-
Killarney (Muckross House) Co. Kerry	1-10	5.4	-	3	3	18.6	11.1	14.8	-	7.8	1	0	104	-	50	-	2.9	6	0	-	-	N/A	-	-	-	-	-	-	-
	11-20	34.1	-	10	8	16.3	12.0	14.2	-	10.0	20	0	98	-	42	-	6.6	20	0	-	-	28.1	-	-	-	-	-	-	-
	21-END	9.6	-	6	3	17.4	12.5	15.0	-	9.4	23	0	116	-	55	-	4.6	23	0	-	-	26.0	-	-	-	-	-	-	-
	MONTH	49.1	56	19	14	17.4	11.9	14.7	-	7.8	1	0	318	-	147	-	2.9	6	0	-	-	N/A	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

JULY 1985

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
Cahirciveen (Valentia Obsy.) Co. Kerry	1-10	13.1	-	6	3	17.8	12.0	14.9	-	9.2	7	0	105	-	49	-	5.7	6	0	17.3	-	46.2	-	3.9	0	-
	11-20	40.4	-	9	8	16.1	12.3	14.2	-	11.1	20	0	98	-	42	-	8.6	20	0	15.7	-	29.8	-	5.5	0	-
	21-END	13.0	-	8	4	16.8	12.4	14.6	-	8.6	27	0	112	-	51	-	6.0	28	0	16.4	-	18.0	-	4.5	1	-
	MONTH	66.5	77	23	15	16.9	12.2	14.6	-0.2	8.6	27	0	315	95	142	95	5.7	6	0	16.5	-0.6	93.0	64	4.6	1	61
Ardfert (Liscahane) Co. Kerry	1-10	12.9	-	7	4	18.9	10.9	14.9	-	7.9	7	0	105	-	50	-	4.0	7	0	-	-	43.7	-	-	-	-
	11-20	46.3	-	10	8	16.7	11.6	14.1	-	8.4	14	0	97	-	42	-	3.8	14	0	-	-	35.5	-	-	-	-
	21-END	8.9	-	7	3	18.1	12.0	15.1	-	8.4	23	0	117	-	56	-	5.3	23	0	-	-	23.4	-	-	-	-
	MONTH	68.1	-	24	15	17.9	11.5	14.7	-	7.9	7	0	320	-	148	-	3.8	14	0	-	-	102.6	-	-	-	-
Lullymore Co. Kildare	1-10	5.4	-	1	1	20.5	10.1	15.3	-	5.0	7	0	109	-	56	-	2.2	8	0	-	-	48.1	-	3.0	-	-
	11-20	45.3	-	9	9	16.8	10.1	13.5	-	6.7	15	0	91	-	37	-	0.6	15	0	-	-	34.5	-	4.3	-	-
	21-END	34.9	-	3	3	18.6	11.0	14.8	-	6.5	23	0	115	-	55	-	0.5	23	0	-	-	28.9	-	3.5	-	-
	MONTH	85.6	134	13	13	18.6	10.4	14.5	-	5.0	7	0	314	-	147	-	0.5	23	0	-	-	111.5	-	3.6	-	65
Kilkenny Co. Kilkenny	1-10	1.1	-	3	0	21.0	10.3	15.6	-	4.6	7	0	112	-	59	-	-0.8	7	1	19.1	-	54.2	-	2.1	0	-
	11-20	42.8	-	8	8	18.0	11.2	14.6	-	7.0	20	0	102	-	47	-	2.3	20	0	16.1	-	36.9	-	3.6	0	-
	21-END	59.8	-	6	2	19.2	11.9	15.5	-	6.7	21	0	122	-	62	-	2.2	21	0	16.7	-	25.9	-	2.8	1	-
	MONTH	103.7	176	17	10	19.4	11.1	15.3	+0.1	4.6	7	0	336	98	168	101	-0.8	7	1	17.3	-0.7	117.0	80	2.9	1	72
Mooncoin (Silverspring) Co. Kilkenny	1-10	11.9	-	3	2	20.2	10.4	15.3	-	4.5	7	0	109	-	56	-	1.0	7	0	-	-	66.7	-	-	-	-
	11-20	24.9	-	9	4	17.6	11.2	14.4	-	6.9	20	0	100	-	46	-	2.3	20	0	-	-	30.6	-	-	-	-
	21-END	24.6	-	5	4	18.9	11.7	15.3	-	7.0	21	0	120	-	59	-	1.7	21	0	-	-	32.7	-	-	-	-
	MONTH	61.4	101	17	10	18.9	11.1	15.0	-	4.5	7	0	329	-	161	-	1.0	7	0	-	-	130.0	-	-	-	-
Ballinamore Co. Leitrim	1-10	25.5	-	9	6	18.5	11.0	14.7	-	5.7	7	0	103	-	49	-	0.9	7	0	-	-	24.8	-	1.9	-	-
	11-20	39.8	-	10	8	16.3	9.9	13.1	-	5.5	13	0	87	-	34	-	0.9	13	0	-	-	39.4	-	3.0	-	-
	21-END	26.9	-	8	4	18.8	11.3	15.0	-	6.7	21	0	117	-	57	-	2.6	23	0	-	-	33.2	-	2.4	-	-
	MONTH	92.2	112	27	18	17.9	10.6	14.3	-	5.5	13	0	308	-	139	-	0.9	7	0	-	-	97.4	-	2.4	-	58
Ardee (Boharnamoe) Co. Louth	1-10	15.2	-	5	4	20.6	10.6	15.6	-	5.3	7	0	112	-	58	-	2.1	7	0	-	-	-	-	-	-	-
	11-20	28.2	-	9	8	17.8	9.5	13.6	-	7.1	20	0	92	-	39	-	2.8	15	0	-	-	-	-	-	-	-
	21-END	61.4	-	5	4	19.4	10.5	15.0	-	6.3	23	0	116	-	57	-	3.1	23	0	-	-	-	-	-	-	-
	MONTH	104.8	159	19	16	19.3	10.2	14.7	-	5.3	7	0	321	-	153	-	2.1	7	0	-	-	-	-	-	-	-

TABLE 1 (CONTINUED)

JULY 1985

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 4.4°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	18.6	-	8	4	18.9	11.9	15.4	-	8.8	6	0	110	-	55	-	2.7	7	0	-	-	32.4	-	2.7	-	-	-	-
	11-20	34.3	-	9	6	16.6	10.3	13.5	-	5.4	13	0	91	-	37	-	-1.6	14	2	-	-	47.8	-	3.7	-	-	-	-
	21-END	10.4	-	6	3	18.6	11.6	15.1	-	7.7	23	0	118	-	58	-	1.8	23	0	-	-	31.9	-	2.5	-	-	-	-
	MONTH	63.3	86	23	13	18.1	11.3	14.7	-	5.4	13	0	319	-	149	-	-1.6	14	2	-	-	112.1	-	3.0	-	61	-	-
Belmullet Co. Mayo	1-10	23.2	-	7	5	16.4	12.1	14.3	-	9.6	6	0	99	-	43	-	6.1	6	0	16.0	-	23.8	-	6.1	0	-	-	-
	11-20	32.3	-	9	8	15.5	10.3	12.9	-	6.5	13	0	85	-	31	-	2.8	13	0	15.3	-	57.8	-	7.3	4	-	-	-
	21-END	24.9	-	9	6	16.7	11.7	14.2	-	8.5	28	0	107	-	46	-	5.0	28	0	16.2	-	26.6	-	5.1	0	-	-	-
	MONTH	80.4	112	25	19	16.2	11.4	13.8	-0.3	6.5	13	0	291	94	119	92	2.8	13	0	15.9	-0.5	108.2	78	6.1	4	64	-	-
Claremorris Co. Mayo	1-10	23.4	-	9	5	18.6	11.2	14.9	-	7.6	6	0	105	-	50	-	4.3	6	0	16.5	-	24.1	-	3.7	0	-	-	-
	11-20	30.2	-	9	7	16.9	9.5	13.2	-	6.1	14	0	88	-	35	-	2.5	14	0	15.1	-	37.4	-	5.6	3	-	-	-
	21-END	10.3	-	6	4	18.3	11.4	14.8	-	7.7	23	0	115	-	54	-	4.0	21	0	16.1	-	20.6	-	4.4	1	-	-	-
	MONTH	63.9	85	24	16	17.9	10.7	14.3	+0.0	6.1	14	0	308	97	139	99	2.5	14	0	15.9	-0.2	82.1	67	4.5	4	59	-	-
Glenamoy Co. Mayo	1-10	30.9	-	9	6	17.4	12.4	14.9	-	7.7	6	0	105	-	50	-	4.5	6	0	-	-	24.3	-	3.4	-	-	-	-
	11-20	63.4	-	10	9	15.5	10.2	12.9	-	6.4	13	0	85	-	31	-	1.5	14	0	-	-	45.6	-	4.0	-	-	-	-
	21-END	29.4	-	7	5	16.9	12.1	14.5	-	9.0	28	0	111	-	50	-	3.9	28	0	-	-	23.5	-	2.1	-	-	-	-
	MONTH	123.7	137	26	20	16.6	11.6	14.1	-	6.4	13	0	301	-	131	-	1.5	14	0	-	-	93.4	-	3.2	-	54	-	-
Dunsany (Grange) Co. Meath	1-10	5.7	-	5	1	19.7	11.1	15.4	-	6.5	7	0	110	-	55	-	1.6	7	0	-	-	41.0	-	-	-	-	-	-
	11-20	34.1	-	9	8	16.5	10.2	13.4	-	6.3	15	0	90	-	36	-	1.9	15	0	-	-	38.0	-	-	-	-	-	-
	21-END	60.4	-	5	4	18.4	11.1	14.7	-	6.9	21	0	114	-	54	-	2.9	23	0	-	-	26.2	-	-	-	-	-	-
	MONTH	100.2	150	19	13	18.2	10.8	14.5	-	6.3	15	0	313	-	145	-	1.6	7	0	-	-	105.2	-	-	-	-	-	-
Clones Co. Monaghan	1-10	28.5	-	7	7	18.8	11.4	15.1	-	7.2	7	0	107	-	52	-	2.1	7	0	15.8	-	29.9	-	2.8	0	-	-	-
	11-20	24.8	-	8	6	16.4	10.0	13.2	-	7.5	20	0	88	-	34	-	1.8	13	0	14.5	-	40.9	-	4.7	1	-	-	-
	21-END	46.6	-	10	7	19.0	11.5	15.3	-	7.0	21	0	119	-	59	-	4.3	21	0	15.8	-	32.0	-	3.4	0	-	-	-
	MONTH	99.9	139	25	20	18.1	11.0	14.5	+0.1	7.0	21	0	314	98	145	102	1.8	13	0	15.4	-1.0	102.8	82	3.6	1	66	-	-
Birr Co. Offaly	1-10	11.0	-	4	2	19.7	11.0	15.4	-	6.5	7	0	110	-	55	-	1.8	7	0	18.0	-	37.8	-	2.4	0	-	-	-
	11-20	45.6	-	7	7	16.8	10.8	13.8	-	8.7	15	0	94	-	39	-	5.4	15	0	15.7	-	35.8	-	4.1	0	-	-	-
	21-END	43.8	-	7	5	18.7	11.8	15.3	-	8.8	21	0	119	-	59	-	4.0	28	0	16.6	-	15.0	-	2.7	0	-	-	-
	MONTH	100.4	148	18	14	18.4	11.2	14.8	+0.0	6.5	7	0	323	96	152	97	1.8	7	0	16.8	-0.6	88.6	66	3.1	0	64	-	-

TABLE 1 (CONTINUED)

JULY 1985

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 4.4°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	10.4	-	3	3	19.9	10.8	15.4	-	5.1	7	0	110	-	56	-	0.4	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	39.0	-	9	7	17.2	11.2	14.2	-	8.4	20	0	98	-	43	-	3.6	20	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	21-END	14.2	-	6	4	18.5	11.6	15.1	-	8.4	21	0	117	-	57	-	2.1	23	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	63.6	-	18	14	18.5	11.2	14.9	-	5.1	7	0	325	-	155	-	0.4	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dungarvan (Carriglea) Co. Waterford	1-10	4.6	-	2	2	20.3	11.3	15.8	-	5.6	7	0	114	-	60	-	5.1	7	0	-	-	63.6	-	1.9	-	-	-	-	-	-	-	-	-	-	-	
	11-20	38.5	-	10	6	18.2	11.5	14.8	-	7.0	20	0	104	-	50	-	6.4	20	0	-	-	41.4	-	2.5	-	-	-	-	-	-	-	-	-	-	-	
	21-END	23.6	-	5	4	19.1	12.1	15.6	-	8.1	23	0	123	-	63	-	7.7	23	0	-	-	35.1	-	2.1	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	66.7	100	17	12	19.2	11.7	15.4	-	5.6	7	0	342	-	172	-	5.1	7	0	-	-	140.1	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-
Mullingar Co. Westmeath	1-10	12.1	-	3	2	19.2	10.8	15.0	-	6.6	7	0	106	-	51	-	3.9	7	0	17.1	-	36.0	-	2.7	0	-	-	-	-	-	-	-	-	-	-	
	11-20	43.5	-	8	7	16.4	10.3	13.3	-	7.3	15	0	89	-	35	-	5.3	15	0	15.0	-	32.5	-	4.1	0	-	-	-	-	-	-	-	-	-	-	-
	21-END	49.5	-	6	5	18.7	11.2	14.9	-	6.5	23	0	116	-	56	-	3.5	23	0	16.0	-	21.4	-	3.0	0	-	-	-	-	-	-	-	-	-	-	-
	MONTH	105.1	146	17	14	18.1	10.7	14.4	+0.1	6.5	23	0	311	94	142	93	3.5	23	0	16.0	-0.7	89.9	65	3.3	0	60	-	-	-	-	-	-	-	-	-	
J.F.K. Park Co. Wexford	1-10	3.3	-	1	1	19.9	11.0	15.4	-	7.1	7	0	110	-	56	-	1.5	6	0	-	-	69.9	-	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	32.8	-	8	7	16.9	10.8	13.9	-	6.6	20	0	95	-	40	-	2.0	20	0	-	-	28.4	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	18.4	-	6	4	18.3	11.7	15.0	-	8.5	21	0	117	-	56	-	3.8	21	0	-	-	33.9	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	54.5	81	15	12	18.4	11.2	14.8	-	6.6	20	0	322	-	152	-	1.5	6	0	-	-	132.2	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-
Clonroche Co. Wexford	1-10	8.7	-	2	2	20.3	10.4	15.3	-	6.2	7	0	109	-	55	-	1.0	7	0	-	-	73.9	-	1.6	-	-	-	-	-	-	-	-	-	-	-	
	11-20	39.1	-	9	8	16.7	10.2	13.4	-	6.0	20	0	90	-	37	-	1.3	15	0	-	-	31.9	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	15.2	-	7	4	18.6	10.7	14.6	-	5.8	21	0	112	-	53	-	0.6	23	0	-	-	41.4	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	63.0	82	18	14	18.5	10.4	14.5	-	5.8	21	0	312	-	145	-	0.6	23	0	-	-	147.2	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-
Johnstown Castle Co. Wexford	1-10	2.3	-	2	1	19.1	11.1	15.1	-	7.7	7	0	107	-	52	-	2.0	7	0	-	-	79.5	-	3.2	-	-	-	-	-	-	-	-	-	-	-	
	11-20	35.6	-	9	7	16.3	11.1	13.7	-	8.0	20	0	93	-	38	-	0.6	16	0	-	-	31.0	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	20.6	-	6	4	17.5	11.4	14.5	-	8.4	21	0	111	-	50	-	2.5	23	0	-	-	36.2	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	58.5	84	17	12	17.6	11.2	14.4	-	7.7	7	0	311	-	141	-	0.6	16	0	-	-	146.7	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-
Rosslare Co. Wexford	1-10	0.1	-	0	0	18.8	11.4	15.1	-	8.2	6	0	107	-	52	-	6.1	6	0	19.7	-	86.5	-	3.9	0	-	-	-	-	-	-	-	-	-	-	
	11-20	32.8	-	9	8	16.8	11.6	14.2	-	7.3	15	0	98	-	43	-	5.0	15	0	16.0	-	35.2	-	6.0	3	-	-	-	-	-	-	-	-	-	-	-
	21-END	16.7	-	4	3	17.6	12.2	14.9	-	9.1	21	0	116	-	54	-	6.1	21	0	16.8	-	34.3	-	5.2	1	-	-	-	-	-	-	-	-	-	-	-
	MONTH	49.6	84	13	11	17.7	11.8	14.7	-0.4	7.3	15	0	320	95	149	96	5.0	15	0	17.5	-0.7	156.0	80	5.0	4	83	-	-	-	-	-	-	-	-	-	

TABLE 2 GLOBAL SOLAR RADIATION

STATION	PERIOD	AMOUNT
		MJ/m ²
Malin Head Co. Donegal	1-10	128.44
	11-20	157.58
	21-end	158.57
	Month	444.59
Dublin Airport Co. Dublin	1-10	179.76
	11-20	142.91
	21-end	140.10
	Month	462.77
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	168.42
	11-20	135.73
	21-end	122.57
	Month	426.72
Kilkenny Co. Kilkenny	1-10	186.65
	11-20	135.19
	21-end	135.10
	Month	456.94
Belmullet Co. Mayo	1-10	122.27
	11-20	170.83
	21-end	140.82
	Month	433.92
Clones Co. Monaghan	1-10	139.43
	11-20	138.09
	21-end	148.75
	Month	426.27
Birr Co. Offaly	1-10	181.70
	11-20	152.51
	21-end	141.64
	Month	475.85

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	36.9	33	68	-
	11-20	21.2	-	51	17
	21-end	N/A	N/A	N/A	N/A
	Month	N/A	-	-	-
Kinsealy Co. Dublin	1-10	33.5	24	42	-
	11-20	26.7	-	35	7
	21-end	30.4	-	0	59
	Month	90.6	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	10.7	4	4	-
	11-20	9.6	-	0	35
	21-end	11.5	-	0	2
	Month	31.8	-	-	-
Ballinamore Co. Leitrim	1-9	10.7	-	0	5
	10-20	16.9	-	0	33
	21-end	18.0	-	0	9
	Month	45.6	-	-	-
Glenamoy Co. Mayo	1-9	12.8	-	0	10
	10-20	22.1	-	0	50
	21-end	12.2	-	0	19
	Month	47.1	-	-	-
Johnstown Castle Co. Wexford	1-10	33.8	32	48	-
	11-20	20.0	-	28	20
	21-end	17.5	-	25	3
	Month	71.3	-	-	-

- 7 -

TABLE 4 SOIL CLIMATE (MULLINGAR)

BARE SOIL TYPE	PERIOD	Mean Temperature (0°C at 100mm)			TEMPERATURE GRADIENT (to 200mm)	SOIL WATER POTENTIAL (hPa) (at depths)	
		Max.	Daily	Min.		75mm	200mm
		Peat	1-10	17.9	16.7	15.0	-0.6
	11-20	15.9	14.8	13.8	+0.2	55	71
	21-end	16.5	15.6	14.1	-0.2	68	64
Mineral	1-10	18.7	16.3	13.7	-0.2	325	160
	11-20	16.5	14.6	12.9	+0.3	74	126
	21-end	17.5	15.7	13.4	-0.1	76	65

special topic

WEATHER AND POTATO BLIGHT (The 1985 Season)

Late blight, caused by *Phytophthora infestans* (Mont.) de Bary, is the most serious form of disease to affect potatoes, causing significant yield losses to unprotected crops in most years. The disease is spread in suitable conditions of temperature, humidity and moisture. 'Critical Periods' have been defined as being sustained spells of warm and humid conditions in excess of eleven hours (in Ireland), accompanied by spells of mist, drizzle or rain to promote leaf wetness. The subsequent continuation of these conditions promotes spore activity and the spread of infection. The duration of favourable conditions in any spell which immediately follows the critical period is expressed in terms of accumulation of effective blight hours (EBH). (See the Special Topics in the April and May 1984 issues of this Bulletin). Weather conditions and disease levels in crops have been especially significant to mid-July in 1985. A summary of the more significant spells follows together with the observed blight levels on crops.

Summary of Significant Spells of Blight:

A spell of weather favouring the spread of potato blight affected the early crops in southern areas in late May. The first extensive spell affecting the mid-early and late crops occurred June 20th-23rd in which there was widespread mist, rain and drizzle although the period was relatively cool. In particular in this spell 47 EBH were accumulated at Dublin Airport and 28 EBH at Clones and Mullingar. Subsequently Inspectors of the Department of Agriculture reported a significant increase in blight levels in the Dublin and East Cork areas.

Intermittent blight spells occurred from June 28th to July 5th in the south and southwest, amounting to 75 EBH at Roche's Point and 20 EBH at Shannon Airport. The persistently wet conditions and the period of rapid new growth made crops particularly vulnerable. The next major spell of blight conditions began in northern areas on July 8/9th and spread to all regions on 10/11th as complex frontal systems in a moist southwesterly airflow became established over Ireland. This warm and wet spell generally continued to 14th. Some 30 to 70 EBH were accumulated at many stations. The midlands and east were least affected this time with totals reaching less than 10 EBH. Inspectors' reports for week ending July 7 indicated first sightings in many widely separated areas. Ongoing observations in the Dublin area showed that 5% of some crops had reached the 5% infection level with rapid spread. From Castlefin, Co. Donegal blight was reported as 10% at the 5% infection level and 5% at the 25% level. Subsequent reports also noted a rapid spread of the disease.

Observed Blight Levels:

Table 1 shows the level of infection reported by inspectors over the six years 1980-1985 in the third week of July at the specified districts together with the accumulations of EBH in the period June 10-July 19 at the nearest weather station.

From the tables it is seen that reported blight levels are considerably greater this year in the Dublin area, that conditions approximate to 1981 in the Sligo area, are less than 1981 in Wexford and considerably less than 1981 in East Cork. It can also be seen that in a general sense the accumulations of EBH at the nearest weather station reflect the situation relative to the normal (EBH) for the station although no generalised correlation obtains.

It must be borne in mind, however, that blight levels in crops not only depend on the character of the weather but also to a significant degree in the effectiveness of the spray programme.

Table 1: Percent of the crop (0-100%) observed at the stated % of Blighted Foliage (0-50%).
(based on British Mycological Society rating scale)

T Keane
Meteorological Service

DUBLIN								EAST CORK							
YEAR	0%	0.1%	1%	5%	25%	50%	EBH	YEAR	0%	0.1%	1%	5%	25%	50%	EBH
1980	98	2	0	0	0	0	60	1980	85	10	5	0	0	0	47
1981	50	42	8	0	0	0	17	1981	5	0	5	25	55	10	141
1982	95	4	1	0	0	0	11	1982	20	60	0	0	0	0	169
1983	75	25	0	0	0	0	4	1983	10	0	0	0	0	0	36
1984	97	3	0	0	0	0	36	1984	90	5	5	0	0	0	25
1985	30	0	5	20	33	10	55	1985	30	50	15	3	2	0	177

(Dublin Airport long term average EBH: 29) (Roches Point long term average EBH: 111)

SLIGO								WEXFORD							
YEAR	0%	0.1%	1%	5%	25%	50%	EBH	YEAR	0%	0.1%	1%	5%	25%	50%	EBH
1980	98	4.5	0.5	0	0	0	50	1980	90	9.5	0.5	0	0	0	75
1981	60	20	15	4	1	0	79	1981	50	30	12	7	1	0	72
1982	97	3	0	0	0	0	23	1982	50	18	2	0	0	0	30
1983	70	20	8	2	0	0	87	1983	60	33	6	1	0	0	58
1984	92	6	2	0	0	0	105	1984	94	5	1	0	0	0	15
1985	60	16	20	4	0	0	104	1985	30	63	5	2	0	0	108

(Claremorris long term average EBH: 63) (Rosslare long term average EBH: 84)