

METEOROLOGICAL SERVICE



AGROMETEOROLOGICAL BULLETIN

MAY 1982

The Weather of May

A northwesterly airflow, becoming strong and gusty on most days, dominated from the 1st to the 5th. The spell was cold and showery, some of the showers being of hail or snow. The wettest day of the spell occurred on the 2nd, most stations recording 10 to 20 mm of precipitation with a maximum of 30 mm at Shannon Airport. Frost on the morning of the 5th proved to be significant in many areas for tender young plants and blossoms; air frost developed at most stations and ground temperature fell to as low as -5 to -7 °C in places.

Changeable conditions set in on the 6th. There were showers or spells of rain on most days. Although the weather had become milder, nevertheless ground frost occurred on most nights up to the 9th, being sharp and widespread in the east on the 8th. Thereafter temperatures recovered generally, the weather was mild and humid and a southeasterly airflow dominated. Spells of rain occurred on most days. The airflow became predominantly southwesterly from the 16th and some thundery troughs affected the country, heaviest falls of rain occurring in the south and west.

Ridge conditions developed on the 26th. Showers died out slowly on the following days and settled weather prevailed from the 28th to the end of the month.

Monthly Amounts of Precipitation were above normal in the west and north and below normal in the southeast, east and parts of the midlands. Values varied from 141% of normal at Malin Head to 46% of normal at Rosslare. Soil moisture deficits continued to be moderately high at both Johnstown Castle in the southeast and at Kinsealy in the east. Major spells of weather favourable to the spread of potato blight occurred in southern regions from 13th to 15th and 21st/22nd.

Mean Monthly Air Temperature varied from 0.4 °C above normal at Shannon Airport and at Malin Head to 0.5 °C below normal at Roche's Point and at Kilkenny. Many inland stations had between 5 and 8 nights with ground frost during the first ten day period, the most significant dates being the 5th, when air frost developed, and the 8th when sharp ground frost was widespread. Mean soil temperature (100mm) varied from 0.2 °C above average at Rosslare to 0.8 °C below average at Mullingar and Clones.

Mean Duration of Bright Sunshine was below normal everywhere except in parts of the west where it was about normal. Values varied from 100% of normal at Shannon Airport and Galway to 78% of normal at Claremorris. Except in parts of the west, the second period of ten days was dullest. Global solar radiation was 3% to 5% below average at most stations but 8% above average at Valentia, although sunshine duration at the latter station was 8% below normal.

Strong Winds and Gale Gusts occurred on most days in the period from the 1st to 5th, and in some places on the 28th and 29th.

Summary Some damaging frost occurred during the first eight days. The month had less than normal rainfall, except in parts of the west; sunshine was below normal at most stations.

(see page 8 for Special Topic)

The data contained in this Bulletin are provisional. Some of the material in Table 1 will be published in its final form later in the Monthly Weather Report; final values of Solar Radiation at stations; marked "e" in Table 2 will be published in the Annual Summary of Solar Radiation.

TABLE 1

May 1982

STATION	PERIOD	RAINFALL (MM.)				TEMPERATURE °C												BRIGHT SUNSHINE		WIND			
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR						GROUND		SOIL (10 CM)		MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms ⁻¹)	DAYS WITH GALE GUSTS				
						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST ABOVE 4.4°C	DEGREE DAYS ABOVE 10.0°C	LOWEST °GRASS-MIN. °	DATE					DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE	
Carlow (Oak Park) Co. Carlow	1-10	13.0	/	3	2	11.8	3.2	7.5	/	0.5	05	0	31	3	-1.6	05	6	/	/	5.50	/	2	/
	11-20	27.9	/	7	6	16.1	7.9	12.0	/	3.3	11	0	76	20	-1.0	11	1	/	/	2.78	/	4	/
	21-end	12.9	/	5	4	17.2	8.1	12.7	/	3.3	27	0	95	39	-1.0	27	1	/	/	5.99	/	2	/
	Month	53.8	/	15	12	15.1	6.5	10.8	/	0.5	05	0	202	62	-1.6	05	8	/	/	4.80	/	3	/
Shannon Airport Co. Clare	1-10	25.9	-	6	5	12.2	4.9	8.5	-	0.3	05	0	41	4	-3.3	05	3	10.1	-	5.77	-	6	4
	11-20	26.2	-	9	7	16.5	9.4	13.0	-	6.4	19	0	86	30	2.9	18	0	13.2	-	6.50	-	5	2
	21-end	20.0	-	6	5	17.8	9.9	13.9	-	7.1	27	0	104	43	2.6	27	0	14.4	-	6.83	-	6	0
	Month	72.1	113	21	17	15.6	8.1	11.9	+0.4	0.3	05	0	231	77	-3.3	05	3	12.6	-0.6	6.38	100	6	6
Fermoy (Moore Park) Co. Cork	1-10	18.6	-	8	6	12.0	2.9	7.5	/	-2.6	05	1	31	2	-5.4	05	7	/	/	4.81	/	3	/
	11-20	36.8	-	9	8	15.6	7.5	11.6	/	3.0	19	0	72	16	-3.3	18	3	/	/	4.92	/	2	/
	21-end	7.3	-	5	4	17.2	7.7	12.5	/	0.3	27	0	93	34	-5.9	27	2	/	/	5.75	/	3	/
	Month	62.7	92	22	18	15.0	6.1	10.6	/	-2.6	05	1	196	52	-5.9	27	12	/	/	5.18	/	3	/
Mallow Co. Cork	1-10	27.6	-	8	6	11.9	3.7	7.8	/	-1.4	05	1	34	3	-2.7	05	3	/	/	3.93	/	/	/
	11-20	40.3	-	9	8	15.7	8.0	11.9	/	3.8	18	0	75	16	2.6	18	0	/	/	5.15	/	/	/
	21-end	9.0	-	6	3	17.3	7.7	12.5	/	1.4	26	0	94	38	0.0	26	0	/	/	5.86	/	/	/
	Month	76.9	107	23	17	15.0	6.5	10.8	/	-1.4	05	1	203	57	-2.7	05	3	/	/	5.01	/	/	/
Roche's Point Co. Cork	1-10	13.9	-	5	3	11.4	5.3	8.4	-	0.9	05	0	40	1	-1.5	05	1	10.6	-	4.46	-	6	4
	11-20	40.5	-	6	6	13.8	9.7	11.7	-	7.8	19	0	73	18	0.4	18	0	13.3	-	6.23	-	5	1
	21-end	20.6	-	5	4	15.1	9.6	12.3	-	6.3	27	0	87	26	4.0	27	0	14.0	-	6.74	-	5	1
	Month	75.0	115	16	13	13.5	8.2	10.8	-0.5	0.9	05	0	200	45	-1.5	05	1	12.7	-0.2	5.84	88	5	6
Glencolumbkille Co. Donegal	1-10	70.1	/	10	7	11.1	3.9	7.5	/	1.4	05	0	31	6	-4.0	05	8	/	/	4.45	/	5	/
	11-20	20.1	/	7	5	16.1	8.7	12.4	/	5.5	11	0	80	21	-0.3	18	1	/	/	7.15	/	3	/
	21-end	43.8	/	8	7	15.8	9.5	12.7	/	8.0	27	0	95	39	0.5	27	0	/	/	5.20	/	4	/
	Month	134.0	/	25	19	14.4	7.4	10.9	/	1.4	05	0	206	66	-4.0	05	9	/	/	5.59	/	4	/
Glenties Co. Donegal	1-10	50.2	-	8	7	11.1	2.5	6.8	/	-2.0	05	2	24	3	-5.0	05	6	/	/	N/A	/	/	/
	11-20	16.1	-	7	7	16.7	7.5	12.1	/	2.5	18	0	77	19	-1.0	11	1	/	/	6.26	/	/	/
	21-end	32.2	-	7	5	16.6	8.0	12.3	/	3.0	30	0	92	36	-1.8	27	1	/	/	5.43	/	/	/
	Month	98.5	111	22	19	14.9	6.0	10.5	/	-2.0	05	2	193	58	-5.0	05	8	/	/	N/A	/	/	/

Notes on the tables in January issue

TABLE 1 (Continued)

May 1982

STATION	PERIOD	RAINFALL (MM.)				TEMPERATURE °C														BRIGHT SUNSHINE		WIND	
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR							GROUND			SOIL (10 CM)				MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (MS ⁻¹)	DAYS WITH GALE GUSTS
						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.0°C	DEGREE DAYS ABOVE 10.0°C	LOWEST "GRASS-MIN."	DATE	DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE				
Malin Head e Co. Donegal	1-10	28.9	-	5	4	10.5	3.7	7.1	-	1.0	07	0	27	2	-3.5	07	1	9.1	-	6.07	-	9	5
	11-20	24.1	-	6	6	15.0	8.6	11.8	-	5.2	11	0	74	20	-0.4	11	1	13.7	-	6.19	-	5	1
	21-end	28.9	-	8	5	16.3	9.1	12.7	-	5.7	27	0	91	30	2.0	21	0	13.9	-	6.14	-	7	7
	Month	81.9	141	19	15	14.0	7.2	10.6	+0.4	1.0	07	0	192	52	-3.5	07	2	12.3	+0.2	6.13	92	7	13
Casement Aerodrome Co. Dublin	1-10	10.4	-	4	2	11.7	1.8	6.7	-	-2.4	08	3	23	1	-7.4	08	8	9.2	-	6.89	-	6	4
	11-20	19.0	-	6	5	16.1	8.0	12.1	-	4.0	19	0	77	22	-1.0	11	2	12.4	-	3.84	-	3	1
	21-end	28.6	-	6	6	17.9	7.9	12.9	-	3.2	27	0	94	32	-0.5	30	1	13.8	-	6.75	-	6	1
	Month	58.0	97	16	13	15.3	6.0	10.6	0.0	-2.4	08	3	194	55	-7.4	08	11	11.8	-	5.85	91	5	6
Dublin Airport e Co. Dublin	1-10	12.7	-	4	2	11.6	3.2	7.4	-	1.0	06	0	30	2	-5.0	08	3	10.2	-	8.17	-	6	3
	11-20	16.8	-	7	5	15.1	8.4	11.8	-	5.8	19	0	74	18	-0.5	11	1	13.1	-	3.85	-	3	0
	21-end	30.1	-	6	5	17.2	9.2	13.2	-	5.5	27	0	97	35	2.8	30	0	14.5	-	6.31	-	5	2
	Month	59.6	96	17	12	14.7	7.0	10.9	+0.3	1.0	06	0	201	55	-5.0	08	4	12.6	-0.3	6.12	95	5	5
Kinsealy Co. Dublin	1-10	14.3	-	4	3	11.8	3.0	7.4	/	-1.0	07	2	30	2	-3.0	07	6	/	/	7.79	/	5	/
	11-20	23.5	-	6	6	14.6	8.0	11.3	/	4.7	11	0	69	12	-2.6	11	2	/	/	3.64	/	3	/
	21-end	19.7	-	6	6	17.3	9.0	13.2	/	4.9	27	0	101	45	2.1	27	0	/	/	6.20	/	4	/
	Month	57.5	97	16	15	14.7	6.7	10.7	/	-1.0	07	2	200	59	-3.0	07	8	/	/	5.89	/	4	/
Galway Co. Galway	1-10	37.0	-	9	5	11.1	4.3	7.7	-	-0.5	05	1	33	2	-4.5	05	2	10.4	-	5.35	-	5	2
	11-20	17.9	-	6	6	16.1	8.9	12.5	-	5.2	11	0	81	25	4.2	11	0	13.9	-	7.96	-	4	0
	21-end	21.5	-	6	4	16.4	10.1	13.2	-	8.9	27	0	97	36	5.7	31	0	15.0	-	6.56	-	6	3
	Month	76.4	102	21	15	14.6	7.8	11.2	-0.2	0.5	05	0	211	63	-4.5	05	2	13.2	-	6.62	100	5	5
Killarney (Muokroas Hse) Co. Kerry	1-10	63.7	/	9	8	11.3	4.8	8.1	/	-0.2	05	1	37	5	-3.2	05	4	/	/	3.98	/	/	/
	11-20	24.4	/	9	7	15.3	8.9	12.1	/	5.9	19	0	77	19	2.5	18	0	/	/	6.37	/	/	/
	21-end	19.2	/	7	5	16.4	10.1	13.3	/	3.2	27	0	102	46	0.6	27	0	/	/	6.71	/	/	/
	Month	107.3	/	25	20	14.4	8.0	11.2	/	-0.2	05	1	216	70	-3.2	05	4	/	/	5.72	/	/	/
Cahiriveen e (Valentia Obsy.) Co. Kerry	1-10	57.5	-	9	8	11.8	5.3	8.6	-	1.4	03	0	42	3	-0.9	05	2	10.9	-	5.61	-	6	6
	11-20	16.6	-	6	5	15.6	9.3	12.4	-	6.9	19	0	80	24	5.0	18	0	14.2	-	6.44	-	6	3
	21-end	20.1	-	6	5	16.0	9.9	13.0	-	6.2	27	0	94	32	3.9	27	0	14.2	-	5.95	-	6	3
	Month	94.2	106	21	18	14.5	8.2	11.4	-0.1	1.4	03	0	216	59	-0.9	05	2	13.4	+0.2	6.00	92	6	12

Notes on the tables in January issue

TABLE 1 (Continued)

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						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.4°C	DEGREE DAYS ABOVE 10.0°C	LOWEST "GRASS-MIN."	DATE	DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE				
Lis Cahane (Ardfert) Co. Kerry	1-10	31.0	/	8	7	11.6	3.7	7.7	/	-2.2	05	1	33	3	-6.2	05	5	/	/	8.84	/	/	/
	11-20	14.6	/	7	5	15.9	8.5	12.2	/	6.2	19	0	78	18	0.5	19	0	/	/	6.69	/	/	/
	21-end	12.9	/	4	3	17.0	9.4	13.2	/	5.5	27	0	101	45	-0.6	27	1	/	/	6.71	/	/	/
	Month	58.5	/	19	15	14.9	7.2	11.1	/	-2.2	05	1	212	66	-6.2	05	6	/	/	6.10	/	/	/
Lullymore Co. Kildare	1-10	22.3	-	6	5	11.4	1.3	6.4	/	-1.4	08	5	20	0	-6.9	08	8	/	/	6.00	/	5	/
	11-20	21.2	-	8	4	16.5	6.9	11.7	/	2.4	19	0	73	15	-3.6	19	1	/	/	N/A	/	4	/
	21-end	18.9	-	4	4	18.4	7.1	12.8	/	1.5	27	0	96	40	-4.5	27	2	/	/	5.89	/	4	/
	Month	62.4	93	18	13	15.5	5.2	10.4	/	-1.4	08	5	189	55	-6.9	08	11	/	/	N/A	/	4	/
Kilkenny e Co. Kilkenny	1-10	15.7	-	7	4	12.0	3.0	7.5	-	-0.4	05	1	31	2	-3.8	05	5	10.4	-	5.92	-	4	1
	11-20	25.0	-	9	6	15.6	8.1	11.9	-	4.5	19	0	75	20	0.6	19	0	13.5	-	3.67	-	3	0
	21-end	20.4	-	5	5	17.3	7.4	12.3	-	1.7	27	0	87	26	-1.9	27	1	14.8	-	6.20	-	4	1
	Month	61.1	96	21	15	15.0	6.2	10.6	-0.5	-0.4	05	1	193	48	-3.8	05	6	13.0	0.0	5.29	82	4	2
Mooncoin (Silverspring) Co. Kilkenny	1-10	17.3	-	5	4	11.8	3.8	7.8	/	0.0	05	0	34	3	-5.4	05	7	/	/	5.97	/	/	/
	11-20	33.9	-	8	8	15.4	7.8	11.6	/	3.0	19	0	72	13	-3.0	11	4	/	/	3.67	/	/	/
	21-end	28.8	-	7	5	16.9	8.4	12.7	/	4.9	28	0	95	39	-1.5	27	3	/	/	5.51	/	/	/
	Month	80.0	111	20	17	14.8	6.7	10.8	/	0.0	05	0	201	55	-5.4	05	14	/	/	5.06	/	/	/
Ballinamore Co. Leitrim	1-10	30.3	-	8	6	11.1	2.2	6.7	/	-1.1	05	1	23	1	-3.1	04	7	/	/	3.95	/	3	/
	11-20	33.8	-	8	7	16.1	6.8	11.5	/	3.1	19	0	71	14	-1.0	19	3	/	/	3.89	/	2	/
	21-end	18.5	-	7	4	17.2	7.3	12.3	/	2.8	27	0	91	35	-1.5	27	2	/	/	5.26	/	3	/
	Month	82.6	110	23	17	14.9	5.5	10.2	/	-1.1	05	1	185	50	-3.1	04	12	/	/	4.40	/	3	/
Ardee (Boharnamoe) Co. Louth	1-10	10.2	/	2	1	12.1	1.0	6.6	/	-3.2	08	4	22	1	-7.0	07	7	/	/	/	/	/	/
	11-20	11.0	/	7	5	17.2	6.2	11.7	/	1.7	11	0	73	15	-0.9	11	1	/	/	/	/	/	/
	21-end	19.8	/	6	4	18.0	8.0	13.0	/	2.7	27	0	99	43	3.4	27	0	/	/	/	/	/	/
	Month	41.0	/	15	10	15.8	5.2	10.5	/	-3.2	08	4	194	59	-7.0	07	8	/	/	/	/	/	/
Ballinrobe (Creagh) Co. Mayo	1-10	55.5	-	9	9	11.8	2.4	7.1	/	-2.1	05	2	27	2	-5.6	65	6	/	/	3.87	/	4	/
	11-20	18.9	-	9	5	16.8	6.3	11.6	/	3.0	19	0	72	12	-1.6	19	2	/	/	7.32	/	3	/
	21-end	42.3	-	7	6	16.8	7.4	12.1	/	3.6	27	0	89	28	-1.9	27	1	/	/	5.42	/	4	/
	Month	116.7	137	25	20	15.2	5.4	10.3	/	-2.1	05	2	188	42	-5.6	05	9	/	/	5.53	/	4	/

Notes on the tables in January issue

TABLE 1 (Continued)

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						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.4°C	DEGREE DAYS ABOVE 10.0°C	LOWEST "GRASS-MIN."	DATE	DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE				
Belmullet e Co. Mayo	1-10	39.1	-	7	7	11.1	4.2	7.7	-	1.0	05	0	33	2	-3.2	05	3	10.3	-	5.32	-	7	5
	11-20	7.9	-	5	2	15.8	7.8	11.8	-	4.2	19	0	74	18	0.0	19	0	13.9	-	8.31	-	6	0
	21-end	28.0	-	9	7	15.2	9.5	12.4	-	7.9	27	0	88	26	5.6	31	0	13.7	-	5.42	-	8	7
	Month	75.0	112	21	16	14.1	7.2	10.7	-0.3	1.0	05	0	195	46	-3.2	05	3	12.7	+0.1	6.32	93	7	12
Claremorris e Co. Mayo	1-10	43.4	-	9	7	11.2	3.1	7.1	-	-1.7	05	2	29	2	-6.6	05	4	9.4	-	3.72	-	4	2
	11-20	19.7	-	7	6	16.3	7.4	11.9	-	3.1	19	0	75	21	1.0	19	0	12.6	-	5.87	-	3	0
	21-end	34.6	-	8	5	16.5	8.2	12.4	-	5.0	27	0	88	26	1.4	27	0	13.1	-	4.67	-	5	1
	Month	97.7	134	24	18	14.8	6.3	10.5	0.0	-1.7	05	2	192	49	-6.6	05	4	11.7	-0.3	4.75	78	4	3
Glenamoy Co. Mayo	1-10	44.0	-	8	7	11.4	3.7	7.6	/	-1.2	06	2	31	3	-3.2	06	2	/	/	5.35	/	/	/
	11-20	10.6	-	7	4	16.3	6.9	11.6	/	3.9	20	0	72	14	1.0	19	0	/	/	7.11	/	/	/
	21-end	36.7	-	8	7	16.4	9.1	12.8	/	6.9	28	0	97	41	5.4	27	0	/	/	5.55	/	/	/
	Month	91.3	107	23	18	14.7	6.6	10.7	/	-1.2	06	2	200	58	-3.2	06	2	/	/	5.99	/	/	/
Dunsany (Grange) Co. Meath	1-10	17.3	-	5	3	10.9	1.3	6.1	/	-4.6	08	3	18	0	-8.0	08	8	/	/	6.47	/	/	/
	11-20	20.4	-	7	5	15.8	7.2	11.5	/	3.6	19	0	71	13	-2.4	19	2	/	/	3.75	/	/	/
	21-end	21.1	-	7	7	16.8	7.7	12.3	/	2.3	27	0	91	32	-3.3	27	2	/	/	5.89	/	/	/
	Month	58.8	92	19	15	14.6	5.5	10.1	/	-4.6	08	3	180	45	-8.0	08	12	/	/	5.39	/	/	/
Clones e Co. Monaghan	1-10	24.7	-	6	4	10.7	2.3	6.5	-	-1.1	05	1	22	1	-5.2	05	6	8.5	-	4.85	-	4	3
	11-20	17.1	-	6	6	16.2	7.4	11.8	-	3.0	11	0	74	19	-1.0	19	1	12.1	-	4.11	-	3	0
	21-end	14.6	-	7	5	17.3	8.1	12.7	-	4.0	27	0	91	30	-2.0	27	1	13.8	-	6.70	-	6	1
	Month	56.4	82	19	15	14.8	6.0	10.4	-0.1	-1.5	05	1	187	50	-5.2	05	8	11.5	+0.8	5.27	90	4	4
Birr e Co. Offaly	1-10	11.8	-	5	3	11.6	3.3	7.5	-	-0.3	05	1	31	2	-4.0	05	7	10.6	-	5.04	-	3	1
	11-20	23.4	-	7	5	16.5	8.1	12.3	-	4.3	11	0	79	24	-0.4	19	1	13.8	-	4.53	-	3	0
	21-end	16.4	-	6	5	17.5	8.4	12.9	-	2.9	27	0	94	33	-2.5	27	1	14.6	-	6.35	-	3	0
	Month	51.6	78	18	13	15.3	6.7	11.0	-0.0	-0.3	05	1	204	59	-4.0	05	9	13.1	+0.1	5.34	85	3	1
	1-10		-						-														
	11-20		-						-														
	21-end		-						-														
	Month		-						-														

Notes on the tables in January issue

TABLE 1 (Continued)

May 1982

STATION	PERIOD	RAINFALL (MM.)				TEMPERATURE °C														BRIGHT SUNSHINE		WIND	
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR						GROUND				SOIL (10 CM)				MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms ⁻¹)	DAYS WITH GALE GUSTS
						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.0°C	DEGREE DAYS ABOVE 10.0°C	LOWEST "GRASS-MIN."	DATE	DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE				
Dungarvan (Ballygagin) Co. Waterford	1-10	32.0	-	6	6	12.1	4.9	8.5	/	0.5	05	0	41	4	-2.0	05	4	/	/	5.34	/	3	/
	11-20	27.3	-	9	8	15.2	8.4	11.8	/	4.3	19	0	74	13	0.5	19	0	/	/	4.59	/	2	/
	21-end	22.4	-	4	4	16.7	9.2	13.0	/	5.5	27	0	99	43	2.2	27	0	/	/	6.44	/	3	/
	Month	81.7	108	19	18	14.7	7.6	11.2	/	0.5	05	0	214	60	-2.0	05	4	/	/	5.49	/	3	/
Mullingar e Co. Westmeath	1-10	21.4	-	7	4	10.8	2.1	6.4	-	-1.0	06	2	21	1	-3.5	06	6	8.7	-	5.38	-	5	3
	11-20	17.6	-	7	5	15.8	7.0	11.4	-	3.0	19	0	70	16	0.5	16	0	12.4	-	4.32	-	4	0
	21-end	29.6	-	7	6	17.2	7.6	12.4	-	2.8	27	0	88	27	0.0	27	0	13.4	-	6.83	-	5	1
	Month	68.6	98	21	15	14.7	5.6	10.2	-0.2	-1.0	06	2	179	44	-3.5	06	6	11.6	-0.8	5.55	89	5	4
J.F.K. Park Co. Wexford	1-10	15.0	-	5	4	11.6	3.4	7.5	/	-0.3	05	1	31	2	-3.3	05	6	/	/	5.77	/	5	/
	11-20	28.9	-	8	6	14.2	8.1	11.2	/	4.7	19	0	68	8	0.2	19	0	/	/	3.18	/	3	/
	21-end	35.6	-	6	5	15.8	8.9	12.4	/	5.9	30	0	92	36	1.8	30	0	/	/	5.93	/	3	/
	Month	79.5	115	19	15	13.9	6.9	10.4	/	-0.3	05	1	191	46	-3.3	05	6	/	/	4.99	/	4	/
Clonroche Co. Wexford	1-10	15.2	-	6	4	11.5	2.8	7.2	/	-0.6	05	1	28	2	-3.6	05	8	/	/	5.96	/	2	/
	11-20	15.4	-	7	7	14.5	7.9	11.2	/	4.5	19	0	68	9	-0.5	19	1	/	/	3.72	/	2	/
	21-end	35.7	-	7	5	16.1	8.6	12.4	/	4.9	30	0	92	36	-1.1	27	2	/	/	6.37	/	3	/
	Month	66.3	78	20	16	14.1	6.5	10.3	/	-0.6	05	1	188	47	-3.6	05	11	/	/	5.38	/	2	/
Johnstown Castle Co. Wexford	1-10	15.5	-	6	4	11.1	3.8	7.5	/	1.7	03	0	30	2	-2.5	07	8	/	/	6.24	/	4	/
	11-20	11.9	-	8	6	13.8	8.7	11.3	/	6.1	11	0	69	12	0.0	11	0	/	/	3.71	/	3	/
	21-end	17.2	-	5	2	15.3	9.4	12.4	/	7.2	30	0	92	36	-0.3	30	1	/	/	6.70	/	5	/
	Month	44.6	61	19	12	13.5	7.4	10.5	/	1.7	03	0	191	50	-2.5	07	9	/	/	5.60	/	4	/
Rosslare e Co. Wexford	1-10	8.7	-	5	3	11.5	5.1	8.3	-	2.6	05	0	39	1	-3.5	06	3	11.3	-	7.46	-	5	2
	11-20	6.2	-	5	3	13.7	9.4	11.6	-	7.5	19	0	72	16	4.7	18	0	13.8	-	4.65	-	4	0
	21-end	14.6	-	3	2	15.2	10.0	12.6	-	8.5	27	0	90	29	1.9	30	0	15.3	-	7.39	-	5	2
	Month	29.5	46	13	8	13.5	8.2	10.9	-0.3	2.6	05	0	201	46	-3.5	06	3	13.5	+0.2	6.53	-	5	4

Notes on the tables in January issue

TABLE 2 GLOBAL SOLAR RADIATION

STATION	PERIOD	AMOUNT
		Joule/cm ²
Malin Head Co. Donegal	1-10	16727
	11-20	16979
	21-end	20635
	Month	54341
Dublin Airport Co. Dublin	1-10	17785
	11-20	13211
	21-end	19183
	Month	50179
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	16705
	11-20	18718
	21-end	20960
	Month	56383
Kilkenny Co. Kilkenny	1-10	16550
	11-20	13514
	21-end	20607
	Month	50671
Belmullet Co. Mayo	1-10	16632
	11-20	20515
	21-end	19861
	Month	57008
Clones Co. Monaghan	1-10	15039
	11-20	15279
	21-end	21343
	Month	51661
Birr Co. Offaly	1-10	15258
	11-20	15145
	21-end	19777
	Month	50180

TABLE 3 POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE May 1982

STATION	PERIOD	P.E. (mm)		SOIL MOISTURE (mm)	
		Amount	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	19	-	43	-
	11-20	16	15	28	15
	21-end	21	-	37	-
	Month	56	-	-	-
Kinsealy Co. Dublin	1-10	32	6	70	-
	11-20	20	-	58	12
	21-end	32	3	61	-
	Month	84	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	19	-	0	41
	11-20	20	3	3	-
	21-end	20	1	4	-
	Month	59	-	-	-
Ballinamore Co. Leitrim	1-10	13	-	17	18
	11-20	8	-	0	26
	21-end	22	4	4	-
	Month	43	-	-	-
Glenamoy Co. Mayo	1-10	22	-	14	24
	11-20	25	14	28	-
	21-end	37	2	30	-
	Month	84	-	-	-
Johnstown Castle Co. Wexford	1-10	21	2	46	-
	11-20	20	5	51	-
	21-end	26	3	54	-
	Month	67	-	-	-

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Notes on the tables in January issue

special topic

SYMPOSIUM ON METEOROLOGY AND PLANT PROTECTION

(Continued from April)

(c) Modelling Systems

Two model types were considered at the symposium, one qualitative, the other quantitative. Qualitative models are unable to forecast the critical stages, or the length of stages, of crops on the basis of climatological data; quantitative models take account of such considerations as the climate-fungal pathogen-plant-host system in relation to time, the biological processes, the importance of population, i.e. the number of pests when a threshold is reached and a real risk occurs. In the modelling of plant disease the state of the host is considered. Regard is taken of the energy of the parasite (the effect of climate on the parasite), receptivity of the plant, weather indices (temperature, rainfall, relative humidity etc.), phenological stage and the overload problem (plant may reject further spores). The potential infection model so obtained can give at any time a quantitative index of the state of the system, interpretable as a risk to the crop. The consensus seems to be that the most practicable approach at present is the use of a mixed (qualitative cum quantitative) model at a regional level rather than one confined to a local climatic zone.

(d) Some Practical Models in Current Use

Models incorporating the above principles have been applied to vine downy mildew in France. The EPIGRAM model from Denmark also incorporates the dependance and progress of barley mildew disease on weather condition.

A Plant Intelligence Service is operated in Britain whereby disease intelligence information is received at Bristol by Telex from the regional plant pathologists every week throughout the period April to September and less frequently (monthly) during the Autumn and Winter. The collected reports are distributed widely. This part of the service is quite similar to the Cereal Diseases and Pests Report operated in Ireland under ACOT, to which the Meteorological Service contributes an appropriate weather report and forecast. Further, in Britain, the weather information from synoptic stations is used together with given parameters to give daily forecasts from the computer at the Met. Office, Bracknell, for a number of diseases including apple scab, potato blight, barley mildew, wheat septoria and eyespot. If a sudden outbreak is likely, there is a facility to make the report available on a daily basis.

The Dutch developed system generated considerable interest at the symposium. EPIPRE (Epidemic Prevention) is a cooperative project for supervised control of diseases and pests in wheat. It operates on a field to field basis. Basic data (cultivar, day planted, soil etc.) and field observations are stored in a data bank. Farmers (who are said to be quite reliable as observers) send in their field observations to a central team for entry into the computer. Using simplified simulation models the data are updated daily and expected damage and loss are calculated and used in a decision system, which leads to one of three decisions, to treat, not to treat or make a new field observation. Exchange of information between farmers and the central team is by post.

Started in 1978, the number of diseases for which advice is given has increased to include Brown and Yellow Rusts, Septoria and a number of aphids. The system is connected to the Dutch Meteorological Service computer. Farmers pay towards the costs of the recommendations and some funding also comes from farmer organisations. Confidence in the system is increasing. In 1978 38 per cent of the 300 farmers in the scheme sprayed according to the system whereas in 1981 some 54% of 1100 farmers relied on it. There can be significant savings through the need for less treatments while there is no advantage in yield to those using routine sprayings.

The EPIPRE system is a good example of a blend of models forming a disease management system, where field sampling methods, providing records to drive the model (biological inputs), are simple and geared to farmer use.

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