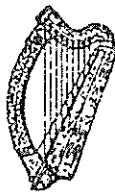


# METEOROLOGICAL SERVICE



## AGROMETEOROLOGICAL BULLETIN

APRIL 1982

### The Weather of April

The 1st and 2nd were mainly dry with some ground frost at night. Frontal troughs affected the country from the 3rd to 7th and all areas had spells of heavy rain, amounting to 30 to 40 per cent of the normal monthly total. A northerly airflow set in on the 7th, accompanied by showers, which became scattered as high pressure was established over the country. Under the influence of high pressure the weather for the remainder of the month was sunny and very dry; apart from isolated patches of rain or drizzle from occasional passing weak troughs. Nighttime temperatures were low and ground frost occurred frequently. As the high pressure began to decline a northwesterly airflow was established on the 28th and some showers or drizzle occurred in the north and west on the following days.

Monthly Amounts of Precipitation were well below normal everywhere. Amounts varied from 50 to 60 per cent of normal in the south and southeast (but 80% at Mooncoin) to about 25 per cent of normal in the northeast; almost all occurred in the period up to the 7th. An absolute drought (a period of 15 consecutive days or more of which 0.2mm or more of rain fell) occurred in parts of the south and east, the drought spell continuing at Dublin Airport until the 30th. Soil moisture deficits reached 64mm in the east while deficits of some 40mm were attained elsewhere.

Mean Monthly Air Temperature was above normal everywhere, ranging from 0.9<sup>o</sup>C above normal at Dublin Airport to 0.2<sup>o</sup>C above normal at Valentia. Soil temperature (100mm) varied from 1.6<sup>o</sup>C above normal at Malin Head and Kilkenny to 0.9<sup>o</sup>C above normal at Mullingar. Accumulated mean air temperature, with a threshold value of 4.4<sup>o</sup>C, varied from 37% above normal at Birr to about normal values at Mullingar and Kilkenny. Accumulations above 10<sup>o</sup>C however, were less than half the normal for April in most inland areas.

Mean Duration of Bright Sunshine was above normal everywhere except in the north and west, where it was below normal. Values varied from 116% of normal at Roches Point to 85% at Claremorris. Global solar radiation values were 10% above average at Valentia and Dublin Airport but 4% below average at Birr.

Strong Winds and Gale Gusts occurred infrequently, and were mainly confined to the 3rd, 7th/8th and 28th.

Summary Apart from the first week, which had a number of wet days, the remainder of the month was sunny, dry and warm, but with frost at night.

See page 8 for Special Topic

TABLE 1

APRIL 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 <sup>-1</sup> )	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	32.7	/	7	5	11.6	4.8	8.2	/	-1.3	09	1	38	2	-5.7	09	2	/	/	3.17	/	2	/
	11-20	1.0	/	1	1	13.9	3.5	8.7	/	-0.3	18	1	43	1	-3.4	18	5	/	/	6.28	/	3	/
	21-end	1.6	/	1	1	15.3	4.8	10.5	/	2.0	21	0	57	7	-2.0	23	5	/	/	5.46	/	2	/
	Month	35.3	/	9	7	13.6	4.4	9.0	/	-1.3	09	2	138	10	-5.7	09	12	/	/	4.97	/	2	/
Shannon Airport Co. Clare	1-10	15.3	-	5	4	12.3	6.1	9.2	-	0.9	09	0	48	4	-1.9	09	1	9.2	-	3.95	-	5	1
	11-20	0.7	-	1	0	14.0	5.3	9.6	-	2.6	16	0	52	3	-1.0	16	3	10.4	-	5.36	-	3	0
	21-end	0.5	-	0	0	15.3	6.3	10.8	-	3.9	24	0	64	10	-1.7	24	1	12.5	-	7.05	-	5	1
	Month	16.5	29	6	4	13.8	5.9	9.9	+0.8	0.9	09	0	164	17	-1.9	09	5	10.7	+1.0	5.45	107	4	2
Fermoy (Moore Park) Co. Cork	1-10	25.3	-	7	6	11.9	4.9	8.4	/	-1.9	09	1	40	1	-8.6	09	4	/	/	3.23	/	3	/
	11-20	0.0	-	0	0	13.7	1.4	7.6	/	-2.8	20	4	32	0	-9.0	18	6	/	/	5.54	/	N/A	/
	21-end	0.0	-	0	0	15.4	4.1	9.8	/	-1.4	23	1	51	4	-8.1	23	6	/	/	6.16	/	N/A	/
	Month	25.3	41	7	6	13.7	3.4	8.6	/	-2.8	20	6	123	5	-9.0	18	16	/	/	4.98	/	-	/
Mallow Co. Cork	1-10	29.0	-	6	4	12.3	5.2	8.8	/	-1.9	09	1	44	4	-4.7	09	2	/	/	3.38	/	/	/
	11-20	0.0	-	0	0	14.0	1.8	7.9	/	-3.0	18	5	35	0	-4.5	18	6	/	/	5.29	/	/	/
	21-end	0.4	-	1	0	15.3	3.8	9.6	/	-1.6	23	1	52	6	-2.7	21	7	/	/	5.86	/	/	/
	Month	29.4	47	7	4	13.9	3.6	8.8	/	-3.0	18	7	131	10	-4.7	09	15	/	/	4.84	/	/	/
Roche's Point Co. Cork	1-10	33.6	-	7	7	10.6	6.6	8.6	-	2.2	09	0	42	1	-1.1	09	1	9.7	-	3.50	-	6	2
	11-20	0.0	-	0	0	12.0	5.6	8.8	-	4.0	15	0	44	0	-1.9	15	2	11.0	-	7.20	-	3	0
	21-end	0.3	-	0	0	14.1	7.6	10.9	-	4.2	23	0	65	11	-1.9	23	2	12.6	-	7.93	-	5	2
	Month	33.9	60	7	7	12.2	6.6	9.4	+0.4	2.2	09	0	151	12	-1.9	23	5	11.1	+1.2	6.21	116	5	4
Glencolumbkille Co. Donegal	1-10	26.2	/	7	6	11.9	6.2	9.1	/	3.6	03	0	47	2	-2.5	03	1	/	/	3.55	/	4	/
	11-20	1.1	/	1	1	13.3	5.6	9.5	/	2.0	12	0	51	3	-3.5	12	4	/	/	7.34	/	2	/
	21-end	6.3	/	4	3	12.3	6.8	9.5	/	5.0	23	0	52	6	-1.5	27	4	/	/	5.60	/	4	/
	Month	33.6	/	12	10	12.5	6.2	9.4	/	2.0	12	0	150	11	-3.5	12	9	/	/	5.50	/	3	/
Glenties Co. Donegal	1-10	18.3	-	5	3	12.3	3.8	8.1	/	-0.5	03	1	37	3	-4.5	03	3	/	/	3.22	/	/	/
	11-20	2.0	-	3	1	14.0	3.2	8.6	/	-1.5	13	3	42	2	-5.0	13	7	/	/	6.31	/	/	/
	21-end	6.5	-	4	3	12.2	5.1	8.7	/	1.2	27	0	43	3	-3.0	21	5	/	/	4.97	/	/	/
	Month	26.8	31	12	7	12.8	4.0	8.4	/	-1.5	13	4	122	8	-5.0	13	15	/	/	4.83	/	/	/

Notes on the tables in January issue

TABLE 1 (Continued)

APRIL 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 <sup>-1</sup> )	DAYS WITH GALE GUSTS				
						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4-40C	DEGREE DAYS ABOVE 10.00C	LOWEST °GRASS-MIN. #	DATE	DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE					MEAN DAILY (HRS.)	% OF AVERAGE	MEAN SPEED (ms <sup>-1</sup> )	DAYS WITH GALE GUSTS
Malin Head e Co. Donegal	1-10	14.4	-	6	4	10.5	5.6	8.0	-	3.2	02	0	37	1	-1.4	03	1	8.7	-	3.18	-	6	3				
	11-20	0.5	-	1	0	10.9	5.1	8.0	-	1.8	13	0	36	0	-2.0	13	2	10.7	-	6.68	-	4	0				
	21-end	7.3	-	4	3	11.3	6.8	9.1	-	3.5	21	0	47	0	-0.1	21	1	11.8	-	3.90	-	6	5				
	Month	22.2	37	11	7	10.9	5.8	8.4	+0.4	1.8	13	0	120	1	-2.0	13	4	10.4	+1.6	4.59	89	5	8				
Gaseam Aerodrome Co. Dublin	1-10	14.6	-	5	4	12.0	4.8	8.4	-	-1.1	09	1	40	3	-4.0	09	2	8.3	-	3.44	-	5	2				
	11-20	0.0	-	0	0	13.1	3.0	8.0	-	-0.5	19	1	37	0	-4.0	19	6	9.7	-	7.05	-	3	0				
	21-end	2.0	-	1	1	14.7	3.8	9.2	-	1.1	27	0	48	1	-2.9	23	6	11.1	-	6.25	-	4	1				
	Month	16.6	33	6	5	13.3	3.8	8.5	+0.4	-1.1	09	2	125	4	-4.0	19	14	9.7	-	5.58	108	4	3				
Dublin Airport e Co. Dublin	1-10	19.4	-	4	3	11.5	5.1	8.3	-	0.0	09	0	39	1	-2.8	02	3	8.9	-	3.95	-	5	1				
	11-20	0.0	-	0	0	12.9	5.0	9.0	-	2.0	11	0	46	3	-2.4	19	5	10.6	-	7.14	-	3	0				
	21-end	0.1	-	0	0	14.4	5.7	10.0	-	2.6	23	0	57	6	0.1	23	0	12.3	-	6.61	-	5	1				
	Month	19.5	39	4	3	12.9	5.3	9.1	+0.9	0.0	09	0	142	10	-2.8	02	8	10.6	+1.4	5.90	110	4	2				
Kinsealy Co. Dublin	1-10	15.2	-	4	4	11.3	4.4	7.9	/	-0.6	03	2	35	1	-6.7	03	4	/	/	3.72	/	4	/				
	11-20	0.0	-	0	0	13.2	4.0	8.6	/	-0.2	19	1	42	3	-5.2	19	8	/	/	7.04	/	3	/				
	21-end	0.0	-	0	0	14.3	5.0	9.7	/	2.6	23	0	53	7	-3.2	28	4	/	/	6.57	/	3	/				
	Month	15.2	32	4	4	12.9	4.4	8.7	/	-0.6	03	3	130	11	-6.7	03	16	/	/	5.78	/	3	/				
Galway Co. Galway	1-10	30.9	-	6	5	12.2	5.3	8.7	-	0.0	09	0	43	3	-4.0	09	1	9.6	-	3.48	-	4	0				
	11-20	0.6	-	1	0	13.0	5.1	9.0	-	2.2	13	0	46	1	-1.0	13	1	11.2	-	4.92	-	2	0				
	21-end	0.3	-	1	0	14.3	4.9	9.6	-	2.4	24	0	52	2	0.7	21	3	12.6	-	6.50	-	4	1				
	Month	31.8	51	8	5	13.2	5.1	9.1	0.0	0.0	09	0	141	6	-4.0	09	5	11.1	-	4.97	96	3	1				
Killarney (Muckross Hse) Co. Kerry	1-10	43.7	/	8	4	11.8	6.0	8.9	/	0.3	09	0	45	4	-2.2	10	3	/	/	3.29	/	/	/				
	11-20	0.3	/	1	0	13.8	3.9	8.9	/	1.3	16	0	44	3	-3.2	18	8	/	/	4.50	/	/	/				
	21-end	2.9	/	3	1	15.0	5.6	10.3	/	2.0	24	0	59	8	-1.6	24	6	/	/	6.91	/	/	/				
	Month	46.9	/	12	5	13.5	5.2	9.4	/	0.3	09	0	148	15	-3.2	18	17	/	/	4.90	/	/	/				
Calirciveen e (Valentia Obsy.) Co. Kerry	1-10	33.5	-	7	5	12.1	6.7	9.4	-	2.0	09	0	50	5	-0.4	09	1	10.0	-	3.30	-	6	3				
	11-20	0.0	-	0	0	13.6	4.1	8.8	-	1.2	19	0	45	3	-1.0	19	3	11.3	-	6.39	-	3	0				
	21-end	0.7	-	2	0	14.4	6.4	10.4	-	3.5	24	0	60	7	1.0	24	0	13.3	-	7.29	-	4	0				
	Month	34.2	40	9	5	13.4	5.7	9.5	+0.1	1.2	19	0	155	15	-1.0	19	4	11.5	+1.2	5.6	109	4	3				

Notes on the tables in January issue

TABLE 1 (Continued)

APRIL 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 (MPH)	DAYS WITH GALE GUSTS		
						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.4°C	DEGREE DAYS ABOVE 10.0°C	LOWEST "GRASS-MIN."	DATE	DAYS WITH GROUND FROST					MEAN DAILY	DIFFERENCE FROM AVERAGE
Liscahane (Ardfert) Co. Kerry	1-10	16.8	/	6	5	12.1	5.4	8.8	/	-0.7	09	1	44	3	-4.3	09	2	/	/	3.61	/	/	/
	11-20	0.6	/	1	0	13.7	3.7	8.7	/	1.1	16	0	43	1	-2.7	19	7	/	/	6.27	/	/	/
	21-end	2.0	/	2	1	14.2	5.4	9.8	/	2.0	25	0	54	7	-1.4	25	6	/	/	6.49	/	/	/
	Month	19.4	/	9	6	13.3	4.8	9.1	/	-0.7	09	1	141	11	-4.3	09	15	/	/	5.46	/	/	/
Bullymore Co. Kildare	1-10	22.5	-	7	4	13.5	3.6	8.6	/	-1.7	09	2	42	3	-6.9	09	4	/	/	2.85	/	5	/
	11-20	0.0	-	0	0	13.5	1.9	7.7	/	-2.9	18	3	33	0	-6.5	19	6	/	/	5.73	/	3	/
	21-end	1.3	-	1	1	15.6	2.0	8.8	/	-1.0	24	4	44	5	-5.2	28	8	/	/	5.42	/	3	/
	Month	23.8	43	8	5	14.2	2.5	8.4	/	-2.9	18	9	119	8	-6.9	09	18	/	/	4.67	/	4	/
Kilkenny e Co. Kilkenny	1-10	29.2	-	5	4	11.6	4.3	7.9	-	-1.4	02	2	35	2	-5.7	09	3	8.7	-	2.82	-	4	1
	11-20	0.4	-	2	0	13.8	2.8	8.3	-	-0.5	18	1	39	0	-4.5	18	7	11.2	-	6.26	-	2	0
	21-end	1.3	-	2	1	15.3	4.5	9.9	-	-0.2	23	1	55	7	-5.0	23	6	12.9	-	6.25	-	3	1
	Month	30.9	56	9	5	13.6	3.9	8.7	+0.2	-1.4	02	4	129	9	-5.7	09	16	10.9	+1.6	5.11	101	3	2
Mooncoin (Silverspring) Co. Kilkenny	1-10	49.5	-	8	6	11.5	5.3	8.4	/	-0.5	09	1	40	2	-6.3	09	5	/	/	3.67	/	/	/
	11-20	0.0	-	0	0	14.0	2.6	8.3	/	-1.1	20	3	39	1	-5.5	18	10	/	/	6.82	/	/	/
	21-end	0.2	-	1	0	15.7	4.6	10.2	/	0.2	23	0	58	7	-5.8	23	7	/	/	7.04	/	/	/
	Month	49.7	80	9	6	13.7	4.2	9.0	/	-1.1	20	4	137	10	-6.3	09	22	/	/	5.84	/	/	/
Ballinamore Co. Leitrim	1-10	21.3	-	6	5	12.3	4.5	8.4	/	-0.7	09	1	40	3	-5.8	09	4	/	/	3.72	/	3	/
	11-20	0.0	-	0	0	13.7	1.7	7.7	/	-1.3	12	4	33	0	-6.6	12	9	/	/	5.42	/	2	/
	21-end	4.1	-	3	1	14.3	4.7	9.5	/	1.0	21	0	51	5	-4.5	21	5	/	/	5.49	/	3	/
	Month	25.4	39	9	6	13.4	3.7	8.6	/	-1.3	12	5	124	8	-6.6	12	18	/	/	5.03	/	3	/
Ardee (Boharnamoe) Co. Louth	1-10	13.3	/	4	3	11.5	3.8	7.7	/	-2.0	02	1	33	0	-2.2	02	2	/	/	/	/	/	/
	11-20	0.0	/	0	0	13.2	1.7	7.5	/	-2.0	18	3	31	0	-2.5	18	3	/	/	/	/	/	/
	21-end	3.0	/	3	1	15.4	3.7	9.6	/	0.3	21	0	52	4	0.2	21	0	/	/	/	/	/	/
	Month	16.3	/	7	4	13.4	3.1	8.3	/	-2.0	18	4	116	4	-2.5	18	5	/	/	/	/	/	/
Ballinrobe (Creagh) Co. Mayo	1-10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	11-20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	21-end	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Month	/	/	/	/	/	/	/	/	NOT AVAILABLE	/	/	/	/	/	/	/	/	/	/	/	/	/

Notes on the tables in January issue

TABLE 1 (Continued)

APRIL 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 <sup>-1</sup> )	DAYS WITH GALE GUSTS					
						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 Co. Mayo	1-10	22.6	-	6	3	12.1	5.3	8.7	-	1.8	09	0	43	4	-2.9	09	2	9.3	-	3.19	-	6	1
	11-20	1.5	-	3	0	13.0	5.2	9.1	-	1.8	12	0	48	2	-1.8	12	1	11.0	-	5.33	-	5	0
	21-end	2.3	-	3	1	13.0	6.9	10.0	-	4.6	26	0	56	2	0.8	26	0	12.4	-	6.43	-	6	0
	Month	26.4	41	12	4	12.7	5.8	9.3	+0.6	1.8	12	0	147	8	-2.9	09	3	10.9	+1.3	4.98	92	6	1
Claremorris Co. Mayo	1-10	27.1	-	6	4	11.8	4.9	8.3	-	-0.9	09	1	40	4	-5.8	09	2	8.6	-	2.87	-	3	0
	11-20	2.3	-	3	1	13.3	3.2	8.3	-	0.4	13	0	39	0	-2.8	13	6	9.4	-	3.99	-	2	0
	21-end	2.1	-	3	1	14.5	4.4	9.5	-	1.3	21	0	51	4	-1.9	21	2	11.3	-	5.37	-	3	1
	Month	31.5	48	12	6	13.2	4.2	8.7	+0.6	-0.9	09	1	130	8	-5.8	09	10	9.8	+1.1	4.08	85	3	1
Clonamee Co. Mayo	1-10	34.0	-	8	5	N/A	N/A	-	/	N/A	-	-	-	N/A	-	/	/	/	/	3.77	/	/	/
	11-20	2.3	-	2	1	N/A	N/A	-	/	N/A	-	-	-	N/A	-	/	/	/	/	4.91	/	/	/
	21-end	5.0	-	3	2	13.9	5.9	9.9	/	1.9	26	0	55	4	1.1	26	0	/	/	6.84	/	/	/
	Month	41.3	50	13	8	N/A	N/A	-	/	N/A	-	-	-	N/A	-	/	/	/	/	5.17	/	/	/
Dunsany (Grange) Co. Meath	1-10	28.8	-	6	4	11.4	4.2	7.8	/	-2.3	09	1	34	2	-8.1	09	4	/	/	3.45	/	/	/
	11-20	0.0	-	0	0	12.5	2.2	7.4	/	-1.7	18	3	30	0	-6.9	18	7	/	/	6.23	/	/	/
	21-end	0.3	-	1	0	14.5	3.3	8.9	/	0.0	21	0	45	3	-5.8	21	7	/	/	6.07	/	/	/
	Month	29.1	54	7	4	12.8	3.2	8.0	/	-2.3	09	4	109	5	-8.1	09	18	/	/	5.25	/	/	/
Clones Co. Monaghan	1-10	14.0	-	6	4	12.0	4.5	8.3	-	1.0	02	0	39	4	-2.4	09	3	8.5	-	3.53	-	4	2
	11-20	0.1	-	0	0	13.4	2.9	8.1	-	0.5	17	0	37	0	-4.8	12	7	9.4	-	6.28	-	2	0
	21-end	5.0	-	1	1	13.9	5.2	9.5	-	1.6	21	0	51	4	-3.5	27	2	10.8	-	5.47	-	4	2
	Month	19.1	35	7	5	13.1	4.2	8.6	+0.7	0.5	17	0	127	8	-4.8	12	12	9.6	+1.0	5.09	112	3	4
Birr Co. Offaly	1-10	22.5	-	5	4	11.9	4.6	8.3	-	-2.1	09	1	39	2	-4.3	09	2	9.2	-	3.26	-	3	0
	11-20	0.1	-	0	0	13.6	3.3	8.4	-	-0.9	18	1	40	0	-5.9	18	6	10.9	-	5.13	-	1	0
	21-end	1.2	-	2	1	15.2	3.6	9.4	-	0.6	27	0	50	2	-3.1	21	7	12.7	-	5.91	-	2	0
	Month	23.8	42	7	5	13.6	3.8	8.7	+0.3	-2.1	09	2	129	4	-5.9	18	15	10.9	+1.5	4.77	95	2	0
	1-10																	/	/	/	/	/	/
	11-20																	/	/	/	/	/	/
	21-end																	/	/	/	/	/	/
	Month																	/	/	/	/	/	/

Notes on the tables in January 1982

TABLE 1 (Continued)

APRIL 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 <sup>-1</sup> )	DAYS WITH GALE GUSTS			
						MEAN MAX.	MEAN MIN.	MEAN DAILY	AND DIFFERENCE FROM AVERAGE	LOWEST MIN.	DATE	DAYS WITH AIR FROST	DEGREE DAYS ABOVE 4.4°C	DEGREE DAYS ABOVE 10.0°C	LOWEST "GRASS-MIN."	DATE					DAYS WITH GROUND FROST	MEAN DAILY	DIFFERENCE FROM AVERAGE
Dungarvan (Rallygagin) Co. Waterford	1-10	43.4	-	7	7	11.3	5.7	8.5	/	1.0	09	0	41	1	-3.1	09	3	/	/	3.19	/	3	/
	11-20	0.1	-	0	0	13.1	3.7	8.4	/	0.8	18	0	40	1	-3.1	15	6	/	/	6.91	/	2	/
	21-end	0.0	-	0	0	15.3	5.6	10.5	/	0.2	23	0	60	7	-5.0	23	2	/	/	7.34	/	3	/
	Month	43.5	66	7	7	13.2	5.0	9.1	/	0.2	23	0	141	9	-5.0	23	11	/	/	5.81	/	3	/
Mullingar e Co. Westmeath	1-10	26.1	-	5	4	11.3	4.2	7.8	-	-0.3	02	1	34	2	-3.2	02	2	8.4	-	3.56	-	5	0
	11-20	0.0	-	0	0	13.1	2.8	8.0	-	0.1	15	0	36	0	-2.9	12	6	9.8	-	5.82	-	2	0
	21-end	4.3	-	3	1	14.4	4.3	9.3	-	0.1	21	0	49	3	-2.9	21	4	11.1	-	6.11	-	4	0
	Month	30.4	48	8	5	13.0	3.7	8.3	+0.4	-0.2	02	1	119	5	-3.2	02	12	9.7	+0.9	5.16	103	4	0
J.F.K. Park Co. Wexford	1-10	43.4	-	6	6	10.9	5.0	8.0	/	0.7	09	0	36	1	-2.9	09	4	/	/	2.94	/	5	/
	11-20	0.0	-	0	0	13.2	4.3	8.8	/	0.6	13	0	44	2	-5.0	13	6	/	/	7.81	/	3	/
	21-end	0.0	-	0	0	15.2	5.5	10.4	/	0.9	23	0	60	9	-3.6	23	4	/	/	6.93	/	3	/
	Month	43.4	71	6	6	13.1	4.9	9.0	/	0.6	13	0	140	12	-5.0	13	14	/	/	5.91	/	4	/
Clonroche Co. Wexford	1-10	50.5	-	5	5	10.6	4.6	7.6	/	-0.9	09	1	32	1	-7.0	09	3	/	/	3.31	/	2	/
	11-20	0.0	-	0	0	13.1	3.2	8.2	/	-0.5	13	1	38	0	-6.3	13	7	/	/	8.15	/	2	/
	21-end	0.0	-	0	0	14.8	4.9	9.9	/	2.0	23	0	55	5	-3.7	23	7	/	/	7.00	/	2	/
	Month	50.5	73	5	5	12.8	4.2	8.5	/	-0.9	09	2	125	6	-7.0	09	17	/	/	6.15	/	2	/
Johnstown Castle Co. Wexford	1-10	39.3	-	5	5	10.7	5.2	8.0	/	0.8	09	0	36	0	-5.4	09	3	/	/	2.91	/	4	/
	11-20	0.2	-	1	0	12.1	4.0	8.1	/	0.7	13	0	37	0	-3.3	13	6	/	/	9.10	/	3	/
	21-end	0.6	-	2	0	13.6	6.1	9.9	/	3.5	23	0	55	6	-1.5	25	5	/	/	7.69	/	3	/
	Month	40.1	66	8	5	12.1	5.1	8.6	/	0.7	13	0	128	6	-5.4	09	14	/	/	6.57	/	3	/
Rosslare e Co. Wexford	1-10	31.4	-	6	4	10.7	6.3	8.5	-	2.8	09	0	41	1	-1.5	02	2	9.1	-	3.01	-	5	3
	11-20	0.5	-	1	0	11.6	6.2	8.9	-	3.8	13	0	45	0	-1.4	15	2	11.3	-	9.54	-	4	0
	21-end	0.4	-	2	0	13.0	7.3	10.2	-	4.3	23	0	58	5	0.0	23	0	12.8	-	6.57	-	5	1
	Month	32.3	60	9	4	11.8	6.6	9.2	+0.3	2.8	09	0	144	6	-1.5	02	4	11.1	+1.1	6.37	108	5	4

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	10905
	11-20	17385
	21-end	13640
	Month	41930
Dublin Airport Co. Dublin	1-10	10801
	11-20	15398
	21-end	15295
	Month	41494
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	11620
	11-20	16732
	21-end	17952
	Month	46304
Kilkenny Co. Kilkenny	1-10	9303
	11-20	14188
	21-end	14270
	Month	37761
Belmullet Co. Mayo	1-10	10528
	11-20	15363
	21-end	16412
	Month	42303
Clones Co. Monaghan	1-10	10935
	11-20	15211
	21-end	14378
	Month	40524
Birr Co. Offaly	1-10	10147
	11-20	13182
	21-end	14591
	Month	37920

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	13	-	0	20
	11-20	17	16	16	-
	21-end	24	22	38	-
	Month	54	-	-	-
Kinsealy Co. Dublin	1-10	18	3	14	-
	11-20	20	20	34	-
	21-end	31	30	64	-
	Month	69	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	7	-	0	26
	11-20	20	20	20	-
	21-end	19	19	39	-
	Month	46	-	-	-
Ballinamore Co. Leitrim	1-10	10	-	0	11
	11-20	18	18	18	-
	21-end	21	17	35	-
	Month	49	-	-	-
Glenamoy Co. Mayo	1-10	20	-	0	14
	11-20	22	20	20	-
	21-end	24	18	38	-
	Month	66	-	-	-
Johnstown Castle Co. Wexford	1-10	13	-	0	26
	11-20	20	20	20	-
	21-end	25	24	44	-
	Month	58	-	-	-

## special topic

### SYMPOSIUM ON METEOROLOGY AND PLANT PROTECTION

A symposium on Meteorology and Plant Protection co-sponsored by the World Meteorological Organisation (WMO) and the European and Mediterranean Plant Organisation (EPPO) was held in Geneva in March 1982. Some 200 participants attended from Research Institutes, the Universities and the National Meteorological Services in Europe and in some North African States. The purpose of the symposium was to review present knowledge on the effects of meteorological factors on the occurrence, spread and control of pests and diseases of plants and animals, and the practical application of this knowledge in different countries.

The meeting consisted of four sections, dealing with (a) climatic analysis, (b) the effects of climatic factors on crop development and on plant pests, (c) modelling systems - modelling of crop growth and development of yield components, modelling of weed development, pest outbreaks and of plant diseases, and (d) the practical implementation of models.

#### (a) CLIMATIC ANALYSIS

The first section, on the climatic factors, dealt with the characteristics of climate from the point of view of different scales, local (micro) and large (meso and macro) scale, and the transfer functions between these scales. Without having to go so far as to establish real transfer functions between these scales, some relations between local microclimates and the mesoclimates, as given by the meteorological screen, have been established in some countries. In France, for example, the results of some investigations have shown that the meteorological screen was representative in forests whatever the slope, whereas on a stoney ground the max/min of the screen was not representative. Differences between the synoptic station rain gauge and one sited near the crop amounted up to 50%, and the variation between single precipitation events ranged from 27% to 110%.

Substantial differences can occur in some instances between the environment as experienced within a crop and that given by a meteorological station in respect to wind, temperature and humidity.

From measurements within a barley crop in Britain, wind gusts of more than 5 times the mean wind speed were found to occur frequently - the impact of fungal spores on crop foliage would therefore be higher than that predicted by mean speed.

It is unrealistic, however, for the present at least, to expect farmers to instal equipment within their crops and maintain them at great cost. The aim perhaps should be to define microclimatic zones which are sufficiently homogeneous.

#### (b) THE EFFECTS OF SOME CLIMATIC FACTORS

The usefulness of constant degree day sums corresponding to stages of development of crops and in the life cycles of pests was supported by many examples in a number of the papers read at the symposium. Sums of daily mean temperature above certain threshold values to forecast the stages of growth of maize are used in France where best results are got for stages between flowering to maturity, other factors being important between sowing and 5/6 leaf stage, e.g. soil condition, rainfall, etc.

The sum of effective temperature and its interaction with day length was stated to be a suitable first comparison for many invertebrate pests because the timing of the life cycle of the pests can be estimated. Endoparasites, for example, which live inside plants, have a life cycle which is dominated by temperature, therefore accumulated soil temperature is of relevance, whereas Hectoparasites live in the soil and their life cycle is dominated by soil moisture. One example given was the use of degree days to forecast the flight of the European cherry fruit fly, the appropriate parameters being the 5°C (at 5 cm soil depth) threshold and 400 degrees from 1 January. These prediction systems allow for a precise forecast for the first occurrence of the pests and also for the stratification of the major production areas.

(To be continued)