



AGROMETEOROLOGICAL BULLETIN

The Weather of May 1988

Summary

Apart from three short wet spells, high pressure and dry conditions dominated to 22nd; it was unsettled subsequently. Except for the north temperature and rainfall were above normal. Sunshine was near or below normal in most places.

Meteorological Situation

A deep low reaching Ireland from the southwest on 1st weakened under the influence of high pressure which dominated from 4th to 7th. As the high receded to Scandinavia on the 8th, a trough from the Atlantic was absorbed over Ireland into a low pressure area over western Europe. A temporary recovery of high pressure on 9th/10th preceded a complex trough system in the vicinity of Ireland from 11th to 13th. Further troughs yielded to an extensive zone of high pressure on its way southwestwards into the Atlantic, and a northeast airflow was established over the country: south moving troughs in the airflow gave outbreaks of rain on 18th/19th, heaviest in the east. With the return eastwards of high pressure the weather was settled from 19th to 21st.

Troughs from the Atlantic advanced over Ireland on 22nd and unsettled weather conditions, low pressure and passing troughs prevailed to 31st.

Precipitation

Despite the number of dry days rainfall was above to well above normal in many areas except the north. Monthly amounts varied from 164% of normal at Fermoy to 56% at Malin Head. Although there were regional variations the spell from the 4th to 22nd, except 11th/13th and to a lesser extent 18th/19th, was largely dry. After 22nd there was a return to generally wet conditions. Soil moisture deficits were maxima about 20th although they ranged from 0 mm at Valentia to 56 mm at Glenamoy.

Temperature

Mean air temperature was normal to well above normal. Values varied from 0.9°C above normal at Malin Head to 0.1°C below at Kilkenny; these anomalies were due to greatly increased day-time maxima as monthly night-time minima proved to be below normal except in coastal areas. Locally there was frequent (18 days) ground frost severest on the 20th when a slight air frost was recorded. Soil temperatures (100 mm) were over 2°C above normal by 20th.

Sunshine and Radiation

Sunshine hours were normal or above normal except at some northwestern and west-midland stations. Amounts varied from 112% of normal at Rosslare to 84% at Birr. In general the middle of the month was brightest whereas the first ten days tended to be dullest. Global radiation varied from 102% of normal at Birr to 88% of normal at Valentia.

Wind

Strong winds with gale gusts occurred on 1st, 22nd to 24th, and 28th, and in some coastal areas on other days.

NOTE: 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 (CONTINUED)

MAY 1988

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	11.0	-	4	4	14.4	6.1	10.3	-	1.5	5	0	60	-	15	-	-3.5	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	11-20	5.0	-	3	1	17.0	4.6	10.8	-	-0.9	19	1	68	-	27	-	-5.7	19	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	21-END	41.8	-	10	7	14.8	6.8	10.8	-	2.8	30	0	71	-	19	-	-1.0	30	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	MONTH	57.8	67	17	12	15.4	5.9	10.6	-	-0.9	19	1	198	-	61	-	-5.7	19	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Malin Head Co. Donegal	1-10	7.4	-	4	1	13.4	7.2	10.3	-	4.0	5	0	59	-	12	-	1.0	5	0	12.4	-	32.5	-	6.1	1	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	2.1	-	2	1	14.0	8.5	11.3	-	5.5	20	0	69	-	20	-	2.3	20	0	15.2	-	87.7	-	7.5	4	-	-	-	-	-	-	-	-	-	-	-	-	
	21-END	23.2	-	8	7	15.2	7.8	11.5	-	4.6	21	0	78	-	23	-	2.0	21	0	13.3	-	62.9	-	8.4	5	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	32.7	56	14	9	14.2	7.8	11.0	+0.9	4.0	5	0	206	109	54	126	1.0	5	0	13.6	+1.5	183.1	92	7.3	10	94	-	-	-	-	-	-	-	-	-	-	-	
Casement Aerodrome Co. Dublin	1-10	37.6	-	5	4	14.9	6.6	10.8	-	3.3	9	0	64	-	17	-	0.1	6	0	11.6	-	35.4	-	4.6	1	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	28.7	-	3	3	15.7	5.4	10.6	-	2.1	20	0	63	-	21	-	-0.6	20	1	13.3	-	80.5	-	3.3	0	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	19.5	-	8	6	15.3	6.5	10.9	-	4.7	26	0	72	-	20	-	0.4	26	0	12.7	-	70.0	-	6.3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	85.8	148	16	13	15.3	6.2	10.7	+0.2	2.1	20	0	198	99	57	86	-0.6	20	1	12.5	-	185.9	98	4.8	5	82	-	-	-	-	-	-	-	-	-	-	-	-
Dublin Airport Co. Dublin	1-10	33.8	-	5	4	14.6	7.7	11.1	-	4.8	9	0	67	-	17	-	2.4	6	0	12.1	-	39.6	-	3.7	0	-	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	20.4	-	3	2	15.6	7.1	11.4	-	3.4	19	0	70	-	23	-	1.8	11	0	15.0	-	84.2	-	3.2	0	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	18.0	-	8	4	14.9	7.9	11.4	-	5.9	25	0	77	-	21	-	0.9	26	0	13.6	-	71.9	-	5.5	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	72.2	124	16	10	15.0	7.6	11.3	+0.7	3.4	19	0	214	104	61	103	0.9	26	0	13.6	+0.7	195.7	100	4.2	2	87	-	-	-	-	-	-	-	-	-	-	-	
Kinsealy Co. Dublin	1-10	22.3	-	4	4	14.7	6.8	10.7	-	3.5	7	0	64	-	16	-	-2.5	7	2	-	-	N/A	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	23.7	-	2	2	14.9	6.1	10.5	-	3.1	20	0	62	-	18	-	-1.3	20	4	-	-	N/A	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	
	21-END	21.8	-	9	7	14.8	6.9	10.9	-	4.2	26	0	71	-	19	-	-2.7	26	3	-	-	N/A	-	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	67.8	121	15	13	14.8	6.6	10.7	-	3.1	20	0	197	-	53	-	-2.7	26	9	-	-	N/A	-	3.4	-	N/A	-	-	-	-	-	-	-	-	-	-	-	
Galway Co. Galway	1-10	19.2	-	6	3	14.7	7.3	11.0	-	3.7	9	0	66	-	18	-	-1.4	9	1	12.0	-	34.0	-	3.6	0	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	25.6	-	2	2	17.0	6.7	11.8	-	2.1	20	0	76	-	29	-	-1.7	20	3	14.6	-	94.5	-	3.2	0	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	40.1	-	8	6	14.7	7.2	11.0	-	3.5	21	0	72	-	19	-	-1.0	21	1	13.4	-	73.6	-	4.8	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	84.9	121	16	11	15.4	7.1	11.2	+0.4	2.1	20	0	214	-	66	-	-1.7	20	5	13.4	-	202.1	104	3.9	2	82	-	-	-	-	-	-	-	-	-	-	-	-
Killarney (Muckross House) Co. Kerry	1-10	23.0	-	3	2	13.9	8.4	11.2	-	3.8	5	0	68	-	16	-	-0.1	5	1	-	-	23.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	15.9	-	4	2	15.8	6.4	11.1	-	1.1	20	0	68	-	23	-	-2.0	18	2	-	-	75.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	21-END	75.9	-	10	8	14.3	7.9	11.1	-	3.5	21	0	74	-	19	-	-1.2	21	1	-	-	54.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	114.8	117	17	12	14.7	7.6	11.1	-	1.1	20	0	210	-	58	-	-2.0	18	4	-	-	152.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MAY 1988

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	12.7	-	3	3	14.6	8.5	11.5	-	5.2	5	0	71	-	19	-	2.7	5	0	12.8	-	31.8	-	5.3	2	-
	11-20	41.7	-	4	3	14.9	6.9	10.9	-	2.0	20	0	65	-	18	-	-0.5	20	1	14.3	-	99.3	-	4.1	2	-
	21-END	84.4	-	9	9	14.4	8.1	11.3	-	5.5	26	0	76	-	20	-	3.0	26	0	14.0	-	72.3	-	5.8	7	-
	MONTH	139.8	163	16	15	14.6	7.8	11.2	+0.0	2.0	20	0	212	96	57	88	-0.5	20	1	13.7	+0.5	203.4	109	5.1	11	86
Ardfert (Liscahane) Co. Kerry	1-10	11.7	-	3	3	14.7	7.1	10.9	-	4.0	5	0	65	-	17	-	-1.1	5	1	-	-	42.1	-	-	-	-
	11-20	22.5	-	3	2	15.1	5.4	10.2	-	0.9	18	0	60	-	18	-	-2.6	18	3	-	-	85.8	-	-	-	-
	21-END	49.8	-	9	9	14.6	7.3	11.0	-	3.8	21	0	72	-	18	-	-0.3	21	1	-	-	64.4	-	-	-	-
	MONTH	84.0	-	15	14	14.8	6.6	10.7	-	0.9	18	0	198	-	53	-	-2.6	18	5	-	-	192.3	-	-	-	-
Lullymore Co. Kildare	1-10	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	-	-	N/A	-	N/A	-	-	-
	11-20	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	-	-	N/A	-	N/A	-	-	-
	21-END	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	-	-	N/A	-	N/A	-	-	-
	MONTH	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	N/A	-	-	N/A	-	N/A	-	N/A	N/A
Kilkenny Co. Kilkenny	1-10	24.9	-	4	3	15.1	6.3	10.7	-	1.7	5	0	65	-	18	-	-2.4	5	3	12.0	-	37.2	-	3.0	1	-
	11-20	4.1	-	2	1	17.3	4.9	11.1	-	0.5	14	0	69	-	25	-	-4.1	14	3	14.6	-	85.4	-	2.3	0	-
	21-END	42.0	-	10	7	14.8	5.1	10.0	-	1.0	21	0	64	-	17	-	-4.3	21	4	12.8	-	56.5	-	3.7	2	-
	MONTH	71.0	113	16	11	15.7	5.4	10.6	-0.1	0.5	14	0	197	94	60	82	-4.3	21	10	13.1	+0.1	179.1	100	3.0	3	72
Mooncoin (Silverspring) Co. Kilkenny	1-10	38.1	-	6	4	15.0	6.2	10.6	-	1.3	5	0	64	-	18	-	-3.8	5	3	-	-	41.0	-	-	-	-
	11-20	1.6	-	1	1	17.1	4.4	10.8	-	-0.8	14	1	66	-	24	-	-3.2	14	4	-	-	73.8	-	-	-	-
	21-END	57.8	-	10	9	15.1	5.0	10.1	-	0.3	21	0	65	-	18	-	-2.9	29	5	-	-	64.0	-	-	-	-
	MONTH	97.5	139	17	14	15.7	5.2	10.5	-	-0.8	14	1	195	-	59	-	-3.8	5	12	-	-	178.8	-	-	-	-
Ballinamore Co. Leitrim	1-10	33.4	-	4	3	14.8	5.9	10.4	-	0.1	7	0	61	-	15	-	-4.1	9	4	-	-	21.1	-	2.8	-	-
	11-20	27.8	-	3	3	16.1	5.5	10.8	-	0.1	20	0	67	-	22	-	-6.2	20	3	-	-	76.8	-	2.6	-	-
	21-END	52.2	-	10	10	15.0	5.8	10.4	-	1.6	21	0	67	-	17	-	-4.8	22	7	-	-	59.3	-	4.2	-	-
	MONTH	113.4	155	17	16	15.3	5.7	10.5	-	0.1	20	0	195	-	54	-	-6.2	20	14	-	-	157.2	-	3.2	-	64
Ardee (Boharnamoe) Co. Louth	1-10	9.6	-	4	3	14.6	4.7	9.6	-	0.6	9	0	56	-	14	-	0.4	9	0	-	-	-	-	-	-	-
	11-20	9.8	-	3	2	16.8	5.2	11.0	-	2.0	20	0	68	-	25	-	-1.2	20	4	-	-	-	-	-	-	-
	21-END	41.6	-	8	5	15.7	4.2	9.9	-	1.7	21	0	63	-	18	-	-1.5	26	2	-	-	-	-	-	-	-
	MONTH	61.0	102	15	10	15.7	4.7	10.2	-	0.6	9	0	187	-	56	-	-1.5	26	6	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MAY

1988

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	23.9	-	5	3	14.7	6.6	10.7	-	1.2	5	0	64	-	17	-	-1.4	9	2	-	-	-	-	-	-	-	-
	11-20	2.8	-	1	1	16.7	4.1	10.4	-	0.0	14	0	63	-	22	-	0.5	14	0	-	-	-	-	-	-	-	-
	21-END	72.9	-	10	9	14.9	4.4	9.7	-	0.0	21	0	61	-	16	-	-3.2	22	7	-	-	-	-	-	-	-	-
	MONTH	99.6	-	16	13	15.4	5.0	10.2	-	0.0	21	0	188	-	55	-	-3.2	22	9	-	-	-	-	-	-	-	-
Dungarvan (Carriglea) Co. Waterford	1-10	39.1	-	3	2	15.3	7.2	11.3	-	1.5	5	0	69	-	21	-	-3.4	5	2	-	-	32.6	-	2.8	-	-	-
	11-20	8.8	-	1	1	17.0	5.4	11.2	-	0.2	14	0	69	-	24	-	-4.4	14	5	-	-	70.9	-	1.8	-	-	-
	21-END	78.3	-	10	9	15.4	4.9	10.1	-	0.7	22	0	66	-	19	-	-3.4	21	7	-	-	59.5	-	3.1	-	-	-
	MONTH	126.2	162	14	12	15.9	5.8	10.8	-	0.2	14	0	205	-	64	-	-4.4	14	14	-	-	163.0	-	2.5	-	58	-
Mullingar Co. Westmeath	1-10	14.1	-	3	3	14.6	6.1	10.3	-	2.3	9	0	61	-	15	-	0.1	7	0	11.6	-	32.4	-	4.0	1	-	-
	11-20	6.2	-	2	2	15.9	5.3	10.6	-	1.1	20	0	64	-	21	-	-1.7	20	2	13.5	-	88.3	-	3.3	0	-	-
	21-END	68.5	-	9	9	15.0	5.5	10.2	-	3.0	25	0	65	-	17	-	1.0	26	0	12.4	-	67.4	-	4.5	2	-	-
	MONTH	88.8	133	14	14	15.1	5.6	10.4	+0.1	1.1	20	0	190	94	53	78	-1.7	20	2	12.5	+0.1	188.1	104	3.9	3	76	-
J.F.K. Park Co. Wexford	1-10	42.1	-	4	4	14.6	5.5	10.0	-	-5.5	1	1	60	-	18	-	-5.5	5	3	-	-	35.3	-	2.2	-	-	-
	11-20	4.0	-	1	1	16.6	6.0	11.3	-	3.0	14	0	70	-	25	-	1.4	14	5	-	-	86.0	-	3.0	-	-	-
	21-END	46.5	-	10	10	14.0	6.9	10.4	-	4.9	25	0	66	-	14	-	-4.6	27	7	-	-	62.3	-	4.4	-	-	-
	MONTH	92.6	127	15	15	15.0	6.2	10.6	-	-5.5	1	1	197	-	57	-	-5.5	5	15	-	-	183.6	-	3.2	-	73	-
Clonroche Co. Wexford	1-10	38.6	-	5	4	15.1	6.9	11.0	-	3.3	5	0	66	-	19	-	-1.2	6	2	-	-	52.5	-	2.1	-	-	-
	11-20	3.1	-	1	1	16.9	5.6	11.3	-	2.6	20	0	70	-	26	-	-4.5	14	5	-	-	91.2	-	1.4	-	-	-
	21-END	73.4	-	10	9	14.3	5.7	10.0	-	2.2	21	0	62	-	15	-	-4.7	21	7	-	-	71.0	-	2.3	-	-	-
	MONTH	115.1	140	16	14	15.4	6.0	10.7	-	2.2	21	0	199	-	60	-	-4.7	21	14	-	-	213.7	-	1.9	-	73	-
Johnstown Castle Co. wexford	1-10	20.2	-	4	3	14.3	7.6	11.0	-	5.7	5	0	66	-	16	-	-0.2	6	1	-	-	53.0	-	1.8	-	-	-
	11-20	2.8	-	1	1	15.5	6.6	11.0	-	3.5	14	0	67	-	21	-	-1.3	20	2	-	-	96.3	-	1.1	-	-	-
	21-END	39.8	-	9	7	14.6	7.4	11.0	-	4.5	29	0	72	-	19	-	-1.3	21	1	-	-	64.4	-	2.2	-	-	-
	MONTH	62.8	94	14	11	14.8	7.2	11.0	-	3.5	14	0	205	-	57	-	-1.3	21	4	-	-	213.7	-	1.7	-	75	-
Rosslare Co. Wexford	1-10	19.8	-	3	3	13.7	8.4	11.0	-	5.1	5	0	66	-	15	-	2.7	5	0	13.1	-	59.3	-	5.8	3	-	-
	11-20	2.7	-	2	1	13.6	8.3	10.9	-	6.0	19	0	65	-	15	-	0.5	20	0	15.7	-	103.3	-	5.5	2	-	-
	21-END	35.9	-	7	5	14.4	8.5	11.5	-	6.6	25	0	78	-	20	-	1.3	29	0	14.5	-	82.0	-	6.0	4	-	-
	MONTH	58.4	99	12	9	13.9	8.4	11.2	+0.4	5.1	5	0	209	100	50	100	0.5	20	0	14.5	+1.2	244.6	112	5.8	9	95	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	145.82
	11-20	219.96
	21-end	181.90
	Month	547.68
Dublin Airport Co. Dublin	1-10	N/A
	11-20	N/A
	21-end	N/A
	Month	N/A
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	140.43
	11-20	224.68
	21-end	228.73
	Month	593.84
Kilkenny Co. Kilkenny	1-10	147.80
	11-20	220.04
	21-end	194.70
	Month	562.54
Belmullet Co. Mayo	1-10	141.35
	11-20	182.52
	21-end	178.81
	Month	502.68
Clones Co. Monaghan	1-10	127.10
	11-20	198.05
	21-end	189.50
	Month	514.65
Birr Co. Offaly	1-10	125.61
	11-20	192.82
	21-end	184.33
	Month	502.76

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	5.5	-	15	16
	11-20	28.6	25	40	-
	21-end	22.7	-	25	15
	Month	56.8	-	-	-
Kinsealy Co. Dublin	1-10	11.6	-	0	1
	11-20	25.5	2	2	-
	21-end	22.8	1	3	-
	Month	59.9	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	4.1	-	0	19
	11-20	18.7	-	0	27
	21-end	30.5	-	0	56
	Month	53.3	-	-	-
Ballinamore Co. Leitrim	1-10	12.0	2	4	-
	11-20	15.6	13	17	-
	21-end	22.7	-	0	21
	Month	50.3	-	-	-
Glenamoy Co. Mayo	1-10	26.5	22	29	-
	11-20	35.7	27	56	-
	21-end	33.3	-	35	21
	Month	95.5	-	-	-
Johnstown Castle Co. Wexford	1-10	15.9	-	0	-
	11-20	28.2	25	25	-
	21-end	31.2	-	17	8
	Month	75.3	-	-	-

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TABLE 4 SOIL CLIMATE (MULLINGAR)

BARE SOIL TYPE	PERIOD	MEAN TEMPERATURE (°C at 100mm)			TEMPERATURE GRADIENT (to 200mm)	SOIL WATER POTENTIAL (hPa) (at depths)	
		Max.	Daily	Min.		75mm	200mm
		Peat	1-10	13.02	11.51	9.19	-0.69
11-20	16.02		13.96	10.84	-0.93	137.70	112.80
21-end	14.71		12.76	10.15	-0.22	87.09	78.09
Mineral	1-10	13.31	11.11	8.79	-0.47	150.60	158.30
	11-20	16.73	13.35	10.17	-0.64	280.30	168.40
	21-end	15.37	12.21	9.74	-0.17	136.45	100.64

The Place of Weather Factors in Developing Reliable Plant Disease Forecasts

DR. D.J. ROYLE

Institute of Arable Crops Research, Long Ashton Research Station,
Department of Agricultural Sciences, University of Bristol,
Long Ashton, Bristol BS 18 9AF, UK

ABSTRACT

All aerial fungal pathogens causing disease in crop plants depend in some degree on weather for their development and spread. This dependence has frequently been exploited in attempts to produce methods for short-term forecasting of disease outbreaks, developments, or some phase(s) of the pathogen life-cycle which relates closely to the severity of subsequent disease. Epidemics of certain diseases, such as cereal rusts and mildews, show more or less continuous progression in crops and are less influenced by weather fluctuations than other diseases, such as Septoria, Rhynchosporium and net blotch, which progress discontinuously; their explosive nature is due to a qualitative influence of weather, usually as some form of water variables and, in general, they have not worked well. However weather is incorporated, reliable forecasts need to be based on the biology underlying serious disease attacks, and our research at Long Ashton seeks to examine the feasibility of forecast-based control of *Septoria tritici* and *S.nodorum* in wheat based on this principle. Our approach with *S. tritici* couples an assessment of resident inoculum in a crop in spring with monitoring for specific rain-splash dispersal events during a critical crop growth stage (from emergence of leaf 2). There is no correlation between the splash events and any convenient meteorological measure of rain amount, duration or rate; a simple splashmeter has therefore been designed and being used to indicate when relevant splash events occur. We are currently investigating with ADAS the possible value of monitoring rainfall by radar, which is based on drop size. So far our approach to forecasting has shown considerable promise for improving decision-making for fungicide selection and timing using a few relatively simple but sound biological observations.

The full text has just been published in the Proceedings of the Conference on Weather and Agriculture held by the AGMET group on February 29, 1988 at University College Dublin. Copies of the proceedings are available on application to AGMET c/o Meteorological Service, Dublin 9.
