



AGROMETEOROLOGICAL BULLETIN

The Weather of December 1989

Summary

1 st - 10 th : High pressure; dry, light easterly winds
11 th - 25th : Unsettled with fluctuating temperature
26th- end : Ridge followed by a trough
Month : : Very cold (except extreme east/south), dry (except south),
and dull (except in west/north)

Meteorological Situation

High pressure north-east of Ireland resulted in dry weather with frost, especially from 1st-3rd, some fog and light easterly winds to 10th. Atlantic low pressure and fluctuating temperature dominated next to 25th. The first troughs of the period giving heavy rain became slow moving as easterly winds prevailed over the country. The main features of the spell included: a deep depression from the Azores, which crossed Ireland on 16th, producing strongest wind in southern regions; a low system, which passed by the northwest on 20th/21st, giving mild southwest winds; and an intense Atlantic low, which veered towards Iceland, bringing strong south to southwest mild winds and rain to the country from 23rd to 25th. A transient ridge on 19th gave one of the coldest nights of the month. Cold conditions in a ridge of high pressure on 26th/27th yielded to milder weather over the following days.

Precipitation

Monthly total varied from being well below normal in the north to well above in the south, i.e. from 43% at Malin Head to 182% at Dungarvan. Wettest days in the south in order of importance based on amounts were 16th, 13th, 11th, 24th, 20th and 31st. In northern areas 16th was wettest day.

Sunshine and Radiation

Apart from the west and north coasts, sunshine hours were well below normal. On north and west coasts total hours varied between 142% to 146% of normal; elsewhere values varied from 75% at Mullingar to 84% at Claremorris. There were some 5 to 6 bright days well distributed through the month. Global radiation varied from 107% at Valentia to 82% of normal at Birr.

Temperature

Mean air temperature varied from 1.7°C below normal at Belmullet to 0.6°C above at Dublin Airport. The above normal values were due to high night-time minima in the extreme east and south coastal areas; elsewhere both daytime and night-time values were equally low. Coldest days were 1st-3rd, 15th, 18th/19th and 26th/27th.

Wind

Spells of strong winds occurred on 11th, 13th, 16th/17th (particularly in southern areas), and 23rd to 25th when gales with storm gusts were most widespread.

TABLE 1

DECEMBER 1989

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	0.7	-	1	0	6.0	-2.9	1.6	-	-5.6	2	8	4	-	0	-	-7.0	1	10	-	-	9.9	-	0.6	-	-
	11-20	58.1	-	7	6	8.1	0.7	4.4	-	-4.0	19	4	15	-	1	-	-4.5	18	9	-	-	8.6	-	3.9	-	-
	21-END	32.8	-	5	4	9.5	3.1	6.3	-	-2.8	27	3	27	-	2	-	-5.6	27	4	-	-	9.5	-	4.0	-	-
	MONTH	91.6	105	13	10	7.9	0.4	4.2	-	-5.6	2	15	46	-	3	-	-7.0	1	23	-	-	28.0	-	2.8	-	0
Shannon Airport Co. Clare	1-10	0.0	-	0	0	5.2	0.3	2.8	-	-3.8	2	5	6	-	0	-	-9.4	1	8	3.8	-	7.8	-	1.9	0	-
	11-20	43.3	-	8	8	8.3	3.3	5.8	-	-1.0	19	1	20	-	1	-	-6.2	19	4	4.8	-	9.5	-	4.9	3	-
	21-END	34.4	-	7	5	9.4	4.6	7.0	-	-2.1	27	1	32	-	1	-	-7.8	27	5	5.5	-	11.8	-	4.5	2	-
	MONTH	77.7	73	15	13	7.7	2.8	5.2	-1.0	-3.8	2	7	58	67	3	-	-9.4	1	17	4.7	-1.1	29.1	65	3.8	5	4
Cork Airport Co. Cork	1-10	0.0	-	0	0	7.4	3.8	5.6	-	1.5	1	0	14	-	0	-	-0.4	1	1	5.5	-	3.0	-	4.9	0	-
	11-20	183.3	-	8	8	8.9	3.5	6.2	-	-1.6	18	1	24	-	1	-	-4.4	18	3	6.0	-	12.5	-	7.5	6	-
	21-END	55.8	-	10	8	8.9	4.8	6.9	-	1.6	27	0	30	-	1	-	-1.3	27	2	6.3	-	14.3	-	7.7	5	-
	MONTH	239.1	172	18	16	8.4	4.1	6.2	+0.2	-1.6	18	1	68	86	2	-	-4.4	18	6	5.9	+0.4	29.8	60	6.7	11	6
Fermoy (Coolnakilla) Co. Cork	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
Fermoy (Moore Park) Co. Cork	1-10	21.9	-	1	1	7.0	-2.2	2.4	-	-5.5	1	8	7	-	0	-	-10.1	4	9	-	-	5.4	-	1.2	-	-
	11-20	73.5	-	7	7	9.0	1.6	5.3	-	-3.6	19	3	21	-	2	-	-6.2	19	6	-	-	10.5	-	3.7	-	-
	21-END	47.4	-	9	8	9.6	2.5	6.1	-	-3.5	27	3	27	-	2	-	-5.5	27	6	-	-	12.0	-	3.5	-	-
	MONTH	142.8	126	17	16	8.6	0.7	4.6	-	-5.5	1	14	55	-	3	-	-10.1	4	21	-	-	12.0	-	2.8	-	-1
Roches Point Co. Cork	1-10	0.0	-	0	0	9.0	5.4	7.2	-	3.5	1	0	28	-	0	-	1.4	1	0	7.0	-	3.8	-	4.3	0	-
	11-20	145.7	-	8	8	10.0	4.7	7.3	-	0.7	19	0	32	-	2	-	-3.1	18	3	7.0	-	10.9	-	7.1	6	-
	21-END	40.8	-	9	8	10.0	6.2	8.1	-	3.2	27	0	42	-	2	-	-1.0	26	1	7.3	-	14.0	-	7.5	7	-
	MONTH	186.5	181	17	16	9.7	5.4	7.6	+0.3	0.7	19	0	102	101	4	-	-3.1	18	4	7.1	+0.4	28.7	53	6.4	13	11
Glencolumbkille Co. Donegal	1-10	0.0	-	0	0	6.7	1.1	3.9	-	-1.0	5	1	8	-	0	-	-6.0	5	8	-	-	N/A	-	1.7	-	-
	11-20	47.8	-	8	6	6.4	0.8	3.6	-	-3.5	15	2	7	-	0	-	-8.0	16	8	-	-	N/A	-	4.0	-	-
	21-END	36.2	-	8	7	8.0	3.6	5.8	-	-0.7	27	1	20	-	0	-	-4.4	27	4	-	-	N/A	-	5.0	-	-
	MONTH	84.0	-	16	13	7.1	1.9	4.5	-	-3.5	15	4	35	-	0	-	-8.0	16	20	-	-	N/A	-	3.6	-	N/A

TABLE 1 (CONTINUED)

DECEMBER 1989

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	0.0	-	0	0	5.8	-1.0	2.4	-	-4.5	5	8	5	-	0	-	-10.1	3	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	39.7	-	8	7	6.1	-0.0	3.0	-	-6.9	15	4	6	-	0	-	-13.4	15	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	21-END	42.3	-	8	6	8.0	3.9	5.9	-	-1.7	27	1	20	-	0	-	-8.7	27	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	82.0	48	16	13	6.6	1.1	3.9	-	-6.9	15	13	31	-	0	-	-13.4	15	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malin Head Co. Donegal	1-10	2.8	-	1	1	7.6	1.8	4.7	-	-0.3	4	1	10	-	0	-	-2.0	4	7	3.8	-	19.4	-	3.6	0	-	-	-	-	-	-	-	-	-	
	11-20	30.4	-	5	3	7.2	3.6	5.4	-	0.8	19	0	13	-	0	-	-2.9	15	3	4.1	-	11.0	-	9.4	8	-	-	-	-	-	-	-	-	-	-
	21-END	14.9	-	7	7	8.0	4.5	6.2	-	0.2	27	0	22	-	0	-	-1.9	27	1	4.9	-	8.8	-	9.8	8	-	-	-	-	-	-	-	-	-	-
	MONTH	48.1	43	13	11	7.6	3.3	5.5	-0.9	-0.3	4	1	46	58	0	-	-2.9	15	11	4.3	-1.2	39.2	136	7.7	16	10	-	-	-	-	-	-	-	-	-
Casement Aerodrome Co. Dublin	1-10	0.0	-	0	0	7.2	0.8	4.0	-	-5.9	2	2	10	-	0	-	-7.8	2	8	4.2	-	16.0	-	1.9	0	-	-	-	-	-	-	-	-	-	
	11-20	52.9	-	9	5	7.9	2.4	5.1	-	-3.0	19	2	16	-	1	-	-6.3	19	5	4.8	-	4.9	-	6.5	8	-	-	-	-	-	-	-	-	-	
	21-END	18.4	-	4	4	8.8	3.7	6.3	-	-1.8	27	2	26	-	1	-	-5.8	27	3	4.8	-	16.1	-	7.8	4	-	-	-	-	-	-	-	-	-	-
	MONTH	71.3	93	13	9	8.0	2.3	5.2	-0.1	-5.9	2	6	51	69	2	-	-7.8	2	16	4.6	-	37.0	79	5.4	12	3	-	-	-	-	-	-	-	-	-
Dublin Airport Co. Dublin	1-10	0.5	-	2	0	8.1	4.6	6.3	-	0.5	2	0	21	-	0	-	-4.9	2	5	5.2	-	12.5	-	1.2	0	-	-	-	-	-	-	-	-	-	
	11-20	44.3	-	9	6	8.2	3.6	5.9	-	-1.4	19	1	19	-	1	-	-3.0	19	5	5.2	-	6.0	-	5.5	2	-	-	-	-	-	-	-	-	-	-
	21-END	12.3	-	6	2	9.2	4.8	7.0	-	0.7	27	0	31	-	2	-	-7.2	27	3	5.0	-	13.4	-	5.5	3	-	-	-	-	-	-	-	-	-	-
	MONTH	57.1	72	17	8	8.5	4.3	6.4	+0.6	-1.4	19	1	71	97	3	-	-7.2	27	13	5.1	+0.3	31.9	61	4.1	5	7	-	-	-	-	-	-	-	-	-
Kinsealy Co. Dublin	1-10	0.3	-	1	0	8.4	2.6	5.5	-	-2.2	2	3	18	-	0	-	-12.1	2	10	-	-	12.0	-	1.7	-	-	-	-	-	-	-	-	-	-	
	11-20	43.0	-	8	8	8.3	3.0	5.7	-	-1.6	19	2	19	-	1	-	-9.5	19	9	-	-	7.2	-	4.8	-	-	-	-	-	-	-	-	-	-	-
	21-END	12.4	-	6	3	N/A	3.1	N/A	-	-2.1	27	2	N/A	-	N/A	-	-2.1	27	11	-	-	N/A	-	4.4	-	-	-	-	-	-	-	-	-	-	
	MONTH	55.7	73	15	11	N/A	2.9	N/A	-	-2.2	2	7	N/A	-	N/A	-	-12.1	2	30	-	-	N/A	-	3.6	-	N/A	-	-	-	-	-	-	-	-	
Galway Co. Galway	1-10																																		
	11-20																																		
	21-END																																		
	MONTH																																		
Killarney (Muckross House) Co. Kerry	1-10	11.2	-	1	1	8.2	1.8	5.0	-	-1.0	3	4	14	-	0	-	-6.0	6	6	-	-	25.2	-	-	-	-	-	-	-	-	-	-	-	-	
	11-20	115.0	-	8	7	9.7	2.2	5.9	-	-2.4	19	3	24	-	2	-	-7.0	19	5	-	-	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	106.3	-	10	10	10.3	4.8	7.5	-	-0.5	27	1	37	-	2	-	-5.0	27	2	-	-	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	232.5	118	19	18	9.4	3.0	6.2	-	-2.4	19	8	75	-	4	-	-7.0	19	13	-	-	41.5	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

DECEMBER 1989

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
Cahirciveen (Valentia Obsy.) Co. Kerry	1-10	0.0	-	0	0	9.4	2.4	5.9	-	-2.0	3	5	23	-	0	-	-5.5	3	6	4.0	-	33.4	-	4.1	1	-
	11-20	78.0	-	9	6	10.4	4.3	7.3	-	-1.4	18	2	34	-	3	-	-5.6	18	3	6.4	-	8.5	-	6.5	6	-
	21-END	66.5	-	10	8	10.7	6.3	8.5	-	1.8	27	0	47	-	3	-	-2.3	27	1	7.3	-	11.9	-	7.2	9	-
	MONTH	144.5	91	19	14	10.2	4.4	7.3	-0.4	-2.0	3	7	104	90	6	-	-5.6	18	10	5.9	-1.0	53.8	142	6.0	16	14
Ardfert (Liscahane) Co. Kerry	1-10	0.0	-	0	0	7.7	0.2	4.0	-	-2.7	1	4	10	-	0	-	-7.5	1	7	-	-	24.5	-	-	-	-
	11-20	52.8	-	9	7	9.3	2.8	6.0	-	-1.1	19	2	22	-	1	-	-5.1	18	3	-	-	9.9	-	-	-	-
	21-END	74.8	-	10	6	9.8	4.8	7.3	-	-0.1	27	1	35	-	1	-	-3.7	27	2	-	-	7.8	-	-	-	-
	MONTH	127.6	-	19	13	9.0	2.7	5.8	-	-2.7	1	7	67	-	3	-	-7.5	1	12	-	-	42.2	-	-	-	-
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	-	-	-
	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	-	-	-
	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	-	-	-
	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	-
Kilkenny Co. Kilkenny	1-10	0.0	-	0	0	4.9	-1.3	1.8	-	-5.3	1	6	4	-	0	-	-10.4	1	10	2.8	-	13.5	-	0.5	0	-
	11-20	68.1	-	9	7	8.1	1.5	4.8	-	-3.0	19	3	16	-	2	-	-6.9	18	8	4.6	-	9.1	-	3.8	2	-
	21-END	39.7	-	7	4	8.9	3.2	6.1	-	-2.5	27	2	26	-	1	-	-8.5	27	5	5.1	-	12.5	-	4.0	3	-
	MONTH	107.8	117	16	11	7.4	1.2	4.3	-1.0	-5.3	1	11	46	61	2	-	-10.4	1	23	4.2	-0.4	35.1	76	2.8	5	0
Mooncoin (Silverspring) Co. Kilkenny	1-10	28.6	-	1	1	7.0	-1.3	2.8	-	-5.8	1	6	8	-	0	-	-8.7	3	10	-	-	8.7	-	-	-	-
	11-20	100.1	-	7	7	9.1	1.7	5.4	-	-2.8	18	4	21	-	2	-	-9.6	18	8	-	-	8.7	-	-	-	-
	21-END	55.9	-	7	5	9.6	2.9	6.2	-	-5.1	26	2	29	-	1	-	-8.5	27	5	-	-	8.8	-	-	-	-
	MONTH	184.6	168	15	13	8.6	1.1	4.8	-	-5.8	1	12	58	-	3	-	-9.6	18	23	-	-	26.2	-	-	-	-
Ballinamore Co. Leitrim	1-10	0.2	-	1	0	5.7	1.2	3.4	-	-4.1	3	3	5	-	0	-	-8.3	1	9	-	-	-10.9	-	0.7	-	-
	11-20	66.8	-	8	6	6.2	0.1	3.1	-	-5.9	19	5	7	-	0	-	-10.9	19	5	-	-	N/A	-	2.2	-	-
	21-END	32.8	-	6	5	7.4	1.7	4.5	-	-4.4	27	3	13	-	0	-	-8.4	27	5	-	-	N/A	-	2.8	-	-
	MONTH	99.8	79	15	11	6.4	1.0	3.7	-	-5.9	19	11	25	-	0	-	-10.9	19	19	-	-	N/A	-	1.9	-	N/A
Ardee (Boharnamoe) Co. Louth	1-10	11.5	-	4	3	N/A	1.1	N/A	-	-4.3	2	3	N/A	-	N/A	-	N/A	-	-	-	-	-	-	-	-	-
	11-20	46.4	-	7	6	N/A	0.2	N/A	-	-5.3	19	5	N/A	-	N/A	-	N/A	-	-	-	-	-	-	-	-	-
	21-END	0.2	-	1	0	N/A	1.2	N/A	-	-5.4	26	4	N/A	-	N/A	-	N/A	-	-	-	-	-	-	-	-	-
	MONTH	58.1	65	12	9	N/A	0.8	N/A	-	-5.4	26	12	N/A	-	N/A	-	N/A	-	-	-	-	-	-	-	-	-

TABLE 1 (CONTINUED)

DECEMBER 1989

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
Ballinrobe (Creagh) Co. Mayo	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	-	-	-	-
	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	-	-	-	-
	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	-	-	-	-
	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
Belmullet Co. Mayo	1-10	0.0	-	0	0	6.9	1.0	3.9	-	-2.9	1	4	9	-	0	-	-8.6	1	7	3.6	-	21.0	-	3.6	0	-
	11-20	48.8	-	7	6	7.4	1.8	4.6	-	-1.3	15	1	11	-	0	-	-7.9	15	7	4.1	-	18.8	-	6.9	5	-
	21-END	42.9	-	8	6	9.3	4.5	6.9	-	1.5	27	0	29	-	1	-	-3.7	27	2	5.5	-	9.4	-	8.3	8	-
	MONTH	91.7	75	15	12	7.9	2.5	5.2	-1.7	-2.9	1	5	49	54	2	-	-8.6	1	16	4.4	-1.7	49.2	146	6.3	13	8
Claremorris Co. Mayo	1-10	0.0	-	0	0	5.0	0.0	2.5	-	-5.4	1	5	3	-	0	-	-9.0	1	4	3.2	-	6.7	-	2.2	5	-
	11-20	59.8	-	7	6	6.3	0.6	3.5	-	-3.3	19	2	9	-	0	-	-6.6	19	6	3.6	-	13.4	-	5.8	4	-
	21-END	45.3	-	6	5	8.0	3.1	5.5	-	-2.8	27	2	20	-	0	-	-5.5	27	4	4.6	-	11.5	-	5.7	4	-
	MONTH	105.1	85	13	11	6.5	1.3	3.9	-1.3	-5.4	1	9	32	49	0	-	-9.0	1	14	3.8	-0.9	31.6	84	4.6	13	-1
Glenamoy Co. Mayo	1-10	0.0	-	0	0	6.2	-0.6	2.8	-	-5.6	3	5	6	-	0	-	-8.5	3	6	-	-	N/A	-	0.9	-	-
	11-20	52.2	-	9	8	7.5	0.7	4.1	-	-2.4	15	5	11	-	0	-	-8.0	15	7	-	-	N/A	-	3.8	-	-
	21-END	39.7	-	6	6	8.8	4.1	6.5	-	-0.3	27	1	26	-	1	-	-0.8	26	2	-	-	N/A	-	****	-	-
	MONTH	91.9	59	15	14	7.6	1.5	4.5	-	-5.6	3	11	43	-	1	-	-8.5	3	15	-	-	N/A	-	-4.9	-	N/A
Dunsany (Grange) Co. Meath	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	-	-	-	-
	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	-	-	-	-
	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	-	-	-	-
	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	-	-	-	-
Clones Co. Monaghan	1-10	0.0	-	0	0	5.0	0.8	2.9	-	-3.0	3	4	3	-	0	-	-5.2	3	6	4.4	-	1.2	-	1.1	0	-
	11-20	49.7	-	7	6	5.7	1.2	3.5	-	-4.0	19	2	7	-	0	-	-10.8	19	4	4.0	-	4.9	-	3.6	1	-
	21-END	23.2	-	6	4	7.8	2.7	5.3	-	-3.0	27	2	18	-	0	-	-6.5	27	5	4.3	-	12.3	-	4.6	3	-
	MONTH	72.9	76	13	10	6.2	1.6	3.9	-0.9	-4.0	19	8	28	49	0	-	-10.8	19	15	4.2	-0.2	18.4	51	3.1	4	-2
Birr Co. Offaly	1-10	0.0	-	0	0	4.9	-1.5	1.7	-	-7.0	1	5	4	-	0	-	-10.0	1	9	2.7	-	11.0	-	0.7	0	-
	11-20	33.1	-	7	4	7.5	1.5	4.5	-	-2.9	19	1	13	-	1	-	-8.7	19	7	4.2	-	12.2	-	3.8	2	-
	21-END	24.3	-	4	4	8.9	3.2	6.1	-	-3.7	27	2	25	-	1	-	-8.7	27	5	4.9	-	8.3	-	4.2	3	-
	MONTH	57.4	67	11	8	7.2	1.2	4.2	-1.2	-7.0	1	8	43	60	2	-	-10.0	1	21	4.0	-0.9	31.5	72	2.9	5	-1

- 5 -

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	1563
	11-20	1175
	21-end	1318
	Month	4056
Dublin Airport Co. Dublin	1-10	1379
	11-20	1269
	21-end	1475
	Month	4123
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	2662
	11-20	1660
	21-end	1748
	Month	6070
Kilkenny Co. Kilkenny	1-10	1916
	11-20	1610
	21-end	1696
	Month	5222
Belmullet Co. Mayo	1-10	1938
	11-20	1664
	21-end	1560
	Month	5162
Clones Co. Monaghan	1-10	1275
	11-20	1170
	21-end	1392
	Month	3837
Birr Co. Offaly	1-10	1889
	11-20	1623
	21-end	1538
	Month	5050

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

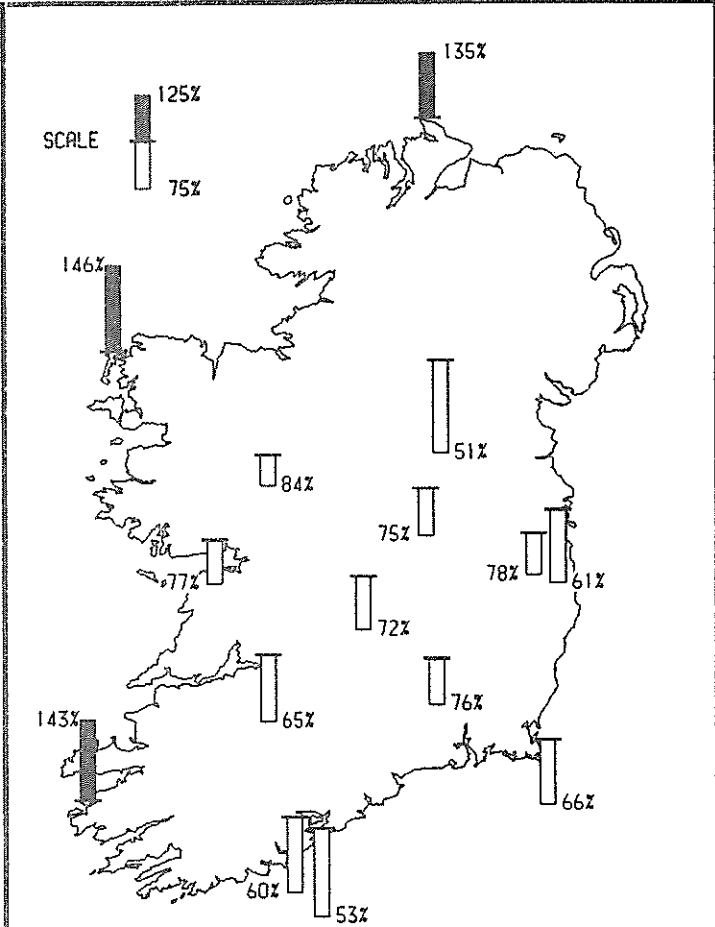
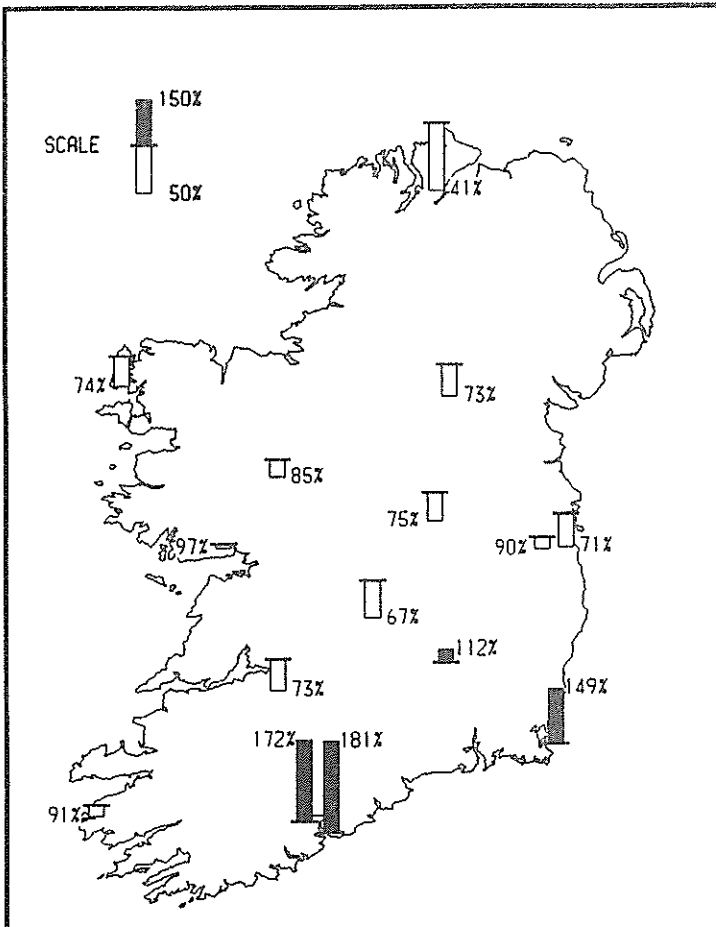
STATION	PERIOD	P.E. (mm)		SOIL MOISTURE (mm)	
		Amount	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	1.5	1	4	-
	11-20	4.4	-	0	54
	21-end	0.1	-	0	33
	Month	6.0	-	-	-
Kinsealy Co. Dublin	1-10	2.1	2	10	-
	11-20	5.1	-	0	38
	21-end	1.6	-	0	13
	Month	8.8	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	(-6.3)	-	0	6
	11-20	2.3	-	0	71
	21-end	3.8	-	0	63
	Month	-	-	-	-
Ballinamore Co. Leitrim	1-10	(-4.5)	4	4	-
	11-20	7.7	-	0	59
	21-end	(-2.7)	-	0	35
	Month	-	-	-	-
Glenamoy Co. Mayo	1-10	3.8	-	0	4
	11-20	1.7	-	0	51
	21-end	14.6	-	0	25
	Month	20.1	-	-	-
Johnstown Castle Co. Wexford	1-10	3.4	2	3	-
	11-20	-	-	0	97
	21-end	-	-	0	16
	Month	-	-	-	-

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	4.1	3.8	3.2	1.21
	11-20	5.0	4.3	3.5	.92	N.A. (frozen)	N.A. (frozen)
	21-end	4.9	4.3	3.5	.59	N.A. (frozen)	N.A. (frozen)
Mineral	1-10	4.6	4.0	2.9	.52	N.A. (frozen)	N.A. (frozen)
	11-20	5.2	4.1	3.0	.62	N.A. (frozen)	N.A. (frozen)
	21-end	5.3	4.4	3.0	.19	N.A. (frozen)	N.A. (frozen)

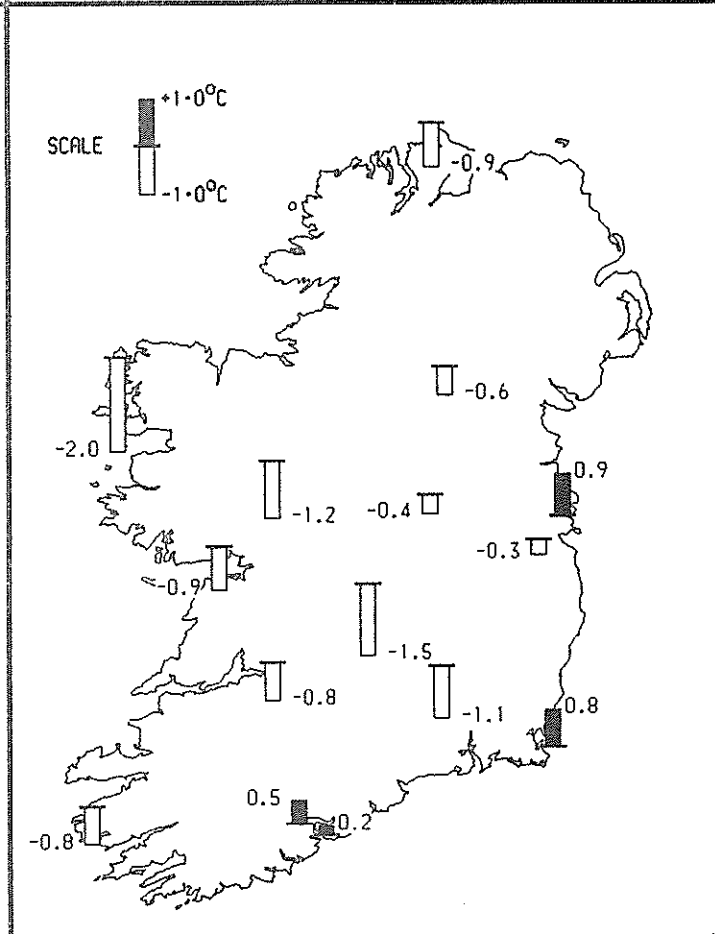
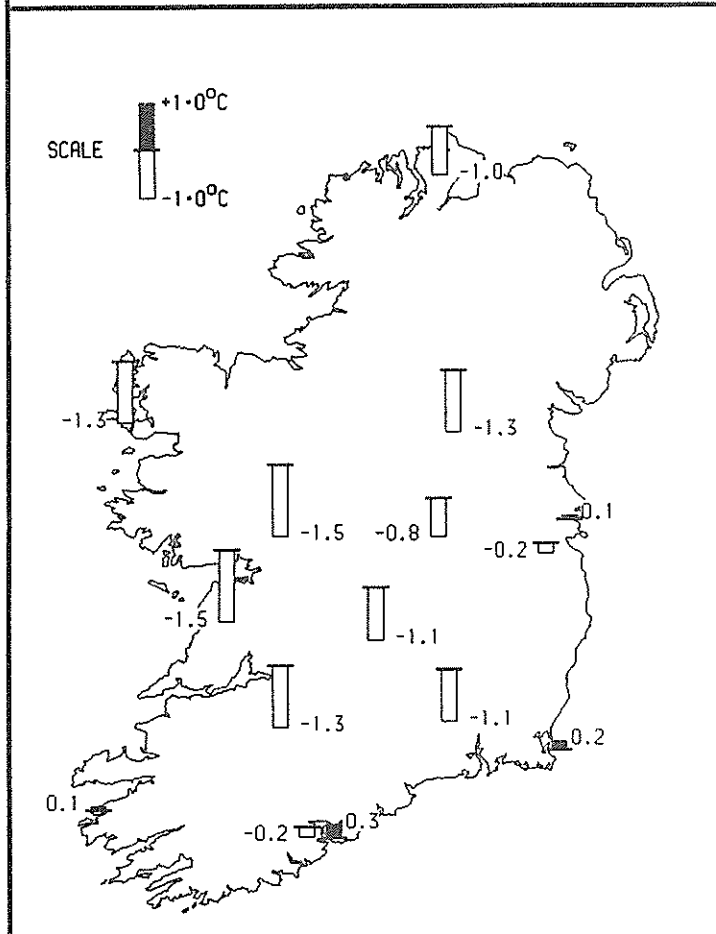
Notes on the tables in January issue

Differences from average



RAINFALL (Percentage of 1951-1980 normals)

SUNSHINE (Percentage of 1951-1980 normals)



MEAN MAX. TEMPERATURE (Deviation from 1951-1980 normals)

MEAN MIN. TEMPERATURE (Deviation from 1951-1980 normals)

PRECIPITATION VALUES FOR December 1989

MARKREE (CO. SLIGO)					LETTERKENNY (CO. DONEGAL)			
PERIOD	AMOUNT	% OF AVERAGE	RAIN DAYS NO.	WET DAYS NO.	AMOUNT	% OF AVERAGE	RAIN DAYS NO.	WET DAYS NO.
1 - 10	0.0		0	0	0.0		0	0
11 - 20	45.6		7	6	34.0		8	6
21 - END	36.4		8	4	33.1		6	5
MONTH	82.0	48	15	10	67.1	65	14	11

Outlook for January 12th - 21st

A westerly airflow will prevail over the first seven days with frequent rainbelts. Although changeable the weather will be mild, and rain will be heavy at times. High pressure will develop subsequently when it will be dry, bright and cold with sharp to severe frost. The high will decline towards the end of the of the period and freshening southeast winds will set in.

AN AGROCLIMATOLOGICAL SUMMARY FOR 1989

Accumulations of given parameters over periods (a) January to May (i) and (b) June to December.
Brackets show percentage of average, except for days with air frost.

	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
	Valentia Obs. <i>Co. Kerry</i>		Claremorris <i>Co. Mayo</i>		Kilkenny <i>Co. Kilkenny</i>		Dublin Airport <i>Dublin</i>	
Day Degrees Threshold 6°C (ii)	532 (114)	1499 (113)	399 (112)	1231 (110)	473 (124)	1408 (114)	442 (125)	1445 (116)
Threshold 10°C (iii)	146 (111)	783 (120)	102 (93)	612 (122)	152 (109)	756 (114)	128 (123)	754 (153)
Global Radiation kJoule/cm ²	149 (105)	224 (106)	133* (n/a)	186 (n/a)	150 (104)	216 (101)	158 (106)	257 (127)
Potential Evapotranspiration (mm)	230 (102)	356 (108)	183 (101)	287 (109)	194 (104)	331 (114)	232 (84)	339 (113)
Precipitation (mm)	626 (121)	748 (91)	523 (146)	710 (111)	281 (84)	473 (89)	211 (86)	357 (73)
Days with air frost	1 (11)	8 (3)	20 (30)	13 (15)	28 (33)	17 (23)	5 (20)	2 (8)
Soil Moisture Deficits	Valentia Obs Co. Kerry		Oakpark Co. Carlow		Johnstown Castle Co. Wexford		Kinsealy Co. Dublin	
Maximum Value	31	63	68	95	58	91	56	105
Date of Maximum	21 May	11 July	21 May	21 July	21 May	21 July	21 May	21 July
Number of 10-day periods with 50 mm deficit or more (v)	0	2	1	8	1	11	1	13

- Notes :
- (i) Approximately coincides with the change from reproductive to flowering state in grass
 - (ii) Threshold temperature representing General Grass Growth
 - (iii) Threshold temperature representing strong growth.
 - (iv) Average number of days with air frost shown in brackets
 - (v) Soil moisture deficits in excess of 50mm limit the growth of grass or shallow rooted crops
- * Global radiation at Belmullet Co. Mayo
n/a Not available

Annual Weather Summary

A very mild winter gave way to near normal temperature in Spring. The spell from January to mid- April was very wet especially in the west. A very warm and dry May and a mostly dry June led to record temperatures and drought in July. While the weather in August and much of October was wet both September and November were dry maintaining good ground conditions. Unsettled weather set in in December.