



AGROMETEOROLOGICAL BULLETIN

The Weather of December 1990

Summary

*1st - 6th : High pressure , cool
7th - 10th : Trough at first followed by cold northeast airflow and wintry showers
11th - 19th : High pressure dominated ; dry and very cold esp. at night
20th - 31st : Very strong southwest to west winds ; changable : mild spells followed by wintry showers
Month : Very cold, bright (except. in northwest), wet (exc. in south)*

Meteorological Situation

High pressure and light winds gave way by 6th to declining pressure and an increasing southwest airflow. Frontal troughs with a period of rain moved down over the country overnight 6th/7th. A wave on the front (which gave some snow later in east) and high pressure in northern latitudes effected a north to northeast airflow over the country to 10th. The high slipped southwards in the Atlantic to be absorbed into another high of Azores origin. A ridge over Ireland on 10th and a frontal trough in northwest winds on 11th followed. The Atlantic high returned and became the dominant feature to 18th, although by then its centre had drifted over Scandanavia.

Following this an extensive southwest airflow was established over northern Europe. Mild air and rain, sometimes heavy, occurred in frontal troughs, especially on 22nd and 24th. However, as the winds veered to the west following each of the troughs, cold air and wintry showers occurred for spells. Winds were strong to gale force through the period mainly from a southwest to northwest direction. They especially reached storm force following a passage of a deep depression by the northwest of the country on 26th. Cold, squally showers, some of hail, sleet or snow, accompanied the strong winds. Southwest wind on 28th preceded further disturbed conditions through to the end of the year.

Precipitation

Precipitation was above normal except in the south and southeast. This was mainly due to a wet 11 days towards the end of the month. Monthly totals varied from 145% of normal at Glenamoy to 68% at Cork Airport. Apart from 6th/7th, the wettest spell occurred from 19th to 30th. Showers were frequently wintry, sometimes of snow.

Sunshine and Radiation

Sunshine hours were above to well above normal except in the west. They varied from 127% of normal at Birr (where global (G) radiation was only 97% of average) to 71% (G, 95%) at Cahirciveen.

Temperature

Mean air temperature was well below normal. Values varied from 1.0°C below normal at Birr / Casement /Roche's Point to 0.5°C below at Malin Head /Belmullet. Negative air temperatures (lowest about -6.0°C) occurred at various times throughout the month. Ground frost was widespread and frequent. Lowest ground values reached - 11.0°C.

Wind

Strong winds with frequent gales occurred on 6th/7th and 22nd to 30th. Storm force winds were widespread on 26th.

TABLE 1

DECEMBER 1990

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	14.2	-	3	3	6.0	0.9	3.5	-	-2.4	8	3	8	-	0	-	-3.6	8	7	-	-	9.4	-	3.3	-	-
	11-20	6.3	-	3	1	6.3	-0.7	2.8	-	-3.3	15	5	6	-	0	-	-6.8	15	7	-	-	18.6	-	2.4	-	-
	21-END	86.4	-	11	10	9.7	2.6	6.2	-	0.0	30	0	29	-	4	-	-3.2	24	5	-	-	17.8	-	6.8	-	-
	MONTH	106.9	123	17	14	7.4	1.0	4.2	-	-3.3	15	8	42	-	4	-	-6.8	15	19	-	-	45.8	-	4.2	-	0
Shannon Airport Co. Clare	1-10	14.4	-	2	2	7.7	2.7	5.2	-	-2.0	10	2	17	-	0	-	-7.9	10	5	4.8	-	18.8	-	2.6	1	-
	11-20	23.5	-	5	2	7.8	2.1	4.9	-	-2.4	16	1	14	-	0	-	-7.2	11	8	4.5	-	17.9	-	2.8	1	-
	21-END	107.0	-	11	11	8.9	3.7	6.3	-	1.0	30	0	26	-	2	-	-1.6	24	5	5.4	-	11.8	-	6.7	8	-
	MONTH	144.9	137	18	15	8.2	2.9	5.5	-0.7	-2.4	16	3	58	67	2	-	-7.9	10	18	4.9	-0.9	48.5	108	4.1	10	4
Cork Airport Co. Cork	1-10	4.5	-	3	2	6.7	1.6	4.2	-	-2.4	8	3	11	-	0	-	-3.8	8	5	4.6	-	18.0	-	4.9	2	-
	11-20	3.3	-	3	1	7.5	2.7	5.1	-	0.1	16	0	13	-	0	-	-2.3	14	5	4.9	-	15.9	-	4.8	2	-
	21-END	86.3	-	11	10	8.8	3.0	5.9	-	0.1	27	0	25	-	2	-	-2.0	28	3	5.6	-	20.9	-	9.1	10	-
	MONTH	94.1	68	17	13	7.7	2.5	5.1	-0.9	-2.4	8	3	49	62	2	-	-3.8	8	13	5.0	-0.5	54.8	110	6.4	14	4
Fermoy (Coolnakilla) Co. Cork	1-10	5.9	-	3	1	6.1	0.4	3.2	-	-5.2	10	3	7	-	0	-	-4.8	8	9	-	-	19.5	-	N/A	-	-
	11-20	8.8	-	5	3	6.7	-0.5	3.1	-	-6.0	19	5	7	-	0	-	-7.7	14	8	-	-	14.2	-	N/A	-	-
	21-END	89.3	-	11	11	9.5	1.3	5.4	-	-2.4	25	5	25	-	2	-	-3.8	24	8	-	-	19.3	-	N/A	-	-
	MONTH	104.0	-	19	15	7.5	0.5	4.0	-	-6.0	19	13	39	-	3	-	-7.7	14	25	-	-	53.0	-	N/A	-	N/A
Fermoy (Moore Park) Co. Cork	1-10	2.7	-	2	1	6.7	-0.5	3.1	-	-2.7	9	6	7	-	0	-	-6.9	4	9	-	-	19.3	-	3.3	-	-
	11-20	10.4	-	6	4	7.4	-0.4	3.5	-	-3.2	16	7	9	-	0	-	-6.4	14	8	-	-	11.8	-	2.1	-	-
	21-END	74.7	-	11	10	11.5	3.4	7.5	-	0.5	30	0	40	-	6	-	-3.8	24	7	-	-	19.2	-	4.7	-	-
	MONTH	87.8	78	19	15	8.6	0.9	4.8	-	-3.2	16	13	56	-	7	-	-6.9	4	24	-	-	50.3	-	3.4	-	2
Roches Point Co. Cork	1-10	3.5	-	2	2	7.9	3.3	5.6	-	-0.9	8	1	19	-	0	-	-2.3	8	5	5.3	-	16.7	-	5.0	3	-
	11-20	2.6	-	1	1	8.8	3.8	6.3	-	2.2	13	0	21	-	0	-	-2.0	13	6	5.7	-	14.2	-	4.3	1	-
	21-END	69.4	-	11	11	9.6	4.2	6.9	-	1.6	29	0	31	-	3	-	-1.0	28	4	6.3	-	21.2	-	9.0	10	-
	MONTH	75.5	73	14	14	8.8	3.8	6.3	-1.0	-0.9	8	1	72	71	3	-	-2.3	8	15	5.8	-0.9	52.1	95	6.2	14	11
Glencolumbkille Co. Donegal	1-10	40.6	-	5	4	8.0	3.3	5.6	-	-1.3	10	2	20	-	0	-	-5.0	10	4	-	-	N/A	-	N/A	-	-
	11-20	19.9	-	5	5	7.7	2.5	5.1	-	0.4	16	0	13	-	0	-	-3.6	16	5	-	-	N/A	-	N/A	-	-
	21-END	164.0	-	11	11	6.9	2.1	4.5	-	0.0	25	0	14	-	0	-	N/A	N/A	-	-	-	N/A	-	N/A	-	-
	MONTH	224.5	-	21	20	7.5	2.6	5.1	-	-1.3	10	2	48	-	0	-	N/A	N/A	-	-	-	N/A	-	N/A	-	N/A

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

DECEMBER 1990

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	35.7	-	6	4	7.5	2.4	4.9	-	-4.2	10	3	18	-	0	-	-5.9	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	17.2	-	5	5	7.6	0.7	4.2	-	-2.9	16	4	11	-	0	-	-7.0	16	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	21-END	166.5	-	11	11	8.0	1.6	4.8	-	-6.0	27	1	18	-	1	-	-2.9	31	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	219.4	128	22	20	7.7	1.6	4.6	-	-6.0	27	8	47	-	1	-	-7.0	16	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Malin Head Co. Donegal	1-10	29.3	-	5	2	8.6	4.5	6.6	-	-0.4	8	1	26	-	0	-	-1.7	10	2	5.7	-	4.7	-	9.6	5	-	-	-	-	-	-	-	-	
	11-20	14.7	-	4	3	8.1	3.7	5.9	-	1.5	16	0	18	-	0	-	-1.9	15	4	4.4	-	12.7	-	7.2	4	-	-	-	-	-	-	-	-	
	21-END	88.0	-	10	10	7.6	2.9	5.3	-	0.4	30	0	18	-	1	-	-0.3	30	1	4.5	-	10.0	-	12.6	11	-	-	-	-	-	-	-	-	
	MONTH	132.0	118	19	15	8.1	3.7	5.9	-0.5	-0.4	8	1	62	78	1	-	-1.9	15	7	4.8	-0.7	27.4	95	9.9	20	21	-	-	-	-	-	-		
Casement Aerodrome Co. Dublin	1-10	14.6	-	4	3	6.4	1.8	4.1	-	-2.5	8	2	10	-	0	-	-4.3	8	6	3.6	-	7.9	-	5.5	4	-	-	-	-	-	-	-	-	
	11-20	21.9	-	4	1	6.6	-0.4	3.1	-	-3.8	15	7	7	-	0	-	-6.1	15	8	2.2	-	21.4	-	4.3	2	-	-	-	-	-	-	-	-	
	21-END	58.5	-	10	8	8.1	3.1	5.6	-	0.2	31	0	23	-	3	-	-1.1	24	5	4.4	-	20.5	-	11.8	10	-	-	-	-	-	-	-	-	
	MONTH	95.0	123	18	12	7.1	1.6	4.3	-1.0	-3.8	15	9	41	55	3	-	-6.1	15	19	3.4	-	49.8	106	7.4	16	6	-	-	-	-	-	-	-	
Dublin Airport Co. Dublin	1-10	20.9	-	4	4	7.0	2.8	4.9	-	-2.0	8	1	14	-	0	-	-6.3	8	5	4.5	-	9.5	-	5.0	3	-	-	-	-	-	-	-	-	
	11-20	10.5	-	5	2	7.4	1.4	4.4	-	-1.1	13	2	11	-	0	-	-6.8	15	7	3.2	-	24.0	-	3.2	1	-	-	-	-	-	-	-	-	
	21-END	47.3	-	9	8	8.8	3.6	6.2	-	0.5	31	0	27	-	3	-	-2.0	24	6	4.7	-	27.7	-	8.7	9	-	-	-	-	-	-	-	-	
	MONTH	78.7	100	18	14	7.8	2.6	5.2	-0.6	-2.0	8	3	51	70	4	-	-6.8	15	18	4.1	-0.7	61.2	117	5.7	13	7	-	-	-	-	-	-	-	
Kinsealy Co. Dublin	1-10	19.7	-	5	4	6.8	3.0	4.9	-	-1.3	8	1	14	-	0	-	N/A	N/A	-	-	-	7.8	-	4.0	-	-	-	-	-	-	-	-	-	
	11-20	8.9	-	4	2	6.9	0.5	3.7	-	-2.1	15	5	8	-	0	-	N/A	N/A	-	-	-	18.8	-	27.2	-	-	-	-	-	-	-	-	-	
	21-END	44.0	-	10	7	10.6	3.7	7.2	-	0.8	31	0	35	-	5	-	-0.9	28	6	-	-	26.8	-	6.1	-	-	-	-	-	-	-	-	-	
	MONTH	72.6	96	19	13	8.2	2.5	5.3	-	-2.1	15	6	58	-	5	-	N/A	N/A	-	-	-	53.4	-	12.5	-	18	-	-	-	-	-	-		
Galway Co. Galway	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	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	-	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	-	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	N/A	N/A	N/A	-	-	-	-	-	-	-	-	
Killarney (Muckross House) Co. Kerry	1-10	12.9	-	3	2	7.7	1.9	4.8	-	-1.6	9	3	13	-	0	-	-6.5	9	7	-	-	5.8	-	-	-	-	-	-	-	-	-	-	-	
	11-20	15.4	-	6	4	8.8	3.0	5.9	-	-0.5	16	2	21	-	1	-	-5.4	11	6	-	-	5.5	-	-	-	-	-	-	-	-	-	-	-	
	21-END	196.0	-	11	11	11.0	3.8	7.4	-	0.2	30	0	38	-	6	-	-1.8	31	4	-	-	6.4	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	224.3	114	20	17	9.2	2.9	6.1	-	-1.6	9	5	73	-	7	-	-6.5	9	17	-	-	17.7	-	-	-	-	-	-	-	-	-	-	-	

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						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 ^e (Valentia Obsy.) Co. Kerry	1-10	19.2	-	5	2	8.8	3.8	6.3	-	0.0	8	0	23	-	0	-	-4.2	10	5	5.7	-	9.2	-	4.1	3	-
	11-20	12.4	-	6	4	9.4	5.7	7.5	-	0.2	16	0	32	-	1	-	-3.9	16	4	6.9	-	7.0	-	3.8	2	-
	21-END	113.6	-	11	11	10.2	4.4	7.3	-	1.6	29	0	34	-	3	-	-1.4	31	3	6.7	-	10.8	-	8.7	10	-
	MONTH	145.2	91	22	17	9.5	4.6	7.0	-0.7	0.0	8	0	89	77	4	-	-4.2	10	12	6.4	-0.5	27.0	71	5.6	15	12
Ardfert (Liscahane) Co. Kerry	1-10	19.3	-	4	3	8.0	2.2	5.1	-	-3.9	10	3	17	-	0	-	-9.0	10	4	-	-	5.6	-	-	-	-
	11-20	18.0	-	6	4	8.8	2.4	5.6	-	-2.6	11	2	19	-	0	-	-5.2	16	6	-	-	8.7	-	-	-	-
	21-END	117.4	-	11	11	10.7	4.1	7.4	-	0.9	24	0	37	-	5	-	-2.3	24	3	-	-	9.1	-	-	-	-
	MONTH	154.7	-	21	18	9.2	3.0	6.1	-	-3.9	10	5	72	-	6	-	-9.0	10	13	-	-	23.4	-	-	-	-
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
Kilkenny ^e Co. Kilkenny	1-10	7.7	-	3	1	6.9	0.9	3.9	-	-2.2	8	5	10	-	0	-	-5.9	10	6	4.2	-	11.2	-	3.0	3	-
	11-20	10.1	-	3	1	6.9	-0.3	3.3	-	-3.7	14	5	9	-	0	-	-8.7	14	7	2.8	-	21.8	-	2.2	1	-
	21-END	77.9	-	11	11	8.8	3.0	5.9	-	-1.0	24	1	27	-	3	-	-7.1	24	7	4.8	-	21.3	-	6.0	7	-
	MONTH	95.7	104	17	13	7.6	1.3	4.4	-0.9	-3.7	14	11	46	61	4	-	-8.7	14	20	4.0	-0.6	54.3	118	3.8	11	1
Mooncoin (Silverspring) Co. Kilkenny	1-10	9.0	-	4	2	6.9	1.1	4.0	-	-3.0	2	5	10	-	0	-	-8.0	2	6	-	-	14.9	-	-	-	-
	11-20	4.9	-	5	1	7.4	-0.6	3.4	-	-4.5	14	5	9	-	1	-	-8.8	14	8	-	-	20.4	-	-	-	-
	21-END	68.3	-	11	10	10.6	2.8	6.7	-	-0.7	30	2	33	-	4	-	-7.1	24	9	-	-	26.2	-	-	-	-
	MONTH	82.2	75	20	13	8.4	1.1	4.8	-	-4.5	14	12	52	-	5	-	-8.8	14	23	-	-	61.5	-	-	-	-
Ballinamore Co. Leitrim	1-10	8.8	-	6	1	6.9	1.9	4.4	-	-2.6	8	3	12	-	0	-	-8.7	10	5	-	-	15.2	-	2.7	-	-
	11-20	27.5	-	4	4	6.6	-1.5	2.5	-	-5.4	16	6	6	-	0	-	-7.6	16	9	-	-	13.8	-	1.6	-	-
	21-END	107.9	-	11	11	8.4	2.1	5.2	-	-0.4	30	2	21	-	1	-	-1.7	28	7	-	-	12.5	-	4.8	-	-
	MONTH	144.2	114	21	16	7.3	0.9	4.1	-	-5.4	16	11	39	-	1	-	-8.7	10	21	-	-	38.5	-	3.0	-	-4
Ardee (Boharnamoe) Co. Louth	1-10	3.3	-	4	1	7.0	2.3	4.6	-	-2.0	10	2	12	-	0	-	-8.1	10	8	-	-	-	-	-	-	-
	11-20	4.7	-	6	3	6.8	-1.4	2.7	-	-5.5	15	7	7	-	0	-	-11.0	15	10	-	-	-	-	-	-	
	21-END	81.8	-	11	10	9.1	2.2	5.6	-	0.6	30	0	23	-	2	-	-4.2	24	9	-	-	-	-	-	-	
	MONTH	89.8	100	21	14	7.7	1.0	4.4	-	-5.5	15	9	41	-	3	-	-11.0	15	27	-	-	-	-	-	-	

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

DECEMBER 1990

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	27.8	-	7	3	9.0	4.2	6.6	-	-0.6	8	2	28	-	1	-	-4.2	10	2	6.2	-	4.3	-	6.6	4	-
	11-20	24.6	-	4	3	9.1	3.4	6.3	-	-0.6	16	1	23	-	1	-	-4.4	16	5	5.5	-	13.7	-	4.6	3	-
	21-END	97.3	-	11	11	9.2	3.7	6.4	-	0.8	29	0	27	-	2	-	-0.5	25	2	5.7	-	8.9	-	11.6	10	-
	MONTH	149.7	122	22	17	9.1	3.8	6.4	-0.5	-0.6	8	3	77	85	3	-	-4.4	16	9	5.8	-0.3	26.9	80	7.7	17	15
Claremorris Co. Mayo	1-10	18.8	-	4	2	6.9	1.8	4.3	-	-2.6	8	3	13	-	0	-	-8.5	10	5	4.4	-	8.8	-	3.4	2	-
	11-20	28.6	-	4	2	6.8	0.3	3.6	-	-4.6	16	4	10	-	0	-	-9.0	16	8	3.4	-	13.9	-	2.9	1	-
	21-END	119.0	-	11	11	7.8	2.4	5.1	-	0.0	29	0	19	-	1	-	-2.3	30	7	4.6	-	10.5	-	7.0	9	-
	MONTH	166.4	134	19	15	7.2	1.5	4.4	-0.8	-4.6	16	7	41	63	1	-	-9.0	16	20	4.1	-0.6	33.2	88	4.6	12	0
Glenamoy Co. Mayo	1-10	44.0	-	4	4	8.9	3.3	6.1	-	-3.0	10	2	25	-	0	-	-3.4	10	3	-	-	4.5	-	0.2	-	-
	11-20	30.5	-	4	4	8.1	1.4	4.8	-	-3.4	18	3	15	-	0	-	-3.9	18	3	-	-	7.4	-	0.1	-	-
	21-END	153.4	-	11	11	8.9	2.6	5.7	-	0.0	31	0	23	-	1	-	-2.1	31	4	-	-	7.1	-	0.1	-	-
	MONTH	227.9	145	19	19	8.6	2.5	5.5	-	-3.4	18	5	63	-	1	-	-3.9	18	10	-	-	19.1	-	0.1	-	-7
Dunsany (Grange) Co. Meath	1-10	18.4	-	4	4	5.9	1.6	3.8	-	-2.6	8	3	8	-	0	-	-7.6	10	5	-	-	9.9	-	-	-	-
	11-20	12.7	-	3	1	5.8	-1.6	2.1	-	-5.0	15	8	4	-	0	-	-8.3	15	8	-	-	18.6	-	-	-	-
	21-END	78.0	-	11	10	8.8	2.6	5.7	-	0.2	30	0	25	-	2	-	-1.5	24	5	-	-	16.1	-	-	-	-
	MONTH	109.1	121	18	15	6.9	0.9	3.9	-	-5.0	15	11	37	-	2	-	-8.3	15	18	-	-	44.6	-	-	-	-
Clones Co. Monaghan	1-10	8.8	-	3	1	6.6	2.2	4.4	-	-2.6	10	2	12	-	0	-	-7.4	10	4	4.2	-	14.2	-	3.4	2	-
	11-20	12.5	-	4	3	6.0	-0.2	2.9	-	-5.1	16	4	7	-	0	-	-7.5	16	8	2.8	-	17.5	-	2.5	1	-
	21-END	87.7	-	11	10	7.4	2.0	4.7	-	-0.2	30	1	17	-	1	-	-3.4	24	6	4.1	-	15.5	-	6.5	9	-
	MONTH	109.0	114	18	14	6.7	1.4	4.0	-0.8	-5.1	16	7	36	63	1	-	-7.5	16	18	3.7	-0.7	47.2	131	4.2	12	-2
Birr Co. Offaly	1-10	11.6	-	4	2	7.0	1.0	4.0	-	-4.5	10	4	11	-	0	-	-10.7	10	6	3.9	-	14.9	-	2.2	1	-
	11-20	12.6	-	3	1	7.1	0.0	3.6	-	-4.9	16	4	10	-	0	-	-9.9	11	8	2.9	-	25.8	-	1.7	0	-
	21-END	72.8	-	11	9	8.5	2.8	5.7	-	0.3	29	0	24	-	2	-	-3.9	24	8	4.7	-	15.1	-	5.1	8	-
	MONTH	97.0	113	18	12	7.6	1.3	4.4	-1.0	-4.9	16	8	45	63	2	-	-10.7	10	22	3.9	-1.0	55.8	127	3.1	9	-1

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

DECEMBER 1990

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	3.9	-	1	1	6.7	0.6	3.7	-	-2.3	9	5	8	-	0	-	-5.3	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	32.1	-	4	4	6.6	-0.6	3.0	-	-3.9	13	5	8	-	0	-	-5.7	16	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	21-END	97.4	-	11	9	10.1	2.7	6.4	-	-1.5	27	2	30	-	4	-	-4.8	24	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	133.4	-	16	14	7.9	1.0	4.4	-	-3.9	13	12	46	-	4	-	-5.7	16	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dungarvan (Carriglea) Co. Waterford	1-10	1.7	-	2	0	7.1	1.6	4.3	-	-2.0	2	3	11	-	0	-	-3.6	2	5	-	-	14.4	-	11.0	-	-	-	-	-	-	-	-	-	-	-	
	11-20	6.3	-	5	3	8.3	0.1	4.2	-	-3.2	14	5	12	-	1	-	-3.2	14	5	-	-	8.5	-	-6.9	-	-	-	-	-	-	-	-	-	-	-	
	21-END	82.1	-	11	10	10.9	2.9	6.9	-	-1.7	30	2	36	-	5	-	-2.6	30	4	-	-	14.9	-	4.3	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	90.1	72	18	13	8.8	1.6	5.2	-	-3.2	14	10	59	-	6	-	-3.6	2	14	-	-	37.8	-	2.8	-	-	-	-	-	-	-	-	-	-	-	0
Mullingar Co. Westmeath	1-10	10.9	-	2	2	6.5	1.5	4.0	-	-2.1	8	2	9	-	0	-	-5.0	10	5	4.0	-	15.5	-	2.8	3	-	-	-	-	-	-	-	-	-	-	
	11-20	30.6	-	3	2	6.7	-1.0	2.9	-	-4.3	15	6	7	-	0	-	-7.1	15	8	2.5	-	24.3	-	1.8	1	-	-	-	-	-	-	-	-	-	-	
	21-END	75.6	-	11	9	7.6	2.2	4.9	-	-0.1	24	1	19	-	1	-	-2.4	24	6	4.1	-	20.7	-	5.8	8	-	-	-	-	-	-	-	-	-	-	
	MONTH	117.1	119	16	13	6.9	0.9	3.9	-0.9	-4.3	15	9	35	60	1	-	-7.1	15	19	3.6	-0.8	60.5	127	3.5	12	-	-	-	-	-	-	-	-	-	-	-
J.F.K. Park Co. Wexford	1-10	4.3	-	3	2	6.7	1.7	4.2	-	-1.9	8	3	11	-	0	-	-4.8	2	6	-	-	14.9	-	3.6	-	-	-	-	-	-	-	-	-	-	-	
	11-20	9.2	-	5	2	7.0	1.6	4.3	-	-0.1	13	1	9	-	0	-	-4.6	13	7	-	-	19.9	-	3.0	-	-	-	-	-	-	-	-	-	-	-	
	21-END	71.9	-	11	9	10.5	3.1	6.8	-	0.0	29	0	32	-	3	-	-4.0	24	8	-	-	27.1	-	7.2	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	85.4	77	19	13	8.2	2.2	5.2	-	-1.9	8	4	52	-	3	-	-4.8	2	21	-	-	61.9	-	4.6	-	-	-	-	-	-	-	-	-	-	-	2
Clonroche Co. Wexford	1-10	6.9	-	3	2	6.5	1.0	3.7	-	-2.0	8	3	9	-	0	-	-6.0	2	7	-	-	13.4	-	1.7	-	-	-	-	-	-	-	-	-	-	-	
	11-20	14.9	-	6	4	6.8	1.0	3.9	-	-0.7	14	1	8	-	0	-	-6.0	14	9	-	-	17.7	-	1.6	-	-	-	-	-	-	-	-	-	-	-	
	21-END	96.7	-	11	10	9.5	2.5	6.0	-	-1.1	30	2	26	-	1	-	-6.0	24	9	-	-	23.5	-	4.3	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	118.5	96	20	16	7.6	1.5	4.6	-	-2.0	8	6	43	-	1	-	-6.0	2	25	-	-	54.6	-	2.5	-	-	-	-	-	-	-	-	-	-	-	
Johnstown Castle Co. Wexford	1-10	16.6	-	4	3	8.5	1.8	5.2	-	-3.7	9	2	18	-	0	-	-5.7	2	7	-	-	16.8	-	1.6	-	-	-	-	-	-	-	-	-	-	-	
	11-20	9.8	-	5	3	8.7	1.3	5.0	-	-0.1	15	1	14	-	0	-	-6.0	15	9	-	-	23.4	-	1.3	-	-	-	-	-	-	-	-	-	-	-	
	21-END	72.5	-	10	9	3.0	1.9	2.4	-	0.0	31	0	14	-	1	-	-3.5	25	7	-	-	28.3	-	2.8	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	98.9	89	19	15	6.6	1.7	4.1	-	-3.7	9	3	45	-	1	-	-6.0	15	23	-	-	68.5	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-
Rosslare Co. Wexford	1-10	21.4	-	4	4	8.2	3.4	5.8	-	-0.4	8	1	20	-	0	-	-2.4	2	4	5.4	-	13.6	-	5.9	4	-	-	-	-	-	-	-	-	-	-	
	11-20	3.6	-	1	1	7.9	3.3	5.6	-	1.5	13	0	15	-	0	-	-3.1	14	4	4.6	-	22.8	-	4.1	2	-	-	-	-	-	-	-	-	-	-	
	21-END	69.7	-	11	8	9.4	4.8	7.1	-	2.2	30	0	32	-	2	-	-1.2	24	5	6.1	-	26.5	-	7.5	10	-	-	-	-	-	-	-	-	-	-	
	MONTH	94.7	97	16	13	8.5	3.9	6.2	-0.9	-0.4	8	1	67	71	2	-	-3.1	14	13	5.4	-0.7	62.9	110	5.9	16	-	-	-	-	-	-	-	-	-	-	9

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	11.48
	11-20	12.91
	21-end	14.32
	Month	38.71
Dublin Airport Co. Dublin	1-10	14.23
	11-20	17.89
	21-end	22.58
	Month	54.70
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	19.54
	11-20	15.76
	21-end	18.63
	Month	53.93
Kilkenny Co. Kilkenny	1-10	19.35
	11-20	20.77
	21-end	23.81
	Month	63.93
Belmullet Co. Mayo	1-10	13.27
	11-20	14.48
	21-end	17.28
	Month	45.03
Clones Co. Monaghan	1-10	17.53
	11-20	15.90
	21-end	16.87
	Month	50.30
Birr Co. Offaly	1-10	18.86
	11-20	19.71
	21-end	20.28
	Month	58.85

Notes on the tables in January issue

TABLE 3 POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE December 1990

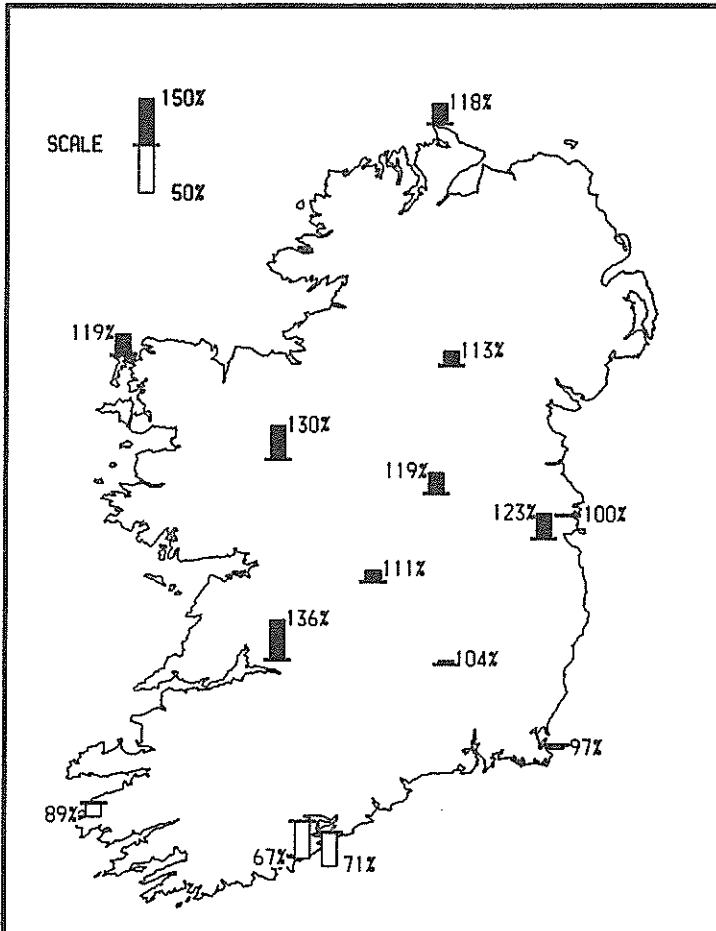
STATION	PERIOD	SOIL MOISTURE (mm)			
		P.E.(mm)	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	5.4	-	0	9
	11-20	2.8	-	0	3
	21-end	N/A	-	0	N/A
	Month	N/A	-	-	-
Kinsealy Co. Dublin	1-10	2.3	-	0	17
	11-20	5.1	-	0	4
	21-end	1.0	-	0	43
	Month	8.4	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	3.1	-	0	16
	11-20	5.6	-	0	3
	21-end	0.4	-	0	119
	Month	9.1	-	-	-
Ballinamore Co. Leitrim	1-10	2.3	-	0	6
	11-20	3.2	-	0	24
	21-end	N/A	-	0	100
	Month	N/A	-	-	-
Glenamoy Co. Mayo	1-10	-	-	0*	-
	11-20	-	-	0	-
	21-end	-	-	0	-
	Month	-	-	-	-
Johnstown Castle Co. Wexford	1-10	8.3	-	0	8
	11-20	11.0	1	1	-
	21-end	11.4	-	0	62
	Month	30.7	-	-	-

*out of order

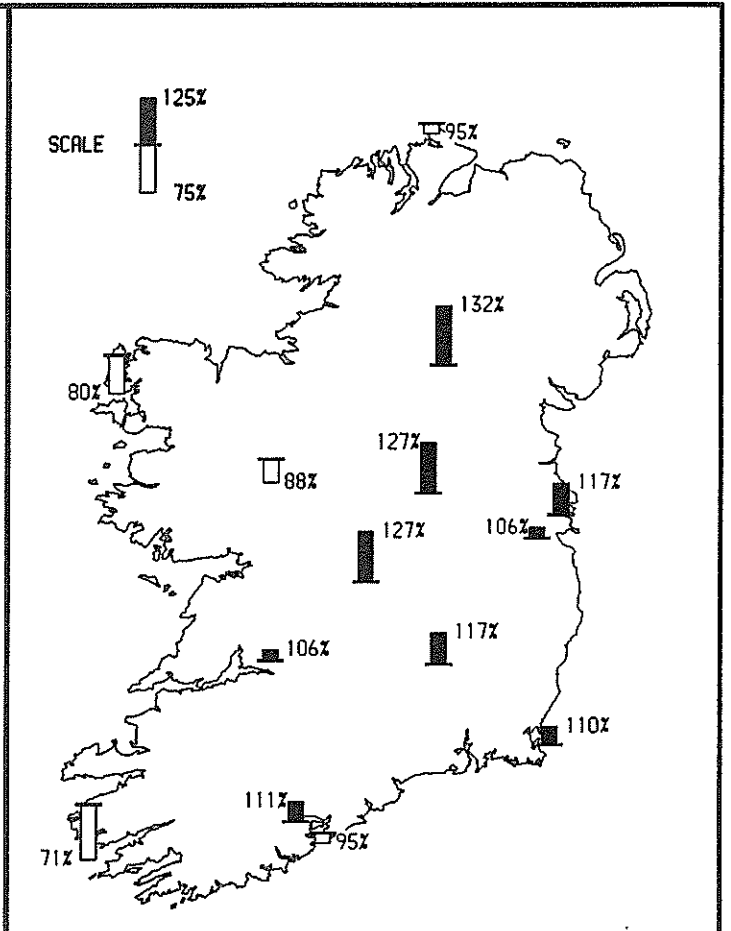
TABLE 4 SOIL CLIMATE (MULLINGAR)

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	5.0	4.2	3.5	1.3
	11-20	3.1	2.4	1.2	1.2	N/A	N/A*
	21-end	5.4	4.4	3.4	1.0	54.5	55.8
Mineral	1-10	5.2	3.8	2.9	0.7	92.5	95.6
	11-20	3.3	2.5	0.9	0.4	N/A	N/A
	21-end	5.9	4.2	3.0	0.3	64.9	67.6

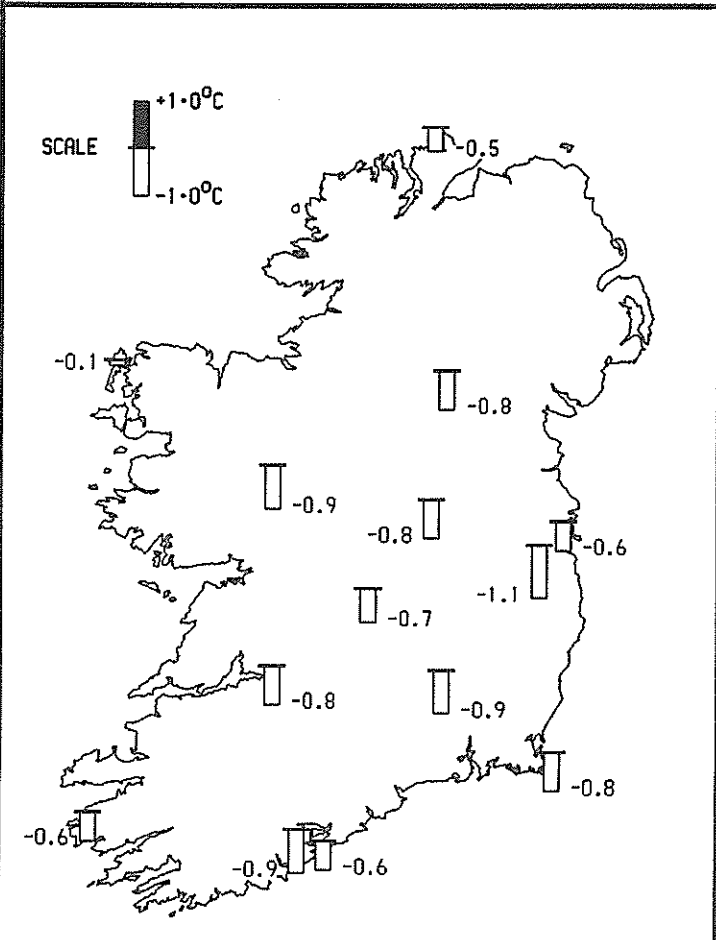
*Frozen



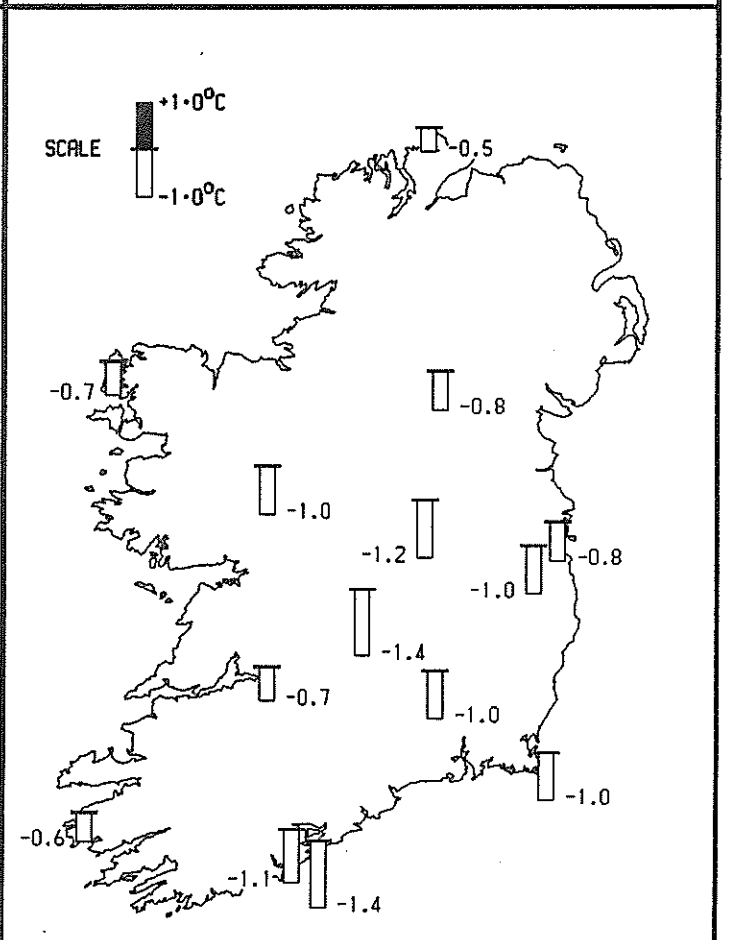
RAINFALL (Percentage of 1951-1980 normals)



SUNSHINE (Percentage of 1951-1980 normals)



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



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