

METEOROLOGICAL SERVICE



SEPTEMBER 1986

AGROMETEOROLOGICAL BULLETIN

The Weather of September

A west to northwest airflow prevailed on 1st/2nd and associated frontal troughs gave spells of rain. Improved conditions set in on the 3rd as high pressure from the North Atlantic developed over Ireland. When the high pressure cell drifted in over Europe, weak troughs affected coastal areas of the south and north on the 5th/6th, and there was a partial influx of warm air in southwestern areas.

A zone of rising pressure over northern regions of the North Atlantic extended down over Ireland on 6th/7th. The weather became settled; subsequent conditions were bright, dry but rather cold. In particular night-time minimum temperatures were several degrees below normal. A slack north to northeasterly airflow prevailed.

As high pressure receded westwards, showers developed over the country in the northerly airflow on 13th/14th. The Atlantic high re-intensified and extended further southward, so that there was a recovery of pressure from the west and southwest on the 15th. This high pressure became the dominant feature for weather over Ireland for the remainder of the month. Occasional troughs and freshening southwest winds affected northwestern areas on 19th/20th. As the high declined into Europe, freshening southwest winds became more extensive over Ireland on 27th. The ensuing airmass was very mild and humid with extensive fog, particularly in coastal areas. However, daytime conditions were very warm and sunny and the influence of the high pressure, which became centred over Europe, remained effective over the country through the end of the month.

Precipitation:

In sharp contrast to the summer months, which proved to be extremely wet and cold, September was exceptionally dry. For most areas it was the driest September on record and in some parts it was the driest month ever recorded. Precipitation amounts varied from as little as less than 1% of normal at Lullymore to a maximum of 29% at Malin Head.

Temperature:

Both the daytime maxima and in particular the night-time minima were well below normal especially during much of the first three weeks of the month. For the month as a whole mean air temperature varied from 1.1°C below normal at Malin Head and Kilkenny to 2.2°C below at Belmullet. Up to 1°C of air frost occurred at some places in the southmidlands on 16th or 19th. Ground frost was extensive on 7th, 9th, and 12th to 19th. Soil temperature was also well below average.

Sunshine and Radiation:

Again in sharp contrast to previous months, sunshine was well above normal. Total sunshine hours varied from 157% of normal at Clones to 112% at Rosslare. Global radiation was about 15% above average.

Wind:

Winds were mostly light to moderate except in the north on 19th/20th and in the west and north on 27th/28th and 30th when there were gale gusts.

Summary:

Exceptionally dry, very sunny but rather cold.

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

SEPTEMBER 1986

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	1.1	-	3	0	16.4	7.1	11.8	-	1.4	9	0	75	-	26	-	-2.0	9	3	-	-	46.7	-	2.4	-	-
	11-20	0.0	-	0	0	15.1	2.7	8.9	-	-0.6	19	1	50	-	14	-	-4.7	19	7	-	-	74.4	-	2.1	-	-
	21-END	0.0	-	0	0	17.0	9.4	13.2	-	6.8	26	0	88	-	34	-	1.0	21	0	-	-	27.0	-	1.7	-	-
	MONTH	1.1	1	3	0	16.2	6.4	11.3	-	-0.6	19	1	214	-	75	-	-4.7	19	10	-	-	148.1	-	2.1	-	38
Shannon Airport Co. Clare	1-10	8.3	-	5	4	16.5	9.5	13.0	-	5.6	4	0	87	-	34	-	1.1	4	0	14.1	-	49.0	-	3.1	0	-
	11-20	0.0	-	0	0	15.2	5.1	10.2	-	2.6	15	0	59	-	16	-	-1.6	17	4	11.5	-	72.2	-	3.2	0	-
	21-END	1.0	-	2	0	17.3	10.4	13.9	-	8.8	21	0	95	-	39	-	1.5	21	0	13.9	-	27.5	-	3.0	0	-
	MONTH	9.3	10	7	4	16.3	8.4	12.4	-1.3	2.6	15	0	240	82	89	71	-1.6	17	4	13.2	-1.4	148.7	133	3.1	0	47
Cork Airport Co. Cork	1-10	2.1	-	3	1	15.7	8.6	12.2	-	6.0	9	0	78	-	25	-	2.8	9	0	14.0	-	43.1	-	3.9	1	-
	11-20	0.0	-	0	0	14.2	5.1	9.6	-	2.3	15	0	54	-	13	-	-1.4	19	1	11.5	-	82.8	-	5.2	0	-
	21-END	2.7	-	3	1	15.9	8.9	12.4	-	2.6	21	0	81	-	28	-	0.3	21	0	13.5	-	27.3	-	3.9	0	-
	MONTH	4.8	4	6	2	15.3	7.5	11.4	-1.5	2.3	15	0	212	80	66	67	-1.4	19	1	13.0	-0.6	153.2	128	4.4	1	47
Fermoy (Coolnakilla) Co. Cork	1-10	6.8	-	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	-	2.9	-	-	
	11-20	0.1	-	0	0	13.7	4.7	9.2	-	1.9	15	0	49	-	10	-	-0.5	19	1	-	-	83.0	-	3.0	-	-
	21-END	1.2	-	4	0	15.7	8.5	12.1	-	5.5	21	0	77	-	25	-	2.6	21	0	-	-	29.7	-	2.6	-	-
	MONTH	8.1	-	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	-	2.8	-	N/A
Fermoy (Moore Park) Co. Cork	1-10	3.6	-	4	1	16.6	7.4	12.0	-	2.4	4	0	77	-	28	-	-0.6	10	1	-	-	37.9	-	2.0	-	-
	11-20	0.0	-	0	0	15.0	2.5	8.8	-	-1.0	19	1	49	-	13	-	-4.9	15	9	-	-	74.8	-	2.6	-	-
	21-END	0.5	-	2	0	17.4	7.4	12.4	-	3.1	21	0	80	-	31	-	-1.3	21	1	-	-	28.6	-	1.6	-	-
	MONTH	4.1	4	6	1	16.3	5.8	11.0	-	-1.0	19	1	207	-	72	-	-4.9	15	11	-	-	141.3	-	2.1	-	38
Roches Point Co. Cork	1-10	2.9	-	3	1	16.1	9.5	12.8	-	7.4	9	0	84	-	30	-	3.2	5	0	14.4	-	44.5	-	3.8	1	-
	11-20	0.0	-	0	0	14.5	6.7	10.6	-	4.7	19	0	62	-	15	-	0.9	19	0	12.7	-	84.2	-	5.4	2	-
	21-END	2.2	-	3	1	15.3	10.3	12.8	-	4.9	21	0	84	-	30	-	-0.1	21	1	13.7	-	23.8	-	3.2	0	-
	MONTH	5.1	6	6	2	15.3	8.8	12.1	-1.6	4.7	19	0	230	79	75	63	-0.1	21	1	13.6	-0.9	152.5	120	4.1	3	48
Glencolumbkille Co. Donegal	1-10	12.2	-	5	3	14.4	8.8	11.6	-	4.9	9	0	72	-	20	-	-2.3	9	3	-	-	N/A	-	3.4	-	-
	11-20	7.4	-	6	4	13.5	5.3	9.4	-	3.5	18	0	50	-	9	-	-4.8	18	9	-	-	N/A	-	2.6	-	-
	21-END	23.7	-	7	7	15.5	7.8	11.7	-	5.8	23	0	73	-	23	-	-1.0	21	1	-	-	N/A	-	3.1	-	-
	MONTH	43.3	-	18	14	14.5	7.3	10.9	-	3.5	18	0	195	-	51	-	-4.8	18	13	-	-	N/A	-	3.0	-	N/A

TABLE 1 (CONTINUED)

SEPTEMBER 1986

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	8.9	-	4	2	14.6	7.3	10.9	-	0.5	9	0	67	-	19	-	-2.4	9	1	-	-	-	-	-	-	-	-	-
	11-20	7.5	-	5	3	14.4	1.8	8.1	-	-1.0	14	3	45	-	12	-	-3.4	14	8	-	-	-	-	-	-	-	-	-
	21-END	11.2	-	6	5	15.8	9.9	12.9	-	6.0	25	0	85	-	31	-	4.2	25	0	-	-	-	-	-	-	-	-	-
	MONTH	27.6	19	15	10	14.9	6.3	10.6	-	-1.0	14	3	196	-	62	-	-3.4	14	9	-	-	-	-	-	-	-	-	-
Malin Head Co. Donegal	1-10	16.8	-	2	2	13.7	9.9	11.8	-	5.4	9	0	74	-	20	-	3.4	9	0	12.8	-	54.5	-	7.8	4	-	-	-
	11-20	3.2	-	4	1	12.9	8.1	10.5	-	4.0	13	0	61	-	11	-	1.4	19	0	12.0	-	73.1	-	7.2	2	-	-	-
	21-END	9.3	-	5	4	15.6	11.0	13.3	-	7.7	27	0	89	-	35	-	4.1	25	0	12.9	-	30.1	-	7.4	4	-	-	-
	MONTH	29.3	29	11	7	14.1	9.7	11.9	-1.1	4.0	13	0	224	83	66	67	1.4	19	0	12.6	-0.5	157.7	143	7.5	10	56	-	-
Casement Aerodrome Co. Dublin	1-10	1.5	-	2	1	16.3	6.5	11.4	-	1.0	9	0	71	-	24	-	-2.2	9	3	12.4	-	68.3	-	4.5	2	-	-	-
	11-20	0.0	-	0	0	14.0	3.2	8.6	-	0.7	16	0	47	-	11	-	-3.6	19	9	10.4	-	81.0	-	3.3	0	-	-	-
	21-END	0.0	-	0	0	17.1	10.0	13.5	-	7.0	27	0	91	-	37	-	3.0	27	0	12.7	-	31.4	-	4.8	0	-	-	-
	MONTH	1.5	2	2	1	15.8	6.6	11.2	-1.8	0.7	16	0	209	77	73	66	-3.6	19	12	11.9	-	180.7	146	4.2	2	49	-	-
Dublin Airport Co. Dublin	1-10	0.7	-	2	0	16.5	8.1	12.3	-	4.8	9	0	79	-	28	-	-1.2	9	1	14.0	-	76.2	-	4.3	2	-	-	-
	11-20	2.5	-	1	1	14.3	5.2	9.8	-	2.1	15	0	55	-	13	-	-0.7	18	5	12.7	-	84.7	-	3.6	0	-	-	-
	21-END	0.1	-	0	0	16.8	10.5	13.6	-	8.6	21	0	93	-	38	-	4.0	25	0	14.0	-	34.5	-	3.3	0	-	-	-
	MONTH	3.3	5	3	1	15.9	7.9	11.9	-1.3	2.1	15	0	226	81	78	70	-1.2	9	6	13.5	-0.5	195.4	153	3.7	2	54	-	-
Kinsealy Co. Dublin	1-10	0.7	-	1	0	16.9	7.2	12.0	-	2.6	9	0	77	-	28	-	-6.5	9	6	-	-	75.5	-	3.0	-	-	-	-
	11-20	0.3	-	1	0	14.2	3.5	8.9	-	1.1	19	0	48	-	11	-	-9.1	19	9	-	-	84.8	-	2.6	-	-	-	-
	21-END	0.0	-	0	0	16.8	9.3	13.1	-	6.9	27	0	87	-	34	-	-2.9	26	4	-	-	32.0	-	2.4	-	-	-	-
	MONTH	1.0	1	2	0	16.0	6.7	11.3	-	1.1	19	0	211	-	73	-	-9.1	19	19	-	-	192.3	-	2.7	-	47	-	-
Galway Co. Galway	1-10	1.8	-	2	1	15.6	8.8	12.2	-	3.8	7	0	78	-	27	-	0.2	7	0	14.0	-	45.8	-	3.6	1	-	-	-
	11-20	0.1	-	0	0	14.5	5.3	9.9	-	2.7	19	0	56	-	14	-	-0.3	19	1	12.0	-	67.8	-	3.8	0	-	-	-
	21-END	2.9	-	5	2	15.4	10.8	13.1	-	8.2	27	0	87	-	32	-	5.2	27	0	13.6	-	26.5	-	4.1	0	-	-	-
	MONTH	4.8	4	7	3	15.2	8.3	11.7	-1.6	2.7	19	0	221	-	73	-	-0.3	19	1	13.2	-	140.1	117	3.8	1	44	-	-
Killarney (Muckross House) Co. Kerry	1-10	8.8	-	5	3	16.0	8.8	12.4	-	3.6	4	0	80	-	29	-	-2.6	4	3	-	-	36.7	-	-	-	-	-	-
	11-20	0.6	-	2	0	14.8	4.2	9.5	-	1.6	19	0	54	-	14	-	-5.5	16	9	-	-	68.8	-	-	-	-	-	-
	21-END	2.0	-	2	1	16.7	8.8	12.7	-	1.7	21	0	84	-	34	-	-5.2	21	4	-	-	43.7	-	-	-	-	-	-
	MONTH	11.4	8	9	4	15.8	7.3	11.5	-	1.6	19	0	218	-	76	-	-5.5	16	16	-	-	149.2	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

SEPTEMBER 1986

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	6.6	-	4	3	15.7	9.9	12.8	-	3.7	4	0	84	-	31	-	-1.0	4	1	14.6	-	34.4	-	2.5	0	-
	11-20	0.0	-	0	0	15.1	6.5	10.8	-	3.0	19	0	65	-	18	-	0.5	20	0	12.8	-	84.6	-	4.2	0	-
	21-END	6.0	-	4	2	16.3	10.0	13.1	-	6.3	21	0	87	-	33	-	3.1	21	0	14.0	-	23.7	-	3.7	0	-
	MONTH	12.6	10	8	5	15.7	8.8	12.3	-1.5	3.0	19	0	236	81	82	67	-1.0	4	1	13.8	-0.7	142.7	128	3.5	0	43
Ardfert (Liscahane) Co. Kerry	1-10	11.7	-	4	4	16.0	8.7	12.3	-	4.3	9	0	79	-	28	-	-0.4	4	1	-	-	41.3	-	-	-	-
	11-20	0.8	-	1	0	14.8	2.9	8.8	-	-0.8	15	1	50	-	14	-	-4.1	15	8	-	-	84.6	-	-	-	-
	21-END	2.4	-	2	1	17.0	8.3	12.7	-	5.2	21	0	83	-	32	-	-0.7	21	1	-	-	41.5	-	-	-	-
	MONTH	14.9	-	7	5	15.9	6.6	11.3	-	-0.8	15	1	212	-	74	-	-4.1	15	10	-	-	167.4	-	-	-	-
Lullymore Co. Kildare	1-10	0.4	-	1	0	16.0	5.7	10.8	-	-1.8	9	1	67	-	22	-	-6.6	9	6	-	-	63.7	-	3.1	-	-
	11-20	0.0	-	0	0	14.4	0.8	7.6	-	-2.3	16	6	42	-	12	-	-8.0	15	8	-	-	72.8	-	2.6	-	-
	21-END	0.0	-	0	0	16.8	8.4	12.6	-	4.7	21	0	82	-	31	-	-2.2	21	1	-	-	23.4	-	2.1	-	-
	MONTH	0.4	0	1	0	15.7	5.0	10.3	-	-2.3	16	7	191	-	64	-	-8.0	15	15	-	-	159.9	-	2.6	-	35
Kilkenny Co. Kilkenny	1-10	2.6	-	4	1	17.1	7.4	12.3	-	2.0	4	0	80	-	30	-	-2.3	9	3	14.3	-	49.3	-	2.3	1	-
	11-20	0.0	-	0	0	15.1	4.0	9.6	-	-0.9	19	1	54	-	14	-	-5.8	19	7	12.1	-	78.6	-	2.3	0	-
	21-END	0.4	-	1	0	17.9	8.5	13.2	-	3.5	21	0	88	-	37	-	-0.5	21	1	13.6	-	26.0	-	1.4	0	-
	MONTH	3.0	4	5	1	16.7	6.6	11.7	-1.1	-0.9	19	1	222	83	82	72	-5.8	19	11	13.3	-0.8	153.9	135	2.0	1	43
Mooncoin (Silverspring) Co. Kilkenny	1-10	2.2	-	3	1	16.8	7.5	12.2	-	3.5	9	0	78	-	29	-	-3.4	9	4	-	-	43.4	-	-	-	-
	11-20	0.0	-	0	0	15.2	3.9	9.5	-	-1.2	19	1	54	-	14	-	-7.5	19	9	-	-	79.9	-	-	-	-
	21-END	0.2	-	0	0	16.9	7.4	12.1	-	3.0	21	0	78	-	29	-	-3.6	21	4	-	-	35.0	-	-	-	-
	MONTH	2.4	3	3	1	16.3	6.3	11.3	-	-1.2	19	1	210	-	72	-	-7.5	19	17	-	-	158.3	-	-	-	-
Ballinamore Co. Leitrim	1-10	5.4	-	2	1	15.6	6.4	11.0	-	0.4	9	0	67	-	21	-	-6.0	9	4	-	-	48.8	-	2.3	-	-
	11-20	0.3	-	1	0	15.0	2.6	8.8	-	-1.2	19	2	49	-	13	-	-6.0	19	8	-	-	60.8	-	1.8	-	-
	21-END	4.2	-	4	2	16.8	9.0	12.9	-	5.4	27	0	85	-	32	-	1.7	27	0	-	-	31.5	-	1.8	-	-
	MONTH	9.9	9	7	3	15.8	6.0	10.9	-	-1.2	19	2	201	-	67	-	-6.0	9	12	-	-	141.1	-	2.0	-	35
Ardee (Boharnamoe) Co. Louth	1-10	0.0	-	0	0	17.2	6.0	11.6	-	-0.5	9	1	75	-	29	-	-5.5	9	4	-	-	-	-	-	-	-
	11-20	0.0	-	0	0	14.8	0.4	7.6	-	-1.8	13	7	42	-	12	-	-8.1	15	9	-	-	-	-	-	-	-
	21-END	0.5	-	1	0	18.1	8.8	13.4	-	4.9	27	0	90	-	38	-	-0.9	27	1	-	-	-	-	-	-	-
	MONTH	0.5	1	1	0	16.7	5.1	10.9	-	-1.8	13	8	208	-	80	-	-8.1	15	14	-	-	-	-	-	-	-

TABLE 1 (CONTINUED)

SEPTEMBER 1986

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
Ballinrobe (Creagh) Co. Mayo	1-10	2.4	-	2	2	16.0	6.5	11.2	-	1.6	7	0	70	-	23	-	-2.1	7	4	-	-	50.8	-	2.2	-	-
	11-20	0.0	-	0	0	14.9	4.2	9.6	-	1.5	19	0	54	-	14	-	-4.6	18	8	-	-	63.5	-	2.1	-	-
	21-END	2.6	-	3	1	16.6	9.9	13.3	-	8.1	27	0	89	-	34	-	1.3	27	0	-	-	24.2	-	2.5	-	-
	MONTH	5.0	4	5	3	15.8	6.9	11.3	-	1.5	19	0	212	-	70	-	-4.6	18	12	-	-	138.5	-	2.2	-	35
Belmullet Co. Mayo	1-10	4.9	-	1	1	14.6	7.3	11.0	-	2.5	7	0	66	-	18	-	-1.6	7	2	13.8	-	48.8	-	4.9	1	-
	11-20	4.1	-	4	2	13.8	5.0	9.4	-	0.8	18	0	52	-	11	-	-2.5	18	5	12.2	-	76.2	-	5.3	0	-
	21-END	16.0	-	8	3	15.2	10.8	13.0	-	8.5	25	0	86	-	31	-	4.4	25	0	13.6	-	24.2	-	7.1	3	-
	MONTH	25.0	24	13	6	14.5	7.7	11.1	-2.2	0.8	18	0	204	74	60	57	-2.5	18	7	13.2	-0.6	149.2	129	5.7	4	38
Claremorris Co. Mayo	1-10	4.1	-	1	1	16.0	6.5	11.2	-	0.6	7	0	71	-	24	-	-2.2	9	2	12.8	-	40.1	-	3.3	1	-
	11-20	0.3	-	1	0	14.8	3.7	9.2	-	0.7	19	0	52	-	13	-	-2.6	18	8	11.2	-	66.7	-	3.5	0	-
	21-END	2.9	-	2	2	16.2	9.6	12.9	-	6.8	21	0	85	-	31	-	1.7	21	0	13.1	-	17.7	-	4.1	0	-
	MONTH	7.3	7	4	3	15.6	6.6	11.1	-1.3	0.6	7	0	207	81	68	70	-2.6	18	10	12.4	-0.9	124.5	127	3.6	1	36
Glenamoy Co. Mayo	1-10	7.2	-	3	3	14.7	8.9	11.8	-	4.6	9	0	74	-	22	-	-3.0	9	2	-	-	43.9	-	2.2	-	-
	11-20	5.6	-	4	3	13.6	3.4	8.5	-	-1.2	18	1	46	-	11	-	-3.9	18	6	-	-	69.3	-	2.5	-	-
	21-END	23.3	-	7	6	15.5	10.9	13.2	-	7.6	25	0	88	-	33	-	3.9	25	0	-	-	27.1	-	3.5	-	-
	MONTH	36.1	28	14	12	14.6	7.7	11.1	-	-1.2	18	1	207	-	65	-	-3.9	18	8	-	-	140.3	-	2.7	-	30
Dunsany (Grange) Co. Meath	1-10	1.5	-	1	1	15.9	6.2	11.0	-	-0.4	9	1	68	-	22	-	-3.3	7	4	-	-	67.1	-	-	-	-
	11-20	0.0	-	0	0	14.0	2.6	8.3	-	0.1	14	0	46	-	11	-	-6.2	16	9	-	-	77.9	-	-	-	-
	21-END	0.2	-	1	0	16.5	9.3	12.9	-	7.1	25	0	85	-	32	-	2.9	27	0	-	-	26.4	-	-	-	-
	MONTH	1.7	2	2	1	15.5	6.0	10.7	-	-0.4	9	1	199	-	65	-	-6.2	16	13	-	-	171.4	-	-	-	-
Clones Co. Monaghan	1-10	4.0	-	3	1	15.5	6.9	11.2	-	0.9	9	0	69	-	22	-	-3.0	9	4	12.5	-	58.0	-	2.6	2	-
	11-20	0.6	-	1	0	14.4	3.1	8.8	-	0.3	18	0	49	-	12	-	-4.2	19	7	10.6	-	71.2	-	1.9	0	-
	21-END	1.4	-	3	0	16.6	10.2	13.4	-	6.6	27	0	90	-	36	-	1.9	27	0	12.4	-	25.0	-	2.4	0	-
	MONTH	6.0	7	7	1	15.5	6.7	11.1	-1.2	0.3	18	0	208	83	71	75	-4.2	19	11	11.8	-1.5	154.2	157	2.3	2	39
Birr Co. Offaly	1-10	1.4	-	3	0	16.1	7.3	11.7	-	0.4	9	0	75	-	26	-	-3.4	9	4	14.0	-	49.3	-	1.6	1	-
	11-20	0.6	-	2	0	14.8	2.7	8.7	-	-1.0	16	3	49	-	13	-	-5.2	16	7	12.3	-	66.2	-	1.4	0	-
	21-END	0.3	-	1	0	16.9	9.8	13.4	-	7.1	21	0	90	-	36	-	4.7	27	0	13.9	-	23.8	-	1.5	0	-
	MONTH	2.3	3	6	0	15.9	6.6	11.3	-1.7	-1.0	16	3	214	80	75	69	-5.2	16	11	13.4	-0.6	139.3	126	1.5	1	36

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

SEPTEMBER 1986

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	9.4	-	5	3	16.4	7.8	12.1	-	3.6	9	0	77	-	27	-	-2.1	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11-20	0.0	-	0	0	14.7	3.0	8.8	-	-1.0	19	1	49	-	12	-	-5.1	15	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	21-END	0.7	-	2	0	17.0	7.9	12.5	-	6.0	26	0	81	-	30	-	1.1	26	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	MONTH	10.1	-	7	3	16.0	6.3	11.1	-	-1.0	19	1	207	-	70	-	-5.1	15	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dungarvan (Carriglea) Co. Waterford	1-10	4.5	-	4	2	17.1	8.4	12.8	-	3.9	10	0	84	-	34	-	3.0	9	0	-	-	-	40.2	-	1.5	-	-	-	-	-	-	-	-	-		
	11-20	0.2	-	1	0	15.5	5.2	10.4	-	0.7	19	0	61	-	17	-	-0.7	19	1	-	-	-	80.4	-	2.1	-	-	-	-	-	-	-	-	-	-	
	21-END	0.0	-	0	0	17.4	8.4	12.9	-	4.9	21	0	85	-	35	-	3.9	22	0	-	-	-	31.8	-	1.1	-	-	-	-	-	-	-	-	-	-	
	MONTH	4.7	5	5	2	16.7	7.4	12.0	-	0.7	19	0	230	-	86	-	-0.7	19	1	-	-	-	152.4	-	1.6	-	-	-	-	-	-	-	-	-	-	-
Mullingar Co. Westmeath	1-10	2.0	-	2	1	15.7	6.9	11.3	-	0.6	9	0	71	-	23	-	-2.5	9	2	13.1	-	-	63.3	-	2.7	0	-	-	-	-	-	-	-	-	-	
	11-20	0.1	-	0	0	14.4	4.0	9.2	-	0.7	16	0	51	-	12	-	-3.0	19	6	11.2	-	-	78.3	-	2.3	0	-	-	-	-	-	-	-	-	-	-
	21-END	0.4	-	2	0	16.5	9.4	12.9	-	6.7	21	0	85	-	33	-	4.1	26	0	12.9	-	-	23.3	-	2.7	0	-	-	-	-	-	-	-	-	-	-
	MONTH	2.5	3	4	1	15.5	6.8	11.2	-1.2	0.6	9	0	207	80	68	66	-3.0	19	8	12.4	-1.2	-	164.9	150	2.6	0	40	-	-	-	-	-	-	-	-	-
J.F.K. Park Co. Wexford	1-10	1.7	-	2	1	16.4	8.4	12.4	-	4.8	7	0	80	-	29	-	-1.9	7	2	-	-	-	46.4	-	2.6	-	-	-	-	-	-	-	-	-	-	-
	11-20	0.0	-	0	0	14.9	5.5	10.2	-	2.9	19	0	59	-	14	-	-5.1	19	6	-	-	-	79.2	-	2.9	-	-	-	-	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	15.9	8.9	12.4	-	5.2	21	0	80	-	28	-	-1.1	21	1	-	-	-	27.8	-	2.0	-	-	-	-	-	-	-	-	-	-	-
	MONTH	1.7	2	2	1	15.7	7.6	11.7	-	2.9	19	0	219	-	71	-	-5.1	19	9	-	-	-	153.4	-	2.5	-	43	-	-	-	-	-	-	-	-	-
Clonroche Co. Wexford	1-10	2.7	-	3	1	16.8	7.7	12.3	-	4.2	7	0	79	-	29	-	-2.9	7	4	-	-	-	50.8	-	1.4	-	-	-	-	-	-	-	-	-	-	-
	11-20	0.0	-	0	0	14.6	5.5	10.1	-	1.7	16	0	58	-	14	-	-5.2	19	4	-	-	-	73.6	-	1.4	-	-	-	-	-	-	-	-	-	-	-
	21-END	0.6	-	2	0	16.4	8.5	12.4	-	5.2	26	0	80	-	29	-	-0.5	21	1	-	-	-	34.3	-	1.4	-	-	-	-	-	-	-	-	-	-	-
	MONTH	3.3	3	5	1	15.9	7.2	11.6	-	1.7	16	0	217	-	71	-	-5.2	19	9	-	-	-	158.7	-	1.4	-	40	-	-	-	-	-	-	-	-	-
Johnstown Castle Co. Wexford	1-10	2.0	-	3	1	16.0	8.4	12.2	-	5.6	4	0	78	-	27	-	-0.5	4	2	-	-	-	54.9	-	2.8	-	-	-	-	-	-	-	-	-	-	-
	11-20	0.1	-	0	0	13.8	6.3	10.1	-	4.0	15	0	57	-	12	-	-2.3	17	2	-	-	-	85.6	-	3.2	-	-	-	-	-	-	-	-	-	-	-
	21-END	0.2	-	0	0	15.1	9.4	12.2	-	5.3	21	0	78	-	25	-	-1.6	21	1	-	-	-	23.3	-	2.8	-	-	-	-	-	-	-	-	-	-	-
	MONTH	2.3	2	3	1	15.0	8.0	11.5	-	4.0	15	0	213	-	64	-	-2.3	17	5	-	-	-	163.8	-	3.0	-	42	-	-	-	-	-	-	-	-	-
Rosslare Co. Wexford	1-10	1.9	-	3	1	16.3	10.1	13.2	-	7.7	7	0	88	-	33	-	2.3	4	0	15.0	-	-	57.5	-	4.4	1	-	-	-	-	-	-	-	-	-	-
	11-20	0.3	-	1	0	13.3	8.7	11.0	-	6.2	16	0	66	-	15	-	3.6	19	0	12.9	-	-	75.0	-	6.9	2	-	-	-	-	-	-	-	-	-	-
	21-END	0.0	-	0	0	15.4	10.2	12.8	-	6.3	21	0	84	-	30	-	3.3	26	0	14.1	-	-	29.8	-	3.8	0	-	-	-	-	-	-	-	-	-	-
	MONTH	2.2	3	4	1	15.0	9.7	12.3	-1.4	6.2	16	0	238	81	78	64	2.3	4	0	14.0	-0.9	-	162.3	112	5.0	3	57	-	-	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	128.02
	11-20	138.39
	21-end	71.71
	Month	338.12
Dublin Airport Co. Dublin	1-10	136.00
	11-20	142.21
	21-end	86.47
	Month	364.68
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	109.10
	11-20	154.48
	21-end	75.76
	Month	339.34
Kilkenny Co. Kilkenny	1-10	126.07
	11-20	144.06
	21-end	91.73
	Month	361.86
Belmullet Co. Mayo	1-10	117.83
	11-20	130.15
	21-end	72.35
	Month	320.33
Clones Co. Monaghan	1-10	138.41
	11-20	130.49
	21-end	68.58
	Month	337.48
Birr Co. Offaly	1-10	127.59
	11-20	131.52
	21-end	78.58
	Month	337.69

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	20.0	19	28	-
	11-20	18.5	19	47	-
	21-end	12.0	10	57	-
	Month	50.5	-	-	-
Kinsealy Co. Dublin	1-10	19.9	19	30	-
	11-20	17.6	17	47	-
	21-end	11.6	9	56	-
	Month	49.1	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	16.2	9	9	-
	11-20	16.1	16	25	-
	21-end	6.9	0	25	-
	Month	39.2	-	-	-
Ballinamore Co. Leitrim	1-10	19.8	14	14	-
	11-20	17.0	17	31	-
	21-end	11.1	7	38	-
	Month	47.9	-	-	-
Glenamoy Co. Mayo	1-10	11.7	5	5	-
	11-20	14.1	9	14	-
	21-end	14.1	-	5	9
	Month	39.9	-	-	-
Johnstown Castle Co. Wexford	1-10	17.2	15	21	-
	11-20	16.5	16	37	-
	21-end	10.0	9	46	-
	Month	43.7	-	-	-

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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	14.6	12.4	9.9	-0.1
11-20	12.5		9.8	7.9	+0.8	197	122
21-end	13.9		12.3	10.6	-0.4	215	160
Mineral	1-10	16.1	12.9	10.0	-0.2	189	123
	11-20	15.3	11.2	8.3	-0.1	396	228
	21-end	14.4	12.7	10.6	-0.3	442	313

special topic

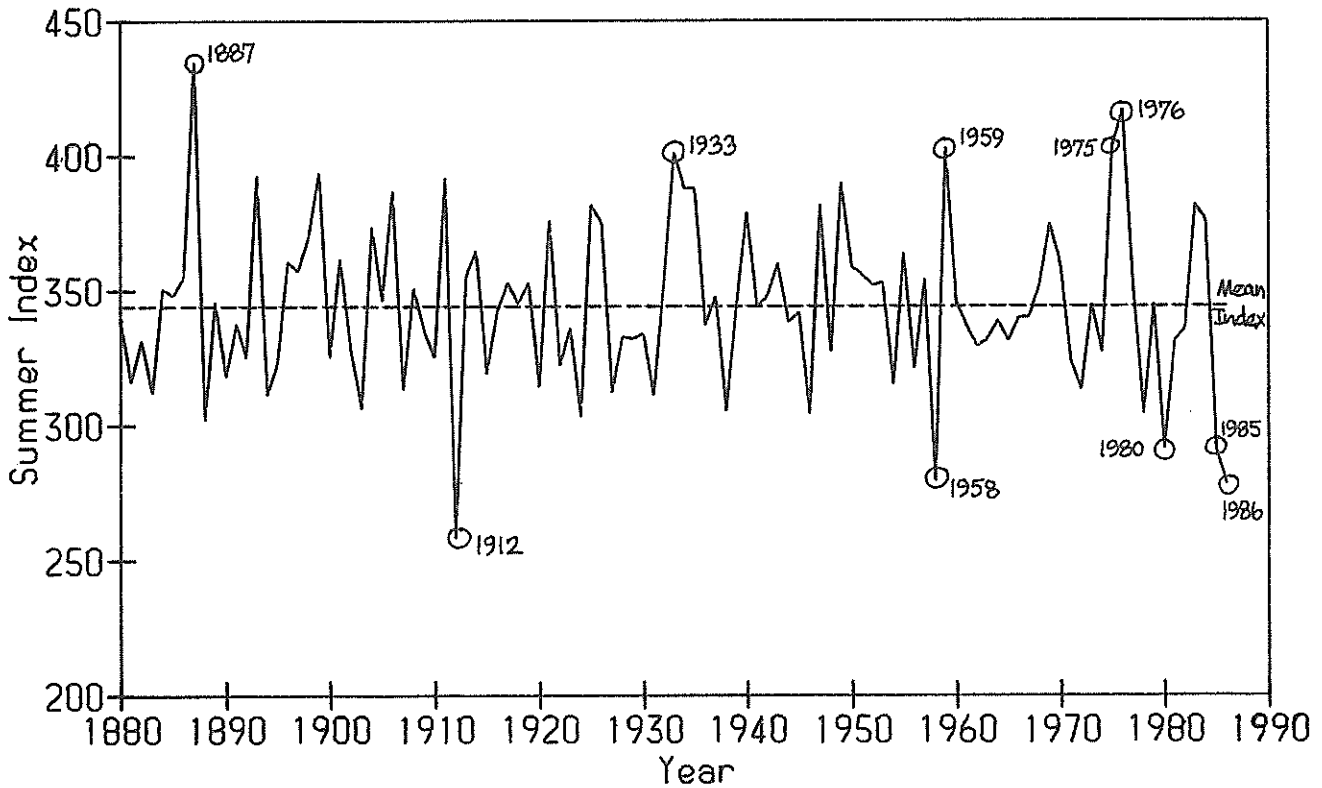
SUMMER INDEX

The weather of a month, season or year is frequently evaluated by comparing certain elements, e.g. precipitation amounts, mean air temperature, sunshine hours, to the normal values for the period. Other criteria often used include accumulated temperature, number of days with maximum temperature exceeding a certain value (e.g. 21°C) and the Poulter Index. The latter is used to express the overall quality of a summer (June to August inclusive) by means of a single figure derived from the sum of weighted values of mean air temperature, total sunshine and total rainfall. High values of the first two elements and low values of rainfall result in a high Index criteria. In a most general way therefore large values of the Summer Index reflect the brighter and drier summer seasons and low values correspond to the cooler, duller and wet seasons. It has been found that the outcome of operations which are very much weather dependent and extend throughout the (summer) season show close association with year-to-year variations in the Index. Milled peat production, for example, has been shown to correlate highly with the Poulter Index for the period May to September inclusive,

The figure below shows the values of the Poulter Summer Index at the Phoenix Park by year since 1880. Considerable year-to-year fluctuation is evident including a number of extreme values (high and low values of the Index). Individual summer seasons can be identified and sequences of seasons. It needs to be stressed, however, that while the number of similar type extreme seasons occurring in sequence are rare, it is not possible to predict upcoming summers by extrapolation of the Index to future years.

T Keane
Meteorological Service

SUMMER WEATHER INDEX* FOR DUBLIN (PHOENIX PARK), 1880-1986



* POULTER INDEX