



# AGROMETEOROLOGICAL BULLETIN

## The Weather of March 1989

### Summary

*1st-16th:* Unsettled, some very wet days; strong southwest airflow.  
*17th- 24th:* Wet, rather cold and changeable; westerly winds.  
*25th - end:* Less wet and mild; southerly winds.

### Meteorological Situation

The Atlantic influence continued from February through March. Deep depressions were steered towards Iceland but occasional secondary centres approached this country. Strong southwest winds and frequent rainbelts prevailed. In particular, depression centres affected the country on 2nd, 6th, 12th and 14th while that on 16th passed through to the continent south of Ireland. Northwest airflows and showery conditions followed each of the centres apart from the 7th and 17th when the Azores high exerted greater influence. The latter ridge was followed by a westerly airflow and the spell proved to be particularly changeable, wet and windy to 24th; strong southwest to northwest winds prevailed during this time. A general backing of wind to a southerly direction then took place and this led to improved temperatures. However an Azores ridge extending over the country on 28th was followed by further unsettled conditions although winds eased gradually towards the end of the month.

### Precipitation

Amounts were well above normal everywhere. Values varied from 235% of normal at Killarney to 109% at Dublin Airport. Rainfall was evenly spread throughout the month. Wettest days varied somewhat with region but at Birr, for example, they occurred on 2nd, 5th, 8/9th, 14th, 18th to 23rd and 27th.

### Temperature

Mean air temperature was well above normal, varying from 1.4°C above at Dublin Airport to 0.1°C above at Belmullet. The mean maximum contributed most to the anomalies and was well above normal at Dublin Airport (2.1°C) whereas the mean minimum values deviated less from normal. In the changeable conditions frost occurred on a number of nights, the more prolonged period being 20th to 25th. Lowest air temperature of -7.3°C occurred at Ballinrobe on the 23rd and lowest ground temperature occurred at Grange on the 17th. Soil temperatures (100mm) were 1.0°C or less above average except in the period 16th to 25th when they tended to be below average.

### Sunshine and Radiation

Hours of bright sunshine varied from 109% of normal at Clones to 74% at Cahirciveen. In general there was no particularly dull period. Global radiation varied from 105% of normal at Dublin Airport to 86% of normal at Valentia.

### Wind

Winds were especially strong and gusty throughout much of the month, particularly in the period 19th to 24th. Other spells occurred on 5/6th, 8/9th, 12/13th. The number of days with gale gusts varied from 28 at Malin Head to 12 in the midwest stations.

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

MARCH 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 <sup>-1</sup> )	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
Carlow (Oak Park) Co. Carlow	1-10	27.1	-	8	6	11.1	3.0	7.1	-	0.0	10	0	32	-	3	-	-3.5	3	6	-	-	35.0	-	4.8	-	-
	11-20	38.0	-	7	6	10.1	2.6	6.3	-	-2.5	17	1	27	-	2	-	-2.2	20	3	-	-	41.8	-	5.2	-	-
	21-END	19.2	-	7	5	11.0	3.8	7.4	-	0.3	21	0	38	-	5	-	-2.0	29	3	-	-	29.1	-	6.0	-	-
	MONTH	84.3	159	22	17	10.8	3.2	7.0	-	-2.5	17	1	96	-	10	-	-3.5	3	12	-	-	105.9	-	5.3	-	30
Shannon Airport Co. Clare	1-10	33.7	-	10	5	11.5	4.1	7.8	-	1.4	3	0	36	-	4	-	-4.3	10	4	6.9	-	35.8	-	5.2	7	-
	11-20	43.2	-	9	7	10.3	3.2	6.7	-	-1.9	17	1	27	-	2	-	-7.7	17	5	6.9	-	38.5	-	5.7	6	-
	21-END	49.4	-	10	8	12.1	5.0	8.6	-	2.2	25	0	48	-	9	-	-3.5	25	5	8.2	-	28.3	-	6.0	5	-
	MONTH	126.3	204	29	20	11.3	4.1	7.7	+0.7	-1.9	17	1	112	102	15	88	-7.7	17	14	7.4	+0.4	102.6	95	5.6	18	38
Cork Airport Co. Cork	1-10	78.9	-	10	7	10.4	4.1	7.2	-	1.2	7	0	31	-	2	-	-1.5	7	3	6.9	-	36.9	-	8.0	5	-
	11-20	51.8	-	9	9	9.5	2.9	6.2	-	-0.7	17	1	23	-	1	-	-2.8	17	2	6.7	-	40.4	-	7.6	6	-
	21-END	35.8	-	9	7	10.7	3.3	7.0	-	-0.1	22	1	35	-	2	-	-2.0	25	3	7.6	-	25.8	-	8.0	7	-
	MONTH	166.5	162	28	23	10.2	3.4	6.8	+0.5	-0.7	17	2	89	105	6	-	-2.8	17	8	7.1	+0.7	103.1	95	7.9	18	35
Fermoy (Coolnakilla) Co. Cork	1-10	68.5	-	10	8	9.9	3.2	6.5	-	0.8	7	0	25	-	1	-	-2.7	8	N/A	-	-	30.0	-	N/A	-	-
	11-20	46.5	-	9	8	9.3	2.6	6.0	-	-1.8	17	2	23	-	1	-	-5.9	17	3	-	-	31.5	-	N/A	-	-
	21-END	42.7	-	10	8	10.5	2.5	6.5	-	-1.8	23	2	30	-	3	-	-3.2	29	6	-	-	24.6	-	N/A	-	-
	MONTH	157.7	-	29	24	9.9	2.7	6.3	-	-1.8	23	4	78	-	5	-	-5.9	17	N/A	-	-	86.1	-	N/A	-	N/A
Fermoy (Moore Park) Co. Cork	1-10	58.0	-	9	8	11.3	3.1	7.2	-	-1.7	7	2	34	-	4	-	-4.8	7	7	-	-	36.4	-	4.3	-	-
	11-20	36.9	-	8	7	10.4	2.3	6.3	-	-3.5	17	3	27	-	3	-	-7.0	17	3	-	-	40.9	-	4.7	-	-
	21-END	33.7	-	8	6	11.7	4.1	7.9	-	0.4	25	0	43	-	6	-	-2.5	29	3	-	-	26.0	-	4.0	-	-
	MONTH	128.6	165	25	21	11.2	3.2	7.2	-	-3.5	17	5	104	-	13	-	-7.0	17	13	-	-	103.3	-	4.3	-	28
Roches Point Co. Cork	1-10	61.1	-	7	5	10.8	5.6	8.2	-	2.8	7	0	39	-	3	-	0.0	10	0	7.8	-	37.0	-	8.0	6	-
	11-20	45.6	-	9	8	10.3	4.5	7.4	-	1.2	17	0	31	-	2	-	-1.4	17	1	7.6	-	44.4	-	8.4	8	-
	21-END	29.7	-	8	5	11.2	4.8	8.0	-	1.0	22	0	42	-	4	-	-0.6	21	2	8.5	-	29.6	-	8.8	8	-
	MONTH	136.4	182	24	18	10.8	5.0	7.9	+0.7	1.0	22	0	113	108	8	-	-1.4	17	3	8.0	+0.6	111.0	101	8.4	22	43
Glencolumbkille Co. Donegal	1-10	60.0	-	10	9	10.4	4.1	7.3	-	1.6	10	0	31	-	2	-	-1.8	10	2	-	-	N/A	-	4.4	-	-
	11-20	82.1	-	10	10	8.5	2.9	5.7	-	-0.6	17	1	18	-	0	-	-5.0	17	5	-	-	N/A	-	4.8	-	-
	21-END	73.3	-	11	11	9.5	3.7	6.6	-	0.1	23	0	28	-	2	-	0.0	23	0	-	-	N/A	-	5.6	-	-
	MONTH	215.4	-	31	30	9.5	3.6	6.5	-	-0.6	17	1	77	-	5	-	-5.0	17	7	-	-	N/A	-	4.9	-	N/A

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MARCH 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 <sup>-1</sup> )	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	62.1	-	10	9	10.5	3.0	6.7	-	-0.3	2	1	28	-	3	-	-4.0	2	6	-	-	-	-	-	-	-	-	-	-	-
	11-20	89.0	-	10	10	8.4	1.7	5.0	-	-4.9	17	2	17	-	0	-	-7.9	17	8	-	-	-	-	-	-	-	-	-	-	-
	21-END	75.1	-	10	10	10.1	2.0	6.1	-	-3.9	23	2	26	-	2	-	-4.4	22	5	-	-	-	-	-	-	-	-	-	-	-
	MONTH	226.2	211	30	29	9.7	2.2	6.0	-	-4.9	17	5	70	-	5	-	-7.9	17	19	-	-	-	-	-	-	-	-	-	-	-
Malin Head Co. Donegal	1-10	30.8	-	9	6	10.4	3.7	7.1	-	1.5	10	0	30	-	3	-	-1.7	3	3	5.9	-	31.4	-	9.8	10	-	-	-	-	-
	11-20	56.7	-	10	10	8.5	3.3	5.9	-	0.0	17	0	20	-	1	-	-3.9	17	3	5.8	-	33.8	-	9.7	9	-	-	-	-	-
	21-END	47.2	-	9	8	10.0	3.8	6.9	-	0.5	22	0	31	-	2	-	-1.0	21	2	6.5	-	20.3	-	9.8	9	-	-	-	-	-
	MONTH	134.7	190	28	24	9.7	3.6	6.6	+0.2	0.0	17	0	80	98	6	-	-3.9	17	8	6.1	-0.0	85.5	81	9.8	28	46	-	-	-	-
Casement Aerodrome Co. Dublin	1-10	24.9	-	5	4	10.9	3.1	7.0	-	-0.8	10	1	31	-	3	-	-3.9	10	4	6.2	-	32.3	-	8.8	7	-	-	-	-	-
	11-20	24.4	-	8	5	9.6	2.3	6.0	-	-4.4	17	2	24	-	2	-	-7.0	17	4	6.0	-	43.4	-	8.6	6	-	-	-	-	-
	21-END	23.7	-	6	4	12.1	3.6	7.9	-	-0.2	23	1	44	-	9	-	-2.4	29	3	7.3	-	37.0	-	8.3	7	-	-	-	-	-
	MONTH	73.0	149	19	13	10.9	3.0	7.0	+1.0	-4.4	17	4	99	114	14	108	-7.0	17	11	6.5	-	112.7	107	8.5	20	42	-	-	-	-
Dublin Airport Co. Dublin	1-10	17.4	-	5	3	11.7	4.2	8.0	-	1.0	10	0	39	-	6	-	-3.2	8	6	6.5	-	29.7	-	6.0	6	-	-	-	-	-
	11-20	13.4	-	8	4	9.9	3.2	6.6	-	-1.6	17	1	26	-	2	-	-6.7	17	4	6.3	-	44.6	-	6.5	5	-	-	-	-	-
	21-END	23.9	-	6	4	12.2	4.3	8.2	-	0.7	21	0	46	-	10	-	-2.0	23	4	7.6	-	39.0	-	6.4	4	-	-	-	-	-
	MONTH	54.7	109	19	11	11.3	3.9	7.6	+1.4	-1.6	17	1	112	129	17	155	-6.7	17	14	6.9	+0.7	113.3	102	6.3	15	45	-	-	-	-
Kinsealy Co. Dublin	1-10	17.5	-	8	5	12.4	3.2	7.8	-	-0.6	10	1	39	-	6	-	-7.6	8	7	-	-	N/A	-	4.4	-	-	-	-	-	-
	11-20	13.4	-	8	6	10.8	2.6	6.7	-	-1.8	18	2	30	-	3	-	-8.2	17	6	-	-	N/A	-	5.1	-	-	-	-	-	-
	21-END	24.1	-	5	4	12.4	3.8	8.1	-	0.5	23	0	45	-	9	-	-6.7	29	4	-	-	N/A	-	5.2	-	-	-	-	-	-
	MONTH	55.0	117	21	15	11.9	3.2	7.5	-	-1.8	18	3	113	-	19	-	-8.2	17	17	-	-	N/A	-	4.9	-	N/A	-	-	-	-
Galway Co. Galway	1-10	48.3	-						-					-		-														
	11-20	63.9	-						-					-		-														
	21-END	50.3	-						-					-		-														
	MONTH	162.5	214						-					-		-														
Killarney (Muckross House) Co. Kerry	1-10	147.6	-	10	10	11.1	5.0	8.1	-	2.5	10	0	38	-	3	-	-1.6	7	3	-	-	20.7	-	-	-	-	-	-	-	-
	11-20	98.7	-	9	9	10.6	4.4	7.5	-	1.6	16	0	33	-	3	-	-3.8	17	3	-	-	24.6	-	-	-	-	-	-	-	-
	21-END	65.7	-	10	9	11.1	4.9	8.0	-	1.1	23	0	43	-	7	-	-2.1	28	3	-	-	17.5	-	-	-	-	-	-	-	-
	MONTH	312.0	235	29	28	10.9	4.8	7.9	-	1.1	23	0	114	-	12	-	-3.8	17	9	-	-	62.8	-	-	-	-	-	-	-	-

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NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MARCH 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 <sup>-1</sup> )	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 <sup>-1</sup>					DATE	DAYS WITH GROUND FROST		MEAN DAILY	DIFFERENCE FROM AVERAGE
Cahirciveen (Valentia Obsy.) Co. Kerry	1-10	82.0	-	10	9	11.4	4.9	8.1	-	1.0	10	0	39	-	4	-	-1.0	10	2	7.8	-	25.9	-	7.1	6	-
	11-20	72.5	-	10	8	10.4	4.4	7.4	-	-1.1	17	1	33	-	2	-	-2.6	17	1	7.8	-	31.5	-	7.4	6	-
	21-END	40.9	-	9	9	11.7	5.6	8.7	-	2.0	25	0	48	-	7	-	1.0	25	0	8.8	-	20.1	-	7.1	7	-
	MONTH	195.4	170	29	26	11.2	5.0	8.1	+0.3	-1.1	17	1	120	98	12	71	-2.6	17	3	8.2	+0.3	77.5	74	7.2	19	35
Ardfert (Liscahane) Co. Kerry	1-10	68.8	-	10	8	11.4	4.4	7.9	-	-1.2	7	1	38	-	4	-	-2.3	7	3	-	-	37.2	-	-	-	-
	11-20	59.8	-	8	8	10.8	3.8	7.3	-	-2.4	17	1	33	-	3	-	-7.6	17	3	-	-	39.8	-	-	-	-
	21-END	43.1	-	10	9	11.3	4.7	8.0	-	1.7	23	0	42	-	7	-	-2.0	25	2	-	-	27.8	-	-	-	-
	MONTH	171.7	-	28	25	11.2	4.3	7.7	-	-2.4	17	2	113	-	14	-	-7.6	17	8	-	-	104.8	-	-	-	-
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 Co. Kilkenny	1-10	24.6	-	8	6	11.5	2.7	7.1	-	-1.4	8	3	33	-	4	-	-7.9	8	6	6.3	-	35.8	-	4.2	6	-
	11-20	31.9	-	7	7	10.3	2.3	6.3	-	-2.0	17	2	26	-	2	-	-9.2	17	7	6.2	-	41.2	-	4.3	4	-
	21-END	26.8	-	8	5	11.7	3.5	7.6	-	-0.5	29	2	42	-	7	-	-7.2	29	5	7.4	-	28.2	-	5.2	4	-
	MONTH	83.3	146	23	19	11.2	2.9	7.0	+0.8	-2.0	17	7	101	109	13	93	-9.2	17	18	6.7	+0.7	105.2	101	4.6	14	32
Mooncoin (Silverspring) Co. Kilkenny	1-10	56.9	-	9	8	11.5	3.1	7.3	-	-1.0	8	2	35	-	4	-	-2.1	8	5	-	-	41.4	-	-	-	-
	11-20	40.8	-	8	7	10.6	3.2	6.9	-	-1.9	17	2	31	-	3	-	-5.2	17	3	-	-	41.9	-	-	-	-
	21-END	17.6	-	7	5	11.7	3.7	7.7	-	-2.2	29	3	42	-	7	-	-1.9	25	5	-	-	32.7	-	-	-	-
	MONTH	115.3	146	24	20	11.3	3.4	7.3	-	-2.2	29	7	108	-	14	-	-5.2	17	13	-	-	116.0	-	-	-	-
Ballinamore Co. Leitrim	1-10	45.3	-	10	7	10.9	1.4	6.1	-	-1.9	10	4	25	-	3	-	-6.0	10	8	-	-	26.5	-	3.3	-	-
	11-20	50.3	-	10	8	8.9	1.0	4.9	-	-4.0	17	4	17	-	0	-	-9.4	17	5	-	-	37.5	-	3.9	-	-
	21-END	51.9	-	10	9	10.7	2.5	6.6	-	-1.5	25	2	31	-	3	-	-6.1	25	6	-	-	26.5	-	3.9	-	-
	MONTH	147.5	176	30	24	10.2	1.7	5.9	-	-4.0	17	10	74	-	7	-	-9.4	17	19	-	-	90.5	-	3.7	-	23
Ardee (Boharnamoe) Co. Louth	1-10	24.2	-	7	6	11.8	2.3	7.1	-	-2.2	10	3	33	-	5	-	-3.5	7	3	-	-	-	-	-	-	-
	11-20	18.1	-	7	5	9.8	1.3	5.6	-	-4.5	17	3	22	-	1	-	-5.0	17	4	-	-	-	-	-	-	-
	21-END	32.1	-	9	9	12.4	3.6	8.0	-	-0.8	25	2	44	-	8	-	-2.0	21	3	-	-	-	-	-	-	-
	MONTH	74.4	131	23	20	11.4	2.4	6.9	-	-4.5	17	8	99	-	14	-	-5.0	17	10	-	-	-	-	-	-	-

TABLE 1 (CONTINUED)

MARCH 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 <sup>-1</sup> )	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	68.8	-	10	9	11.1	2.4	6.7	-	-1.1	7	1	29	-	3	-	-5.5	10	6	-	-	37.9	-	4.6	-	-	
	11-20	61.9	-	10	8	9.5	-1.6	3.9	-	-7.2	20	6	16	-	1	-	-8.4	20	9	-	-	32.7	-	4.6	-	-	
	21-END	69.2	-	11	10	10.7	-2.7	4.0	-	-7.3	23	8	23	-	4	-	-10.1	25	10	-	-	27.8	-	4.6	-	-	
	MONTH	199.9	208	31	27	10.4	-0.7	4.9	-	-7.3	23	15	68	-	7	-	-10.1	25	25	-	-	98.4	-	4.6	-	15	
Belmullet Co. Mayo	1-10	47.9	-	10	8	10.6	4.1	7.4	-	2.2	2	0	32	-	2	-	-1.7	3	3	6.7	-	40.2	-	8.8	9	-	
	11-20	49.0	-	10	10	9.5	3.4	6.5	-	0.1	17	0	25	-	1	-	-4.7	17	4	6.9	-	35.7	-	8.9	8	-	
	21-END	36.3	-	8	8	10.5	4.3	7.4	-	0.5	22	0	35	-	2	-	0.4	25	0	7.3	-	27.0	-	8.0	6	-	
	MONTH	133.2	160	28	26	10.2	3.9	7.1	+0.1	0.1	17	0	92	92	5	-	-4.7	17	7	7.0	+0.1	102.9	91	8.5	23	43	
Claremorris Co. Mayo	1-10	57.8	-	9	8	10.7	2.5	6.6	-	-0.3	7	1	27	-	3	-	-4.1	10	4	6.1	-	33.9	-	6.4	7	-	
	11-20	54.9	-	9	9	9.2	1.9	5.6	-	-3.8	17	2	20	-	0	-	-8.5	17	5	6.0	-	31.2	-	6.3	5	-	
	21-END	45.6	-	10	6	10.9	2.5	6.7	-	-0.7	25	2	33	-	4	-	-4.6	28	3	7.2	-	25.7	-	6.2	5	-	
	MONTH	158.3	195	28	23	10.3	2.3	6.3	+0.3	-3.8	17	5	80	93	7	-	-8.5	17	12	6.4	+0.4	90.8	93	6.3	17	30	
Glenamoy 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	-	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
Dunsany (Grange) Co. Meath	1-10	27.7	-	8	6	10.7	2.0	6.4	-	-1.2	3	3	27	-	3	-	-7.1	10	6	-	-	28.7	-	-	-	-	
	11-20	30.8	-	9	7	9.2	1.6	5.4	-	-5.5	17	2	21	-	1	-	-11.0	17	4	-	-	34.2	-	-	-	-	
	21-END	25.7	-	8	5	11.1	3.5	7.3	-	-0.5	23	2	38	-	5	-	-2.6	25	4	-	-	28.5	-	-	-	-	
	MONTH	84.2	145	25	18	10.4	2.4	6.4	-	-5.5	17	7	86	-	9	-	-11.0	17	14	-	-	91.4	-	-	-	-	
Clones Co. Monaghan	1-10	34.0	-	9	5	10.9	2.1	6.5	-	-0.5	3	3	27	-	3	-	-5.6	10	6	5.6	-	36.6	-	6.1	7	-	
	11-20	34.8	-	8	7	8.6	1.7	5.2	-	-2.8	17	3	17	-	0	-	-8.4	17	5	5.3	-	40.0	-	5.9	5	-	
	21-END	41.3	-	10	8	10.8	3.3	7.1	-	-0.5	25	3	35	-	4	-	-3.4	25	3	6.2	-	29.2	-	6.2	5	-	
	MONTH	110.1	178	27	20	10.1	2.4	6.3	+0.7	-2.8	17	9	79	101	7	-	-8.4	17	14	5.7	+0.1	105.8	109	6.1	17	32	
Birr Co. Offaly	1-10	27.4	-	9	5	11.1	3.0	7.1	-	-0.1	10	2	32	-	4	-	-4.2	10	6	6.6	-	35.8	-	4.5	5	-	
	11-20	34.9	-	8	7	9.9	2.2	6.1	-	-4.4	17	2	25	-	1	-	-8.7	17	4	6.5	-	37.1	-	4.6	4	-	
	21-END	33.8	-	9	7	11.8	3.7	7.8	-	-0.4	22	1	43	-	8	-	-2.6	28	5	7.8	-	27.0	-	5.0	4	-	
	MONTH	96.1	181	26	19	11.0	3.0	7.0	+0.7	-4.4	17	5	99	108	13	100	-8.7	17	15	7.0	+0.6	99.9	93	4.7	13	31	

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MARCH 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 <sup>-1</sup> )	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										
Dundrum (Knockavilla) Co. Tipperary	1-10	34.7	-	8	8	11.3	2.8	7.0	-	-1.6	10	2	32	-	4	-	-6.5	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	33.1	-	7	7	10.3	2.4	6.3	-	-4.0	17	2	27	-	2	-	-4.5	20	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	40.3	-	7	5	10.9	3.0	7.0	-	0.0	23	0	34	-	4	-	-3.8	29	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	108.1	-	22	20	10.8	2.7	6.8	-	-4.0	17	4	94	-	9	-	-6.5	7	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dungarvan (Carriglea) Co. Waterford	1-10	76.7	-	10	8	11.8	2.8	7.3	-	-2.4	7	2	35	-	4	-	-5.4	2	7	-	-	36.9	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	58.3	-	9	8	10.9	2.6	6.7	-	-1.9	20	3	30	-	4	-	-9.6	16	8	-	-	41.2	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	37.8	-	9	7	12.2	3.2	7.7	-	-1.4	23	4	44	-	8	-	-7.7	25	5	-	-	27.9	-	4.0	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	172.8	188	28	23	11.7	2.9	7.3	-	-2.4	7	9	109	-	16	-	-9.6	16	20	-	-	106.0	-	3.8	-	-	-	-	-	-	-	-	-	-	-	-
Mullingar Co. Westmeath	1-10	35.5	-	8	5	10.6	1.9	6.3	-	-1.9	10	2	26	-	3	-	-4.6	10	6	5.7	-	35.1	-	6.2	8	-	-	-	-	-	-	-	-	-	-	-
	11-20	38.1	-	8	7	9.3	2.0	5.7	-	-2.6	17	2	21	-	1	-	-5.6	17	3	5.6	-	42.5	-	6.5	5	-	-	-	-	-	-	-	-	-	-	-
	21-END	30.6	-	9	8	11.0	3.3	7.1	-	-1.1	25	2	37	-	5	-	-3.1	25	5	7.1	-	29.6	-	6.8	5	-	-	-	-	-	-	-	-	-	-	-
	MONTH	104.2	168	25	20	10.3	2.4	6.4	+0.8	-2.6	17	6	84	102	8	-	-5.6	17	14	6.2	+0.4	107.2	101	6.5	18	30	-	-	-	-	-	-	-	-	-	
J.F.K. Park Co. Wexford	1-10	54.7	-	9	8	10.7	3.7	7.2	-	0.1	7	0	32	-	2	-	-5.2	8	6	-	-	34.6	-	8.2	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	37.7	-	8	7	10.1	3.9	7.0	-	0.1	17	0	30	-	2	-	-6.6	20	7	-	-	36.5	-	5.3	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	23.2	-	6	5	10.9	4.1	7.5	-	0.2	23	0	38	-	3	-	-5.5	29	4	-	-	26.5	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	115.6	150	23	20	10.6	3.9	7.2	-	0.1	17	0	100	-	7	-	-6.6	20	17	-	-	97.6	-	6.0	-	-	-	-	-	-	-	-	-	-	-	30
Clonroche Co. Wexford	1-10	56.2	-	9	6	10.5	3.4	7.0	-	-0.7	7	1	30	-	2	-	-6.1	8	7	-	-	33.6	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	46.3	-	8	7	9.8	3.3	6.6	-	-2.0	17	1	27	-	1	-	-7.1	17	4	-	-	44.0	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	24.3	-	6	5	10.9	3.6	7.3	-	-0.5	29	2	36	-	3	-	-6.4	29	2	-	-	39.1	-	3.1	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	126.8	146	23	18	10.4	3.5	6.9	-	-2.0	17	4	93	-	6	-	-7.1	17	13	-	-	116.7	-	3.0	-	-	-	-	-	-	-	-	-	-	-	25
Johnstown Castle Co. Wexford	1-10	49.1	-	9	8	11.4	4.5	7.9	-	1.9	8	0	38	-	4	-	-3.4	8	4	-	-	33.8	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	53.4	-	7	7	9.9	3.7	6.8	-	-0.6	17	1	28	-	1	-	-0.7	17	3	-	-	33.7	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-
	21-END	24.1	-	6	6	11.2	4.3	7.8	-	0.4	23	0	41	-	3	-	-3.1	29	2	-	-	33.3	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-
	MONTH	126.6	169	22	21	10.8	4.2	7.5	-	-0.6	17	1	107	-	9	-	-3.4	8	9	-	-	100.8	-	2.5	-	-	-	-	-	-	-	-	-	-	-	25
Rosslare Co. Wexford	1-10	37.7	-	8	6	11.0	5.7	8.3	-	3.0	7	0	40	-	3	-	-2.0	7	1	7.7	-	40.1	-	7.3	6	-	-	-	-	-	-	-	-	-	-	-
	11-20	48.0	-	8	7	9.9	4.3	7.1	-	1.5	17	0	29	-	2	-	-0.5	20	2	7.1	-	40.1	-	7.2	6	-	-	-	-	-	-	-	-	-	-	-
	21-END	18.5	-	6	4	11.2	5.1	8.1	-	1.4	23	0	44	-	4	-	-0.4	29	2	8.4	-	36.6	-	7.0	7	-	-	-	-	-	-	-	-	-	-	-
	MONTH	104.2	165	22	17	10.7	5.0	7.9	+1.1	1.4	23	0	113	118	8	-	-2.0	7	5	7.8	+0.7	116.8	96	7.2	19	40	-	-	-	-	-	-	-	-	-	

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m <sup>2</sup>
Malin Head Co. Donegal	1-10	66.4
	11-20	81.1
	21-end	78.0
	Month	226.2
Dublin Airport Co. Dublin	1-10	69.28
	11-20	85.51
	21-end	108.22
	Month	263.01
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	65.29
	11-20	84.63
	21-end	81.51
	Month	231.43
Kilkenny Co. Kilkenny	1-10	74.39
	11-20	87.82
	21-end	96.02
	Month	258.25
Belmullet Co. Mayo	1-10	69.50
	11-20	82.20
	21-end	84.71
	Month	236.41
Clones Co. Monaghan	1-10	67.57
	11-20	82.96
	21-end	83.58
	Month	234.11
Birr Co. Offaly	1-10	74.28
	11-20	84.93
	21-end	92.94
	Month	252.15

Notes on the tables in January issue

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

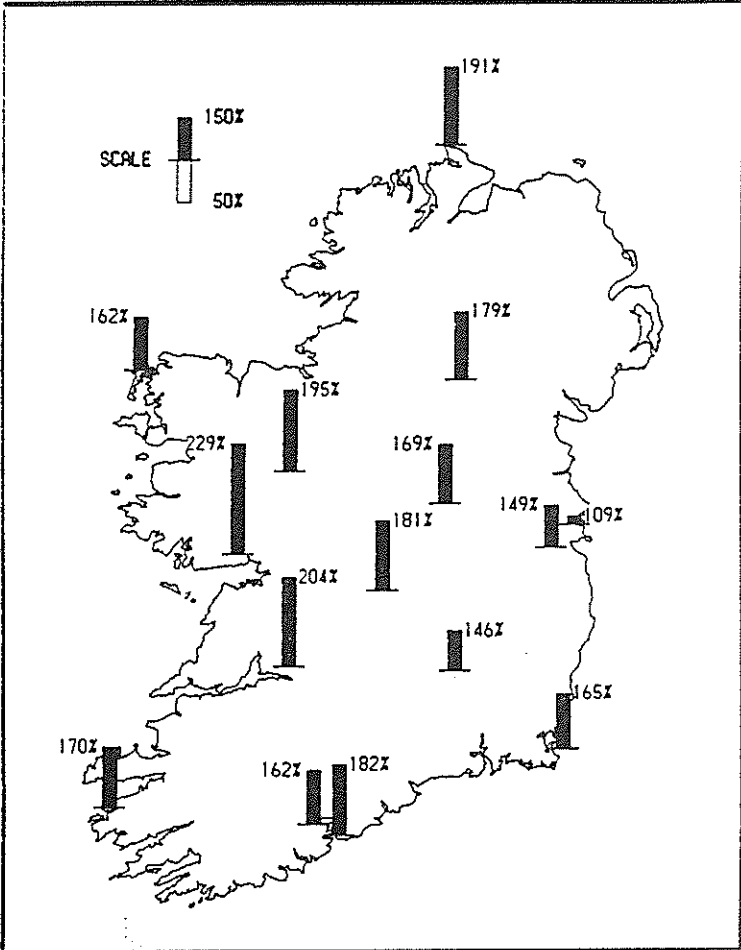
STATION	PERIOD	P.E. (mm)		SOIL MOISTURE (mm)	
		Amount	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	3.2	-	0	24
	11-20	8.8	-	0	29
	21-end	8.5	-	0	11
	Month	20.5	-	0	--
Kinsealy Co. Dublin	1-10	10.0	-	0	8
	11-20	8.7	-	0	5
	21-end	12.8	-	0	11
	Month	31.5	-	0	--
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	(-5.4)	-	0	87
	11-20	4.3	-	0	67
	21-end	(-1.6)	-	0	44
	Month	-	-	-	--
Ballinamore Co. Leitrim	1-10	3.2	-	0	42
	11-20	9.2	-	0	41
	21-end	5.7	-	0	46
	Month	18.1	-	-	-
Glenamoy Co. Mayo	1-10				
	11-20				
	21-end Month	N/A	N/A	N/A	N/A
Johnstown Castle Co. Wexford	1-10	12.2	-	0	37
	11-20	9.1	-	0	50
	21-end	5.9	-	0	13
	Month	27.2	-	-	--

- 7 -

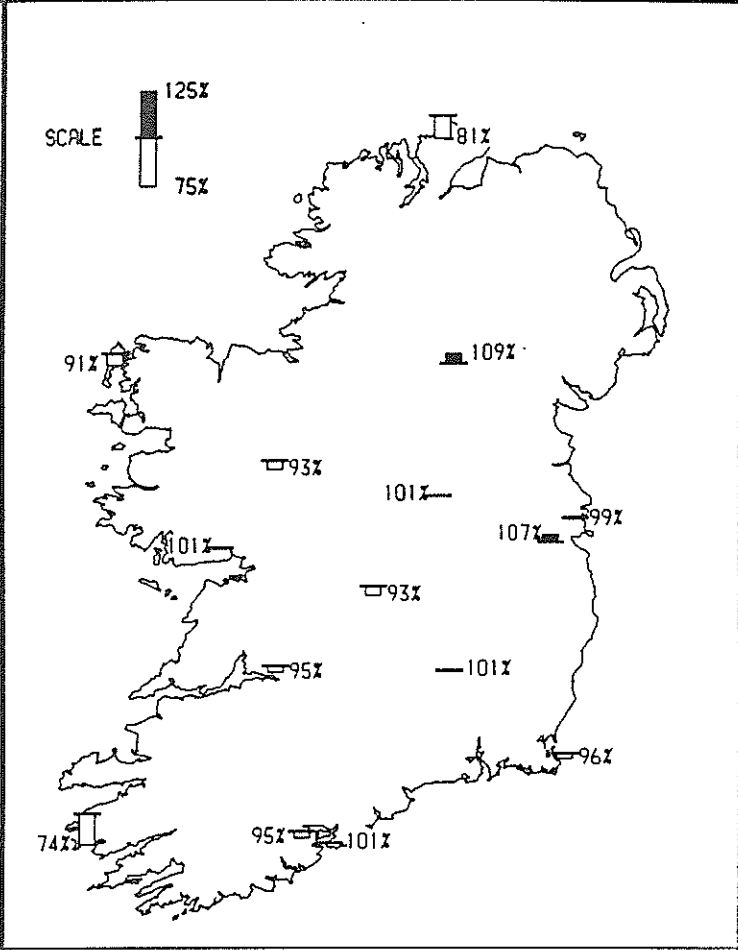
TABLE 4 SOIL CLIMATE (MULLINGAR)

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	6.9	5.9	4.1	0.17
	11-20	4.8	6.0	4.4	0.64	60.2	65.1
	21-end	8.0	7.1	5.0	-0.14	58.1	59.3
Mineral	1-10	8.0	5.7	3.3	-0.15	53.2	58.6
	11-20	8.2	5.6	3.4	0.15	52.3	64.5
	21-end	8.8	7.5	4.0	-0.35	46.7	54.6

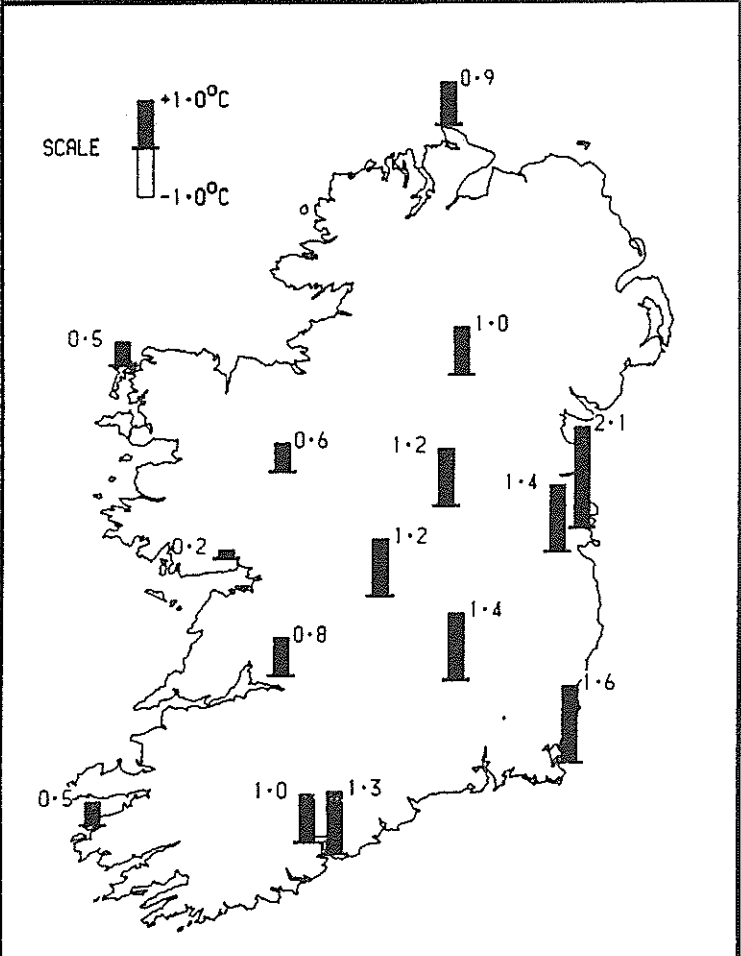
# Differences from average



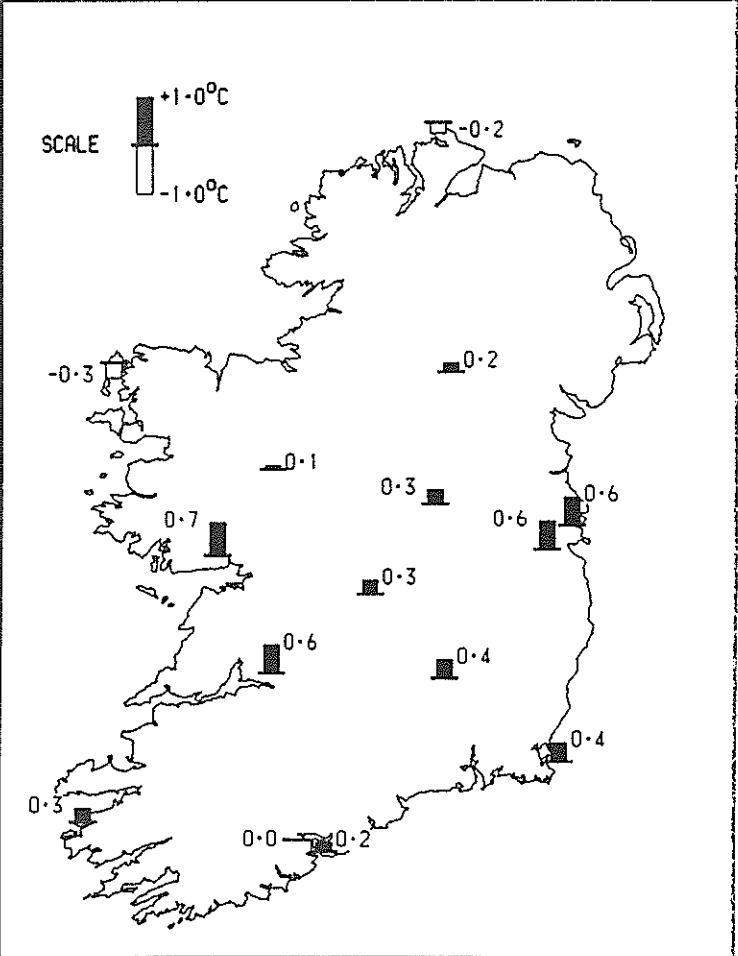
Rainfall percentage of (1951-80) normals



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 March 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	44.2		10	7	30.5		10	8
11 - 20	62.3		9	9	64.6		10	9
21 - END	49.0		11	11	53.1		9	8
MONTH	155.5	201	30	27	148.2	168	23	25

## Outlook for April 12th - 22nd

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The Atlantic influence will dominate. Showers in west to northwest winds over the first few days, followed by a passing ridge, will give way by 14th/15th to an active depression system off the west of Ireland — some heavy rain and strong southwest winds will occur. A slacker airflow will set in towards the end of the period but the weather will remain unsettled.

# Farming and Weather Forecasts

T. Keane, Meteorological Service

Farming has increasingly become a very technical and precise enterprise. A concern with profit margins, growth rates, weight gains, feed supplies, quota systems, agreed prices, work schedules, are all part of good farm management. For the most part, it may be said that the principal area of uncertainty remaining in farming now hinges upon weather, i.e. weather is the factor that makes farming difficult (after A.J. Brereton). The effects of weather may be direct, e.g. impact on growth, variability in production. interruptions caused to operations due to wet spells, setbacks arising from damaging storms; or the effects may be indirect, e.g. influences on diseases and the activity of parasites which require control while avoiding useless application. A flexible approach to management is essential. The farmer therefore has constantly to change decisions because of weather.

The most immediate requirement from the farmers' point of view is for a dependable weather forecast service, locally accurate and extending for a forecast period as long as possible. Within the constraints of present forecasting capabilities, in practice, requirements may range from just a few hours to four to seven days. However, more than most perhaps the longer range forecasts are extremely important to farming.

The weekly forecast is very useful for planning the week's work activity on the farm and for assessing the overall effect the weather will likely have on progress on many fronts. As specific tasks become due, e.g. spraying, fertilizer spreading, silage making, final decisions must be made on the basis of the most recent short range weather forecast.

Depending on the farming enterprise mix, many farmers have a need for weather forecasts throughout the year while others have a greater requirement at certain times for particular farm operations. In a survey carried out in 1985, 42% of farmers gave as their first choice the daily 24 hour forecast while 20% favoured 2 - day (48 hour) forecasts and 38% preferred 3-day (72 hour) or more ranges (Table 1(a)). With regard to preference for reception, 52% choose TV, 30% radio, 9% ATWS, 5% direct contact with the forecaster and 4% newspapers, agriline, etc. (Table 1(b)). The surprisingly high loading for radio follows from greater accessibility to radio in both cars and tractors and because the 7.55 a.m. forecast was considered to be very important. The recent improvement in television presentation, and in particular the innovation of a weekly forecast on this medium geared towards farming (at 1202 on Sundays), may have caused these percentages to change somewhat.

Table 1(a) Forecast Period : 1st Choice of Farmers

Period (hours)	24	48	72 or more
	42	20	38

Table 1(b) Means of reception : 1st Choice of Farmers.

Means	TV	RADIO	ATWS	DIRECT CONTACT	Newspapers and other, e.g. Agriline
	52	30	9	5	4