



AGROMETEOROLOGICAL BULLETIN

The Weather of April 1989

Summary

- 1st- 7th** : Wet; northeast airflow with spells of rain from the east
8th- 16th : Continuing wet ; changeable with depressions from Atlantic
17th - 25th : Cold and dry in high pressure, but later wintry showers as pressure declined
26th - end : Changeable but improving temperature

Meteorological Situation

The weather over the first seven days was determined by an Atlantic trough advancing into Europe and returning northwards over Britain and North Sea. Apart from the influence of a Scandinavian ridge on 3rd, a northeast airflow prevailed and rainbelts moved southwestwards over the country.

A ridge from Europe on 8th preceded a complex trough system affecting the eastern Atlantic on 9th/10th. An intense wave depression over southern and eastern areas on 11th was succeeded by showery troughs in a westerly airflow on 12th to 14th. The following depression passed into Europe on 15th giving a northeast airflow but rain affected the southeast and was slow to clear on 16th.

After 16th, high pressure from Greenland extended southwards over western Europe. The weather turned cold and there was a sharp drop particularly in nighttime temperature with the arrival of Arctic type air. As the high receded the first wintry showers affected the country on 22nd / 23rd and a trough over western areas on 24th gave some snow there as far south as Kerry.

As pressure declined further a depression from the northwest on 26th was slow to clear the east on 27th. Changeable conditions then gradually led to improved temperature by end of month.

Precipitation

Amounts varied from 202% of normal at Malin Head to 87% at Cork Airport. Wettest days were 2nd, 5th, 6th and 11th. It was dry everywhere from 17th to 21st, and in some areas to 23rd. Snow was reported on 5th and 24th and widespread hail showers on 12th to 14th and 23rd to 26th. Field conditions were generally poor until well after upturn in weather mid-month.

Sunshine and Radiation

Bright sunshine hours were well above normal in the west and below normal in the east. Values varied from 142% of normal at Roche's Point to 86% at Dublin Airport. Global radiation varied from 124% of normal at Dublin Airport to 77% of normal at Dublin Airport.

Temperature

Mean air temperature varied between 1.0°C (Rosslare and Malin Head) and 2.3°C (Galway) below normal due to low daily maxima but principally low daily minima. Air frost was widespread on 4th, 13th, 15th, 24th-26th (coldest spell). Lowest value of -4.4°C occurred at Birr on 24th. Ground frost was sharp to severe, lowest value of -10.3°C at Clones on the 24th. There was much damage caused to tender plants. Soil temperatures (100mm) were generally 1°C to 2°C below normal.

Wind

Gale gusts were extensive on 11th and 26th and less general on 9th, 16th and 27th.

TABLE 1 (CONTINUED)

APRIL 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 ^e (Valentia Obsy.) Co. Kerry	1-10	45.6	-	8	5	10.3	3.2	6.7	-	0.0	8	0	28	-	2	-	-3.0	5	3	8.1	-	51.6	-	4.6	2	-
	11-20	27.5	-	4	4	11.4	2.7	7.1	-	0.2	13	0	31	-	4	-	-1.6	18	3	9.2	-	78.2	-	3.7	3	-
	21-END	21.9	-	7	5	11.1	4.6	7.8	-	1.1	24	0	37	-	4	-	-2.2	24	4	10.0	-	47.1	-	5.0	3	-
	MONTH	95.0	120	19	14	10.9	3.5	7.2	-2.0	0.0	8	0	96	62	10	29	-3.0	5	10	9.1	-1.2	176.9	114	4.4	8	60
Ardfert (Liscahane) Co. Kerry	1-10	33.5	-	8	6	10.0	2.4	6.2	-	-2.5	5	3	27	-	2	-	-7.6	5	5	-	-	49.0	-	-	-	-
	11-20	11.1	-	4	3	11.7	1.9	6.8	-	-1.2	15	3	30	-	5	-	-4.7	18	7	-	-	82.2	-	-	-	-
	21-END	15.7	-	6	5	11.9	2.7	7.3	-	-2.7	25	3	36	-	6	-	-7.3	24	4	-	-	58.0	-	-	-	-
	MONTH	60.3	-	18	14	11.2	2.3	6.8	-	-2.7	25	9	93	-	13	-	-7.6	5	16	-	-	189.2	-	-	-	-
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	-	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 ^e Co. Kilkenny	1-10	28.7	-	8	6	9.1	2.6	5.8	-	-1.6	8	1	21	-	1	-	-7.3	8	5	7.0	-	40.1	-	3.6	0	-
	11-20	16.6	-	5	4	12.2	2.2	7.2	-	-1.4	15	3	34	-	6	-	-7.2	15	5	8.5	-	59.2	-	2.5	2	-
	21-END	11.9	-	6	3	11.6	2.0	6.8	-	-2.5	26	3	32	-	6	-	-9.3	24	6	8.8	-	39.3	-	2.9	1	-
	MONTH	57.2	110	19	13	11.0	2.3	6.6	-1.6	-2.5	26	7	87	63	13	33	-9.3	24	16	8.1	-1.2	138.6	91	3.0	3	49
Mooncoin (Silverspring) Co. Kilkenny	1-10	31.7	-	7	4	9.6	2.4	6.0	-	-2.6	8	1	23	-	2	-	-8.7	8	6	-	-	37.6	-	-	-	-
	11-20	42.8	-	6	5	12.4	1.4	6.9	-	-2.6	15	3	32	-	6	-	-7.0	15	8	-	-	54.7	-	-	-	-
	21-END	20.0	-	7	4	11.8	2.0	6.9	-	-2.2	24	3	33	-	6	-	-8.4	24	7	-	-	39.4	-	-	-	-
	MONTH	94.5	158	20	13	11.2	1.9	6.6	-	-2.6	15	7	88	-	14	-	-8.7	8	21	-	-	131.7	-	-	-	-
Ballinamore Co. Leitrim	1-10	50.2	-	9	8	8.4	2.5	5.4	-	-2.1	4	3	19	-	1	-	-7.0	4	3	-	-	29.3	-	2.6	-	-
	11-20	25.6	-	4	3	12.4	1.1	6.7	-	-2.5	13	3	32	-	6	-	-6.7	13	8	-	-	49.6	-	2.0	-	-
	21-END	18.7	-	6	4	10.5	0.9	5.7	-	-3.2	24	5	25	-	3	-	-9.0	24	7	-	-	36.7	-	2.3	-	-
	MONTH	94.5	145	19	15	10.4	1.5	6.0	-	-3.2	24	11	75	-	10	-	-9.0	24	18	-	-	115.6	-	2.3	-	17
Ardee (Boharnamoe) Co. Louth	1-10	52.9	-	8	8	9.9	2.6	6.2	-	-1.1	4	2	25	-	3	-	-1.8	4	5	-	-	-	-	-	-	-
	11-20	14.2	-	5	3	12.6	0.9	6.7	-	-1.7	15	4	32	-	6	-	-3.0	13	6	-	-	-	-	-	-	-
	21-END	18.7	-	5	4	11.0	0.1	5.6	-	-4.0	24	5	25	-	4	-	-3.2	25	5	-	-	-	-	-	-	-
	MONTH	85.8	162	18	15	11.2	1.2	6.2	-	-4.0	24	11	83	-	14	-	-3.2	25	16	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

APRIL 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			
Dundrum (Knockavilla) Co. Tipperary	1-10	22.7	-	8	3	9.4	2.6	6.0	-	-1.3	4	2	23	-	1	-	-5.4	4	7	-	-	-	-	-	-	-	-	-	-
	11-20	12.4	-	4	4	11.9	0.9	6.4	-	-4.0	15	4	31	-	5	-	-7.2	15	7	-	-	-	-	-	-	-	-	-	
	21-END	15.4	-	7	4	11.9	1.6	6.7	-	-3.8	25	3	32	-	6	-	-7.7	25	6	-	-	-	-	-	-	-	-	-	
	MONTH	50.5	-	19	11	11.1	1.7	6.4	-	-4.0	15	9	86	-	13	-	-7.7	25	20	-	-	-	-	-	-	-	-	-	
Dungarvan (Carriglea) Co. Waterford	1-10	42.8	-	7	4	9.9	2.3	6.1	-	-2.9	8	1	24	-	2	-	N/A	N/A	-	-	40.8	-	3.0	-	-	-	-		
	11-20	27.4	-	6	4	13.1	1.5	7.3	-	-2.2	15	2	36	-	8	-	N/A	N/A	-	-	55.7	-	2.3	-	-	-	-		
	21-END	14.1	-	5	3	12.9	2.7	7.8	-	-2.5	26	3	42	-	11	-	N/A	N/A	-	-	N/A	-	2.6	-	-	-	-		
	MONTH	84.3	120	18	11	11.9	2.2	7.1	-	-2.9	8	6	102	-	20	-	N/A	N/A	-	-	140.3	-	2.6	-	44	-	-		
Mullingar Co. Westmeath	1-10	28.6	-	8	7	8.5	2.4	5.5	-	-0.6	4	1	18	-	1	-	-3.0	8	4	6.6	-	35.2	-	5.4	1	-	-		
	11-20	19.5	-	4	3	11.7	2.1	6.9	-	-2.2	15	2	32	-	5	-	-4.5	15	5	8.1	-	60.1	-	3.1	1	-	-		
	21-END	17.6	-	5	4	10.4	1.2	5.8	-	-2.6	24	4	25	-	3	-	-5.2	24	5	7.9	-	49.6	-	3.8	0	-	-		
	MONTH	65.7	111	17	14	10.2	1.9	6.1	-1.6	-2.6	24	7	75	58	9	-	-5.2	24	14	7.5	-1.3	144.9	97	4.1	2	49	-		
J.F.K. Park Co. Wexford	1-10	31.2	-	8	7	9.2	3.1	6.1	-	-0.5	8	1	22	-	1	-	-8.5	8	9	-	-	35.4	-	4.7	-	-	-		
	11-20	33.7	-	5	3	11.8	3.2	7.5	-	0.6	12	0	35	-	5	-	-6.8	15	6	-	-	54.8	-	2.4	-	-	-		
	21-END	15.2	-	5	4	11.5	2.5	7.0	-	-1.6	24	3	33	-	5	-	-8.8	26	9	-	-	42.2	-	2.6	-	-	-		
	MONTH	80.1	131	18	14	10.8	2.9	6.9	-	-1.6	24	4	89	-	11	-	-8.8	26	24	-	-	132.4	-	3.2	-	47	-		
Clonroche Co. Wexford	1-10	31.3	-	9	6	8.5	3.2	5.8	-	-1.3	8	1	20	-	0	-	-7.0	8	4	-	-	44.0	-	2.1	-	-	-		
	11-20	33.8	-	4	4	11.8	2.8	7.3	-	-0.4	15	1	33	-	5	-	-6.2	15	7	-	-	68.6	-	1.6	-	-	-		
	21-END	14.6	-	5	4	11.0	2.0	6.5	-	-1.9	26	3	30	-	5	-	-8.3	26	5	-	-	55.2	-	1.8	-	-	-		
	MONTH	79.7	117	18	14	10.4	2.7	6.5	-	-1.9	26	5	83	-	10	-	-8.3	26	16	-	-	167.8	-	1.8	-	47	-		
Johnstown Castle Co. Wexford	1-10	31.2	-	8	6	9.3	3.8	6.6	-	0.2	8	0	24	-	1	-	-2.3	8	3	-	-	40.5	-	1.9	-	-	-		
	11-20	39.0	-	5	3	11.6	3.7	7.6	-	1.1	15	0	34	-	4	-	-3.0	15	3	-	-	62.2	-	1.4	-	-	-		
	21-END	18.4	-	7	5	11.0	2.6	6.8	-	-0.8	25	3	30	-	4	-	-5.2	26	6	-	-	45.4	-	1.5	-	-	-		
	MONTH	88.6	141	20	14	10.6	3.4	7.0	-	-0.8	25	3	89	-	9	-	-5.2	26	12	-	-	148.1	-	1.6	-	46	-		
Rosslare Co. Wexford	1-10	19.2	-	8	4	9.2	4.3	6.8	-	1.2	8	0	26	-	1	-	-2.6	8	1	7.8	-	48.3	-	6.7	4	-	-		
	11-20	38.7	-	4	3	11.2	5.2	8.2	-	2.0	14	0	39	-	3	-	-2.5	15	2	9.5	-	78.9	-	5.6	3	-	-		
	21-END	15.7	-	7	5	10.8	4.5	7.6	-	0.3	26	0	35	-	4	-	-1.5	26	2	9.8	-	59.6	-	5.4	2	-	-		
	MONTH	73.6	136	19	12	10.4	4.7	7.5	-1.0	0.3	26	0	100	73	8	-	-2.6	8	5	9.0	-1.0	186.8	105	5.9	9	67	-		

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	97.92
	11-20	169.91
	21-end	153.34
	Month	421.17
Dublin Airport Co. Dublin	1-10	102.77
	11-20	136.41
	21-end	143.05
	Month	482.23
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	129.15
	11-20	176.31
	21-end	142.41
	Month	447.87
Kilkenny Co. Kilkenny	1-10	109.97
	11-20	150.17
	21-end	145.26
	Month	405.40
Belmullet Co. Mayo	1-10	103.04
	11-20	163.98
	21-end	137.42
	Month	404.44
Clones Co. Monaghan	1-10	90.43
	11-20	137.22
	21-end	124.15
	Month	351.80
Birr Co. Offaly	1-10	100.08
	11-20	129.85
	21-end	139.16
	Month	369.09

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

STATION	PERIOD	SOIL MOISTURE (mm)			
		P.E. (mm)	Deficit	Accumulated Deficit	Surplus
Carlow (Oak Park) Co. Carlow	1-10	16.1	-	0	10
	11-20	3.8	-	0	7
	21-end	15.8	-	4	-
	Month	35.7	-	-	-
Kinsealy Co. Dublin	1-10	14.5	-	0	26
	11-20	10.7	-	0	8
	21-end	8.5	-	0	7
	Month	33.7	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	14.3	-	0	23
	11-20	2.3	-	0	26
	21-end	15.9	-	0	2
	Month	32.5	-	-	-
Ballinamore Co. Leitrim	1-10	11.9	-	0	38
	11-20	6.7	-	0	19
	21-end	15.6	-	0	3
	Month	34.2	-	-	-
Glenamoy Co. Mayo	1-10	-	-	-	-
	11-20	-	-	-	-
	21-end	-	-	-	-
	Month	-	-	-	-
Johnstown Castle Co. Wexford	1-10	12.4	-	0	16
	11-20	14.6	-	0	27
	21-end	25.0	-	6	-
	Month	52.0	-	-	-

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	8.1	6.9	5.3	0.66
	11-20	10.0	7.6	5.9	-0.09	71.3	66.8
	21-end	9.8	8.5	6.3	0.28	88.7	79.8
Mineral	1-10	8.9	6.4	4.5	0.19	52.5	56.2
	11-20	10.8	7.9	5.4	-0.26	64.9	69.7
	21-end	10.1	7.7	5.2	0.04	96.6	104.6

Notes on the tables in January issue

PRECIPITATION VALUES FOR April 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	48.0		9	8	56.9		8	8
11 - 20	28.1		4	4	37.2		4	4
21 - END	17.8		7	6	22.1		5	4
MONTH	93.9	144	20	18	116.2	169	17	16

Outlook for May 12th - 22nd

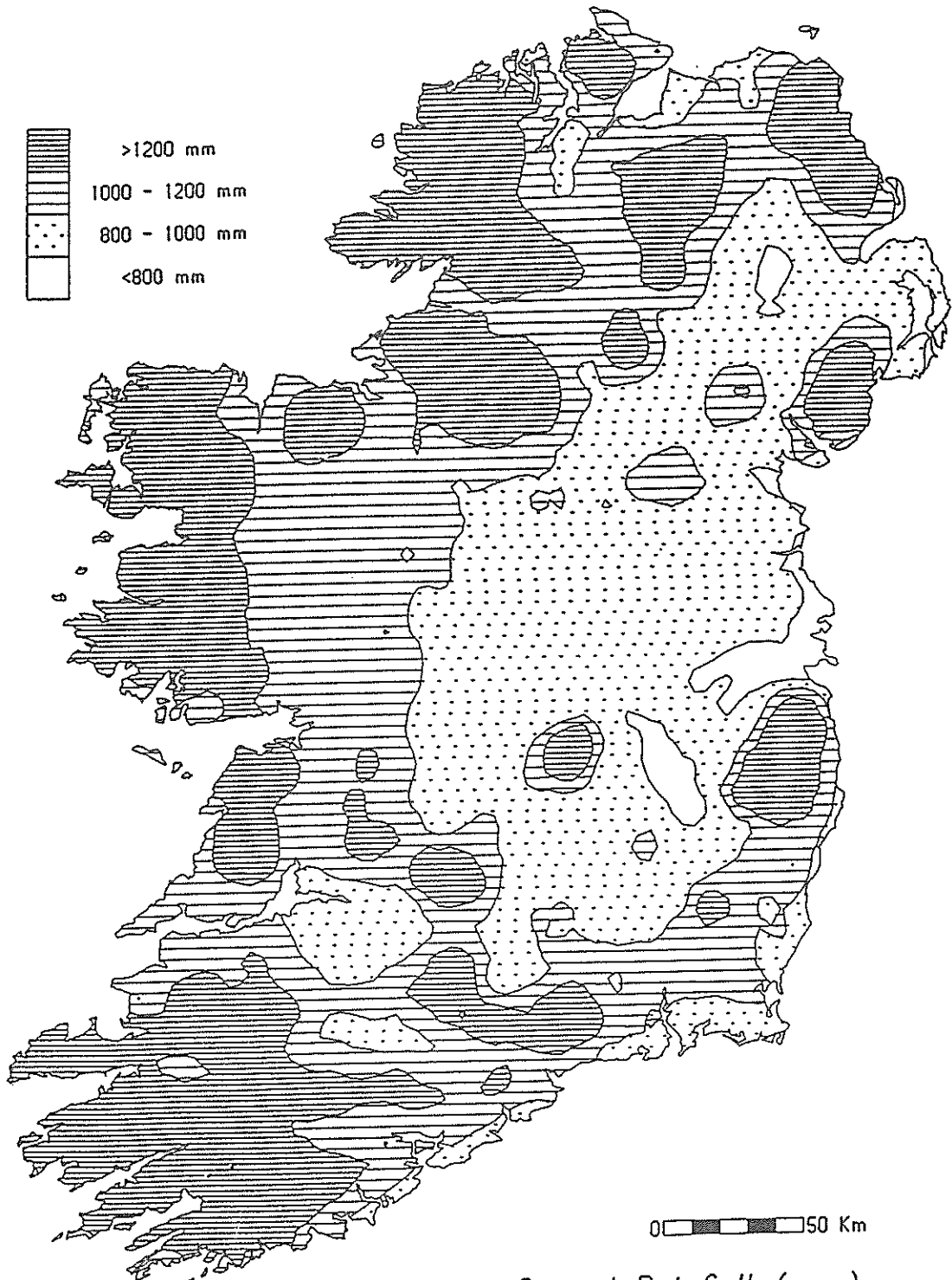
Rising pressure to 15th should be followed by variable but above average values. Moderate westerly winds at first but in the main southerly directions will prevail subsequently, and the strength will tend to be lighter. In general: below average rainfall amounts; variable cloud amounts with a good deal of sunshine at times; and drying conditions good for usefully long spells.

MEAN ANNUAL RAINFALL AND FARMING IN IRELAND

W. Burke, *ex. An Foras Taluntais*, Malahide, Co. Dublin

Rainfall is the dominant feature governing agricultural zonation in Ireland. The map of mean annual rainfall distribution appears to be very complex but this is largely due to topography—rainfall is always greater on mountains. On the map, the main trends are the 800 mm, 1000 mm and 1200 mm isohyets - therefore 4 categories are shown on the accompanying map. If the heavy rainfall associated with the mountains of east Munster and Leinster is allowed for it is clearly seen that there is a very strong increase in rainfall from East to West. Tillage is mainly associated with the region that has less than 1000 mm, dairying with the area that has less than 1200 mm, while areas having more than 1200 mm are largely covered by blanket bog and have least agricultural activity.

The climatic advantage in western areas for early and late season grass growth (because of the higher temperature there in spring and autumn), is more apparent than real. The advantage is offset to varying degrees by poaching, poor trafficability, and slurry disposal problems, in many soils. Within those high rainfall regions, however, pockets of dairying are found where soils are freely draining or locally where rainfall is relatively low. In the extreme south and east, on the other hand, grass growth may be curtailed in mid-season due to tendency for drought conditions to develop in summer.



1951-80 Mean Annual Rainfall (mm)