



MARCH 1987

AGROMETEOROLOGICAL BULLETIN

The Weather of March

Mild and wet on 1st and rain from another trough on 3rd were each succeeded by high pressure on 2nd and 4th. A southwesterly airflow on 5th with spells of light rain gradually backed to southeasterly but with rising pressure through 8th subsequent troughs moved to the south of the country confining heavy rain to southern areas on 9th. High pressure centred over Scandinavia extended westwards on 10th. Although a trough advanced from the northwest on 14th, it was succeeded by another high cell from the Atlantic. This latter centre drifted southwards west of Ireland allowing a relatively mild and moist northwest airflow to set in over the country on 16th/17th. With the passage of a cold front late on 17th, cold northwesterly winds set in with hail and sleet showers to 21st. A southwest airflow with frontal rainbelts which dominated from 22nd culminated in the intense deepening of a wave depression approaching Ireland from the southwest on 26th. Heavy rain and very strong southwest winds as the deepening depression centre advanced towards the northwest of Ireland and Scotland were succeeded on 27th by strong northwest, becoming north, airflow with wintry showers. As the winds eased, mild air steered by an Atlantic high reached the northwest on 29th, the winds subsequently backing and freshening from the southwest.

Precipitation:

Amounts were well above normal in the northern half of the country. Values varied from 153% of normal at Glenties to 87% at Casement Aerodrome. Snow occurred on a number of days i.e. on up to 8 days at Claremorris and Clones and 11 days at Belmullet. Wettest days occurred on 1st and 26th, and to a lesser extent on 7th, 18th and 27th. Driest spell occurred from 8th to 16th but with a break on 9th in south and many areas on 14th.

Temperature:

Mean air temperatures were below normal everywhere, the minimum values contributing most to the negative deviations. Departures from monthly normals (for the mean values) varied from 1.1C° below at Belmullet to 0.4C° below at Shannon Airport. Apart from the first ten days, soil temperatures were below normal, the greatest negative deviations for a 5-day period occurring about the middle of the month except at Claremorris where the last period was 2.0C° below average. Air frost occurred on 3rd, 8th, 11-14th, 19th-22nd and 29th and was severe on 12th/13th. Grass minima were below freezing frequently (except on 6th/7th) and reached an absolute minimum for the month of -12.7°C at Kilkenny on 12th.

Sunshine and Radiation:

Sunshine amounts were well below normal almost everywhere varying from 69% of normal at Birr to 100% at Roche's Point. Global radiation was 88% of average at Birr and 98% at Cahirciveen.

Wind:

Gales were most extensive on 27th while strong winds with gale gusts occurred on 1st-3rd, 5th-9th (and 10th in southern areas), 17-19th and 25-28th.

Summary:

Cold, dull and wet.

TABLE 1

MARCH 1967

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
Carlow (Oak Park) Co. Carlow	1-10	28.3	-	5	5	8.7	2.7	5.7	-	-1.5	8	2	21	-	1	-	-5.0	3	3	-	-	21.7	-	4.8	-	-
	11-20	7.1	-	4	3	8.2	-0.7	3.8	-	-5.0	12	6	12	-	0	-	-8.2	12	8	-	-	30.1	-	3.7	-	-
	21-END	29.3	-	9	7	10.0	3.5	6.8	-	-1.0	21	1	31	-	2	-	-5.3	21	3	-	-	30.2	-	5.7	-	-
	MONTH	64.7	122	18	15	9.0	1.9	5.5	-	-5.0	12	9	63	-	3	-	-8.2	12	14	-	-	82.0	-	4.8	-	28
Shannon Airport Co. Clare	1-10	14.5	-	8	3	10.3	4.6	7.4	-	1.7	3	0	32	-	3	-	-3.6	3	3	6.6	-	27.8	-	5.9	6	-
	11-20	15.7	-	7	6	8.9	1.6	5.3	-	-2.5	13	2	19	-	1	-	-9.0	13	6	5.3	-	32.7	-	4.7	3	-
	21-END	36.8	-	10	5	10.3	3.7	7.0	-	-1.6	21	1	33	-	2	-	-7.8	21	4	6.8	-	31.6	-	5.6	5	-
	MONTH	67.0	108	25	14	9.8	3.3	6.6	-0.4	-2.5	13	3	84	76	6	-	-9.0	13	13	6.3	-0.7	92.1	85	5.4	14	35
Cork Airport Co. Cork	1-10	55.6	-	7	7	8.5	4.0	6.3	-	2.0	8	0	21	-	0	-	-5.7	8	2	6.7	-	25.9	-	8.1	7	-
	11-20	10.1	-	6	3	8.0	0.8	4.4	-	-2.0	13	5	14	-	1	-	-7.5	13	6	5.1	-	38.7	-	5.8	3	-
	21-END	65.5	-	10	8	10.1	3.1	6.6	-	-2.0	21	1	30	-	2	-	-6.7	21	4	6.9	-	37.5	-	7.2	5	-
	MONTH	131.2	127	23	18	8.9	2.6	5.8	-0.5	-2.0	21	6	66	78	3	-	-7.5	13	12	6.2	-0.2	102.1	94	7.0	15	32
Fermoy (Coolnakilla) Co. Cork	1-10	37.0	-	9	5	7.8	3.1	5.5	-	0.3	3	0	17	-	0	-	-3.5	8	2	-	-	23.5	-	7.2	-	-
	11-20	8.8	-	8	4	7.4	0.4	3.9	-	-2.1	13	5	10	-	0	-	-7.5	12	8	-	-	38.8	-	4.9	-	-
	21-END	44.3	-	11	9	9.3	2.5	5.9	-	-2.4	21	3	24	-	1	-	-6.0	21	4	-	-	34.4	-	6.2	-	-
	MONTH	90.1	-	28	18	8.2	2.0	5.1	-	-2.4	21	8	51	-	2	-	-7.5	12	14	-	-	95.9	-	6.1	-	24
Fermoy (Moore Park) Co. Cork	1-10	23.7	-	6	4	9.4	2.8	6.1	-	-3.0	8	3	25	-	2	-	-7.5	8	5	-	-	25.3	-	3.7	-	-
	11-20	10.9	-	7	7	8.7	-1.1	3.8	-	-7.4	13	7	14	-	1	-	-11.6	12	9	-	-	38.8	-	3.2	-	-
	21-END	37.4	-	9	7	10.8	3.1	6.9	-	-2.1	29	3	34	-	3	-	-7.1	22	5	-	-	30.5	-	4.7	-	-
	MONTH	72.0	92	22	18	9.7	1.6	5.7	-	-7.4	13	13	73	-	6	-	-11.6	12	19	-	-	94.6	-	3.9	-	20
Rochas Point Co. Cork	1-10	44.4	-	8	7	9.0	5.1	7.0	-	2.6	8	0	27	-	1	-	-1.3	8	2	7.1	-	26.9	-	7.4	8	-
	11-20	5.5	-	6	2	8.6	2.1	5.3	-	-0.4	20	1	16	-	1	-	-3.5	13	5	5.6	-	38.7	-	5.9	3	-
	21-END	57.7	-	9	7	10.2	4.5	7.4	-	-0.8	21	1	36	-	2	-	-4.5	21	3	7.6	-	44.2	-	7.9	5	-
	MONTH	107.6	143	23	16	9.3	3.9	6.6	-0.6	-0.8	21	2	80	76	3	-	-4.5	21	10	6.8	-0.6	109.8	100	7.1	16	39
Glencolumbkille Co. Donegal	1-10	61.4	-	8	5	8.6	3.4	6.0	-	0.8	10	0	21	-	1	-	-3.0	3	3	-	-	N/A	-	5.8	-	-
	11-20	42.4	-	8	8	8.2	2.4	5.3	-	-0.5	12	2	17	-	0	-	-5.5	12	6	-	-	N/A	-	4.1	-	-
	21-END	89.3	-	11	10	8.6	2.1	5.4	-	-0.6	21	1	18	-	0	-	-3.9	24	6	-	-	N/A	-	4.6	-	-
	MONTH	192.1	-	27	23	8.5	2.6	5.5	-	-0.6	21	3	56	-	1	-	-5.5	12	15	-	-	N/A	-	4.8	-	N/A

TABLE 1 (CONTINUED)

MARCH 1987

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	41.3	-	6	5	8.7	2.7	5.7	-	-1.5	3	1	20	-	1	-	-3.1	3	4	-	-	-	-	-	-	-	-	-	-	-	-
	11-20	43.0	-	8	8	7.9	1.1	4.5	-	-3.8	12	5	15	-	0	-	-5.6	20	6	-	-	-	-	-	-	-	-	-	-	-	
	21-END	79.8	-	10	9	8.3	1.7	5.0	-	-2.9	21	2	17	-	0	-	-6.6	21	6	-	-	-	-	-	-	-	-	-	-	-	
	MONTH	164.1	153	24	22	8.3	1.8	5.1	-	-3.8	12	8	51	-	1	-	-6.6	21	16	-	-	-	-	-	-	-	-	-	-	-	
Malin Head Co. Donegal	1-10	29.4	-	6	4	7.8	3.5	5.6	-	1.4	3	0	17	-	1	-	-2.6	3	2	5.5	-	21.6	-	9.8	10	-	-	-	-	-	
	11-20	34.7	-	8	6	7.5	2.5	5.0	-	-1.3	12	1	14	-	0	-	-5.3	12	4	5.1	-	27.1	-	8.4	6	-	-	-	-	-	
	21-END	37.2	-	10	8	8.2	2.7	5.5	-	-2.4	21	1	19	-	0	-	-4.0	21	4	5.5	-	33.2	-	9.6	8	-	-	-	-	-	
	MONTH	101.3	143	24	18	7.8	2.9	5.4	-1.0	-2.4	21	2	49	60	1	-	-5.3	12	10	5.4	-0.7	81.9	77	9.3	24	37	-	-	-	-	
Casement Aerodrome Co. Dublin	1-10	13.4	-	4	4	9.4	2.3	5.8	-	-2.3	3	2	22	-	3	-	-7.0	3	6	5.4	-	32.7	-	6.7	7	-	-	-	-	-	
	11-20	5.9	-	3	2	7.9	-0.6	3.7	-	-4.7	12	5	12	-	0	-	-9.5	12	8	4.2	-	34.2	-	5.9	4	-	-	-	-	-	
	21-END	23.1	-	9	7	9.4	2.9	6.1	-	-1.1	29	2	25	-	2	-	-4.0	21	3	5.8	-	24.4	-	8.1	5	-	-	-	-	-	
	MONTH	42.4	87	16	13	8.9	1.6	5.3	-0.7	-4.7	12	9	59	68	5	-	-9.5	12	17	5.1	-	91.3	87	7.0	16	34	-	-	-	-	
Dublin Airport Co. Dublin	1-10	21.1	-	5	4	8.4	2.9	5.6	-	-0.2	3	1	18	-	2	-	-3.1	8	4	5.5	-	26.6	-	6.0	2	-	-	-	-	-	
	11-20	8.6	-	3	2	8.1	0.8	4.5	-	-2.6	20	4	14	-	0	-	-5.5	12	7	4.7	-	35.5	-	5.1	3	-	-	-	-	-	
	21-END	26.8	-	10	7	9.3	2.9	6.1	-	-1.8	21	2	25	-	2	-	-4.4	21	3	6.1	-	27.2	-	6.5	4	-	-	-	-	-	
	MONTH	56.5	113	18	13	8.6	2.2	5.4	-0.8	-2.6	20	7	57	66	4	-	-5.5	12	14	5.5	-0.7	89.3	81	5.9	9	33	-	-	-	-	
Kinsealy Co. Dublin	1-10	25.3	-	5	5	8.3	1.9	5.1	-	-1.2	8	2	16	-	2	-	-4.0	8	4	-	-	27.3	-	5.4	-	-	-	-	-	-	
	11-20	9.2	-	4	2	8.3	0.7	4.5	-	-2.4	12	4	14	-	1	-	-6.6	13	7	-	-	37.3	-	4.0	-	-	-	-	-	-	
	21-END	21.1	-	10	4	9.7	3.6	6.6	-	-1.8	21	2	30	-	3	-	-4.6	21	4	-	-	27.7	-	5.0	-	-	-	-	-	-	
	MONTH	55.6	118	19	11	8.8	2.1	5.4	-	-2.4	12	8	60	-	6	-	-6.6	13	15	-	-	92.3	-	4.8	-	30	-	-	-	-	
Galway Co. Galway	1-10	25.6	-	5	4	10.1	4.1	7.1	-	0.2	3	0	30	-	2	-	-3.0	3	3	6.7	-	25.7	-	5.3	3	-	-	-	-	-	
	11-20	19.5	-	6	5	8.9	0.7	4.8	-	-4.0	12	5	18	-	1	-	-6.2	13	7	5.5	-	38.1	-	4.2	3	-	-	-	-	-	
	21-END	53.1	-	9	8	9.0	3.0	6.0	-	-3.5	21	1	24	-	0	-	-6.0	21	4	6.3	-	25.0	-	5.4	3	-	-	-	-	-	
	MONTH	98.2	129	20	17	9.3	2.7	6.0	-0.6	-4.0	12	6	72	-	3	-	-6.2	13	14	6.2	-	88.8	81	5.0	9	30	-	-	-	-	
Killerney (Muckross House) Co. Kerry	1-10	26.9	-	7	5	10.2	5.0	7.6	-	0.4	8	0	35	-	4	-	-3.6	8	4	-	-	22.5	-	-	-	-	-	-	-	-	
	11-20	21.4	-	6	4	8.6	1.1	4.9	-	-4.1	13	6	17	-	1	-	-8.6	13	7	-	-	26.5	-	-	-	-	-	-	-	-	
	21-END	84.8	-	10	9	10.7	4.0	7.3	-	-2.1	21	1	36	-	3	-	-5.5	21	4	-	-	24.5	-	-	-	-	-	-	-	-	
	MONTH	133.1	100	23	18	9.9	3.4	6.6	-	-4.1	13	7	88	-	8	-	-8.6	13	15	-	-	73.5	-	-	-	-	-	-	-	-	

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MARCH 1987

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)														BRIGHT SUNSHINE		WIND				
		AMOUNT	% OF AVERAGE	RAIN DAYS	WET DAYS	AIR							GROUND			SDIL (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	38.9	-	7	5	10.9	5.7	8.3	-	2.1	3	0	41	-	4	-	-0.7	3	1	8.3	-	21.4	-	7.2	7	-
	11-20	18.7	-	6	5	9.4	2.2	5.8	-	-2.7	13	2	22	-	1	-	-5.0	13	5	7.0	-	31.5	-	4.7	3	-
	21-END	67.0	-	11	7	10.6	5.0	7.8	-	0.0	21	0	40	-	3	-	-2.3	21	1	8.4	-	32.6	-	6.4	6	-
	MONTH	124.6	108	24	17	10.3	4.4	7.3	-0.5	-2.7	13	2	103	84	8	-	-5.0	13	7	7.9	-0.0	85.5	81	6.1	16	33
Ardfert (Liscahane) Co. Kerry	1-10	17.8	-	6	4	10.8	4.9	7.9	-	1.6	3	0	37	-	5	-	-2.4	8	4	-	-	25.8	-	-	-	-
	11-20	38.6	-	6	5	8.9	1.1	5.0	-	-3.6	13	5	18	-	1	-	-7.4	12	5	-	-	35.0	-	-	-	-
	21-END	43.2	-	10	7	9.9	4.3	7.1	-	-0.6	21	1	33	-	2	-	-2.7	21	3	-	-	28.4	-	-	-	-
	MONTH	99.6	-	22	16	9.9	3.5	6.7	-	-3.6	13	6	87	-	7	-	-7.4	12	12	-	-	90.2	-	-	-	-
Lullymore Co. Kildare	1-10	23.0	-	6	5	8.6	1.5	5.0	-	-3.7	3	3	17	-	1	-	-9.0	3	6	-	-	23.3	-	4.5	-	-
	11-20	9.7	-	6	2	7.4	-1.0	3.2	-	-4.3	13	8	10	-	0	-	-12.6	12	9	-	-	34.0	-	3.5	-	-
	21-END	31.9	-	11	9	9.2	2.1	5.6	-	-2.5	21	3	22	-	1	-	-9.0	21	4	-	-	24.9	-	5.4	-	-
	MONTH	64.6	117	23	16	8.4	0.9	4.7	-	-4.5	13	14	49	-	3	-	-12.6	12	19	-	-	82.2	-	4.5	-	21
Kilkenny Co. Kilkenny	1-10	23.9	-	6	4	8.9	2.8	5.8	-	-2.1	3	2	22	-	2	-	-6.5	8	4	5.9	-	21.4	-	4.4	5	-
	11-20	5.8	-	6	3	8.7	-1.0	3.9	-	-6.3	13	6	15	-	1	-	-12.7	12	9	4.7	-	36.5	-	3.0	2	-
	21-END	20.9	-	9	5	10.6	3.2	6.9	-	-1.0	21	2	33	-	3	-	-7.2	21	3	6.5	-	35.2	-	4.7	3	-
	MONTH	50.6	89	21	12	9.5	1.7	5.6	-0.6	-6.3	13	10	70	75	6	-	-12.7	12	16	5.7	-0.3	93.1	90	4.1	10	30
Mooncoin (Silverspring) Co. Kilkenny	1-10	41.7	-	7	5	8.8	2.7	5.8	-	-2.2	3	2	22	-	1	-	-8.0	3	7	-	-	20.4	-	-	-	-
	11-20	5.3	-	4	2	9.1	-0.1	4.5	-	-3.9	13	5	17	-	1	-	-10.7	12	9	-	-	36.3	-	-	-	-
	21-END	45.6	-	10	8	10.7	3.3	7.0	-	-3.5	21	3	35	-	3	-	-10.0	21	5	-	-	35.7	-	-	-	-
	MONTH	92.6	117	21	15	9.6	2.0	5.8	-	-3.9	13	10	74	-	5	-	-10.7	12	21	-	-	92.4	-	-	-	-
Bellinamore Co. Leitrim	1-10	36.2	-	5	5	8.6	1.7	5.2	-	-3.3	3	2	18	-	1	-	-7.8	3	6	-	-	14.7	-	3.0	-	-
	11-20	31.1	-	8	5	8.3	-0.3	4.0	-	-3.9	12	6	14	-	0	-	-10.8	12	8	-	-	36.5	-	3.0	-	-
	21-END	49.6	-	11	8	9.0	1.4	5.2	-	-4.1	21	3	20	-	1	-	-6.2	29	5	-	-	28.2	-	3.9	-	-
	MONTH	116.9	139	24	18	8.6	0.9	4.8	-	-4.1	21	11	52	-	1	-	-10.8	12	19	-	-	71.4	-	3.3	-	20
Ardara (Bohernamoe) Co. Louth	1-10	44.9	-	7	4	8.4	1.9	5.2	-	-2.9	3	2	18	-	2	-	-8.9	3	6	-	-	-	-	-	-	-
	11-20	6.1	-	5	3	8.3	-0.9	3.7	-	-5.3	12	6	14	-	1	-	-11.9	12	9	-	-	-	-	-	-	-
	21-END	29.7	-	10	8	9.2	2.4	5.8	-	-2.9	21	3	24	-	2	-	-9.9	21	9	-	-	-	-	-	-	-
	MONTH	80.7	142	22	15	8.6	1.2	4.9	-	-5.3	12	11	56	-	4	-	-11.9	12	26	-	-	-	-	-	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MARCH 1987

STATION	PERIOD	RAINFALL (mm)				TEMPERATURE (°C)														BRIGHT SUNSHINE		WIND				
		AMOUNT	% OF AVERAGE	RAIN DAYS		AIR							GROUND				SOIL (10cm)			TOTAL NO. OF HOURS	% OF AVERAGE	MEAN SPEED (ms ⁻¹)	DAYS WITH GALE GUSTS	P.E. (FENMAN) (mm)		
				WET DAYS	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 °C-RASS-MIN*	DATE	DAYS WITH GROUND FROST	MEAN DAILY						DIFFERENCE FROM AVERAGE	
																										MEAN DAILY
Ballinrobe (Creagh) Co. Mayo	1-10	39.2	-	5	5	9.9	3.5	6.7	-	-1.2	3	1	20	-	2	-	-7.3	3	4	-	-	16.9	-	4.3	-	-
	11-20	25.2	-	7	5	9.0	0.6	4.0	-	-4.3	13	5	17	-	1	-	-10.3	13	0	-	-	42.0	-	3.2	-	-
	21-END	70.4	-	10	9	9.4	2.2	5.0	-	-6.0	21	3	25	-	2	-	-11.7	21	6	-	-	23.3	-	3.9	-	-
	MONTH	134.8	140	22	19	9.4	2.1	5.0	-	-6.0	21	9	70	-	4	-	-11.7	21	10	-	-	82.2	-	3.0	-	24
Belmullet Co. Mayo	1-10	26.4	-	6	5	10.0	3.5	6.0	-	0.4	3	0	27	-	2	-	-4.4	3	1	7.1	-	22.9	-	7.0	5	-
	11-20	32.1	-	7	5	8.9	1.3	5.1	-	-2.7	13	6	16	-	0	-	-7.6	12	5	6.5	-	35.0	-	6.1	3	-
	21-END	60.5	-	10	10	8.7	2.7	5.7	-	-1.4	21	1	21	-	0	-	-6.1	21	3	6.6	-	29.2	-	7.2	7	-
	MONTH	119.0	143	23	20	9.2	2.5	5.9	-1.1	-2.7	13	5	66	66	3	-	-7.6	12	9	6.7	-0.2	87.9	70	6.8	15	36
Clermorris Co. Mayo	1-10	37.6	-	5	4	9.6	2.7	6.2	-	-1.9	3	1	24	-	1	-	-6.0	3	2	6.0	-	14.5	-	5.0	2	-
	11-20	13.9	-	5	4	9.1	-0.6	4.2	-	-5.2	13	6	16	-	1	-	-0.7	12	0	5.5	-	36.3	-	3.7	3	-
	21-END	51.1	-	10	9	9.3	1.6	5.5	-	-3.6	21	2	21	-	1	-	-5.5	21	4	5.9	-	18.7	-	5.0	4	-
	MONTH	102.6	127	20	17	9.3	1.3	5.3	-0.7	-5.2	13	9	61	71	5	-	-0.7	12	15	5.0	-0.2	69.5	71	4.6	9	24
Glenamoy Co. Mayo	1-10	33.7	-	6	6	9.0	3.9	6.9	-	-1.6	3	1	20	-	3	-	-4.3	3	3	-	-	20.2	-	4.7	-	-
	11-20	27.6	-	7	5	8.3	1.0	4.7	-	-4.0	13	4	16	-	0	-	-7.5	12	6	-	-	36.0	-	3.0	-	-
	21-END	69.7	-	10	10	8.7	2.2	5.5	-	-2.3	21	1	19	-	0	-	-4.6	21	6	-	-	20.1	-	4.3	-	-
	MONTH	131.0	127	23	21	8.9	2.4	5.7	-	-4.0	13	6	64	-	3	-	-7.5	12	15	-	-	84.3	-	4.0	-	17
Dunsany (Grange) Co. Meath	1-10	35.4	-	6	5	8.2	1.4	4.0	-	-3.3	3	3	16	-	1	-	-7.0	3	6	-	-	23.7	-	-	-	-
	11-20	10.1	-	6	2	7.0	-1.0	3.4	-	-5.4	12	6	11	-	0	-	-10.4	12	9	-	-	31.2	-	-	-	-
	21-END	32.2	-	11	9	8.9	2.5	5.7	-	-3.0	21	3	23	-	1	-	-7.0	21	4	-	-	23.7	-	-	-	-
	MONTH	77.7	134	23	16	8.3	1.0	4.7	-	-5.4	12	12	50	-	2	-	-10.4	12	19	-	-	79.6	-	-	-	-
Clones Co. Monaghan	1-10	32.4	-	6	5	8.3	2.4	5.3	-	-1.0	3	2	17	-	1	-	-6.5	3	4	5.4	-	18.2	-	5.1	6	-
	11-20	20.9	-	7	5	8.1	0.2	4.2	-	-3.6	12	5	14	-	0	-	-9.4	12	6	4.4	-	32.3	-	3.4	3	-
	21-END	39.9	-	10	10	8.6	1.6	5.1	-	-2.6	21	3	18	-	1	-	-7.4	21	5	5.2	-	22.9	-	4.4	4	-
	MONTH	93.2	150	23	20	8.4	1.4	4.9	-0.7	-3.6	12	10	49	65	2	-	-9.4	12	15	5.0	-0.6	73.4	76	4.3	13	24
Birr Co. Offaly	1-10	17.0	-	5	3	9.5	3.0	6.3	-	-1.9	3	1	24	-	4	-	-6.0	3	4	6.4	-	22.6	-	4.4	4	-
	11-20	11.6	-	7	5	8.4	-0.7	3.0	-	-5.6	12	6	14	-	0	-	-11.0	12	9	5.2	-	26.9	-	2.5	1	-
	21-END	26.0	-	10	7	9.0	2.9	6.3	-	-0.4	29	2	27	-	2	-	-3.2	22	4	6.5	-	24.1	-	4.1	3	-
	MONTH	55.4	105	22	15	9.2	1.0	5.5	-0.0	-5.6	12	9	65	71	4	-	-11.0	12	17	6.1	-0.3	73.6	69	3.7	0	26

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 1 (CONTINUED)

MARCH 1987

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	17.2	-	5	4	9.3	2.5	5.9	-	-3.3	3	2	24	-	2	-	-7.2	8	6	-	-	-	-	-	-	-	-	-
	11-20	20.7	-	5	5	8.2	-0.9	3.7	-	-3.2	12	6	13	-	0	-	-11.0	12	9	-	-	-	-	-	-	-	-	-
	21-END	22.4	-	11	7	10.1	3.2	6.7	-	-1.0	29	3	30	-	2	-	-7.6	22	6	-	-	-	-	-	-	-	-	-
	MONTH	60.3	-	21	16	9.2	1.6	5.4	-	-3.2	12	11	67	-	5	-	-11.0	12	21	-	-	-	-	-	-	-	-	-
Dungarvan (Carrigles) Co. Waterford	1-10	56.7	-	6	5	9.9	3.2	6.6	-	-2.6	0	2	28	-	3	-	-3.0	8	3	-	-	25.7	-	4.1	-	-	-	-
	11-20	7.8	-	7	2	9.1	0.3	4.7	-	-3.8	13	5	17	-	1	-	-4.5	13	6	-	-	37.2	-	2.4	-	-	-	-
	21-END	62.7	-	10	9	11.0	4.0	7.5	-	-2.6	21	1	39	-	4	-	-3.4	21	3	-	-	35.9	-	3.8	-	-	-	-
	MONTH	127.2	138	23	16	10.0	2.6	6.3	-	-3.8	13	8	84	-	8	-	-4.5	13	12	-	-	98.8	-	3.4	-	23	-	-
Mullingar Co. Westmeath	1-10	37.4	-	6	5	8.6	2.0	5.3	-	-2.9	3	2	18	-	1	-	-6.0	3	5	3.3	-	21.2	-	4.8	1	-	-	-
	11-20	17.3	-	7	5	8.1	-0.1	4.0	-	-3.9	13	6	13	-	0	-	-7.5	13	8	4.5	-	37.7	-	3.2	3	-	-	-
	21-END	38.1	-	11	9	9.0	1.8	5.4	-	-4.3	21	3	22	-	1	-	-7.7	21	3	5.7	-	27.0	-	4.4	3	-	-	-
	MONTH	92.8	150	24	19	8.6	1.3	4.9	-0.7	-4.3	21	11	53	65	3	-	-7.7	21	17	5.2	-0.6	85.9	81	4.1	7	24	-	-
J.F.K. Park Co. Wexford	1-10	38.8	-	5	5	8.4	3.5	6.0	-	0.2	3	0	29	-	1	-	-6.4	3	7	-	-	17.5	-	6.7	-	-	-	-
	11-20	4.2	-	4	2	8.7	0.4	4.6	-	-4.5	13	3	15	-	1	-	-10.6	20	9	-	-	36.8	-	3.2	-	-	-	-
	21-END	56.8	-	8	7	9.9	3.6	6.8	-	-1.0	29	2	30	-	1	-	-6.5	21	6	-	-	34.8	-	6.6	-	-	-	-
	MONTH	99.8	130	17	14	9.0	2.6	5.8	-	-4.5	13	5	65	-	2	-	-10.6	20	22	-	-	89.1	-	5.5	-	30	-	-
Clonroche Co. Wexford	1-10	39.0	-	5	5	7.6	3.2	5.4	-	0.6	0	0	16	-	0	-	-7.5	3	5	-	-	18.1	-	3.4	-	-	-	-
	11-20	2.8	-	5	1	8.4	0.3	4.3	-	-2.7	13	4	14	-	1	-	-11.5	13	9	-	-	36.1	-	2.1	-	-	-	-
	21-END	60.5	-	9	8	9.9	3.0	6.5	-	-1.9	21	3	28	-	1	-	-9.5	21	7	-	-	39.3	-	3.5	-	-	-	-
	MONTH	102.3	118	19	14	8.7	2.2	5.4	-	-2.7	13	7	58	-	2	-	-11.5	13	21	-	-	93.5	-	3.0	-	24	-	-
Johnstown Castle Co. Wexford	1-10	24.7	-	6	5	7.9	3.8	3.8	-	7.1	3	0	18	-	0	-	-4.7	3	5	-	-	22.9	-	6.2	-	-	-	-
	11-20	0.8	-	1	0	8.3	0.8	4.6	-	-7.9	19	4	15	-	1	-	-10.6	13	9	-	-	42.7	-	3.6	-	-	-	-
	21-END	59.5	-	10	8	9.7	3.7	6.7	-	-1.8	21	1	36	-	1	-	-7.7	21	3	-	-	42.1	-	5.7	-	-	-	-
	MONTH	85.0	113	17	13	8.6	2.8	5.7	-	-1.9	19	5	63	-	1	-	-10.6	13	19	-	-	107.7	-	5.2	-	20	-	-
Rosslare Co. Wexford	1-10	20.3	-	5	4	8.2	4.7	6.4	-	3.4	9	0	21	-	0	-	-8.8	3	1	6.4	-	25.0	-	5.9	5	-	-	-
	11-20	0.5	-	2	0	8.3	2.0	5.2	-	-1.5	20	2	16	-	1	-	-4.4	20	6	5.6	-	35.9	-	2.9	2	-	-	-
	21-END	42.8	-	9	5	9.9	4.2	7.1	-	-1.9	21	1	33	-	1	-	-4.2	21	3	7.0	-	40.1	-	5.3	4	-	-	-
	MONTH	63.6	101	16	9	8.8	3.7	6.3	-0.6	-1.9	21	3	71	74	2	-	-4.4	20	10	6.4	-0.7	102.0	84	4.7	11	34	-	-

NOTES ON THE TABLES IN JANUARY ISSUE

TABLE 2 GLOBAL RADIATION

STATION	PERIOD	AMOUNT MJ/m ²
Malin Head Co. Donegal	1-10	55.51
	11-20	77.63
	21-end	98.48
	Month	231.62
Dublin Airport Co. Dublin	1-10	63.43
	11-20	86.05
	21-end	87.62
	Month	237.10
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	62.30
	11-20	92.99
	21-end	105.28
	Month	260.57
Kilkenny Co. Kilkenny	1-10	60.37
	11-20	94.46
	21-end	109.49
	Month	264.32
Belmullet Co. Mayo	1-10	57.87
	11-20	82.23
	21-end	89.14
	Month	229.24
Clones Co. Monaghan	1-10	53.09
	11-20	86.48
	21-end	83.14
	Month	222.61
Birr Co. Offaly	1-10	62.34
	11-20	81.50
	21-end	90.00
	Month	233.84

Notes on the tables in January issue

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	3.6	-	0	25
	11-20	6.1	-	0	1
	21-end	7.1	-	0	22
	Month	16.8	-	-	-
Kinsealy Co. Dublin	1-10	5.0	-	0	20
	11-20	6.2	-	0	3
	21-end	8.6	-	0	13
	Month	19.8	-	-	-
Cahirciveen (Valentia Obs.) Co. Kerry	1-10	2.4	-	0	49
	11-20	13.8	-	0	6
	21-end	-0.6	-	0	70
	Month	15.6	-	-	-
Ballinamore Co. Leitrim	1-10	2.7	-	0	34
	11-20	13.8	-	0	17
	21-end	5.5	-	0	44
	Month	22.0	-	-	-
Glenamoy Co. Mayo	1-10	10.9	-	0	23
	11-20	3.9	-	0	24
	21-end	1.1	-	0	69
	Month	15.9	-	-	-
Johnstown Castle Co. Wexford	1-10	-0.2	-	0	25
	11-20	8.0	7	7	-
	21-end	18.7	-	0	41
	Month	26.5	-	-	-

- 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	6.8	5.2	3.9	0.0
	11-20	6.1	4.2	2.6	+0.1	N/A	N/A
	21-end	7.2	5.4	3.7	-0.4	54	N/A
Mineral	1-10	7.4	5.3	3.5	+0.2	43	43
	11-20	7.2	4.5	2.4	+0.2	63	69
	21-end	7.6	5.6	3.7	-0.2	57	N/A

TIMING OF SOIL-BASED FARMING OPERATIONS

While many soil properties are more or less permanent - unchangeable almost, some properties vary with time and climate. Chief amongst these are soil air/soil water relations and, by implication, properties such as soil consistence and soil strength. Few people fail to notice that the soils become wetter during the late autumn and winter months and dry out in the spring and summer. However, not all soils behave alike - sandy and gravelly soils appearing relatively dry all year and clayey soils remaining sticky and wet for 8 or 9 months annually.

Fairly standard terms are used to describe soil in its various states of wetness. These 'consistence' terms are PLASTIC, for wet soil, FRIABLE for intermediate conditions and HARD for dry soil. These terms refer to the variation in molecular and film cohesion within the soil, which in turn determine soil strength. The general pattern of soil strength changes with moisture content for an 'average' mineral soil is depicted in Fig. 1. When a soil changes from being hard to friable, the moisture state is referred to as the Shrinkage Limit, (SL). When it changes from friable to plastic, the term Plastic Limit (PL) moisture is used, and similarly when soils become viscous, the term Liquid Limit (LL) is used.

A soil property of great importance to farming is the difference between the amount of moisture held at SL and PL and the rate at which soil changes from being plastic to being hard and vice-versa. Nearly all soil-engaging farm operations should be carried out when the soil is friable. In this state soil strength is moderately low and soils are very 'workable'. If allowed to get too dry, soil gets too hard and fine seedbeds are difficult to form. If, on the other hand, soil is worked when too wet, clods are formed, compaction will take place, and spinning, smearing and rutting will follow. Animals allowed on wet land in the plastic state will break (poach) the surface and cause plastic deformation.

Fig. 1 also helps to explain why water-retentive soils are heavy. The heaviness refers to the greater draw-bar pull (high strength) of a soil when it is wet. Coarser soils will be drier and have lower strength and draw-bar pull (light soils). The great benefit of higher organic matter levels in mineral soils is the promotion or maintenance of a stable structure. Such soils will have lower strength values and a 'larger' friable zone. This makes cultivation easier and extends the period over which cultivations can take place.

When a soil dries out in the summer the higher strength facilitates on-surface traffic such as spraying and harvesting operations. Likewise since frozen soils are essentially dry, their high strength is often availed of (logging in cold climates is an obvious example).

The common farm operations and some 'do's' and 'dont's' are outlined in Fig. 1. The conditions promoting wind and water erosion are also shown.

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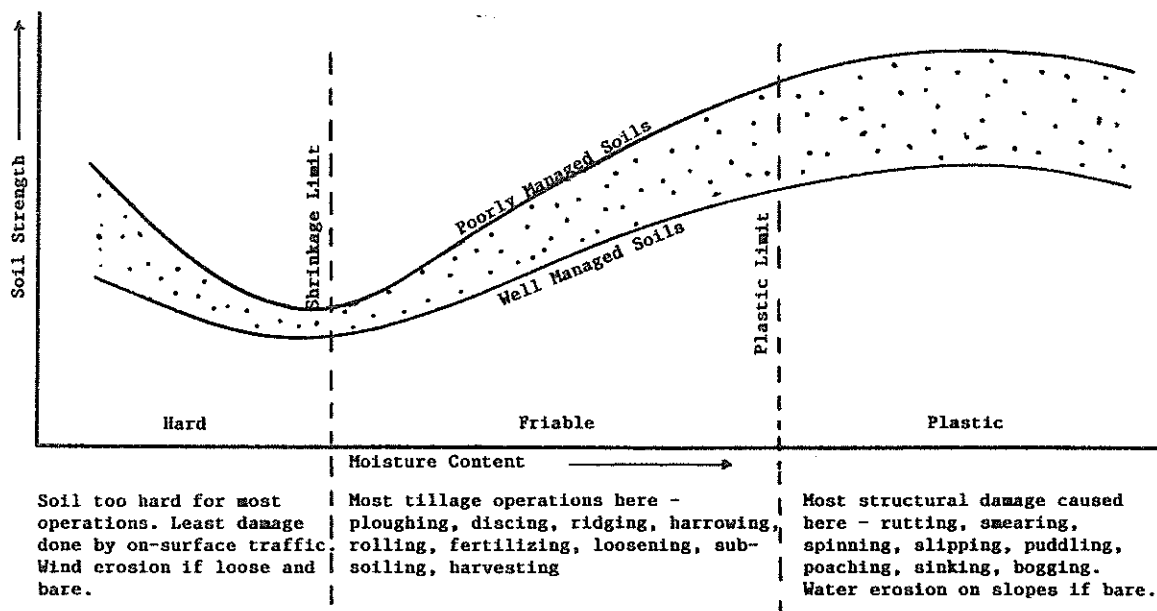


Fig. 1. Schematic depiction of soil strength with changing moisture content