

# Rainfall and Sunshine both above average

September 1987 was a sunny month which, unusually enough, also had above average rainfall because of heavy falls on 1st, 4th, 11th, 19th and 21st. For much of the month the Atlantic depressions and their associated rainbelts dominated the weather picture in the vicinity of Ireland. Winds were predominantly between south and west in direction and the weather was very changeable. The rainbelts mainly moved from west to east, but some of the wettest days of the month such as Friday the 11th and Saturday the 19th, were caused by weather systems formed over the warm waters of the south Atlantic which then moved northeastwards to affect Ireland. During the 25th/26th a high pressure area in the Atlantic moved eastwards, crossing the country on Sunday the 27th but remaining close enough to block the progress of the Atlantic rainbelts and maintain dry conditions until the last day of the month.

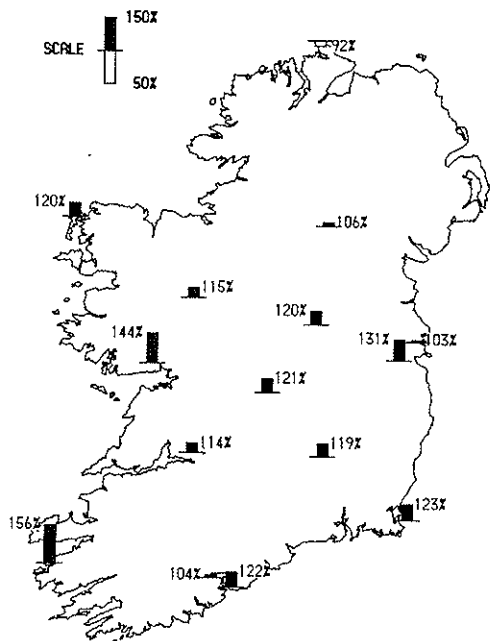
## HIGH SUNSHINE TOTALS

Sunshine totals for the month ranged from 173.4 hours (120% of normal) at Rosslare to 103.3 hours (106% of normal) at Claremorris. Most stations recorded in excess of 120% of normal sunshine while Clones and Mullingar had almost 140% of their normal sunshine. Nonetheless most stations had lower totals than those of last year's very sunny September, except Rosslare and Roche's Point which both had their sunniest September for 15 to 20 years. Sunniest days were 1st, 3rd, 5th the periods 12th to 14th, 22nd to 24th and 28th/29th. The highest dally sunshine was 11.3 hours, recorded at Rosslare on Thursday the 3rd. Particularly dull days were 11th, 19th and 21st.

## ABOVE NORMAL RAINFALL

Except in parts of Ulster, rainfall was above normal, despite the dry spell towards the end of the month. While the number of days with a total of 1 millimetre or more was normal or below, the number of days with 5 millimetres or more was above normal at most stations. After the thundery rain in the eastern half of the country early on 1st, we had further heavy falls on the 4th, 11th, 19th and 21st. Highest daily total for the month was 39.5mm at Galway on 19th. Valentia Observatory (Cahiriveen) however had 38.7 mm on the 21st and over 30mm of this fell between 8am and 10am. The last day of the month, Wednesday the 30th, gave some very unusual rainfall figures. If you look at the daily distribution graphs for rainfall, everywhere had little or no rain except for Cahirciveen which had the comparatively large fall of 28mm (over an inch of

*(Continued on back page)*



Rainfall percentage of (1951-1980) normals

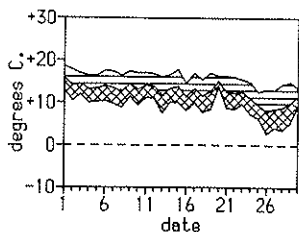
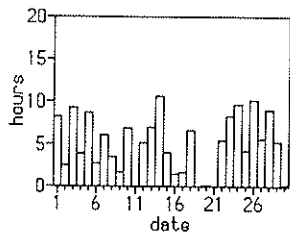
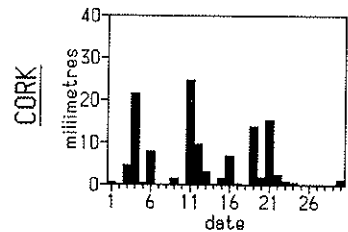
# Distribution of Daily Values


  
 Max  
 Mean  
 Min

### Rainfall

### Sunshine

### Temperature

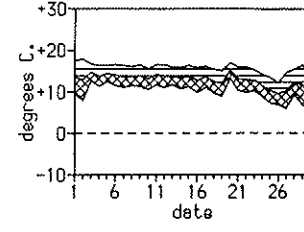
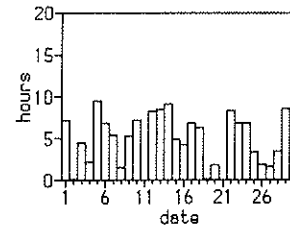
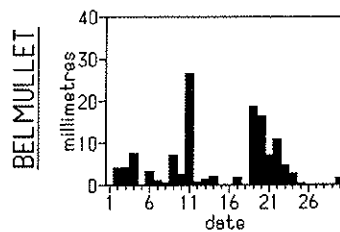
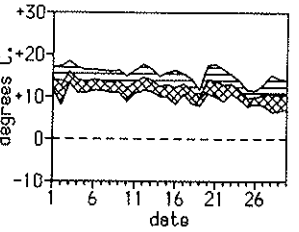
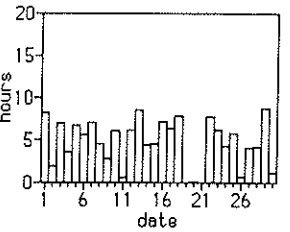
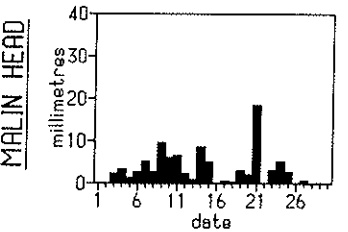
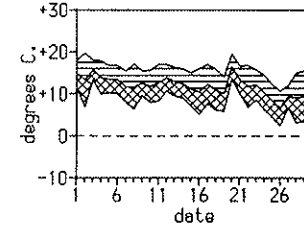
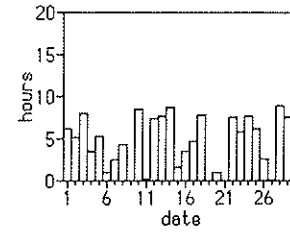
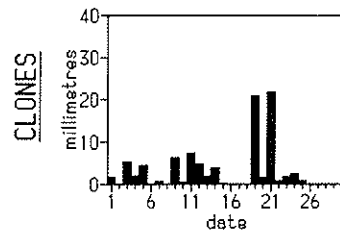
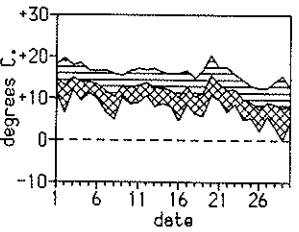
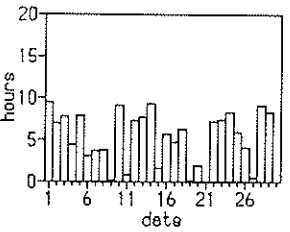
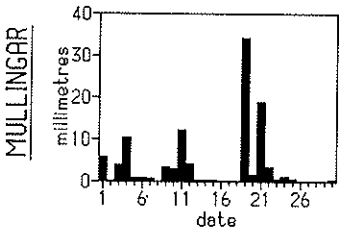
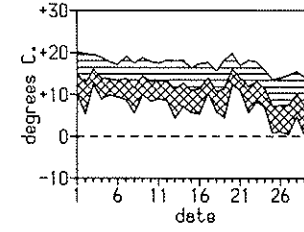
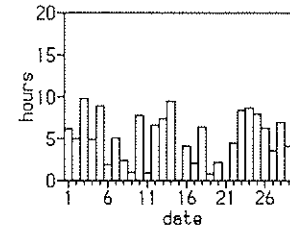
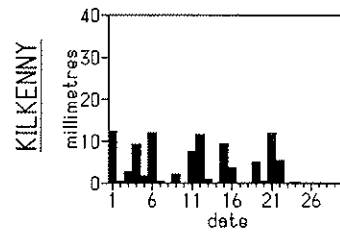
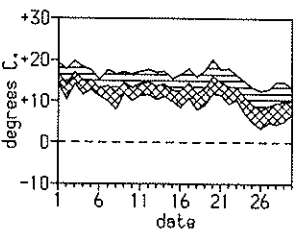
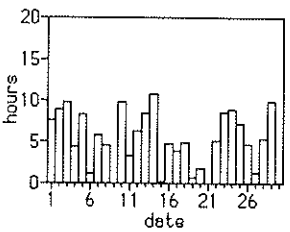
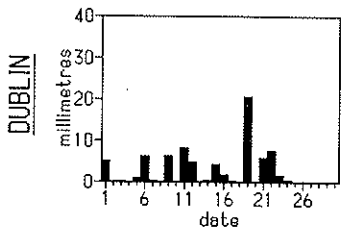
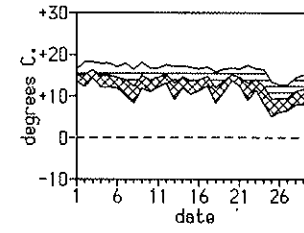
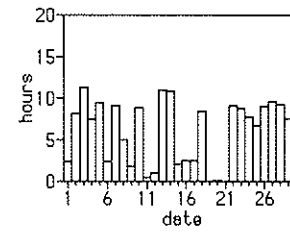
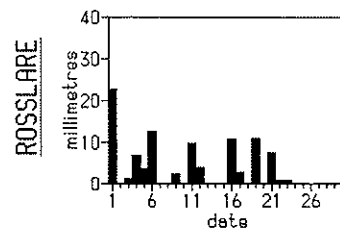
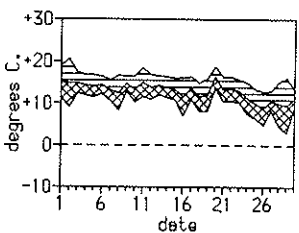
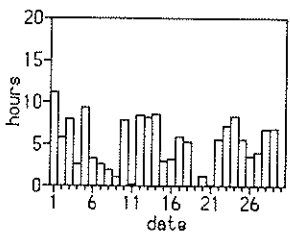
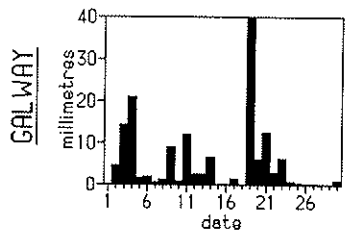
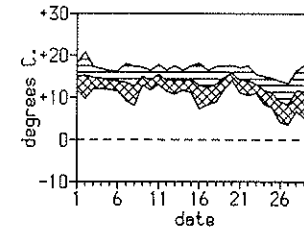
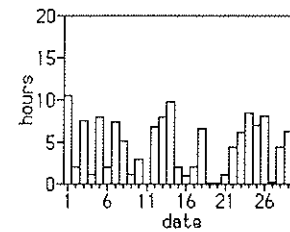
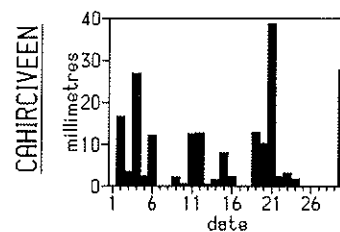



  
 Max  
 Mean  
 Min

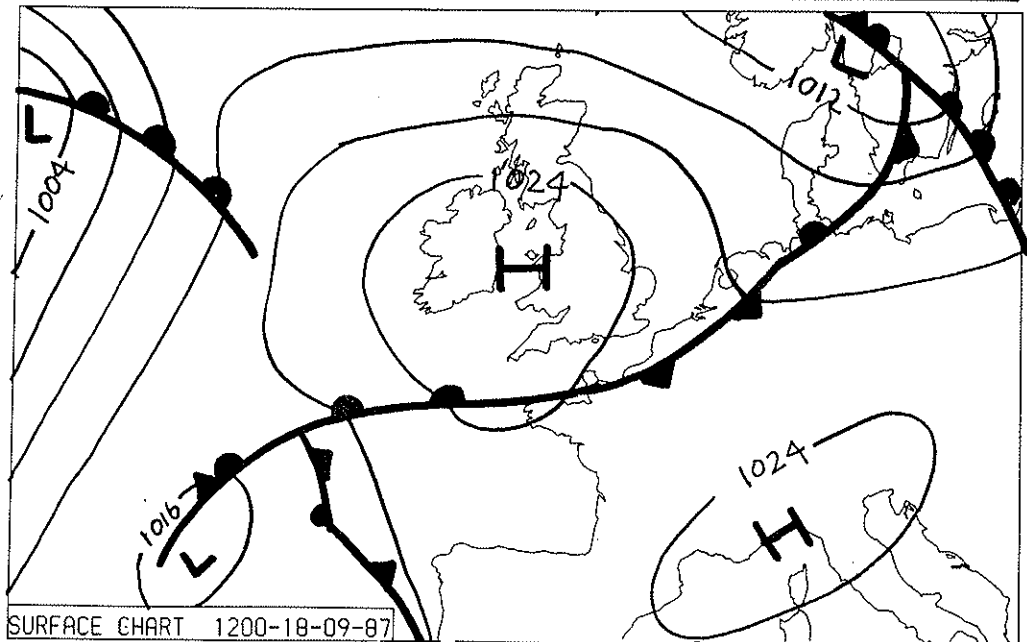
### Rainfall

### Sunshine

### Temperature

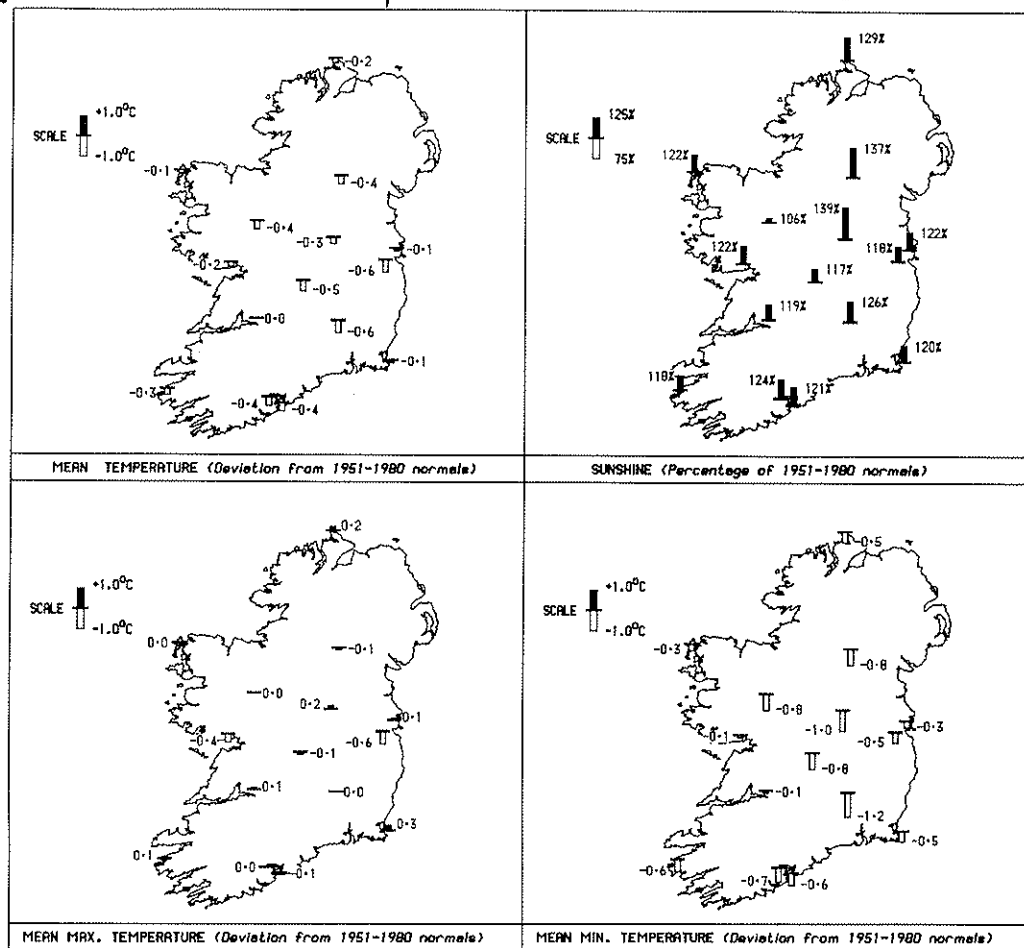


Pleasant day, but rain approaching from the south



The satellite picture was taken by the European weather satellite METEOSAT at 1230 on Friday the 18th of September. The weather chart shows a ridge of high pressure over the country under threat from the frontal system to the south of the country. This system brought the heavy rain we experienced on Saturday the 19th.

September 1987 Totals, Means and Extremes



Station	Rainfall			Air Temperature						Sunshine		Wind Max Gust	Number of days with											
	Total	Most in a Day		Means of		Extreme Temperature			Total	Most in a Day	Rain*		Snow	Frost	Hail	Thunder	Fog	Gale Gusts						
		Amount	Date(s)	Max	Min	Highest	Lowest	Date(s)		Date(s)		Amount							Date(s)					
Belmullet	126.7	26.6	11	15.8	10.1	13.0	17.8	2	5.5	30	140.6	9.5	5	53	22	-	-	-	-	1	12			
Birr	95.9	22.9	19	16.7	9.1	12.4	21.0	20	-1.0	26	129.8	8.5	14,28	39	19	-	1	-	-	-	1	4		
Cahircolveen	199.7	38.7	21	16.8	10.0	13.4	20.8	2	3.6	27	138.9	10.5	1	46	20	-	-	-	-	-	-	9		
Cesement	90.7	19.3	19	16.3	8.3	12.3	21.1	2	1.3	26	146.1	10.8	3	44	19	-	-	-	-	-	-	2	10	
Claremorris	122.8	18.2	19	16.1	7.6	11.9	19.2	2	1.0	29	103.3	8.5	14	45	21	-	-	-	-	-	-	1	4	
Clones	89.8	21.9	21	15.9	7.8	11.9	19.7	2	2.5	26	134.0	8.9	28	37	19	-	-	-	-	-	-	3	3	
Cork Airport	119.4	24.7	11	16.0	9.0	12.5	18.6	1	2.8	26	148.1	10.6	14	43	20	-	-	-	-	-	-	10	7	
Dublin Airport	75.3	20.7	19	16.6	9.5	13.1	20.2	20	3.4	26	156.8	10.8	14	42	18	-	-	-	-	-	-	5	2	
Galway	149.9	39.5	19	16.2	9.7	13.0	20.5	2	3.1	29	146.0	11.2	1	46	22	-	-	-	-	-	-	-	7	
Kilkenny	97.6	12.4	1	17.3	6.9	12.1	20.1	1	0.5	27,29	144.0	9.8	3	38	18	-	-	-	-	-	-	4	5	
Mellin Head	93.0	18.5	21	15.6	9.8	12.7	18.5	3	6.5	28	142.0	8.8	29	54	22	-	-	-	-	-	-	-	20	
Mullingar	107.6	34.2	19	16.2	7.5	11.9	20.4	20	0.0	29	152.7	9.5	1	38	21	-	-	-	-	-	-	4	4	
Rocha's Point	110.2	16.7	4	16.2	10.4	13.3	19.1	1	4.7	28	154.5	10.9	14	47	16	-	-	-	-	-	-	3	9	
Roselore	96.9	22.7	1	16.5	10.6	13.6	18.3	2, 3	5.1	25	173.4	11.3	3	43	14	-	-	-	-	-	-	3	10	
Shannon Airport	102.6	20.1	4	17.3	10.1	13.7	22.0	20	3.7	26	133.8	8.5	1, 14	37	21	-	-	-	-	-	-	-	2	1

NOTES: Rainfall in millimetres, Temperatures in Degrees Celsius, Sunshine in Hours and Wind in Knots. Gale Gust = Gust of > 33.5 knots. \* = days with 0.2mm or more

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rain). For the hurling final on the 6th conditions underfoot were greasy since about 6 mm of rain fell during the morning and early afternoon. Before the football All-Ireland there was some 20mm of rain during the morning and afternoon of Saturday the 19th but thereafter it remained mainly dry until after the match on the 20th. For the month total rainfall ranged from 75mm at Dublin Airport to 172mm at Cahirciveen but at most stations was between 90mm and 130mm. At Casement Aerodrome it was the wettest September for 11 years.

## SOME COOL NIGHTS

On 26th, Birr recorded the first air frost of Autumn ( $-1^{\circ}\text{C}$ ) in a slack northwesterly airflow as a high pressure cell approached from the Atlantic; this was later than last year when the same temperature was recorded there on the 16th of September. Lowest air temperatures at all stations were recorded during the period 25th to 29th when winds were light and skies were often clear at night. Minima lower than those of 1986 were recorded only at Mullingar ( $0^{\circ}\text{C}$ ) which was its lowest September value since 1952 and at Rosslare ( $5.1^{\circ}\text{C}$ ) which had its lowest September value since 1974.

Mean minimum air temperatures for the month were below normal, ranging from  $6.9^{\circ}\text{C}$  at Kilkenny to  $10.6^{\circ}\text{C}$  at Rosslare; these compare with normal values of  $8.5^{\circ}\text{C}$  to  $11^{\circ}\text{C}$ . Mean maxima for September ranged from  $15.6^{\circ}\text{C}$  at Malin Head to  $17.3^{\circ}\text{C}$  at Kilkenny and Shannon Airport and were just about or a little above normal except at Casement Aerodrome and Galway. Warmest days were the 1st to the 3rd and also the 20th when in a warm southerly, Shannon Airport recorded  $22^{\circ}\text{C}$ , the highest air temperature of the month and only a little lower than the maximum of September 1986. During the period 25th to 28th daytime temperatures were low and while they rose on 29th, they remained below normal to the end of the month. Mean temperature for the month ranged from  $11.9^{\circ}\text{C}$  in parts of the midlands to  $13.7^{\circ}\text{C}$  at Shannon Airport and varied from just about normal to  $0.6^{\circ}\text{C}$  below normal. Mean temperatures were well below normal between 24th and 30th but were above normal from 1st to 5th, on 11th, 12th and on 20th.

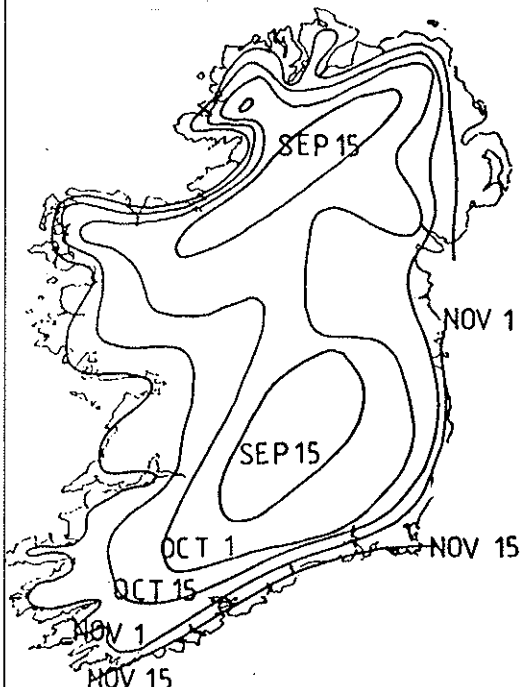
## WINDS

While winds were fresh to strong and blustery at times between 3rd and 5th, 9th and 14th and on 22nd/23rd there were no severe gales and, indeed, the highest gusts ranged from only 50 to 55 knots on the coasts of Ulster and Connaught and from 35 to 47 knots elsewhere. On 11th, a vigorous deepening system of depressions, which included the remains of hurricane Cindy, approached from the southwest. The system didn't form one single depression but instead it preserved several separate centres and we thus evaded a severe gale.

# First Autumn frost

Late September and early October often bring the first touch of air frost reminding us that another summer is over, and winter is fast approaching. Frosts in Autumn are less of a hazard to crops than those in late spring, although they sometimes cause damage.

In 1972 air frost in early September caused widespread defoliation of the potato crop. As can be seen from the figure there are two fairly large areas where frost in mid-September may be expected to occur on average once every 10 years.



DATE WITH A RETURN PERIOD  
OF 10 YEARS