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ROTHAMSTED  
RESEARCH

## Report for 1979 - Part 1

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### Weather Tables Rothamsted; Woburn; Broom's Barn; Saxmundham

#### Rothamsted Research

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## WEATHER TABLES

ROTHAMSTED WEATHER 1978-79

Latitude 51° 48' 30" N; Longitude 0° 21' 10" W; Altitude 128 m

	Temperature (°C)					Radiation		Wind Run at 2 m km day <sup>-1</sup>	Rain	Water (mm)			
	Mean maximum	Mean minimum	Soil at 10 cm	Dew- point	Ground frosts	Sunshine hours	MJ m <sup>-2</sup> day <sup>-1</sup>			Rain days	Drainage bare soil	Open water	Pot. trans
1978													
October	15.7	7.4	10.0	9.0	8	102	6.1	158	5	8	—	41	23
November	11.2	4.8	7.3	6.1	10	87	3.8	239	21	10	—	17	9
December	6.4	1.1	3.5	2.2	17	36	1.8	253	128	23	108	5	1
1979													
January	2.0 (-3.8)	-4.6 (-4.8)	0.8	-2.7	29	53 (+1)	2.7	224	76 (+12)	20	57	0.0	1
February	3.0 (-3.4)	-1.7 (-2.1)	0.6	-1.0	27	54 (-13)	4.2	240	69 (+17)	13	67	3	9
March	7.7 (-1.4)	1.0 (-0.3)	3.0	2.0	16	90 (-25)	7.0	306	129 (+83)	26	97	28	27
April	11.6 (-0.5)	3.7 (+0.5)	6.3	4.1	12	114 (-37)	11.2	232	93 (+46)	16	55	47	54
May	14.9 (-1.0)	5.7 (-0.5)	10.2	6.0	7	202 (+8)	17.3	219	108 (+57)	19	61	76	85
June	18.1 (-0.8)	9.1 (-0.1)	14.7	10.6	0	143 (-60)	16.9	156	30 (-27)	13	1	84	86
July	21.0 (+0.4)	10.8 (-0.3)	17.7	11.4	0	183 (-9)	17.7	149	25 (-28)	6	Trace	117	101
August	19.9 (-0.5)	10.1 (-0.8)	14.7	11.0	2	162 (-18)	13.9	153	67 (+5)	14	9	90	77
September	18.3 (+0.6)	8.5 (-0.6)	13.1	9.7	7	172 (+28)	12.0	181	18 (-43)	7	Trace	76	57
October	14.9 (+1.6)	7.1 (+1.2)	10.1	9.4	9	117 (+14)	6.9	158	80 (+20)	15	44	39	17
November	9.4 (+0.5)	2.4 (-0.3)	5.2	4.5	18	63 (+1)	3.1	217	52 (-20)	17	41	11	5
December	7.7 (+1.2)	2.7 (+1.7)	4.6	3.0	15	52 (+7)	2.1	294	129 (+63)	20	109	10	6
Total or mean	12.4 (-0.6)	4.6 (-0.5)	8.4	5.7	142	1405 (-103)	9.6	211	876 (+185)	186	541	581	525

NOTES ON THE TABLE

1. Except for the last column, all quantities are measured.
2. Drainage and evaporation are measured in inches.
3. Drainage is through 50 cm bare undisturbed soil.
4. Long period averages are for different periods. Departures are in brackets: Air temperatures 1878-1978; Sunshine 1892-1978; Rain 1948-78.

WOBURN WEATHER 1978-79

Latitude 52° 1' 5" N; Longitude 0° 35' 35" W; Altitude 89 m

	Temperature (°C)					Radiation Sunshine hours	Wind Run at 2 m km day <sup>-1</sup>	Water	
	Mean maximum	Mean minimum	Soil at 10 cm	Dew- point	Ground frosts			Rain (mm)	Rain days
1978									
October	15.8	7.2	9.9	9.5	7	83	151	3	5
November	11.4	4.6	7.3	6.0	9	77	245	26	7
December	6.5	1.0	3.7	2.3	15	27	212	107	22
1979									
January	2.4 (-3.6)	-4.1 (-4.6)	0.9	-1.8	26	52 (+2)	193	60 (+6)	18
February	3.1 (-3.3)	-1.7 (-2.1)	0.9	-0.8	25	46 (-18)	184	51 (+10)	13
March	7.8 (-1.6)	1.3 (-0.1)	3.3	2.4	19	90 (-25)	314	127 (+84)	23
April	11.9 (-0.5)	3.5 (0.0)	6.7	5.3	14	93 (-48)	187	87 (+42)	21
May	15.3 (-0.7)	6.0 (-0.1)	10.3	7.5	7	184 (+1)	229	103 (+50)	20
June	18.0 (-1.3)	8.8 (-0.3)	15.0	11.7	0	151 (-48)	160	43 (-7)	9
July	21.4 (+0.5)	10.7 (-0.5)	17.1	14.6	0	169 (-11)	177	14 (-40)	6
August	19.9 (-0.8)	10.7 (-0.2)	15.0	14.2	1	157 (-15)	187	70 (+9)	13
September	18.6 (+0.6)	8.4 (-0.8)	13.1	12.7	8	159 (+25)	201	15 (-37)	5
October	15.1 (+1.2)	6.4 (+0.2)	10.0	10.3	8	109 (+8)	137	81 (+28)	13
November	9.8 (+0.5)	3.2 (0.0)	5.5	5.7	11	61 (0)	244	46 (-17)	19
December	8.3 (+1.6)	3.0 (+1.7)	4.5	4.0	14	44 (0)	310	131 (+78)	24
Total or mean	12.6 (-0.6)	4.7 (-0.6)	8.5	7.1	133	1315 (-129)	210	828 (+206)	184

NOTE ON THE TABLE

Standard long period mean is 1930-78, departures are in brackets.

WEATHER TABLES

BROOM'S BARN WEATHER 1978-79

Latitude 52° 16' N; Longitude 0° 34' E; Altitude 75 m

Month	Temperature (°C)					Radiation		Wind Run at 2 m km day <sup>-1</sup>	Water (mm)			
	Mean maximum	Mean minimum	Soil at 10 cm	Dew point	Ground frosts	Sunshine hours	Solar Radn. MJ m <sup>-2</sup> day <sup>-1</sup>		Rainfall (mm)	Evaporation		
								Rain days		Open water	Pot. trans.	
1978												
October	15.3	8.5	10.3	9.3	0	95	4.91	164	8	10	33	18
November	11.1	5.4	7.3	5.6	6	96	3.13	248	17	9	—	7
December	6.4	1.8	3.5	2.5	12	39	1.45	247	90	21	—	1
1979												
January	2.0 (-4.2)	-3.2 (-4.6)	0.3	-2.0	27	63 (+18)	2.04	233	57 (+10)	22	—	1
February	3.0 (-3.4)	-1.2 (-2.2)	0.4	-1.0	26	42 (-19)	3.35	234	51 (+16)	14	—	9
March	7.9 (-0.9)	1.5 (-0.4)	3.0	1.9	13	92 (-22)	5.61	314	80 (+43)	20	—	25
April	11.7 (+0.2)	4.1 (+0.4)	6.6	4.0	6	121 (-18)	9.63	237	45 (+2)	20	63	45
May	15.5 (-0.5)	6.5 (-0.3)	10.9	6.8	7	211 (+18)	14.60	224	70 (+25)	20	104	76
June	18.7 (-0.5)	9.9 (+0.4)	15.9	10.3	0	189 (-22)	16.84	176	27 (-25)	7	129	85
July	21.2 (+0.4)	11.8 (+0.3)	17.8	11.3	0	177 (-6)	15.75	173	17 (-28)	6	128	99
August	20.4 (-0.6)	11.3 (-0.2)	15.6	12.0	0	173 (-5)	13.21	171	61 (+7)	14	121	74
September	19.0 (+0.7)	9.8 (0.0)	13.7	10.5	1	187 (+41)	10.81	213	16 (-37)	8	80	50
October	15.2 (+0.8)	7.9 (+0.6)	10.4	9.8	5	119 (+14)	5.56	178	53 (+11)	9	37	14
November	9.5 (+0.5)	3.3 (0.0)	5.1	4.1	6	66 (-6)	2.74	227	41 (-22)	15	—	5
December	7.8 (+1.1)	3.3 (+1.5)	4.4	3.2	11	64 (+19)	1.74	293	96 (+42)	21	—	2
Total or mean	12.7 (-0.5)	5.4 (-0.4)	8.7	5.9	102	1504 (+12)	8.49	223	614 (+44)	176	—	485

NOTES ON THE TABLE

Except for the last column, all quantities are measured.  
 Departures from long-period average are for different periods:  
 Air Temperature and Rainfall 1964-78; Sunshine 1965-78.

### SAXMUNDHAM WEATHER 1979

Latitude 52° 13' N; Longitude 1° 28' E; Altitude 37 m

Month	Temperature (°C)					Radiation MJ m <sup>-2</sup> day <sup>-1</sup>	Wind Run at 2 m km day <sup>-1</sup>	Water (mm)			Accumulated Day-degrees F	
	Maximum air	Minimum air	Soil at 10 cm	Dew- point	Ground frosts			Rain (mm)	Rain days	Evaporation open water	A	B
January	3.2 (-3.6)	-3.0 (-5.4)	0.9	0.0	21	1.9	298	88 (+30)	14	—	4	292
February	4.3 (-2.1)	-0.1 (-1.5)	0.8	0.0	17	3.6	304	89 (+48)	8	—	7	468
March	8.3 (+0.1)	1.7 (-0.5)	3.8	2.8	12	6.5	378	63 (+21)	16	—	66	561
April	11.2 (+0.6)	4.1 (+0.6)	7.4	5.0	9	10.6	272	52 (+16)	12	58	221	601
May	15.3 (+1.0)	6.8 (-0.2)	12.4	7.8	9	15.5	275	68 (+30)	11	93	547	622
June	18.4 (+0.3)	10.3 (+0.7)	18.7	11.7	0	16.4	172	33 (-5)	10	108	1021	622
July	22.3 (+2.1)	11.7 (0.0)	19.6	11.7	0	16.1	174	27 (-26)	7	171	1659	622
August	20.3 (-0.4)	11.4 (-0.6)	17.0	11.7	1	13.0	193	61 (+17)	12	100	2240	622
September	19.0 (+1.2)	10.2 (+0.1)	15.3	10.5	4	11.4	228	26 (-39)	4	110	2732	624
October	15.2 (+1.2)	8.7 (+1.1)	11.9	10.5	5	6.0	240	25 (-13)	8	49	3094	627
November	9.2 (-0.1)	3.8 (0.0)	6.3	5.0	14	2.7	257	48 (-31)	13	15	3195	674
December	8.7 (+1.6)	3.4 (+0.9)	5.2	3.3	16	1.7	360	96 (+46)	15	—	3289	756
Total	—	—	—	—	108	—	—	676 (+94)	130	—	—	—
Mean	12.9 (-0.2)	5.8 (-0.4)	9.9	6.7	—	8.8	263	—	—	—	—	—

#### NOTES ON THE TABLE

1. Except for the last two columns all quantities are measured.
2. Temperatures were measured in °F.
3. 'Soil at 10 cm' and 'Dewpoint' are at 0900 GMT.
4. Radiation was measured with a Kipp Solarimeter.
5. Rain and evaporation were measured in inches.
6. 'Evaporation' is the mean of two open water tanks installed on 28 March, 1979. They are 56 cm diameter, 30 cm deep and set 15 cm in the ground. Water level is about 6 cm below the rim.
7. Calculated values of accumulated temperature are: A. Day-degrees above 42°. B. Day-degrees below 42°.
8. Deviations from 10-year mean shown in brackets.