

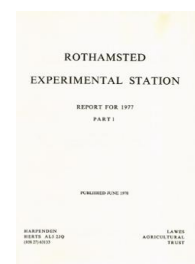
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ROTHAMSTED  
RESEARCH

## Report for 1977 - Part 1

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

#### Rothamsted Research

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## WEATHER TABLES

### ROTHAMSTED WEATHER 1976-77

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>	Water (mm)				
	Mean maximum	Mean minimum	Soil at 10 cm	Dewpoint	Ground frosts	Sunshine hours	mWh cm <sup>-2</sup> day <sup>-1</sup>		Rain	Evaporation			
										Rain days	Drainage bare soil	Open Pot	water trans
<b>1976</b>													
October	13.6	7.5	10.3	9.0	6	46	128	185	123	24	101	25	19
November	8.7	2.7	5.0	4.3	23	61	85	170	82	19	71	15	3
December	4.1	-1.0	1.4	-0.1	28	60	59	185	87	15	79	11	-2
<b>1977</b>													
January	4.6 (-1.2)	0.1 (-0.1)	1.9	0.9	24	41 (-10)	60	205	74 (+12)	20	71	7	2
February	8.1 (+1.7)	2.0 (+1.6)	3.6	3.0	16	67 (-1)	127	234	109 (+59)	23	97	15	12
March	9.9 (+0.8)	3.1 (+1.8)	5.0	4.3	18	90 (-25)	203	261	55 (+10)	18	32	23	29
April	11.1 (-1.0)	2.7 (-0.5)	5.9	3.5	19	160 (+9)	355	278	31 (-15)	16	1	49	55
May	14.9 (-1.0)	5.5 (-0.7)	10.5	6.2	7	220 (+27)	501	269	42 (-9)	13	15	89	93
June	15.8 (-3.1)	7.6 (-1.6)	12.5	8.5	3	131 (-73)	403	210	77 (+22)	18	27	65	74
July	20.2 (-0.4)	10.6 (-0.5)	16.7	11.3	0	198 (+6)	479	192	7 (-47)	7	Trace	97	99
August	19.1 (-1.3)	10.9 (0.0)	15.1	12.1	0	133 (-48)	309	148	119 (+58)	16	57	63	57
September	17.3 (-0.4)	9.4 (+0.3)	12.7	10.0	0	119 (-25)	278	178	23 (-40)	12	6	72	51
October	15.2 (+1.9)	7.9 (+2.1)	10.3	9.3	1	106 (+3)	177	161	49 (-13)	17	18	31	21
November	9.0 (+0.1)	3.3 (+0.6)	5.2	3.7	15	88 (+26)	106	328	60 (-14)	19	40	21	12
December	8.1 (+1.6)	3.0 (+2.0)	4.7	3.7	11	42 (-3)	49	242	60 (-4)	19	55	7	4
Total or mean	12.8 (-0.2)	5.5 (+0.4)	8.7	6.4	114	1395 (-114)	3047	225	706 (+19)	198	419	539	509

#### 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. Departures from long-period averages (in brackets) are for different periods; Air temperatures 1878-1976; Sunshine 1882-1976; Rain 1948-76.

### WOBURN WEATHER 1976-77

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	Dewpoint	Ground frosts			Rain (mm)	Rain days
<b>1976</b>									
October	13.7	7.8	10.2	9.0	2	46	170	108	25
November	9.0	2.9	5.1	4.2	16	59	164	50	17
December	4.3	-1.1	1.4	0.3	25	59	153	98	14
<b>1977</b>									
January	5.0 (-1.0)	0.0 (-0.5)	2.0	1.3	22	35 (-15)	171	65 (+11)	15
February	8.3 (+1.9)	1.9 (+1.5)	3.9	3.2	15	60 (-5)	235	105 (+66)	21
March	10.2 (+0.8)	3.3 (+1.9)	5.3	3.6	12	89 (-27)	253	52 (+10)	19
April	11.2 (-1.3)	2.5 (-1.1)	6.2	3.8	14	145 (+3)	262	33 (-12)	17
May	14.9 (-1.1)	4.8 (-1.3)	11.2	6.3	7	207 (+25)	198	35 (-19)	12
June	16.3 (-3.1)	7.0 (-2.2)	13.2	8.9	3	138 (-63)	193	80 (+30)	16
July	20.7 (-0.3)	10.3 (-0.9)	17.3	11.4	3	187 (+6)	188	6 (-48)	3
August	19.3 (-1.5)	10.4 (-0.5)	15.2	12.2	0	126 (-47)	139	155 (+95)	20
September	17.4 (-0.6)	9.3 (+0.1)	13.1	10.6	2	115 (-20)	198	17 (-36)	11
October	15.5 (+1.7)	7.5 (+1.4)	10.4	9.6	5	107 (+6)	188	28 (-26)	10
November	9.3 (+0.1)	3.2 (0.0)	5.5	3.8	13	83 (+23)	297	57 (-7)	18
December	8.4 (+1.7)	3.1 (+1.8)	4.8	3.8	14	40 (-5)	224	59 (+7)	17
Total or mean	13.0 (-0.2)	5.3 (0.0)	9.0	6.5	110	1332 (-119)	212	692 (+71)	179

#### NOTES ON THE TABLE

1. Standard long period mean is 1930-76. Departures are in brackets.

**BROOM'S BARN WEATHER 1976-77**  
 Latitude 52° 16' N; Longitude 0° 34' E; Altitude 75 m

	Temperature (°C)					Radiation		Wind Run at 2 m km <sup>-2</sup> day <sup>-1</sup>	Water (mm)				
	Mean maximum	Mean minimum	Soil at 10 cm	Dewpoint	Ground frosts	Sunshine hours	mWh cm day <sup>-1</sup>		Rain	Rain days	Open water	Pot trans	
<b>1976</b>													
October	13.9	8.3	10.6	9.8	0	55	112	188	97	24	30	13	
November	8.7	3.6	5.2	4.6	5	74	70	177	78	19	12	-1	
December	4.1	-0.3	1.4	0.6	22	69	53	199	55	15	—	-4	
<b>1977</b>													
January	4.6 (-1.7)	0.5 (-1.0)	1.8	1.3	20	52 (+7)	58	206	58 (+14)	22	—	-1	
February	7.7 (+1.4)	2.3 (+1.3)	3.5	3.0	10	62 (+1)	100	242	57 (+24)	21	—	8	
March	10.0 (+1.4)	3.5 (+1.8)	5.1	4.4	8	103 (-11)	171	264	41 (+7)	19	28	23	
April	11.1 (-0.6)	3.1 (-0.7)	5.9	3.1	12	150 (+10)	269	276	36 (-8)	20	61	47	
May	14.7 (-1.4)	6.1 (-0.8)	11.1	6.3	2	233 (+44)	421	240	43 (0)	11	106	71	
June	16.4 (-3.1)	8.4 (-1.2)	13.5	9.2	1	144 (-76)	375	189	47 (-3)	16	100	69	
July	20.7 (-0.3)	11.2 (-0.4)	17.4	11.5	0	199 (+12)	410	189	7 (-41)	3	129	101	
August	19.9 (-1.3)	11.3 (-0.2)	15.6	12.4	0	150 (-32)	266	169	129 (+81)	18	90	51	
September	17.8 (-0.5)	10.0 (+0.2)	13.1	10.2	0	129 (-17)	247	215	18 (-39)	7	76	46	
October	16.0 (+1.8)	8.6 (+1.5)	10.6	9.7	0	143 (+40)	162	201	13 (-33)	11	37	17	
November	9.2 (+0.4)	3.9 (+0.8)	5.3	3.6	11	91 (+22)	86	312	61 (-6)	18	29	9	
December	8.4 (+1.8)	3.9 (+2.3)	4.6	3.9	8	63 (+19)	46	276	54 (+3)	16	13	2	
Total or mean	13.0 (-0.2)	6.1 (+0.3)	9.0	6.5	72	1519 (+19)	218	232	564 (-1)	182	—	443	

NOTES ON THE TABLE

1. Except for the last column, all quantities are measured.
2. Departures from long-period average are for different periods.
3. Air temperature and rainfall 1964-76, Sunshine 1965-76.

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### SAXMUNDHAM WEATHER 1977

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

	Temperature (°C)				Radiation mWh cm <sup>-2</sup> day <sup>-1</sup>	Wind Run at 2 m km day <sup>-1</sup>	Water (mm)			Accumulated Day-degrees F	
	Mean air	Soil at 10 cm	Dewpoint	Ground frosts			Rain	Rain days	Evaporation open water	A	B
January	3.3	2.3	2.2	15	65	272	65	19	—	20	145
February	5.6	3.7	3.9	12	101	296	71	15	—	80	200
March	7.2	5.6	5.0	11	196	331	53	15	—	205	238
April	7.0	6.3	2.8	13+	301	335	28	9+	51	343	299
May	10.0	11.3	6.7	3	436	311	42	10+	98	600	308
June	12.4	13.7	9.4	1	360	224	36	12	70	968	309
July	15.6	17.0	12.8	0	425	200	10	6	92	1526	309
August	15.2	16.0	13.9	0	318	190	72	14	81	2062	310
September	13.8	13.3	11.1	0	243	245	17	9	54	2501	310
October	12.0	10.7	10.5	1	179	235	18	10	31	2863	311
November	6.9	6.2	5.0	6	89	378	69	18	27	2990	363
December	6.7	5.3	4.4	4	47	335	65	10	—	3080	393
Total or mean	9.6	9.3	7.3	66	230	279	546	147	—	—	—

#### 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 09.00 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 29 March 1977. 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°F. B. Day-degrees below 42°F.

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