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ROTHAMSTED  
RESEARCH

## Report for 1982 - Part 1

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

#### **Rothamsted Research**

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## WEATHER TABLES

*[Faint, illegible text and tables are visible, likely bleed-through from the reverse side of the page. The text appears to be organized in a tabular format with multiple columns.]*

### ROTHAMSTED WEATHER 1981-82

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

	1981			1982												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
<b>TEMPERATURE (°C)</b>																
Mean screen maximum	11.7	10.1	2.7	5.3	6.9	9.7	12.7	16.6	19.8	21.4	20.7	19.4	12.9	10.2	6.6	13.5
Difference from average	-1.6	+1.2	-3.8	-0.4	+0.5	+0.6	+0.6	+0.7	+0.9	+0.8	+0.3	+1.7	-0.4	+1.3	+0.1	+0.6
Mean screen minimum	4.6	3.6	-3.3	-0.9	1.2	1.6	3.5	5.9	11.1	11.3	11.1	9.3	6.3	4.8	1.0	5.5
Difference from average	-1.3	+0.9	-4.3	-1.0	+0.8	+0.3	+0.3	-0.3	+1.9	+0.2	+0.2	+0.2	+0.5	+2.1	0.0	+0.4
Soil at 10 cm	7.6	6.0	1.3	2.4	3.3	4.0	7.5	11.6	16.6	17.1	16.0	13.5	9.4	7.2	2.9	9.3
Dew point	5.7	5.0	-1.5	0.0	2.4	2.5	3.8	6.7	12.6	12.6	11.5	11.9	8.5	6.2	2.1	6.7
No. of days with ground frost	15	18	29	22	15	23	15	11	0	0	0	2	9	13	22	132
<b>RADIATION</b>																
Sunshine (h per month)	109	56	49	66	44	165	172	221	164	171	176	160	73	67	54	1533
Difference from average	+6	-6	+4	+15	-23	+51	+22	+28	-37	-20	-3	+15	-30	+4	+9	+31
Mean daily radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	6.1	2.8	2.0	2.7	3.5	9.8	13.7	18.1	16.5	15.7	13.7	10.6	4.9	2.9	1.9	10.4
<b>WIND (km day<sup>-1</sup>)</b>																
Wind run at 2 m	222	216	215	242	210	281	214	192	151	185	179	144	162	242	244	258
<b>WATER (mm per month)</b>																
Rainfall (5 inch walled gauge)	72	45	55	57	31	83	22	60	113	42	42	47	127	100	72	796
Difference from average	+11	-26	-12	-5	-20	+31	-25	+7	+58	+11	-19	-12	+65	+30	+6	+105
Rain days	20	16	16	15	11	20	6	11	21	9	15	12	20	23	17	180
Drainage through 50 cm bare undisturbed soil	46	31	78	67	20	55	5	15	48	4	TR	9	103	84	68	478
Open water (tank) evaporation	35	18	2	3	12	38	68	90	79	103	100	74	29	17	14	627
Potential evaporation	21	6	0	6	10	34	62	91	87	94	79	45	12	3	1	524

#### NOTES ON THE TABLE

1. Except for potential evaporation, all quantities are measured.
2. Drainage and evaporation are measured in inches.
3. Long period averages are for different periods: air temperatures 1878-1981; sunshine 1892-1981; rain 1948-81.

WOBURN WEATHER 1981-82

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

	1981			1982												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
<b>TEMPERATURE (°C)</b>																
Mean screen maximum	12.0	10.5	2.9	5.6	7.5	10.2	13.2	17.1	20.4	21.6	20.9	19.5	13.3	10.4	7.1	13.9
Difference from average	-1.9	+1.2	-3.9	-0.3	+1.1	+0.8	+0.8	+1.2	+1.1	+0.7	+0.2	+1.4	-0.5	+1.1	+0.4	+0.7
Mean screen minimum	4.8	3.7	-3.3	-1.5	1.4	1.5	3.0	5.3	11.2	11.1	11.7	9.0	6.9	5.3	1.0	5.5
Difference from average	-1.4	+0.5	-4.6	-1.9	+1.0	+0.1	-0.5	-0.8	+2.1	0.0	+0.8	-0.2	+0.8	+2.1	-0.3	+0.3
Soil at 10 cm	7.8	6.2	1.6	2.7	3.6	4.2	7.8	12.3	16.7	16.9	16.0	13.5	9.7	7.3	3.3	9.5
Dew point	5.9	4.8	-1.8	0.2	4.7	3.3	4.4	7.1	12.7	12.7	11.7	11.5	8.5	5.9	2.2	7.1
No. of days with ground frost	7	14	25	19	15	18	17	9	0	0	0	0	2	10	18	108
<b>RADIATION</b>																
Sunshine (h per month)	99	41	37	43	33	150	155	204	135	151	157	151	74	57	38	1348
Difference from average	-2	-20	-7	-7	-31	+37	+16	+21	-60	-28	-14	+15	-28	-4	-6	-89
Mean daily radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	6.3	3.1	2.2	2.8	3.9	9.9	13.7	N/A	N/A	15.4	14.5	10.8	5.5	3.0	2.0	—
<b>WIND (km day<sup>-1</sup>)</b>																
Wind run at 2 m	239	257	159	220	213	276	174	179	144	172	226	163	179	269	268	207
<b>WATER (mm per month)</b>																
Rainfall (5 inch gauge)	79	34	47	42	26	90	27	44	106	28	45	31	109	80	53	681
Difference from average	+25	-29	-7	-12	-15	+44	-18	-10	+55	-26	-18	-20	+54	+18	-1	+51
Rain days	22	12	16	13	10	20	7	13	17	8	14	12	17	17	12	160

NOTE ON THE TABLE

1. Long period averages are for the period 1930-81

### BROOM'S BARN WEATHER 1981-82

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

	1981			1982												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
<b>TEMPERATURE (°C)</b>																
Mean screen maximum	12.0	10.5	2.5	5.7	7.2	10.0	12.7	17.0	19.9	21.3	21.4	19.9	13.2	10.2	6.9	13.8
Difference from average	-2.3	-1.5	-4.3	-0.2	+0.9	+1.2	+1.2	+1.1	+0.8	+0.6	+0.3	+1.4	-1.0	+1.1	+0.3	+0.6
Mean screen minimum	5.3	4.4	-2.9	-0.5	1.6	2.2	4.0	6.7	11.5	12.1	12.3	10.8	7.7	5.6	1.2	6.3
Difference from average	-2.0	+1.1	-4.8	-1.6	+0.6	+0.1	+0.3	-0.1	+1.9	+0.6	+0.8	+0.8	+0.5	+2.3	-0.4	+0.5
Soil at 10 cm	7.9	6.2	0.9	1.8	3.3	4.3	8.1	12.2	16.6	17.7	16.7	14.2	9.8	7.0	2.7	9.5
Dew point	5.7	4.7	-1.4	0.9	2.3	2.7	4.2	7.3	13.0	13.1	12.3	12.0	9.2	5.9	1.8	7.1
No. of days with ground frost	4	5	24	18	13	13	8	1	0	0	0	0	2	5	16	76
<b>RADIATION</b>																
Sunshine (h per month)	133	61	41	69	61	169	159	240	137	178	175	161	76	64	52	1541
Difference from average	+25	-10	-6	+21	+1	+62	+20	+46	-69	-1	0	+11	-33	-6	+6	+58
Mean daily radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	6.7	3.0	2.0	2.7	4.4	9.9	13.4	18.9	16.3	16.3	14.3	11.0	5.1	2.8	2.0	9.8
Daily diffuse radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	—	—	—	—	—	—	8.1	9.8	11.0	10.1	8.2	6.0	3.6	2.0	1.5	—
<b>WIND (km day<sup>-1</sup>)</b>																
Wind run at 2 m	224	251	175	220	227	262	180	183	157	153	195	147	141	246	231	195
<b>WATER (mm per month)</b>																
Rainfall (5 inch gauge)	83	34	51	36	19	49	11	61	73	25	49	58	119	71	51	622
Difference from average	+38	-28	-5	-10	-16	+5	-32	+16	+21	-20	-3	+7	+72	+11	-5	+46
Rain days	21	14	15	17	10	16	8	17	20	5	12	13	22	15	11	166
Open water evaporation sunken tank	41	19	—	—	11	46	73	120	104	123	127	84	21	23	10	(742)
Class "A" pan	—	—	—	—	—	—	—	128	98	121	124	81	25	21	12	(610)
Potential transpiration	22	12	-1	1	13	38	59	93	87	99	97	56	13	6	2	564

#### NOTES ON THE TABLE

1. Except for potential evaporation, all quantities are measured.
2. Long period averages are for different periods; air temperatures 1964-81; sunshine 1965-81.
3. Evaporation pan Class "A" installed in May, 1982.
4. Diffuse radiation recording from April 1982.

### SAXMUNDHAM WEATHER 1981-82

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

	1981			1982												Year
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
<b>TEMPERATURE (°C)</b>																
Mean screen maximum	12.3	10.8	2.8	6.4	6.3	9.8	12.6	16.6	19.8	21.7	22.2	20.5	14.0	11.3	7.1	14.0
Difference from average	-1.4	+1.7	-4.8	+0.1	-0.8	+0.8	+1.7	+2.4	+1.4	+1.5	+1.4	+2.4	+0.5	+2.0	0.0	+1.1
Mean screen minimum	5.4	4.7	-1.6	0.7	1.9	1.2	3.3	6.6	11.0	12.4	12.3	10.8	7.1	5.7	1.7	6.2
Difference from average	-2.1	+0.8	-4.5	-1.0	+0.2	-1.7	-0.5	+0.4	+1.3	+0.7	+0.5	+0.6	-0.1	+1.7	-0.7	+0.1
Soil at 10 cm	10.0	7.8	2.3	2.5	3.3	5.9	9.5	15.7	18.2	19.9	19.1	14.7	11.0	8.1	2.9	10.9
Dew point	6.7	6.1	0.0	2.8	2.8	3.9	3.9	8.3	12.8	13.3	13.3	12.8	8.9	7.2	2.8	7.7
No of days with ground frost	9	11	21	23	13	17	16	6	0	0	0	1	6	7	14	103
<b>RADIATION</b>																
Mean daily radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	5.7	2.4	1.8	2.2	3.5	9.0	13.1	17.5	15.2	16.0	13.0	10.3	4.3	2.4	1.7	9.0
<b>WIND (km day<sup>-1</sup>)</b>																
Wind run at 2 m	261	270	238	254	291	317	234	197	157	178	210	198	229	382	283	244
<b>WATER (mm per month)</b>																
Rainfall (5 inch gauge)	80	51	79	36	23	48	7	48	67	17	49	50	124	70	51	590
Difference from average	+33	-14	+24	-20	-19	-1	-35	+11	+23	-31	+11	-19	+75	+10	-9	-4
Rain days	18	11	13	11	4	13	7	10	12	9	12	14	24	17	13	146
Open water (tank) evaporation	40	17	—	—	—	—	72	115	102	107	116	81	35	35	—	—

#### NOTES ON THE TABLE

1. All quantities are measured.
2. Temperatures were measured in °F.
3. 'Soil at 10 cm' and 'Dewpoint' are 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, 56 cm diameter, 30 cm deep and set 15 cm in the ground, installed on 23 March 1982. Water level is about 6 cm below the rim.
7. Long period averages are for the period 1972-81.