

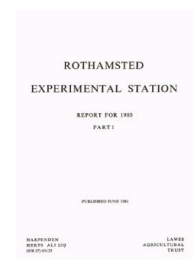
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Report for 1980 - Part 1

[Full Table of Content](#)



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

Rothamsted Research

Rothamsted Research (1981) *Weather Tables Rothamsted; Woburn; Broom's Barn; Saxmundham* ; Report For 1980 - Part 1, pp 283 - 287 - DOI: <https://doi.org/10.23637/ERADOC-1-137>

WEATHER TABLES

ROTHAMSTED WEATHER 1979-80

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

	1979			1980												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
TEMPERATURE (°C)																
Mean screen maximum	14.9	9.4	7.7	4.4	8.6	7.6	12.6	15.6	18.4	18.8	20.7	18.7	12.3	8.3	7.5	12.8
Difference from average	+1.6	+0.5	+1.2	-1.3	+2.2	-1.5	+0.5	-0.3	-0.5	-1.8	+0.3	+1.0	-1.1	-0.6	+1.0	-0.2
Mean screen minimum	7.1	2.4	2.7	-0.9	1.6	1.1	3.4	5.2	9.2	9.9	11.4	10.3	4.7	3.1	1.4	5.0
Difference from average	+1.2	-0.3	+1.7	-1.0	+1.2	-0.2	+0.2	-1.0	0.0	-1.2	+0.5	+1.2	-1.2	+0.4	+0.4	-0.1
Soil at 10 cm	10.1	5.2	4.6	1.0	4.1	3.6	7.2	10.8	14.5	14.4	15.9	13.8	7.9	5.3	3.6	8.5
Dew point	9.4	4.5	3.0	0.1	3.7	2.2	3.5	5.3	10.1	11.1	12.4	11.8	6.5	3.6	2.9	6.1
No. of days with ground frost	9	18	15	28	19	20	20	8	1	0	1	0	11	18	22	148
RADIATION																
Sunshine (h per month)	117	63	52	71	54	83	149	213	178	160	154	143	129	68	58	1460
Difference from average	+14	+1	+7	+20	-13	-32	-1	+19	-24	-31	-26	-1	+26	+6	+13	-44
Mean daily radiation (MJ m ⁻² day ⁻¹)	6.9	3.1	2.1	2.9	4.3	6.8	12.6	17.7	18.0	14.9	13.4	10.9	6.7	3.1	2.1	9.5
WIND (km day⁻¹)																
Wind run at 2 m	158	217	294	206	191	254	228	229	184	177	172	178	219	323	314	223
WATER (mm per month)																
Rainfall (5 inch walled gauge)	80	52	129	33	44	79	29	19	70	81	49	24	97	45	41	611
Difference from average	+20	-20	+63	-31	-9	+30	-18	-34	+14	+29	-13	-35	+37	-26	-27	-83
Rain days	15	17	20	13	14	20	10	6	19	16	8	11	18	18	17	170
Drainage through 50 cm bare soil	44	41	109	27	36	50	15	TR	2	33	17	TR	60	27	35	302
Open water (tank) evaporation	39	11	10	4	14	28	63	101	91	76	93	69	38	12	8	597
Potential transpiration	17	5	6	1	11	26	61	91	94	82	75	51	20	8	3	523

NOTES ON THE TABLE

1. Except for potential evaporation, 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: air temperatures 1878-1979; sunshine 1892-1979; rain 1948-79.

WOBURN WEATHER 1979-80

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

	1979			1980												Year
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
TEMPERATURE (°C)																
Mean screen maximum	15.1	9.8	8.3	4.9	9.2	8.2	13.0	15.7	18.8	19.1	20.6	19.1	12.8	8.6	8.1	13.2
Difference from average	+1.2	+0.5	+1.6	-1.0	+2.8	-1.2	+0.6	-0.3	-0.5	-1.8	-0.1	+1.1	-1.1	-0.7	+1.3	-0.1
Mean screen minimum	6.4	3.2	3.0	-1.0	1.9	1.3	3.1	4.7	9.6	9.7	11.2	10.5	4.9	3.4	2.0	5.1
Difference from average	+0.2	0.0	+1.7	-1.4	+1.5	-0.1	-0.4	-1.4	+0.5	-1.5	+0.3	+1.3	-1.3	+0.2	+0.7	-0.1
Soil at 10 cm	10.0	5.5	4.5	1.0	4.3	3.9	7.8	11.6	15.8	15.1	16.3	14.0	8.2	5.6	4.0	9.0
Dew point	10.3	5.7	4.0	0.4	3.8	2.8	3.1	5.3	10.2	11.0	13.3	12.0	6.6	4.0	2.9	6.3
No. of days with ground frost	8	11	14	24	12	20	13	12	0	0	0	0	11	15	18	125
RADIATION																
Sunshine (h per month)	109	61	44	61	54	83	141	210	163	158	148	141	126	53	55	1393
Difference from average	+8	0	0	+11	-10	-32	+1	+26	-34	-22	-22	+7	+25	-8	+11	-47
WIND (km day⁻¹)																
Wind run at 2 m	137	244	310	171	189	213	152	169	204	176	196	205	217	281	327	208
WATER (mm per month)																
Rainfall (5 inch gauge)	81	46	131	33	47	78	22	31	92	113	124	22	81	50	30	723
Difference from average	+28	-17	+78	-21	+6	+33	-24	-24	+42	+61	+62	-29	+28	-12	-25	+97
Rain days	13	19	24	11	13	20	10	5	20	18	15	12	18	18	14	174

NOTE ON THE TABLE

1. Standard long period mean is 1930-79.

BROOM'S BARN WEATHER 1979-80

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

	1979			1980												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
TEMPERATURE (°C)																
Mean screen maximum	15.2	9.5	7.8	4.7	8.6	8.1	12.9	15.8	19.1	19.0	21.1	19.5	13.0	8.4	7.6	13.1
Difference from average	+0.8	+0.5	+1.1	-1.2	+2.4	-0.7	+1.4	-0.1	0.0	-1.8	+0.1	+1.2	-1.5	-0.6	+0.8	0.0
Mean screen minimum	7.9	3.3	3.3	-0.3	2.5	1.7	4.0	5.6	9.9	10.6	12.1	11.4	5.7	3.6	2.1	5.7
Difference from average	+0.6	0.0	+1.5	-1.3	+1.6	-0.2	+0.3	-1.2	+0.3	-1.0	+0.6	+1.6	-1.7	+0.3	+0.2	-0.1
Soil at 10 cm	10.4	5.1	4.4	1.1	4.1	3.8	7.7	11.5	15.8	15.2	16.7	14.3	8.2	5.2	3.5	8.9
Dew point	9.8	4.1	3.2	0.2	3.6	2.6	3.9	5.1	10.3	11.4	12.7	12.0	6.8	3.8	3.3	6.3
No. of days with ground frost	5	6	11	22	6	13	9	4	0	0	0	0	6	14	15	89
RADIATION																
Sunshine (h per month)	119	66	64	68	52	85	176	239	206	161	138	150	130	52	48	1505
Difference from average	+14	-6	+19	+22	-8	-27	+39	+45	-4	-22	-39	+2	+24	-20	+1	+13
Mean daily radiation (MJ m ⁻² day ⁻¹)	5.6	2.7	1.7	2.5	3.7	7.0	13.4	19.0	18.5	14.2	12.2	10.6	6.6	2.7	1.8	9.3
WIND (km day⁻¹)																
Wind run at 2 m	178	227	293	185	203	242	199	219	188	193	197	197	224	288	319	22
WATER (mm per month)																
Rainfall (5 inch gauge)	53	41	96	35	42	59	17	12	92	65	36	19	91	55	42	565
Difference from average	+11	-22	+42	-13	+6	+19	-27	-34	+41	+21	-19	-31	+49	-7	-15	-10
Rain days	9	15	21	15	12	17	6	6	16	15	12	7	14	19	20	159
Open water (tank) evaporation	37	—	—	—	—	—	71	129	107	91	106	74	45	—	—	623
Potential transpiration	14	5	2	0	11	27	60	100	99	72	75	54	21	8	4	531

NOTES ON THE TABLE

1. Except for potential evaporation, all quantities are measured.
Long period averages are for different periods; air temperatures 1964-79; sunshine 1965-79.

SAXMUNDHAM WEATHER 1979-80

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

	1979			1980												Year
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
TEMPERATURE (°C)																
Mean screen maximum	15.2	9.2	8.7	4.8	8.3	8.3	12.0	15.1	19.3	19.3	21.2	20.0	13.4	8.7	7.9	13.2
Difference from average	+1.2	-0.1	+1.6	-1.5	+1.7	-0.2	+1.4	+0.8	+1.2	-0.9	+0.5	+2.1	-0.5	-0.6	+0.4	+0.4
Mean screen minimum	8.7	3.8	3.4	0.3	2.6	2.3	3.8	6.3	9.8	11.0	12.6	11.6	6.1	4.4	2.5	6.1
Difference from average	+1.1	0.0	+0.9	-1.5	+1.0	0.0	+0.2	-0.7	+0.1	-0.7	+0.8	+1.6	-1.5	+0.5	-0.3	-0.5
Soil at 10 cm	11.9	6.3	5.2	1.7	5.4	4.9	9.1	13.6	16.3	16.0	17.7	15.1	10.0	6.2	4.7	10.1
Dew point	10.5	5.0	3.3	1.1	3.9	3.9	5.0	6.7	11.7	12.8	15.0	13.3	7.8	5.0	4.4	7.6
No of days with ground frost	5	14	16	28	14	16	21	10	0	0	1	0	22	17	25	154
RADIATION																
Mean daily radiation (MJ m ⁻² day ⁻¹)	6.0	2.7	1.7	2.3	3.9	5.9	12.3	18.5	16.1	14.5	11.2	10.0	5.5	1.9	0.9	8.6
WIND (km day⁻¹)																
Wind run at 2 m	240	257	360	243	237	294	227	240	180	191	206	230	269	362	341	252
WATER (mm per month)																
Rainfall (5 inch gauge)	25	48	96	39	51	51	32	1	108	55	14	25	98	54	59	587
Difference from average	-13	-31	+46	-23	+9	+8	-5	-34	+71	+9	-29	-43	+58	-20	+7	+8
Rain days	8	13	15	10	8	15	9	3	16	12	6	4	9	11	13	116
Open water (tank) evaporation	49	15	—	—	—	—	62	122	111	84	91	81	48	23	—	—

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 installed on 13 March 1980. 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. Long period averages are for the period 1970-79.