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# Rothamsted Experimental Station Report for 1983

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## Broom's Barn Weather 1982-83

### Rothamsted Research

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**BROOM'S BARN WEATHER 1982-83**

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

	1982	1983	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
<b>TEMPERATURE (°C)</b>															
Mean screen maximum	13.2	10.2	9.1	4.0	9.8	11.1	14.0	18.9	25.4	22.5	17.6	14.2	10.0	7.7	13.7
Difference from average	-1.0	+1.1	+3.2	-2.3	+0.9	-0.5	-1.9	-0.2	+4.7	+1.4	-0.9	0.0	+0.9	+1.1	+0.5
Mean screen minimum	7.7	5.6	3.6	-1.2	3.0	3.0	6.5	9.9	13.4	12.5	10.9	7.4	4.9	2.9	6.4
Difference from average	+0.5	+2.3	+2.5	-2.2	+0.9	-0.7	-0.3	+0.2	+1.9	+0.9	+0.9	+0.2	+1.4	+1.3	+0.6
Soil at 10 cm	9.8	7.0	4.7	1.3	4.6	6.4	10.8	16.0	20.2	18.3	13.5	9.9	6.8	4.0	9.7
Dewpoint	9.2	5.9	3.6	-1.2	3.4	4.6	7.6	10.4	14.7	13.1	10.6	7.9	5.5	3.5	7.0
No. of days with ground frost	2	5	6	20	10	10	1	0	0	0	0	1	6	13	67
<b>RADIATION</b>															
Sunshine (h per month)	76	64	52	94	86	135	141	177	233	196	111	129	39	58	1451
Difference from average	-33	-6	+3	+34	-25	-6	-56	-25	+52	+21	-39	+22	-41	+11	-37
Mean daily radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	5.1	2.8	2.5	5.6	7.8	12.3	14.6	18.9	19.3	15.0	8.9	6.4	2.7	2.1	9.7
Mean daily diffuse radiation (MJ m <sup>-2</sup> day <sup>-1</sup> )	3.6	2.0	1.9	3.6	5.7	7.6	10.2	11.4	10.7	8.8	5.6	3.8	2.1	1.4	6.1
WIND (km day <sup>-1</sup> )	141	246	352	243	250	200	172	171	127	142	229	240	145	257	211
Wind run at 2 m															
<b>WATER (mm per month)</b>															
Rainfall (5 inch gauge)	119	71	39	40	38	86	120	30	34	10	65	39	55	40	596
Difference from average	+72	+11	-6	+7	-7	+43	+74	-22	-11	-45	+14	-12	-6	-13	+16
Raindays	22	15	15	11	17	19	24	9	7	4	16	15	10	16	163
Open water evaporation sunken tank	21	23	17	14	34	49	82	147	147	137	73	42	10	7	729
Difference from average	-17	+4	+3	-1	-5	-14	-22	-5	+23	+18	-11	+5	-9	-6	-24
Open water evaporation Class 'A' pan	25	21	35	28	43	59	81	119	151	132	76	47	11	11	793
Potential transpiration	13	6	14	14	36	47	68	102	116	87	50	25	7	2	568

NOTES ON THE TABLE

1. Except for potential transpiration, all quantities are measured.
2. Long period averages are: air temperature 1964-82; sunshine 1965-82; rainfall 1963-82; evaporation 1970-82.