



ROTHAMSTED
RESEARCH

Rothamsted long-term liming experiment plans 1962-1996

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Description: Contains five standardized experiment plans for the Rothamsted Long-term Liming Experiment, 1962-1996, showing plot numbers, layout and treatment factors (not to scale).

- **Plan 1:** 1962-1973. Lime and PK treatments applied to whole plots
- **Plan 2:** 1974-1980. Mg treatments applied to sub-plots, lime and PK treatments to whole plots
- **Plan 3:** 1981-1986. Lime and P treatments to whole plots
- **Plan 4:** 1987-1990. Mn treatments applied to sub-plots, lime and P treatments to whole plots
- **Plan 5:** 1991-1996. S treatments applied to sub-plots, lime and P treatments to whole plots.

Site: R/CS/10. Sawyers field 1, Rothamsted Experimental Farm, Rothamsted Research, West Common, Harpenden, Hertfordshire, AL5 2JQ, UK. Latitude 51.8157, Longitude -0.3752

Related Resources:

- Original hand drawn plans for individual years can be found here: <http://www.era.rothamsted.ac.uk/eradoc/book/146>
- Refer to website for more details: <http://www.era.rothamsted.ac.uk/>

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**Rothamsted long term liming experiment R/CS/10
Plan 1962-1973**

Not to scale

Sawyers

Lime and PK plot treatments

N

Plot	1	2	3	4	5	6	7	8	Block 1
Lime	O	O	H	L	O	M	L	H	
PK	P	K	none	P	PK	none	none	P	
	9	10	11	12	13	14	15	16	Block 1
	M	O	L	L	M	H	H	M	
	K	none	PK	K	PK	K	PK	P	
	17	18	19	20	21	22	23	24	Block 2
	M	M	M	O	M	L	O	L	
	K	PK	none	P	P	K	PK	P	
	25	26	27	28	29	30	31	32	Block 2
	L	O	H	H	O	L	H	H	
	PK	none	K	PK	K	none	P	none	

76.8m

51.2m

Treatment factors:

Lime t CaCO₃ ha⁻¹, total 1962-1973

O	0
L	5
M	10
H	20

PK treatment: kg ha⁻¹yr⁻¹

1962-1980:	P	K
none	0	0
K	0	104
P	27.5	0
PK	27.5	104

No P or K in fallow years, and different rate for potatoes.

Plot area 6.4m x 18.3m (6.4m x 18m 1968) Fallow 1969

Rothamsted long term liming experiment R/CS/10

Not to scale

Plan 1974-1980

Mg applied to sub-plots

Sawyers

Lime and PK whole plot treatments

N

Sub-plot	011	021	031	041	051	061	071	081	Block
Mg	Mg	Mg	Mg	-	-	-	Mg	Mg	
Lime	O	O	H	L	O	M	L	H	1
Mg	-	-	-	Mg	Mg	Mg	-	-	1
PK	P	K	none	P	PK	none	none	P	
Sub-plot	012	022	032	042	052	062	072	082	76.8m
	091	101	111	121	131	141	151	161	2
Mg	-	-	Mg	Mg	Mg	-	-	Mg	
M	M	O	L	L	M	H	H	M	2
-	-	Mg	-	-	-	Mg	Mg	-	
K	K	none	PK	K	PK	K	PK	P	2
092	102	112	122	132	142	152	162		
									51.2m
	171	181	191	201	211	221	231	241	2
-	-	Mg	Mg	-	-	Mg	-	Mg	
M	M	M	O	M	L	O	O	L	2
Mg	-	-	Mg	Mg	-	Mg	-	-	
K	PK	none	P	P	K	PK	PK	P	2
172	182	192	202	212	222	232	242		
									51.2m
	251	261	271	281	291	301	311	321	2
-	-	-	-	-	Mg	-	-	Mg	
L	O	O	H	H	O	L	H	H	2
Mg	Mg	Mg	Mg	Mg	-	Mg	Mg	-	
PK	none	none	K	PK	K	none	P	none	2
252	262	272	282	292	302	312	322		

Treatment factors:

Lime	t CaCO ₃ ha ⁻¹ , total 1962-1980
O	0
L	7
M	15
H	30

Mg	kgMg ha ⁻¹ yr ⁻¹
-	0
Mg	112
Mg applied 1974, 1976-78	

PK treatment	kg ha ⁻¹ yr ⁻¹	
1962-1980:	P	K
none	0	0
K	0	105
P	27.5	0
PK	27.5	105

No P or K in fallow years, and different rate for potatoes.

See plans for previous years (1962-1973) for further details

Plot area 6.4m x 18.3m (6.4m x 18m 1974, 1976) Fallow 1979 & 1980

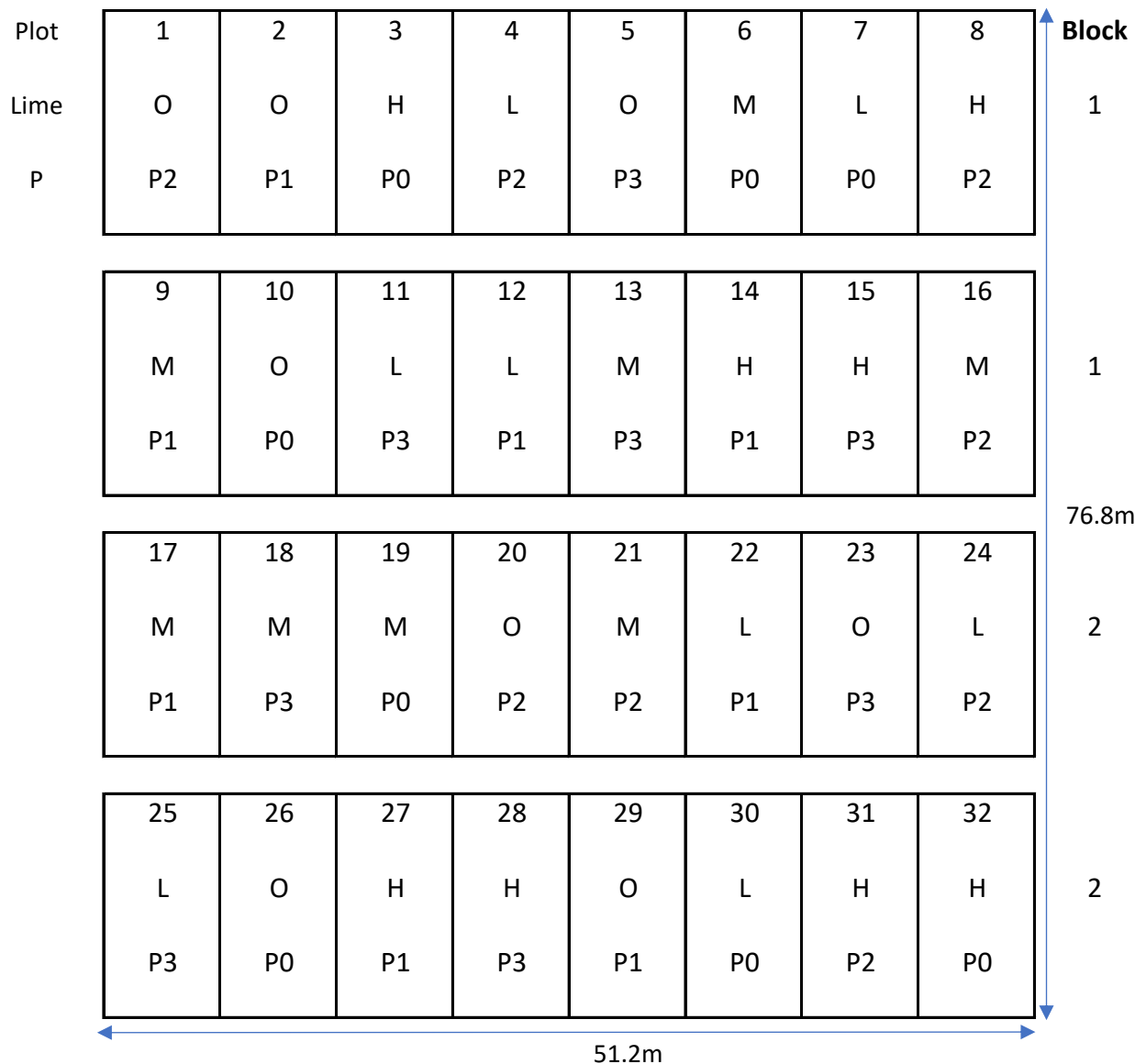
**Rothamsted long term liming experiment R/CS/10
Plan 1981-1986**

Not to scale

Sawyers

Lime and P plot treatments

N



Treatment factors:

Lime t CaCO₃ ha⁻¹, total 1962-1986

O	0
L	14
M	23
H	50

PK treatment	P treatment	kgP ha ⁻¹ total	
		1962-80	1981-86
None	P0	0	0
K	P1	0	50
P	P2	495	75
PK	P3	495	150

See plans for previous years (1962-1980) for further details

Plot area 6.4m x 18.3m (6.0m x 18m 1983, 1985, 1986) Fallow 1984

Rothamsted long term liming experiment R/CS/10

Not to scale

Plan 1987-1990

Mn applied to sub-plots

Sawyers

Lime and P whole plot treatments

N

Sub-plot	011	021	031	041	051	061	071	081	Block
Mn	Mn	Mn	Mn	Mn	Mn	Mn	Mn	Mn	
Lime	O	O	H	L	O	M	L	H	
Mn	-	-	-	-	-	-	-	-	1
P	P2	P1	P0	P2	P3	P0	P0	P2	
Sub-plot	012	022	032	042	052	062	072	082	1
	091	101	111	121	131	141	151	161	1
	-	-	-	-	-	-	-	-	
	M	O	L	L	M	H	H	M	1
	Mn	Mn	Mn	Mn	Mn	Mn	Mn	Mn	
	P1	P0	P3	P1	P3	P1	P3	P2	1
	092	102	112	122	132	142	152	162	
									2
	171	181	191	201	211	221	231	241	
	Mn	Mn	Mn	Mn	Mn	Mn	Mn	Mn	2
	M	M	M	O	M	L	O	L	
	-	-	-	-	-	-	-	-	2
	P1	P3	P0	P2	P2	P1	P3	P2	
	172	182	192	202	212	222	232	242	2
	251	261	271	281	291	301	311	321	2
	-	-	-	-	-	-	-	-	
	L	O	H	H	O	L	H	H	2
	Mn	Mn	Mn	Mn	Mn	Mn	Mn	Mn	
	P3	P0	P1	P3	P1	P0	P2	P0	2
	252	262	272	282	292	302	312	322	

51.2m

Treatment factors:

Lime: t CaCO₃ ha⁻¹, total 1962-1987

O	0
L	15
M	24.5
H	52.5

Mn spray treatment

1987-1990:

-	not applied
Mn	foliar spray applied

PK treatment

P treatment

kgP ha⁻¹ total

1962-1980:

1981-1988:

1962-80 1981-88

None	P0	0	0
K	P1	0	75
P	P2	495	100
PK	P3	495	225

See plans for previous years (1962-1986) for further details

Plot area 6.0m x 18.3m

Rothamsted long term liming experiment R/CS/10

Not to scale

Plan 1991-1996

S applied to sub-plots

Sawyers

Lime and P whole plot treatments

N

Sub-plot	011	021	031	041	051	061	071	081	Block
S	-	-	-	-	S	S	S	-	
Lime	O	O	H	L	O	M	L	H	
S	S	S	S	S	-	-	-	S	
P	P2	P1	P0	P2	P3	P0	P0	P2	
Sub-plot	012	022	032	042	052	062	072	082	
76.8m									
	091	101	111	121	131	141	151	161	1
S	S	-	S	S	-	-	S	S	
M	O	L	L	M	H	H	M	M	
-	-	S	-	-	S	S	-	-	
	P1	P0	P3	P1	P3	P1	P3	P2	
	092	102	112	122	132	142	152	162	
76.8m									
	171	181	191	201	211	221	231	241	2
S	-	S	-	S	S	S	-	-	
M	M	M	O	M	L	O	L	L	
-	S	-	S	-	-	-	S	S	
	P1	P3	P0	P2	P2	P1	P3	P2	
	172	182	192	202	212	222	232	242	
76.8m									
	251	261	271	281	291	301	311	321	2
S	S	S	-	S	-	-	-	-	
L	O	H	H	O	L	H	H	H	
-	-	-	S	-	S	S	S	S	
	P3	P0	P1	P3	P1	P0	P2	P0	
	252	262	272	282	292	302	312	322	
51.2m									

Treatment factors:

Lime: t CaCO₃ ha⁻¹, total 1962-1987

O	0
L	15
M	24.5
H	52.5

S treatment

1991-1996:	kgS ha ⁻¹ yr ⁻¹
-	0
S	30

PK treatment

1962-1980:

None
K
P
PK

P treatment

1981-1988:

P0
P1
P2
P3

kgP ha⁻¹ total

1962-80 1981-88

0	0
0	75
495	100
495	225

See plans for previous years (1962-1990) for further details

Plot area 6.0m x 18.3m 1991, 1992; 5.76m x 16.1m 1993, 1994; 6.0m x 16.1m 1995, 1996