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ROTHAMSTED
RESEARCH

Collection of Plans for the Woburn Organic Manuring Experiment

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W/RN/12 - Woburn Organic Manuring 1990 - 1994

Rothamsted Research

Rothamsted Research (1966-1988) *W/RN/12 - Woburn Organic Manuring 1990 - 1994* ; Collection Of Plans For The Woburn Organic Manuring Experiment, pp 25 - 29

1990

STACKYARD B.

26 TH Year

EXPERIMENT

ORGANIC MANURING

WOBURN

Sponsor: P. R. Poulton

TREATMENTS to Winter Wheat (Ww) and Winter Beans (BE)

Residues of Organic Manures

(Dg) FYM annually 1985-71 and 1981-85

(St) Straw annually 1965-71 and 1981-85

(Gm) Green Manure annually 1965-71 then (Lc8) Ley (clover/grass)

1979-86 (BE) 1980-87 (Ww)

(Pt) Peat annually 1965-71 then (Lc8) 1979-86 (BE) 1980-87 (Ww)

Residues of Fertilizers

(Fd) P, K, Mg equivalent to (Dg) rate annually 1965-71 and 1981-85 (Ww)

(Fs) K, Mg equivalent to straw with P annually 1965-71 then

± Dg rate 1981-86 (Ww) 7 (BE)

Legs: (Lc) (clover/grass/ley) 1965-71 then (Lc6) 1981-86 (BE) 7 (Ww) - clover/grass/ley (Lc7) Grass ley with N

Sub Plot N Treatments. kg ha⁻¹

-1, 2, 3, 4, 5 0, 50, 100, 150, 200, 250 (Ww)
 (-) 1, 2, 3, 4, 5 0, 50, 100, 150, 200, 250, (BE) applied in 1989.

STANDARD APPLICATIONS per hectare

Manures: (0:17:34) @ 588 kg with seed and

Mn foliar spray @ SFP in spring. (BE) and (Ww)

Wheat only: Cartafuran @ 7.5 kg, Drazo pellet's (standard rate) must be applied 7-14 days before sowing, repeat with seed

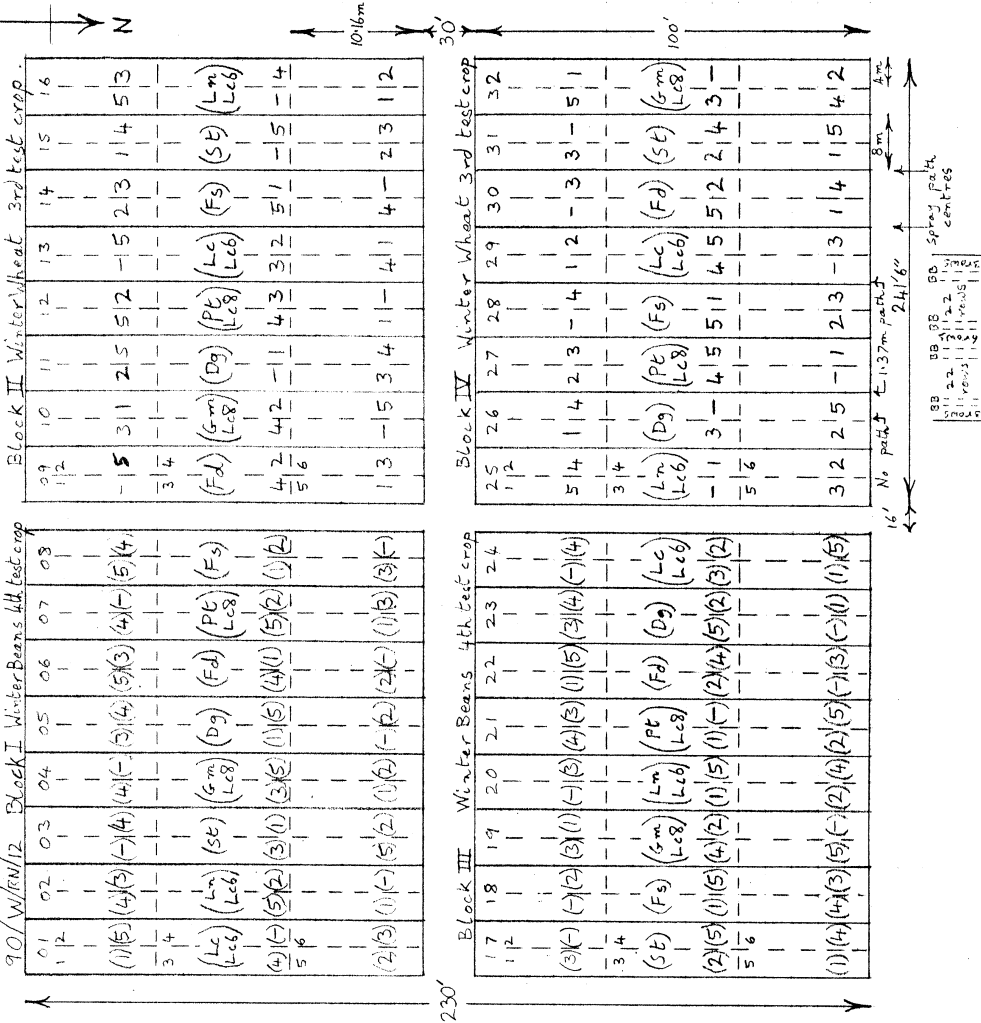
VARIETIES: BE Banner sown @ Kgha' Date;

Ww Mercia sown @ Kgha' Date;

SOB PLOT AREA: 14' x 30' = 0.0039 ha.

Wheat plots drilled without paths between sub-plots. Cross paths to be cut just before N application to allow for maximum sampling area before them.

W.Beans are sown solid, seed ploughed in, and paths cut later



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WOBURN W. wheat & W. beans 27th Year STACKYARD B 1991

SPONSOR: PR. Peulston

TREATMENTS to W. wheat (NW) and W. beans (BE)

Residues of organic manures

(Dg) FYM annually 1965-71 and 1981-85

(St) Straw annually 1965-71 and 1981-85

(Gm) Green manure annually 1965-71 then (Le8) Leg (Clover/Grass) 1979-86 (BE) 1980-87 (NW)

(Pt) Peat annually 1965-71 then (Le8) 1979-86 (BE) 1980-87 (NW)

Residues of Fertilizers

(Fk) P, K, Mg equivalent to (Dg) rate, annually 1965-71 and 1981-86 (BE) 7 (NW)

(Fs) K, Mg equivalent to straw with P annually 1965-71 then (Dg) rate 1981-6 (NW) 7 (BE)

Legs: (Le) Clover/Grass by } 1965-71 then (Le6) 1981-6 (BE) 7 (NW) - clover/grass leg
(Lr) Grass leg with N }

Sub plot N Treatments Kg N ha⁻¹

-1, 2, 3, 4, 5, 0, 50, 100, 150, 200, 250. NW

(-)(1)(2)(3)(4)(5) 0, 50, 100, 150, 200, 250. BE applied in 1970 & previous yrs

STANDARD APPLICATIONS ha⁻¹

Manures: BE: (0.16:36) @ 556kg

NW: (0.16:36) @ 556kg

Min. foliar spray @ 5FP in spring

VARIETIES: BE Banner sown @ 2.1 t/ha / m² (150 kg/ha) on 23 October 1990

NW Hereta sown @ 150 kg/ha Date: 27 September 1990

SUBPLOT AREA 14' x 30' = 0.0039 ha.

W. beans are sown solid, seed ploughed in, and paths cut later

ORGANIC MANURING EXPERIMENT

Block III W. beans 4th test crop

09	10	11	12	13	14	15	16
(-)(5)	(3)(1)	(2)(5)	(5)(2)	(-)(5)	(2)(3)	(1)(4)	(5)(3)
(Fd)	(Gm)	(Dg)	(Pt)	(Le)	(Fs)	(St)	(Lr)
(4)(2)	(4)(2)	(-)(1)	(4)(3)	(3)(2)	(5)(1)	(-)(5)	(-)(4)
(1)(3)	(-)(5)	(3)(4)	(1)(-)	(4)(1)	(4)(-)	(2)(-)	(1)(2)

Block III W. wheat

17	18	19	20	21	22	23	24
31	-2	31	-3	43	115	314	-4
(St)	(Fs)	(Gm)	(Lr)	(Pt)	(Fd)	(Le)	(Le6)
25	15	42	15	11	24	52	32
14	43	5	-2	4	25	-3	115

Block IV W. beans 4th test crop

25	26	27	28	29	30	31	32
(5)(4)	(1)(4)	(2)(3)	(-)(4)	(1)(2)	(-)(3)	(3)(-)	(5)(1)
(Lr)	(Dg)	(Pt)	(Le)	(Fs)	(Le6)	(Fd)	(St)
(-)(1)	(3)(-)	(4)(5)	(5)(1)	(4)(5)	(5)(2)	(2)(4)	(3)(-)
(3)(2)	(2)(5)	(-)(1)	(2)(3)	(-)(3)	(1)(4)	(1)(5)	(4)(2)

10.16m

30'

88	88	88	88	88	88	88	88
16	16	16	16	16	16	16	16
11	11	11	11	11	11	11	11
5	5	5	5	5	5	5	5

499' (152m)

Spring paths

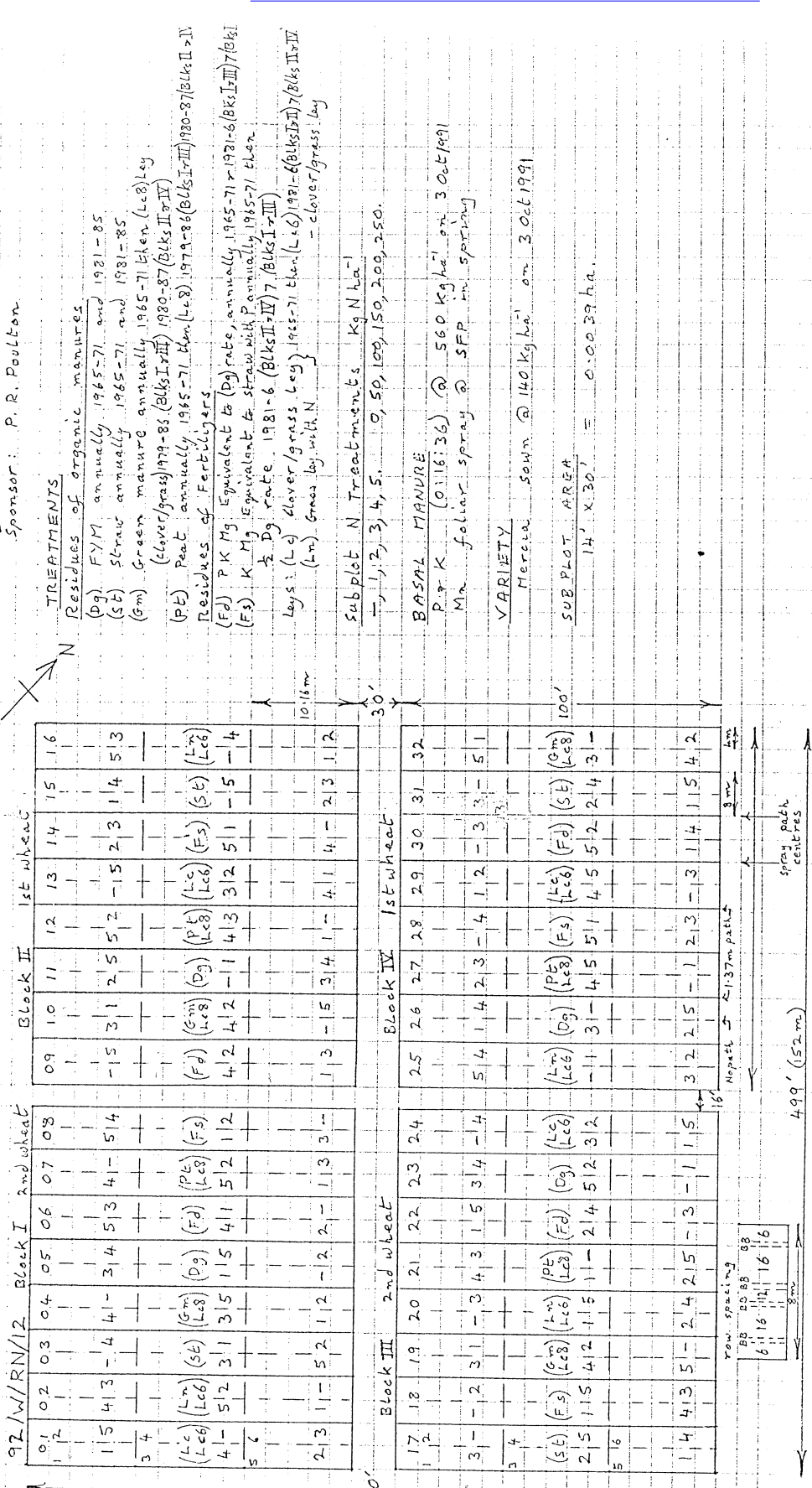
Centres

WOBURN W. Wheat
 28th year STACKYARD B 1992
 Sponsor: P. R. Poulton

ORGANIC MANURING EXPERIMENT

92/W/RN/12

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TREATMENTS

Residues of organic manures

(Dg) FYM annually 1965-71 and 1981-85
 (St) straw annually 1965-71 and 1981-85
 (Gm) Green manure annually 1965-71 then (Lc8) 1st year

(Pb) Peat annually 1965-71 then (Lc8) 1979-86 (Bk5 I-III) 1980-87 (Bk5 II-IV)

Residues of Fertilizers
 (Fd) P K Mg Equivalent to (Dg) rate, annually 1965-71 & 1981-86 (Bk5 I-III) 7 (Bk5 I-IV)
 (Fs) K Mg Equivalent to straw with P annually 1965-71 then

1/2 Dg rate 1981-86 (Bk5 II-IV) 7 (Bk5 I-III)

Lays: (Lc) clover/grass lay 1965-71 then (Lc6) 1981-86 (Bk5 I-III) 7 (Bk5 II-IV)
 (Ln) Grass lay with N - clover/grass lay

Subplot N Treatments Kg N/ha
 1, 2, 3, 4, 5, 0, 50, 100, 150, 200, 250.

BASAL MANURE
 P & K (0:16:36) @ 560 Kg/ha on 3 Oct 1991
 Mn foliar spray @ SFP in spring

VARIETY
 Marica sown @ 140 Kg/ha on 3 Oct 1991

SUBPLOT AREA
 14' x 30' = 0.0039 ha.

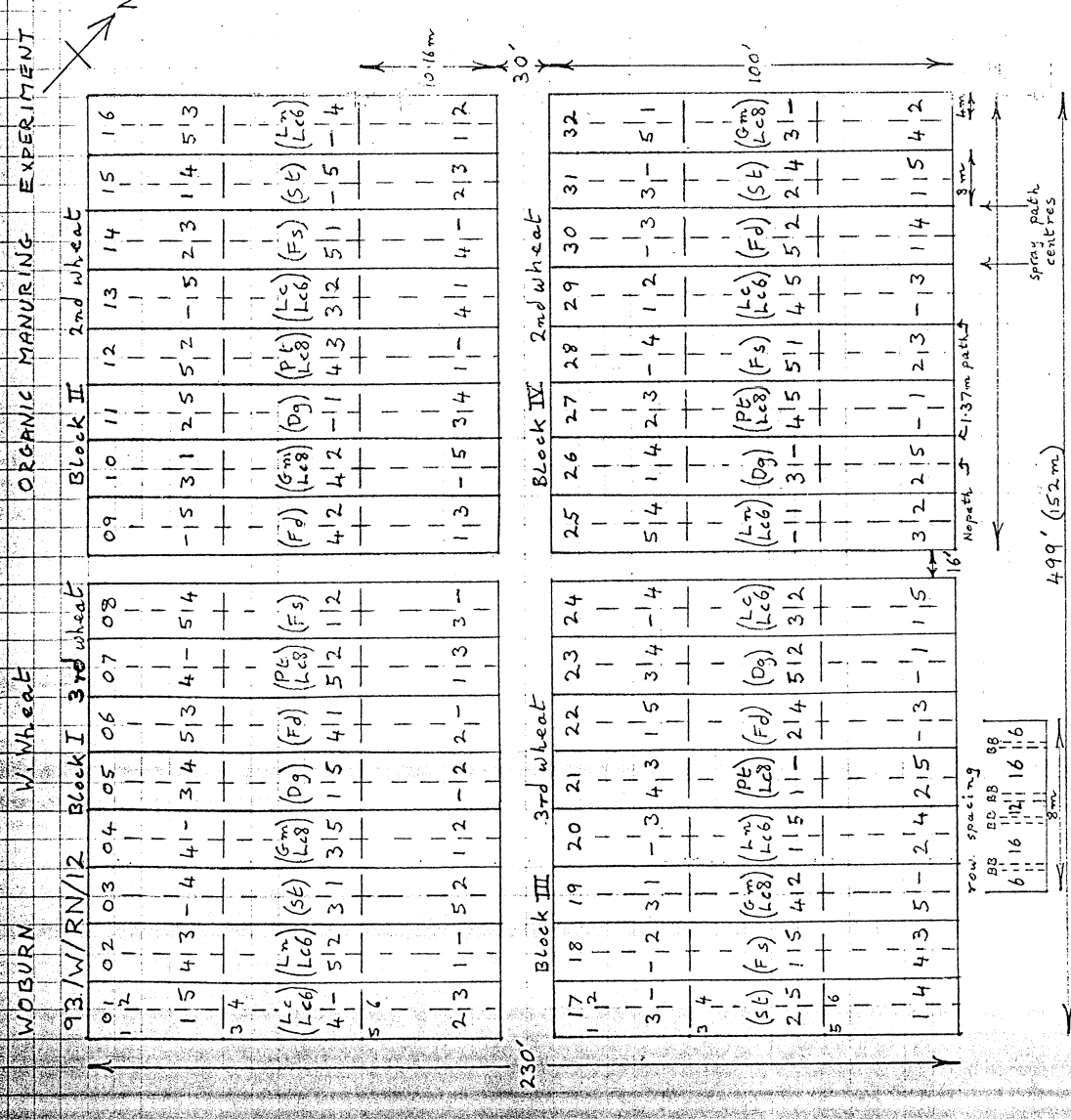
WOBURN 1993 29th year STACKYARD B 1993 204
 Sponsor: P. R. Poulton

TREATMENTS
 Residues of organic manures
 (Dg) FYM annually 1965-71 and 1981-85
 (St) Straw annually 1965-71 and 1981-85
 (Gm) Green manure annually 1965-71 then (Lc8) Ley
 (clover/grass) 1979-86 (Blks I & III) 1980-87 (Blks II & IV)
 (Pt) Peat annually 1965-71 then (Lc8) 1979-86 (Blks I & III) 1980-87 (Blks II & IV)
 Residues of Fertilisers
 (Fd) P K Mg Equivalent to (Dg) rate, annually 1965-71 & 1981-86 (Blks I & III) 7 (Blks II & IV)
 (Fs) K Mg Equivalent to straw with P annually 1965-71 then
 1/2 Dg rate 1981-6 (Blks II & IV) 7 (Blks I & III)
 Lays: (Lc) clover/grass ley } 1965-71 then (Lc6) 1981-86 (Blks I & III) 7 (Blks II & IV) -
 (Lm) Grass ley with N } - clover/grass ley

Subplot N Treatments Kg N ha⁻¹
 -, 1, 2, 3, 4, 5. 0, 50, 100, 150, 200, 250.

BASAL MANURE
 P & K (0:16:36) @ 556 Kg ha⁻¹
 Mn foliar spray @ SFP in spring

VARIETY
 Mercia sown @ 130 Kg ha⁻¹ on 7 Oct 1992
 SUB PLOT AREA 14' x 30' = 0.0039 ha.



row spacing

88	88	88
6	16	16
11	11	11
8	8	8

30th year STACKYARD B 1994
 Sponsor: P. R. Poulton

ORGANIC MANURING EXPERIMENT

WOUBURN W. Wheat

94 W/ RN/12

Block I 4th wheat							
01	02	03	04	05	06	07	08
12	1	1	1	1	1	1	1
15	413	4	41	314	513	41	514
34	1	1	1	1	1	1	1
(Lc)	(Lm)	(St)	(Gm)	(Dg)	(Fd)	(Pt)	(Fs)
(Lc6)	(Lc6)	(Lc8)	(Lc8)	(Lc8)	(Lc8)	(Lc8)	(Lc8)
41	512	31	315	115	41	512	112
56	1	1	1	1	1	1	1
213	11	52	112	12	21	113	31

Block II 3rd wheat

09	10	11	12	13	14	15	16
1	1	1	1	1	1	1	1
15	31	215	52	15	23	14	513
1	1	1	1	1	1	1	1
(Fd)	(Gm)	(Dg)	(Pt)	(Lc)	(Fs)	(St)	(Lc)
(Lc6)	(Lc8)	(Lc8)	(Lc8)	(Lc6)	(Lc6)	(Lc6)	(Lc6)
412	412	11	413	312	511	15	14
1	1	1	1	1	1	1	1
113	15	314	1	411	41	213	112

Block III 4th wheat

17	18	19	20	21	22	23	24
12	1	1	1	1	1	1	1
31	12	31	13	413	15	314	14
34	1	1	1	1	1	1	1
(St)	(Fs)	(Lc)	(Lm)	(Pt)	(Dg)	(Lc)	(Lc)
(Lc6)	(Lc6)	(Lc8)	(Lc8)	(Lc8)	(Lc8)	(Lc8)	(Lc8)
215	115	412	115	11	214	512	312
516	1	1	1	1	1	1	1
114	413	51	214	215	13	115	115

Block IV 3rd wheat

25	26	27	28	29	30	31	32
1	1	1	1	1	1	1	1
514	14	213	4	12	3	31	51
1	1	1	1	1	1	1	1
(Lm)	(Dg)	(Pt)	(Fs)	(Lc)	(Fd)	(St)	(Gm)
(Lc6)	(Lc8)	(Lc8)	(Lc8)	(Lc6)	(Lc6)	(Lc6)	(Lc8)
11	31	415	511	415	512	214	31
312	215	1	213	13	114	115	412

TREATMENTS

Residues of organic manures
 (Dg) FYM annually 1965-71 and 1981-85
 (St) Straw annually 1965-71 and 1981-85
 (Gm) Green manure annually 1965-71 then (Lc8) ley
 (Lc) Clover/grass 1979-86 (Blks I & III) 1980-87 (Blks II & IV)
 (Pt) Peat annually 1965-71 then (Lc8) 1979-86 (Blks I & III) 1980-87 (Blks II & IV)
 Residues of Fertilizers
 (Fd) PK Mg Equivalent to (Dg) rate, annually 1965-71 & 1981-86 (Blks I & III) 7 (Blks II & IV)
 (Fs) K Mg Equivalent to straw with P annually 1965-71 then
 1/2 Dg rate 1981-86 (Blks II & IV) 7 (Blks I & III)
 Lays: (Lc) Clover/grass ley
 (Lm) Grass ley with N
 - clover/grass ley

Subplot N Treatments Kg N ha⁻¹
 1, 2, 3, 4, 5. 0, 50, 100, 150, 200, 250.

BASAL MANURE
 P & K (0.16:36) @ 556 kg/ha for blocks II & IV only
 Mn foliar spray @ 5FP in spring

VARIETY
 Mercia dressed Panicle @ 325 seeds/m² on 16 Oct 1993

SUB PLOT AREA
 14' x 30' = 0.37 ha.
 harvested area = 2m x 9/16 = 0.00183 ha

