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RESEARCH

Collection of Plans for the Woburn Organic Manuring Experiment

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W/RN/12 - Woburn Organic Manuring 1975 - 1979

Rothamsted Research

Rothamsted Research (1966-1988) *W/RN/12 - Woburn Organic Manuring 1975 - 1979* ; Collection Of Plans For The Woburn Organic Manuring Experiment, pp 10 - 14

11th year
 STACKYARD B 1975

Sponsor: G.E.G. Mattingly

WOBURN ORGANIC MANURING EXPERIMENT Sugar beet

Barley

75' W/RN/12		I		II		III		IV	
09	10	11	12	13	14	15	16	17	18
1:0	2:3	4:2	2:6	6:7	0:2	2:5	5:2	1:0	2:3
6:5	6:4	6:3	4:7	5:1	6:1	4:0	0:7	3:7	4:1
(Lc)	(Lm)	(St)	(Gm)	(Dg)	(Pt)	(Fs)	(Lc)	(Lm)	(St)
0:1	2:4	6:7	0:4	6:1	0:6	0:1	2:5	5:7	6:5
5:7	3:5	4:5	2:7	3:0	7:3	3:7	4:6	2:4	2:4

230' 26"		III		IV		V		VI	
19	20	21	22	23	24	25	26	27	28
3:7	6:3	6:1	4:1	3:7	0:6	2:4	6:5	5:7	6:3
2:4	1:2	2:4	2:7	4:1	2:5	0:7	0:7	2:0	4:7
(St)	(Fs)	(Gm)	(Lm)	(Pt)	(Fd)	(Dg)	(Lc)	(Dg)	(Pt)
6:1	5:4	3:0	0:5	6:0	3:7	6:5	2:1	3:1	0:1
0:5	0:7	7:5	6:3	5:2	4:1	3:1	3:4	6:4	2:5

TREATMENTS per acre (hectare)
 Residues of Organic Manures (applied annually 1965-71) and Ley (Sown 1965)
 (Dg) 4 tons (10 tonnes) (DM) FYM, (16 tons [40 tonnes] FYM)
 (St) 3 tons (7.5 tonnes) (DM) Straw
 (Pt) 3 tons (7.5 tonnes) (DM) Peat
 (Gm) Green Manure
 (Lc) Grass-clover ley { ploughed up 1971 Blocks I & III
 (Ln) Grass ley with N { 1972 Blocks I & IV

Fertilisers
 (Fd) P, K, Mg equivalent to Dg (High PKMg)
 (Fs) K, Mg equivalent to straw with P (Low PKMg)
 Nitrogen to Barley 1975 Blocks I & III

No - None, N1-0.2, N2-0.4, N3-0.6, N4-0.8, N5-1.0, N6-1.19, N7-1.39 e.L.N.00
 Nitrogen to Sugar beet 1975 Blocks II & IV
 No - None, N1-0.3, N2-0.6, N3-0.9, N4-1.3, N5-1.6, N6-1.9, N7-2.2 cwt. N.00

VARIETIES
 Blocks I & III Barley - Julia Sown at: 140 lb (157 kg) Date: 4 Mar
 Blocks II & IV Sugar beet - Klein E sown at: 5 lb (5.6 kg) Date: 29 Apr

BASAL MANURING per acre (hectare)
 Sugar beet - 0.9 cwt (114 kg) P₂O₅ as superphosphate, 1.4 t (160 kg) K₂O as
 muriate of potash ploughed in in autumn. 510 lb (572 kg) compound
 fertiliser (0:20:20), 891 lb (100 kg) MgO as Epsom salts in the seed bed
 7.3 lb (8.2 kg) B₂O₃ as 'Solubor' in June. 2 tons (5 tonnes) Chalk
 IN AUTUMN

Barley - 255 lb (286 kg) compound fertiliser (0:20:20) c.i.b.
 Sub-plot area
 14' x 26' = 0.0064 acre (0.0026 ha)

WOBURN ORGANIC MANURING EXPERIMENT 12th year **STACKYARD B 1976** 204
 Sponsor: G.E.G. Mattingly

Winter Oats

01	02	03	04	05	06	07	08
(3)(2)(7)(0)	(0)(6)(5)(4)(2)	(0)(4)(3)(6)(3)(0)					
(1)(6)(2)(3)	(0)(6)(5)(7)(3)(5)(4)(6)(7)(0)						
(1)(L)(S)(G)(D)(P)(F)(S)							
(0)(2)(4)(0)(7)(0)(4)(0)(6)(6)(0)(2)(5)							
(5)(7)(9)(5)(0)(5)(3)(7)(3)(7)(0)(6)(6)							
17	18	19	20	21	22	23	24
(3)(7)(6)(3)(6)(0)(6)(0)(6)(0)(6)(6)(6)(6)							
(2)(4)(0)(2)(4)(0)(7)(0)(2)(5)(0)(7)(0)(7)							
(5)(F)(S)(G)(L)(P)(F)(D)(D)(L)(C)							
(9)(0)(6)(0)(3)(0)(6)(0)(0)(0)(0)(0)(6)(2)(0)							
(0)(5)(0)(7)(7)(5)(6)(3)(6)(0)(6)(0)(3)(0)(3)(6)							

Barley

09	10	11	12	13	14	15	16
1:0	2:3	4:2	2:6	6:7	0:2	2:5	5:2
6:5	6:4	6:3	4:7	5:1	6:1	4:0	0:7
(F)(G)(D)(P)(L)(C)(F)(S)(L)							
7:2	5:0	7:1	3:0	4:0	5:7	7:1	3:6
3:4	7:1	0:5	1:5	3:2	4:3	3:6	4:1
25	26	27	28	29	30	31	32
5:7	6:3	0:3	6:4	5:0	4:0	6:4	5:0
2:0	4:7	4:2	5:2	6:3	6:7	5:2	4:1
(L)(D)(P)(F)(L)(C)(F)(S)(G)							
3:1	0:1	1:6	3:0	7:4	1:3	7:1	6:3
6:4	2:5	7:5	1:7	2:1	2:5	3:0	7:2

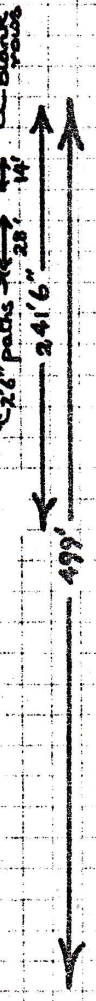
TREATMENTS per acre (hectare)
 Residues of Organic Manures (applied annually 1965-71) and Ley (Sown 1965)
 (Dg) 4 tons (10 tonnes) DM FYM, (16 tons (50 tonnes) FYM)
 (St) 3 tons (7.5 tonnes) DM Straw
 (Pt) 3 tons (7.5 tonnes) DM Peat
 (Gm) Green Manure
 (Ln) Grass-clover ley { ploughed up 1971 Blocks I & II
 (Lc) Grass ley with N { 1972 Blocks II & IV

Fertilisers
 (Fd) P, K, Mg equivalent to Dg (High P, K, Mg)
 (Fs) K, Mg equivalent to straw with P (Low P, K, Mg)
 Nitrogen to Barley 1975 Blocks I & II
 No-N, N1-0-2, N2-0-4, N3-0-6, N4-0-8, N5-1-0, N6-1-19, N7-1-29 cost N on
 0 25 50 75 100 125 150 175 kg Nitro-chalk 25
 Residues of Nitrogen to Barley 1975 Blocks I & II W. S. Oct 1974
 (0) -None (1) -0.2 (2) -0.4 (3) -0.6 (4) -0.8 (5) -1.0 (6) -1.19 (7) -1.39 cost N
 0 25 50 75 100 125 150 175 kg N

VARIETIES (200 kg)
 Blocks I & II Winter Oats - Peniarth Sown at 10 lb Date: 27 Oct
 Blocks III & IV Barley - Julia Sown at 145 lb (16 kg) Date: 8 Mar

BASAL MANURING per acre (hectare)
 Winter Oats - 2.70 lb (303 kg) compound fertiliser (0:20:20) c.o
 Spring Barley - 2.60 lb (291 kg) compound fertiliser (0:20:20) c.o

SUB-PLOT AREA
 14' x 20' = 0.0664 acre (0.0266 ha)



WOBURN 15th year STACKYARD B' 1977 201
 Sponsor: G.E.G. Mattingly

ORGANIC MANURING EXPERIMENT

WOBURN 17/11/RN/12
 MANURE Potatoes
 Winter Oats

Year	02	03	04	05	06	07	08
1971	1.4	1.2	1.1	1.2	1.1	1.2	1.1
1972	0.7	0.6	0.7	0.5	0.6	0.4	0.7
1973	1.6	1.5	1.4	1.2	1.0	1.1	1.2
1974	1.6	1.5	1.4	1.2	1.0	1.1	1.2
1975	1.6	1.5	1.4	1.2	1.0	1.1	1.2
1976	1.6	1.5	1.4	1.2	1.0	1.1	1.2
1977	1.6	1.5	1.4	1.2	1.0	1.1	1.2

Year	09	10	11	12	13	14	15	16
1971	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1
1972	0.9	0.8	0.9	0.7	0.8	0.6	0.9	0.8
1973	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1974	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1975	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1976	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1977	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1

Year	17	18	19	20	21	22	23	24
1971	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0
1972	4.0	3.6	3.6	4.0	3.6	4.0	3.6	4.0
1973	5.3	5.3	5.0	3.6	5.2	7.0	7.0	7.0
1974	5.3	5.3	5.0	3.6	5.2	7.0	7.0	7.0
1975	5.3	5.3	5.0	3.6	5.2	7.0	7.0	7.0
1976	5.3	5.3	5.0	3.6	5.2	7.0	7.0	7.0
1977	5.3	5.3	5.0	3.6	5.2	7.0	7.0	7.0

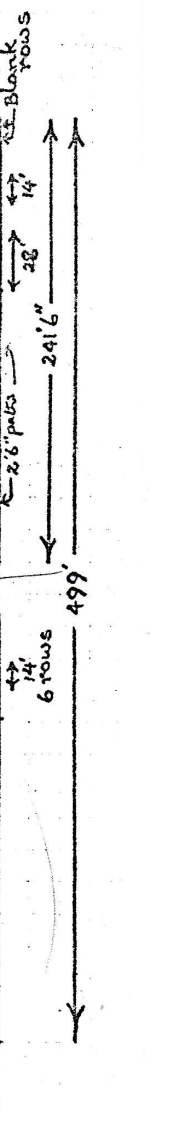
Year	25	26	27	28	29	30	31	32
1971	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1
1972	0.7	0.6	0.7	0.5	0.6	0.4	0.7	0.8
1973	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1974	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1975	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1976	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1
1977	1.6	1.5	1.4	1.2	1.0	1.1	1.2	1.1

TREATMENTS per acre (hectare)
 Residues of Organic Manures (applied annually 1965-7) & lay down (1965)
 (Dg) 4 tons (10 tonnes) (D.M.) FYM, (16 tons [40 tonnes] FYM)
 (St) 3 tons (7.5 tonnes) (D.M.) Straw
 (P) 3 tons (7.5 tonnes) (D.M.) Peat
 (Gm) Green Manure
 (Lc) Grass-clover ley { ploughed up 1971 Blocks I & III
 (Lm) Grass ley with N { 1972 Blocks II & IV
 Fertilisers
 (Fd) P, K, Mg equivalent to Dg (High PKMg)
 (Fs) K, Mg equivalent to Straw with P (Low PKMg)
 Nitrogen to Potatoes 1977 Blocks I & III
 0 - None, 1-0.6, 2-1.19, 3-1.79, 4-2.39, 5-2.99, 6-3.58, 7-4.18 cwt N
 0 75 150 225 300 375 450 525 kg N
 Residues of Nitrogen to Barley 1976 Blocks II & IV w. Oct 1977
 (0) - None, (1)-0.2, (2)-0.4, (3)-0.6, (4)-0.8, (5)-1.0, (6)-1.19, (7)-1.39 cwt N
 0 25 50 75 100 125 150 175 kg N

VARIETIES
 Blocks I & III Potatoes - Fentland Crown Planted:
 Blocks II & IV Winter Oats - Peniarth sown @ 180 lb (82) Date: 8 Nov

BASAL MANURING per acre (hectare)
 Winter Oats - 260 lb (291 kg) compound fertiliser (0:20:20) C/O
 Potatoes - 1020 lb (1123 kg) compound fertiliser (0:20:20) in autumn, 1075 lb (1205 kg) compound fertiliser (0:20:20) in the seedbed plus 336 lb (377 kg) Kieserite

SUB-PLOT AREA
 14' x 20' = 0.0064 acre (0.0026 ha)



ORGANIC MANURING EXPERIMENT 14th year STACKYARD 'B' 1978 204
 Sponsor: G.E.G. Mattingly

WOBBURN
 Winter Wheat

78/W/RN/12	01-02	03	04	05	06	07	08
(Lc)	4.5	0.7	6.7	2.4	3.5	6.3	5.1
(Lc)	3.4	6.1	5.4	6.1	2.0	5.2	3.2
(Lc)	7.6	5.3	1.0	7.3	1.6	7.1	7.6
(Lc)	2.0	4.2	3.2	5.0	4.7	0.4	0.3
(Lc)	7.6	5.3	1.0	7.3	1.6	7.1	7.6
(Lc)	2.0	4.2	3.2	5.0	4.7	0.4	0.3

78/W/RN/12	09	10	11	12	13	14	15
(Lc)	6.7	5.4	3.5	5.1	1.0	7.5	5.2
(Lc)	1.2	1.3	1.4	3.0	2.6	1.6	3.7
(Lc)	0.5	2.7	0.6	4.7	3.7	2.0	0.6
(Lc)	4.3	0.6	7.2	6.2	4.5	3.4	4.1
(Lc)	0.5	2.7	0.6	4.7	3.7	2.0	0.6
(Lc)	4.3	0.6	7.2	6.2	4.5	3.4	4.1

78/W/RN/12	16	17	18	19	20	21	22
(Lc)	4.0	1.4	1.6	3.6	4.0	7.1	5.3
(Lc)	5.3	6.5	5.3	5.0	3.6	5.2	7.0
(Lc)	1.6	2.3	4.7	7.2	1.7	4.0	1.2
(Lc)	7.2	7.0	0.2	1.4	2.5	3.6	4.6
(Lc)	1.6	2.3	4.7	7.2	1.7	4.0	1.2
(Lc)	7.2	7.0	0.2	1.4	2.5	3.6	4.6

TREATMENTS per acre (hectare)
 Residues of Organic Manures (applied annually 1965-71) 18 Ley (sown 1965)
 (Dg) 4 tons (10 tonnes) (DM) FYM, (16 tons [40 tonnes] FYM)
 (St) 3 tons (7.5 tonnes) (DM) Straw
 (Pt) 3 tons (7.5 tonnes) (DM) Peat
 (Gm) Green Manure
 (Lc) Grass-clover ley { ploughed up 1971 Blocks I & II
 (Ln) Grass ley with N { 1972, Blocks II & IV
 Fertilisers

(Fd) P, K, Mg equivalent to Dg (High P, K, Mg)
 (Fs) K, Mg equivalent to Straw with P (Low P, K, Mg)
 Nitrogen to Winter Wheat 1978 Series I & II

0-None, 1-0.24, 2-0.48, 3-0.72, 4-0.96, 5-1.20, 6-1.44, 7-1.68 cut N
 0 30 60 90 120 150 180 210 kg N
 Nitrogen to Potatoes 1978 Series I & II
 0-None, 1-0.6, 2-1.19, 3-1.79, 4-2.39, 5-2.99, 6-3.58, 7-4.18 cut N
 0 75 150 225 300 375 450 525 kg N

VARIETIES
 Block I & II Winter Wheat - Maris Huntsman sown at: 19.0 lb (20.0 kg)
 Block II & IV Potatoes - Pentland Crown Planted: 2.4 Apr. [Date: 14 Nov
BASAL MANURING per acre (hectare)
 Winter Wheat - 0.9 cut (14 kg) P₂O₅ as superphosphate
 0.48 cut (60 kg) K₂O as Muriate of potash
 Potatoes - 1080 lb (1210 kg) compound fertiliser (0:20:20
 in autumn, 1080 lb (1210 kg) compound fertiliser
 (0:20:20) in the seedbed plus 372 lb (417 kg)
 Kieserite

SUB-PLOT AREA
 14' x 20' = 0.0064 acre (0.0026 ha)

