ROTHAMSTED RESEARCH

Yields of the Field Experiments 1976

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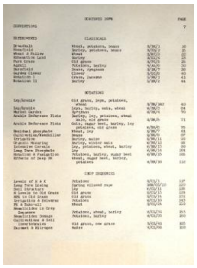

Experiments - Classicals

Rothamsted Research

Rothamsted Research (1977) *Experiments - Classicals ;* Yields Of The Field Experiments 1976, pp 10 - 48 **- DOI: https://doi.org/10.23637/ERADOC-1-15**

76/R/BK/1

BROADBALK

Object: To study the effects of organic and inorganic manures on continuous winter wheat. Since 1968 two three-year rotations have been included: potatoes, beans, wheat and fallow, wheat, wheat.

The 133rd year, wheat, potatoes, beans. The ninth year of the revised scheme.

For previous years see 'Details' 1967, Station Report for 1966, pp.229-231, Station Report for 1968, Part 2, 68/A/1(t) and 69-75/R/BK/1.

Areas harvested:

	Section	
Wheat:	0	0.00434
	1	0.00798
	5, 6 and 7	0.00659
	8 and 9	0.00694
Potatoes:	2	0.00659
Beans:	4	0.00741

Treatments:

Whole plots

PLOT	Plot	Fertilisers and organic manures:- Treatments until 1967	Treatments from 1968
01DN2PK	01	-	D N2 P K
21DN2	21	D	D N2
22D	22	D	D
03O	03	None	None
05MIN	05	P K Na Mg	P K (Na) Mg
06N1MIN	06	N1 P K Na Mg	N1 P K (Na) Mg
07N2MIN	07	N2 P K Na Mg	N2 P K (Na) Mg
08N3MIN	08	N3 P K Na Mg	N3 P K (Na) Mg
09N4MIN	09	N*1 P K Na Mg	N4 P K (Na) Mg
10N2	10	N2	N2
11N2P	11	N2 P	N2 P
12N2PNA	12	N2 P Na	N2 P Na
13N2PK	13	N2 P K	N2 P K
14N2PKMG	14	N2 P Mg	N2 P K Mg
15N3MIN	15	N2 P K Na Mg	N3 P K (Na) Mg
16N2MIN	16	N*2 P K Na Mg	N2 P K (Na) Mg
17N2MINH	17	+N2	N2 1/2(P K (Na) Mg)
18N2MINH	18	+ P K Na Mg	N2 1/2(P K (Na) Mg)
19C	19	C	C
20NKMG	20	N2 K Na Mg	N2 K (Na) Mg

\+ Alternating

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N1,N2,N3,N4: 48, 96, 144, 192 kg N (as sulphate of ammonia until 1967, except N* which was nitrate of soda. All as 'Nitro-Chalk' from 1968).
P: 35 kg P as single superphosphate (triple superphosphate in 1974)
K: 90 kg K as sulphate of potash
Na: 55 kg Na as sulphate of soda
(Na): 16 kg Na as sulphate of soda until 1973
Mg: 30 kg Mg annually to Plot 14, 35 kg Mg every third year to other plots since 1974. All as kieserite since 1974, previously as sulphate of magnesia annually
D: Farmyard manure at 35 tonnes
C: Castor meal to supply 96 kg N
MIN: P K (Na) Mg

Strips of sub-plots: Until 1967 wheat alone was grown on the experiment, with some bare fallowing on strips of sub-plots. From 1968, ten sub-plots were started with the following cropping:-

SECTION		1968	69	70	71	72	73	74	75	76
SC0/W25	Section 0	W (last fallowed 1951)	W	W	W	W	W	W	W	W
SC1/W10	Section 1	W (last fallowed 1966)	W	W	W	W	W	W	W	W
POTATOES	Section 2	BE	W	P	BE	W	P	BE	W	P
-	Section 3	W (fallowed 1967)	W	F	W	W	F	W	W	F
BEANS	Section 4	W (fallowed 1965)	P	BE	W	P	BE	W	P	BE
SC5/W1F	Section 5	W (fallowed 1965)	F	W	W	F	W	W	F	W
SC6/W2F	Section 6	F	W	W	F	W	W	F	W	W
SC7/W1BE	Section 7	P	BE	W	P	BE	W	P	BE	W
SC8/W4	Section 8*	W (fallowed 1963)	W	W	W	F	W	W	W	W
SC9/W18	Section 9	W (last fallowed 1958)	W	W	W	W	W	W	W	W

W = wheat, P = potatoes, BE = beans, F = fallow

* No weedkillers

NOTE: For a fuller record of treatments see 'Details' etc.

Standard applications:
Winter wheat: Manures: Section 1: Chalk at 3.1 t. Weedkillers: Sections 0, 1 and 9: Glyphosate at 1.7 kg in 220 l. Sections 0, 1, 5, 6, 7 and 9: Terbutryne and related triazines ('Prebane' at 4.5 kg in 220 l). Dicamba with mecoprop and MCPA ('Banlene Plus' at 5.6 l in 220 l). Insecticides: Pirimicarb at 0.14 kg in 220 l. Section 9 only: Dimethoate at 0.11 kg in 220 l.
Potatoes: Manures: Chalk at 3.1 t. Weedkillers: Linuron at 1.2 kg plus paraquat at 0.42 kg ion in 220 l. Fungicide: Mancozeb at 1.3 kg in 450 l. Insecticide: Pirimicarb at 0.14 kg in 450 l.
Fallow Section: Manures: Chalk at 3.1 t.

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Seed: Winter wheat: Cappelle, dressed with chlorfenvinphos, sown at 200 kg.
Potatoes: Pentland Crown.
Spring beans: Minden, sown at 220 kg.

Cultivations, etc.:-
ALL SECTIONS: Autumn fertilisers and castor meal applied: 30 Sept, 1975.
FYM applied: 9 Oct. Ploughed: 11 Oct.
CROPPED SECTIONS:
Winter wheat: Glyphosate applied: 24 Sept. Chalk applied: 29 Sept. Rotary harrowed sections 5, 6, 7, 8 and 9, spring-tine cultivated and rotary harrowed twice sections 0 and 1: 14 Oct. Seed sown: 16 Oct. 'Prebane' applied: 18 Oct. N applied: 31 Mar, 1976. Dimethoate applied: 8 Apr. 'Banlene Plus' applied: 29 Apr. Pirimicarb applied: 24 June. Combine harvested: 30 July.
Potatoes: Chalk applied: 29 Sept, 1975. Deep-tine cultivated: 9 Dec. Spring-tine cultivated: 22 Mar, 1976. N applied: 25 Mar. Rotary cultivated and potatoes machine planted: 29 Mar. Grubbed: 30 Mar. Weedkillers applied: 5 May. Insecticide applied: 17 June. Grubbed and rotary ridged: 21 June. Fungicide applied: 28 July. Haulm mechanically destroyed: 13 Sept. Lifted: 24 Sept.
Spring beans: Deep-tine cultivated: 9 Dec, 1975. N applied: 27 Feb. Heavy spring-tine cultivated: 3 Mar, 1976. Seed sown: 4 Mar. Tractor hoed: 27 Apr, 25 May. Combine harvested: 20 July.
FALLOW SECTION: Chalk applied: 29 Sept, 1975. Deep-tine cultivated: 9 Dec. Spring-tine cultivated: 22 Mar, 1976, 20 July. Heavy spring-tine cultivated: 20 Apr, 11 June. Ploughed: 2 June, 8 July.

NOTES: (1) On Section 9 extensive damage by larvae of the Crambid moth, Agriphila straminella, was caused to Plot 10. Other plots in this section were also affected but much less severely. Dimethoate was applied as a control measure.
(2) All wheat sections suffered a massive invasion of cereal aphids which was controlled by pirimicarb.

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WHEAT

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

SECTION PLOT	SC7/W1BE	SC5/W1F	SC6/W2F	SC1/W10	SC9/W18	SC0/W25	SC8/W4	MEAN
01DN2PK	4.11	4.10	4.66	*	*	*	*	4.29
21DN2	3.86	4.06	4.21	4.46	3.43	4.58	2.73	3.91
22D	4.61	4.68	4.32	4.63	4.09	4.75	2.61	4.24
030	2.34	3.06	1.10	1.61	1.12	1.85	1.34	1.77
05MIN	2.05	3.22	1.17	1.48	1.77	2.00	1.55	1.89
06N1MIN	3.64	4.05	2.82	2.61	2.68	3.42	1.65	2.98
07N2MIN	4.25	4.38	4.01	3.72	3.21	3.92	1.75	3.61
08N3MIN	3.86	4.22	4.44	4.02	3.40	4.04	2.53	3.79
09N4MIN	3.82	3.78	4.33	4.30	4.01	4.04	3.08	3.91
10N2	3.10	3.97	3.49	2.52	0.65	1.86	2.02	2.52
11N2P	3.35	3.25	3.78	2.55	2.05	2.05	1.79	2.69
12N2PNA	3.85	3.32	3.97	3.15	2.64	3.13	1.82	3.13
13N2PK	4.18	4.25	4.11	4.04	3.50	3.96	2.21	3.75
14N2PKMG	4.58	4.21	4.05	4.01	3.48	3.77	2.20	3.76
15N3MIN	4.64	3.96	4.08	4.10	3.25	4.27	2.38	3.81
16N2MIN	4.22	4.22	4.10	3.57	3.61	3.66	1.93	3.62
17N2MINH	4.49	4.41	4.03	3.42	3.46	3.53	1.90	3.61
18N2MIN	4.57	4.22	4.22	3.14	3.46	3.49	2.15	3.61
19C	4.79	4.19	4.38	3.78	3.42	4.22	2.09	3.84
20NKMG	*	*	*	2.37	*	2.92	*	2.65

GRAIN MEAN DM% 87.7

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

SECTION PLOT	SC7/W1BE	SC5/W1F	SC6/W2F	SC1/W10	SC9/W18	SC0/W25	SC8/W4	MEAN
01DN2PK	6.00	4.96	5.75	*	*	*	*	5.57
21DN2	5.90	5.97	6.02	6.05	5.36	5.60	4.75	5.66
22D	6.12	6.51	5.28	5.77	5.38	5.78	5.55	5.77
030	2.13	2.51	0.74	1.20	1.02	1.48	1.24	1.47
05MIN	1.95	3.68	0.99	1.14	1.51	1.47	1.34	1.73
06N1MIN	3.98	4.22	2.79	2.08	2.22	2.97	1.72	2.86
07N2MIN	4.70	5.21	3.84	3.63	3.36	3.83	2.93	3.93
08N3MIN	4.82	5.54	5.29	4.27	3.84	4.58	3.78	4.59
09N4MIN	5.01	4.88	5.56	4.66	4.98	4.72	4.74	4.94
10N2	2.35	3.75	2.89	2.06	0.63	1.64	1.91	2.17
11N2P	2.95	2.95	3.22	2.02	2.00	2.14	1.82	2.44
12N2PNA	3.66	3.35	3.89	2.92	2.41	2.89	2.24	3.05
13N2PK	3.81	4.08	3.69	4.12	3.79	4.16	2.88	3.79
14N2PKMG	3.49	3.96	3.81	3.71	3.03	4.13	2.00	3.45
15N3MIN	4.41	4.40	4.11	4.55	3.25	5.01	3.04	4.11
16N2MIN	3.52	4.31	3.62	3.35	3.02	3.77	2.93	3.50
17N2MINH	3.67	4.29	3.35	2.90	3.13	3.14	2.90	3.34
18N2MIN	4.25	3.94	4.08	2.65	3.36	3.16	2.79	3.46
19C	4.08	4.33	4.18	3.11	2.71	3.56	2.61	3.51
20NKMG	*	*	*	1.67	*	2.50	*	2.09

STRAW MEAN DM% 92.8

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PLOT	POTATOES TOTAL TUBERS: TONNES/ HECTARE	POTATOES % WARE 3.81 CM (1.5 INCH) RIDDLE	SPRING BEANS GRAIN: TONNES/ HECTARE
01DN2PK	30.3	95.0	0.95
21DN2	36.6	95.4	1.10
22D	37.5	97.8	1.20
030	11.6	93.8	0.35
05MIN	18.7	96.9	0.86
06N1MIN	25.6	97.1	0.80
07N2MIN	30.6	97.8	0.97
08N3MIN	32.0	97.2	0.89
09N4MIN	29.2	96.5	1.03
10N2	10.6	91.1	0.32
11N2P	8.3	88.3	0.44
12N2PNA	10.5	90.7	0.21
13N2PK	22.4	96.9	1.20
14N2PKMG	22.4	94.8	0.97
15N3MIN	31.8	98.0	1.40
16N2MIN	27.9	96.5	1.34
17N2MINH	25.6	98.1	1.10
18N2MINH	25.6	97.9	1.24
19	15.6	95.0	0.68
MEAN DM%			82.4

https://doi.org/10.23637/ERADOC-1-15

76/R/HB/2

HOOSFIELD

Object: To study the effects of organic and inorganic manures on continuous spring barley. Since 1968 a rotation of potatoes, beans and barley has been included.

The 125th year, barley, potatoes and beans. The 9th year of revised scheme.

For previous years see 'Details' 1967, Station Report for 1966, 68/A/2(t), 69/R/HB/2(t) and 70-75/R/HB/2.

Treatments to barley: All combinations of:-

1. MANURE Fertilisers, organic manures and frequency of barley cropping:-

	Form of N 1852-1966	Additional treatments 1852-1976	
---CON	None	-	Continuous
-P-CON	None	P	Continuous
--KCON	None	K (Na) Mg	Continuous
-PKCON	None	P K (Na) Mg	Continuous
A--CON	A	-	Continuous
AP-CON	A	P	Continuous
A-KCON	A	K (Na) Mg	Continuous
APKCON	A	P K (Na) Mg	Continuous
N--CON	N	-	Continuous
N--SICON	N	- Si	Continuous
N--RTN	N	-	In rotation (P,BE,B)
N--SIRTN	N	Si	In rotation (P,BE,B)
NP-CON	N	P	Continuous
NP-SICON	N	P Si	Continuous
NP-RTN	N	P	In rotation (P,BE,B)
NP-SIRTN	N	P Si	In rotation (P,BE,B)
N-KCON	N	K (Na) Mg	Continuous
N-KSICON	N	K (Na) Mg Si	Continuous
N-KRTN	N	K (Na) Mg	In rotation (P,BE,B)
N-KSIRTN	N	K (Na) Mg Si	In rotation (P,BE,B)
NPKCON	N	P K (Na) Mg	Continuous
NPKSICON	N	P K (Na) Mg Si	Continuous
NPKRTN	N	P K (Na) Mg	In rotation (P,BE,B)
NPKSIRTN	N	P K (Na) Mg Si	In rotation (P,BE,B)
C--CON	C	-	Continuous
C--RTN	C	-	In rotation (P,BE,B)
CP-CON	C	P	Continuous
CP-RTN	C	P	In rotation (P,BE,B)
C-KCON	C	K (Na) Mg	Continuous
C-KRTN	C	K (Na) Mg	In rotation (P,BE,B)
CPKCON	C	P K (Na) Mg	Continuous
CPKRTN	C	P K (Na) Mg	In rotation (P,BE,B)
DCON	None	D	Continuous
(D)CON	(D)	-	Continuous
(A)CON	(Ashes)	-	Continuous
-CON	None	-	Continuous

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Form of N: A, sulphate of ammonia: N, nitrate of soda - each to supply 43 kg N.
C, castor meal to supply 96 kg N.
P: 35 kg P as single superphosphate (triple superphosphate in 1974).
K: 90 kg K as sulphate of potash.
(Na): 16 kg Na as sulphate of soda until 1973.
Mg: 35 kg Mg, as kieserite every third year, since 1974 (sulphate of magnesia until 1973).
Si: Silicate of soda at 450 kg.
D: Farmyard manure at 35 tonnes, (D): until 1871 only.
(Ashes): Weed ash 1852-1916, furnace ash 1917-1932. None since.

2. N Nitrogen fertiliser (kg N), as 'Nitro-Chalk', since 1968 (cumulative N applications until 1973, on a cyclic system since 1974):

0	None
43	48
96	96
144	144

There are four extra plots testing all combinations of:-

1. MANURE

551AN2PK	Plot 551	A	N2	P	K	Continuous
561--PK	Plot 561		-	P	K	Continuous
571NN2--	Plot 571	N	N2			Continuous
581NN2--	Plot 581	N	N2			Continuous

N2: 96 kg N as 'Nitro-Chalk' since 1968. Other symbols as above.

2. MGNESIUM Magnesium fertiliser (kg Mg) as kieserite every third year since 1974:

0	None
35	35

Treatments to potatoes and beans:- All combinations of:-

1. MANURE Fertiliser and organic manures:

	To potatoes and beans: 1852-1966	1852-1976
C---	C	-
CP--	C	P
C-KMG	C	K (Na) Mg
CPKMG	C	P K (Na) Mg

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2. NRESID N Nitrogen fertiliser (kg N), as 'Nitro-Chalk':

Beans	Potatoes	Beans (residual effects, applied to previous potatoes)	Potatoes (applied 1976)
(0)	0	None	None
(96)	96	96	96
(192)	192	192	192
(288)	288	288	288

NOTE: For a fuller record see 'Details' etc.

Standard applications:

Barley: Manures: Chalk at 2.9 t, to continuous barley plots only. Weedkillers: Dicamba with mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l) to 'Form of N 1852-1966 N and C' plots. Dicamba with mecoprop and MCPA ('Banlene Plus' at 5.6 l in 220 l) to all remaining plots.

Potatoes: Manures: Chalk at 2.9 t. Weedkillers: Linuron at 1.2 kg with paraquat at 0.42 kg ion in 220 l. Fungicide: Mancozeb at 1.3 kg in 450 l. Insecticide: Pirimicarb at 0.14 kg in 450 l. Haulm desiccant: Diquat at 0.6 kg in 220 l.

Seed: Barley: Julia, dressed with ethirimol, sown at 160 kg.
Potatoes: Pentland Crown.
Beans: Minden, sown at 220 kg.

Cultivations, etc.:-

All plots: P and K applied: 1 Oct, 1975. Chalk applied: 2 Oct. Silicate of soda applied: 6 Oct. Heavy spring-tine cultivated: 15 Oct. FYM applied: 13 Nov. Ploughed: 17 Nov. Spring-tine cultivated: 27 Feb, 1976.

Barley: Heavy spring-tine cultivated (except 'Form of N 1852-1966 N and C' plots and 'extra' plots): 14 Oct, 1975. Seed sown: 1 Mar, 1976. N applied: 26 Mar. 'Banlene Plus' applied: 14 May. 'Tetralex Plus' applied: 25 May. Combine harvested: 22 July.

Potatoes: N applied: 26 Mar. Spike rotary cultivated, seed mechanically planted: 29 Mar. Grubbed: 30 Mar. Weedkillers applied: 5 May. Insecticide applied: 17 June. Grubbed and rotary ridged: 21 June. Fungicide applied: 28 July. Haulm mechanically destroyed: 23 Sept. Haulm desiccant applied: 28 Sept. Lifted: 21 Oct.

Beans: Seed sown: 4 Mar. Tractor hoed: 27 Apr, 24 May. Combine harvested: 21 July.

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BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

N	0	48	96	144	MEAN
MANURE					
---CON	1.00	1.19	1.08	1.32	1.15
-P-CON	1.43	1.48	1.40	1.98	1.57
--KCON	1.57	1.86	1.64	2.63	1.92
-PKCON	2.03	2.99	3.92	4.12	3.27
A--CON	0.74	0.74	0.97	1.09	0.88
AP-CON	1.09	1.33	1.12	1.29	1.21
A-KCON	1.07	1.00	1.18	1.41	1.17
APKCON	2.05	3.07	3.68	3.74	3.14
N--CON	0.98	0.84	0.99	1.07	0.97
N--SICON	2.12	2.78	2.26	2.63	2.45
N--RTN	2.19	1.84	2.11	1.83	1.99
N--SIRTN	2.78	2.76	3.05	2.78	2.84
NP-CON	1.56	1.85	1.99	1.92	1.83
NP-SICON	2.34	2.56	2.98	3.50	2.84
NP-RTN	2.91	3.20	3.37	3.58	3.26
NP-SIRTN	3.20	3.49	3.49	3.41	3.40
N-KCON	1.45	1.46	1.23	1.57	1.43
N-KSICON	2.09	2.31	2.80	3.70	2.73
N-KRTN	2.30	2.15	2.39	2.62	2.37
N-KSIRTN	2.90	3.04	3.16	3.62	3.18
NPKCON	2.20	3.13	3.64	3.71	3.17
NPKSICON	2.48	3.50	3.99	3.85	3.46
NPKRTN	3.05	4.07	4.15	4.43	3.92
NPKSIRTN	3.33	3.84	4.50	4.45	4.03
C--CON	2.20	2.48	2.63	2.85	2.54
C--RTN	2.55	2.98	2.57	2.99	2.77
CP-CON	2.13	2.50	2.65	3.00	2.57
CP-RTN	2.86	2.78	3.13	3.13	2.98
C-KCON	1.89	2.63	2.69	3.13	2.59
C-KRTN	2.48	3.13	3.21	3.14	2.99
CPKCON	2.13	3.22	3.63	3.71	3.17
CPKRTN	3.32	4.16	4.45	4.49	4.10
DCON	4.65	4.25	4.44	4.47	4.45
(D)CON	1.92	3.27	2.49	2.84	2.63
(A)CON	1.86	1.81	1.81	1.56	1.76
-CON	1.39	1.80	1.55	2.01	1.69
MEAN	2.17	2.54	2.68	2.88	2.57

GRAIN MEAN DM% 86.0

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BARLEY

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

N	0	48	96	144	MEAN
MANURE					
---CON	0.61	0.60	0.62	0.62	0.61
-P-CON	0.61	0.62	0.82	0.81	0.71
--KCON	0.81	1.02	1.02	1.61	1.11
-PKCON	0.81	1.44	1.83	2.26	1.59
A--CON	0.41	0.42	0.42	0.63	0.47
AP-CON	0.84	0.81	0.83	0.84	0.83
A-KCON	0.63	0.81	0.82	0.80	0.76
APKCON	0.83	1.47	1.85	1.88	1.51
N--CON	0.69	0.70	0.69	0.69	0.70
N--SICON	0.72	1.08	1.06	1.06	0.98
N--RTN	1.07	1.02	1.05	1.04	1.05
N--SIRTN	1.43	1.41	1.39	1.41	1.41
NP-CON	1.74	1.74	1.35	1.71	1.64
NP-SICON	1.78	1.41	1.41	1.78	1.60
NP-RTN	1.03	1.37	1.39	1.72	1.38
NP-SIRTN	0.71	0.69	1.06	0.72	0.79
N-KCON	2.03	1.38	2.03	1.02	1.61
N-KSICON	1.75	2.10	2.11	1.07	1.76
N-KRTN	2.43	2.39	2.05	1.37	2.06
N-KSIRTN	2.78	2.37	2.03	1.71	2.22
NPKCON	1.04	0.69	1.39	1.39	1.13
NPKSICON	1.41	1.40	1.07	1.76	1.41
NPKRTN	1.40	1.39	1.38	1.04	1.30
NPKSIRTN	1.39	1.41	1.74	0.70	1.31
C--CON	1.12	1.06	1.11	0.74	1.01
C--RTN	1.83	1.47	1.09	1.47	1.47
CP-CON	1.46	1.77	2.14	2.19	1.89
CP-RTN	1.45	1.09	1.82	2.22	1.64
C-KCON	1.07	1.46	1.05	1.08	1.17
C-KRTN	1.07	1.43	1.80	1.45	1.43
CPKCON	1.08	1.43	2.17	2.18	1.71
CPKRTN	1.43	1.77	2.48	2.51	2.05
DCON	3.05	2.73	3.02	2.98	2.95
(D)CON	0.81	1.64	1.33	1.61	1.35
(A)CON	0.84	1.11	1.10	0.83	0.97
-CON	0.85	0.80	0.81	1.09	0.89
MEAN	1.25	1.32	1.43	1.39	1.35

STRAW MEAN DM% 87.5

https://doi.org/10.23637/ERADOC-1-15

76/R/HB/2

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

MANURE / MGNESIUM	551AN2PK	561--PK	571NN2-	581NN2-	MEAN
0	3.22	1.51	2.52	1.24	2.12
35	3.66	1.57	2.27	1.22	2.18
MEAN	3.44	1.54	2.39	1.23	2.15

GRAIN MEAN DM% 85.3

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

MANURE / MGNESIUM	551AN2PK	561--PK	571NN2-	581NN2-	MEAN
0	1.76	0.70	1.06	0.52	1.01
35	2.11	0.68	1.05	0.70	1.13
MEAN	1.93	0.69	1.05	0.61	1.07

STRAW MEAN DM% 90.6

https://doi.org/10.23637/ERADOC-1-15

76/R/HB/2

POTATOES

TOTAL TUBERS TONNES/HECTARE

***** TABLES OF MEANS *****

N	0	96	192	288	MEAN
MANURE					
C---	12.3	12.3	17.3	22.3	16.0
CP--	16.8	16.3	19.0	19.1	17.8
C-KMG	28.3	32.6	35.0	36.4	33.1
CPKMG	29.8	36.1	40.3	41.7	37.0
MEAN	21.8	24.3	27.9	29.9	26.0

PERCENTAGE WARE 3.81 CM (1.5 INCH RIDDLE)

***** TABLES OF MEANS *****

N	0	96	192	288	MEAN
MANURE					
C---	87.7	88.5	93.9	93.1	90.8
CP--	92.5	92.3	93.9	91.8	92.6
C-KMG	98.0	96.5	96.0	97.4	97.0
CPKMG	96.4	96.1	97.5	97.2	96.8
MEAN	93.6	93.3	95.4	94.9	94.3

PLOT AREA HARVESTED 0.00191

BEANS

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

NRESID	(0)	(96)	(192)	(288)	MEAN
MANURE					
C---	0.42	0.55	0.41	0.48	0.46
CP--	0.34	0.35	0.42	0.28	0.35
C-KMG	0.28	0.42	0.49	0.63	0.45
CPKMG	0.49	0.77	0.55	0.76	0.64
MEAN	0.38	0.52	0.47	0.54	0.48

GRAIN MEAN DM% 84.2

SUB PLOT AREA HARVESTED 0.00143

https://doi.org/10.23637/ERADOC-1-15

76/R/WF/3

WHEAT AND FALLOW

Object: To study the effects of fallowing for one or three years on unmanured winter wheat - Hoosfield.

The 121st year, winter wheat.

For previous years see 'Details' 1967, 68/A/3(t), 69-75/R/WF/3.

Whole plot dimensions: 9.61 x 52.1.

Treatments:

PLOT	Phase of fallowing cycle (up to 1976):-							
1/FALL1	Plot 1	F	W	F	F	F	W	F	W
-	Plot 2	F	F	W	F	W	F	W	F
3/FALL3	Plot 3	F	W	F	W	F	F	F	W
-	Plot 4	W	F	F	F	W	F	W	F
-	Plot 5	F	W	F	W	F	W	F	F
-	Plot 6	W	F	W	F	F	F	W	F
7/FALL1	Plot 7	F	F	F	W	F	W	F	W
-	Plot 8	W	F	W	F	W	F	F	F

W = wheat, F = fallow.

Basal applications: Dicamba with mecoprop and MCPA ('Banlene Plus' at 5.6 l in 220 l).

Seed: Cappelle, sown at 200 kg.

Cultivations, etc.:-
Wheat plots: Ploughed: 11 Oct, 1975. Rotary harrowed: 15 Oct. Seed sown: 17 Oct. Weedkiller applied: 29 Apr, 1976. Combine harvested: 29 July.
Fallow plots: Ploughed: 11 Oct, 1975, 2 June, 1976 and 8 July. Heavy spring-tine cultivated: 21 Apr, 11 June. Spring-tine cultivated: 22 Mar, 20 July.

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PLOT	1/FALL1	7/FALL1	3/FALL3	MEAN
	1.81	1.56	2.02	1.80

GRAIN MEAN DM% 87.8

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

PLOT	1/FALL1	7/FALL1	3/FALL3	MEAN
	1.01	0.51	0.74	0.76

STRAW MEAN DM% 92.4

PLOT AREA HARVESTED 0.01483

https://doi.org/10.23637/ERADOC-1-15 *pp 14*

76/R/EX/4

EXHAUSTION LAND

Object: To study the residual effects of manures, applied 1856-1901, on the yield of continuous barley - Hoosfield.

The 121st year, barley.

For previous years see 'Details' 1967, 68/A/7 and 69-75/R/EX/4.

Treatments: All combinations of :-

Whole plots

1. PLOTFERT(01) Fertiliser and farmyard manure 1876-1901:-

1-	Plot 1 None
2-	Plot 2 None
3D	Plot 3 D
4D	Plot 4 D
5N	Plot 5 N
6N*	Plot 6 N*
7NMIN	Plot 7 N P K Na Mg
8N*MIN	Plot 8 N* P K Na Mg
9P	Plot 9 P
10MIN	Plot 10 P K Na Mg

N = 96 kg N as ammonium salts
N* = 96 kg N as nitrate of soda
P = 34 kg P as superphosphate
K = 137 kg K as sulphate of potash
Na = 16 kg Na as sulphate of soda
Mg = 11 kg Mg as sulphate of magnesia
D = Farmyard manure at 35 tonnes
MIN = P K Na Mg

Sub plots

2. N Nitrogen fertiliser (kg N) 1976:

0	None
48	48
96	96
144	144

NOTES: (1) For a fuller record of treatments see 'Details' 1967 etc.
(2) The whole site was bare fallowed in 1975.
(3) Exceptionally small yields were obtained from certain treatments. Examination of stubbles showed much shrivelled grain had been ejected by the combine.

Basal applications: Weedkillers: Dicamba, mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l).

Seed: Julia, dressed with ethirimol, sown at 160 kg.

Cultivations, etc.:- Deep-tine cultivated: 13 Nov, 1975. Spring-tine cultivated: 1 Mar, 1976. Seed sown: 3 Mar. N applied: 24 Mar. Weedkiller applied: 28 May. Harvested: 26 July.

https://doi.org/10.23637/ERADOC-1-15 *pp 15*

76/R/EX/4

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

N PLOTFERT(01)	0	48	96	144	MEAN
1-	0.28	0.12	0.03	0.01	0.11
2-	0.07	0.05	0.12	0.23	0.12
3D	2.36	2.05	2.21	2.23	2.21
4D	2.07	2.38	2.10	1.51	2.01
5N	0.34	0.12	0.22	0.22	0.23
6N*	0.14	0.28	0.39	0.57	0.35
7NMIN	1.44	1.06	1.02	1.19	1.18
8N*MIN	1.60	1.53	1.21	1.10	1.36
9P	0.62	0.96	0.93	1.10	0.90
10MIN	1.48	1.98	1.85	1.50	1.70
MEAN	1.04	1.05	1.01	0.97	1.02

GRAIN MEAN DM% 85.0

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

N PLOTFERT(01)	0	48	96	144	MEAN
1-	0.19	0.19	0.03	0.05	0.12
2-	0.31	0.06	0.29	0.21	0.22
3D	1.34	1.29	1.37	1.27	1.32
4D	1.27	1.60	1.65	1.55	1.52
5N	0.15	0.15	0.23	0.15	0.17
6N*	0.07	0.22	0.15	0.36	0.20
7NMIN	0.89	0.75	0.73	0.89	0.82
8N*MIN	0.95	1.02	1.02	0.84	0.96
9P	0.74	0.75	0.90	0.84	0.81
10MIN	1.05	1.31	1.31	1.13	1.20
MEAN	0.70	0.73	0.77	0.73	0.73

STRAW MEAN DM% 91.8

SUB PLOT AREA HARVESTED 0.00728

https://doi.org/10.23637/ERADOC-1-15

76/R/PG/5

PARK GRASS

Object: To study the effects of organic and inorganic manures on old grass (for hay). The effects of liming are also studied.

The 121st year, hay.

For previous years see 'Details' 1967, 68/A/6(t), 69-71/R/PG/5, 72/R/PG/5(t), 73-75/R/PG/5.

Treatments:

Whole plots

MANURE	Fertilisers and organic manures:-	
N1	Plot 1	N1
O(D)	Plot 2	None (D until 1863)
O/PLOT3	Plot 3	None
P	Plot 4-1	P
N2P	Plot 4-2	N2 P
N1MIN	Plot 6	NI P K Na Mg
MIN	Plot 7	P K Na Mg
PNAMG	Plot 8	P Na Mg
N2MIN	Plot 9	N2 P K Na Mg
N2PNAMG	Plot 10	N2 P Na Mg
N3MIN	Plot 11-1	N3 P K Na Mg
N3MINSI	Plot 11-2	N3 P K Na Mg Si
O/PLOT12	Plot 12	None
D/F	Plot 13	D/F
N2*MIN	Plot 14	N2* P K Na Mg
MIN(N2*)	Plot 15	P K Na Mg (N2* until 1875)
N1*MIN	Plot 16	N1* P K Na Mg
N1*	Plot 17	N1*
N2KNAMG	Plot 18	N2 K Na Mg
D	Plot 19	D
D/N*PK	Plot 20	D/N*P K

N1, N2, N3:	48, 96, 144 kg N as sulphate of ammonia
N1*, N2*:	48, 96 kg N as nitrate of soda (30 kg N to Plot 20 in years with no farmyard manure)
P:	35 kg P (15 kg P to Plot 20 in years with no farmyard manure) as single superphosphate (triple superphosphate in 1974)
:K	225 kg K (45 kg K to Plot 20 in years with no farmyard manure) as sulphate of potash
Na:	15 kg Na as sulphate of soda
Mg:	10 kg Mg as sulphate of magnesia
Si:	Silicate of soda at 450 kg
D:	Farmyard manure at 35 tonnes every fourth year
F:	Fish meal every fourth year to supply 63 kg N
MIN:	P K Na Mg

https://doi.org/10.23637/ERADOC-1-15

Sub plots

LIME	Liming:-
A	a Ground chalk applied as necessary to achieve pH7
B	b Ground chalk applied as necessary to achieve pH6
C	c Ground chalk applied as necessary to achieve pH5
D	d None

Chalk applied 1976 (tonnes CaCO3):

Plot	1a	3.8
Plot	4/2a	12.6
Plot	6a	6.3
Plot	7a	3.8
Plot	9a	13.8
Plot	10a	16.3
plot	11/1a	20.7
Plot	11/2a	19.5
Plot	12a	18.2
Plot	12b	7.5
Plot	15a	6.9
Plot	16a	1.9
Plot	18a	1.9

Plots 7a, 9a, 10a chalk applied: 19 Jan. Remaining plots chalk applied: 27-29 Jan.

Additional sub plots (Plots 18, 19 and 20 only) (tonnes CaCO3 applied every fourth year 1920-1964):-

N2KNAMG0	18-1	None
N2KNAMG2	18-2	13.5
N2KNAMG1	18-3	7.9
D0	19-1	None
D2	19-2	6.3
D1	19-3	1.1
D/N*PK0	20-1	None
D/N*PK2	20-2	5.6
D/N*PK1	20-3	1.1

Since 1965 Plot 18-1 has been split into two for treatments 'c' and 'd' above and Plot 18-3 split into two for treatments 'a' and 'b'. The remaining sub-plots of Plots 18, 19 and 20 are treated as 'a'.

NOTE: For a fuller record of treatments see 'Details' etc.

Cultivations, etc.:- Mineral fertilisers applied: 8 Dec, 1975. N applied: 1st dressing - 8 Apr, 2nd dressing - 10 May. Cut twice: 9 June, 9 Nov.

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76/R/PG/5

1ST CUT (9/6/76) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

LIME / MANURE	A	B	C	D	MEAN
N1	1.70	1.85	1.32	0.25	1.28
O(D)	1.36	1.41	1.17	1.26	1.30
O/PLOT3	1.35	1.38	0.93	1.06	1.18
P	2.03	2.53	2.05	2.05	2.16
N2P	2.78	3.01	2.10	1.37	2.31
N1MIN	4.17	4.54			4.36
MIN	4.87	5.29	2.71	2.20	3.77
PNAMG	2.01	2.07	2.36	2.43	2.22
N2MIN	5.83	5.56	4.49	2.37	4.56
N2PNAMG	3.04	3.11	2.40	1.47	2.51
N3MIN	5.13	4.98	5.02	3.00	4.53
N3MINSI	5.07	5.45	5.29	4.45	5.07
O/PLOT12	1.24	1.28	1.48	1.22	1.31
D/P	2.87	3.10	2.72	2.53	2.81
N2*MIN	4.00	4.43	4.78	4.95	4.54
MIN(N2*)	4.62	4.25	1.84	2.23	3.23
N1*MIN	4.74	4.56	3.99	4.02	4.33
N1*	1.89	2.22	1.82	2.40	2.08
N2KNAMG0			0.79	0.25	0.52
N2KNAMG2	2.38				2.38
N2KNAMG1	1.73	1.82			1.78
D0	2.53				2.53
D2	3.59				3.59
D1	2.98				2.98
D/N*PK0	3.79				3.79
D/N*PK2	3.91				3.91
D/N*PK1	4.35				4.35

1ST CUT MEAN DM% 30.8

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76/R/PG/5

2ND CUT (9/11/76) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

LIME / MANURE	A	B	C	D	MEAN
N1	0.59	0.68	0.49	0.10	0.46
O(D)	0.42	0.31	0.55	0.54	0.46
O/PLOT3	0.23	0.18	0.32	0.40	0.28
P	0.43	0.36	0.88	0.99	0.66
N2P	1.56	1.63	0.86	0.72	1.19
N1MIN	1.22	1.31			1.27
MIN	0.97	1.09	1.14	1.07	1.07
PNAMG	0.57	0.59	0.82	0.96	0.74
N2MIN	1.31	1.26	1.07	0.92	1.14
N2PNAMG	0.96	1.01	0.87	0.53	0.84
N3MIN	1.41	1.81	1.87	1.80	1.72
N3MINSI	1.90	2.89	1.92	2.17	2.22
O/PLOT12	0.88	0.92	0.94	1.04	0.95
D/P	1.16	1.43	1.11	0.94	1.16
N2*MIN	0.91	1.06	1.68	1.90	1.39
MIN(N2*)	0.90	0.95	0.75	0.81	0.85
N1*MIN	0.92	0.86	1.16	0.95	0.97
N1*	0.56	0.69	0.91	0.92	0.77
N2KNAMG0			0.28	0.06	0.17
N2KNAMG2	1.06				1.06
N2KNAMG1	0.61	0.82			0.72
D0	1.29				1.29
D2	1.03				1.03
D1	.03				1.03
D/N*PK0	1.40				1.40
D/N*PK2	1.03				1.03
D/N*PK1	1.38				1.38

2ND CUT MEAN DM% 18.5

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76/R/PG/5

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

LIME / MANURE	A	B	C	D	MEAN
N1	2.29	2.53	1.80	0.35	1.74
O(D)	1.77	1.72	1.72	1.80	1.76
O/PLOT3	1.58	1.56	1.25	1.46	1.46
P	2.46	2.89	2.92	3.04	2.83
N2P	4.35	4.64	2.96	2.09	3.51
N1MIN	5.39	5.86			5.62
MIN	5.84	6.37	3.85	3.28	4.84
PNAMG	2.58	2.66	3.18	3.39	2.96
N2MIN	7.14	6.82	5.57	3.29	5.70
N2PNAMG	4.00	4.12	3.28	2.00	3.35
N3MIN	6.54	6.79	6.89	4.80	6.25
N3MINSI	6.97	8.34	7.21	6.62	7.29
O/PLOT12	2.12	2.21	2.42	2.26	2.25
D/F	4.03	.54	3.83	3.48	3.97
N2*MIN	4.91	5.48	6.45	6.85	5.92
MIN(N2*)	5.52	5.20	2.59	3.04	4.09
N1*MIN	5.65	5.43	5.14	4.98	5.30
N1*	2.45	2.90	2.72	3.32	2.85
N2KNAMG0			1.08	0.32	0.70
N2KNAMG2	3.44				3.44
N2KNAMG1	2.34	2.64			2.49
D0	3.82				3.82
D2	4.62				4.62
D1	4.00				4.00
D/N*PK0	5.19				5.19
D/N*PK2	4.93				4.93
D/N*PK1	5.73				5.73

TOTAL OF 2 CUTS MEAN DM% 24.6

https://doi.org/10.23637/ERADOC-1-15 *pp 21*

76/R/AG/6

AGDELL

Object: To study, by crop yields and soil analyses, the residual values of phosphate and potash applied in the period 1848-1951 and further dressings since 1964.

The seventh year of revised scheme, barley and potatoes.

For previous years see 'Details' 1967, 68/A/4, 69/R/AG/6, 70/R/AG/6(t), 71/R/AG/6(t), 72/R/AG/6(t) and 73-75/R/AG/6.

Treatments: All combinations of:-

Whole plots

1. OLDRESD — Fertilisers and organic manures applied to roots every fourth year, in the period 1848-1948:

NONE	None
PKNAMG	P K Na Mg
NPKNAMGC	N P K Na Mg C

N: 48 kg N as sulphate of ammonia
P: 41 kg P as superphosphate
K: 224 kg K as sulphate of potash
Na: 16 kg Na as sulphate of soda
Mg: 11 kg Mg as sulphate of magnesia
C: Castor meal at 2240 kg supplying about 112 kg N

2. OLDROTN — Rotation 1848-1951:

FALLOW	With fallow: Roots (turnips or swedes), barley, fallow, wheat
LEGUME	With legume: Roots, barley, legume (clover or beans), wheat

Half plots

3. 1964RESD — Residues of 1964 treatments:

P	P
K	K

Quarter plots

4. PREVCROP — Previous cropping 1958-69 on P-test half plots, 1958-70 on K-test half plots:

ARABLE	Arable or fallow
GRASS	Grass

Sixteenth plots

5. P205 64 K20 64 — Rates of 1964 treatments (kg):

		P205 to P-test half plots	K20 to K-test half plots
0	0	None	None
500	315	500	315
1000	630	1000	630
2000	1260	2000	1260

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Sixty fourth plots

6. P205 70 2 — On P-test half plots:

Residues of P205 applied 1970-72 to barley (total, kg)

0	0
375	375

On K-test half plots:

K20 73 6 — K20 applied to potatoes 1976 (kg) cumulative to dressings in 1973-75:

(0) 0	(0) 0
(620) 250	(620) 250

K20 73 6 — K20 applied to barley (kg):

(0) 0	(0) 0
(620) 0	(620) 0

Strips of sixty fourth plots:

7. On P-test half plots:

N 76 — N (kg) to barley 1976 (cumulative to dressings 1973-1975)

63	63
94	94

On K-test half plots:

CROP — Crops in 1976

POTATOES — Potatoes
BARLEY — Barley

Sub plot dimensions: Plots 1, 2, 3 and 4 - 6.04 x 3.02. Plots 5, 6 - 5.43 x 3.02.

Standard applications:

P-test half plots:

Barley: Manures: None. Weedkillers: Ioxynil at 0.42 kg with mecoprop at 1.26 kg in 280 l.

K-test half plots:

Barley: Manures: N at 95 kg as 'Nitro-Chalk' P205 at 120 kg as superphosphate. Weedkillers: Ioxynil at 0.42 kg with mecoprop at 1.3 kg in 280 l.

Potatoes: Manures: N at 250 kg as 'Nitro-Chalk'. P205 at 190 kg as superphosphate. Weedkiller: Linuron at 0.84 kg in 280 l. Insecticides: Menazon ('Saphicol' at 0.7 l in 280 l) applied twice. Fungicide: Mancozeb at 1.3 kg in 280 l applied with second insecticide spray.

https://doi.org/10.23637/ERADOC-1-15

Seed: Barley: Julia, dressed with ethirimol, sown at 190 kg.
Potatoes: King Edward.

Cultivations, etc.:- All plots: Heavy spring-tine cultivated: 23 Oct, 1975.
Ploughed: 7 Nov. Spring-tine cultivated: 8 Mar, 1976.
Barley: P applied to K-test half plots: 16 Oct, 1975. All N applied and seed sown: 11 Mar, 1976. Weedkiller applied: 7 May. Combine harvested: 15 July.
Potatoes: Standard N, P and test K applied: 29 Mar. Rotary cultivated and potatoes planted: 31 Mar. Grubbed and rotary ridged: 13 Apr.
Weedkiller applied: 6 May. Insecticide applied : 10 June. Insecticide with fungicide applied: 5 July.
Lifted: 21 Sept.

K-TEST HALF PLOTS

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP ARABLE

	OLDRESD	NONE		PKNAMG		NPKNAMGC	
	OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
K20 73 6	K20 64						
(0)0	0	4.40	4.43	4.72	3.99	4.08	4.63
	315	4.84	4.56	4.37	4.66	4.69	4.57
	630	5.40	4.67	3.89	5.29	4.66	5.08
	1260	5.17	4.93	4.85	5.30	5.13	5.08
(620)0	0	4.66	4.42	4.17	5.03	4.87	5.38
	315	5.11	4.86	4.30	4.22	5.21	4.47
	630	4.92	4.51	4.58	4.58	3.85	4.42
	1260	4.11	3.97	3.94	4.18	4.42	4.84

PREVCROP GRASS

	OLDRESD	NONE		PKNAMG		NPKNAMGC	
	OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
K20 73 6	K20 64						
(0)0	0	2.56	3.55	4.15	4.08	4.15	4.23
	315	4.82	5.13	3.64	4.46	4.52	4.94
	630	4.32	4.94	4.93	5.39	3.01	5.10
	1260	4.20	4.95	4.54	4.44	5.29	4.74
(620)0	0	3.24	3.43	4.03	4.30	3.71	4.35
	315	4.29	4.32	2.96	3.42	3.60	4.10
	630	4.37	4.43	4.32	4.44	3.05	3.42
	1260	3.74	3.95	4.41	4.04	4.07	4.83

GRAIN MEAN DM% 85.1

PLOT AREA HARVESTED 0.00085

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76/R/AG/6

P-TEST HALF PLOTS

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP ARABLE

		OLDRESD	NONE		PKNAMG	NPKNAMGC		
		OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
P205 70 2	P205 64	N 76						
0	0	63	3.20	2.86	3.61	3.58	3.01	3.11
		94	2.15	2.52	4.04	3.87	3.14	2.86
	500	63	3.21	3.34	3.67	3.48	3.27	3.56
		94	3.29	2.93	4.52	3.73	4.04	3.27
	1000	63	3.48	3.99	3.21	3.73	3.26	3.47
		94	3.80	4.15	4.28	4.10	3.41	3.05
	2000	63	3.63	4.04	3.86	3.98	3.48	3.39
		94	3.40	4.22	4.55	4.38	3.85	3.53
375	0	63	3.49	3.54	3.56	3.40	3.11	3.05
		94	2.85	4.05	4.13	3.85	3.80	3.35
	500	63	3.58	3.73	3.70	3.99	3.62	3.66
		94	3.80	3.91	4.40	3.71	4.22	3.52
	1000	63	3.75	3.72	3.67	4.26	3.15	3.83
		94	2.62	3.95	4.38	4.32	2.92	3.63
	2000	63	3.72	3.90	4.22	4.08	3.43	3.45
		94	3.95	4.42	4.70	4.22	4.05	3.47

PREVCROP GRASS

		OLDRESD	NONE		PKNAMG	NPKNAMGC		
		OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
P205 70 2	P205 64	N 76						
0	0	63	1.67	1.14	1.38	2.02	3.23	2.05
		94	2.60	1.26	3.24	2.16	3.32	2.13
	500	63	3.52	3.57	4.29	2.33	3.56	2.80
		94	2.94	3.61	3.77	2.76	3.55	3.11
	1000	63	3.96	4.00	3.88	3.15	3.80	3.55
		94	3.15	3.06	4.29	3.89	4.16	3.78
	2000	63	4.52	3.95	4.63	4.25	3.95	4.00
		94	3.62	4.43	4.39	4.68	4.09	4.45
375	0	63	3.18	2.90	2.80	3.11	3.49	2.46
		94	2.87	2.73	3.58	3.33	3.74	2.89
	500	63	3.41	3.84	4.66	3.01	3.89	3.51
		94	3.01	3.48	4.44	3.90	3.93	3.84
	1000	63	3.58	4.30	4.17	3.91	3.92	3.55
		94	4.15	3.92	4.61	4.29	3.79	3.74
	2000	63	4.21	4.69	4.28	3.41	4.22	3.49
		94	4.08	4.81	4.87	4.76	4.39	4.58

GRAIN MEAN DM% 80.5

PLOT AREA HARVESTED 0.00085

https://doi.org/10.23637/ERADOC-1-15

76/R/AG/6

K-TEST HALF PLOTS

POTATOES

TOTAL TUBERS TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP ARABLE

	OLDRESD	NONE		PKNAMG		NPKNAMGC	
	OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
K20 73 6	K20 64						
(0)0	0	6.5	8.2	18.6	17.9	10.3	16.3
	315	8.2	7.2	16.0	14.1	14.8	10.0
	630	7.5	10.0	15.2	19.9	15.1	11.4
	1260	3.2	12.0	11.6	17.3	12.3	12.2
(620)250	0	6.6	15.5	18.8	22.4	16.8	21.3
	315	10.0	14.5	26.2	16.5	23.2	16.0
	630	10.3	17.6	16.6	21.1	19.4	18.5
	1260	7.8	13.0	20.1	16.0	23.2	14.0

PREVCROP GRASS

	OLDRESD	NONE		PKNAMG		NPKNAMGC	
	OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
K20 73 6	K20 64						
(0)0	0	6.2	6.5	5.8	4.1	9.9	7.8
	315	4.6	6.8	16.5	7.5	11.0	12.6
	630	10.4	8.3	7.7	14.0	14.2	17.0
	1260	10.2	1.8	14.4	16.2	15.9	18.9
(620)250	0	16.3	16.8	7.3	16.2	23.7	20.7
	315	18.5	12.1	16.0	17.7	24.0	16.0
	630	12.2	14.4	12.2	14.6	21.4	22.2
	1260	11.0	11.9	20.2	14.2	25.3	20.8

https://doi.org/10.23637/ERADOC-1-15

76/R/AG/6

POTATOES

K-TEST HALF PLOTS

PERCENTAGE WARE 3.81 CM(1.5 INCH) RIDDLE

***** TABLES OF MEANS *****

PREVCROP ARABLE

	OLDRESD	NONE		PKNAMG		NPKNAMGC	
	OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
K20 73 6	K20 64						
(0)0	0	71.8	63.3	85.2	89.4	81.7	82.1
	315	75.5	64.4	79.1	74.2	64.0	77.5
	630	88.9	62.5	86.1	84.3	78.7	71.8
	1260	89.5	78.5	82.5	78.2	74.6	80.2
(620)250	0	77.2	82.8	84.1	89.0	86.1	79.8
	315	86.7	82.2	86.9	77.4	80.9	86.4
	630	87.1	90.6	89.5	83.1	80.1	79.5
	1260	78.7	82.7	85.5	80.0	83.0	80.7

PREVCROP GRASS

	OLDRESD	NONE		PKNAMG		NPKNAMGC	
	OLDROTN	FALLOW	LEGUME	FALLOW	LEGUME	FALLOW	LEGUME
K20 73 6	K20 64						
(0)0	0	50.7	62.8	37.5	41.1	56.6	36.4
	315	69.1	75.6	73.5	61.2	46.4	59.5
	630	68.8	56.0	66.0	67.2	68.2	62.2
	1260	73.0	54.5	79.8	82.9	76.1	69.2
(620)250	0	83.7	83.2	54.0	71.2	79.1	82.0
	315	87.4	78.1	85.5	79.0	73.3	75.5
	630	65.3	62.4	71.9	70.0	72.4	69.2
	1260	74.2	85.3	84.1	85.6	83.9	77.9

SUB PLOT AREA HARVESTED 0.00069

https://doi.org/10.23637/ERADOC-1-15

76/R/BN/7

BARNFIELD

Object: The experiment was designed to study the effects of organic and inorganic manures on continuous root crops. It has been progressively modified to study effects on other crops.

The tenth year of beans on Sections 1 and 2. The second year of Italian ryegrass on the rest of the experiment except for the discard of Strip 4, sown to wheat for take-all studies.

For previous years see 'Details' 1967, 68/A/5(t), 69/R/BN/7, 70/R/BN/7(t), 71/R/BN/7(t), 72/R/BN/7(t) and 73-75/R/BN/7.

Plot dimensions:
Ryegrass: 10.7 x 55.9.
Beans: Section 1: 10.7 x 55.9.

Treatments to ryegrass: All combinations (except NKMG) of:-

Whole plots

1. MANURE Fertilisers and organic manures:

DN	D	N				
DNPK	D	N	P	K		
NPKMG		N	P	K	(Na)	Mg
NP		N	P			
NPK		N	P	K		
NPMG		N	P		(Na)	Mg
N		N				
NKMG		N		K	(Na)	Mg

N: 75 kg N per cut in 1975 only. 100 kg N before 1st cut, 75 kg N after 1st cut in 1976. All as 'Nitro-Chalk'.
P: 35 kg P as single superphosphate (triple superphosphate in 1974).
K: 225 kg K as sulphate of potash.
(Na): 90 kg Na as sodium chloride until 1973.
Mg: 90 kg Mg as kieserite every fourth year since 1974 (sulphate of magnesia until 1973).
D: Farmyard manure at 35 tonnes (until 1975).

Quarter plots

2. NFORMRES Residues of forms of N (each supplying 96 kg N):

NS	Nitrate of soda
SA	Sulphate of ammonia
SA/CM	Sulphate of ammonia + castor meal
CM	Castor meal

Castor meal last applied 1961, others until 1959.

NOTE: Yields were taken only from half plots cropped with sugar beet in 1973.

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Treatments to beans: All combinations of:-

Whole plots

1. MANURE Fertilisers and organic manures:

D	D
DPK	D P K
PKMG	P K (Na) Mg
P	P
PK	P K
PMG	P (Na) Mg
NONE	None

Rates and forms as for ryegrass but FYM applied for 1976 bean crop.

Half plots

2. PREVCROP(74) Previous crop in 1974 (after continuous beans 1967-1973):

BEANS	Beans
FALLOW	Fallow

Quarter plots

3. PREVCROP(75) Previous crop in 1975:

BEANS	Beans
FALLOW	Fallow

NOTES: (1) Treatment MANURE D, PREVCROP(74)BEANS, PREVCROP(75)FALLOW was not sown.
(2) Treatment MANURE NONE, PREVCROP(74)FALLOW, PREVCROP(75)FALLOW suffered partial crop failure. The yield presented includes that from the area of crop failure.

Standard applications:
Spring beans: Weedkiller: Mecoprop ('Methoxone P' at 4.2 l in 220 l).

Seed: Beans, Maris Bead, sown at 220 kg.

Cultivations, etc.:- P and K applied: 7 Oct, 1975.
Ryegrass: N applied: 26 Feb, 24 May. Cut three times: 18 May, 28 June, 17 Aug.
Spring Beans: Weedkiller applied: 9 Oct. FYM applied: 5 Nov. Ploughed: 6 Nov. Spring-tine cultivated: 2 Mar, 1976. Rotary harrowed and seed sown: 8 Mar. Combine harvested: 21 July.

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76/R/BN/7

RYEGRASS

1ST CUT (18/5/76) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

NFORMRES MANURE	NS	SA	SA/CM	CM	MEAN
DN	6.04	5.52	5.66	5.48	5.67
DNPK	5.90	6.15	6.50	6.18	6.18
NPKMG	5.68	5.66	6.04	6.28	5.92
NP	4.81	4.65	5.36	5.27	5.02
NPK	5.53	5.62	5.62	5.53	5.58
NPMG	5.14	4.68	5.55	5.59	5.24
N	3.95	3.84	5.37	5.61	4.69
MEAN	5.29	5.16	5.73	5.71	5.47

MANURE NKMG 5.30

1ST CUT MEAN DM% 23.3

2ND CUT (28/6/76) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

NFORMRES MANURE	NS	SA	SA/CM	CM	MEAN
DN	1.80	2.06	2.02	2.15	2.01
DNPK	1.88	1.88	1.91	2.30	1.99
NPKMG	1.44	1.15	1.36	1.60	1.39
NP	1.31	1.34	1.94	2.07	1.67
NPK	1.28	1.19	1.68	1.87	1.51
NPMG	1.14	1.00	1.53	1.68	1.34
N	1.40	1.05	1.91	1.66	1.51
MEAN	1.47	1.38	1.77	1.91	1.63

MANURE NKMG 1.29

2ND CUT MEAN DM% 35.4

3RD CUT (17/8/76) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

NFORMRES MANURE	NS	SA	SA/CM	CM	MEAN
DN	0.31	0.35	0.36	0.71	0.43
DNPK	0.25	0.21	0.26	0.65	0.34
NPKMG	0.26	0.12	0.23	0.40	0.25
NP	0.08	0.11	0.19	0.26	0.16
NPK	0.12	0.12	0.23	0.37	0.21
NPMG	0.17	0.13	0.25	0.25	0.20
N	0.14	0.14	0.31	0.33	0.23
MEAN	0.19	0.17	0.26	0.42	0.26

MANURE NKMG 0.20

3RD CUT MEAN DM% 44.0

https://doi.org/10.23637/ERADOC-1-15

76/R/BN/7

RYEGRASS

TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

NFORMRES MANURE	NS	SA	SA/CM	CM	MEAN
DN	8.15	7.92	8.04	8.34	8.11
DNPK	8.03	8.23	8.66	9.13	8.51
NPKMG	7.37	6.93	7.63	8.28	7.55
NP	6.20	6.10	7.49	7.60	6.85
NPK	6.93	6.94	7.54	7.77	7.29
NPMG	6.45	5.81	7.33	7.52	6.78
N	5.49	5.02	7.58	7.61	6.42
MEAN	6.95	6.71	7.75	8.04	7.36

MANURE NKMG 6.79

TOTAL OF 3 CUTS MEAN DM% 34.?

PLOT AREA HARVESTED 0.00568

BEANS

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP(74)	BEANS		FALLOW	
PREVCROP(75)	BEANS	FALLOW	BEANS	FALLOW
MANURE				
D	0.92	*	0.91	1.32
DPK	0.94	1.18	1.36	1.37
PKMG	0.59	0.57	0.57	0.69
P	0.50	0.47	0.43	0.52
PK	0.66	0.56	0.73	0.70
PMG	0.62	0.64	0.67	0.52
NONE	0.41	0.53	0.39	0.12

* NOT SOWN

GRAIN MEAN DM% 81.5

SUB PLOT AREA HARVESTED 0.00732

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76/R/GC/8

GARDEN CLOVER

Object: To study yields and pathogens of red clover grown continuously - Manor Garden.

The 123rd year, red clover.

For previous years see 'Details' 1967, 68/A/8(t) and 69-75/R/GC/8.

Whole plot dimensions: 2.13 x 3.05.

Treatments: All combinations of:-

1. VARIETY Varieties:

HUNGAROP	Hungaropoly (resistant to Sclerotinia trifoliorum)
S.123	S.123 (susceptible to S.trifoliorum)

2. ALDICARB Aldicarb to seedbed:

0	None
10	10 kg

Basal applications: Manures: (0:14:28) at 540 kg. K20 at 75 kg, as muriate of potash, after each cut except the last. Mg at 110 kg, as Epsom salts, half in spring, half after first cut. N at 130 kg, as 'Nitro-Chalk, in spring and after each cut except the last. Irrigation: Total 87 mm.

Seed: Sown at 34 kg.

Cultivations, etc.:- Area hand dug, all plants removed: 6 Oct, 1975. Basal PK and Mg applied: 28 Jan, 1976. Area raked down to seedbed, seed sown: 11 Mar. Aldicarb applied, raked in: 12 Mar. N applied: 18 Mar. Irrigated, 10 mm: 29 Apr. Irrigated, 7 mm on each occasion: 11 May, 7 June, 2 July, 8 July, 15 July. Cut, basal N, K and Mg applied: 27 July. Irrigated, 7 mm on each occasion: 2 Aug, 10 Aug, 18 Aug, 24 Aug, 27 Aug. Cut, basal N and K applied: 7 Sept. Irrigated, 7 mm: 8 Sept. Cut: 8 Oct.

NOTE: Samples of herbage were taken for determination of N, P, K, Ca, Na and Mg.

DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

VARIETY	HUNGAROP		S.123		
ALDICARB	0	10	0	10	MEAN
1ST CUT (27/7/76)	1.45	2.40	1.05	2.09	1.75
2ND CUT (7/9/76)	1.05	1.41	0.51	0.88	0.96
3RD CUT (8/10/76)	0.53	0.82	0.50	0.73	0.64
TOTAL OF 3 CUTS	3.03	4.62	2.06	3.71	3.35

MEAN DM% 1ST CUT:	20.2
2ND CUT:	20.9
3RD CUT:	13.4
TOTAL OF 3 CUTS:	18.2

PLOT AREA HARVESTED 0.00010

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76/S/RN/1

ROTATION I

Object: To compare nutrient cycles, uptakes of nutrients and responses to fresh P and K of lucerne and grass leys. To obtain an estimate of the rate of release of nutrients, particularly K, from Saxmundham soil. The effects of lucerne and grass leys will be compared on subsequent arable crops - Saxmundham.

Sponsors: A.E. Johnston.

The 78th year, grass and lucerne.

For previous years see 'Details' 1967, 68/A/9(t), 69/S/RN/1(t), 70/S/RN/1(t) and 71-75/S/RN/1.

Whole plot dimensions (new treatments): 5.49 x 17.1.

Treatments: From 1899 to 1969 the experiment followed a four-course rotation of wheat, roots, barley, legumes. Each phase of the rotation was present each year on a separate block. From 1966 each plot was divided, a small area at the south end continued under the original treatment (OLDTREAT), on the larger sub-plots modified treatments (NEWTREAT) were applied (see below).

In 1970 the rotation was stopped and each pair of blocks was divided for lucerne and grass
(the OLDTREAT sub-plots form a part of the Grass area).

TREATMENT 1899-1965	OLDTREAT Grass	NEWTREAT Lucerne	NEWTREAT Grass
	MANURE	MANURE	MANURE
D	(D)	(D)	(D)N
B	B	B	BN
N	N	(N)P2	(N)P2N
P	P	(P)P1	(P)P1N
K	K	(K)P2K	(K)P2KN
-	-	(-)P2	(-)P2N
PK	PK	(PK)P1K	(PK)P1KN
NK	NK	(NK)P2K	(NK)P2KN
NP	NP	(NP)P1	(NP)P1N
NPK	NPK	(NPK)P1K	(NPK)P1KN

D: Farmyard manure at 15 tonnes
(D): Farmyard manure at 30 tonnes (1966-1969 15 tonnes on OLDTREAT), 60 tonnes in autumn 1969, none since
B: Bone meal at 0.5 tonnes
N: 1899-1965 - 38 kg N as nitrate of soda. Since 1970 - 100 kg N (38 kg N on OLDTREAT) per cut as 'Nitro-Chalk'
P: 1899-1965 40 kg P205 as single superphosphate. Since 1966 50 kg P205 as triple superphosphate
P1,P2: 50, 100 kg P205 as triple superphosphate (single superphosphate until 1965)
K: 1899-1965 63 kg K20 as muriate of potash. Since 1966 - 126 kg K20 (75 kg K20 on OLDTREAT)

NOTES: (1) For a fuller record of treatments see 'Details' etc.
(2) On OLDTREAT grass, clover appeared naturally on some plots in 1975. To unify the plots white clover was sown on all at 33 kg.
(3) Lucerne was resown in 1976.

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Seed: Lucerne: Sabalt, sown at 30 kg.

Cultivations, etc.:-
OLDTREAT Grass: P,K and bone meal applied: 15 Mar, 1976. Cut: 8 June and 1 Sept.
NEWTREAT Grass: P,K and bone meal applied: 15 Mar. N applied: 16 Mar and 16 June. Cut: 8 June and 1 Sept.
Lucerne: Ploughed: 21 Oct, 1975. P,K and bone meal applied, seed sown: 6 Apr, 1976. Cut: 18 Aug.

76/S/RN/1 GRASS OLDTREAT

DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

MANURE	1ST CUT (8/6/76)	2ND CUT (1/9/76)	TOTAL OF 2 CUTS
(D)	3.01	0.30	3.31
B	2.23	0.06	2.29
N	3.54	0.48	4.02
P	1.59	0.06	1.65
K	1.13	0.03	1.16
-	1.37	0.00	1.37
PK	2.06	0.16	2.22
NK	3.42	0.41	3.83
NP	3.57	0.63	4.20
NPK	3.69	0.53	4.22
MEAN	2.56	0.27	2.83

1ST CUT MEAN DM% 40.5

2ND CUT MEAN DM% 32.3

TOTAL OF 2 CUTS MEAN DM% 36.4

PLOT AREA HARVESTED 0.00050

https://doi.org/10.23637/ERADOC-1-15 *pp 34*

76/S/RN/1 GRASS NEWTREAT

DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

MANURE	1ST CUT (12/6/75)	2ND CUT (1/9/76)	TOTAL OF 2 CUTS
(D)N	7.36	0.85	8.21
BN	5.83	0.54	6.37
(N2)P2N	5.83	0.67	6.50
(N1)P1N	5.66	0.62	6.28
(N1)P2KN	6.65	0.85	7.50
(N1)P2N	5.75	0.63	6.38
(N1)P1KN	6.76	1.00	7.77
(N2)P2KN	6.73	0.87	7.60
(N2)P1N	5.87	0.75	6.62
(N2)P1KN	6.73	0.73	7.46
MEAN	6.32	0.75	7.07

1ST CUT MEAN DM% 39.8

2ND CUT MEAN DM% 42.2

TOTAL OF 2 CUTS MEAN DM% 41.0

1ST CUT PLOT AREA HARVESTED 0.00123

2ND CUT PLOT AREA HARVESTED 0.00138

76/S/RN/1 LUCERNE NEWTREAT

1ST AND ONLY CUT (18/8/76)

DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

MANURE	
(D)	3.63
B	2.42
(N)P2	2.47
(P)P1	2.32
(K)P2K	2.59
(-)P2	2.47
(PK)P1K	2.78
(NK)P2K	3.00
(NP)P1	2.47
(NPK)P1K	3.09
MEAN	2.72

MEAN DM% 31.1

PLOT AREA HARVESTED 0.00134

https://doi.org/10.23637/ERADOC-1-15

76/S/RN/2

ROTATION II

Object: To measure, by crop yields and soil analysis, the residual value of P applied as FYM or superphosphate in the periods 1899-1964 and 1965-1967 - Saxmundham.

Sponsors: G.E.G. Mattingly, A.E. Johnston.

The eighth year of revised scheme, barley.

For previous years see 'Details' 1967, 68/A/10(t), 69/S/RN/2(t) and 70-75/S/RN/2.

Whole plot dimensions: 5.49 x 39.8.

Treatments: From 1899-1964 the experiment tested farmyard manure and nitrogen and phosphate fertilisers applied to a rotation of crops. Since 1965 the treatments have been changed to evaluate old residues of P (from FYM and superphospate) and new residues from treatments applied 1965-1967. All crops of the rotation - potatoes, barley, sugar beet, barley - were grown until 1974. The whole experiment was sown to barley in 1975 and 1976 - and tests combinations of:

Whole plots

1. RESIDUE Residues of previous treatments:-

		Approximate total dressing 1899-1964	Total dressing 1965-1967
(0)0	Plot 1	None	None
(D)0	Plot 2	400 tonnes FYM	None
(DP)0	Plot 3	400 tonnes FYM, 2.7 tonnes P_2O_5	None
(DP)D2	Plot 4	400 tonnes FYM, 2.7 tonnes P_2O_5	100 tonnes FYM
(DP)D2P1	Plot 5	400 tonnes FYM, 2.7 tonnes P_2O_5	100 tonnes FYM, 0.56 tonnes P_2O_5
(DP)P1	Plot 6	400 tonnes FYM, 2.7 tonnes P_2O_5	0.56 tonnes P_2O_5
(DP)P2	Plot 7	400 tonnes FYM, 2.7 tonnes P_2O_5	1.13 tonnes P_2O_5
(DP52)0	Plot 8	326 tonnes FYM, 4.3 tonnes P_2O_5 (until 1952 only)	None

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2nd barley after potatoes or sugar beet (1974) tests in addition to 1:-

Sub plots

2. P205(72) Phosphate residues 1970-72 (total P205 applied (kg)):

(0)	None (2 sub plots/plot)
(126)	126
(252)	252
(378)	378

and some of the combinations of 2 with:-

3. P205 74-6 Phosphate in 1974, 75 and 76 (kg P205):

	1974	1975-6
(0)0	None	None
(63x2)63	63	63
(189)0	189	None

3rd barley ater potatoes or sugar beet (1973) tests in addition to 1:-

Sub plots

2. P205(71) Phosphate residues 1969-71 (total P205 applied (kg)):

(0)	None (2 sub plots/plot)
(126)	126
(252)	252
(378)	378

and some of the combinations of 2 with:-

3. P205 73-6 Phosphate in 1973, 74, 75 (kg P205) None in 1976:

	1973	1974, 75
(0)0	None	None
(63x3)0	63	63
(189)0	189	None

Standard applications: All plots: Weedkillers: Dichlorprop plus MCPA ('Mephetol Plus' at 8.4 l in 340 l). Fungicide: Tridemorph at 0.53 kg applied with the weedkiller.
Second barley: Manures: (25:0:16) at 450 kg.
Third barley: Manures: K20 at 150 kg as muriate of potash.
After potatoes: N at 63 kg as 'Nitro-Chalk' (N1).
After sugar beet: N at 94 kg as 'Nitro-Chalk' (N2).

Seed: Julia, dressed with ethirimol, sown at 190 kg.

Cultivations, etc.:- K applied: 29 Sept, 1975. Ploughed: 6 Oct. Test P applied: 4 Mar, 1976. Seed sown, NK applied to second barley, N applied to third barley: 15 Mar. Weedkiller and fungicide applied: 18 May. Combine harvested: 19 July.

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BARLEY AFTER BARLEY 1975 POTATOES 1974

***** TABLES OF MEANS *****

		GRAIN TONNES/HECTARE			STRAW TONNES/HECTARE		
	P20574 6	(0)0	(63X2)63	189(0)	(0)0	(63X2)63	189(0)
RESIDUE	P205(72)						
(0)0	(0)	1.83		3.05	1.09		1.52
(0)0	(126)		2.82			1.47	
(0)0	(252)			2.25			1.09
(0)0	(378)		3.30			1.38	
(D)0	(0)	2.93	2.58		1.57	1.33	
(D)0	(126)			2.81			1.71
(D)0	(252)		3.14			1.61	
(D)0	(378)			3.02			1.66
(DP)0	(0)	3.09	3.57		1.61	1.85	
(DP)0	(126)			3.12			1.95
(DP)0	(252)		3.76			1.90	
(DP)0	(378)			3.41			1.71
(DP)D2	(0)	3.53		3.69	2.09		1.99
(DP)D2	(126)		4.18			2.18	
(DP)D2	(252)			4.34			2.23
(DP)D2	(378)		4.38			2.14	
(DP)D2P1	(0)	3.91	3.94		2.18	1.95	
(DP)D2P1	(126)			3.75			2.04
(DP)D2P1	(252)		4.32			2.28	
(DP)D2P1	(378)			4.40			2.37
(DP)P1	(0)	4.91	4.40		2.66	2.33	
(DP)P1	(126)			4.25			2.04
(DP)P1	(252)		4.25			2.33	
(DP)P1	(378)			4.29			2.37
(DP)P2	(0)	4.57		4.60	2.28		2.47
(DP)P2	(126)		4.36			2.33	
(DP)P2	(252)			4.41			2.33
(DP)P2	(378)		4.25			2.23	
(DP52)0	(0)	3.61		3.30	1.71		1.95
(DP52)0	(126)		3.84			2.37	
(DP52)0	(252)			4.03			1.80
(DP52)0	(378)		4.28			1.90	

GRAIN MEAN DM% 83.3

STRAW MEAN DM% 61.8

PLOT AREA HARVESTED 0.00077

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BARLEY AFTER BARLEY 1975 SUGAR BEET 1974

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

		GRAIN TONNES/HECTARE			STRAW TONNES/HECTARE		
	P20574 6	(0)0	(63X2)63	189(0)	(0)0	(63X2)63	189(0)
RESIDUE	P205(72)						
(0)0	(0)	2.17	3.27		1.07	1.59	
(0)0	(126)			2.96			1.69
(0)0	(252)		2.49			0.97	
(0)0	(378)			3.19			1.68
(D)0	(0)	2.85		3.68	1.89		2.35
(D)0	(126)		3.52			1.89	
(D)0	(252)			3.65			1.84
(D)0	(378)		3.78			2.05	
(DP)0	(0)	3.61		3.47	2.15		1.84
(DP)0	(126)		4.00			2.25	
(DP)0	(252)			4.37			2.25
(DP)0	(378)		3.42			1.79	
(DP)D2	(0)	4.40	3.61		2.25	1.84	
(DP)D2	(126)			3.96			1.99
(DP)D2	(252)		3.93			2.30	
(DP)D2	(378)			3.74			2.05
(DP)D2P1	(0)	3.39		4.18	1.84		2.25
(DP)D2P1	(126)		4.32			2.35	
(DP)D2P1	(252)			4.05			2.25
(DP)D2P1	(378)		3.64			1.99	
(DP)P1	(0)	4.30		4.10	2.30		2.05
(DP)P1	(126)		4.35			2.46	
(DP)P1	(252)			4.56			2.66
(DP)P1	(378)		4.49			2.46	
(DP)P2	(0)	3.92	4.34		2.15	2.10	
(DP)P2	(126)			4.02			1.94
(DP)P2	(252)		4.36			2.40	
(DP)P2	(378)			4.19			2.40
(DP52)0	(0)	3.47	4.08		1.69	1.94	
(DP52)0	(126)			4.64			2.05
(DP52)0	(252)		3.32			1.69	
(DP52)0	(378)			3.95			1.74

GRAIN MEAN DM% 83.4

STRAW MEAN DM% 66.6

PLOT AREA HARVESTED 0.00077

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BARLEY GIVEN N1 AFTER BARLEY 1974-5 POTATOES 1973
AND
BARLEY GIVEN N2 AFTER BARLEY 1974-5 SUGARBEET 1973

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVIOUS CROP 1973		POTATOES			SUGAR BEET		
	P20573 6	(0)0	(63X3)0	189(0)	(0)0	(63X3)0	189(0)
RESIDUE	P205(71)						
(0)0	(0)	1.10	2.71		1.04		1.20
(0)0	(126)			2.15		2.39	
(0)0	(252)		2.84				2.38
(0)0	(378)			2.71		2.99	
(D)0	(0)	2.02		2.67	1.79	2.38	
(D)0	(126)		2.39				2.66
(D)0	(252)			2.52		3.27	
(D)0	(378)		2.81				2.99
(DP)0	(0)	3.49		3.16	3.14	3.64	
(DP)0	(126)		3.65				3.60
(DP)0	(252)			3.61		3.06	
(DP)0	(378)		2.92				3.29
(DP)D2	(0)	3.82	3.71		3.73		4.16
(DP)D2	(126)			3.69		4.23	
(DP)D2	(252)		3.49				4.58
(DP)D2	(378)			3.05		4.32	
(DP)D2P1	(0)	4.06		3.48	4.75	4.24	
(DP)D2P1	(126)		3.89				4.18
(DP)D2P1	(252)			3.74		4.58	
(DP)D2P1	(378)		3.06				4.20
(DP)P1	(0)	3.89		3.77	4.01	4.40	
(DP)P1	(126)		3.79				4.59
(DP)P1	(252)			3.99		4.33	
(DP)P1	(378)		3.71				4.38
(DP)P2	(0)	3.22	3.80		4.31		4.40
(DP)P2	(126)			3.57		3.97	
(DP)P2	(252)		4.06				3.61
(DP)P2	(378)			3.68		4.52	
(DP52)0	(0)	3.71	3.41		4.09		4.34
(DP52)0	(126)			2.70		4.37	
(DP52)0	(252)		3.74				4.95
(DP52)0	(378)			3.94		4.05	

GRAIN MEAN DM% (PREVIOUS CROP 1973 POTATOES) 84.6

GRAIN MEAN DM% (PREVIOUS CROP 1973 SUGAR BEET) 84.1

PLOT AREA HARVESTED 0.00077

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