ROTHAMSTED RESEARCH

Yields of the Field Experiments 1995

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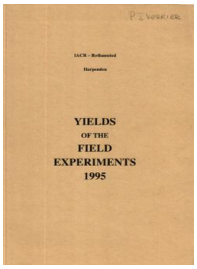

Crop Sequences

Rothamsted Research

Rothamsted Research (1996) *Crop Sequences ;* Yields Of The Field Experiments 1995, pp 51 - 96 **- DOI: https://doi.org/10.23637/ERADOC-1-50**

95/R/CS/10 and 95/W/CS/10

LONG TERM LIMING

Object: To study the effects of different amounts of lime, phosphate and sulphur on the yields and compositions of a sequence of crops - Rothamsted (R) Sawyers I and Woburn (W) Stackyard C.

Sponsor: S.P. McGrath.

The 34rd year, w. wheat.

For previous years see 'Details' 1967, 1973 and 74-94/R&W/CS/10.

Design: 2 randomised blocks of 16 plots split into 2 sub-plots.

Whole plot dimensions: 6.0 x 16.1 (R), 6.0 x 16.1 (W).

Treatments: All combinations of:-

Whole plots

1. **CHALK** Residual effects of ground chalk (tonnes CaCO3) (total applied 1962-87):

		Rothamsted total		Woburn total	
R	W	1962-78	1982-87	1962-78	1982-87
0	0	0	0	0	0
15	9	7	8	6	3
24.5	25.5	15	9.5	14	11.5
52.5	45.5	30	22.5	23	22.5

2. **P** Residual effects of P fertilizer applied:

	Until 1978	1981	1982	1983		1988	
	R & W	R & W	R & W	R	W	R	W
0	0	0	0	0	0	0	0
P1	0	P1	P1	0	P2	P1	P1
P2	P	P1	0	P2	P2	P1	P1
P3	P	P3	P1	P2	P4	P3	P3

Rates 1981-83 and 1988 P1, P2, P3, P4 = 25, 50, 75, 100 kg P as superphosphate

Sub-plots

3. **SULPHUR** Sulphur (kg S, as calcium sulphate), applied cumulatively since 1991:

0
30

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/10 and 95/W/CS/10

NOTES: (1) Until 1978 test P was applied cumulatively, rates varied with crop, none in 1979 and 1980. K was also applied cumulatively, to P1 and P3 plots. Since 1981 K has been applied basally (none in 1986, 1987, 1989, 1990, 1993, 1994 and 1995).
(2) Test manganese was applied cumulatively, 1987-90.

Experimental diary:

Sawyers I (R):

06-Sep-94 : B : Barclay Gallup at 4.0 l in 200 l.
12-Sep-94 : B : Topped.
14-Sep-94 : B : Ploughed.
29-Sep-94 : B : Disced, heavy spring-tine cultivated.
30-Sep-94 : B : Rotary harrowed, Genesis, dressed Rappor, drilled at 380 seeds per m^2.
24-Nov-94 : B : Alpha Isoproturon 500 at 2.5 l with Stomp 400 at 2.5 l in 200 l.
13-Apr-95 : B : 34.5% N at 435 kg.
01-May-95 : **T** : **SULPHUR** 30: Gypsum (17.5% S) at 171 kg.
10-May-95 : B : Halo at 2.0 l in 200 l.
16-Jun-95 : B : Halo at 2.0 l with Patrol at 0.5 l in 300 l.
02-Aug-95 : B : Combine harvested.

Stackyard C (W):

23-Sep-94 : B : Ploughed
30-Sep-94 : B : Rotary harrowed, Genesis, dressed Rappor, drilled at 300 seeds per m^2. Rolled.
28-Nov-94 : B : Panther at 2.0 l with Decis at 0.20 l in 200 l.
13-Mar-95 : **T** : **SULPHUR** 30: Gypsum (17.5% S) at 171 kg.
15-Mar-95 : B : 34.5% N at 116 kg.
21-Apr-95 : B : 34.5% N at 348 kg.
28-Apr-95 : B : Halo at 2.0 l in 200 l.
01-Jun-95 : B : Cyclone at 1.0 l with Mallard at 0.3 l in 200 l.
30-Jun-95 : B : Pirimicarb 50 DG at 280 g in 300 l.
04-Aug-95 : B : Combine harvested.

N.B. At Rothamsted, **CHALK** 0 plots failed, and have been omitted from the analyses.

95/R/CS/10 SAWYERS I (R)

GRAIN TONNES/HECTARE

***** Tables of means *****

P	-	P1	P2	P3	Mean
CHALK					
15	5.97	6.84	7.27	7.15	6.81
24.5	7.35	7.27	8.17	8.26	7.76
52.5	6.80	7.88	8.20	8.46	7.83
Mean	6.71	7.33	7.88	7.96	7.47

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/10 SAWYERS I (R)

GRAIN TONNES/HECTARE

***** Tables of means *****

SULPHUR	0	30	Mean
CHALK			
15	6.76	6.85	6.81
24.5	7.66	7.87	7.76
52.5	7.78	7.89	7.83
Mean	7.40	7.54	7.47

SULPHUR	0	30	Mean
P			
-	6.81	6.60	6.71
P1	7.15	7.51	7.33
P2	7.78	7.98	7.88
P3	7.85	8.07	7.96
Mean	7.40	7.54	7.47

SULPHUR		0	30
CHALK	P		
15	-	6.36	5.58
	P1	6.63	7.05
	P2	7.24	7.30
	P3	6.82	7.49
24.5	-	7.36	7.34
	P1	6.93	7.62
	P2	7.89	8.45
	P3	8.46	8.06
52.5	-	6.71	6.88
	P1	7.89	7.86
	P2	8.22	8.18
	P3	8.28	8.65

*** Standard errors of differences of means ***

CHALK	P	SULPHUR	CHALK P
0.321	0.370	0.159	0.641

CHALK SULPHUR	P SULPHUR	CHALK P SULPHUR
0.375	0.433	0.750

Except when comparing means with the same level(s) of

CHALK	0.275
P	0.318
CHALK.P	0.551

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/10 SAWYERS I (R)

GRAIN TONNES/HECTARE

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	11	0.641	8.6
BLOCK.WP.SP	12	0.551	7.4

GRAIN MEAN DM% 90.2

SUB PLOT AREA HARVESTED 0.00150

95/W/CS/10 STACKYARD C (W)

GRAIN TONNES/HECTARE

***** Tables of means *****

P	-	P1	P2	P3	Mean
CHALK					
0	1.12	0.82	2.24	1.38	1.39
9	7.37	7.74	8.25	7.78	7.78
25.5	7.10	7.13	7.72	7.52	7.37
45.5	6.48	8.12	7.21	7.52	7.33
Mean	5.52	5.95	6.36	6.05	5.97

SULPHUR	0	30	Mean
CHALK			
0	1.45	1.32	1.39
9	7.76	7.81	7.78
25.5	7.30	7.44	7.37
45.5	7.14	7.52	7.33
Mean	5.91	6.02	5.97

SULPHUR	0	30	Mean
P			
-	5.33	5.71	5.52
P1	5.86	6.05	5.95
P2	6.38	6.33	6.36
P3	6.09	6.01	6.05
Mean	5.91	6.02	5.97

https://doi.org/10.23637/ERADOC-1-50

95/W/CS/10 STACKYARD C (W)

GRAIN TONNES/HECTARE

***** Tables of means *****

CHALK	SULPHUR P	0	30
0	-	0.89	1.34
	P1	0.63	1.00
	P2	2.28	2.21
	P3	2.01	0.74
9	-	6.94	7.79
	P1	8.01	7.47
	P2	8.27	8.24
	P3	7.84	7.72
25.5	-	7.12	7.09
	P1	6.93	7.33
	P2	7.67	7.77
	P3	7.48	7.57
45.5	-	6.36	6.61
	P1	7.86	8.37
	P2	7.32	7.10
	P3	7.04	8.00

*** Standard errors of differences of means ***

CHALK	P	SULPHUR	CHALK P
0.244	0.244	0.128	0.489

CHALK SULPHUR	P SULPHUR	CHALK P SULPHUR
0.304	0.304	0.608

Except when comparing means with the same level(s) of

CHALK	0.255
P	0.255
CHALK.P	0.510

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	15	0.489	8.2
BLOCK.WP.SP	16	0.510	8.5

GRAIN MEAN DM% 91.1

SUB PLOT AREA HARVESTED 0.00143

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/140

CHEMICAL REFERENCE PLOTS

Object: To study the persistence in soil of agricultural chemicals applied annually, singly and in combination, and their effects on soil microflora and on yield of continuous s. barley - Long Hoos V 3.

Sponsors: R.H. Bromilow, A.A. Evans, P.H. Nicholls.

The 22nd year, s. barley.

For previous years see 74-94/R/CS/140.

Design: Single replicate of 32 plots.

Whole plot dimensions: 4.06 x 4.57.

Treatments: Applied cumulatively every year until 1993, none since.

All combinations of:-

1.	**WEEDKLLR**	Weedkiller in autumn:
	(NONE)	None
	(GLYPHOS)	Glyphosate to barley stubble each autumn
2.	**FUNGCIDE[1]**	Fungicide in autumn:
	(NONE)	None
	(TRIADIM)	Triadimefon in autumn
3.	**FUNGCIDE[2]**	Fungicide in spring:
	(NONE)	None
	(BENOMYL)	Benomyl to the seedbed
4.	**INSCTCDE**	Insecticide:
	(NONE)	None
	(CHLORFEN)	Chlorfenvinphos to the seedbed
5.	**NEMACIDE**	Nematicide:
	(NONE)	None
	(ALDICARB)	Aldicarb to the seedbed

Experimental diary:

09-Aug-94 : B : Straw baled.
15-Nov-94 : B : Stubble topped.
01-Dec-94 : B : Ploughed.
23-Mar-95 : B : Heavy spring-tine cultivated. Rotary harrowed, Alexis, undressed, drilled at 310 seeds per m^2.
11-May-95 : B : 34.5% N at 435 kg.
15-Jun-95 : B : Lorate 20 DF at 30 g in 300 l.

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/140

Experimental diary:
15-Jun-95 : B : Starane 2 at 0.5 l in 300 l.
08-Aug-95 : B : Combine harvested.

GRAIN TONNES/HECTARE

***** Tables of means *****

FUNGCIDE[1]	(NONE)	(TRIADIM)	Mean
WEEDKLLR			
(NONE)	3.87	3.78	3.83
(GLYPHOS)	3.65	3.91	3.78
Mean	3.76	3.85	3.80

FUNGCIDE[2]	(NONE)	(BENOMYL)	Mean
WEEDKLLR			
(NONE)	3.86	3.80	3.83
(GLYPHOS)	3.61	3.95	3.78
Mean	3.73	3.87	3.80

FUNGCIDE[2]	(NONE)	(BENOMYL)	Mean
FUNGCIDE[1]			
(NONE)	3.82	3.69	3.76
(TRIADIM)	3.64	4.05	3.85
Mean	3.73	3.87	3.80

INSCTCDE	(NONE)	(CHLORFEN)	Mean
WEEDKLLR			
(NONE)	3.95	3.71	3.83
(GLYPHOS)	3.82	3.73	3.78
Mean	3.89	3.72	3.80

INSCTCDE	(NONE)	(CHLORFEN)	Mean
FUNGCIDE[1]			
(NONE)	3.69	3.83	3.76
(TRIADIM)	4.09	3.61	3.85
Mean	3.89	3.72	3.80

INSCTCDE	(NONE)	(CHLORFEN)	Mean
FUNGCIDE[2]			
(NONE)	3.74	3.73	3.73
(BENOMYL)	4.04	3.71	3.87
Mean	3.89	3.72	3.80

https://doi.org/10.23637/ERADOC-1-50

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GRAIN TONNES/HECTARE

***** Tables of means *****

NEMACIDE / WEEDKLLR	(NONE)	(ALDICARB)	Mean
(NONE)	3.80	3.86	3.83
(GLYPHOS)	3.73	3.82	3.78
Mean	3.77	3.84	3.80

NEMACIDE / FUNGCIDE[1]	(NONE)	(ALDICARB)	Mean
(NONE)	3.76	3.76	3.76
(TRIADIM)	3.77	3.92	3.85
Mean	3.77	3.84	3.80

NEMACIDE / FUNGCIDE[2]	(NONE)	(ALDICARB)	Mean
(NONE)	3.67	3.80	3.73
(BENOMYL)	3.86	3.88	3.87
Mean	3.77	3.84	3.80

NEMACIDE / INSCTCDE	(NONE)	(ALDICARB)	Mean
(NONE)	3.79	3.99	3.89
(CHLORFEN)	3.74	3.70	3.72
Mean	3.77	3.84	3.80

FUNGCIDE[2] / WEEDKLLR / FUNGCIDE[1]	(NONE)	(BENOMYL)
(NONE) / (NONE)	4.00	3.74
(NONE) / (TRIADIM)	3.72	3.85
(GLYPHOS) / (NONE)	3.65	3.65
(GLYPHOS) / (TRIADIM)	3.57	4.25

INSCTCDE / WEEDKLLR / FUNGCIDE[1]	(NONE)	(CHLORFEN)
(NONE) / (NONE)	3.90	3.85
(NONE) / (TRIADIM)	4.00	3.57
(GLYPHOS) / (NONE)	3.47	3.82
(GLYPHOS) / (TRIADIM)	4.17	3.64

INSCTCDE / WEEDKLLR / FUNGCIDE[2]	(NONE)	(CHLORFEN)
(NONE) / (NONE)	3.80	3.92
(NONE) / (BENOMYL)	4.10	3.50
(GLYPHOS) / (NONE)	3.67	3.54
(GLYPHOS) / (BENOMYL)	3.97	3.92

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GRAIN TONNES/HECTARE

***** Tables of means *****

	INSCTCDE	(NONE)	(CHLORFEN)
FUNGCIDE[1]	FUNGCIDE[2]		
(NONE)	(NONE)	3.58	4.07
	(BENOMYL)	3.80	3.59
(TRIADIM)	(NONE)	3.90	3.39
	(BENOMYL)	4.28	3.82

	NEMACIDE	(NONE)	(ALDICARB)
WEEDKLLR	FUNGCIDE[1]		
(NONE)	(NONE)	3.82	3.92
	(TRIADIM)	3.77	3.80
(GLYPHOS)	(NONE)	3.69	3.60
	(TRIADIM)	3.77	4.05

	NEMACIDE	(NONE)	(ALDICARB)
WEEDKLLR	FUNGCIDE[2]		
(NONE)	(NONE)	3.80	3.92
	(BENOMYL)	3.80	3.79
(GLYPHOS)	(NONE)	3.54	3.67
	(BENOMYL)	3.92	3.97

	NEMACIDE	(NONE)	(ALDICARB)
FUNGCIDE[1]	FUNGCIDE[2]		
(NONE)	(NONE)	3.80	3.85
	(BENOMYL)	3.72	3.67
(TRIADIM)	(NONE)	3.54	3.74
	(BENOMYL)	4.00	4.10

	NEMACIDE	(NONE)	(ALDICARB)
WEEDKLLR	INSCTCDE		
(NONE)	(NONE)	3.93	3.97
	(CHLORFEN)	3.67	3.75
(GLYPHOS)	(NONE)	3.65	4.00
	(CHLORFEN)	3.82	3.64

	NEMACIDE	(NONE)	(ALDICARB)
FUNGCIDE[1]	INSCTCDE		
(NONE)	(NONE)	3.70	3.67
	(CHLORFEN)	3.82	3.85
(TRIADIM)	(NONE)	3.87	4.30
	(CHLORFEN)	3.67	3.54

	NEMACIDE	(NONE)	(ALDICARB)
FUNGCIDE[2]	INSCTCDE		
(NONE)	(NONE)	3.68	3.80
	(CHLORFEN)	3.67	3.80
(BENOMYL)	(NONE)	3.90	4.17
	(CHLORFEN)	3.82	3.59

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95/R/CS/140

GRAIN TONNES/HECTARE

***** Tables of means *****

	FUNGCIDE[1]	(NONE)		(TRIADIM)	
WEEDKLLR	**FUNGCIDE[2]**	(NONE)	(BENOMYL)	(NONE)	(BENOMYL)
(NONE)		4.00	3.74	3.72	3.85
(GLYPHOS)		3.65	3.65	3.57	4.25

	FUNGCIDE[1]	(NONE)		(TRIADIM)	
WEEDKLLR	**INSCTCDE**	(NONE)	(CHLORFEN)	(NONE)	(CHLORFEN)
(NONE)		3.90	3.85	4.00	3.57
(GLYPHOS)		3.47	3.82	4.17	3.64

	FUNGCIDE[2]	(NONE)		(BENOMYL)	
WEEDKLLR	**INSCTCDE**	(NONE)	(CHLORFEN)	(NONE)	(CHLORFEN)
(NONE)		3.80	3.92	4.10	3.50
(GLYPHOS)		3.67	3.54	3.97	3.92

	FUNGCIDE[2]	(NONE)		(BENOMYL)	
FUNGCIDE[1]	**INSCTCDE**	(NONE)	(CHLORFEN)	(NONE)	(CHLORFEN)
(NONE)		3.58	4.07	3.80	3.59
(TRIADIM)		3.90	3.39	4.28	3.82

	FUNGCIDE[1]	(NONE)		(TRIADIM)	
WEEDKLLR	**NEMACIDE**	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)		3.82	3.92	3.77	3.80
(GLYPHOS)		3.69	3.60	3.77	4.05

	FUNGCIDE[2]	(NONE)		(BENOMYL)	
WEEDKLLR	**NEMACIDE**	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)		3.80	3.92	3.80	3.79
(GLYPHOS)		3.54	3.67	3.92	3.97

	FUNGCIDE[2]	(NONE)		(BENOMYL)	
FUNGCIDE[1]	**NEMACIDE**	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)		3.80	3.85	3.72	3.67
(TRIADIM)		3.54	3.74	4.00	4.10

	INSCTCDE	(NONE)		(CHLORFEN)	
WEEDKLLR	**NEMACIDE**	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)		3.93	3.97	3.67	3.75
(GLYPHOS)		3.65	4.00	3.82	3.64

	INSCTCDE	(NONE)		(CHLORFEN)	
FUNGCIDE[1]	**NEMACIDE**	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)		3.70	3.67	3.82	3.85
(TRIADIM)		3.87	4.30	3.67	3.54

	INSCTCDE	(NONE)		(CHLORFEN)	
FUNGCIDE[2]	**NEMACIDE**	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)		3.68	3.80	3.67	3.80
(BENOMYL)		3.90	4.17	3.82	3.59

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95/R/CS/140

GRAIN TONNES/HECTARE

*** Standard errors of differences of means ***

Margins of two factor tables	0.202
Two factor tables	0.285
Three factor tables	0.404

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
WP	6	0.571	15.0

GRAIN MEAN DM% 89.9

PLOT AREA HARVESTED 0.00105

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/302

EYESPOT RESISTANCE TO MBC

Object: To study the development of resistance to MBC fungicides in eyespot and the ability of resistant strains to survive, spread and infect - Meadow.

Sponsor: G.L. Bateman.

The eleventh year, w. wheat after set-aside.

For previous years see 85-93/R/CS/302

Design: 2 randomised blocks of 4 plots split into 6 sub-plots.

Whole plot dimensions: 12.0 x 24.0.
Sub-plot dimensions: 4.5 x 6.0.

Treatments: All combinations of:-

Whole plots

1. **FUNGCIDE**		Fungicide applied cumulatively 1985-93 and 1995:
	NONE	None
	CARB	Carbendazim at 0.25 kg
	PRO	Prochloraz at 0.40 kg (0.50 kg in 1993 and 1995)
	CARB+PRO	Carbendazim at 0.25 kg with prochloraz at 0.40 kg (0.50 kg in 1993 and 1995)

Sub-plots

2. **EYE INOC**		Eyespot inoculum, applied in first year only:
	NATURAL	Natural background population (duplicated)
	W 19R 1S	Inoculated with wheat strains in proportion 19 resistant to one sensitive
	W 1R 19S	As above but one resistant to 19 sensitive
	R 19R 1S	Inoculated with rye strains, 19 resistant to one sensitive
	R 1R 19S	As above but one resistant to 19 sensitive

NOTE: The inoculum was colonized on oat seed and broadcast in October, 1984.

Experimental diary:

19-Jul-94 : B : PK as (0:20:32) at 1406 kg.
05-Aug-94 : B : Barclay Gallup at 2.0 l with Frigate at 1.0 l in 200 l.
15-Aug-94 : B : Ploughed.
27-Sep-94 : B : Rotary harrowed, Mercia, dressed Cerevax, drilled at 380 seeds per m^2.
28-Sep-94 : B : Rolled.
21-Nov-94 : B : Auger at 2.5 l with Stomp 400 at 2.5 l and Decis at 200 ml in 200 l.
13-Mar-95 : B : 34.5% N at 118 kg.

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Experimental diary:

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   14-Mar-95 : T : FUNGCIDE CARB: Tripart Defensor FL at 0.5 l in 200 l.
             : T : FUNGCIDE PRO: Sportak 45 at 1.1 l in 200 l.
             : T : FUNGCIDE CARB+PRO: Sportak 45 at 1.1 l with Tripart
                   Defensor FL at 0.5 l in 200 l.
   11-Apr-95 : T : FUNGCIDE CARB: Tripart Defensor FL at 0.5 l in 200 l.
             : T : FUNGCIDE PRO: Barclay Eyetak at 1.1 l in 200 l.
             : T : FUNGCIDE CARB+PRO: Barclay Eyetak at 1.1 l with Tripart
                   Defensor FL at 0.5 l in 200 l.
   12-Apr-95 : B : 34.5% N at 463 kg.
   10-May-95 : B : Calixin at 0.35 l with Halo at 2.0 l in 200 l.
   16-Jun-95 : B : Halo at 2.0 l with Patrol at 0.5 l in 300 l.
   02-Aug-95 : B : Combine harvested.
```

NOTE: Samples were taken in July to assess eyespot.

GRAIN TONNES/HECTARE

***** Tables of means *****

EYE INOC / FUNGCIDE	NATURAL	W 19R 1S	W 1R 19S	R 19R 1S	R 1R 19S	Mean
NONE	9.78	9.40	8.70	9.22	10.01	9.48
CARB	9.09	9.29	9.45	8.97	9.50	9.23
PRO	9.13	8.72	9.36	9.26	8.93	9.09
CARB+PRO	9.79	8.87	9.78	9.70	10.01	9.66
Mean	9.45	9.07	9.32	9.29	9.61	9.36

*** Standard errors of differences of means ***

EYE INOC	FUNGCIDE* EYE INOC	
0.243	0.485	min.rep
0.210	0.420	max-min

* Within the same level of **FUNGCIDE** only.

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP.SP	24	0.485	5.2

GRAIN MEAN DM% 91.7

SUB-PLOT AREA HARVESTED 0.00137

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/309 and 95/W/CS/309

LONG-TERM STRAW INCORPORATION

Object: To study the effects of rotational ploughing and time of sowing after the incorporation or burning of straw on soil conditions and pests, diseases, weeds and yield of w. wheat - Rothamsted (R) Great Knott III and Woburn (W) Far Field I.

Sponsors: R.D. Prew, A.D. Todd, E.T.G. Bacon, J.F. Jenkyn, R.J. Gutteridge, W. Powell.

The eleventh year, w. wheat.

For previous years see 85-94/R & W/CS/309.

Design: 4 randomised blocks of 12 plots split into 2 sub-plots (R).
2 randomised blocks of 12 plots split into 2 sub-plots (W).

Whole plot dimensions: 9.0 x 28.0 (R).
9.0 x 30.0 (W).

Treatments: All combinations of:-

Whole plots

1. **STRAWCUL** Treatment of straw of previous crop and type of cultivation up to 1994 (before the space) and subsequently (after the space):

   BT1 BTT
   BT1T2 CTT
   BP2 BPP
   BT1P2 CPP
   CT1 CTT
   CT1 CPT
   CT1T2 CTP
   CT1T2 CTT
   CP2 CPP
   CP2 CPT
   CT1P2 CTP
   CT1P2 CTT

Sub-plots

2. **SOW DATE** Date of sowing:

   E Early
   L Late

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/309 and 95/W/CS/309

NOTES: (1) The following codes are used:
B Straw burnt
C Straw chopped and spread
T1 Cultivated to 10 cm depth
T1P2 Cultivated to 10 cm depth, ploughed to 20 cm
T1T2 Cultivated to 10 cm depth and again to 20 cm
P2 Ploughed to 20 cm depth
(2) From 1994 T plots were cultivated to 10 cm and P plots were ploughed to 20 cm depth.
(3) In the experimental diary only the code after the space is used. i.e. BTT, CTT, BPP, CPP, etc.

Experimental diary:

Great Knott III (R).

06-Aug-94 : **T** : **STRAWCUL** CTT, CPP, CPT, CTP: Straw chopped.
08-Aug-94 : **T** : **STRAWCUL** BTT, BPP: Straw burnt, ash incorporated with discs.
02-Sep-94 : B : PK as (0:20:32) at 1317 kg.
27-Sep-94 : B : Sting CT at 2.0 l in 200 l.
03-Oct-94 : **T** : **STRAWCUL** CTT, CPT, BTT: Heavy spring-tine cultivated, twice.
: **T** : **STRAWCUL** BPP, CPP, CTP: Ploughed.
10-Oct-94 : **T** : **STRAWCUL** CTT, CPT, BTT, **SOW DATE** E: Cultivated by rotary grubber, rotary harrowed.
: **T** : **STRAWCUL** BPP, CPP, CTP, **SOW DATE** E: Spring-tine cultivated.
11-Oct-94 : **T** : **SOW DATE** E: Rotary harrowed, Soissons, dressed Beret 050FS, drilled at 380 seeds per m^2.
17-Nov-94 : **T** : **SOW DATE** L: Rotary harrowed, Soissons, dressed Beret 050FS drilled at 450 seeds per m^2.
24-Nov-94 : B : Draza at 5.5 kg.
25-Nov-94 : B : Avadex BW Granular at 22.5 kg.
10-Mar-95 : B : 34.5% N at 118 kg.
16-Mar-95 : B : Stefes IPU at 5.0 l in 200 l.
11-Apr-95 : B : 34.5% N at 463 kg.
10-May-95 : B : Halo at 2.0 l in 200 l.
16-Jun-95 : B : Bravo 500 at 1.0 l with Silvacur at 0.5 l in 300 l.
04-Aug-95 : B : Combine harvested.

Far Field I (W).

08-Sep-94 : B : PK as (0:20:32) at 781 kg.
26-Sep-94 : B : Gramoxone 100 at 3.0 l in 200 l.
28-Sep-94 : **T** : **STRAWCUL** BTT, BPP: Straw burnt.
29-Sep-94 : **T** : **STRAWCUL** BPP, CPP, CTP: Ploughed.
30-Sep-94 : B : Rotary harrowed.
: **T** : **STRAWCUL** BTT, CTT, CPT: Spring-tine cultivated.
: **T** : **STRAWCUL** BPP, CPP, CTP: Rolled.
: **T** : **SOW DATE** E Soissons dressed Beret 050FS drilled at 350 seeds per m^2.
02-Nov-94 : **T** : **SOW DATE** E: Avadex BW Granules at 22.5 kg.
16-Nov-94 : **T** : **SOW DATE** L: Rotary harrowed. Soissons dressed Beret 050FS, drilled at 400 seeds per m^2.
28-Nov-94 : **T** : **SOW DATE** L: Avadex BW Granules at 22.5 kg.
02-Dec-94 : B : Stomp 400 at 3.3 l with Stefes IPU at 3.0 l in 200 l.

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/309 and 95/W/CS/309

Experimental diary:
Far Field I (W).
15-Mar-95 : B : 34.5% N at 116 kg.
28-Apr-95 : B : 34.5% N at 464 kg.
02-May-95 : B : Starane 2 at 1.0 l with Halo at 2.0 l in 200 l.
01-Jun-95 : B : Cyclone at 1.0 l in 300 l.
30-Jun-95 : B : Pirimicarb 50 DG at 280 g in 300 l.
02-Aug-95 : B : Combine harvested.

NOTES: (1) On W/CS/309 three late-sown, tined sub-plots on one side of the experiment grew poorly after being waterlogged, with treatment combinations **STRAWCUL** CT1T2-CTT, CT1-CPT, BT1-BTT. These plots have been treated as missing values and estimated values have been used in the analysis.
(2) Establishment counts were made in winter. Numbers of grass weeds were counted in March and April and numbers of ears of grass weeds were counted in June.
(3) Crop samples were taken in April (R) and June (R and W) to measure diseases affecting the stem bases and roots.

95/R/CS/309 GREAT KNOTT III(R)

GRAIN TONNES/HECTARE

***** Tables of means *****

SOW DATE	E	L	Mean
STRAWCUL			
BT1 BTT	6.38	8.59	7.48
BT1T2 CTT	6.04	6.33	6.19
BP2 BPP	8.10	8.96	8.53
BT1P2 CPP	7.68	8.51	8.10
CT1 CTT	6.24	7.13	6.68
CT1 CPT	7.27	7.05	7.16
CT1T2 CTP	7.60	8.27	7.94
CT1T2 CTT	6.11	6.62	6.36
CP2 CPP	7.58	8.02	7.80
CP2 CPT	7.17	7.07	7.12
CT1P2 CTP	8.50	8.40	8.45
CT1P2 CTT	7.37	6.58	6.98
Mean	7.17	7.63	7.40

*** Standard errors of differences of means ***

STRAWCUL	**SOW DATE**	**STRAWCUL SOW DATE**
0.410	0.117	0.500

Except when comparing means with the same level(s) of **STRAWCUL** 0.405

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/309 GREAT KNOTT III(R)

GRAIN TONNES/HECTARE

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	33	0.579	7.8
BLOCK.WP.SP	36	0.573	7.7

GRAIN MEAN DM% 91.4

SUB-PLOT AREA HARVESTED 0.00644

95/W/CS/309 FAR FIELD I (W)

GRAIN TONNES/HECTARE

***** Tables of means *****

SOW DATE	E	L	Mean
STRAWCUL			
BT1 BTT	2.61	3.54	3.08
BT1T2 CTT	1.36	4.91	3.13
BP2 BPP	6.08	5.97	6.02
BT1P2 CPP	5.38	5.14	5.26
CT1 CTT	2.16	4.34	3.25
CT1 CPT	4.06	3.78	3.92
CT1T2 CTP	6.63	6.78	6.70
CT1T2 CTT	1.12	4.57	2.85
CP2 CPP	5.62	5.77	5.69
CP2 CPT	3.26	4.18	3.72
CT1P2 CTP	5.66	5.42	5.54
CT1P2 CTT	3.59	5.01	4.30
Mean	3.96	4.95	4.46

*** Standard errors of differences of means ***

STRAWCUL	**SOW DATE**	**STRAWCUL SOW DATE**
0.790	0.116	0.839

Except when comparing means with the same level(s) of **STRAWCUL** 0.401

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	11	0.790	17.7
BLOCK.WP.SP	9	0.401	9.0

GRAIN MEAN DM% 91.4 SUB-PLOT AREA HARVESTED 0.00660

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/311

EFFECTS OF SHALLOW STRAW INCORPORATION

Object: To study the effects of straw incorporation by rotational ploughing, with shallow cultivation in the intervening years, on diseases and yield of winter wheat - West Barnfield I.

Sponsors: J.F. Jenkyn, R.J. Gutteridge, A.D. Todd.

The eleventh year, w. wheat.

For previous years see 85-94/R/CS/311.

Design: 6 x 4 criss-cross split into 2 sub-plots. Originally a single replicate of 3 x 2 x 2 x 2 x 2.

Whole plot dimensions: 4.5 x 12.0.

Treatments: Combinations of:-

Whole plots

1. **STRAW** Treatments to straw of previous wheat:

BURNT	Burnt (duplicated)
BALED	Baled and removed (duplicated)
CHOPPED	Chopped and incorporated (duplicated)

Criss-cross with

2. **CULTIVTN**

S	Shallow tine cultivated to 10 cm (duplicated)
S(P)	Shallow tine cultivated to 10 cm, ploughed to 23 cm in autumn 1993
P	Ploughed to 23 cm

Experimental diary:

08-Aug-94	**T**	**STRAW** BALED: Straw baled and removed.
	T	**STRAW** BURNT: Straw burnt and ash incorporated with discs.
	T	**STRAW** CHOPPED: Straw chopped with trailed chopper.
02-Sep-94	B	PK as (0:20:32) at 1317 kg.
06-Sep-94	B	Sting CT at 2.0 l in 200 l.
04-Oct-94	**T**	**CULTIVTN** P: Ploughed.
	T	**CULTIVTN** S, S(P): Heavy spring-tine cultivated twice.
07-Oct-94	B	Rotary harrowed.
	T	**CULTIVTN** S, S(P): Cultivated by rotary grubber.
	B	Rotary harrowed, Soissons, dressed Beret 050FS, drilled at 380 seeds per m^2.
18-Nov-94	B	Auger at 3.0 l with Stomp 400 at 2.5 l in 200 l.
25-Nov-94	B	Atlas Dimethoate 40 at 850 ml in 200 l.
10-Mar-95	B	34.5% N at 118 kg.
11-Apr-95	B	34.5% N at 580 kg.
03-May-95	B	Halo at 2.0 l in 200 l.

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95/R/CS/311

Experimental diary:
16-Jun-95 : B : Bravo 500 at 1.0 l with Silvacur at 0.5 l in 300 l.
04-Aug-95 : B : Combine harvested.

NOTES: (1) All plots were shallow cultivated until the rotational ploughing was introduced in autumn 1993.
(2) Ears of volunteers and grass weeds were counted in June. Crop samples were taken in April and June to measure disease affecting the stem bases and roots.

GRAIN TONNES/HECTARE

***** Tables of means *****

CULTIVTN / STRAW	S	S(P)	P	Mean
BU	8.60	8.48	8.70	8.59
BA	8.00	8.54	8.42	8.24
CH	8.58	8.70	8.45	8.58
Mean	8.39	8.57	8.52	8.47

GRAIN MEAN DM% 92.1

SUB-PLOT AREA HARVESTED 0.00276

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/323

CEREAL SEQUENCES AND TAKE-ALL

Object: To study the effects on take-all (*Gaeumannomyces graminis*) and yield of different cereals grown in various cereal sequences - West Barnfield II.

Sponsors: R.J. Gutteridge, R.D. Prew.

The eighth year, w. barley, w. oats, w. triticale, w. wheat.

For previous years see 88-94/R/CS/323

Design: 3 randomised blocks of 26 plots.

Whole plot dimensions: 3.0 x 10.0.

CROPSEQ Crop sequences (1988 to 1995 respectively):

TTTTTTTT
OTTTOTTT
TOTTTOTT
TTOTTTOT
TTTOTTTO
WWWWWWWW
OWWWOWWW
WOWWWOWW
WWOWWWOW
WWWOWWWO
BBBBBBBB
OBBBOBBB
BOBBBOBB
BBOBBBOB
BBBOBBBO
WTWTWTWT
WBWBWBWB
TBTBTBTB
SBSBSBSB
WWTTTWWW
WWBBBWWW
TTBBBTTT
TTWWWTTT
BBWWWBBB
BBTTTBBB
WWSSSWWW

W = W. wheat
S = S. barley
B = W. barley
O = W. oats
T = W. triticale

NOTE: Only the last letter of the crop sequence, the crop in 1995, is used in the experimental diary.

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/323

Experimental diary:

22-Jul-94	: B	:	Straw baled.
06-Sep-94	: B	:	Sting CT at 2.0 l in 200 l.
07-Sep-94	: B	:	Dolomite at 5.0 t.
08-Sep-94	: B	:	PK as(0:20:32) at 300 kg.
16-Sep-94	: B	:	Ploughed and furrow pressed.
23-Sep-94	: **T**	:	**CROPSEQ** B: Rotary harrowed, Magie, dressed Rappor Plus, drilled at 350 seeds per m^2.
	: **T**	:	**CROPSEQ** O: Rotary harrowed, Image, dressed Panoctine, drilled at 350 seeds per m^2.
	: **T**	:	**CROPSEQ** T: Rotary harrowed, Lasko, dressed Cerevax, drilled at 400 seeds per m^2.
	: **T**	:	**CROPSEQ** W: Rotary harrowed, Mercia, dressed Rappor, drilled at 380 seeds per m^2.
26-Sep-94	: **T**	:	**CROPSEQ** O: Glytex at 2.25 kg in 200 l.
	: **T**	:	**CROPSEQ** B, T, W: Hytane 500 SC at 2.5 l with Stomp 400 at 3.3 l in 200 l.
10-Mar-95	: B	:	34.5% N at 92 kg.
10-Apr-95	: **T**	:	**CROPSEQ** T, O: 34.5% N at 354 kg.
	: **T**	:	**CROPSEQ** B: 34.5% N at 442 kg.
	: **T**	:	**CROPSEQ** W: 34.5% N at 500 kg.
28-Apr-95	: B	:	Starane 2 at 0.75 l in 200 l.
	: **T**	:	**CROPSEQ** B: Tigress at 2.5 l in 200 l.
	: **T**	:	**CROPSEQ** W, T: Topik 240EC at 125 ml with Actipron at 1.2 l in 200 l.
16-Jun-95	: **T**	:	**CROPSEQ** W: Halo at 2.0 l with Patrol at 0.5 l in 300 l.
20-Jul-95	: **T**	:	**CROPSEQ** B, O: Combine harvested.
02-Aug-95	: **T**	:	**CROPSEQ** W, T: Combine harvested.

NOTE: Plant samples were taken in April, June and July for take-all and eyespot assessments. Soil cores were taken after harvest to assess take-all infectivity.

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/323

GRAIN TONNES/HECTARE

***** Tables of means *****

CROPSEQ	
TTTTTTTT	4.71
OTTTOTTT	4.92
TOTTTOTT	5.65
TTOTTTOT	5.80
TTTOTTTO	4.84
WWWWWWWW	6.90
OWWWOWWW	6.17
WOWWWOWW	7.74
WWOWWWOW	7.47
WWWOWWWO	5.22
BBBBBBBB	5.62
OBBBOBBB	5.37
BOBBBOBB	6.15
BBOBBBOB	5.82
BBBOBBBO	6.24
WTWTWTWT	4.79
WBWBWBWB	5.63
TBTBTBTB	6.01
SBSBSBSB	5.50
WWTTTWWW	6.73
WWBBBWWW	6.51
TTBBBTTT	5.25
TTWWWTTT	4.84
BBWWWBBB	5.95
BBTTTBBB	5.80
WWSSSWWW	6.18
Mean	5.84

*** Standard errors of differences of means ***

CROPSEQ
0.416

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	50	0.510	8.7

GRAIN MEAN DM% 89.7

PLOT AREA HARVESTED 0.00228

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/326 and 95/W/CS/326

AMOUNTS OF STRAW

Object: To study the effects of different amounts of straw, incorporated into the soil, on w.wheat - Rothamsted (R) Great Knott III, Woburn (W) Far Field I.

Sponsors: N.J. Bradbury, M.J. Glendining, J.F. Jenkyn.

The ninth year, w. wheat.

For previous years see 87-94/R & W/CS/326.

Design: 4 randomised blocks of 4 plots (R).
3 randomised blocks of 4 plots (W).

Whole plot dimensions: 3.0 x 13.5 (R).
3.0 x 14.5 (W).

Treatments:

STRAW Amounts of straw incorporated into the seedbed (t per ha 85% DM), cumulative to previous annual dressings:

		R	W
NONE	None	-	-
NORMAL	Normal	6.5	3.8
2 NORMAL	Twice normal	13.0	7.6
4 NORMAL	Four times normal	26.0	15.2

Experimental diary:

Great Knott III (R)

16-Aug-94 : **T** : **STRAW** NORMAL, 2 NORMAL, 4 NORMAL: Straw applied.
: **T** : **STRAW** NONE: Straw removed.
: B : Straw and stubble chopped.
02-Sep-94 : B : PK as(0:20:32) at 1317 kg.
27-Sep-94 : B : Sting CT at 2.0 l in 200 l.
04-Oct-94 : B : Ploughed.
07-Oct-94 : B : Rolled.
10-Oct-94 : B : Spring-tine cultivated.
11-Oct-94 : B : Rotary harrowed, Soissons, dressed Beret 050FS, drilled at 380 seeds per m^2.
24-Nov-94 : B : Draza at 5.5 kg.
25-Nov-94 : B : Avadex BW Granular at 22.5 kg.
10-Mar-95 : B : 34.5% N at 118 kg.
16-Mar-95 : B : Stefes IPU at 5.0 l in 200 l.
11-Apr-95 : B : 34.5% N at 463 kg.
10-May-95 : B : Halo at 2.0 l in 200 l.
16-Jun-95 : B : Bravo 500 at 1.0 l with Silvacur at 0.5 l in 300 l.
04-Aug-95 : B : Combine harvested.

Far Field I (W)

24-Aug-94 : **T** : **STRAW** NORMAL, 2 NORMAL, 4 NORMAL: Straw applied.
: **T** : **STRAW** NONE: Straw removed.
26-Aug-94 : B : Straw and stubble chopped.
08-Sep-94 : B : PK as (0:20:32) at 781 kg.

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95/R/CS/326 and 95/W/CS/326

Experimental diary:

Far Field I (W)

26-Sep-94 : B : Gramoxone 100 at 3.0 l in 200 l.
29-Sep-94 : B : Ploughed.
30-Sep-94 : B : Rotary harrowed, Soissons, dressed Beret 050FS, drilled at 350 seeds per m^2. Rolled.
02-Nov-94 : B : Avadex BW Granular at 22.5 kg.
02-Dec-94 : B : Stomp 400 at 3.3 l with Stefes IPU at 3.0 l in 200 l.
15-Mar-95 : B : 34.5% N at 116 kg.
28-Apr-95 : B : 34.5% N at 464 kg.
02-May-95 : B : Starane 2 at 1.0 l with Halo at 2.0 l in 200 l.
01-Jun-95 : B : Cyclone at 1.0 l in 300 l.
30-Jun-95 : B : Pirimicarb 50 DG at 280 g in 300 l.
02-Aug-95 : B : Combine harvested.

NOTES: Stubbles were sampled for dry matter in August 1994.
At Rothamsted soil was sampled in August 1994 for inorganic nitrogen, microbial biomass nitrogen and carbon, nitrogen mineralization and soil respiration measurements.
At Woburn soil was sampled in October 1994 for nitrogen measurements.
Straw and grain yields were measured.

95/R/CS/326 GREAT KNOTT III (R)

GRAIN TONNES/HECTARE

***** Tables of means *****

STRAW	
-	7.92
1	8.18
2	8.08
4	8.38
Mean	8.14

*** Standard errors of differences of means ***

STRAW
0.143

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	9	0.203	2.5

GRAIN MEAN DM% 91.3

PLOT AREA HARVESTED 0.00311

https://doi.org/10.23637/ERADOC-1-50

95/W/CS/326 FAR FIELD I (W)

GRAIN TONNES/HECTARE

***** Tables of means *****

STRAW	
-	6.99
1	6.85
2	6.75
4	7.22
Mean	6.95

*** Standard errors of differences of means ***

STRAW
0.359

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	6	0.440	6.3

GRAIN MEAN DM% 91.9

PLOT AREA HARVESTED 0.00319

https://doi.org/10.23637/ERADOC-1-50

95/W/CS/347

GREEN CROPS FOR SET-ASIDE

Object: To obtain information on the establishment and maintenance of sown crops and unsown vegetation in three-year and five-year set-aside. Effects on soil nitrate and leaching after ploughing are also studied - Woburn, Horsepool Lane Close II.

Sponsors: R.D. Prew, E.T.G. Bacon, D.P. Yeoman, M.V. Hewitt, J.F. Jenkyn, R.J. Gutteridge.

Design: 3 randomised blocks of 6 plots split into 2 x 2 criss-cross.

Whole plot dimensions: 6.5 x 26.0.

The sixth year, w. and s. sown wheat.

For previous years see 90-94/W/CS/347.

Treatments:

Test phase (first test crop after 5-year treatment phase)

Whole plots

1. **PREVCROP** Previous crops, cumulative 1990 to 1994:

(RY LF)	Ryegrass, cuttings left in situ
(RY+CL LF)	Ryegrass + clover, cuttings left in situ
(RY+CL RE)	Ryegrass + clover, cuttings removed
(RY+N RE)	Ryegrass given 100 kg N in spring, cuttings removed
(TU LF)	Tumbledown, natural regrowth, cuttings left in situ
(ARABLE)	Arable sequence w. wheat, w. wheat, w. oats, w. wheat, w. oats

Sub-plots (**WHEAT** split-plots, **N** criss-cross)

2. **WHEAT** Time of ploughing and drilling:

W	Winter
S	Spring

3. **N** Fertilizer nitrogen applied in spring:

NO	None
N OPT	Optimum

NOTES: (1) N OPT was given 40 kg N early (W in March, S in June) and the following rates later (W in April, S in July)

	(RY LF)	(RY+CL LF)	(RY+CL RE)	(RY+N RE)	(TU LF)	(ARABLE)
W	155	135	135	160	140	170
S	120	120	120	120	130	155

(2) The three blocks after 3-year set-aside were discontinued after the second test crop in 1994.

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95/W/CS/347

Experimental diary:

05-Oct-94 : **T** : **WHEAT** W: Ploughed.
07-Oct-94 : **T** : **WHEAT** W: Rolled. Rotary harrowed, Cadenza, dressed Rappor, drilled at 300 seeds per m^2.
01-Dec-94 : B : Stomp 400 at 3.3 l with Stefes IPU at 3.0 l in 200 l.
16-Mar-95 : **T** : **WHEAT** W: **N** N OPT: 27% N at 148 kg.
22-Mar-95 : **T** : **WHEAT** S: Ploughed.
30-Mar-95 : **T** : **WHEAT** S: Rotary harrowed.
31-Mar-95 : **T** : **WHEAT** S: Rotary harrowed, Cadenza, dressed Rappor, drilled at 500 seeds per m^2.
28-Apr-95 : **T** : **WHEAT** W, **N** N OPT: Nitrogen treatments applied as 27% N.
: **T** : **WHEAT** S: Rotary harrowed, Cadenza, dressed Cerevax, re-drilled at 500 seeds per m^2.
02-May-95 : **T** : **WHEAT** W: Halo at 2.0 l in 200 l.
25-May-95 : **T** : **WHEAT** S: Cadenza, dressed Rappor, re-drilled at 900 seeds per m^2.
26-May-95 : **T** : **PREVCROP** (RY+CL RE), (RY+N RE): Corrective P and K applied.
01-Jun-95 : **T** : **WHEAT** W: Cyclone at 1.0 l in 300 l.
15-Jun-95 : **T** : **WHEAT** S: Ally at 30 g in 300 l.
16-Jun-95 : **T** : **WHEAT** S, **N** N OPT: 27% N at 148 kg.
29-Jun-95 : B : Pirimicarb 50 DG at 280 g in 300 l.
19-Jul-95 : **T** : **WHEAT** S, **N** N OPT: Nitrogen treatments applied as 27% N.
05-Aug-95 : **T** : **WHEAT** W: Combine harvested.
22-Sep-95 : **T** : **WHEAT** S: Combine harvested.

NOTES: (1) The spring wheat was re-drilled twice following the failure of the first and second sowings, and yields were negligible and are not presented.
(2) Soil mineral nitrogen was measured in autumn and spring. Weeds were counted in November and July. Numbers of ears of wheat were estimated in July.

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95/W/CS/347 PLOTS 19-36

GRAIN TONNES/HECTARE

***** Tables of means *****

N	NO	N OPT	Mean
PREVCROP			
(RY LF)	1.70	6.74	4.22
(RY+CL LF)	4.03	8.29	6.16
(RY+CL RE)	3.72	7.17	5.45
(RY+N RE)	2.15	7.12	4.63
(TU LF)	1.44	7.64	4.54
(ARABLE)	1.72	7.24	4.48
Mean	2.46	7.37	4.91

*** Standard errors of differences of means ***

PREVCROP	N	PREVCROP N
0.707	0.304	0.884

Except when comparing means with the same level(s) of

PREVCROP	0.752
N	0.886

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP1.WP2	10	0.923	18.8

GRAIN MEAN DM% not measured

SUB-PLOT AREA HARVESTED 0.00235 or 0.00323

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/354

SOWING DATES AND TAKE-ALL

Object: To study the effects of sequences of sowing dates and volunteers on take-all (*Gaeumannomyces graminis*) and yield of winter wheat - Little Knott I.

Sponsor: R.J. Gutteridge.

The fifth year, w. wheat.

For previous years see 91-94/R/CS/354

Design: 4 randomised blocks of 5 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments:

SOW SEQ	Sequences of sowing date in 1991-1994 and level of volunteers in 1992-1994, all sown in mid-September 1994:
(E E E E)	Early in 1991, 1992, 1993 and 1994
(E L L L)	Early in 1991, late in 1992, 1993 and 1994
(E L+ L+ L+)	Early in 1991, late in 1992, 1993 and 1994, volunteers encouraged since 1992
(L E E E)	Late in 1991, early in 1992, 1993 and 1994
(L L* L* L*)	Late in 1991, 1992, 1993 and 1994, volunteers controlled since 1992

Experimental diary:

21-Aug-94 : B : Straw baled.
01-Sep-94 : B : Ploughed and furrow pressed.
12-Sep-94 : B : Rotary harrowed, Mercia, dressed Cerevax, drilled at 380 seeds per m^2.
13-Sep-94 : B : Rolled.
18-Nov-94 : B : Auger at 3.0 l with Stomp 400 at 2.5 l and Ripcord at 250 ml in 200 l.
13-Mar-95 : B : 34.5% N at 118 kg.
13-Apr-95 : B : 34.5% N at 463 kg.
02-Aug-95 : B : Combine harvested.

NOTE: Plant samples were taken in April and July for take-all assessment. Soil cores were taken after harvest to assess take-all infectivity.

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95/R/CS/354

GRAIN TONNES/HECTARE

***** Tables of means *****

SOW SEQ	
(E E E E)	3.85
(E L L L)	3.66
(E L+ L+ L+)	3.03
(L E E E)	3.18
(L L* L* L*)	3.53
Mean	3.45

*** Standard errors of differences of means ***

SOW SEQ
0.337

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	12	0.477	13.8

GRAIN MEAN DM% 92.3

PLOT AREA HARVESTED 0.00228

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/355

RATES OF N AND MINERALIZATION

Object: To study the cumulative effects of rates of nitrogen fertilizer on soil mineralization capacity and yields of continuous winter wheat - Claycroft.

Sponsor: P.R. Poulton.

The fifth year, w. wheat.

For previous years see 91-94/R/CS/355.

Design: 3 randomised blocks of 7 plots.

Whole plot dimensions: 21.0 x 23.0.

Treatments:

N	Nitrogen fertilizer (kg N) as 34.5% N:
0	
50	
100	
150	
200	
250	
300	

Experimental diary:

20-Aug-94 : B : Straw chopped.
05-Sep-94 : B : PK as (0:20:32) at 1317 kg.
12-Sep-94 : B : Ploughed and furrow pressed.
28-Sep-94 : B : Rotary harrowed.
29-Sep-94 : B : Rotary harrowed, Mercia, dressed Rappor, drilled at 380 seeds per m^2.
30-Sep-94 : B : Draza at 5.5 kg.
07-Nov-94 : B : Avadex BW Granular at 22.5 kg.
23-Nov-94 : B : Alpha Isoproturon 500 at 5.0 l with Treflan at 2.0 l in 200 l.
11-Apr-95 : **T** : **N** 50, 100, 150, 200, 250, 300: Nitrogen treatments applied.
21-Apr-95 : B : Starane 2 at 0.75 l in 200 l.
15-Jun-95 : B : Halo at 2.0 l with Mallard 750 EC at 0.5 l in 300 l.
03-Aug-95 : B : Combine harvested.

NOTE: Crop samples were taken for chemical analysis.

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95/R/CS/355

GRAIN TONNES/HECTARE

***** Tables of means *****

N	
0	3.72
50	5.06
100	5.02
150	6.16
200	6.32
250	6.04
300	6.27
Mean	5.51

*** Standard errors of differences of means ***

N
0.433

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	12	0.530	9.6

GRAIN MEAN DM% 91.4

PLOT AREA HARVESTED 0.00483

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/408

MISCANTHUS SINENSIS GIGANTEUS STUDY

Object: To quantify the biomass yield potential of *Miscanthus sinensis* Giganteus - Road Piece West.

Sponsor: D.G. Christian.

The third year, grass.

For previous year see 94/R/CS/408.

Design: 3 randomised blocks of 3 plots.

Whole plot dimensions: 10.0 x 10.0.

Treatments:

N	Nitrogen fertilizer cumulative to previous dressings, kg N:
-	None
N1	60
N2	120

Experimental diary:

15-May-95 : B : Muriate of potash at 281 kg.
: **T** : **N** N1, N2: 27% N applied.
30-Jan-96 : B : Cut.

NOTE: The crop was sampled periodically to measure leaf area, biomass and nutrient content. Shoot number and shoot height were measured monthly. Soil nitrogen was measured in April.

DRY MATTER TONNES/HECTARE

***** Tables of means *****

N	-	N1	N2	Mean
	11.48	9.84	11.02	10.78

*** Standard errors of differences of means ***

N
0.558

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	4	0.683	6.3

MEAN DM% 44.05 PLOT AREA HARVESTED 0.00422

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/411

PANICUM STUDY

Object: To quantify the biomass yield potential of varieties of *Panicum* species - Road Piece West.

Sponsor: D.G. Christian.

The third year, grass.

For previous year see 94/R/CS/411

Design: 3 blocks of 7 x 2 plots.

Whole plot dimensions: 5.0 x 2.0.

Treatments:

1. **VARIETY**

CAVIN R	Cave in Rock
KANLOW	Kanlow
PATHFIND	Pathfinder
SUNBURST	Sunburst
FOREST B	Forest Burg
NEBR 28	NEBR 28
DAKOTAH	Dakotah

2. **N** Nitrogen fertilizer, kg N:

-	None
N1	60

Experimental diary:

02-May-95 : B : Duplosan New System CMPP at 2.5 l with Oxytril CM at 1.4 l in 200 l.
15-May-95 : **T** : **N** N1: 34.5% N at 174 kg.
22-Jun-95 : B : Duplosan New System CMPP at 2.5 l with Oxytril CM at 1.4 l in 200 l.
23-Oct-95 : **T** : **VARIETY** DAKOTAH: Cut.
14-Dec-95 : **T** : **VARIETY** FOREST B, SUNBURST: Cut.
04-Jan-96 : **T** : **VARIETY** NEBR 28, PATHFIND: Cut.
06-Feb-96 : **T** : **VARIETY** KANLOW: Cut.
08-Feb-96 : **T** : **VARIETY** CAVIN R: Cut.

NOTE: Soil nitrogen was measured in April. Height was measured and samples taken for biomass in September. Harvest samples were analysed for N,P and K.

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95/R/CS/411

DRY MATTER TONNES/HECTARE

***** Tables of means *****

NITROGEN	-	N1	Mean
VARIETY			
CAVIN R	8.11	8.03	8.07
KANLOW	7.10	5.34	6.22
PATHFIND	8.48	8.22	8.35
SUNBURST	6.98	8.05	7.51
FOREST B	7.35	8.72	8.04
NEBR 28	8.59	7.30	7.95
DAKOTAH	5.28	5.70	5.49
Mean	7.41	7.34	7.37

*** Standard errors of differences of means ***

VARIETY	NITROGEN	VARIETY NITROGEN
0.374	0.200	0.529

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	26	0.647	8.8

MEAN DM% 57.3

PLOT AREA HARVESTED 0.00011

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/420

SET-ASIDE, CULTIVATION AND CROPS

Object: To measure the establishment, growth and yield of w. wheat and w. rape following a range of cultivations and herbicide applications after natural regeneration set-aside. To assess levels of soil nitrogen and weeds in the two crops and diseases in the wheat - Meadow.

Sponsors: E.T.G. Bacon, D.P. Yeoman, M.V. Hewitt, R.D. Prew, J.F. Jenkyn and R.J. Gutteridge.

The second year, w. wheat and w. rape.

Design: 4 randomised blocks of 5 x 2 plots split into 2 sub-plots.

Whole plot dimensions: 12.0 x 26.0.
Sub-plot dimensions: 10.0 x 12.0.

Treatments:

Whole plots

1. **SETDESTR**		Method and time of destruction of set-aside in 1994:
	(PG)	Ploughed in May, glyphosate pre-drilling
	(PC)	Ploughed in May, cultivated in June and July
	(MP)	Minimally cultivated in May, ploughed in August
	(HP)	Herbicide in May, ploughed in August
	(-P)	Ploughed in August

Sub-plots

2. **CROP**		Crop in 1995:
	R	Winter rape
	W	Winter wheat
3. **NITROGEN**		Fertilizer nitrogen in 1995 (kg N):
	-	None
	N	160

Experimental diary:

```
24-May-94 : T : SETDESTR (HP): Glyphogan at 4.0 l in 200 l.
27-May-94 : T : SETDESTR (PG), (PC), (MP), (-P): Topped.
03-Jun-94 : T : SETDESTR (MP): Heavy spring-tine cultivated to 10 cm.
          : T : SETDESTR (PG), (PC): Ploughed.
05-Jul-94 : T : SETDESTR (MP), (-P): Topped.
06-Jul-94 : T : SETDESTR (PC): Heavy spring-tine cultivated.
19-Jul-94 : B : PK as (0:20:32) at 1406 kg.
22-Jul-94 : T : SETDESTR (-P): Topped.
01-Aug-94 : T : SETDESTR (PC): Heavy spring-tine cultivated.
          : T : SETDESTR (MP), (HP), (-P): Topped.
12-Aug-94 : T : SETDESTR (MP), (HP), (-P): Ploughed.
```


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Experimental diary:

26-Aug-94 : **T** : **CROP** R: Cultivated by rotary grubber (one block only).
: **T** : **CROP** R: Spring-tine cultivated.
: **T** : **CROP** R: Rotary harrowed, Apex, dressed Lindex-Plus FS, drilled at 120 seeds per m^2.
27-Sep-94 : **T** : **SETDESTR** (PG), **CROP** W: Sting CT at 2.0 l in 200 l.
28-Sep-94 : **T** : **CROP** W: Spring-tine cultivated.
: **T** : **CROP** W: Rotary harrowed, Genesis, dressed Rappor, drilled at 380 seeds per m^2.
29-Sep-94 : B : Draza at 5.5 kg.
02-Nov-94 : **T** : **CROP** R: Butisan S at 2.5 l with Laser at 1.0 l and Atlas Adjuvant Oil at 2.4 l in 260 l.
21-Nov-94 : **T** : **CROP** W: Auger at 2.5 l with Stomp 400 at 2.5 l and Decis at 200 ml in 200 l.
07-Feb-95 : **T** : **CROP** W: Birlane 24 at 2.8 l in 200 l.
23-Feb-95 : **T** : **CROP** R, **NITROGEN** N: 34.5% N at 174 kg.
13-Mar-95 : **T** : **CROP** W, **NITROGEN** N: 34.5% N at 118 kg.
30-Mar-95 : **T** : **CROP** R, **NITROGEN** N: 34.5% N at 290 kg.
11-Apr-95 : **T** : **CROP** R: Barclay Eyetak at 1.1 l in 200 l.
12-Apr-95 : **T** : **CROP** W, **NITROGEN** N: 34.5% N at 348 kg.
03-May-95 : **T** : **CROP** W: Starane 2 at 0.75 l with Halo at 2.0 l in 200 l.
20-Jun-95 : **T** : **CROP** W: Silvacur at 1.0 l in 200 l.
12-Jul-95 : **T** : **CROP** R: Reglone at 3.0 l with Vassgro Spreader at 400 ml in 400 l.
18-Jul-95 : **T** : **CROP** R: Combine harvested.
02-Aug-95 : **T** : **CROP** W: Combine harvested.

NOTES: (1) Treatment **SETDESTR** (PG) - 'Glyphosate pre-drilling' was not applied to the plots going into rape.
(2) Straw was chopped in August 1993 at the start of the set-aside year.
(3) Soil and plant samples were taken in November and March for nitrogen content. Weed counts were made in November and March. Samples to assess root and stem base diseases in wheat were taken in April and June. Grain quality was assessed.

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95/R/CS/420

WINTER RAPE

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

***** Tables of means *****

NITROGEN	-	N	Mean
SETDESTR			
(PG)	3.67	4.31	3.99
(PC)	4.11	4.57	4.34
(MP)	3.48	4.65	4.06
(HP)	3.47	4.32	3.90
(-P)	2.73	4.22	3.48
Mean	3.49	4.42	3.95

*** Standard errors of differences of means ***

	SETDESTR	**NITROGEN**	**SETDESTR NITROGEN**
	0.168	0.116	0.249
Except when comparing means with the same level(s) of **SETDESTR**			0.259

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	12	0.238	6.0
BLOCK.WP.SP	15	0.366	9.3

GRAIN MEAN DM% 87.6

SUB-PLOT AREA HARVESTED 0.00230

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/420

WINTER WHEAT

GRAIN TONNES/HECTARE

***** Tables of means *****

NITROGEN	-	N	Mean
SETDESTR			
(PG)	6.71	8.94	7.82
(PC)	6.02	8.75	7.39
(MP)	5.93	8.88	7.41
(HP)	5.72	8.66	7.19
(-P)	4.33	8.85	6.59
Mean	5.74	8.82	7.28

*** Standard errors of differences of means ***

	SETDESTR	**NITROGEN**	**SETDESTR NITROGEN**
	0.449	0.286	0.637
Except when comparing means with the same level(s) of **SETDESTR**			0.639

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	12	0.635	8.7
BLOCK.WP.SP	15	0.904	12.4

GRAIN MEAN DM% 91.4

SUB-PLOT AREA HARVESTED 0.00230

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/429

WINTER RYE AS AN ENERGY CROP

Object: To measure the effects of different levels of nitrogen fertilizer on the biomass yield of w. rye - Road Piece West.

Sponsor: D.G. Christian.

The second year, w. rye.

For previous year see 94/R/CS/429.

Design: 3 randomised blocks of 5 plots.

Plot dimensions: 3.0 x 15.0.

Treatments:

NITROGEN	Nitrogen fertilizer (kg N), applied as 'Nitro-Chalk', cumulative to previous dressings:
-	None
N1	30
N2	60
N3	90
N4	120

Experimental diary:

30-Aug-94	B	Straw baled.
21-Sep-94	B	Harrowed to remove weeds, ploughed.
30-Sep-94	B	Rotary harrowed twice. Amando, dressed Baytan, drilled at 350 seeds per m^2.
	B	Draza at 5.5 kg.
02-Dec-94	B	Starane 2 at 0.75 l in 200 l.
04-Apr-95	**T**	**NITROGEN** N1, N2, N3, N4: 27% N at 111, 222, 333 and 444 kg respectively.
19-Apr-95	B	Tern 750 EC at 1.0 l in 200 l.
28-Apr-95	B	Starane 2 at 1.0 l with New 5C Cycocel at 2.5 l in 200 l.
19-Jun-95	B	Corbel at 1.0 l in 400 l.
09-Aug-95	B	Combine harvested.

NOTE: Crop samples were taken in April to determine nitrogen content, plant and tiller numbers before top dressing. Biomass and nitrogen content was measured at anthesis. Grain and straw were sampled at harvest for nitrogen content.

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95/R/CS/429

GRAIN TONNES/HECTARE

***** Tables of means *****

NITROGEN

-	3.22
N1	4.19
N2	4.76
N3	4.84
N4	4.49
Mean	4.30

*** Standard errors of differences of means ***

NITROGEN
0.411

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	8	0.504	11.7

GRAIN MEAN DM% 89.5

PLOT AREA HARVESTED 0.00230

https://doi.org/10.23637/ERADOC-1-50

95/W/CS/435

RYEGRASS, WHEAT VOLUNTEERS AND DISEASES

Object: To study how different populations of cereal volunteers and ryegrass sown as a cover crop affect the survival of cereal diseases - Woburn, School Field.

Sponsors: J.F. Jenkyn, R.J. Gutteridge.

Design: 4 randomised blocks of 10 x 2 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments:

1.	**CROP**	Crop, seed rate and soil inoculation:
	R	Ryegrass at 30 kg
	RW	Ryegrass at 30 kg + wheat at 50 seeds per m^2
	RI	Ryegrass at 30 kg+ soil inoculated with *Phialophora graminicola*
	RWI	Ryegrass at 30 kg + wheat at 50 seeds per m^2 + soil inoculated with *P. graminicola*
	M	Mustard at 300 seeds per m^2
	MW1	Mustard at 100 seeds per m^2 + wheat at 4 seeds per m^2
	MW2	Mustard at 100 seeds per m^2 + wheat at 9 seeds per m^2
	MW3	Mustard at 100 seeds per m^2 + wheat at 50 seeds per m^2
	MW4	Mustard at 100 seeds per m^2 + wheat at 200 seeds per m^2
	MW5	Mustard at 30 seeds per m^2 + wheat at 400 seeds per m^2
2.	**CULT**	Time of ploughing:
	PE	Early (12 May)
	PL	Late (17 Aug)

Experimental diary:

22-Aug-94 : B : Disced.
07-Sep-94 : B : Gramoxone 100 at 3.0 l in 200 l.
10-Sep-94 : B : Ploughed.
12-Sep-94 : B : Rolled.
13-Sep-94 : B : Rotary harrowed.
: **T** : Seeds sown and soil inoculated.
24-Nov-94 : **T** : **CROP** R and RI: Leyclene at 5.0 l in 220 l.
11-May-95 : B : Topped.
12-May-95 : **T** : **CULT** PE: Ploughed.
29-Jun-95 : **T** : **CULT** PL: Topped.
17-Aug-95 : **T** : **CULT** PL: Topped, ploughed.

NOTE: Mustard variety was Tilney, wheat, Soissons and ryegrass, Borvi, all undressed.

No yields were taken in 1995.

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95/R/CS/438

TAKE-ALL CONTROL

Object: To test seed treatments for the control of take-all in w. wheat - Long Hoos I/II.

Sponsors: G.L. Bateman, J.F. Jenkyn, R.J. Gutteridge.

The first year, w. wheat.

Design: 4 randomised blocks of 3 x 3 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of :-

1. **SEED TRT** Seed treatment:

UT	None
BY	Fuberidazole and triadimenol as 'Baytan'
NT	New treatment

NOTE: NT is under commercial development, composition undisclosed.

2. **N RATE** Rate and timing of nitrogen (kg N):

	Early	Later	Total
N1	-	120	120
N2	40	80	120
N3	40	160	200

Experimental diary:

26-Sep-94 : B : Ploughed and furrow pressed.
17-Oct-94 : B : Rotary harrowed, twice.
: **T** : **SEED TRT** UT: Rotary harrowed, Hussar, undressed, drilled at 380 seeds per m^2.
: **T** : **SEED TRT** BY: Rotary harrowed, Hussar, dressed Baytan, drilled at 380 seeds per m^2.
: **T** : **SEED TRT** NT: Rotary harrowed, Hussar, dressed N, drilled at 380 seeds per m^2.
21-Nov-94 : B : Draza at 5.5 kg.
24-Nov-94 : B : Alpha Isoproturon 500 at 3.0 l in 200 l.
: B : Stomp 400 at 3.3 l in 200 l.
27-Feb-95 : **T** : **N RATE** N2, N3: 34.5% N at 116 kg.
10-Apr-95 : **T** : **N RATE** N3: 34.5% N at 464 kg.
: **T** : **N RATE** N1: 34.5% N at 348 kg.
: **T** : **N RATE** N2: 34.5% N at 232 kg.
11-Apr-95 : B : Barclay Eyetak at 1.1 l in 200 l.
31-May-95 : B : Barclay Hurler at 1.0 l in 300 l.
09-Aug-95 : B : Combine harvested.

Previous crops: W. wheat 1993, s. wheat 1994.

NOTE: Samples to assess root and stem base diseases were taken in January, April and July.

https://doi.org/10.23637/ERADOC-1-50

95/R/CS/438

GRAIN TONNES/HECTARE

***** Tables of means *****

N RATE / SEED TRT	N1	N2	N3	Mean
UT	6.13	6.76	7.96	6.95
BY	6.64	7.21	8.02	7.29
NT	7.12	7.54	8.68	7.78
Mean	6.63	7.17	8.22	7.34

*** Standard errors of differences of means ***

SEED TRT	N RATE	SEED TRT N RATE
0.161	0.161	0.279

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	24	0.395	5.4

GRAIN MEAN DM% 89.4

PLOT AREA HARVESTED 0.00227

https://doi.org/10.23637/ERADOC-1-50

95/W/CS/440

TAKE-ALL CONTROL

Object: To test the efficacy of seed treatments for the control of take-all (*Gaeumannomyces graminis*) at various rates of nitrogen fertilizer - Woburn, Stackyard III.

Sponsors: G.L. Bateman, J.F. Jenkyn, R.J. Gutteridge.

Design: 8 blocks of 3 plots split into 3 sub-plots.

Whole plot dimensions: 3.0 x 46.0.
Sub-plot dimensions: 3.0 x 15.0.

Treatments: All combinations of:-

Whole plots

1. **SEED TRT** Seed treatment:

UT	Untreated
BY	Fuberidazole + triadimenol
NT	New treatment

NOTE: NT is under commercial development, composition undisclosed.

Sub-plots

2. **N RATE** Nitrogen fertilizer (kg N) as 27% N:

	Early	Later
N1	0	80
N2	30	50
N3	30	130

Experimental diary:

08-Sep-94 : B : PK as (0:20:32) at 781 kg.
26-Sep-94 : B : Barclay Gallup at 4.0 l in 200 l.
06-Oct-94 : B : Ploughed.
17-Oct-94 : B : Rotary harrowed, Hussar drilled at 325 seeds per m^2, rolled.
28-Nov-94 : B : Panther at 2.0 l with Decis at 200 ml in 200 l.
06-Mar-95 : **T** : **N RATE** N2, N3: 27% N at 111 kg.
26-Apr-95 : **T** : **N RATE** N1: 27% N at 296 kg, N2 at 185 kg and N3 at 481 kg.
02-May-95 : B : Halo at 2.0 l in 200 l.
01-Jun-95 : B : Cyclone at 1.0 l with Mallard 750 EC at 0.3 l in 200 l.
29-Jun-95 : B : Pirimicarb 50 DG at 280 g in 300 l.
05-Aug-95 : B : Combine harvested.

NOTE: Plant establishment was assessed in autumn and spring. Plant samples were taken in November, April and June to assess take-all infection.

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95/W/CS/440

GRAIN TONNES/HECTARE

***** Tables of means *****

N RATE / **SEED TRT**	N1	N2	N3	Mean
UT	2.36	2.95	3.71	3.01
BY	2.29	3.22	3.25	2.92
NT	2.68	3.91	4.29	3.63
Mean	2.44	3.36	3.75	3.18

*** Standard errors of differences of means ***

SEED TRT	**N RATE**	**SEED TRT N RATE**
0.318	0.197	0.422

Except when comparing means with the same level(s) of **SEED TRT** 0.341

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	14	0.636	20.0
BLOCK.WP.SP	42	0.682	21.4

GRAIN MEAN DM% 89.9

SUB-PLOT AREA HARVESTED 0.00326

https://doi.org/10.23637/ERADOC-1-50