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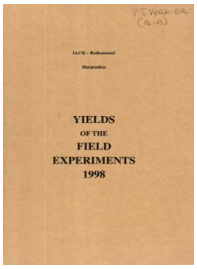
ROTHAMSTED RESEARCH

Yields of the Field Experiments 1998

Full Table of Content



Annuals - Winter Wheat

Rothamsted Research

Rothamsted Research (1999) *Annuals - Winter Wheat ;* Yields Of The Field Experiments 1998, pp 116 - 134 **- DOI: https://doi.org/10.23637/ERADOC-1-52**

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98/W/WW/1

WINTER WHEAT

FUNGICIDES AND TIMINGS

Object: To test some new fungicides on w. wheat - Woburn, Far Field II.

Sponsors: C. Peters.

Design: 3 randomised blocks of 3 x 4 + 1 plots

Plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1.	**FUNG 1**	Fungicides in April, growth stage (GS) 32:
	AF	Azoxystrobin at 150 g and epoxiconazole at 38 g
	KF	Kresoxim-methyl with epoxiconazole each at 94 g
	AKH	Azoxystrobin at 75 g with kresoxim-methyl at 50 g and epoxiconazole at 94 g
2.	**FUNG 2**	Fungicides in May/June, GS 39 and/or 55 and/or 61:
	AP39	Azoxystrobin at 200 g with flutriafol at 50 g at GS 39
	AP55	Azoxystrobin at 200 g with flutriafol at 50 g at GS 55
		Azoxystrobin at 200 g with flutriafol at 50 g at GS 39 and azoxystrobin at 100 g at GS 61
	0	Epoxiconazole at 125 g at GS 39

Plus Extra

EXTRA	
-	Epoxiconazole at 94 g at GS 32 and difenoconazole at 50 g at GS 61

Experimental diary:

19-Sep-97 : B : Ploughed.
01-Oct-97 : B : Rolled. Rotary harrowed. Hereward, dressed Sibutol, drilled at 325 seeds per m^2.
13-Nov-97 : B : Isoproturon 500 at 1.0 l with Stomp 400 SC at 2.0 l and Cyperkill 10 at 0.25 l in 200 l.
11-Feb-98 : B : 34.5% N at 145 kg.
19-Mar-98 : B : Phosyn Manganese at 2.0 l with Profol Copper at 0.25 l in 200 l.
30-Mar-98 : B : 34.5% N at 377 kg.
23-Apr-98 : **T** : **FUNG 1** AF: Amistar at 0.60 l with Opus at 0.30 l in 220 l.
: **T** : **FUNG 1** KF: Landmark at 0.75 l in 220 l.
: **T** : **FUNG 1** AKH: Amistar at 0.30 l with Landmark at 0.40 l and Opus at 0.35 l in 200 l.
: **T** : **EXTRA** -: Opus at 0.75 l in 200 l.
04-May-98 : B : Tripart Brevis at 2.0 l in 200 l.

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98/W/WW/1

Experimental diary:

```
   21-May-98 : B : Ally at 20 g in 200 l.
             : T : EXTRA -: Opus at 0.70 l in 220 l.
             : T : FUNG 2 AP39, APA: Amistar at 0.80 l with Pointer at
                   0.40 l in 220 l.
             : T : FUNG 2 0: Opus at 1.0 l in 220 l.
   01-Jun-98 : T : FUNG 2 AP55: Amistar at 0.80 l with Pointer at 0.40 l in
                   200 l.
   12-Jun-98 : T : FUNG 2 APA: Amistar at 0.40 l in 220 l.
             : T : EXTRA -: Plover 250 EC at 0.20 l in 220 l
   12-Aug-98 : B : Combine harvested.
```

Previous crops: W. wheat 1996, potatoes 1997.

GRAIN TONNES/HECTARE

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

FUNG 2 / FUNG 1	AP39	AP55	APA	0	Mean
AF	9.26	9.47	10.17	9.34	9.56
KF	9.55	9.75	9.74	8.97	9.50
AKH	9.55	9.86	10.50	9.11	9.76
Mean	9.45	9.69	10.14	9.14	9.61
EXTRA	8.82				

Grand mean 9.54

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

FUNG 1	FUNG 2	FUNG 1 FUNG 2 & EXTRA
0.114	0.132	0.228

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	24	0.279	2.9

GRAIN MEAN DM% 88.7

PLOT AREA HARVESTED 0.00230

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98/R/WW/2

WINTER WHEAT

WEED GROWTH AND DEVELOPMENT

Object: To study the growth and seed production of weeds in the presence and absence of a wheat crop - Pastures.

Sponsors: J.W. Cussans, P.J.W. Lutman.

Design: 4 randomised blocks of 7 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments:

CRP WEED	Crop and/or weed species:
WW	W. wheat
WCH	W. wheat and chickweed (*Stellaria media*)
WBG	W. wheat and black-grass (*Alopecurus myosuroides*)
WCL	W. wheat and cleavers (*Galium aparine*)
CH	Chickweed
BG	Black-grass
CL	Cleavers

Experimental diary:

11-Sep-97 : B : Harvest at 3.0 l in 300 l.
26-Sep-97 : B : Ploughed. Rolled.
06-Oct-97 : B : Rotary harrowed.
: **T** : **CRP WEED** WBG, BG: Black-grass broadcast.
: **T** : **CRP WEED** WCH, CH: Chickweed broadcast.
: **T** : **CRP WEED** WCL, CL: Cleavers broadcast.
: **T** : **CRP WEED** WW, WCH, WBG, WCL: Rotary harrowed, Consort, dressed Sibutol, drilled at 380 seeds per m^2.
24-Oct-97 : B : Tiger 90 at 15 kg.
21-Jan-98 : **T** : **CRP WEED** WW, WCH, WCL, CH, CL: Cheetah Super at 1.0 l in 220 l.
05-Feb-98 : **T** : **CRP WEED** BG, BGW, WW: Starane 2 at 1.0 l in 220 l.
13-Mar-98 : B : 34.5% N at 120 kg.
27-Apr-98 : B : Opus at 0.6 l with Tripart Brevis at 2.25 l in 200 l.
28-Apr-98 : B : 34.5% N at 460 kg.
15-May-98 : B : Bravo 500 at 1.0 l with Opus at 0.5 l in 200 l.
15-Jun-98 : B : Bavistin DF at 0.5 kg with Folicur at 0.5 l in 100 l.
06-Aug-98 : **T** : **CRP WEED** BG: Cut and stationary combined.
20-Aug-98 : **T** : **CRP WEED** WW, WCH, WBG, WCL: Combine harvested.
28-Aug-98 : **T** : **CRP WEED** CL: Combine harvested.

Previous crops: W. wheat 1996, s. beans 1997.

NOTE: Plant samples were taken regularly through the winter and spring to measure leaf and tiller numbers, green area and dry weight. Soil cores were taken in June to assess root distribution.

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98/R/WW/2

GRAIN TONNES/HECTARE

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

CRP	WEED
WW	11.77
WCH	9.02
WBG	6.19
WCL	11.45
Mean	9.61

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

CRP	WEED
	0.406

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	9	0.574	6.0

GRAIN MEAN DM% 86.4

PLOT AREA HARVESTED 0.00230

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98/R/WW/3

WINTER WHEAT

PLANT N INDICATORS

Object: To relate chlorophyll concentrations in individual leaves of w. wheat to nitrogen supply and crop yield - Pastures.

Sponsors: P.B. Barraclough.

Design: 3 randomised blocks of 18 plots.

Whole plot dimensions: 3.0 x 25.0.

Treatments:

NITROGEN Kg N and timing:

	Early March (GS 24)	Mid April (GS 31)	Mid May (GS 37)	Late May (GS 51)	Total
-	0	0	0	0	0
A	40	40	0	0	80
B	40	40	40	0	120
C	40	40	80	0	160
D	40	80	0	0	120
E	40	80	40	0	160
F	40	80	80	0	200
G	40	120	0	0	160
H	40	120	40	0	200
I	40	120	80	0	240
J	40	160	0	0	200
K	40	0	0	0	40
L	40	0	40	0	80
M	40	0	80	0	120
N	40	0	0	80	120
O	40	40	0	80	160
P	40	80	0	80	200
Q	40	120	0	80	240

Experimental diary:

11-Sep-97 : B : Harvest at 3.0 l in 300 l.
26-Sep-97 : B : Ploughed. Rolled.
06-Oct-97 : B : Rotary harrowed, Hereward, dressed Anchor, drilled at 380 seeds per m^2.
24-Oct-97 : B : Tiger 90 at 15 kg.
26-Nov-97 : B : Atlas Fieldgard at 5.0 l with MSS Optica at 0.7 l in 100 l.
13-Mar-98 : **T** : **NITROGEN** applied as 34.5% N (GS 24).
08-Apr-98 : **T** : **NITROGEN** applied as 34.5% N (GS 31).
27-Apr-98 : B : Opus at 0.6 l with Tripart Brevis at 2.25 l in 200 l.
05-May-98 : B : Ally at 20 g with Starane 2 at 0.7 l in 200 l.

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Experimental diary:

```
   15-May-98 : T : NITROGEN applied as 34.5% N (GS 37).
             : B : Bravo 500 at 1.0 l with Opus at 0.5 l in 200 l.
   19-May-98 : B : Irrigated 15 mm.
   28-May-98 : T : NITROGEN applied as 34.5% N (GS 51).
   15-Jun-98 : B : Bavistin DF at 0.5 kg with Folicur at 0.5 l in 100 l.
   19-Aug-98 : B : Combine harvested.
```

Previous crops: W. wheat 1996, s. beans 1997

NOTE:

GRAIN TONNES/HECTARE

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

NITROGEN	
-	7.19
A	8.65
B	9.20
C	9.68
D	9.11
E	9.19
F	8.70
G	9.12
H	8.54
I	9.05
J	8.89
K	8.14
L	9.20
M	9.70
N	8.78
O	9.31
P	9.44
Q	8.35
Mean	8.90

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

NITROGEN
0.226

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	34	0.277	3.1

GRAIN MEAN DM% 88.1

PLOT AREA HARVESTED 0.00437

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98/R/WW/4

WINTER WHEAT

FUSARIUM STUDY

Object: To assess different inocula and inoculum sources on the development of ear blight in mist-irrigated or unirrigated w. wheat - Little Knott.

Sponsors: G.L. Bateman.

Design: 3 randomised blocks of 3 x 2 plots

Whole plot dimensions: 4.0 x 14.0.

Treatments:

1. **FUSARIUM** *Fusarium* inocula:

U	None
FS	*F. culmorum* as spores
FG	*F. culmorum* as colonised grain

2. **MISTING**

-	None
M	Irrigated

Experimental diary:

17-Sep-97 : B : Scythe LC at 1.5 l with Vassgro Non Ionic at 100 ml in 200 l.
25-Sep-97 : B : Ploughed.
27-Sep-97 : B : Rolled.
06-Oct-97 : B : Rotary harrowed, Charger, dressed Beret Gold drilled at 380 seeds per m^2.
26-Nov-97 : B : Lexus Class WSB at 60 g in 200 l
18-Feb-98 : B : 34.5% N at 120 kg.
31-Mar-98 : **T** : **FUSARIUM** FG: Inoculum applied.
28-Apr-98 : B : 34.5% N at 460 kg.
09-May-98 : B : Ally at 15 g with Topik at 125 ml and Chiltern Cropoil at 1.0 l in 200 l.
18-May-98 : B : Terpal at 1.0 l with Headland Enhance LF at 40 ml in 200 l.
03-Jun-98 : **T** : **FUSARIUM** FS: Inoculation and mist irrigation begun.
13-Jun-98 : **T** : **FUSARIUM** FS: Inoculation and mist irrigation completed.
20-Aug-98 : B : Combine harvested.

Previous crops: W. wheat 1996, w. oats 1997

NOTES: (1) Mist irrigation was applied to pairs of plots in sequence between 03-Jun-98 and 13-Jun 98.
(3) Ear blight was assessed in June. Plant samples were taken in July to assess stem base diseases and isolation of fungal pathogens. Seeds were assessed at harvest for fungal infection.

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98/R/WW/4

GRAIN TONNES/HECTARE

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

MISTING	-	M	Mean
FUSARIUM			
U	7.12	6.84	6.98
FS	3.58	3.70	3.64
FG	6.68	6.38	6.53
Mean	5.79	5.64	5.72

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

FUSARIUM	MISTING	FUSARIUM MISTING
0.231	0.189	0.327

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	10	0.400	7.0

GRAIN MEAN DM% 86.2

PLOT AREA HARVESTED 0.00138

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98/R/WW/5

WINTER WHEAT

SEMIOCHEMICALS AND APHIDS

Object: To test semiochemicals on cereal aphids in autumn and spring migratory periods - Pastures.

Sponsors: L.E. Smart, B.J. Pye, L.J. Wadhams.

Design: 5 x 5 quasi-complete Latin square.

Whole plot dimensions: 6.0 x 6.0.

Treatments:

SEMIOCHM	Semiochemicals:
-	None
A	Methyl salicylate and nepetalactone
B	Methyl salicylate in autumn. Polygodial applied by electrostatic sprayer applied in October and twice in June
C	Camphor
D	AJH/8/158 at 50 g in 200 l applied in May and June

NOTE: Methyl salicylate, camphor and nepetalactone were applied as point sources in the centre of the plots from 21-Oct-98. AJH/8/158 is under commercial development, composition undisclosed.

Experimental diary:

11-Sep-97	B	Harvest at 3.0 l in 300 l.
26-Sep-97	B	Ploughed. Rolled.
06-Oct-97	B	Rotary harrowed, Consort, undressed, drilled at 380 seeds per m^2.
24-Oct-97	B	Tiger 90 at 15 kg.
27-Oct-97	**T**	**SEMIOCHM** B: Polygodial at 50 g ai in 10.4 l.
26-Nov-97	B	Atlas Fieldgard at 5.0 l with MSS Optica at 0.7 l in 100 l.
19-Feb-98	B	34.5% N at 120 kg.
27-Apr-98	B	Opus at 0.6 l with Tripart Brevis at 2.25 l in 200 l.
28-Apr-98	B	34.5% N at 460 kg.
05-May-98	B	Ally at 20 g with Starane 2 at 0.7 l in 200 l.
08-May-98	**T**	**SEMIOCHM** D: AJH/8/158 at 50 g ai in 200 l.
15-May-98	B	Bravo 500 at 1.0 l with Opus at 0.5 l in 200 l.
01-Jun-98	**T**	**SEMIOCHM** D: AJH/8/158 at 50 g ai in 200 l.
04-Jun-98	**T**	**SEMIOCHM** B: Polygodial at 50 g ai in 10.4 l.
15-Jun-98	B	Bavistin DF at 0.5 kg with Folicur at 0.5 l in 100 l.
19-Jun-98	**T**	**SEMIOCHM** B: Polygodial at 50 g ai in 10.4 l.
	T	**SEMIOCHM** D: AJH/8/158 at 50 g ai in 200 l.
19-Aug-98	**T**	Combine harvested.

Previous crops: Ley 1996, s. beans 1997.

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NOTE: Aphid populations were assessed on five occasions in October and November and weekly from mid-May to end of July.

GRAIN TONNES/HECTARE

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

SEMIOCHM

-	10.57
A	10.40
B	10.38
C	10.35
D	10.86
Mean	10.51

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

SEMIOCHM
0.257

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

Stratum	d.f.	s.e.	cv%
ROW.COL	12	0.407	3.9

GRAIN MEAN DM% 88.2

PLOT AREA HARVESTED 0.00138

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98/R/WW/8

WINTER WHEAT

SEED TREATMENTS AND FOLIAR DISEASES A

Object: To test new seed treatments on the control of take-all (*Gaeumannomyces graminis*) and foliar diseases of w. wheat - Highfield IV/Road Piece East.

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

Design: 4 randomised blocks of 3 x 8 + 1 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

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

S	30-Sep-97
O	20-Oct-97
N	13-Nov-97

2. **T** Seed treatment and foliar spray:

	Seed Treatment	Foliar Spray
-	None	None
-F2	None	F2
-F1F2	None	F1 and F2
9R1F2	CR21529 at 200 ml	F2
9R2F2	CR21529 at 300 ml	F2
9R3F2	CR21529 at 450 ml	F2
8R3F2	CR21528 at 450 ml	F2
BF2	Baytan	F2

Plus 1 extra plot:

3. **EXTRA**

PF2	Seedbed inoculated *Phialophora* and F2

F1 = Cyproconazole and prochloraz at growth stage (GS) 30-31 as Sportak Delta 460 HF and Tern 750 EC
F2 = Tebuconazole and azoxystrobin at GS 59 as Standon Tebuconazole and Amistar

NOTE: CR21528 and CR21529 and under commercial development, composition disclosed in confidence.

Experimental diary:
17-Sep-97 : B : Scythe LC at 3.0 l with Vassgro Non Ionic at 100 ml in 200 l.
24-Sep-97 : B : Ploughed and furrow pressed.

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Experimental diary:

30-Sep-97 : **T** : **EXTRA** PF2: Inoculum applied.
: **T** : **SOW DATE** S: Rotary harrowed, Hereward, dressed as treatment, drilled at 380 seeds per m^2.
20-Oct-97 : **T** : **SOW DATE** O: Rotary harrowed, Hereward, dressed as treatment, drilled at 380 seeds per m^2.
13-Nov-97 : **T** : **SOW DATE** N: Rotary harrowed, Hereward, dressed as treatment, drilled at 380 seeds per m^2.
13-Jan-98 : B : Lexus Class WSB at 60 g in 100 l.
13-Feb-98 : B : 34.5% N at 116 kg.
23-Mar-98 : **T** : **SOW DATE** S **T** -F1F2: Sportak Delta 460 HF at 1.0 l with Tern 750 EC at 0.5 l in 200 l.
16-Apr-98 : **T** : **SOW DATE** O, N **T** -F1F2: Sportak Delta 460 HF at 1.0 l with Tern 750 EC at 0.5 l in 220 l.
28-Apr-98 : B : 34.5% N at 460 kg.
08-May-98 : B : Ally at 20 g with Starane 2 at 0.5 l in 200 l.
12-May-98 : **T** : **T** -F2, -F1F2, 9R1F2, 9R2F2, 9R3F2, 8R3F2, BF2 and **EXTRA** PF2: Standon Tebuconazole at 0.5 l with Amistar at 0.5 l in 220 l.
11-Aug-98 : B : Combine harvested.

Previous crops: W. wheat 1996, w. wheat and barley 1997.

NOTE: Plant samples were taken in March for dry weights and disease assessments and in June for disease assessment. Patches of take-all were assessed in July.

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GRAIN TONNES/HECTARE

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

T	-	-F2	-F1F2	9R1F2	9R2F2	9R3F2	8R3F2	BF2	Mean
SOW DATE									
S	6.96	8.29	7.50	8.15	8.14	7.91	8.27	7.50	7.84
O	7.65	7.98	8.85	9.27	8.64	8.58	8.48	8.43	8.48
N	7.97	8.87	9.17	9.04	8.55	8.52	8.60	8.29	8.63
Mean	7.53	8.38	8.51	8.82	8.44	8.34	8.45	8.07	8.32

EXTRA PF2 7.89

Grand mean 8.30

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

SOW DATE	**T**	**SOW DATE T & EXTRA**
0.174	0.285	0.493

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	72	0.697	8.4

GRAIN MEAN DM% 88.2

PLOT AREA HARVESTED 0.00228

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98/R/WW/9

WINTER WHEAT

SEED TREATMENTS AND FOLIAR DISEASES B

Object: To assess the effects of seed treatment and foliar fungicides on foliar diseases in the absence of take-all (*Gaeumannomyces graminis*)- Bones Close

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

Design: 4 randomised blocks of 3 x 8 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1. **SOW DATE** Time of sowing:

S	25-Sep-97
O	20-Oct-97
N	13-Nov-97

2. **FUNG** Fungicide:

	Seed Treatment	Foliar Spray
-	None	None
-F2	None	F2
-F1F2	None	F1 and F2
9R1F2	CR21529 at 200 ml	F2
9R2F2	CR21529 at 300 ml	F2
9R3F2	CR21529 at 450 ml	F2
8R3F2	CR21528 at 450 ml	F2
BF2	Baytan	F2

F1 = Cyproconazole and prochloraz at growth stage (GS) 30-31 as Sportak Delta 460 HF and Tern 750 EC
F2 = Tebuconazole and azoxystobin at GS 59 as Standon Tebuconazole and Amistar

NOTE: CR21529 and CR21528 are under commercial development, composition disclosed in confidence.

Experimental diary:

26-Aug-97 : B : Ploughed and furrow pressed.
25-Sep-97 : **T** : **SOW DATE** S: Rotary harrowed, Hereward, dressed as treatment, drilled at 380 seeds per m^2.
20-Oct-97 : **T** : **SOW DATE** O: Rotary harrowed, Hereward, dressed as treatment, drilled at 380 seeds per m^2.
13-Nov-97 : **T** : **SOW DATE** N: Rotary harrowed, Hereward, dressed as treatment, drilled at 380 seeds per m^2.
28-Jan-98 : B : Amazon at 1.0 l in 200 l.
18-Feb-98 : B : 34.5% N at 120 kg.
17-Mar-98 : B : Ally at 20 g with MSS Optica at 1.0 l in 200 l.

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Experimental diary:

23-Mar-98 : **T** : **SOW DATE** S, **FUNG** -F1F2: Sportak Delta 460 HF at 1.0 l with Tern 750 EC at 0.5 l in 220 l.

16-Apr-98 : **T** : **SOW DATE** O, N, **FUNG** -F1F2: Sportak Delta 460 HF at 1.0 l with Tern 750 EC at 0.5 l in 220 l.

28-Apr-98 : B : 34.5% N at 460 kg.

12-May-98 : **T** : **FUNG** -F2, -F1F2, 9R1F2, 9R2F2, 9R3F2, 8R3F2, BF2: Standon Tebuconazole at 0.5 l with Amistar at 0.5 l in 220 l.

18-Aug-98 : B : Combine harvested.

Previous crops: W. cereal 1996, w. rape 1997

NOTE: Plant samples were taken in March for dry weights and in July for disease assessment.

GRAIN TONNES/HECTARE

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

SOW DATE / **FUNG**	S	O	N	Mean
-	7.68	8.05	8.37	8.03
-F2	8.54	8.54	9.19	8.76
-F1F2	9.07	9.37	9.52	9.32
9R1F2	8.77	8.72	8.98	8.82
9R2F2	8.87	8.66	8.87	8.80
9R3F2	9.01	8.58	9.05	8.88
8R3F2	8.37	8.73	8.21	8.44
BF2	8.63	8.07	8.68	8.46
Mean	8.62	8.59	8.86	8.69

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

SOW DATE	**FUNG**	**SOW DATE** **FUNG**
0.099	0.162	0.281

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	69	0.398	4.6

GRAIN MEAN DM% 87.2

PLOT AREA HARVESTED 0.00229

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98/R/WW/12

WINTER WHEAT

FOLIAR SPRAYS AND TAKE-ALL

Object: To test the efficacy of a novel material on the control of take-all (*Gaeumannomyces graminis*) in w. wheat - Highfield IV/Road Piece East.

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

Design: 4 randomised blocks of 5 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments:

TREATMNT	
-	None
ST	CGA 245704 seed treatment
SA	CGA 245704 foliar spray 12-Nov-97
SE	CGA 245704 foliar spray 25-Feb-98
SL	CGA 245704 foliar spray 31-May-98

NOTE: CGA 245704 is under commercial development, composition disclosed in confidence.

Experimental diary:

17-Sep-97 : B : Scythe LC at 3.0 l with Vassgro Non Ionic at 100 ml in 200 l.
24-Sep-97 : B : Ploughed and furrow pressed.
30-Sep-97 : B : Rotary harrowed, Hereward, dressed as treatment, drilled at 400 seeds per m^2.
12-Nov-97 : **T** : **TREATMNT** SA: CGA 245704 at 60 g in 200 l.
06-Jan-98 : B : Atlas Fieldgard at 2.6 l with Stomp 400 SC at 3.3 l in 200 l.
13-Feb-98 : B : 34.5% N at 116 kg. Grasp at 1.4 l with Isoguard at 2.0 l and Output at 0.75 l in 200 l.
25-Feb-98 : **T** : **TREATMNT** SE: CGA 245704 at 60 g in 200 l.
31-Mar-98 : **T** : **TREATMNT** SL: CGA 245704 at 60 g in 200 l.
28-Apr-98 : B : 34.5% N at 400 kg.
08-May-98 : B : Ally at 20 g with Starane 2 at 0.5 l in 200 l.
11-Aug-98 : B : Combine harvested.

Previous crops: W. wheat 1996, w. wheat and barley 1997.

NOTE: Plant samples were taken in November, March and June to assess root and stem base diseases.

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98/R/WW/12

GRAIN TONNES/HECTARE

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

TREATMNT

-	7.63
ST	6.86
SA	7.64
SE	7.01
SL	7.59
Mean	7.34

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

TREATMNT

0.706

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	12	0.998	13.6

GRAIN MEAN DM% 89.8

PLOT AREA HARVESTED 0.00229

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98/R/WW/13

WINTER WHEAT

FUNGICIDE AND TIMINGS

Object: To test some new fungicides on w. wheat - Sawyers II.

Sponsors: C. Peters.

Design: 3 randomised blocks of 3 x 4 + 1 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1. **FUNG 1** — Fungicides in April, growth stage (GS) 32:

AF	Azoxystrobin at 150 g and epoxiconazole at 38 g
KF	Kresoxim-methyl with epoxiconazole each at 94 g
AKH	Azoxystrobin at 75 g with kresoxim-methyl at 50 g and epoxiconazole at 94 g

2. **FUNG 2** — Fungicides in May/June, GS 39 and/or 55 and/or 61:

AP39	Azoxystrobin at 200 g with flutriafol at 50 g at GS 39
AP55	Azoxystrobin at 200 g with flutriafol at 50 g at GS 55
APA	Azoxystrobin at 200 g with flutriafol at 50 g at GS 39 and azoxystrobin at 100 g at GS 61
0	Epoxiconazole at 125 g at GS 39

Plus extra

EXTRA

-	Epoxiconazole at 94 g at GS 32 and difenoconazole at 50 g at GS 61

Experimental diary:

24-Sep-97	: B	:	PK as (0:20:32) at 1250 kg.
27-Sep-97	: B	:	Ploughed.
28-Sep-97	: B	:	Rolled.
29-Sep-97	: B	:	Rotary harrowed, Abbot, dressed Beret Gold, drilled at 380 seeds per m^2.
13-Jan-98	: B	:	Lexus Class WSB at 60 g in 100 l.
18-Feb-98	: B	:	34.5% N at 120 kg.
23-Apr-98	: **T**	:	**EXTRA** -: Opus at 0.75 l in 200 l.
	: **T**	:	**FUNG 1** AKH: Amistar at 0.30 l with Landmark at 0.40 l and Opus at 0.35 l in 220 l.
	: **T**	:	**FUNG 1** AF: Amistar at 0.60 l with Opus at 0.30 l in 220 l.
	: **T**	:	**FUNG 1** KF: Landmark at 0.75 l in 220 l.
28-Apr-98	: B	:	34.5% N at 460 kg.
	: B	:	Tripart Brevis at 2.25 l in 200 l.
21-May-98	: **T**	:	**EXTRA** -: Opus at 0.70 l in 220 l.

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Experimental diary:

```
   21-May-98 : T : FUNG 2 0: Opus at 1.0 l in 220 l.
             : T : FUNG 2 AP39, APA: Amistar at 0.80 l with Pointer at
                   0.40 l in 220 l.
   01-Jun-98 : T : FUNG 2 AP55: Amistar at 0.80 l with Pointer at 0.40 l
                   in 220 l.
   12-Jun-98 : T : EXTRA -: Plover 250 EC at 0.20 l in 220 l.
             : T : FUNG 2 APA: Amistar at 0.40 l in 220 l.
   19-Aug-98 : T : Combine harvested.
```

Previous crops: Set-aside 1996, w. and s. beans and lupins 1997.

GRAIN TONNES/HECTARE

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

FUNG 2 / FUNG 1	AP39	AP55	APA	O	Mean
AF	9.45	10.28	10.28	9.35	9.84
KF	9.85	10.15	11.15	9.82	10.24
AKH	10.16	10.14	9.99	9.42	9.93
Mean	9.82	10.19	10.48	9.53	10.00
EXTRA	9.49				

Grand mean 9.96

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

FUNG 1	FUNG 2	FUNG 1 FUNG 2 & EXTRA
0.277	0.320	0.554

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	24	0.679	6.8

GRAIN MEAN DM% 88.5

PLOT AREA HARVESTED 0.00230

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