

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1996

[Full Table of Content](#)



96/R/CS/302 Eyespot Resistance to Mbc - W. Wheat

Rothamsted Research

Rothamsted Research (1997) *96/R/CS/302 Eyespot Resistance to Mbc - W. Wheat* ; Yields Of The Field Experiments 1996, pp 61 - 62 - DOI: <https://doi.org/10.23637/ERADOC-1-51>

96/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 twelfth year, w. wheat.

For previous years see 85-93,95/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 1995-6: |
| NONE | None |
| CARB | Carbendazim at 0.25 kg |
| PRO | Prochloraz at 0.40 kg (0.50 kg in 1993, 1995 and 1996) |
| CARB+PRO | Carbendazim at 0.25 kg with prochloraz at 0.40 kg (0.50 kg in 1993, 1995 and 1996) |

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:

- 13-Sep-95 : B : Ploughed and furrow pressed.
28-Sep-95 : B : Rotary harrowed, Hereward, dressed Panoctine, drilled at 380 seeds per m².
20-Nov-95 : B : Panther at 2.0 l in 200 l.
11-Mar-96 : B : 34.5% N at 116 kg.
03-Apr-96 : T : **FUNGCIDE** CARB+PRO: Barclay Eytak at 1.1 l with Tripart Defensor FL at 0.5 l in 200 l.
 : T : **FUNGCIDE** PRO: Barclay Eytak at 1.1 l in 200 l.
 : T : **FUNGCIDE** CARB: Tripart Defensor FL at 0.5 l in 200 l.

96/R/CS/302

Experimental diary:

11-Apr-96 : B : 34.5% N at 463 kg.
 30-Apr-96 : B : Starane 2 at 1.0 l in 200 l.
 13-May-96 : T : **FUNGCIDE** CARB+PRO: Barclay Eyetak at 1.1 l with 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: Tripart Defensor FL at 0.5 l in 200 l.
 13-Jun-96 : B : Alto 100 SL at 0.6 l with Mallard 750 EC at 0.4 l in
 300 l.
 09-Jul-96 : B : Wild oats pulled by hand.
 06-Aug-96 : B : Combine harvested.

NOTE: Samples were taken in July to assess eyespot, brown foot rot and
 take-all.

GRAIN TONNES/HECTARE

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

EYE INOC	NATURAL	W 19R 1S	W 1R 19S	R 19R 1S	R 1R 19S	Mean
FUNGCIDE						
NONE	9.33	8.98	8.44	8.74	9.98	9.13
CARB	8.62	8.76	8.59	8.03	8.75	8.56
PRO	8.78	8.45	9.21	9.54	8.91	8.94
CARB+PRO	9.93	8.99	9.46	9.52	10.41	9.71
Mean	9.17	8.79	8.92	8.96	9.51	9.09

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

EYE INOC	FUNGCIDE*	
	EYE INOC	
0.301	0.601	min.rep
0.260	0.521	max-min

EYE INOC

max-min NATURAL any of the remainder
 min.rep Any of the remainder

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

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	3	0.489	5.4
BLOCK.WP.SP	24	0.601	6.6

GRAIN MEAN DM% 88.3

SUB-PLOT AREA HARVESTED 0.00138