

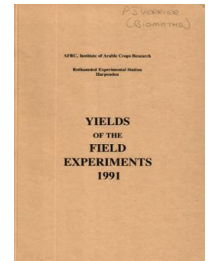
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1991

[Full Table of Content](#)



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

Rothamsted Research

Rothamsted Research (1992) *91/R/CS/302 Eyespot Resistance to Mbc - W. Wheat* ; Yields Of The Field Experiments 1991, pp 57 - 58 - DOI: <https://doi.org/10.23637/ERADOC-1-46>

91/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 seventh year, w. wheat.

For previous years see 85-90/R/CS/302.

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

Whole plot dimensions: 12.0 x 24.0.

Treatments: All combinations of:-

Whole plots

- | | |
|---------------------|--|
| 1. FUNGICIDE | Fungicides applied cumulatively 1985-91: |
| NONE | None |
| CARB | Carbendazim at 0.25 kg |
| PRO | Prochloraz at 0.40 kg |
| CARB+PRO | Carbendazim at 0.15 kg + prochloraz at 0.40 kg |

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 |

NOTES: (1) Fungicide treatments were applied in 200 l on 15 Nov, 1990 and 12 Apr, 1991.

(2) The eyespot inoculum was colonised on oat seed and this was broadcast in October, 1984.

Basal applications: Manure: 'Nitram' at 120 kg and later at 460 kg.
Weedkillers: Tri-allate at 2.2 kg. Diflufenican at 0.10 kg and isoproturon at 1.0 kg in 200 l. Glyphosate at 0.54 kg with a wetting agent, 'Team' at 1.0 l, in 200 l.

Seed: Mercia, sown at 170 kg.

Cultivations, etc.:- Straw burnt, heavy spring-tine cultivated: 22 Aug, 1990. Ploughed, furrow pressed: 24 Aug. Rotary harrowed, seed sown: 24 Sept. Tri-allate applied: 2 Nov. Diflufenican and isoproturon applied: 9 Nov. First N applied: 14 Mar, 1991. Second N applied: 8 Apr. Glyphosate with wetting agent applied: 12 Aug. Combine harvested: 22 Aug.

91/R/CS/302

NOTE: Eyespot and sharp eyespot were assessed at fortnightly intervals from May - July on the **EYE INOC NATURAL** plots only.

GRAIN TONNES/HECTARE

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

EYE INOC FUNGICIDE	NATURAL	W 19R 1S	W 1R 19S	R 19R 1S	R 1R 19S	Mean
NONE	5.32	5.14	5.12	5.01	4.90	5.14
CARB	5.37	5.20	4.99	5.19	4.90	5.17
PRO	5.54	5.51	5.12	5.40	5.84	5.49
CARB+PRO	5.61	5.72	5.44	5.44	5.51	5.55
Mean	5.46	5.39	5.17	5.26	5.29	5.34

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

EYE INOC	FUNGICIDE*
	EYE INOC
0.082	0.164 min.rep
0.071	0.142 max-min

EYE INOC
max-min NATURAL v any of the remainder
min.rep any of the remainder

* Within the same level of **FUNGICIDE** only

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP.SP	24	0.164	3.1

GRAIN MEAN DM% 84.5

SUB PLOT AREA HARVESTED 0.00138