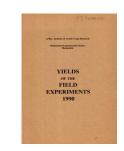
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Yields of the Field Experiments 1990



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Rothamsted Research

Rothamsted Research (1991) 90/R/CS/302 Eyespot Resistance to Mbc - W. Wheat; Yields Of The Field Experiments 1990, pp 63 - 64 - DOI: https://doi.org/10.23637/ERADOC-1-42

90/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 sixth year, w. wheat.

For previous years see 85-89/R/CS/302.

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

Whole plot dimensions: 12.0×24.0 .

Treatments: All combinations of:-

Whole plots

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
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 24 Nov, 1989 and 30 Mar, 1990.

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

Basal applications: Manure: 'Nitram' at 580 kg. Weedkillers: Glyphosate at 0.27 kg in 200 l. Chlorotoluron at 3.0 kg with cyanazine at 0.75 kg in 200 l. Fluroxypyr at 0.15 kg with bromoxynil at 0.34 kg and clopyralid at 0.07 kg in 200 l. Insecticide: Deltamethrin at 6.2 g in 200 l.

Seed: Avalon, sown at 180 kg.

90/R/CS/302

Cultivations, etc.:- Heavy spring-tine cultivated: 22 Aug, 1989.
Glyphosate applied: 14 Sept. Ploughed: 22 Sept. Rotary harrowed twice, seed sown: 3 Oct. Chlorotoluron with cyanazine applied: 23 Nov. Deltamethrin applied: 22 Feb, 1990. N applied: 18 Apr. Fluroxypyr, bromoxynil and clopyralid applied: 30 Apr. Combine harvested: 10 Aug.

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 FUNGCIDE	NATURAL	W 19R 1S	W 1R 19S	R 19R 1S	R 1R 19S	Mean
NONE	5.03	5.03	4.23	4.87	5.07	4.88
CARB	4.74	4.53	4.50	4.64	4.99	4.69
PRO	4.66	4.26	4.79	4.57	4.69	4.60
CARB+PRO	4.89	4.70	4.80	4.91	4.88	4.84
Mean	4.83	4.63	4.58	4.75	4.91	4.75

^{***} Standard errors of differences of means ***

EYE INOC	FUNGCIDE*		
	EYE INOC		
0.191	0.381	min.rep	
0.165	0.330	max-min	

EYE INOC

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

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP.SP	24	0.381	8.0

GRAIN MEAN DM% 90.1

SUB PLOT AREA HARVESTED 0.00138

^{*} Within the same level of FUNGCIDE only