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Yields of the Field Experiments 1996



Full Table of Content

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

Rothamsted Research

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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: 12.0×24.0 . Sub-plot dimensions: 4.5×6.0 .

Treatments: All combinations of:-

Whole plots

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

Eyespot inoculum, applied in first year only:

NATURAL

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

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 1 in 200 1.

11-Mar-96 : B : 34.5% N at 116 kg.

03-Apr-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 1 in 200 1.

: T : FUNGCIDE CARB: Tripart Defensor FL at 0.5 1 in 200 1.

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 1 in 200 1.

13-May-96 : T : FUNGCIDE CARB+PRO: Barclay Eyetak at 1.1 l with Tripart

Defensor FL at 0.5 1 in 200 1.

: T : FUNGCIDE PRO: Barclay Eyetak at 1.1 1 in 200 1.

: T : FUNGCIDE CARB: Tripart Defensor FL at 0.5 1 in 200 1.

13-Jun-96 : B : Alto 100 SL at 0.6 l with Mallard 750 EC at 0.4 l in

300 1.

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 FUNGCIDE	NATURAL	W 19R 1S	W 1R 19S	R 19R 1S	R 1R 19S	Mean
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