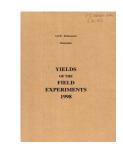
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Yields of the Field Experiments 1998



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Rothamsted Research

Rothamsted Research (1999) 98/R/CS/302 Eyespot Resistance to Mbc - W. Wheat; Yields Of The Field Experiments 1998, pp 56 - 57 - DOI: https://doi.org/10.23637/ERADOC-1-52

98/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 14th year, w. wheat.

For previous years see 85-93,95-97/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 1995-98:

NONE None

CARB Carbendazim at 0.25 kg

PRO Prochloraz at 0.40 kg (0.50 kg in 1993, 1995-1998)

CARB+PRO Carbendazim and prochloraz as above

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:

04-Oct-97 : B : Ploughed.

08-Oct-97 : B : Harrowed, rotary harrowed, Hereward, dressed Anchor, drilled at 380 seeds per m².

05-Dec-97 : B : Part: Unite A at 0.125 l with Unite B at 1.0 l and Adder at 1.0 l in 200 l.

13-Jan-98 : B : Completed: Unite A at 0.125 l with Unite B at 1.0 l and LI-700 at 1.0 l in 200 l.

16-Feb-98 : B : 34.5% N at 120 kg.

99/R/CS/302

Experimental diary:

16-Mar-98 : 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 l in 200 l.

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

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

27-Apr-98 : T : FUNGCIDE PRO: Barclay Eyetak at 1.1 1 in 200 1.

: T : FUNGCIDE CARB: Campbell's Carbendazim 50 % Flowable at 0.5 1

in 200 1.

: T : FUNGCIDE CARB+PRO: Barclay Eyetak at 1.1 l with Tripart

Defensor FL at 0.5 1 in 200 1.

28-Apr-98 : B : Ally at 20 g with Cheetah Super at 0.75 1, Starane 2 at 0.7 1

and Chiltern Cropoil at 1.0 1 in 200 1.

03-Jul-98 : B : Folicur at 0.3 1 in 100 1.

05-Aug-98 : B : Alpha Glyphogan at 3.0 1 in 200 1.

11-Aug-98 : B : Combine harvested.

GRAIN TONNES/HECTARE

**** Tables of means ****

| EYE INOC | NATURAL | W 19R 1S | W 1R 19S | R 19R 1S | R 1R 19S | Mean |
|----------|---------|----------|----------|----------|----------|------|
| FUNGCIDE | | | | | | |
| NONE | 7.49 | 7.79 | 6.67 | 6.44 | 7.41 | 7.22 |
| CARB | 6.55 | 6.57 | 6.57 | 6.45 | 7.03 | 6.62 |
| PRO | 7.99 | 7.76 | 8.06 | 8.42 | 7.77 | 8.00 |
| CARB+PRO | 7.88 | 7.98 | 7.76 | 7.43 | 8.11 | 7.84 |
| Mean | 7.48 | 7.52 | 7.27 | 7.19 | 7.58 | 7.42 |

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

EYE INOC FUNGCIDE* EYE INOC

0.269 0.538 min.rep 0.233 0.446 max-min

EYE INOC

max-min NATURAL v 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.SP 24 0.538 7.3

GRAIN MEAN DM% 90.6 SUB-PLOT AREA HARVESTED 0.00138