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[Full Table of Content](#)

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

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87/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.

Sponsors: G.L. Bateman, B.D.L. Fitt.

The third years, w. wheat.

For previous years see 85-86/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 to 1985 and 1986 treatments: |
| 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 500 l on 12 Nov, 1986 repeated in 200 l on 14 Apr, 1987.

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

Basal applications: Manures: 'Nitram' at 590 kg. Weedkillers: Paraquat at 0.60 kg ion in 200 l. Isoproturon at 2.5 kg with clopyralid at 0.07 kg, bromoxynil at 0.34 kg and mecoprop at 2.5 kg in 200 l.

Seed: Avalon, sown at 180 kg.

Cultivations, etc.: Heavy spring-tine cultivated twice: 27 Aug, 1986. Paraquat applied: 18 Sept. Discd, rotary harrowed, seed sown: 30 Sept. Remaining weedkillers applied: 16 Apr, 1987. N applied: 17 Apr. Combine harvested: 1 Sept.

NOTE: Yields were not taken. Eyespot and sharp eyespot were assessed in April and July. Eyespot was characterized according to type and MBC resistance.