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98/R/CS/483 Severe Take-all in Wheat - W. Wheat

Rothamsted Research

Rothamsted Research (1999) *98/R/CS/483 Severe Take-all in Wheat - W. Wheat* ; Yields Of The Field Experiments 1998, pp 108 - 109 - DOI: <https://doi.org/10.23637/ERADOC-1-52>

98/R/CS/483

SEVERE TAKE-ALL IN WHEAT

Object: To create severe take-all (*Gaeumannomyces graminis*) in winter wheat by applying inoculum artificially to spring wheat and then test seed dressings on w. wheat - Summerdells I.

Sponsors: G.L. Bateman, R.J. Gutteridge.

The second year, w. wheat.

For previous year see 97/R/CS/483

Design: 4 randomised blocks of 2 x 7 plots.

Plot dimensions: 3.0 x 10.0.

Treatments:-

All combinations of:

1. **INOCULTN** Inoculum applied in 1997:
 - None
 - TA Take-all inoculum

2. **SEED TRT** Seed dressing in 1998:
 - None
 - R1 CR 21529 at 200 ml per 100 kg
 - R2 CR 21529 at 300 ml per 100 kg
 - R3 CR 21529 at 450 ml per 100 kg
 - NR1 CR 21529 (Non-P) at 200 ml per 100 kg
 - NR3 CR 21529 (Non-P) at 450 ml per 100 kg
 - B Baytan Flowable at 200 ml per 100 kg

NOTE: Treatments CR 21529 and CR 21529 (Non-P) are under commercial development, composition disclosed in confidence.

Experimental diary:

- 10-Sep-97 : B : PK as (0:20:32) at 1250 kg.
- 01-Oct-97 : B : Heavy spring-tine cultivated twice.
- 01-Oct-97 : T : Rotary harrowed, Hereward, dressed as treatment, drilled at 400 seeds per m².
- 03-Oct-97 : B : Rolled.
- 16-Oct-97 : B : Draza at 5.5 kg.
- 13-Jan-98 : B : Unite A at 0.125 l with Unite B at 1.0 l and LI-700 at 1.0 l in 200 l.
- 17-Feb-98 : B : 34.5% N at 120 kg.
- 29-Apr-98 : B : 34.5% N at 460 kg.
- 18-Aug-98 : B : Combine harvested.

NOTE: Plant populations, growth and take-all were assessed in March. Take-all and stem base diseases were assessed in June.

98/R/CS/483

GRAIN TONNES/HECTARE

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

INOCULTN SEED TRT	-	TA	Mean
-	5.78	5.82	5.80
R1	6.03	6.25	6.14
R2	6.14	6.58	6.36
R3	5.59	6.67	6.13
NR1	6.75	5.68	6.21
NR3	6.22	6.70	6.46
B	5.68	6.29	5.99
Mean	6.03	6.28	6.16

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

INOCULTN SEED TRT	SEED TRT	INOCULTN SEED TRT
0.227	0.425	0.601

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	39	0.850	13.8
GRAIN MEAN DM%	88.0		
PLOT AREA HARVESTED	0.00228		