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

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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