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00/R/CS/494 Take-all, Phialophora and Seed Treatments - W. Wheat

Rothamsted Research

Rothamsted Research (2001) *00/R/CS/494 Take-all, Phialophora and Seed Treatments - W. Wheat* ; Yields Of The Field Experiments 2000, pp 92 - 93 - DOI: <https://doi.org/10.23637/ERADOC-1-55>

00/R/CS/494

TAKE-ALL, PHIALOPHORA AND SEED TREATMENTS

Object: To test a fungal antagonist of take-all (*Gaeumannomyces graminis*) and determine its interaction with a take-all-selective fungicide - Stackyard.

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

The third year, w. wheat.

For previous years see 98-99/R/CS/494.

Design: 4 randomised blocks of 18 plots.

Plot dimensions: 3.0 x 10.0.

Treatments: Selected combinations of:-

1. **Y1998** Treatment to 1998 crop:
 - (-8) None
 - (P8) *Phialophora* inoculum to seedbed
 - (T8) Take-all inoculum to seedbed
2. **Y1999** Treatment to 1999 crop:
 - (-9) None
 - (P9) *Phialophora* inoculum to seedbed
 - (T9) Take-all inoculum to seedbed
3. **Y2000** Treatment to 2000 crop:
 - 0 None
 - P0 *Phialophora* inoculum to seedbed
 - S0 Seed treatment fungicide; fluquinconazole at 75 g a.i./100 kg
 - PS0 *Phialophora* inoculum and seed treatment fungicide; fluquinconazole at 75 g a.i./100 kg

Experimental diary:

02-Sep-99 : B : : Shallow (10 cm) ploughed.
 04-Sep-99 : B : : Rolled.
 04-Oct-99 : T : P0,PS0 : *Phialophora* inoculum applied.
 : T : -0,P0 : Combination drilled, Hereward, tr. undressed, at 380 seeds/m² with the Accord drill.
 : T : S0,PS0 : Combination drilled, Hereward, tr. fluquinconazole, at 380 seeds/m² with the Accord drill.
 06-Oct-99 : B : : Rolled.
 12-Nov-99 : B : : tm)Lexus 50 DF at 20 g in 200 l.
 : B : : tm)Stomp 400 SC at 2.5 l in 200 l.
 : B : : tm)Toppel 10 at 250 ml in 200 l.
 07-Mar-00 : B : : 34.5% N at 232 kg.
 19-Apr-00 : B : : 34.5% N at 435 kg.
 24-Apr-00 : B : : tm)Opus at 0.5 l in 100 l.
 : B : : tm)Unix at 0.5 l in 100 l.
 : B : : tm)BASF 3C Chlormequat 720 at 2.2 l in 100 l.

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Experimental diary:

12-May-00 : B : : tm)Ally at 30 g in 200 l.
 : B : : tm)Starane 2 at 0.5 l in 200 l.
 22-May-00 : B : : Opus at 0.75 l in 100 l.
 27-Jun-00 : B : : Folicur at 0.25 l in 100 l.
 29-Jun-00 : B : : Hand rogued wild oats.
 10-Aug-00 : B : : Combine harvested.

Previous crops: S. wheat 1998, w. wheat 1999.

NOTE: All plots were sampled in April and June to assess root and stem base diseases.

GRAIN TONNES/HECTARE

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

	Y1998	Y2000	-0	P0	S0	PS0
	Y1999	Y1999				
(-8)	(-9)	(-9)	5.98	5.47	6.80	6.60
	(P9)	(P9)	5.29	5.11	6.86	6.43
	(T9)	(T9)	+	+	+	+
(P8)	(-9)	(-9)	5.76	+	6.69	+
	(P9)	(P9)	+	5.43	+	+
	(T9)	(T9)	4.45	+	5.45	+
(T8)	(-9)	(-9)	6.02	+	7.17	+
	(P9)	(P9)	6.12	6.50	6.91	+
	(T9)	(T9)	+	+	+	+

+ TREATMENT COMBINATIONS NOT TESTED

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

Y1998
 Y1999
 Y2000
 0.404

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	51	0.572	9.4

GRAIN MEAN DM% 82.1

PLOT AREA HARVESTED 0.00237