

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED  
RESEARCH

## Yields of the Field Experiments 1994

[Full Table of Content](#)



### 94/R/CS/331 Take-all Inoculation - W. Wheat, W. Oats

#### Rothamsted Research

Rothamsted Research (1995) *94/R/CS/331 Take-all Inoculation - W. Wheat, W. Oats* ; Yields Of The Field Experiments 1994, pp 70 - 71 - DOI: <https://doi.org/10.23637/ERADOC-1-49>

94/R/CS/331

**TAKE-ALL INOCULATION**

**Object:** To compare a range of methods of artificially inoculating take-all (*Gaeumannomyces graminis*), to assess the residual effects of a seed treatment and to relate amounts of disease established to the yield and grain quality of w. wheat - Great Harpenden I.

**Sponsors:** D. Hornby, G.L. Bateman, R.J. Gutteridge.

The sixth year, w. wheat, w. oats.

For previous years see 89-93/R/CS/331

**Design:** 4 randomised blocks of 9 plots.

**Whole plot dimensions:** 3.0 x 22.0.

**Treatments:**

<b>INOC+SDT</b>	Methods of inoculating take-all to w. wheat in the first year (1989), none since, plus levels of seed treatment in the fifth year (1993) to control take-all:
NONE O W	None (w. oats 1994, alternating with w. wheat)
NONE W O	None (w. wheat 1994, alternating with w. oats)
NONE W W	None (continuous w. wheat)
I PRE PL	Infective inoculum applied to soil surface pre-ploughing
I PRE SO	Infective inoculum applied by fertilizer drill to 10 cm depth before rotary harrowing and sowing wheat
I CD	Infective inoculum drilled with the seed
SEEDTR 0	No seed treatment
SEEDTR 1	Seed treatment at 100 g a.i.
SEEDTR 2	Seed treatment at 150 g a.i.

**NOTE:** Experimental seed treatment was applied at a.i. rates per 100 kg w. wheat (cv. Riband) seed drilled.

**Experimental diary:**

13-Sep-93 : B : Ploughed.  
21-Oct-93 : B : Heavy spring-tine cultivated.  
22-Oct-93 : T : **INOC+SDT** NONE O W: Image, dressed Panoctine Plus, drilled at 350 seeds per m<sup>2</sup>.  
          : T : **INOC+SDT** All plots except NONE O W: Mercia, dressed Cerevax, drilled at 380 seeds per m<sup>2</sup>.  
26-Oct-93 : T : **INOC+SDT** NONE O W: Glytex at 2.25 kg in 200 l.  
21-Dec-93 : B : Draza at 5.5 kg.  
09-Mar-94 : B : 34.5% N at 118 kg.  
19-Apr-94 : B : 34.5% N at 448 kg.  
09-May-94 : T : **INOC+SDT** All plots except NONE O W: Ally at 30 g with Cheetah Super at 3.0 l and Starane 2 at 0.75 l in 200 l.  
          : B : Halo at 2.0 l with New 5C Cycocel at 2.5 l in 200 l.  
20-May-94 : B : 34.5% N at 100 kg.

94/R/CS/331

**Experimental diary:**

17-Jun-94 : B : Hostathion at 840 ml in 200 l.  
23-Jun-94 : B : Cyclone at 1.0 l with Mallard 750 EC at 0.5 l in 200 l.  
15-Aug-94 : T : **INOC+SDT** All plots except NONE O W: Combine harvested.  
23-Aug-94 : T : **INOC+SDT** NONE O W: Combine harvested.

**NOTE:** Plant samples were taken in July for take-all assessments.

**GRAIN TONNES/HECTARE**

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

<b>INOC+SDT</b>	
NONE W O	8.71
NONE W W	8.29
I PRE PL	8.48
I PRE SO	8.56
I CD	8.02
SEEDTR 0	8.51
SEEDTR 1	8.19
SEEDTR 2	8.40
Mean	8.40

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

<b>INOC+SDT</b>
0.295

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	21	0.418	5.0
GRAIN MEAN DM%	84.9		
PLOT AREA HARVESTED	0.00506		