

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 1980

[Full Table of Content](#)



80/R/CS/202 Effects of Phialophora

Rothamsted Research

Rothamsted Research (1981) *80/R/CS/202 Effects of Phialophora* ; Yields Of The Field Experiments 1980, pp 162 - 163 - DOI: <https://doi.org/10.23637/ERADOC-1-31>

80/R/CS/202

EFFECTS OF PHIALOPHORA

Object: To study the effects of ryegrass, oats and wheat, and of soil inoculation on populations of *Phialophora radicicola graminicola* (Prg) and on take-all (*Gaeumannomyces graminis*) and yield of following w. wheat crops - Whittlocks.

Sponsors: E. Lester, D.B. Slope, R.J. Gutteridge.

The fourth year, w. wheat.

For previous years see 77-79/R/CS/202.

Design: 3 randomised blocks of 8 plots.

Whole plot dimensions: 2.67 x 6.10.

Treatments:

CRP INOC	Crops in 1977 (all w. wheat 1978 to 1980) and inoculation in 1977 and 1978:
GRASS	Ryegrass
GRASS(I)	Ryegrass + Prg inoculum 1977
OATS	S. oats
OATS(I)	S. oats + Prg inoculum 1977
OATS I	S. oats + Prg inoculum to 1978 wheat
OATS DI	S. oats + dummy inoculum (sand) to 1978 wheat
WHEAT	S. wheat
WHEAT(I)	S. wheat + Prg inoculum 1977

NOTE: *Phialophora* inoculum was a culture macerated in coarse sand. Coarse sand alone was applied as dummy inoculum.

Basal applications: Manures: (0:20:20) at 260 kg, combine drilled. 'Nitro-chalk' at 480 kg. Weedkillers: Methabenzthiazuron at 3.1 kg in 220 l. Mecoprop with bromoxynil and ioxynil (as 'Brittox' at 3.5 l) in 250 l. Insecticide: Demeton-s-methyl at 0.24 kg in 250 l.

Seed: Flanders, sown at 200 kg.

Cultivations, etc.: Ploughed: 19 Sept, 1979. Rotary harrowed: 6 Oct. Seed sown, methabenzthiazuron applied: 8 Oct. N applied: 11 Apr, 1980. 'Brittox' applied: 24 Apr. Insecticide applied: 24 June. Combine harvested: 21 Aug.

NOTE: Estimates of take-all and *Phialophora* were made on the crop in April and early July. Bio-assays of soils for take-all and *Phialophora* were made after harvest, before ploughing.

80/R/CS/202

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

CRP INOC	
GRASS	6.77
GRASS(I)	6.71
OATS	5.83
OATS(I)	6.36
OATS I	6.60
OATS DI	5.92
WHEAT	6.54
WHEAT(I)	6.26
MEAN	6.37

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	CRP INOC
SED	0.544

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	14	0.666	10.4

GRAIN MEAN DM% 82.6

PLOT AREA HARVESTED 0.00116