

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 1986

[Full Table of Content](#)



## 86/R/CS/299 Crops and Rhizoctonia - W. Barley

### Rothamsted Research

Rothamsted Research (1987) *86/R/CS/299 Crops and Rhizoctonia - W. Barley* ; Yields Of The Field Experiments 1986, pp 139 - 141 - DOI: <https://doi.org/10.23637/ERADOC-1-36>

86/R/CS/299

CROPS AND RHIZOCTONIA

Object: To study the effects of cropping and inoculation with *Rhizoctonia* isolates on subsequent infection and on yield of a sequence of crops - Meadow.

Sponsors: G.A. Hide, P.J. Read.

The fourth year, w. barley.

For previous years see 84-85/R/CS/299.

Design: 2 randomised blocks of 2 whole plots split into 4 sub plots split into 4 sub sub plots.

Whole plot dimensions: 3.0 x 43.0.

Treatments: All combinations of:-

Whole plots

1. PREVCROP(84) Crops in 1984 (all potatoes in 1985):

W WHEAT  
W BARLEY

Sub plots

2. PREVCROP(83) Crops in 1983:

FALLOW B	Fallow, cultivations as for s. barley
FALLOW P	Fallow, cultivations as for potatoes
POTATOES	Potatoes
S BARLEY	S. barley

Sub sub plots

3. INOC(83) Inoculum in 1983, applied during seedbed cultivations:

NONE	None
RHIZ C W	<i>Rhizoctonia cerealis</i> from wheat
RHIZ S B	<i>Rhizoctonia solani</i> from barley
RHIZ S P	<i>Rhizoctonia solani</i> from potatoes

Basal applications: Manures: 'Nitram' at 290 kg. Weedkillers: Clopyralid at 0.07 kg, bromoxynil octanoate at 0.34 kg, mecoprop at 2.5 kg and isoproturon at 2.1 kg in 200 l applied with the prochloraz and carbendazim. Fungicides: Prochloraz at 0.4 kg and carbendazim at 0.15 kg. Triadimenol at 0.062 kg in 500 l.

Seed: Igri, dressed flutriafol, ethirimol and thiabendazole, sown at 150 kg.

86/R/CS/299

Cultivations, etc.:- Heavy spring-tine cultivated: 21 Oct, 1985 and 22 Oct. Rotary harrowed, seed sown: 23 Oct. N applied: 25 Apr, 1986. Weedkillers with prochloraz and carbendazim applied: 30 Apr. Triadimenol applied: 17 June. Combine harvested: 8 Aug.

NOTE: Plants were sampled at the end of May to assess Rhizoctonia and other root diseases. Plant heights were measured.

GRAIN TONNES/HECTARE

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

PREVCROP (83)	FALLOW B	FALLOW P	POTATOES	S BARLEY	MEAN
PREVCROP (84)					
W WHEAT	6.89	6.83	7.29	6.94	6.99
W BARLEY	6.75	6.57	7.01	6.92	6.81
MEAN	6.82	6.70	7.15	6.93	6.90
INOC(83)	NONE	RHIZ C W	RHIZ S B	RHIZ S P	MEAN
PREVCROP (84)					
W WHEAT	7.16	6.95	6.80	7.04	6.99
W BARLEY	6.88	6.93	6.65	6.80	6.81
MEAN	7.02	6.94	6.72	6.92	6.90
INOC(83)	NONE	RHIZ C W	RHIZ S B	RHIZ S P	MEAN
PREVCROP (83)					
FALLOW B	7.03	6.77	6.72	6.75	6.82
FALLOW P	6.75	6.63	6.54	6.88	6.70
POTATOES	7.14	7.34	6.95	7.18	7.15
S BARLEY	7.15	7.01	6.69	6.88	6.93
MEAN	7.02	6.94	6.72	6.92	6.90
PREVCROP (84)	INOC(83)	NONE	RHIZ C W	RHIZ S B	RHIZ S P
W WHEAT	PREVCROP (83)				
	FALLOW B	7.21	6.73	6.82	6.79
	FALLOW P	6.90	6.74	6.51	7.16
	POTATOES	7.25	7.40	7.21	7.30
	S BARLEY	7.28	6.92	6.65	6.92
W BARLEY	FALLOW B	6.86	6.81	6.62	6.70
	FALLOW P	6.61	6.51	6.56	6.61
	POTATOES	7.02	7.29	6.69	7.06
	S BARLEY	7.02	7.11	6.74	6.83

86/R/CS/299

GRAIN TONNES/HECTARE

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

TABLE	PREVCROP(83)	INOC(83)	PREVCROP(84)* PREVCROP(83)
-------	--------------	----------	-------------------------------

SED	0.113	0.100	0.160
-----	-------	-------	-------

TABLE	PREVCROP(84)* INOC(83)	PREVCROP(83) INOC(83)	PREVCROP(84)* PREVCROP(83) INOC(83)
-------	---------------------------	--------------------------	---

SED	0.141	0.207	0.292
-----	-------	-------	-------

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

PREVCROP(83)	0.200		
PREVCROP(84).PREVCROP(83)			0.283

\* WITHIN THE SAME LEVEL OF PREVCROP(84) ONLY

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

STRATUM	DF	SE	CV%
---------	----	----	-----

BLOCK.WP.SP	6	0.160	2.3
BLOCK.WP.SP.SSP	24	0.283	4.1

GRAIN MEAN DM% 85.8

SUB PLOT AREA HARVESTED 0.00231