

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/B/1 Winter Barley Rhynchosporium Control in a Serially Balanced Design

Rothamsted Research

Rothamsted Research (1981) *80/R/B/1 Winter Barley Rhynchosporium Control in a Serially Balanced Design* ; Yields Of The Field Experiments 1980, pp 251 - 252 - **DOI:**
<https://doi.org/10.23637/ERADOC-1-31>

80/R/B/1

WINTER BARLEY

RHYNCHOSPORIUM CONTROL IN A SERIALY BALANCED DESIGN

Object: To study the effects of interference between plots of w. barley with different amounts of *Rhynchosporium secalis* - Gt. Knott III.

Sponsors: J.F. Jenkyn, A. Bainbridge, G.V. Dyke.

Design: 2 lines of 38 plots each. Each line is a serially balanced sequence such that each of 4 treatments has as neighbours all ordered pairs of the other 3 treatments, once each.

Whole plot dimensions: 3.9 x 9.14.

Treatments:

TREATMNT	Treatment with infected straw and times of applying fungicide:
O INFSTR	No fungicide against <i>R. secalis</i> . Infected straw worked in to seedbed
CAPT A	Captafol in autumn
CAPT S	Captafol in spring
CAPT A+S	Captafol in autumn and in spring

- NOTES: (1) The effects of treatments to neighbouring plots (left - LHN, right - RHN) are estimated. In this experiment 'left' was South, 'right' was North. The analysis presented assumes a Fourier curve with 4 terms, 2 sine and 2 cosine to represent positional variation.
- (2) The area surrounding this experiment was sown with the *Rhynchosporium* resistant variety Athene at 160 kg on 18 Oct, 1979.
- (3) Straw was applied (at 645 kg) to 'O INFSTR' plots on 17 Oct, 1979. Captafol was applied at 1.34 kg in 340 l on 31 Dec and 10 Apr, 1980.

Basal applications: Manures: (10:23:23) at 250 kg, combine drilled. 'Nitro-chalk' at 540 kg. Weedkillers: Paraquat at 0.56 kg ion in 220 l. Methabenzthiazuron at 1.6 kg in 220 l. Fungicide: Ethirimol (as 'Milgo E' at 1.3 l) in 220 l.

Seed: Maris Otter, sown at 160 kg.

Cultivations, etc.: Heavy spring-tine cultivated: 25 Sept, 1979. Paraquat applied: 15 Oct. Power harrowed: 17 Oct. Seed sown: 18 Oct. Methabenzthiazuron applied: 20 Oct. Fungicide applied: 5 Apr, 1980. N applied: 9 Apr. Combine harvested: 31 July. Previous crops: S. barley 1978, w. oats 1979.

NOTE: Leaf diseases were assessed during the season, and 1000 grain weights after harvest.

80/R/B/1

GRAIN TONNES/HECTARE

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

TREATMNT	O INFSTR	CAPT A	CAPT S	CAPT A+S
	6.46	6.73	6.91	6.79

LHN	O INFSTR	CAPT A	CAPT S	CAPT A+S
TREATMNT				
O INFSTR		6.43	6.52	6.41
CAPT A	6.82		6.56	6.80
CAPT S	7.07	6.95		6.71
CAPT A+S	7.05	6.57	6.76	

RHN	O INFSTR	CAPT A	CAPT S	CAPT A+S
TREATMNT				
O INFSTR		6.55	6.50	6.33
CAPT A	6.86		6.69	6.63
CAPT S	6.92	6.90		6.91
CAPT A+S	7.02	6.81	6.54	

TREATMNT	RHN	O INFSTR	CAPT A	CAPT S	CAPT A+S
LHN					
O INFSTR	CAPT A		6.19	6.64	6.46
O INFSTR	CAPT S		6.68	6.34	6.55
O INFSTR	CAPT A+S		6.77	6.50	5.97
CAPT A	O INFSTR	6.92		6.99	6.55
CAPT A	CAPT S	6.72		6.71	6.25
CAPT A	CAPT A+S	6.93		6.39	7.08
CAPT S	O INFSTR	7.46	7.03		6.71
CAPT S	CAPT A	6.68	6.96		7.23
CAPT S	CAPT A+S	6.62	6.72		6.78
CAPT A+S	O INFSTR	7.49	7.09	6.57	
CAPT A+S	CAPT A	6.72	6.67	6.31	
CAPT A+S	CAPT S	6.86	6.68	6.73	

GRAND MEAN 6.72

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

TABLE	TREATMNT	TREATMNT LHN	TREATMNT RHN	TREATMNT LHN RHN
SED	0.120	0.220	0.220	0.389

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

STRATUM	DF	SE	CV%
LINE.WP	31	0.356	5.3

GRAIN MEAN DM% 77.8

PLOT AREA HARVESTED 0.00195