

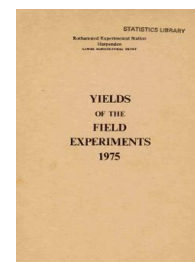
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75/ R&w/B/4 - Varieties, N & Fungicides - Barley

Rothamsted Research

Rothamsted Research (1976) 75/ R&w/B/4 - Varieties, N & Fungicides - Barley ; Yields Of The Field Experiments 1975, pp 309 - 313 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/B/4 and 75/W/B/4

SPRING BARLEY

VARIETIES, N AND FUNGICIDES

Object: To study the yields of some of the newer varieties of barley.
The effects of fungicides and a range of nitrogen rates are also studied - Rothamsted (R) Gt Knott II and Woburn (W) Far Field II.

Sponsors: R. Moffitt, J.F. Jenkyn.

Design: 2 randomised blocks of 18 plots split into 3.

Whole plot dimensions: 4.27 x 24.7.

Treatments: All combinations of:-

Whole plots: 1. Varieties and mildew control:	VARIETY
Julia - no fungicide	JU O
Julia - seed dressed ethirimol	JU E
Julia - tridemorph spray at 0.53 kg in 220 l, early with weedkiller	JU TW
Julia - seed dressed MEB 6447	JU M
Julia)	JU T
Aramir)	AR T
Hassan) sprayed tridemorph at 0.53 kg in 450 l at recommended stage	HA T
Lofa Abed)	LA T
Maris Mink)	MM T
2. Rust fungicide:	FUNGICIDE
None	NONE
Benodanil at 1.12 kg in 450 l	BENODANI
Sub plots: 3. Nitrogen fertiliser (kg N):	N
38	38
75	75
113	113

NOTE: At Woburn the planned FUNGICIDE treatment was not applied i.e. VARIETY treatments were duplicated in each block.

Basal applications:-

Great Knott II (R): Manures: (0:20:20) at 310 kg. Weedkiller: Dicamba, mecoprop and MCPA ('Tetralix Plus' at 7.0 l in 220 l).

Far Field II (W): Manures: (0:20:20) at 310 kg. Weedkiller: Ioxynil at 0.52 kg and mecoprop at 1.6 kg in 280 l.

Seed: Both sites varieties sown at 160 kg.

75/R/B/4 and 75/W/B/4

Cultivations, etc.:-

Great Knott II (R): Ploughed: 4-6 Nov, 1974. Spring-tine cultivated twice: 14 Apr, 21 Apr, 1975. Rotary harrowed: 22 Apr. Seed sown: 23 Apr. N applied: 30 Apr. Weedkiller applied to all plots tridemorph treatment applied with weedkiller: 6 June. Tridemorph applied: 20 June. Benodanil applied: 21 July. Combine harvested: 22 Aug. Previous crops: Beans 1973, winter wheat 1974.

Far Field II (W): Ploughed: 10-13 Jan, 1975. Spring-tine cultivated with crumbler twice: 21 Mar, 25 Mar. Seed sown: 25 Mar. N applied: 1 Apr. Weedkiller applied to all plots, tridemorph treatment applied with weedkiller: 20 May. Tridemorph applied: 20 June. Combine harvested: 11 Aug. Previous crops: Fallow 1973, barley 1974.

- NOTES: (1) Estimates of mildew (*Erysiphe graminis*) and other leaf diseases were made during the season.
- (2) GREAT KNOTT II (R). There was evidence of a linear fertility trend across the site and yields adjusted for this trend are presented.

75/R/B/4 GREAT KNOTT (R)

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

FUNGCIDE	NONE	BENODANI	MEAN
VARIETY			
JU O	3.45	3.68	3.57
JU E	3.93	3.87	3.90
JU TW	3.99	4.13	4.06
JU M	3.54	3.65	3.60
JU T	3.62	4.16	3.89
AR T	3.44	3.26	3.35
HA T	3.13	3.41	3.27
LA T	4.26	4.30	4.28
MM T	3.41	3.78	3.59
MEAN	3.64	3.80	3.72

N	38	75	113	MEAN
VARIETY				
JU O	3.16	3.71	3.83	3.57
JU E	3.37	3.95	4.38	3.90
JU TW	3.44	4.23	4.51	4.06
JU M	3.04	3.76	3.99	3.60
JU T	3.40	3.81	4.48	3.89
AR T	2.93	3.49	3.63	3.35
HA T	2.80	3.29	3.72	3.27
LA T	3.81	4.31	4.72	4.28
MM T	2.95	3.77	4.05	3.59
MEAN	3.21	3.81	4.15	3.72

N	38	75	113	MEAN
FUNGCIDE				
NONE	3.15	3.71	4.07	3.64
BENODANI	3.27	3.92	4.22	3.80
MEAN	3.21	3.81	4.15	3.72

FUNGCIDE	NONE		BENODANI			
N	38	75	113	38	75	113
VARIETY						
JU O	3.11	3.60	3.66	3.22	3.83	4.00
JU E	3.35	3.92	4.52	3.39	3.97	4.25
JU TW	3.23	4.15	4.60	3.65	4.30	4.43
JU M	2.91	3.79	3.92	3.17	3.72	4.06
JU T	3.18	3.56	4.12	3.61	4.05	4.83
AR T	3.11	3.55	3.65	2.74	3.43	3.60
HA T	2.85	2.99	3.56	2.75	3.59	3.88
LA T	3.84	4.29	4.64	3.77	4.33	4.80
MM T	2.74	3.52	3.97	3.16	4.03	4.14

75/R/B/4 GREAT KNOTT (R)

GRAIN TONNES/HECTARE

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

TABLE	VARIETY	FUNGCIDE	N	VARIETY FUNGCIDE
REP	12	54	36	6
SED	0.196	0.090	0.063	0.278

TABLE	VARIETY N	FUNGCIDE N	VARIETY FUNGCIDE N
REP	4	18	2
SED	0.247	0.116	0.350
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY	0.190		
FUNGCIDE		0.089	
VARIETY.FUNGCIDE			0.269

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.270	7.3
BLOCK.WP.SP	36	0.267	7.2

GRAIN MEAN DM% 81.7

SUB PLOT AREA HARVESTED 0.00163

75/W/B/4 FAR FIELD II (W)

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

	N	38	75	113	MEAN
VARIETY					
JU O		4.15	5.33	5.59	5.02
JU E		4.10	5.29	5.81	5.07
JU TW		4.09	5.57	5.82	5.16
JU M		4.30	5.36	5.75	5.14
JU T		4.13	5.43	5.80	5.12
AR T		3.95	5.43	6.12	5.16
HA T		4.07	5.37	5.86	5.10
LA T		4.25	5.66	6.64	5.52
MM T		4.64	4.91	5.99	5.18
MEAN		4.19	5.37	5.93	5.16

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

TABLE	VARIETY	N	VARIETY N
SED	0.188	0.085	0.282
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: VARIETY			0.256

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

STRATUM	DF	SE	CV%
BLOCK.WP	26	0.267	5.2
BLOCK.WP.SP	54	0.362	7.0

GRAIN MEAN DM% 89.3

SUB PLOT AREA HARVESTED 0.00217