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81/R/B/6 and 81/W/B/6 Varieties, N and Fungicide - S. Barley

Rothamsted Research

Rothamsted Research (1982) *81/R/B/6 and 81/W/B/6 Varieties, N and Fungicide - S. Barley* ; Yields Of The Field Experiments 1981, pp 282 - 284 - DOI: <https://doi.org/10.23637/ERADOC-1-35>

81/R/B/6 and 81/W/B/6

SPRING BARLEY

VARIETIES, N AND FUNGICIDE

Object: To study the yields of some of the newer varieties of s. barley; fungicides and nitrogen rates are also tested - Rothamsted (R), Gt. Knott III and Woburn (W), Horsepool Lane Close E.

Sponsor: R. Moffitt.

Design: 3 randomised blocks of 10 x 4 criss cross.

Column plot dimensions: Gt. Knott III (R): 3.0 x 27.1.
Horsepool Lane Close E (W): 4.0 x 27.1.

Treatments: All combinations of:-

Column plots

1. VARIETY	Varieties and systemic fungicidal seed dressings:
ATEM	Atem, no systemic seed dressing
GEORG O	Georgie, no systemic seed dressing
GEORG E	Georgie, dressed ethirimol
GEORG T	Georgie, dressed triadimenol plus fuberidazole
GOLDMARK	Goldmarker, no systemic seed dressing
GO+KO+TR	Goldmarker, Koru and Triumph seed mixed in equal parts, no systemic seed dressing
KORU	Koru, no systemic seed dressing
KYM	Kym, no systemic seed dressing
TRIUMPH	Triumph, no systemic seed dressing
TYRA	Tyra, no systemic seed dressing

Row plots

2. N FUNG	Nitrogen fertiliser (kg N) and foliar fungicide:
40	40
80	80
120	120
120+TRID	120 + tridemorph at 0.53 kg

NOTE: Tridemorph was applied in 250 l on 30 May to Gt. Knott III (R); in 280 l on 1 June to Horsepool Lane Close (W).

Basal applications:

Gt. Knott III (R): Manures: (0:20:20) at 310 kg, combine drilled.
Weedkillers: Glyphosate at 1.4 l in 250 l, dicamba with mecoprop and MCPA (as 'Banlene Plus' at 5 l) in 250 l.
Horsepool Lane Close (W): Manures: (0:20:20) at 310 kg, broadcast.
Weedkillers: Dicamba with mecoprop and MCPA (as 'Herrisol' at 4.9 l) in 280 l.

Seed: Gt. Knott III (R): Sown at 160 kg.
Horsepool Lane Close (W): Sown at 160 kg.

81/R/B/6 and 81/W/B/6

Cultivations, etc.: -

Gt. Knott III (R): Glyphosate applied: 25 Sept, 1980. Ploughed: 25 Nov. Spring-tine cultivated twice: 9 Apr, 1981. Seed sown: 10 Apr. N applied: 16 Apr. 'Banlene Plus' applied: 30 May. Combine harvested: 3 Sept. Previous crops: W. oats 1979, w. barley 1980.

Horsepool Lane Close (W): Deep-tine cultivated twice: 5 Jan, 1980. Spring-tine cultivated: 9 Apr. PK applied, N applied, rotary cultivated: 13 Apr. Seed sown: 14 Apr. 'Herrisol' applied: 1 June. Combine harvested: 28 Aug. Previous crops: W. wheat 1979, potatoes 1980.

81/R/B/6 GT. KNOTT III (R)

GRAIN TONNES/HECTARE

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

N FUNG VARIETY	40	80	120	120+TRID	MEAN
ATEM	5.07	5.30	6.01	6.31	5.67
GEORG O	4.73	4.89	4.96	5.73	5.08
GEORG E	4.65	5.24	5.15	5.77	5.20
GEORG T	5.28	5.69	5.72	5.95	5.66
GOLDMARK	5.14	5.66	5.09	5.97	5.47
GO+KO+TR	4.93	6.20	6.06	6.45	5.91
KORU	4.97	5.61	5.65	6.15	5.59
KYM	5.37	5.53	5.98	5.86	5.68
TRIUMPH	5.08	6.09	6.38	6.78	6.08
TYRA	4.88	4.96	4.76	5.20	4.95
MEAN	5.01	5.52	5.58	6.02	5.53

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

TABLE	VARIETY	N FUNG	VARIETY N FUNG
SED	0.218	0.177	0.353
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY			0.308
N FUNG			0.316

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

STRATUM	DF	SE	CV%
BLOCK.WP1	18	0.267	4.8
BLOCK.WP2	6	0.217	3.9
BLOCK.WP1.WP2	54	0.324	5.9

GRAIN MEAN DM% 85.6

SUB PLOT AREA HARVESTED 0.00124

81/W/B/6 HORSEPOOL LANE CLOSE E (W)

GRAIN TONNES/HECTARE

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

N FUNG VARIETY	40	80	120	120+TRID	MEAN
ATEM	5.18	5.15	6.11	5.97	5.60
GEORG O	4.19	4.05	4.88	4.73	4.46
GEORG E	3.20	3.48	4.17	4.21	3.77
GEORG T	4.27	4.43	5.40	4.90	4.75
GOLDMARK	4.33	5.13	5.92	5.46	5.21
GO+KO+TR	4.24	4.69	5.70	5.34	4.99
KORU	4.42	4.36	5.46	5.57	4.95
KYM	4.81	5.07	5.89	5.92	5.42
TRIUMPH	3.88	4.36	4.62	5.16	4.50
TYRA	4.78	4.34	5.70	5.30	5.03
MEAN	4.33	4.51	5.39	5.26	4.87

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

TABLE	VARIETY	N FUNG	VARIETY N FUNG
SED	0.496	0.402	0.734
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY			0.585
N FUNG			0.630

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

STRATUM	DF	SE	CV%
BLOCK.WP1	18	0.608	12.5
BLOCK.WP2	6	0.492	10.1
BLOCK.WP1.WP2	54	0.549	11.3

GRAIN MEAN DM% 82.5

SUB PLOT AREA HARVESTED 0.00168