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# Yields of the Field Experiments 1979

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## 79/R/B/7 and 79/W/B/7 Varieties and N - Barley

### Rothamsted Research

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79/R/B/7 and 79/W/B/7

SPRING BARLEY

VARIETIES AND N

Object: To study the yields of some of the newer varieties of barley; a growth regulator and three rates of nitrogen are also tested - Rothamsted (R) Bylands and Woburn (W) Far Field I.

Sponsor: R. Moffitt.

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

Whole plot dimensions: 4.27 x 27.1.

Treatments: All combinations of:-

Column plots

1. VARIETY Varieties (all seed purchased from standard commercial sources, seed vigour not tested except as stated):

ATHOS	Athos
DRAM	Dram
GEORG	Georgie
GEORG H	Georgie, high vigour seed ex R.H.M.
GEORG L	Georgie, low vigour seed ex R.H.M.
GOLDMARK	Goldmarker
JUPITER	Jupiter
MAGNUM	Magnum
MINAK	Minak
PORTHOS	Porthos

Row plots

2. N GR Nitrogen fertiliser (kg N) and growth regulator:

38	38
75	75
113	113
113 M+E	113 + mepiquat chloride and ethephon (as 'Terpal' at 2.45 kg in 220 l (R), in 250 l (W))

Basal applications:

Bylands (R): Manures: (0:20:20) at 310 kg, combine drilled. Weedkillers: Mecoprop at 1.6 kg and bromoxynil with ioxynil (as 'Oxytril CM' at 1.4 kg) in 220 l. Fungicide: Tridemorph at 0.53 kg in 220 l.

Far Field I (W): Manures: (0:20:20) at 310 kg, combine drilled. Weedkillers: Bromoxynil with ioxynil ('Oxytril CM' at 2.1 kg in 250 l).

Seed: Bylands (R): Varieties sown at 160 kg.

Far Field I (W): Varieties sown at 160 kg.

79/R/B/7 and 79/W/B/7

Cultivations, etc.:-

Bylands (R): Subsoiled, tines 100 cm apart and 45 cm deep: 15 Nov, 1978.  
 Ploughed: 21 Dec. Rotary harrowed, seed sown: 27 Apr, 1979. N applied: 17 May. Weedkiller applied: 4 June. Fungicide applied: 12 June.  
 Growth regulator applied: 21 June. Combine harvested: 29 Aug. Previous crops: Wheat 1977, barley 1978.

Far Field I (W): Heavy spring-tine cultivated three times: 7 Sept, 1978, 30 Oct, 8 Nov. Subsoiled, tines 140 cm apart and 60 cm deep: 30 Oct. Spring-tine cultivated twice, with crumbler attached: 17 Apr, 1979, 18 Apr. N applied: 18 Apr. Spring-tine cultivated: 19 Apr. Seed sown: 20 Apr. Weedkiller applied: 5 June. Growth regulator applied: 18 June. Combine harvested: 22 Aug. Previous crops: Beans 1977, barley 1978.

79/R/B/7

GRAIN TONNES/HECTARE

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

N GR	38	75	113	113 M+E	MEAN
VARIETY					
ATHOS	2.86	3.53	3.79	3.53	3.43
DRAM	3.24	3.95	4.02	3.75	3.74
GEORG	3.28	3.26	4.03	3.91	3.62
GEORG H	3.23	3.32	3.96	3.09	3.40
GEORG L	3.16	3.90	3.80	3.65	3.63
GOLDMARK	2.87	3.74	3.52	3.76	3.47
JUPITER	3.11	3.39	3.77	3.52	3.45
MAGNUM	2.09	2.72	3.16	2.78	2.69
MINAK	1.79	2.52	2.94	2.75	2.50
PORTHOS	2.95	3.61	3.66	3.34	3.39
MEAN	2.86	3.39	3.66	3.41	3.33

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

TABLE	VARIETY	N GR	VARIETY N GR
SED	0.195	0.194	0.394
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY			0.385
N GR			0.360

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

STRATUM	DF	SE	CV%
BLOCK.VARIETY	18	0.238	7.2
BLOCK.N GR	6	0.238	7.1
BLOCK.VARIETY.N GR	54	0.429	12.9

GRAIN MEAN DM% 83.2

SUB PLOT AREA HARVESTED 0.00130

79/W/B/7

GRAIN TONNES/HECTARE

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

N GR	38	75	113	113 M+E	MEAN
VARIETY					
ATHOS	3.92	5.31	5.95	5.70	5.22
DRAM	3.72	4.26	4.26	5.28	4.38
GEORG	4.44	5.85	6.26	5.96	5.63
GEORG H	4.25	5.57	5.77	5.88	5.37
GEORG L	4.52	5.63	5.77	5.97	5.47
GOLDMARK	4.61	5.80	6.53	6.52	5.87
JUPITER	4.19	5.75	5.66	5.97	5.39
MAGNUM	3.99	5.34	5.67	5.75	5.19
MINAK	4.24	5.38	5.62	5.50	5.18
PORTHOS	3.89	5.13	5.93	6.08	5.26
MEAN	4.18	5.40	5.74	5.86	5.29

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

TABLE	VARIETY	N GR	VARIETY N GR
SED	0.134	0.100	0.239
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY			0.224
N GR			0.227

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

STRATUM	DF	SE	CV%
BLOCK.VARIETY	18	0.164	3.1
BLOCK.N GR	6	0.123	2.3
BLOCK.VARIETY.N GR	54	0.259	4.9

GRAIN MEAN DM% 83.7

SUB PLOT AREA HARVESTED 0.00173