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Yields of the Field Experiments 1973

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73/R&bb/BS/2 - Varieties & N - Spring Barley

Rothamsted Research

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73/R/16/2 AND 73/W/29/2

SPRING BARLEY

VARIETIES AND N

Object: To study the yield of newer varieties of barley grown at a range of nitrogen levels - Rothamsted (R) Gt Harpenden II and Woburn (W) Horsepool Lane Close.

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

Design: 4 blocks of 11 plots, split into 3.

Whole plot dimensions: 4.27 x 24.7. Sub plot area harvested:
Gt Harpenden II (R): 0.00163. Horsepool Lane Close (W): 0.00217.

Treatments: All combinations of:-

Whole plots: 1. Varieties and Mildew control	VARIETY
Berac, sprayed tridemorph	BE-T
Gertra, sprayed tridemorph	GE-T
Hassan, sprayed tridemorph	HA-T
Julia, no mildew control	JU-C
Julia, seed dressed ethirimol	JU-E
Julia, sprayed tridemorph	JU-T
Lofa Abed, sprayed tridemorph	LA-T
Mazurka, sprayed tridemorph	MA-T
Maris Mink, sprayed tridemorph	MM-T
Universe, sprayed tridemorph	UN-T
Vada, sprayed tridemorph	VA-T

Tridemorph applied at 0.53 kg in 370 l.

Sub plots: 2. Nitrogen fertiliser (kg N)	N
38	38
75	75
113	113

Basal applications:

Gt Harpenden II (R): Manures: 310 kg (0:20:20) combine drilled.
Weedkiller: MCPA, mecoprop and dicamba ('Tetralix plus' at 7.0 l in 220 l).

Horsepool Lane Close (W): Manures: Magnesian limestone at 7.5 tonnes, 310 kg (0:20:20) combine drilled: Weedkiller: Ioxynil at 0.53 kg and mecoprop at 1.6 kg in 280 l.

73/R/BS/2 AND 73/W/BS/2

Seed: Gt Harpenden II (R) and Horsepool Lane Close (W): Varieties sown at 160 kg.

Cultivations, etc.:-

Gt Harpenden II (R): Ploughed: 24 Nov, 1972. Seed sown: 16 Mar, 1973.
F applied: 23 Mar. Weedkiller applied: 15 May. Tridemorph applied: 1 June. Combine harvested: 11 Aug. Previous crops: Spring beans 1971, barley 1972.

Horsepool Lane Close (W): Deep-tine cultivated: 1 Sept, 1972. Magnesian limestone applied: 18 Sept. - Deep-tine cultivated: 26 Sept.
Ploughed: 1 Jan, 1973. Power harrowed seed sown: 14 Mar.
N applied: 19 Mar. Weedkiller applied: 11 May. Tridemorph applied: 1 June. Combine harvested: 10 Aug. Previous crops: Fallow 1971, barley 1972.

NOTE: Gt Harpenden II (R). Some of the grain was lost from one plot - treatment EE-T, N 38. An estimated value was used in the analysis.

Standard errors per plot. Grain: tonnes/hectare:

Gt Harpenden II (R):	Whole plot: 0.207 or 3.3% (30 d.f.)
	Sub plot: 0.221 or 3.6% (65 d.f.)
Horsepool (W):	Whole plot: 0.451 or 8.8% (30 d.f.)
	Sub plot: 0.638 or 12.5% (66 d.f.)

73/R/BS/2 AND 73/W/BS/2

TABLES OF MEANS

CRAIN: TOMES/HECTARE

GT HARPENDEN II (R)

VARIETY

	BE-T	GE-T	LA-T	JU-O	JU-E	JU-T	LA-T	MA-T	MI-T	UN-T	VA-T	Mean
N												
38	6.41	5.96	6.65	5.51	6.16	6.31	5.77	5.83	7.58	7.68	5.73	6.33
75	6.51	5.95	6.68	5.25	6.06	6.19	5.46	5.89	7.61	7.41	5.89	6.27
113	6.13	5.67	6.20	5.12	6.03	6.19	5.39	5.71	6.97	6.95	6.08	6.04
Mean	6.35	5.86	6.51	5.29	6.09	6.23	5.54	5.81	7.39	7.35	5.90	6.21

STANDARD ERRORS OF DIFFERENCES

N	VARIETY	N	VARIETY
0.047	0.147	0.194	

Except when comparing means
with same level of VARIETY: 0.156

Mean D.M. % 79.0

73/R/BS/2 AND 73/W/BS/2

GRAIN: TONNES/HECTARE

HORSEPOOL LANE CLOSE (W)

VARIETY

	BE-T	GE-T	HA-T	JU-O	JU-E	JU-F	LA-T	MA-T	MM-T	UN-T	VA-T	Mean
N												
36	4.73	5.03	5.20	4.36	4.79	5.19	4.59	4.94	5.27	3.74	4.82	4.79
75	5.09	5.00	5.00	4.49	5.22	5.33	5.28	5.21	5.12	5.30	5.29	5.12
113	5.35	5.52	5.30	4.71	5.48	5.79	5.14	5.67	5.33	5.85	5.42	5.41
Mean	5.06	5.18	5.16	4.52	5.16	5.44	5.00	5.27	5.24	4.96	5.17	5.11

STANDARD ERRORS OF DIFFERENCES

N	VARIETY	N	VARIETY
0.136	0.319	0.488	

Except when comparing means
with same level of VARIETY: 0.451

Mean D.M. % 83.0