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Yields of the Field Experiments 1976

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76/R/B/3 and 76/W/B/3 Varieties and N - Barley

Rothamsted Research

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76/R/B/3 and 76/W/B/3

SPRING BARLEY

VARIETIES AND N

Object: To study the yields of some of the newer varieties of barley.
Three nitrogen rates are included and on one variety the effects of
mildew control are also studied - Rothamsted (R) Pastures and
Woburn (W) Horsepool Lane Close E.

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

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

Whole plot dimensions: Pastures (R): 4.27 x 24.7.
Horsepool Lane Close (W): 4.27 x 20.1.

Treatments: All combinations of:-

Whole plots

1. VARIETY Varieties and mildew control:

JU H -	Julia, home-grown seed, no fungicide	
JU H E	Julia, home-grown seed, dressed ethirimol	
JU H T	Julia, home-grown seed, crop sprayed tridemorph (2 plots/block)	
JU M T	Julia, multiplication stock, crop sprayed tridemorph	
AM T	Aramir)
AR T	Ark Royal)
GE T	Georgie) crop sprayed tridemorph
LA T	Lofa Abed)
PO T	Porthos)
SU T	Sundance)

Sub plots

2. N Nitrogen fertiliser (kg N):

38	38
75	75
113	113

- NOTES: (1) Pastures (R): Tridemorph applied at 0.53 kg in 450 l: 27 May.
(2) Horsepool Lane Close (W): Tridemorph applied at 0.53 kg in 280 l:
27 May.
(3) On Pastures (R) all sub plots of one plot of (JU H -)
received tridemorph in error. Estimated values were used in
the analysis.

Basal applications: Pastures (R): Manures: (0:20:20) at 310 kg, combine
drilled. Weedkillers: Paraquat at 0.42 kg ion in 220 l. Dicamba with
mecoprop and MCPA ('Banlene Plus' at 5.6 l in 220 l).
Horsepool Lane Close (W): Manures: (0:20:20) at 310 kg, combine drilled.
Weedkiller: Ioxynil at 0.5³ kg and mecoprop at 1.6 kg in 280 l. Ioxynil at 0.42 kg
and mecoprop at 1.3 kg in 280 l.

NOTE: The second application of weedkiller on Horsepool Lane Close was applied
with tridemorph where this was applied as a treatment, and separately to
remaining plots.

Seed: Pastures (R): Varieties sown at 150 kg.
Horsepool Lane Close (W): Varieties sown at 160 kg.

76/R/B/3 and 76/W/B/3

Cultivations, etc.:-

Pastures (R): Paraquat applied: 6 Nov, 1975. Ploughed: 24 Nov. Spring-tine cultivated twice: 2 Mar, 12 Mar, 1976. Seed sown: 22 Mar. N applied: 1 Apr. 'Banlene Plus' applied: 14 May. Combine harvested: 27 July. Previous crops: Potatoes 1974, winter wheat 1975.

Horsepool Lane Close (W): Deep-tine cultivated four times: 21 Sept, 22 Sept, 23 Oct, 18 Dec, 1975. Spring-tine cultivated: 27 Feb, 1976. Spring-tine cultivated with crumbler: 22 Mar. Seed sown: 24 Mar. N applied: 29 Mar. Weedkiller applied to all plots: 3 May. Tridemorph treatment applied with weedkiller: 27 May. Combine harvested: 29 July. Previous crops: Beans 1974, winter wheat 1975.

76/R/B/3 PASTURES (R)

GRAIN TONNES/HECTARE

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

VARIETY	N	38	75	113	MEAN
JU H -		4.58	4.55	4.45	4.53
JU H E		4.63	4.71	4.79	4.71
JU H T		4.65	4.95	5.15	4.92
JU M T		4.48	4.62	4.74	4.61
AM T		4.68	5.02	5.14	4.95
AR T		4.90	5.31	5.20	5.14
GE T		5.05	5.41	5.59	5.35
LA T		4.67	5.22	5.16	5.02
PO T		4.90	5.46	5.33	5.23
SU T		5.19	5.32	5.58	5.36
MEAN		4.76	5.05	5.12	4.98

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

TABLE	VARIETY	N	VARIETY	N
SED	0.123		0.187	MIN REP
	0.107	0.052	0.162	MAX-MIN

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:
 VARIETY 0.172 MIN REP
 0.149 MAX-MIN
 0.121 MAX REP

VARIETY
 MAX REP JU H T
 MAX-MIN JU H T V ANY OF REMAINDER
 MIN REP ANY OF REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.174	3.5
BLOCK.WP.SP	66	0.243	4.9

GRAIN MEAN DM% 87.1

SUB PLOT AREA HARVESTED 0.00163

76/W/B/3 HORSEPOOL LANE CLOSE E(W)

GRAIN TONNES/HECTARE

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

	N	38	75	113	MEAN
VARIETY					
JU H -		3.32	3.81	3.51	3.55
JU H E		3.43	3.55	3.35	3.44
JU H T		3.99	4.05	4.08	4.04
JU M T		3.72	3.57	3.76	3.68
AM T		2.59	3.19	2.65	2.81
AR T		4.01	3.80	3.47	3.76
GE T		3.49	4.00	4.27	3.92
LA T		3.30	3.67	3.55	3.51
PO T		3.75	3.88	4.18	3.94
SU T		3.77	3.82	3.58	3.72
MEAN		3.58	3.76	3.68	3.67

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

TABLE	VARIETY	N	VARIETY	N
SED	0.353		0.415	MIN REP
	0.306	0.077	0.360	MAX-MIN

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

VARIETY	0.254	MIN REP
	0.220	MAX-MIN
	0.180	MAX REP

VARIETY
 MAX REP JU H T
 MAX-MIN JU H T V ANY OF REMAINDER
 MIN REP ANY OF REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	31	0.500	13.6
BLOCK.WP.SP	64	0.353	9.6

GRAIN MEAN DM% 87.8

SUB PLOT AREA HARVESTED 0.00173