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74/R/B/4 and 74/W/B/4 Varieties and N - Barley

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74/R/B/4 and 74/W/B/4

BARLEY

VARIETIES AND N

Object: To study the yield of several varieties of barley grown at a range of nitrogen rates - Rothamsted (R) Delafield and Woburn (W) White Horse.

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

Design: 4 randomised blocks of 14 plots, split into 3.

Whole plot dimensions: 4.2' x 20.1. Sub plot area harvested:
Delafield (R) - 0.00130, White Horse (W) - 0.00173.

Treatments: All combinations of:-

Whole plots: 1. Varieties and mildew control:

VARIETY

Abacus, sprayed tridemorph	AB T
Armelle, sprayed tridemorph	AR T
Berac, sprayed tridemorph	BE T
Hassan, sprayed tridemorph	HA T
Julia, no mildew control	JU O
Julia, seed dressed ethirimol	JU E
Julia, sprayed tridemorph	JU T
Lofa Abed, sprayed tridemorph	LA T
Maris Mink, sprayed tridemorph	MM T
Mazurka, sprayed tridemorph	MZ T
Proctor, no mildew control	PR O
Proctor, seed dressed ethirimol	PR E
Proctor, sprayed tridemorph	PR T
Universe, sprayed tridemorph	UN T

Sub plots: 2. Nitrogen fertiliser (kg N):

N

38	38
75	75
113	113

NOTE: Tridemorph applied at 0.5 kg in 450 l Delafield (R) and 280 l White Horse (W).

Basal applications:

Delafield (R): Manures: Balancing (0:20:20) at 1060 kg and (0:20:20) at 310 kg combine drilled. Weedkiller: MCPA, mecoprop and dicamba ('Tetralex Plus' at 7.0 l in 220 l).

White Horse (W): Manures: (0:20:20) at 310 kg combine drilled. Weedkillers: Paraquat at 0.56 kg ion in 370 l. Ioxynil at 0.53 kg and mecoprop at 1.6 kg in 280 l.

74/R/B/4 and 74/W/B/4

Seed: Delafield (R) and White Horse (W): Varieties sown at 160 kg.

Cultivations, etc.:-

Delafield (R): Balancing PK applied: 10 Sept, 1973. Ploughed: 28 Nov.

Spring-tine cultivated twice, seed sown: 1 Apr, 1974. N applied: 9 Apr. Weedkiller applied: 17 May. Tridemorph applied: 4 June. Combine harvested: 22 Aug. Previous crops: Potatoes 1972, winter wheat 1973.

White Horse (W): Paraquat applied: 12 Sept, 1973. Ploughed: 16 Nov.

Spring-tine cultivated with crumbler, seed sown: 27 Mar, 1974.

N applied: 3 Apr. Ioxynil with mecoprop applied: 17 May.

Tridemorph applied: 4 June. Combine harvested: 24 Aug. Previous crops: Spring beans 1972, winter wheat 1973.

NOTE: White Horse (W): Only three blocks were harvested, the fourth was badly damaged by rabbit grazing.

Standard errors per plot. Grain: tonnes/hectare.

Delafield (R). Whole plot: 0.276 or 5.6% (39 d.f.)

Sub plot: 0.373 or 7.5% (84 d.f.)

White Horse (W). Whole plot: 0.627 or 12.3% (26 d.f.)

Sub plot: 0.389 or 7.6% (56 d.f.)

74/R/B/4 and 74/W/B/4

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	DELAFIELD (R)					WHITE HORSE (W)			
	38	N 75	113	Mean		38	N 75	113	Mean
VARIETY					VARIETY				
AB T	4.53	5.18	5.24	4.99	AB T	4.62	4.92	5.10	4.88
AR T	3.82	4.62	4.90	4.45	AR T	4.52	4.46	4.76	4.58
BE T	3.99	4.84	5.13	4.65	BE T	4.59	5.30	5.36	5.08
HA T	4.23	5.07	5.38	4.89	HA T	4.79	5.14	5.38	5.10
JU O	4.53	4.67	5.00	4.73	JU O	4.33	4.93	4.36	4.54
JU E	4.94	5.44	5.81	5.40	JU E	3.46	4.18	4.19	3.95
JU T	4.35	5.11	5.08	4.85	JU T	4.62	5.55	5.68	5.28
LA T	4.97	6.03	6.09	5.70	LA T	5.51	6.06	5.95	5.84
MM T	4.85	5.67	5.83	5.45	MM T	5.74	6.82	6.54	6.37
MZ T	4.65	5.14	5.39	5.06	MZ T	4.26	4.64	5.12	4.67
PR O	3.83	4.35	4.46	4.21	PR O	5.04	5.28	4.73	5.02
PR E	4.33	4.81	4.89	4.68	PR E	4.37	4.35	4.10	4.27
PR T	4.38	4.67	4.84	4.63	PR T	5.35	5.49	5.11	5.32
UN T	5.80	5.88	6.21	5.96	UN T	5.75	6.77	6.52	6.35
Mean	4.51	5.11	5.30	4.97	Mean	4.78	5.28	5.21	5.09

STANDARD ERRORS OF DIFFERENCES

	N	VARIETY	N		N	VARIETY	N
			VARIETY				VARIETY
Except when comparing means	0.071	0.195	0.291	0.085	0.512	0.574	
with same level of: VARIETY			0.264			0.317	
Mean D.M. %	85.8				83.9		