

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1971

[Full Table of Content](#)



71/R/B/2 and 71/W/B/2 Varieties, N and Ethirimol - Barley

Rothamsted Research

Rothamsted Research (1972) *71/R/B/2 and 71/W/B/2 Varieties, N and Ethirimol - Barley* ; Yields Of The Field Experiments 1971, pp 267 - 270 - DOI: <https://doi.org/10.23637/ERADOC-1-97>

71/R/B/2 and 71/W/B/2

BARLEY

VARIETIES, N AND ETHIRIMOL

Object: To study the yield of newer varieties of barley grown at a range of nitrogen levels. The effects of ethirimol on the incidence of mildew (*Erysiphe graminis*) are also studied - Rothamsted (R) Great Knott III and Woburn (W) Horsepool.

Design: 4 randomised blocks of 12 plots, split into 3.

Whole plot dimensions:-

Great Knott III (R): 4.27 x 24.7. Sub plot area harvested: 0.00163.
Horsepool (W): 4.27 x 20.1. Sub plot area harvested: 0.00173.

Treatments:

Whole plots: All combinations of:-

1. Varieties: Gerkra (G), Julia (J), Midas (M), Sultan (S), Vada (V), Zephyr (Z).
2. Fungicidal seed dressing: None (O), ethirimol at 0.70 kg (F).

Sub plots:

3. Nitrogen: 38, 75, 113 kg (R) and 50, 100, 150 kg (W) as 'Nitro-Chalk'.

Basal applications:-

Great Knott III (R): 246 kg (0:20:20) combine drilled. Weedkillers: Paraquat at 0.56 kg ion in 225 l. Ioxynil octanoate, bromoxynil octanoate and the iso-octyl ester of dichlorprop ('Oxytril P' at 1.4 l in 225 l).

Horsepool (W): 252 kg (0:20:20) combine drilled. Weedkillers: Paraquat at 0.84 kg ion in 281 l (to kill remains of first sowing badly damaged by birds). Ioxynil at 0.525 kg plus mecoprop at 1.58 kg in 281 l.

Cultivations, etc.:-

Great Knott III (R): Paraquat applied: 14 Oct, 1970. Ploughed: 2 - 10 Nov. Seed combine drilled at 157 kg: 10 Mar, 1971. N applied: 23 Mar. 'Oxytril P' applied: 11 May. Combine harvested: 20 Aug. Previous crops: Potatoes 1969, winter wheat 1970.

71/R/B/2 and 71/W/B/2

Horsepool (W): Subsoiled, tines 142 cm apart, 61 cm deep:
11 Sept, 1970. Rotary cultivated: 15 Sept. Rotary cultivated
second stroke: 2 Oct. Deep-tine cultivated: 11 Oct. Seed
combine drilled at 157 kg: 23 Mar, 1971. N applied: 24 Mar.
Paraquat applied: 20 Apr. Power harrowed, seed redrilled at
157 kg: 21 Apr. Ioxynil/mecoprop applied: 17 May. Combine
harvested: 25 Aug. Previous crops: Spring beans 1969, winter
wheat 1970.

NOTE: Samples were taken for assessment of mildew (*Erysiphe graminis*)
and other foliar diseases.

Standard errors per plot. Grain, tonnes/hectare.

Great Knott III (R):	Whole plot:	0.195 or 3.5%	(33 d.f.)
	Sub plot:	0.330 or 5.9%	(72 d.f.)
Horsepool (W):	Whole plot:	0.307 or 6.6%	(33 d.f.)
	Sub plot:	0.374 or 8.1%	(72 d.f.)

71/R/B/2 and 71/W/B/2

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

GREAT KNOTT III (R)

	G	J	M	S	V	Z	Mean
	(±0.098)						(±0.040)
O	5.16	5.65	4.85	5.10	5.97	5.15	5.32
F	5.67	6.45	5.31	5.47	6.56	5.84	5.88
N: KG/HA	(1) and (2)						(±0.048)
38	5.01	5.57	4.71	5.10	5.63	5.01	5.17
75	5.54	6.24	5.18	5.48	6.58	5.68	5.78
113	5.70	6.34	5.35	5.27	6.60	5.80	5.84
Mean (±0.069)	5.42	6.05	5.08	5.28	6.27	5.49	5.60

N: KG/HA

	38	75	113
	(3) and (4)		
O	4.97	5.40	5.58
F	5.37	6.17	6.11

(1) (±0.117) (3) (±0.068) For use in vertical and diagonal comparisons only

(2) (±0.118) (4) (±0.067) For use in horizontal and interaction comparisons only

Mean D.M. %: 81.5

71/R/B/2 and 71/W/B/2

GRAIN: TONNES/HECTARE

HORSEPOOL (W)

	G	J	M	S	V	Z	Mean
	(±0.154)						(±0.063)
O	4.67	4.56	3.82	3.38	5.59	4.14	4.36
F	4.86	4.78	4.48	4.51	6.00	4.88	4.92
N: KG/HA	(1) and (2)						(±0.054)
50	4.86	5.06	4.60	4.26	5.72	4.75	4.88
100	4.83	4.79	4.10	3.94	5.77	4.64	4.68
150	4.61	4.16	3.75	3.63	5.90	4.15	4.37
Mean (±0.109)	4.77	4.67	4.15	3.94	5.80	4.51	4.64

N: KG/HA

	50	100	150
	(3) and (4)		
O	4.59	4.38	4.11
F	5.16	4.97	4.62

(1) (±0.132) (3) (±0.088) For use in vertical and diagonal comparisons only

(2) (±0.153) (4) (±0.076) For use in horizontal and interaction comparisons only

Mean D.M. %: 82.3