

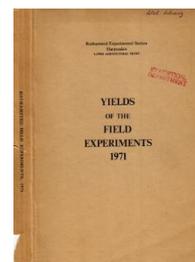
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED  
RESEARCH

## Yields of the Field Experiments 1971

[Full Table of Content](#)



### 71/R/B/3 and 71/W/B/3 Rates, Forms and Methods of Applying N - Barley

#### Rothamsted Research

Rothamsted Research (1972) *71/R/B/3 and 71/W/B/3 Rates, Forms and Methods of Applying N - Barley* ; Yields Of The Field Experiments 1971, pp 271 - 273 - DOI:

<https://doi.org/10.23637/ERADOC-1-97>

71/R/B/3 and 71/W/B/3

BARLEY

RATES, FORMS AND METHODS OF APPLYING N

Object: To study the effects of urea, liquid or solid, broadcast or injected, on the yields of barley - Rothamsted, Great Knott III (R) and Woburn, Horsepool (W).

Design: Great Knott III (R): 4 randomised blocks of 14 plots.  
Horsepool (W): 3 randomised blocks of 14 plots.

Whole plot dimensions: 2.13 x 30.5. Area harvested: 0.00650.

Treatments: No nitrogen (2 plots per block) (NO) and all combinations of:-

1. Forms of nitrogen: 'Nitro-Chalk' 21% N (NC). Solid (prilled) urea 46% N (SU). Urea solution 18% N (LU).
2. Methods of applying nitrogen: Injected (I), broadcast (sprayed for LU treatment) (B).
3. Rates of nitrogen: 63 kg, 126 kg.

Basal applications: 250 kg (0:20:20) broadcast by drill. Weedkillers:-

Great Knott III (R): 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): Ioxynil at 0.53 g and mecoprop at 1.58 kg in 281 l.

Cultivations, etc.:-

Great Knott III (R): Paraquat applied: 14 Oct, 1970. Ploughed: 2 - 10 Nov. Basal PK applied: 24 Feb, 1971. Treatments applied, seed drilled at 157 kg: 27 Feb. 'Oxytril P' applied: 11 May. Combine harvested: Aug 18. Variety: Julia. Previous crops: Potatoes 1969, winter wheat 1970.

Horsepool (W): Sub-soiled 142 cm wide by 61 cm deep: 11 Sept, 1970. Rotary cultivated 1st stroke: 15 - 17 Sept, 2nd stroke: 2 - 3 Oct. Deep-tine cultivated: 11 Oct. Treatments and basal PK applied, seed drilled at 157 kg: 26 Feb, 1971. Weedkiller applied: 11 May. Combine harvested: 17 Aug. Variety: Julia. Previous crops: Spring beans 1969, winter wheat 1970.

Standard errors per plot. Grain, tonnes/hectare.

Great Knott III (R): 0.195 or 3.3% (33 d.f.)  
Horsepool (W): 0.288 or 5.0% (22 d.f.)

71/R/B/3 and 71/W/B/3

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

GREAT KNIGHT III (R)

	N: KG/HA				Mean
	I	B	63	126	
	(±0.069)		(±0.069)		(±0.049)
NC	6.01	5.85	5.67	6.18	5.93
SU	5.99	6.04	5.78	6.26	6.02
LU	6.01	5.98	5.74	6.24	5.99
			(±0.056)		(±0.040)
		I	5.75	6.26	6.00
		B	5.72	6.20	5.96
Mean (±0.040)			5.73	6.23	5.98

NO 3.99 (±0.069)

General Mean: 5.70

Mean D.M. %: 84.8

71/R/B/3 and 71/W/B/3

GRAIN: TONNES/HECTARE

HORSEPOOL (W)

N: KG/HA

	I	B	63	126	Mean
	(±0.118)		(±0.118)		(±0.083)
NC	5.83	5.64	5.95	5.53	5.74
SU	5.86	5.86	6.21	5.51	5.86
LU	5.68	5.75	5.88	5.55	5.71
			(±0.096)		(±0.068)
		I	6.09	5.49	5.79
		B	5.93	5.57	5.75
Mean (±0.068)			6.01	5.53	5.77

NO 5.80 (±0.118)

General mean: 5.78

Mean D.M. %: 83.1