

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 1972

[Full Table of Content](#)



72/R/B/3 Barley Weedkiller and Aqueous N

Rothamsted Research

Rothamsted Research (1973) *72/R/B/3 Barley Weedkiller and Aqueous N* ; Yields Of The Field Experiments 1972, pp 306 - 308 - DOI: <https://doi.org/10.23637/ERADOC-1-62>

72/R/B/3

BARLEY

WEEDKILLER AND AQUEOUS N

Object: To study the effects of a range of rates of solid or liquid nitrogen in combination with a range of rates of hormone weedkiller on foliar scorch and yield of barley - Pastures.

Sponsors: S.C.R. Freeman, A. Penny.

Design: 3 randomised blocks of 28 plots.

Whole plot dimensions: 2.13 x 2.74. Area harvested: 0.00038.

Treatments: All combinations of:-

1. Weedkiller (dichlorprop/MCPA) (E): 0 (0), 1.4 (1), 2.8 (2), 4.2 (3) kg total a.e.
2. Forms of nitrogen: Solid as 'Nitro-Chalk' (21% N) applied immediately after the weedkiller (S), liquid as urea/ammonium nitrate (26% N) mixed with the weedkiller (L).
3. Nitrogen: 37.7, 75.3, 113 kg N, together with 4 extra treatments: SN2 E H0, SN2 E H1, SN2 E H2, SN2 E H3 (N2 = 75.3) where 'Nitro-Chalk' was applied early (E) and the H0 plots were hand weeded.

Basal applications: 190 kg (10:24:24) combine drilled. Weedkiller: Paraquat at 0.56 kg ion in 225 l.

Seed: Julia dressed ethirimol, sown at 160 kg.

Cultivations, etc.: Paraquat applied: 2 Oct, 1971. Ploughed: 23 Nov. Seed combine drilled: 20 Mar, 1972. N applied to E plots: 3 May. Remaining N treatments and weedkiller applied: 18 May. H0 plots hand weeded: 30 June. Cut by sickle: 17 Aug. Previous crops: Beans 1970, barley 1971,

NOTE: Grain and straw samples were taken for determination of dry matter and % N.

Standard error per plot.

Grain, tonnes/hectare: 0.334 or 5.1% (54 d.f.)

72/R/B/3

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	FORM		N: KG/HA			Mean
	S	L	37.7	75.3	113	
H: KG/HA						
0	6.49	6.45	6.40	6.59	6.41	6.47
1.4	6.66	6.79	6.48	6.64	7.05	6.72
2.8	6.58	6.52	6.48	6.48	6.71	6.55
4.2	6.53	6.44	6.18	6.48	6.80	6.49
		FORM				
		S	6.46	6.72	6.52	6.57
		L	6.31	6.37	6.97	6.55
Mean			6.39	6.55	6.74	6.56

Extra (SN2 E)

H: KG/HA

	0	1.4	2.8	4.2	Mean
	6.38	6.44	6.58	6.39	6.45

STANDARD ERRORS OF DIFFERENCES

H	FORM	N	H FORM	H N	FORM N
0.111	0.079	0.096	0.188	0.219	0.136

EXTRA

H

0.273

Grand Mean: 6.54
Mean D.M. %: 77.2

72/R/B/3

STRAW: TONNES/HECTARE

	FORM		N: KG/HA			Mean
	S	L	37.7	75.3	113	
H: KG/HA						
0	6.73	6.31	5.90	6.58	7.08	6.52
1.4	6.50	6.38	6.09	6.26	6.96	6.44
2.8	6.47	6.43	5.84	6.25	7.25	6.45
4.2	6.36	6.20	5.60	6.30	6.94	6.28
		FORM				
		S	5.92	6.64	6.98	6.51
		L	5.79	6.06	7.13	6.33
Mean			5.86	6.35	7.06	6.42

Extra (SN2 E9)

	H: KG/HA				Mean
	0	1.4	2.8	4.2	
	6.37	6.38	6.48	6.52	6.44

Grand Mean: 6.42
 Mean D.M. %: 52.1