

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/M/4 N P Fertiliser (Phenylphosphonic Acid) for Barley - Mixed Crops

Rothamsted Research

Rothamsted Research (1972) *71/R/M/4 N P Fertiliser (Phenylphosphonic Acid) for Barley - Mixed Crops* ; Yields Of The Field Experiments 1971, pp 346 - 347 - DOI:

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

71/R/M/4

BARLEY

NP FERTILISER (PHENYLPHOSPHONIC ACID) FOR BARLEY

Object: To study the effects of phenylphosphonic acid on barley -
West Barnfield I.

Design: 3 randomised blocks of 18 plots.

Whole plot dimensions: 1.83 x 3.66. Area harvested: 0.00026.

Treatments: All combinations of:-

1. Varieties: Julia (J), Sultan (S).
2. Nitrogen: 56 kg (N1), 112 kg (N2) as 'Nitro-Chalk'.
3. Seed treated with phenylphosphonic acid: Untreated (P0),
0.25 (P1), 0.5 (P2), 1.0 (P4) % of weight of seed.

Two additional treatments were included, SN1A1, SN2A1 (where A1 was phenylphosphonic acid at 2% sprayed over seed by Scottish Agricultural Industries).

Basal applications: 336 kg (0:20:20). Weedkillers: Paraquat at 0.28 kg ion in 225 l, and later at 0.56 kg ion in 225 l. 2,4-D at 0.56 kg plus dichlorprop at 2.24 kg in 449 l.

Cultivations, etc.: Paraquat applied: 19 Sept, 1970. Ploughed: 24 Sept. Paraquat applied: 5 Feb, 1971. N and basal PK applied, seed drilled at 191 kg: 12 Mar. 2,4-D/dichlorprop applied: 5 May. Harvested by hand: 17 Aug. Previous crops: Spring oilseed rape 1969, winter wheat 1970.

Standard error per plot.

Barley: Grain, tonnes/hectare: 0.383 or 9.6% (30 d.f.)

71/R/M/4

SUMMARY OF RESULTS

	N1	N2	P0	P1	P2	P4	Mean
GRAIN: TONNES/HECTARE							
	(±0.111)		(±0.156)				(±0.078)
J	4.41	4.81	4.57	4.71	4.70	4.45	4.61
S	3.50	3.30	3.50	3.37	3.49	3.24	3.40
			(±0.156)				(±0.078)
		N1	3.96	4.18	3.88	3.80	3.96
		N2	4.11	3.90	4.31	3.89	4.05
Mean (±0.111)			4.04	4.04	4.09	3.85	4.00

SN1A1 3.55 (±0.221)
 SN2A1 3.58

STRAW: TONNES/HECTARE							
J	4.85	5.73	5.32	5.33	5.15	5.37	5.29
S	4.05	4.45	4.33	4.35	4.37	3.95	4.25
		N1	4.48	4.67	4.35	4.29	4.45
		N2	5.17	5.00	5.17	5.03	5.09
Mean			4.82	4.84	4.76	4.66	4.77

SN1A1 4.08
 SN2A1 4.67

General mean: Grain: 3.96
 Straw: 4.73

Mean D.M. %: Grain: 84.3
 Straw: 86.7