

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/CS/1 Levels of N and K - Potatoes

Rothamsted Research

Rothamsted Research (1972) *71/R/CS/1 Levels of N and K - Potatoes* ; Yields Of The Field Experiments 1971, pp 125 - 127 - DOI: <https://doi.org/10.23637/ERADOC-1-97>

71/R/CS/1

LEVELS OF N AND K

Object: To study the effects of N, P and K fertilisers, applied to grass 1958 - 1967 and of fresh P and K applied 1971, on yields of potatoes - Harwoods Piece.

The 14th year, potatoes.

For previous years see 58/Cg/2(t), 59/Cg/2(t), 60/Ci/1, 61/Dg/1, 62/C/11, 63/C/7, 64/C/6(t), 65/C/6(t), 66/C/5, 67/C/4, 68/C/4(t), 69/R/CS/1(t) and 70/R/CS/1(t).

Whole plot dimensions: 2.13 x 16.5. Sub plot area harvested: 0.00095.

Treatments:-

Whole plots:- P and K, cumulative with treatments applied to grass 1958 - 1967.

P: None (P0), 125 (P1), 251 (P2) kg P2O5 as granular superphosphate.

K: None (K0), 125 (K1), 251 (K2) kg K2O as muriate of potash.

N residues : Nitrogen treatments to grass 1958 - 1967:

None (R0), 38 (R1), 75 (R2), 113 (R3) kg N for each cut.

Half plots: K cumulative since 1969: None (K0), 125 kg (KK) K2O as muriate of potash.

Basal applications: 7530 kg ground chalk. 188 kg N as 'Nitro-Chalk' broadcast by drill.

Weedkillers: Paraquat at 0.28 kg ion in 225 l. Linuron at 0.84 kg plus paraquat at 0.42 kg ion in 427 l.

Fungicide: Mancozeb at 1.34 kg in 438 l.

Insecticide: Demeton-s-methyl at 245 g applied with the fungicide.

Cultivations, etc.: Paraquat applied: 18 Sept, 1970. Chalked: 21 Sept.

Ploughed: 29 Oct. P and K and basal N applied, K applied to half plots, all plots rotary cultivated, potatoes planted: 6 Apr, 1971.

Linuron plus paraquat applied: 10 May. Grubbed: 4 June. Rotary

ridged: 7 June. Fungicide plus insecticide applied: 24 June.

Haulm destroyed mechanically: 26 Aug. Lifted: 16 Sept. Variety: King Edward.

NOTE: The percentages of P and K in tubers, and of P, K and Mg in the leaves in July, were determined.

Standard errors per plot. Total tubers, tonnes/hectare.

Whole plot: 2.44 or 12.4% (33 d.f.)

Sub plot: 2.86 or 14.5% (36 d.f.)

71/R/CS/1

SUMMARY OF RESULTS

TOTAL TUBERS: TONNES/HECTARE

1969 - 71

	KD	KK	Mean
	(1) and (2)		(±1.22)
N P K			
0 1 0	10.4	21.8	16.1
1 1 0	9.7	20.4	15.0
1 1 1	18.0	23.1	20.5
1 1 2	22.3	27.8	25.0
2 1 0	8.3	20.0	14.1
2 1 1	19.0	26.1	22.5
2 1 2	21.0	24.7	22.9
3 1 0	7.8	20.7	14.3
3 1 1	17.1	21.5	19.3
3 1 2	21.5	24.0	22.7
3 0 2	19.1	22.5	20.8
3 2 2	21.2	23.9	22.5
Mean (±0.41)	16.3	23.0	19.6

- (1) (±1.58) For use in vertical and diagonal comparisons only
 (2) (±1.43) For use in horizontal and interaction comparisons only

71/R/CS/1

% WARE: 3.81 CM (1.5 INCH) RIDDLE

1969 - 71

	KD	KK	Mean
N P K			
0 1 0	64.9	82.4	73.7
1 1 0	66.6	78.7	72.7
1 1 1	78.4	81.9	80.1
1 1 2	83.5	84.7	84.1
2 1 0	56.0	80.6	68.3
2 1 1	78.7	82.9	80.8
2 1 2	78.6	84.6	81.6
3 1 0	58.7	78.7	68.7
3 1 1	80.0	79.7	79.9
3 1 2	81.7	83.0	82.3
3 0 2	83.4	83.6	83.5
3 2 2	77.1	79.9	78.5
Mean	74.0	81.7	77.9