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Yields of the Field Experiments 1975

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75/ R/CS/1 - Levels of N & K - Barley

Rothamsted Research

Rothamsted Research (1976) 75/ R/CS/1 - Levels of N & K - Barley ; Yields Of The Field Experiments 1975, pp 132 - 134 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/CS/1

LEVELS OF N AND K

Object: To study the residual effects of N, P and K fertilisers applied to grass 1958-1967 and further dressings of P and K to arable crops 1969-71 - Harwoods Piece.

Sponsor: F.V. Widdowson.

The eighteenth year, barley.

For previous years see 58/Cg/2(t), 59/Cg/2(t), 60/C1/1, 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), 70/R/CS/1(t), 71/R/CS/1(t) and 72-74/R/CS/1.

Design: 4 randomised blocks of 12 plots split into 2.

Whole plot dimensions: 2.13 x 16.5.

Treatments: All combinations of:-

Whole plots: 1. NPK residues:

NPK RES

To grass 1958-67			To potatoes 1971		
N	P	K	P	K	
0	1	0	1	0	N0 P1 K0
1	1	0	1	0	N1 P1 K0
1	1	1	1	1	N1 P1 K1
1	1	2	1	2	N1 P1 K2
2	1	0	1	0	N2 P1 K0
2	1	1	1	1	N2 P1 K1
2	1	2	1	2	N2 P1 K2
3	1	0	1	0	N3 P1 K0
3	1	1	1	1	N3 P1 K1
3	1	2	1	2	N3 P1 K2
3	0	2	0	2	N3 P0 K2
3	2	2	2	2	N3 P2 K2

To grass: N1, 2, 3 = 38, 75, 113 kg N per cut. P1, 2 = 75, 150 kg P2O5 per annum. K1, 2 = 38, 75 kg K2O per cut.

To potatoes: P1, 2 = 125, 250 kg P2O5. K1, 2 = 125, 250 kg K2O. All arable crops received basal N.

Sub plots: 2. Residues of muriate of potash applied in three equal dressings 1969-1971 (kg K2O total):

K2O RES

None	0
376	376

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Basal applications: Manures: 'Nitro-Chalk' at 250 kg. Weedkiller:
Dicamba with mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l).

Seed: Julia, dressed with ethirimol, sown at 190 kg.

Cultivations, etc.: - Ploughed: 29 Nov, 1974. Spring-tine cultivated
and power harrowed: 24 Apr, 1975. Seed sown and N applied: 25 Apr.
Weedkiller applied: 6 June. Combine harvested: 26 Aug.

NOTE: The yields have been adjusted for a trend across the site.

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GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

	0	376	MEAN
K20 RES			
NPK RES			
N0 P1 K0	4.53	4.69	4.61
N1 P1 K0	4.64	4.80	4.72
N1 P1 K1	4.59	4.78	4.69
N1 P1 K2	4.97	4.63	4.80
N2 P1 K0	4.94	5.12	5.03
N2 P1 K1	5.01	5.17	5.09
N2 P1 K2	4.74	4.90	4.82
N3 P1 K0	4.80	4.78	4.79
N3 P1 K1	4.67	4.92	4.79
N3 P1 K2	4.74	4.94	4.84
N3 P0 K2	4.43	4.59	4.51
N3 P2 K2	4.99	5.13	5.06
MEAN	4.75	4.87	4.81

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	NPK RES	K20 RES	NPK RES K20 RES
SED	0.197	0.053	0.243
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
NPK RES			0.189

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	33	0.278	5.8
BLOCK.WP.SP	32	0.259	5.4

GRAIN MEAN DM% 85.3

PLOT AREA HARVESTED 0.00118