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Numerical Results of the Field Experiments 1969

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69/R/CS/1 - Levels of N & K - Potatoes

Rothamsted Research

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LEVELS OF N AND K

(69/R/CS/1)

Residues of N,P and K to grass Harwoods Piece 1969 - the 12th year, potatoes.

For treatments etc. see 'Results' 63/C/7.1 and 65/C/6.2 and for previous years' results see 58/Cg/2, 59/Cg/2, 60/Ci/1, 61/Dg/1, 62/C/11, 63/C/7, 64/C/6, 65/C/6, 66/C/5, 67/C/4 and 68/C/4.

Plots were split for a test of none (KD) v 1.0 (KK) cwt K2O as granular muriate of potash. Otherwise no treatment or basal P and K were applied in 1969.

Basal applications: 1.0 cwt N as 'Nitro-Chalk' broadcast by hand. Weedkiller: Paraquat at 0.375 lb ion plus linuron at 0.75 lb in 37 gals. Fungicide: Mancozeb at 1.2 lb in 37 gals on three occasions. Insecticide: Demeton-s-methyl at 3.5 oz applied with second mancozeb spray.

Area of each sub plot: 0.0043. Area harvested: 0.0024.

Cultivations, etc.: Ploughed: 6 Feb, 1969. Rotary cultivated, basal 'Nitro-Chalk' and muriate of potash applied, potatoes machine planted: 14 Apr. Weedkiller applied: 13 May. Grubbed: 19 June. Earthed up: 26 June. Fungicide applied: 15 July, 4 Aug, 21 Aug. Insecticide applied: 4 Aug. Lifted: 25 Sept. Variety: Pentland Dell.

NOTE: Leaf samples were taken in July for determination of percentage K. % N, % P and % K in tubers was determined. After harvest soil samples were taken to determine available P and K.

Standard errors per plot. Total tubers, tons:

Whole plot: 1.206 or 10.8% (33 d.f.)

Sub plot: 1.790 or 16.1% (36 d.f.)

SUMMARY OF RESULTS

TOTAL TUBERS: TONS

N P K	KD	KK	Mean
	(1) and (2)	(1) and (2)	(± 0.603)
0 1 0	9.94	14.73	12.34
1 1 0	8.42	12.19	10.31
1 1 1	9.62	13.97	11.80
1 1 2	14.79	16.46	15.62
2 1 0	5.58	12.18	8.88
2 1 1	8.49	11.70	10.09
2 1 2	11.42	13.29	12.36
3 1 0	4.98	11.85	8.42
3 1 1	7.21	11.35	9.28
3 1 2	8.81	13.90	11.35
3 0 2	9.45	13.26	11.35
3 2 2	11.06	12.93	11.99
Mean (± 0.258)	9.15	13.15	11.15

(1) (± 0.874) For use in vertical and diagonal comparisons only.

(2) (± 0.895) For use in horizontal and interaction comparisons only.

% WARE			
	KD	KK	Mean
N P K			
0 1 0	92.3	97.2	94.8
1 1 0	90.0	96.4	93.2
1 1 1	95.4	97.0	96.2
1 1 2	97.0	97.8	97.4
2 1 0	88.0	96.7	92.3
2 1 1	92.1	96.5	94.3
2 1 2	95.8	96.7	96.3
3 1 0	84.7	95.8	90.3
3 1 1	93.0	96.7	94.9
3 1 2	95.2	97.2	96.2
3 0 2	94.0	97.7	95.8
3 2 2	96.1	96.9	96.5
Mean	92.8	96.9	94.8