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68/DE/12 Varieties, Nitrogen and Scab (*Streptomyces Scabies* - Potatoes

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68/De/12.1

POTATOES

(RP 13/1 and WP 2/1)

Varieties, nitrogen and scab (*Streptomyces scabies*) - Rothamsted (R)
Pastures and Woburn (W) Great Hill Bottom I 1968.

Design: 4 randomised blocks of 3 plots, split into 3.

Area of each sub plot: 0.0120. Area harvested: Pastures (R): 0.0028,
Great Hill Bottom I (W): 0.0029.

Treatments: All combinations of:-

Whole plots: 1. Varieties: King Edward (KE), Majestic (M),
Pentland Dell (PD).

Sub plots: 2. N: None (NO), 1.0 (N1), 2.0 (N2) cwt as 'Nitro-
Chalk'.

Basal applications: 6 cwt (0:14:28).

Pastures (R): Weedkillers: Paraquat at 0.75 lb ion in 32 gals.

Paraquat at 0.38 lb ion plus linuron at 0.75 lb in 40 gals.

Fungicide: Mancozeb at 1.2 lb in 37 gals on 3 occasions.

Insecticide: Demeton-s-methyl at 3.5 oz in 37 gals applied
with mancozeb on one occasion.

Great Hill Bottom I (W): Weedkillers: Paraquat at 0.5 lb ion in
33 gals. Linuron at 0.5 lb plus paraquat at 0.38 lb ion
in 50 gals. Fungicide: Mancozeb at 1.2 lb in 38 gals
on 2 occasions.

Cultivations, etc.:

Pastures (R): Paraquat applied: 3 Oct, 1967. Ploughed: 29 Oct.

Basal PK compound applied: 22 Mar, 1968. 'Nitro-Chalk' applied,
plots rotary cultivated, potatoes machine planted: 1 Apr.

Paraquat and linuron applied: 3 May. Plots grubbed: 6 June.

Plots rotary ridged: 10 June. Mancozeb applied: 4 July.

Mancozeb and demeton-s-methyl applied: 19 July. Mancozeb
applied: 5 Aug. Sprayed with undiluted BOV at 15 gals:

21 Aug. Lifted: 4 Oct. Previous crops: Fallow 1966,
barley 1967.

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Great Hill Bottom I (W): Deep-tine cultivated: 25 Sept, 1967.
Ploughed: 20 Feb, 1968. Paraquat applied: 3 Mar. Basal PK compound applied: 22 Mar. 'Nitro-Chalk' applied: 3 Apr. Plots rotary cultivated, potatoes planted: 4 Apr. Linuron and paraquat applied: 2 May. Grubbed and rotary ridged: 15 June. Fungicide applied: 18 and 30 July. Sprayed with undiluted BOV at 15 gals: 15 Aug. Lifted: 4 Oct. Previous crops: Fallow 1966, potatoes 1967.

NOTE: Assessments of surface area of tubers affected by scab (*Streptomyces scabies*) were made at harvest.

Standard errors per plot. Total tubers:

Pastures (R):	Whole plot: 0.285 or 1.7% (6 d.f.)
	Sub plot: 1.012 or 6.0% (18 d.f.)
Great Hill Bottom I (W):	Whole plot: 0.776 or 8.4% (6 d.f.)
	Sub plot: 1.401 or 15.2% (18 d.f.)

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SUMMARY OF RESULTS

PASTURES (R)

	NO	N1	N2	Mean
TOTAL TUBERS				
	(1) and (2)			(± 0.143)
KE	13.79	20.68	19.93	18.14
M	13.28	14.76	15.36	14.46
PD	15.15	18.13	19.86	17.71
Mean (± 0.292)	14.07	17.86	18.38	16.77

(1) (± 0.437) For use in vertical and diagonal comparisons(2) (± 0.506) For use in horizontal and interaction comparisons

% WARE

KE	93.2	96.4	95.7	95.1
M	96.7	97.6	96.7	97.0
PD	98.2	99.0	98.9	98.7
Mean	96.0	97.7	97.1	96.9

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GREAT HILL BOTTOM I (W)

	NO	N1	N2	Mean
	TOTAL TUBERS			
	(1) and (2)			(±0.388)
KE	5.84	10.25	12.36	9.48
M	7.13	10.49	10.27	9.29
PD	6.36	9.13	11.20	8.90
Mean (±0.404)	6.44	9.96	11.27	9.22

(1) (±0.691) For use in vertical and diagonal comparisons

(2) (±0.700) For use in horizontal and interaction comparisons

% WARE

KE	81.7	85.8	91.4	86.3
M	90.3	92.2	94.8	92.4
PD	89.8	92.9	94.8	92.5
Mean	87.3	90.3	93.7	90.4