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Numerical Results of the Field Experiments 1970

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70/R/RN/7 Residual Phosphate - Potatoes, Barley, Turnips

Rothamsted Research

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RESIDUAL PHOSPHATE

(70/R/RN/7)

Potatoes, barley and swedes, Great Field IV and Sawyers I the 11th year. For treatments and previous years' results see 'Details' 1967 and 'Results' 67/B/6, 68/B/5 and 69/R/RN/7.

Area of each plot:-

Great Field IV: 0.0193. Area harvested: Potatoes and barley - 0.0129.
Turnips - 0.0096.

Sawyers I: 0.0212. Area harvested: Potatoes and barley - 0.0141.

Revised manuring on both fields:

	cwt N	cwt K ₂ O
Potatoes	2.0	2.0 as 'Nitro-Chalk' and sulphate of potash
Barley	0.8	0.5 as (25:0:16) combine drilled
Swedes	0.5	1.0 as 'Nitro-Chalk' and sulphate of potash

The barley variety is now Julia.

NOTE: Because of dry weather, swedes failed on both fields and turnips were sown (without further manuring). On Sawyers I the turnips were seriously affected by *Phoma* and yields were not taken.

Standard applications:

Potatoes: Weedkiller: Linuron at 1 lb plus paraquat at 0.375 lb ion in 39 gals. Fungicide: Mancozeb at 1.2 lb in 40 gals on 2 occasions. Insecticide: Demeton-s-methyl at 3.5 oz with first mancozeb spray.

Barley: Ground chalk at 25 cwt. Weedkiller: 2,4-D at 0.5 lb and dichlorprop at 2 lb in 20 gals.

Cultivations, etc. (both fields):- Ploughed: 24 Nov, 1969.

Potatoes: Fertilisers applied: 5 May, 1970. Plots rotary cultivated, potatoes machine planted: 6 May. Weedkiller applied: 23 May. Grubbed and rotary ridged: 18 June. Fungicide and insecticide applied: 29 July. Fungicide applied: 14 Aug. Sprayed with undiluted BOV at 15 gals: 15 Sept. Lifted: 25 Sept.

Barley: Ground chalk applied: 6 Oct, 1969. Treatment P fertilisers applied: 26 Mar, 1970. Seed combine drilled at 140 lb: 28 Mar. Weedkiller applied 18 May. Combine harvested: 14 Aug. Variety: Julia.

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Swedes: Fertilisers applied: 14 May, 1970. Seed drilled at 1.5 lb: 15 May. Power harrowed for turnips: 23 June. Rotary cultivated: 24 June. Turnips drilled at 1.5 lb: 25 June. Singled: 23 July - 7 Aug. Lifted: 12 Oct. Variety of turnips: Imperial Green Globe.

Standard errors per plot.

Sawyers I:

Potatoes, total tubers, tons: 1.016 or 9.5% (11 d.f.)

Barley, grain, cwt: 1.57 or 5.1% (11 d.f.)

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SUMMARY OF RESULTS

POTATOES

Treatment	TOTAL TUBERS: TONS		% WARE: 1.5 INCH	
	Great Field IV Mean	Sawyers I Mean	Great Field IV Mean	Sawyers I Mean
		(±0.719)		
O	11.68	9.25	98.0	98.2
A1	12.87	8.54	98.5	96.4
A2	15.32	10.12	98.2	98.1
A3	16.80	11.86	98.5	96.9
A4	17.32	13.44	98.1	97.9
T1	12.18	8.43	98.4	97.3
T2	14.17	9.89	97.5	97.1
R2	15.21	12.50	98.3	98.3
R3	14.37	11.51	97.4	97.8
R4	15.53	13.70	97.3	97.5
G1	12.62	7.60	97.6	98.0
S1	13.55	11.00	98.3	98.1
Mean	14.30	10.65	98.0	97.6

BARLEY

	GRAIN: CWT		STRAW: CWT	
		(±1.11)		
O	23.9	24.1	16.9	8.6
A1	36.6	30.5	17.7	10.5
A2	37.8	31.9	18.9	11.5
A3	33.9	33.2	19.7	10.8
A4	33.7	34.3	24.7	14.3
T1	42.0	28.0	17.3	9.4
T2	36.4	30.9	16.3	11.2
R2	32.1	31.7	14.4	8.9
R3	32.8	33.0	19.8	11.5
R4	33.1	33.7	19.5	13.2
G1	36.5	28.6	18.1	9.5
S1	32.3	27.6	15.1	9.8
Mean	34.3	30.6	18.2	10.8
Mean D.M.%:	86.5	86.7	88.2	88.1

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TURNIPS, ROOTS: TONS

Treat- ment	Great Field IV Mean
O	0.37
A1	4.40
A2	6.76
A3	8.47
A4	6.95
T1	3.15
T2	3.38
R2	3.98
R3	4.82
R4	5.37
G1	2.69
S1	2.32
Mean	4.39