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## Numerical Results of the Field Experiments 1969

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### 69/W/RN/14 - Long Term Phosphate - Barley & Potatoes

#### Rothamsted Research

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LONG TERM PHOSPHATE

(69/w/RN/14)

Residual and cumulative effects of superphosphate -  
Woburn Stackyard III 1969, 2nd year.

For design, treatments, etc., and for previous year's results  
see 'Results' 68/B/8. In 1969 residual effects only  
were measured.

Area of each sub-plot: 0.0167. Area harvested: Barley: 0.0111.  
Potatoes: 0.0111.

Basal applications:

Potatoes: 2.0 cwt N as 'Nitro-Chalk' and 1.5 cwt K20  
as sulphate of potash in spring. Weedkiller:  
Paraquat at 0.37 lb ion plus linuron at 0.5 lb  
in 25 gals. Fungicide: Mancozeb at 1.2 lb in  
37 gals applied on 2 occasions. Insecticide:  
Demeton-s-methyl at 3.5 oz applied once with  
fungicide.

Barley: 17 cwt ground chalk, 1.2 cwt N as 'Nitro-Chalk',  
and 0.5 cwt K20 as muriate of potash. Weedkiller:  
Ioxynil octanoate, bromoxynil octanoate, iso-octyl-  
ester of dichlorprop ('Oxytril P' at 1 pint in 25  
gals).

Cultivations, etc.: Both crops, ploughed: 25 Nov, 1968.

Potatoes: 'Nitro-Chalk', sulphate of potash applied: 10 Apr,  
1969. Rotary cultivated, potatoes planted: 18 Apr.  
Weedkiller applied: 15 May. Rotary ridged: 16 June.  
Fungicide and insecticide applied together: 18 July.  
Fungicide applied: 7 Aug, 27 Aug. Sprayed with  
undiluted BOV at 16 gals: 25 Sept. Lifted: 20 Oct.  
Variety: Majestic.

Barley: Ground chalk applied: 21 Oct, 1968. 'Nitro-Chalk',  
muriate of potash applied: 25 Mar, 1969. Seed drilled  
at 140 lb: 29 Mar. Weedkiller applied: 22 May.  
Combine harvested: 25 Aug. Variety: Maris Badger.

Standard errors per plot.

Potatoes, Total Tubers, tons:	Whole plot: 1.591 or 10.6% (10 d.f.)
	Sub plot: 1.434 or 9.5% (18 d.f.)
Barley, Grain, cwt:	Whole plot: 1.64 or 5.5% (10 d.f.)
	Sub plot: 2.44 or 8.1% (18 d.f.)

SUMMARY OF RESULTS

BARLEY

R0	R1	R2	R4	R6	Mean
GRAIN:CWT					
(±0.67)		(±0.95)			
27.8	29.9	30.2	32.5	32.5	30.1
STRAW:CWT					
23.1	24.8	26.4	31.1	26.9	25.9

Mean D.M.%: Grain: 82.5  
 Straw: 85.3

POTATOES

R0	R1	R2	R4	R6	Mean
TOTAL TUBERS:TONS					
(±0.649)		(±0.918)			
14.16	15.14	15.70	15.89	15.14	15.03
% WARE					
96.9	97.0	96.1	96.5	95.0	96.4