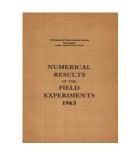
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Yields of the Field Experiments 1963



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63/R/NL/B/9 N Levels and Residues Two Course Rotation

Rothamsted Research

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63/B/9.1

N LEVELS AND RESIDUES ROTATION

(NL)

Direct and residual effects of sulphate of ammonia - Long Hoos III 1963, the fourth year.

Rotation: Wheat, potatoes.

Design (each crop): 3 x 3 x 3 in 3 blocks of 9 plots each.

Area of each plot: 0.0212 acres. Area harvested: 0.0141 acres.

Treatments. All combinations of: -

Nitrogen at 3 levels in 1963.

Nitrogen at 3 levels in 1960, and repeated on the same plots in 1962.

Nitrogen at 3 levels in 1961.

To wheat: None, 0.5, 1.0 cwt N per acre.

To potatoes: None, 0.75, 1.50 cwt N per acre.

The nitrogen was applied as sulphate of ammonia.

Note: Ground chalk in addition to basal dressing was applied at 1 cwt for each cwt of sulphate of ammonia applied during the years 1960, 1961 and 1962.

Basal dressings (per acre):

To wheat: 2.25 cwt compound fertiliser (14% P205, 28% K20), combine

To potatoes: 5 cwt compound fertiliser (14% P205, 28% K20), broadcast on flat.

Cultivations, etc.:

Wheat: Corrective dressings of ground chalk applied: Oct 11, 1962.

Basal ground chalk applied at 30 cwt per acre: Oct 22. Ploughed:

Nov 15. Seed drilled at 3.25 bushels per acre: Dec 17. Sulphate
of ammonia applied: Apr 26, 1963. Sprayed with mecoprop/2, 4-D at
3.2 pints in 40 gallons per acre: May 21. Combine harvested:

Sept 10. Variety: Cappelle.

Potatoes: Corrective dressings of ground chalk applied: Oct 11, 1962.

Basal ground chalk applied at 30 cwt per acre: Oct 22. Ploughed:

Nov 14. Basal fertiliser broadcast on flat: Apr 30, 1963. Sulphate
of ammonia applied: May 4. Potatoes planted: May 6. Earthed up:

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Sprayed with maneb at 1.2 lb in 20 gallons per acre: June 27. Sprayed with copper oxychloride fungicide at 2.3 lb copper July 11. in 20 gallons per acre: Sept 3. Sprayed with undiluted BOV at 16 gallons per acre: Sept 12. Lifted: Oct 8. Variety: Majestic.

Note: For details of the previous years' results see 'Results of the Field Experiments' 60/B/10, 61/B/9 and 62/B/9.

Standard errors per plot.
Wheat, Grain (at 85% dry matter): 2.60 cwt per acre or 7.9% (15 d.f.) Potatoes, Total tubers: 0.566 tons per acre or 4.8% (15 d.f.)

Summary of Results Wheat, Grain (at 85% dry matter): cwt per acre

N: cwt per acre in 1961	N: cwt per acre in 1960 and 1962			N: cwt per acre in 1963			
	None	0.75	1.50	None	0.5	1.0	Mean
	(±1.50)			(±1.50)			(±0.87)
None 0.5 1.0	29.8 28.3 28.2	30.7 32.5 35.0	36.8 36.7 38.2	25.1 26.0 27.9	33.2 30.5 34.8	38.9 41.1 38.8	32.4 32.5 33.8
	N: cwt per acre in 1960 and 1962						
		None 0.75 1.50		19.9 27.2 31.9	30.7 32.1 35.7	35.7 38.9 44.2	28.8 32.7 37.3
		Mean (±0.87)	26.3	32.8	39.6	32.9

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Po	ta	to	es

	N: cwt per acre in 1960 and 1962			N: cwt per acre in 1963			
N: cwt per acre in 1961	None	0.5	1.0	None	0.75	1.50	Mean
		Total	tubers:	tons per	acre		
	-11 7-11	(±0.327)		(±0.327)			(±0.189)
None 0.75 1.50	11.19 11.44 12.35			8.62 8.80 8.84			11.59 11.86 12.10
	N: cwt per acre in 1960 and 1962						
		None 0.5 1.0		8.21 8.67 9.38	12.43 12.87 13.11	13.42	
		Mean (±0.189)	8.75	12.80	14.01	11.85
	Perc	entage w	are (1.5	inch ri	ddle)		
None 0.75 1.50	95.1 94.6 94.7	94.3 95.7 96.1	94.9 95.5 95.3	93.2 94.0 94.1	95 • 3 95 • 8 95 • 7	95.9 95.9 96.2	94.8 95.2 95.3
	N: cwt per acre in 1960 and 1962						
		None 0.5 1.0		93.7 93.8 93.8	95.3 95.8 95.7	95.3 96.5 96.1	94.8 95.4 95.2
		Mean		93.8	95.6	96.0	95.1