

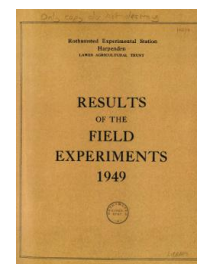
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## Yields of the Field Experiments 1949

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### 49/CE/1 Potatoes - Application of Dung

*49/CE/1 Potatoes - Application of Dung*, Rothamsted Research (1950) Yields Of The Field Experiments 1949, pp 81 - 83

49/Ce/1.1

## POTATOES

The effects of three methods of applying dung at three levels, of sulphate of ammonia, of superphosphate and of muriate of potash.

R.P. - Sawyers III 1949

System of replication: 4 randomized blocks of 12 plots each, plots being split into 2 for NPK, certain high order interactions being confounded with block differences.

Area of each sub plot: 0.021 acres. Area harvested 0.0175 acres.

### Treatments:

#### Whole plots.

Dung: None, 5, 10 or 15 cwt FYM per acre.  
Method of application: Ploughed in in winter (W), ploughed in in spring (S), or placed in the bouts (B).

#### Sub-plots.

Sulphate of ammonia: None, 0.6 cwt N per acre.  
Superphosphate: None, 0.6 cwt P<sub>2</sub>O<sub>5</sub> per acre.  
Muriate of potash: None, 1.0 cwt K<sub>2</sub>O per acre.

Basal Manuring: None

Cultivations etc.: Ploughed: Sept 14-15. Dung applied to "W" plots: Dec 20. Ploughed all plots: Dec 20-22. Dung applied to "S" plots: Mar 22-23. Ploughed all plots: Mar 22-24. Bouted: Apr 19. Dung applied to "B" plots: Apr 20. Artificials applied planted and covered in: Apr 21-22. Rolled down ridges: Apr 22. Chain harrowed twice: May 18. Hoed: July 1-2. Earthed up: July 13. Sprayed to kill off haulm: Sept 16. Lifted: Sept 23-24. Variety: Majestic Scotch A. Previous crop: Wheat.

Standard errors per plot: Total tubers.

Whole plot: 0.547 tons per acre or 8.64%

Sub-plot: 0.499 tons per acre or 7.88%

49/CA/1.2

Total tubers: tons per acre

Dung: tons per acre

	0	5	10	15	Mean
Method of application		(±0.273)			(±0.158)
Ploughed in, in winter		5.86	6.63	6.85	6.44
" " " " spring		6.43	6.55	7.18	6.72
Placed in bouts		6.04	6.54	7.33	6.64
Sulphate of ammonia		(±0.188)*			(±0.072)
None	5.20	5.82	6.30	6.94	6.06
0.6 cwt per acre N	5.80	6.39	6.85	7.30	6.58
Response to N (±0.204)	0.60	0.57	0.55	0.36	0.52(1)
Superphosphate		(±0.188)*			(±0.072)
None	5.49	6.07	6.54	7.09	6.30
0.6 cwt per acre P	5.51	6.14	6.61	7.14	6.35
Response to P (±0.204)	0.02	0.07	0.07	0.05	0.05(1)
Muriate of potash		(±0.188)*			(±0.072)
None	5.01	5.78	6.37	7.04	6.05
1.0 cwt per acre K	5.98	6.43	6.78	7.20	6.60
Response to K (±0.204)	0.97	0.65	0.41	0.16	0.55(1)
Mean (±0.158)	5.50	6.11	6.57	7.12	6.32

Standard error (1)±0.102

\* Standard error for comparisons other than vertical

49/0e/1.3

Total tubers: tons per acre

	Method of application of dung		
	Ploughed in in winter	Ploughed in in spring	Placed in bouts
Sulphate of ammonia		$\pm 0.188^*$	
None	6.27	6.38	6.42
0.6 cwt per acre N	6.62	7.05	6.86
Response to N ( $\pm 0.204$ )	0.35	0.67	0.44
Superphosphate		$\pm 0.188^*$	
None	6.53	6.83	6.35
0.6 cwt per acre P	6.36	6.61	6.93
Response to P ( $\pm 0.204$ )	-0.17	-0.22	0.58
Muriate of potash		$\pm 0.188^*$	
None	6.20	6.53	6.46
1.0 cwt per acre K	6.69	6.91	6.81
Response to K ( $\pm 0.204$ )	0.49	0.38	0.35

\*Standard error for comparisons other than vertical

Responses to treatments ( $\pm 0.188$ )\*\*

Response to:	Sulphate of ammonia		Superphosphate		Muriate of potash	
	Abs.	Pres.	Abs.	Pres.	Abs.	Pres.
Sulphate of ammonia	-	-	0.56	0.48	0.20	0.84
Superphosphate	0.09	0.01	-	-	-0.37	0.47
Muriate of potash	0.23	0.87	0.13	0.97	-	-

\*\* Standard error of horizontal difference between two responses  $\pm 0.316$ .