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Yields of the Field Experiments 1959

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59/R/CF/1 and 59/W/CF/1 Potatoes - Forms and Levels of K

Rothamsted Research

Rothamsted Research (1960) *59/R/CF/1 and 59/W/CF/1 Potatoes - Forms and Levels of K*; Yields Of The Field Experiments 1959, pp 92 - 93 - DOI: <https://doi.org/10.23637/ERADOC-1-179>

59/Cf/1.2

Summary of Results

Total tubers: tons per acre

	Form of K				Mean
	O	G	S	M	
	<u>Rothamsted</u>				
Mean (± 0.430)	7.23	10.75	10.65	10.26	9.72
K: cwt per acre					
1.25 (± 0.608)	-	10.55	9.86	9.12	9.84 (± 0.351)
2.50	-	10.95	11.44	11.40	11.26
Diff. (± 0.859)	-	+0.40	+1.58	+2.28	+1.42 (± 0.496)
N: cwt per acre					
0.75 (± 0.608)	7.33	10.46	11.01	10.47	9.82
1.50	7.12	11.04	10.28	10.05	9.62
Diff. (± 0.859)	-0.21	+0.58	-0.73	-0.42	-0.20 (± 0.430)
	<u>Woburn</u>				
Mean (± 0.380)	6.29	6.69	6.58	6.72	6.57
K: cwt per acre					
1.25 (± 0.538)	-	6.05	6.93	5.34	6.11 (± 0.334)
2.50	-	7.34	6.16	8.10	7.20
Diff. (± 0.818)	-	+1.29	-0.77	+2.76	+1.09 (± 0.472)
N: cwt per acre					
0.75 (± 0.538)	6.07	6.43	6.92	7.28	6.68
1.50	6.50	6.97	6.19	6.16	6.46
Diff. (± 0.818)	+0.43	+0.54	-0.73	-1.12	-0.22 (± 0.409)

Forms of K

- O = No potash
- C = Potassium bi-carbonate, KHCO_3
- S = Potassium sulphate, K_2SO_4
- M = Potassium chloride, KCl .

59/Cf/2.1

POTATOES

Concentrated fertilizers - Rothamsted (R) Great Field I and Woburn (W)
Lansome Field 1959.

Design (each field): 4 randomized blocks of 5 plots each.

Area of each plot (each field): 0.0212 acres. Area harvested:
0.0141 acres.

Treatments: None and all combinations of:-

Types of fertilizer: A mixture of sulphate of ammonia, superphosphate
and muriate of potash (A); concentrated compound fertilizer
(15% N, 10% P₂O₅, 20% K₂O) (B).

Rates of application: cwt per acre

- (1) 0.75 N; 0.5 P₂O₅; 1.0 K₂O.
(2) 1.5 N; 1.0 P₂O₅; 2.0 K₂O.

Basal dressing: None.

Cultivations, etc.:

Great Field I (R): Ploughed: Oct 23, 1958. Ridged: Apr 14, 1959.
Fertilizers applied in the furrows, potatoes hand planted: Apr 20.
Earthed up: June 30. Sprayed with copper fungicide at 5 lb in
40 gallons per acre: Aug 15. Sprayed with sulphuric acid, 15%
BOV in 100 gallons per acre: Sept 21. Lifted: Oct 8. Variety:
Ulster Supreme. Previous crop: Wheat.

Lansome Field (W): Sprayed with dalapon at 10 lb in 40 gallons per
acre: Nov 8, 1958, and at 5 lb in 40 gallons per acre: Nov 22.
Ploughed: Jan 23, 1959. Ridged, fertilizers applied in the
furrows, potatoes hand planted: Apr 9. Earthed up: June 22.
Sprayed with zineb at 2 lb and demeton methyl at 12 fluid oz
(50% active ingredients) in 40 gallons per acre: Aug 15. Haulm
destroyed mechanically: Sept 22. Lifted: Sept 29. Variety:
Majestic. Previous crop: Barley.

Note: At Woburn the plant was poor and irregular. There was no
evidence of association between yield and plant number and the yields
were not adjusted.

Standard errors per plot. Total tubers:

Great Field I (R): 0.839 tons per acre or 7.2% (12 d.f.)
Lansome Field (W): 0.683 tons per acre or 10.5% (12 d.f.)