

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1960

[Full Table of Content](#)



60/R/CF/2 and 60/W/CF/2 Potatoes - Forms and Levels of K

Rothamsted Research

Rothamsted Research (1961) *60/R/CF/2 and 60/W/CF/2 Potatoes - Forms and Levels of K* ; Yields Of The Field Experiments 1960, pp 121 - 123 - DOI: <https://doi.org/10.23637/ERADOC-1-180>

60/Cf/2.1

POTATOES

Forms and levels of K - Rothamsted (R) Sawyers I and Woburn (W)
Lansome Field 1960.

Design (each field): 4 blocks of 8 plots each with certain high order
interactions partially confounded with block differences.

Area of each plot: 0.0141 acres. Area harvested: (R) - 0.0071,
(W) - 0.0141 acres.

Treatments: No potash (2 plots per block) and all combinations of:-

Forms of K: Potassium bi-carbonate, KHCO_3 (C);
Potassium sulphate, K_2SO_4 (S);
Potassium chloride, KCl (M);

Levels of K: 1.25; 2.50 cwt K_2O per acre.

All the above in combination with:-

Levels of N: 0.75; 1.50 cwt N per acre as sulphate of ammonia.

Basal dressing (each field): 0.75 cwt P_2O_5 per acre as triple
superphosphate.

Cultivations, etc.:

Sawyers I (R): Ploughed: Nov 28, 1959. Ridged, fertilisers
applied: Apr 25, 1960. Potatoes hand planted: Apr 26.
Earthed up: June 21. Sprayed with zineb at 2 lb in 40 gallons
per acre: July 14. Sprayed with copper fungicide at 3 lb in
40 gallons per acre: July 25, and at 5 lb in 40 gallons per
acre: Aug 15. Sprayed with undiluted BOV at 15 gallons per
acre: Aug 31. Haulm destroyed mechanically: Sept 22.
Lifted: Oct 7. Variety: King Edward. Previous crop: Fallow.
Lansome Field (W): Ploughed twice: Sept 8, 1959 and Jan 7, 1960.
Ridged: Apr 28. Fertilisers applied, potatoes hand planted:
Apr 29. Earthed up: June 14. Sprayed with copper fungicide
at 5 lb in 40 gallons per acre: July 23 and Aug 8. Sprayed
with undiluted BOV at 15 gallons per acre: Sept 8. Lifted:
Sept 28. Variety: Majestic. Previous crop: Spring wheat.

Standard errors per plot. Total tubers tons per acre:

Sawyers I (R): 1.279 tons per acre or 9.5% (15 d.f.)

Lansome Field (W): 1.547 tons per acre or 10.5% (15 d.f.)

60/Cf/2.2

Summary of ResultsTotal tubers: tons per acre

	Form of K				
	O	C	S	M	Mean
<u>Sawyers I (R)</u>					
Mean (± 0.452)	10.96	14.09	14.11	14.60	13.44*
K ₂ O: cwt per acre					
1.25 (± 0.640)	-	13.66	13.74	15.22	14.21 (± 0.369)
2.50 (± 0.640)	-	14.52	14.48	13.99	14.33 (± 0.369)
Diff. (± 0.904)	-	+0.86	+0.74	-1.23	+0.12 (± 0.522)
N: cwt per acre					
0.75 (± 0.640)	10.21	13.32	13.29	14.71	12.88
1.50 (± 0.640)	11.70	14.86	14.92	14.50	13.99
Diff. (± 0.904)	+1.49	+1.54	+1.63	-0.21	+1.11 (± 0.452)

Lansome Field (W)

Mean (± 0.547)	16.00	14.64	14.52	14.04	14.80*
K ₂ O: cwt per acre					
1.25 (± 0.774)	-	15.12	14.84	14.66	14.87 (± 0.447)
2.50 (± 0.774)	-	14.15	14.21	13.42	13.93 (± 0.447)
Diff. (± 1.094)	-	-0.97	-0.63	-1.24	-0.94 (± 0.632)
N: cwt per acre					
0.75 (± 0.774)	15.88	13.66	13.70	13.29	14.13
1.50 (± 0.774)	16.12	15.62	15.35	14.80	15.47
Diff. (± 1.094)	+0.24	+1.96	+1.65	+1.51	+1.34 (± 0.547)

*General mean

Forms of K

O = No potash

C = Potassium bi-carbonate, KHCO₃S = Potassium sulphate, K₂SO₄

M = Potassium chloride, KCl

60/Cf/2.3

<u>Percentage ware</u>					
	Form of K				Mean
	O	C	S	M	
<u>Sawyers I (R)</u>					
Mean	87.8	93.4	93.6	93.1	93.4
K ₂ O: cwt per acre					
1.25	-	92.5	92.8	93.8	93.0
2.50	-	94.4	94.4	92.4	93.7
Diff.	-	+1.9	+1.6	-1.4	+0.7
N: cwt per acre					
0.75	84.8	92.8	93.7	93.0	91.1
1.50	90.8	94.0	93.5	93.2	92.9
Diff.	+6.0	+1.2	-0.2	+0.2	+1.8
<u>Lansome Field (W)</u>					
Mean	96.2	94.8	95.4	95.6	95.3
K ₂ O: cwt per acre					
1.25	-	95.6	95.3	95.8	95.6
2.50	-	94.0	95.5	95.4	95.0
Diff.	-	-1.6	+0.2	-0.4	-0.6
N: cwt per acre					
0.75	96.0	94.2	94.7	95.1	95.0
1.50	96.4	95.4	96.0	96.1	96.0
Diff.	+0.4	+1.2	+1.3	+1.0	+1.0

Riddle size:

Sawyers I (R): $1\frac{1}{2}$ ";Lansome Field (W): $1\frac{5}{8}$ ".