

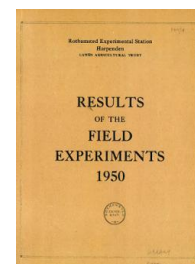
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50/CE/3 Potatoes - Method of Planting - Rothamsted and Woburn

Rothamsted Research

Rothamsted Research (1951) *50/CE/3 Potatoes - Method of Planting - Rothamsted and Woburn* ;
Yields Of The Field Experiments 1950, pp 77 - 78 - DOI: <https://doi.org/10.23637/ERADOC-1-185>

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POTATOES

Methods of planting and fertilizers - Rothamsted Great Knott I and Woburn Butt Close 1950

System of replication: 4 × 2 × 2 design in 4 randomized blocks of 8 plots each, a high order interaction being confounded with block differences, plus 2 extra plots per block without fertilizer.

Area of each plot: 0.028 acre. Area harvested: 0.014 acre

Treatments: All combinations of

Compound granular fertilizer (7% N, 7% P₂O₅, 10.5% K₂O): 8, 16 cwt per acre.

Method of placement: A - Broadcast fertilizer on the flat, ridge, plant by dropper into ridges; B - Broadcast on the flat, plant by dropper on the flat, ridge; C - Ridge, broadcast on ridges, plant by hand in furrows, split back ridges (standard method); D - Ridge, broadcast on ridges, split back ridges, plant by dropper into ridge.

Depth of planting: Shallow; Deep.

The two plots per block receiving no fertilizer were planted by Method C, one at each depth.

Basal manuring: Rothamsted - 10-12 tons dung and compost per acre.
Woburn - None

Cultivations, etc.:

Rothamsted

Ploughed: Sept 8-12. Dung applied: Feb 6. Ploughed: various days: Feb 6-27. Cultivated: Mar 28-29. Disced: Mar 30. Fertilizers applied A and B plot: Apr 13. Potatoes planted and covered in on B plots: Apr 4. Ridged A, C and D plots: Apr 17. Fertilizers applied C and D plots, potatoes planted A, C and D plots and rolled ridges: Apr 21. Harrowed ridges: May 17. Grubbed: June 2. Earthed up: June 30. Weeded: various days, July 10-31. Sprayed with Perenox: July 31. Sprayed with Coppesan: Aug 21. Sprayed with 15% B.O.V. to kill off haulm: Sept 27. Lifted: Oct 12. Variety: Majestic. Previous crop: Linseed.

Woburn

Ploughed: Sept 7-9, Oct 25-27 and Jan 2-6. Springtined: Mar 31. Fertilizers applied, potatoes planted and covered in, all plots: May 1-2. Rolled ridges: May 15-17. Harrowed and weeded: May 30-31. Grubbed: June 9-16. Ridged: June 26-27. Sprayed with Perenox: Aug 4. Sprayed with Coppesan: Aug 8. Weeded: Sept 4. Sprayed with 15% B.O.V. to kill off haulm: Oct 2-3. Lifted: Oct 12. Variety: Majestic. Previous crop: Wheat.

Standard errors per plot:

Total tubers, Rothamsted: 0.840 tons per acre or 5.6% (19 d.f.)
 Woburn: 0.851 tons per acre or 5.8% (19 d.f.)

Summary of Results

Placement of fertilizers	On Flat		No Fertilizer	On Ridges		Mean
	In ridges A	On flat B	In furrows C	In furrows C	In ridges D	
Total tubers: tons per acre. Rothamsted						
Mean (± 0.297)	15.33	15.77	15.10	14.10	15.12	15.09
Fertilizer cwt per acre						
8 (± 0.420)	16.06	16.30		14.95	16.16	15.87
16 (± 0.420)	14.60	15.25		13.26	14.09	14.30
Difference (± 0.594)	-1.46	-1.05		-1.69	-2.07	-1.57 (± 0.297)
Planting						
Shallow (± 0.420)	14.78	15.88	14.79	13.61	15.19	14.85
Deep	15.88	15.67	15.40	14.60	15.06	15.32
Difference (± 0.594)	1.10	-0.21	0.61	0.99	-0.13	0.47 (± 0.266)
Total tubers: tons per acre. Woburn						
Mean (± 0.301)	14.55	15.29	7.82	14.35	14.92	13.38
Fertilizer cwt per acre						
8 (± 0.426)	13.42	14.34		13.98	13.77	13.88
16 (± 0.426)	15.68	16.24		14.71	16.07	15.67
Difference (± 0.602)	2.26	1.90		0.73	2.30	1.79 (± 0.301)
Planting						
Shallow (± 0.426)	14.56	14.52	8.19	14.46	14.95	13.34
Deep	14.53	16.06	7.45	14.24	14.89	13.43
Difference (± 0.602)	-0.03	1.54	-0.74	-0.22	-0.06	0.09 (± 0.269)
Percentage Ware. Woburn						
Mean	92.4	92.8	92.9	94.0	92.7	93.0
Fertilizer cwt per acre						
8	91.9	92.2		93.4	92.0	92.4
16	93.0	93.4		94.6	93.4	93.6
Difference	1.1	1.2		1.2	1.4	1.2
Planting						
Shallow	91.9	93.0	92.0	93.2	92.3	92.5
Deep	93.0	92.7	93.8	94.8	93.0	93.5
Difference	1.1	-0.3	1.8	1.6	-0.7	1.0