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Yields of the Field Experiments 1963

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63/R/RP501/DD/4 and 63/W/WP301/DD/4 Potatoes - Control of Weeds

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63/Dd/4.1

POTATOES

(RP 501, WP 301)

Control of weeds by herbicide sprays - Rothamsted (R) Highfield IV and Woburn (W) Butt Furlong 1963.

Design: 4 randomised blocks of 6 plots each, plots on Highfield IV (R) being split for O v N.

Area of each plot (acres).	Area harvested (acres).
Highfield IV (R): 0.0258	0.0074
Butt Furlong (W): 0.0145	0.0096

Treatments (in lb active material in 40 gallons per acre):-

None (until weed counts were made)	(O)
Mechanical cultivations	(M)
Paraquat: 0.75 lb	(P)
Paraquat: 0.75 lb	
+ prometryne: 2 lb	(PrP)
+ simazine: 0.50 lb	(SP)
+ trietazine: 1 lb	(TP)

Plots on Highfield IV (R) were split for O v 0.6 cwt N per acre as 'Nitro-Chalk' in addition to basal dressing.

Basal dressing per acre: Highfield IV (R): 6 cwt compound fertiliser (17% N, 11% P₂O₅, 22% K₂O), 6 tons dung. Butt Furlong (W): 8 cwt compound fertiliser (17% N, 11% P₂O₅, 22% K₂O).

Cultivations, etc.:

Highfield IV (R): Dung applied: Mar 8, 1963. Ploughed: Mar 22. Basal compound applied at 4 cwt per acre, all plots rotary cultivated: Apr 30. Spring-tine cultivated: May 4. Basal compound applied at 2 cwt per acre: May 7. All plots rotary cultivated, potatoes planted: May 8. 'Nitro-Chalk' applied: May 10. Ridges rolled: May 13. M plots chain harrowed: May 30. Herbicide sprays applied: June 4. M plots grubbed: June 6. M plots weeded and then grubbed: June 15. M and O plots grubbed: July 2. M and O plots earthed up: July 4. Sprayed with maneb at 0.8 lb in 20 gallons per acre: July 9, and again at 1.2 lb in 20 gallons per acre: July 29. Sprayed with copper fungicide at 2.3 lb copper plus 0.35 pints menazon in 20 gallons per acre: Aug 14. Sprayed with maneb at 1.2 lb in 20 gallons per acre: Sept 5. Sprayed with undiluted BCV at 16 gallons per acre: Sept 12. Lifted: Oct 23. Variety: King Edward. Previous crops: Barley undersown with ryegrass 1961, barley 1962.

63/Dd/4.2

Butt Furlong (W): Ploughed twice: Nov 1, 1962 and Mar 8, 1963.
Basal dressing applied: Apr 23. Rotary cultivated: Apr 25.
Potatoes planted: Apr 26. Ridges rolled: Apr 27. M plots
chain harrowed: May 13. Herbicide sprays applied: May 24.
M plots grubbed: May 25, and earthed up: June 17. O plots
hand-weeded, grubbed and earthed up: June 22. Sprayed with
copper fungicide at 2.3 lb copper in 20 gallons per acre:
July 25, and again at 2.3 lb copper plus demeton methyl at
4 fluid oz in 30 gallons per acre: Aug 23. Sprayed with
undiluted BCV at 16 gallons per acre: Sept 13. Lifted: Oct 9.
Variety: Majestic. Previous crops: Sugar beet 1961, barley
1962.

Note: Plots receiving treatment O were included mainly for weed
counts and have been omitted from the analysis of variance.

Standard errors per plot. Total tubers:

Highfield IV (R): Whole plot: 0.788 tons per acre or 8.2% (12 d.f.)
Sub plot: 0.835 tons per acre or 8.6% (15 d.f.)
Butt Furlong (W): 1.746 tons per acre or 16.3% (12 d.f.)

63/Dd/4.3

Summary of Results

N: cwt per acre including basal	Treatments					Mean	O
	M	P	PrP	SP	TP		

Total tubers: tons per acre

Highfield IV (R)

	(1) and (2)						
1.0	9.13	10.34	9.59	9.40	9.45	9.58	9.76
1.6	10.15	10.03	9.12	8.91	10.50	9.74	10.40
Mean (± 0.394)	9.64	10.18	9.35	9.15	9.97	9.65	10.08
Diff (± 0.590)	+1.02	-0.31	-0.47	-0.49	+1.05	+0.16 (± 0.264)	+0.64

Butt Furlong (W)

Mean (± 0.873)	10.54	11.40	10.54	9.60	11.64	10.74	9.81
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Percentage ware (1.5 inch riddle)

Highfield IV (R)

1.0	90.8	89.8	88.7	91.0	90.3	90.1	90.0
1.6	91.3	91.0	91.4	91.6	92.1	91.5	91.1
Mean	91.0	90.4	90.1	91.3	91.2	90.7	90.5
Diff	+0.5	+1.2	+2.7	+0.6	+1.8	+1.4	+1.1

Butt Furlong (W)

Mean	58.0	66.0	70.2	65.5	70.4	66.0	66.4
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(1) ± 0.418 (2) ± 0.491

- (1) For use in vertical and interaction comparisons
 (2) For use in horizontal and diagonal comparisons

Treatments (in lb active material in 40 gallons per acre)

- O = None (until weed counts were made)
 M = Mechanical cultivations
 P = Paraquat: 0.75 lb
 PrP = Paraquat: 0.75 lb + prometryne: 2 lb
 SP = Paraquat: 0.75 lb + simazine: 0.50 lb
 TP = Paraquat: 0.75 lb + trietazine: 1 lb