

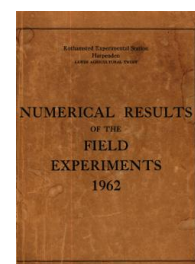
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62/R/DD/1 and 62/W/DD/1 Potatoes - Control of Weeds

Rothamsted Research

Rothamsted Research (1963) *62/R/DD/1 and 62/W/DD/1 Potatoes - Control of Weeds* ; Yields Of The Field Experiments 1962, pp 134 - 136 - DOI: <https://doi.org/10.23637/ERADOC-1-164>

62/Da/1.1

POTATOES

Control of weeds by residual herbicides - Rothamsted (R) Great Knott I and Woburn (W) Great Hill 1962.

Design: 4 randomised blocks of 10 plots each, plots on Great Knott I (R) being split for 0 v final earthing up.

Area of each plot (acres): 0.0216 Area harvested:
R - 0.0072
W - 0.0096

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

None	(O)
Mechanical cultivations	(M)
2,6-DBN: 1, 2 lb	(DB1; DB2)
Dinoseb: 4, 6 lb	(DS1; DS2)
Prometryne: $1\frac{3}{4}$; $2\frac{1}{2}$ lb	(Ta1; Ta2)
Trietazine: $1\frac{1}{2}$ lb	(Te)
Trietazine: $1\frac{1}{2}$ lb + paraquat: $\frac{3}{4}$ lb **	(TeP)

In addition plots on Great Knott I (R) were split for 0 v final earthing up (E).

* $1\frac{1}{4}$ lb on Great Hill (W)

** paraquat spray repeated on Great Hill (W).

Note: On Great Knott I (R) weeds and haulm on 0, DB1 and DB2 plots were mown on July 31, and the yields are omitted from the analysis.

Basal dressing: 8 cwt compound fertiliser (17% N, 11% P₂O₅, 22% K₂O).

Cultivations, etc.:

Great Knott I (R): Ploughed: Dec 26, 1961. Rotary cultivated, basal dressing applied: Apr 16, 1962. Potatoes planted: Apr 26. Ridges rolled: Apr 28. DB and Te sprays applied: May 9. M plots chain harrowed: May 11. M plots grubbed: May 14. DS, Ta and TeP sprays applied: May 30. M plots re-ridged: June 6. M plots grubbed: June 18. E sub-plots grubbed and earthed up: July 5. Sprayed with maneb at $1\frac{1}{2}$ lb active material in 18 gallons per acre: July 18. Weeds and haulm mown on 0 and DB plots: July 31. Sprayed with copper fungicide at 5 lb in 20 gallons per acre: Aug 9 and again at 5 lb in 40 gallons per acre: Aug 24. Sprayed with undiluted BOV at 18 gallons per acre: Sept 18. Lifted: Oct 8. Variety: King Edward. Previous crops: Winter wheat 1960, barley 1961.

62/Da/1.2

Great Hill (W): Subsoiled: Oct 26, 1961. Ploughed: Oct 31.
Basal dressing applied: Apr 7, 1962. Potatoes planted: Apr 9.
Ridges rolled: Apr 12. DB, Te and TeP sprays applied: Apr 19.
Ta, DS sprays applied and second paraquat spray of $\frac{3}{4}$ lb in 40
gallons per acre applied to TeP plots: May 16. Cultivations to
M plots: chain harrowed - May 1; harrowed with weeder - May 5;
grubbed - May 14; harrowed - May 26; re-ridged - May 24;
grubbed - May 31 and June 15; earthed up - June 21. Sprayed
with copper oxychloride at 2.3 lb copper in 40 gallons per acre:
July 24. Tops and weeds burnt off with paraquat at 0.9 lb
in 40 gallons per acre: Aug 9. Haulm destroyed mechanically:
Aug 22. Lifted: Sept 5. Variety: Majestic. Previous crops:
Potatoes 1960, barley 1961.

Note: At Woburn dry weights of weeds were estimated on plots of
certain treatments.

Standard errors per plot. Total tubers:
Great Knott I (R): Whole plot: 1.414 tons per acre or 10.4% (18 d.f.)
Sub plot: 1.311 tons per acre or 9.6% (21 d.f.)
Great Hill (W): 1.086 tons per acre or 18.1% (27 d.f.)

62/Da/1.3

Summary of Results

Final cultivation	Treatments										Mean
	0	M	DB1	DB2	DS1	DS2	Ta1	Ta2	Te	TeP	
	<u>Total tubers: tons per acre</u>										
	<u>Great Knott I (R)</u>										
	(+0.655) ¹ (+0.845) ²										
None	+	14.66		12.88	14.62	12.34	14.40	12.37	13.77	13.57	
Earthed up		14.22		13.83	14.48	12.75	14.18	12.46	13.44	13.62	
Mean (+0.706)		14.44		13.35	14.55	12.54	14.29	12.42	13.60	13.59	
Diff. (+0.927)		-0.44		+0.95	-0.14	+0.41	-0.22	+0.09	-0.33	+0.05	
										(±0.350)	
Mean (+0.543)	2.21	7.49	5.75	6.36	6.32	6.50	4.91	5.71	5.79	8.98	6.00
	<u>Percentage ware (1 1/2" riddle)</u>										
	<u>Great Knott I (R)</u>										
None	+	92.9		92.9	94.7	93.4	94.4	93.3	92.9	93.5	
Earthed up		94.2		94.6	94.0	92.6	93.9	92.7	92.9	93.5	
Mean		93.6		93.8	94.4	93.0	94.1	93.0	92.9	93.5	
Diff.		+1.3		+1.7	-0.7	-0.8	-0.5	-0.6	0.0	0.0	
	<u>Great Hill (W)</u>										

Not recorded * 1/4 lb on Great Hill (W)
 (1) for use in vertical and interaction comparisons ** 1/4 paraquat spray repeated on Great Hill (W)
 (2) for use in horizontal and diagonal comparisons

Treatments
 0 = None
 M = Mechanical cultivations
 DB1; DB2 = 2,6-DBN: 1, 2 lb
 DS1; DS2 = Dinoseb: 4, 6 lb
 Ta1; Ta2 = Prometryne: 1 1/4; 2 1/2 lb
 Te = Trietazine: 1 1/2 lb
 TeP = Trietazine: 1 1/2 lb + paraquat: 2/4 lb
 + crop failed