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Yields of the Field Experiments 1956

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56/R/CE/2 Potatoes - Virus Spread (Insecticide Spray)

Rothamsted Research

Rothamsted Research (1957) *56/R/CE/2 Potatoes - Virus Spread (Insecticide Spray)* ; Yields Of The Field Experiments 1956, pp 91 - 92 - DOI: <https://doi.org/10.23637/ERADOC-1-176>

56/Ce/2.1

POTATOES

Control of virus spread by insecticide - Great Knott III 1956.

Design: 5 × 5 Latin square.

Area of each plot: 0.0602 acres. Area harvested: 0.0120 acres.

Treatments: No insecticide; high; low volume spraying of DDT emulsion, 2 lb active ingredient per acre per application.

High volume: 80 gallons per acre. 4; 6 times applied during season.

Low volume: 25 gallons per acre. 4; 6 times applied during season.

Infector plants: 6 leaf roll and 6 virus Y infected plants planted in each plot.

Note: The tractor used for spraying was driven over all plots on each occasion always passing over the same rows. Yields were taken from the undamaged rows and an estimate of the loss of the yield due to tractor damage was made from an area of 0.0602 acres.

Basal dressing per acre: 8 tons dung; 10½ cwt compound granular fertilizer (9% N, 3% P₂O₅, 15% K₂O).

Cultivations, etc.: Dung applied: Sept 24, 1955. Ploughed: Sept 26. Basal fertilizers applied on the flat: Apr 4, 1956. Potatoes machine planted: Apr 7 - 10. Earthed up: June 26. Sprayed with copper fungicide, 3 lb in 80 gallons per acre: Aug 8. Sprayed with sulphuric acid, 20% BOV: Sept 13. Lifted: Oct 23 - 24. Variety: Majestic. Previous crop: Wheat.

Dates of DDT sprayings (both high and low volume):

4 times: June 14; June 26; July 12; Aug 8.

6 times: May 30 and Aug 29 in addition to above dates.

Standard error per plot:

Total tubers: 1.25 tons per acre or 8.9% (12 d.f.)

Note: Aphid counts were made and tuber samples taken to assess virus spread.

56/Ce/2.2

Summary of Results

		Number of sprayings with DDT					Mean
		None	High volume 4	6	Low volume 4	6	
Total tubers: tons per acre							
Mean	(±0.559)	13.35	13.97	14.62	14.41	13.63	14.00
Increase	(±0.791)		+0.62	+1.27	+1.06	+0.28	
Percentage ware (1½" riddle)							
Mean		76.2	80.4	75.1	79.1	78.8	77.9
Increase			+4.2	-1.1	+2.9	+2.6	

Estimated loss of yield in damaged rows due to

6 passages of the tractor: 6.4%

Estimated loss of yield in whole crop due to

6 passages of the tractor along 4 rows out of 8: 3.2%