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Yields of the Field Experiments 1958

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58/R/CF/2 Potatoes - Control of Blight (Copper Spray)

Rothamsted Research

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58/Cf/2.1

POTATOES

The control of blight (Phytophthora infestans) by copper fungicide spray - Great Knott II 1958.

Design: 8 randomized blocks of 2 plots each.

Area of each plot: 0.1273 acres. Area harvested: Whole plots - 0.0141 acres; sub plots - 0.0071 acres.

Treatments.

Whole plots: No spray; copper fungicide sprayed twice.

Sub plots: On sprayed plots only, 2 rows damaged by 2 passages of the tractor during copper spray operations were compared with 2 undamaged rows.

Basal dressing: 10 cwt compound fertilizer (10% N, 10% P₂O₅, 18% K₂O) per acre.

Cultivations, etc.: Ploughed: Oct 2 - 19, 1957. Sprayed with TCA at 20 lb in 80 gallons per acre: Jan 14, 1958. Basal fertilizer applied: Apr 21. Potatoes machine planted: Apr 23. Earthed up: July 4. Fungicide treatment, 5 lb in 40 gallons per acre, applied twice: July 16 and Aug 11. Sprayed with sulphuric acid, 20% BOV, 100 gallons per acre: Sept 17. Lifted: Oct 24. Variety: Majestic. Previous crop: Spring wheat.

Standard errors per plot. Total tubers:

Whole plots: 0.693 tons per acre or 6.0% (7 d.f.)

Sub plots (sprayed plots only): 0.611 tons per acre or 5.1% (7 d.f.)

Note. Estimates were made of the rate of bulking, destruction of foliage by blight and amount of blight on the tubers. 2 rows of King Edward were planted on each plot for an assessment of blight infected tubers.

58/Cf/2.2

Summary of Results

None	Spray Copper fungicide	Mean	Difference
Total tubers: tons per acre			
11.04	12.08	11.56	+1.04 (± 0.347)
Percentage ware ($1\frac{1}{2}$ " riddle)			
91.2	91.8	91.5	+0.6

Sprayed plots only

Undamaged	Damaged	Difference
Total tubers: tons per acre		
12.23	11.93	-0.30 (± 0.305)
Percentage ware ($1\frac{1}{2}$ " riddle)		
92.2	91.5	-0.7