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Yields of the Field Experiments 1962

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62/R/DD/2 Potatoes - Time of Burning Off Haulm

Rothamsted Research

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62/Da/2.1

POTATOES

Time of burning off haulm - Great Knott III 1962.

Design: 4 randomised blocks of 10 plots each.

Area of each plot: 0.0565 acres. Area harvested: 0.0141 acres.

Treatments. All combinations of:-

Fungicide sprays: None (0); sprayed on 3 occasions (the first with maneb, the second and third with commercial copper oxychloride wettable powder) (Cu).

Burning off haulm: None (0); haulm burnt off when 1 - 5% (A); when 10 - 20% (B); when 50% (C) blighted on Cu plots.

In addition two plots per block (CuL C; MC) were sprayed as follows:-

CuL C: As "Cu" but all sprays applied later (1st and 2nd on dates of 2nd and 3rd sprayings of "Cu" plots).

MC: As "Cu", but all sprayings with maneb^{*}; both were burnt off at date C.

* At $1\frac{1}{2}$ lb active ingredient in 18 gallons per acre.

** At 2.3 lb Cu in 20 gallons per acre.

*** With undiluted BOV - A at 15 gallons, B and C at 18 gallons per acre each.

Note: In fact the haulm was burnt off when 1% (A); when 7% (B); and when 55% (C) blighted on Cu plots.

Basal dressing per acre: 20 tons of dung; 8 cwt compound fertiliser (10% N, 10% P_2O_5 , 18% K_2O).

Cultivations, etc.: Patches sprayed with dalapon at 8 lb in 40 gallons per acre: Sept 8, 1961 and again at 4 lb in 40 gallons per acre: Sept 27. Dung applied and ploughed in: Nov 21. Basal fertiliser applied, plots rotary cultivated, potatoes machine planted: Apr 16, 1962. Earthed up: July 3. Cu and MC plots sprayed with maneb: July 17. Cu plots sprayed with copper oxychloride, CuL C and MC plots with maneb: Aug 9. Cu and CuL C plots sprayed with copper oxychloride, MC plots with maneb: Aug 29. A plots sprayed with BOV: Sept 7. CuL C plots sprayed with copper oxychloride, B plots with BOV: Sept 14. C plots sprayed with BOV: Sept 25. Haulm destroyed mechanically: Oct 9. Lifted: Oct 18. Variety: King Edward. Previous crops: Winter wheat 1960, spring beans 1961.

Note: Periodic samples were taken for the weight of tops and tubers, and an assessment of blight on foliage and in tubers was made.

Standard error per plot.

Total tubers: 0.778 tons per acre or 5.1% (27 d.f.)

62/Da/2.2

Summary of Results

Date of burning off

Spray	O	A	B	C	Mean
	<u>Total tubers: tons per acre</u>				
	(±0.389)				(±0.194)
O	14.70	13.85	13.87	14.74	14.29
Cu	17.09	14.34	15.78	16.02	15.81
Mean (±0.275)	15.90	14.10	14.82	15.38	15.05 (±0.138)
	CuL C		MC		
	16.43		16.85		
	(±0.389)				

General mean: 15.37

Percentage ware ($1\frac{1}{2}$ " riddle)

O	92.9	92.7	92.9	92.5	92.8
Cu	94.2	92.6	93.9	94.1	93.7
Mean	93.6	92.6	93.4	93.3	93.2
	CuL C		MC		
	93.7		94.3		

General mean: 93.4

Date of burning off

O = None

A = Haulm burnt off when 1 - 5%

B = When 10 - 20%

C = Blighted on Cu plots.

Sprays

O = None

Cu = Sprayed on 3 occasions (the first with maneb*, the second and third with commercial copper oxychloride wettable powder**)

CuL C = As "Cu" but all sprays applied later (1st and 2nd on dates of 2nd and 3rd sprayings of "Cu" plots).

MC = As "Cu", but all sprayings with maneb; both were burnt off at date C.

* At $1\frac{1}{2}$ lb active ingredient in 18 gallons per acre.

** At 2.3 lb Cu in 20 gallons per acre.

*** With undiluted BOV - A at 15 gallons, B and C at 18 gallons per acre each.