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# Numerical Results of the Field Experiments 1968



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# 68/DE/3 Effects of Stem Canker (Rhizoctonia Solani) - Potatoes

### **Rothamsted Research**

Rothamsted Research (1970) 68/DE/3 Effects of Stem Canker (Rhizoctonia Solani) - Potatoes; Numerical Results Of The Field Experiments 1968, pp 341 - 342 - **DOI**:

https://doi.org/10.23637/ERADOC-1-58

68/De/3.1

#### POTATOES

## (RP 3/1)

Effects of stem-canker (Rhizoctonia solani) - Long Hoos I and II, 1968.

Design: 6 blocks of 2 plots split into 4.

Area of each plot: 0.0033. Area harvested: 0.0033.

Treatments: All combinations of:-

Whole plots: 1. Varieties: King Edward (KE), Majestic (M).

Sub-plots: 2. Levels of seed infection (Rhizoctonia solani):
Clean (A), moderately infected (B), severely
infected (C), unselected stock (D). B and C
were assessed from sclerotia on skin.

Basal applications: 10 cwt (13:13:20) Weedkiller: Paraquat at 0.38 lb ion plus linuron at 0.75 lb in 36 gals. Fungicide: Mancozeb at 1.2 lb in 37 gals on 3 occasions: Insecticide: Demeton-s-methyl at 3.5 oz applied with mancozeb on one occasion.

Cultivations, etc.: Deep-tine cultivated twice: 2 Oct,1967.
Ploughed: 4 - 23 Jan, 1968. Basal NPK applied: 14 Mar.
Plots rotary cultivated, potatoes machine planted: 11 Apr.
Weedkiller applied: 4 May. Grubbed and rotary ridged:
17 Jun. Mancozeb applied: 4 July. Mancozeb and demeton-smethyl applied: 19 July. Mancozeb applied: 5 Aug. Sprayed
with undiluted BOV at 15 gals: 31 Aug. Lifted: 14 Oct.
Previous crops: Lucerne and cocksfoot 1966, fallow 1967.

NOTE: Emergence counts were made on 20 May and 13 June. A count of the number of plants infected with Corticium solani (the perfect stage of Rhizoctonia solani) was made on 22 July. After burning off and prior to lifting, counts were made of stem and plant number.

Standard errors per plot. Total tubers: Whole plot: 0.617 or 3.3% (5 d.f.) Sub plot: 1.247 or 6.7% (30 d.f.)

68/De/3.2

#### SUMMARY OF RESULTS

	A	В	C	D	Mean
		TOTAL	TUBERS	ilye sigh	E was addition.
		(1) a	(±0.252)		
KE	21.32	19.19	19.92	21.09	20.38
М	16.70	17.00	16.48	16.73	16.73
Mean (±0.360)	19.01	18.10	18.20	18.91	18.55

- (1) ±0.508 for use in vertical and diagonal comparisons
- (2) ±0.509 for use in horizontal and interaction comparisons

G.	WARE
10	MHL

KE	95.8	96.1	96.0	95.6	95.9
M	98.0	97.5	97.4	98.3	97.8
Mean	96.9	96.8	96.7	97.0	96.8