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89/R/P/13 Fungicides With the Seed - Potatoes

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89/R/P/13

POTATOES

FUNGICIDES WITH THE SEED

Object: To study the effects of fungicides applied with the seed at planting on the yield and tuber diseases of potatoes - Great Harpenden II.

Sponsors: R. Moffitt, G.A. Hide.

Design: 4 randomised blocks of 8 plots.

Whole plot dimensions: 1.5 x 6.10.

Treatments: All combinations of:-

1. **VARIETY** Varieties:

DESIREE
ESTIMA

2. **SOILFUNG** Fungicides, per t of seed, applied in the ridge at planting:

NONE	None
THIA+IMA	Thiabendazole at 30 g plus imazalil at 10 g
TOLC MET	Tolclofos methyl at 250 g

plus two extra treatments with fungicides, applied to the seed of Estima only, before planting:

SD FN ES

THIA+IMA	Thiabendazole at 30 g plus imazalil at 10 g per t of seed
TOLC MET	Tolclofos methyl at 125 g per t of seed

NOTES: (1) SOILFUNG applications were made with a powder applicator placing the fungicide alongside the potatoes at planting.
(2) SD FN ES treatments were applied to tubers by electrostatic sprayer in 0.44 l of water per tonne of seed on 10 Apr, 1989.
(3) Irrigation was applied on 14 June (12mm), 15 June (12mm), 22 June (25mm), 29 June (25mm).

Basal applications: Manures: (0:18:36) at 920 kg. FYM at 60 t. (13:13:20) at 1510 kg. Weedkiller: Linuron at 1.6 kg in 400 l. Fungicides: Mancozeb at 1.4 kg in 200 l on three occasions and at 1.0 kg in 200 l on a fourth occasion. Fentin hydroxide at 0.27 kg in 260 l.

Cultivations, etc.:- PK applied: 27 Sept, 1988. FYM applied: 23 Nov - 7 Dec. Ploughed: 12 Dec. NPK applied: 31 Mar, 1989. Rotary harrowed, potatoes planted: 3 May. Ridged: 24 May. Linuron applied: 28 May. Mancozeb applied: 3 July, 17 July, 28 July, 14 Aug. Fentin hydroxide applied: 30 Aug. Haulm mechanically destroyed: 18 Sept. Lifted: 13 Oct. Previous crops: W. barley 1987 and 1988.

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NOTE: Tubers were examined at harvest for blemishing diseases and some were stored to observe disease development.

TOTAL TUBERS TONNES/HECTARE

***** Tables of means *****

SOILFUNG VARIETY	NONE	THIA+IMA	TOLC MET	Mean
DESIREE	56.0	56.9	51.8	54.9
ESTIMA	56.4	54.6	52.5	54.5
Mean	56.2	55.8	52.2	54.7
SD FN ES	THIA+IMA	TOLC MET	Mean	
	44.3	46.0	45.2	

GRAND MEAN 52.3

*** Standard errors of differences of means ***

VARIETY	SOILFUNG	VARIETY SOILFUNG & SD FN ES
1.87	2.29	3.24

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	21	4.58	8.8

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

***** Tables of means *****

SOILFUNG VARIETY	NONE	THIA+IMA	TOLC MET	Mean
DESIREE	97.0	96.6	96.8	96.8
ESTIMA	95.9	96.6	96.9	96.5
Mean	96.4	96.6	96.9	96.7
SD FN ES	THIA+IMA	TOLC MET	Mean	
	96.9	96.8	96.9	

GRAND MEAN 96.7

PLOT AREA HARVESTED 0.00091