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80/R/P/6 Potatoes Seed Treatment and Tuber Size

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80/R/P/6

POTATOES

SEED TREATMENT AND TUBER SIZE

Object: To study the effects of seed treatment with thiabendazole and times of boxing on stem numbers, tuber numbers and size and on the yield of potatoes - Sawyers II.

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

Design: 4 randomised blocks of 11 plots.

Whole plot dimensions: 2.84 x 9.53.

Treatments: All combinations of:-

1. FUNGCIDE Fungicide at lifting in 1979:

NONE	None
THIABEND	Thiabendazole at 10 g per tonne of seed

2. BOX TIME Times of boxing:

NONE	Seed not boxed
LIFTING	At lifting on 14 September 1979
DECEMBER	17 December
APRIL	8 April

plus three extra plots:

EXTRA

TD BD	Seed treated with thiabendazole at boxing in December
TA BA	" " " " " " " April
TP O	" " " " " at planting. Not boxed

NOTE: Thiabendazole was applied by dipping tubers in a 0.1% solution for five minutes.

Basal applications: Manures: Chalk at 7.5 t. (0:20:20) at 1260 kg. FYM at 25 t. Epsom salts at 145 kg mixed with kieserite at 145 kg. (13:13:20) at 1510 kg. Weedkillers: Linuron at 1.1 kg in 250 l. Fungicide: Mancozeb at 1.3 kg in 250 l applied six times, with insecticide on the third and fourth occasions. Insecticide: Pirimicarb at 0.14 kg. Desiccant: BOV at 170 l.

Seed: King Edward.

Cultivations, etc.: - Heavy spring-tine cultivated: 17 Sept, 1979. Chalk applied: 9 Oct. Subsoiled with tines 160 cm apart and 40 cm deep: 1 Nov. PK applied: 13 Nov. FYM applied: 21 Dec. Epsom salts and kieserite applied: 31 Dec. Ploughed: 8 Jan, 1980. Heavy spring-tine cultivated: 14 Apr. NPK applied, spike rotary cultivated, ridged: 15 Apr. Hand planted, ridges split back: 16 Apr. Grubbed: 24 Apr. Rotary ridged: 28 Apr. Weedkillers applied: 18 May. Fungicide applied: 18 June, 30 June, 11 July, 24 July, 5 Aug, 18 Aug. Insecticide applied: 11 July, 24 July. Desiccant applied: 19 Sept. Tops mechanically destroyed: 1 Oct. Lifted: 3 Oct.

80/R/P/6

Previous crops: W. oats 1978, w. wheat 1979.

NOTE: Emergence counts were made in late May, plant and stem counts in late September.

TOTAL TUBERS TONNES/HECTARE

***** TABLES OF MEANS *****

BOX TIME FUNGICIDE	NONE	LIFTING	DECEMBER	APRIL	MEAN
NONE	52.1	60.8	58.6	58.7	57.5
THIABEND	53.5	57.7	58.3	60.6	57.5
MEAN	52.8	59.2	58.4	59.6	57.5
EXTRA	TD BD 55.8	TA BA 56.1	TP 0 52.3	MEAN 54.7	

GRAND MEAN 56.8

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	EXTRA	FUNGICIDE	BOX TIME	FUNGICIDE BOX TIME & EXTRA
SED	2.46	1.23	1.74	2.46

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	30	3.48	6.1

PERCENTAGE WARE 4.44CM (1.75 INCH) RIDDLE

***** TABLES OF MEANS *****

BOX TIME FUNGICIDE	NONE	LIFTING	DECEMBER	APRIL	MEAN
NONE	85.8	85.1	84.3	84.7	85.0
THIABEND	84.0	85.3	81.1	82.5	83.2
MEAN	84.9	85.2	82.7	83.6	84.1
EXTRA	TD BD 84.7	TA BA 83.9	TP 0 86.4	MEAN 85.0	

GRAND MEAN 84.3

PLOT AREA HARVESTED 0.00135