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Yields of the Field Experiments 1974

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74/R/P/3 Seed Sources - Potatoes

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74/R/P/3

POTATOES

SEED SOURCES

Object: To study yields and tuber-borne diseases of potato stocks freed from these diseases by the use of stem cuttings and to compare these with local once-grown and bought-in certified stocks - Pastures.

Sponsors: G.A. Hide, F. Bell.

Design: 4 randomised blocks of 24 plots.

Whole plot dimensions: 1.42 x 9.52. Area harvested: 0.00135.

Treatments: Sources of King Edward seed tubers:	SEEDSRCE
Healthy (ex Scotland VTSC), two plots per block	Healthy
Healthier (once-grown at Rothamsted from ex-Scotland VTSC) two plots per block	Healthy +
Ten different certified stocks	Cert/1-Cert/10
Ten different once-grown stocks	OG/1-OG/10

Basal applications: Manures: (13:13:20) at 1510 kg. Weedkillers: Linuron at 1.2 kg plus paraquat at 0.42 kg ion in 450 l. Fungicide: Mancozeb at 1.3 kg in 450 l on two occasions. Insecticide: Demeton-s-methyl at 0.25 kg with mancozeb on the first occasion.

Cultivations, etc.: - Ploughed: 23 Nov, 1973. Spring-tine cultivated: 17 Apr, 1974. NPK applied: 24 Apr. Spiked rotary cultivated, potatoes machine planted: 29 Apr. Weedkiller applied: 21 May. Grubbed: 19 June. Rotary ridged: 21 June. Fungicide applied: 12 July, 2 Aug. Insecticide applied: 12 July. Haulm mechanically destroyed: 10 Sept. Sprayed with undiluted BOV at 220 l: 16 Sept. Lifted: 24 Oct. Previous crops: Barley 1972, spring beans 1973.

NOTE: Counts were made of plant and stem numbers after burning off and before lifting. Tubers were graded into 6 sizes and assessments made of Oospora, Rhizoctonia, Helminthosporium and Phoma infection.

Standard error per plot.

Total tubers: tonnes/hectare: 3.54 or 6.3% (71 d.f.)

74/R/P/3

TABLES OF MEANS

	TOTAL TUBERS: TONNES/HECTARE	PERCENTAGE WARE 4.44 CM (1.75 INCH) RIDDLE
SEEDSRCE		
Healthy	60.3	84.8
Healthy +	56.2	79.5
Cert/1	61.6	80.7
Cert/2	58.2	82.5
Cert/3	53.3	83.2
Cert/4	54.4	81.5
Cert/5	56.9	87.3
Cert/6	59.0	84.0
Cert/7	61.8	85.8
Cert/8	61.2	87.2
Cert/9	49.1	83.7
Cert/10	57.4	85.5
OG/1	56.4	85.3
OG/2	54.8	82.8
OG/3	50.8	84.8
OG/4	54.0	81.9
OG/5	58.0	82.8
OG/6	54.8	86.5
OG/7	53.5	83.2
OG/8	55.7	83.7
OG/9	53.1	83.4
OG/10	58.5	85.1
Mean	56.5	83.7
Mean Cert/1-Cert/10	57.3	84.1
Mean OG/1-OG/10	55.0	84.0

STANDARD ERRORS OF DIFFERENCES. TOTAL TUBERS

	SEEDSRCE
Healthy v Healthy +	1.77
Healthy or Healthy + v any of remainder	2.17
Between any of remainder	2.50
Mean CERE/1-Cert/10 v mean OG/1-OG/10	0.79