



Yields of the Field Experiments 1987

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87/W/P/2 Varieties and Control of Globodera Pallida - Potatoes

Rothamsted Research

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87/W/P/2

POTATOES

VARIETIES AND CONTROL OF GLOBODERA PALLIDA

Object: To study the effects of rates of nematicide on seven varieties of potato differing in their resistance to the pale cyst nematode (*Globodera pallida*) - Woburn Far Field II.

Sponsor: A.G. Whitehead.

Design: 3 randomised blocks of 21 plots.

Whole plot dimensions: 3.0 x 4.6.

Treatments: All combinations of:-

1. VARIETY Varieties:

CAXTON
DESIREE
FINGAL
GLENN
MORAG
ROMANO
SANTE

2. OXAMYL Rates of oxamyl (kg):

0.0
2.8
5.6

Basal applications: Manures: (10:10:15+4.5 Mg) at 2290 kg. Weedkiller: Linuron at 1.6 kg in 200 l. Fungicides: Mancozeb at 1.4 kg in 200 l on four occasions applied with the insecticide on the second. Fentin hydroxide at 0.28 kg in 200 l on two occasions. Insecticide: Pirimicarb at 0.14 kg. Desiccant: Diquat at 0.80 kg ion in 200 l.

Cultivations, etc.: - Spring-tine cultivated: 30 Jan, 1987 and 16 Feb. NPK Mg applied: 22 Apr. Oxamyl applied, rotary cultivated and potatoes planted: 28 Apr. Rotary ridged: 15 May. Weedkiller applied: 25 May. Mancozeb applied: 24 June, 26 July, 5 Aug. Mancozeb and pirimicarb applied: 8 July. Fentin hydroxide applied: 18 Aug, 4 Sept. Desiccant applied: 18 Sept. Haulm mechanically destroyed: 1 Oct. Lifted: 5 Oct. Previous crops: Potatoes 1985 and 1986.

NOTE: Soil samples were taken before applying nematicide and after harvest for cyst and egg counts of *G. pallida*.

87/W/P/2

TOTAL TUBERS TONNES/HECTARE

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

OXAMYL	0.0	2.8	5.6	Mean
VARIETY				
CAXTON	42.2	52.4	49.7	48.1
DESIREE	29.4	50.1	51.7	43.7
FINGAL	45.9	65.7	64.6	58.7
GLENNA	47.9	59.3	58.8	55.3
MORAG	46.2	56.1	58.7	53.7
ROMANO	18.4	40.9	44.4	34.6
SANTE	31.1	53.9	48.7	44.5
Mean	37.3	54.1	53.8	48.4

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

Table	VARIETY	OXAMYL	VARIETY OXAMYL
s.e.d.	3.36	2.20	5.81

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	40	7.12	14.7

PERCENTAGE WARE 4.44CM (1.75 INCH) RIDDLE

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

OXAMYL	0.0	2.8	5.6	Mean
VARIETY				
CAXTON	93.7	87.5	87.7	89.6
DESIREE	85.3	95.2	92.0	90.8
FINGAL	91.1	95.5	93.2	93.3
GLENNA	97.1	96.7	95.9	96.5
MORAG	91.3	92.5	92.8	92.2
ROMANO	86.7	93.7	94.1	91.5
SANTE	91.1	94.8	93.0	93.0
Mean	90.9	93.7	92.7	92.4

PLOT AREA HARVESTED 0.00070