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## Yields of the Field Experiments 1990

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### 90/W/P/4 Susceptible Varieties and *Globodera Pallida* Control - Potatoes

#### Rothamsted Research

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90/W/P/4

POTATOES

SUSCEPTIBLE VARIETIES AND *G. PALLIDA* CONTROL

**Object:** To assess the control of *Globodera pallida* by oxamyl on a range of susceptible varieties - Woburn, Lansome/Mill Dam Close III.

**Sponsors:** A.G. Whitehead, A.J.F. Nichols.

**Design:** 2 randomised blocks of 22 plots.

**Whole plot dimensions:** 3.0 x 4.6.

**Treatments:** All combinations of:-

<b>1. VARIETY</b>	Varieties:
BARD	Maris Bard
CARA	Cara
COSTELLA	Costella
DESIREE	Desiree
ESTIMA	Estima
JAVELIN	Pentland Javelin
PIPER	Maris Piper
RECORD	Record
ROMANO	Romano
SQUIRE	Pentland Squire
WILJA	Wilja

<b>2. NEMACIDE</b>	Nematicide:
NONE	None
OXAMYL	Oxamyl at 5.6 kg applied to the seedbed

**Basal applications:** Manures: (13:13:20) at 1.6 t. Weedkillers: Glyphosate at 1.4 kg in 220 l. Linuron at 1.6 kg in 220 l. Fungicides: Mancozeb at 1.0 kg on the first two occasions and at 1.4 kg on the third, applied with a wetting agent, 'Bond' at 200 ml, in 220 l. Fentin hydroxide at 0.27 kg in 220 l, applied on three occasions. Irrigation: 12 mm applied on each of 17 occasions.

**Cultivations, etc.:-** Glyphosate applied: 1 Sept, 1989. Ploughed: 13 Nov. NPK applied: 20 Apr, 1990. Spring-tine cultivated: 23 Apr. Oxamyl treatments applied, rotary cultivated, potatoes planted: 25 Apr. Rotary ridged: 26 Apr. Linuron applied: 3 May. Irrigation applied: 15, 18, 22, 31 May, 5, 8, 13, 15, 19, 26, 29 June, 2, 11, 16, 20, 23 and 26 July. Mancozeb and wetting agent applied: 26 June, 11 and 24 July. Fentin hydroxide applied: 7, 21 Aug and 10 Sept. Haulm mechanically destroyed: 14 Sept. Potatoes lifted: 18 Sept. Previous crops: Potatoes 1988, s. barley 1989.

**NOTE:** Populations of *G. pallida* eggs in soil were assessed before planting and after harvest.

90/W/P/4

**TOTAL TUBERS TONNES/HECTARE**

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

NEMACIDE VARIETY	NONE	OXAMYL	Mean
BARD	27.6	33.5	30.5
CARA	33.2	43.2	38.2
COSTELLA	43.5	58.0	50.7
DESIREE	27.6	43.4	35.5
ESTIMA	35.1	49.4	42.2
JAVELIN	28.4	31.8	30.1
PIPER	43.3	49.9	46.6
RECORD	23.5	28.1	25.8
ROMANO	36.3	33.2	34.7
SQUIRE	40.4	44.5	42.4
WILJA	35.4	36.3	35.8
Mean	34.0	41.0	37.5

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

VARIETY	NEMACIDE	VARIETY NEMACIDE
5.26	2.24	7.44

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	21	7.44	19.8

**PERCENTAGE WARE 4.4CM (1.75 INCH) RIDDLE**

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

NEMACIDE VARIETY	NONE	OXAMYL	Mean
BARD	89.1	90.2	89.7
CARA	86.6	82.0	84.3
COSTELLA	88.2	90.7	89.4
DESIREE	89.8	92.3	91.0
ESTIMA	90.7	93.0	91.9
JAVELIN	82.4	87.3	84.9
PIPER	83.9	87.3	85.6
RECORD	80.6	87.6	84.1
ROMANO	80.2	86.0	83.1
SQUIRE	93.4	91.0	92.2
WILJA	83.1	88.1	85.6
Mean	86.2	88.7	87.4

PLOT AREA HARVESTED 0.00069