ROTHAMSTED RESEARCH

Yields of the Field Experiments 1980

Full Table of Content

80/W/P/5 Potatoes Varieties and Potato Cyst Nematode

Rothamsted Research

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80/W/P/5

POTATOES

VARIETIES AND POTATO CYST NEMATODE

Object: To measure the yields of potato varieties, resistant and susceptible to potato cyst-nematode, on infested land treated with and without oxamyl and to study effects on nematode populations - Woburn, Horsepool.

Sponsor: A.G. Whitehead.

Design: 3 randomised blocks of 16 plots.

Whole plot dimensions: 2.84 x 6.09.

Treatments: All combinations of:-

1. VARIETY — Varieties:

A BANNER	Arran Banner
CARA	Cara
CROFT	Croft
DESIREE	Desiree
M PIPER	Maris Piper
P CROWN	Pentland Crown
P DELL	Pentland Dell
RECORD	Record

2 OXAMYL — Oxamyl to seedbed (kg):

0.0
5.6

Basal applications:- Manures: (13:13:20) at 1880 kg. Weedkiller: Linuron at 1.1 l in 280 l. Fungicide: Mancozeb at 1.3 kg in 300 l applied five times, with insecticide on the third, fourth and fifth occasions. Insecticide: Pirimicarb at 0.14 kg. Haulm desiccant: Undiluted BOV at 170 l.

Cultivations, etc.:- Heavy spring-tine cultivated: 20 Oct, 1979. Spring-tine cultivated: 22 Oct. NPK applied: 12 Apr, 1980. Heavy spring-tine cultivated: 14 Apr. Oxamyl applied, rotary cultivated, potatoes planted: 1 May. Weedkiller applied: 16 May. Fungicide applied: 18 June, 3 July, 22 July, 10 Aug, 22 Aug. Insecticide applied: 22 July, 10 Aug, 22 Aug. Haulm desiccant applied: 24 Sept. Lifted: 30 Sept. Previous crops: W. oats 1978, potatoes 1979.

NOTES: (1) Soil samples were taken before applying treatments and after harvest for counts of cysts, eggs, and larvae of Globodera rostochiensis.
(2) The treatment combinations of OXAMYL 0.0 with VARIETY A BANNER, CROFT, DESIREE, P CROWN, P DELL, RECORD gave very poor yields. These combinations were omitted from the analysis presented and standard errors presented do not apply to them.

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80/W/P/5

TOTAL TUBERS TONNES/HECTARE

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

OXAMYL	0.0	5.6
VARIETY		
A BANNER	0.3	53.0
CARA	37.1	63.4
CROFT	3.2	65.7
DESIREE	1.3	52.1
M PIPER	24.8	63.7
P CROWN	2.5	65.7
P DELL	1.0	52.6
RECORD	1.1	61.4

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

TABLE	VARIETY* OXAMYL
SED	5.10

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

STRATUM	DF	SE*	CV%
BLOCK.WP	18	6.25	11.6

* CALCULATED ONLY FROM PLOTS WITH VARIETIES
CARA AND M PIPER WITH OXAMYL 0.0 AND
ALL VARIETIES WITH OXAMYL 5.6

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE TONNES/HECTARE

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

OXAMYL	0.0	5.6
VARIETY		
A BANNER	0.0	97.3
CARA	96.5	97.8
CROFT	52.4	95.9
DESIREE	0.0	93.4
M PIPER	94.1	94.4
P CROWN	34.8	96.4
P DELL	9.5	96.6
RECORD	7.0	96.0

PLOT AREA HARVESTED 0.00087

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