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Yields of the Field Experiments 1975

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75/ R/P/4 - Blight & Aphid Reference Plots - Potatoes

Rothamsted Research

Rothamsted Research (1976) 75/ R/P/4 - *Blight & Aphid Reference Plots - Potatoes* ; Yields Of The Field Experiments 1975, pp 365 - 368 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/P/4

POTATOES

BLIGHT AND APHID REFERENCE PLOTS

Object: To study the separate and combined effects of sprays to control blight and aphids on potatoes - Great Harpenden II.

Sponsors: O.J. Stedman, R.W. Gibson.

Design: 4 randomised blocks of 7 plots split into 3.

Whole plot dimensions: 8.53 x 9.53.

Treatments: All combinations of:-

Whole plots: 1. Blight fungicide:

None

FUNGICIDE

Mancozeb applied on 21 July at
1.3 kg in 450 l

NONE

MANCOZEB

2. Aphicide:

APHICIDE

None

NONE

Demeton-s-methyl applied early, on
24 June at 0.25 kg in 450 l

DEMETONE

Demeton-s-methyl applied with the
blight spray on 21 July on 0.25 kg
in 450 l

DEMETONL

Sub plots: 3. Varieties:

VARIETY

King Edward

EDWARD

Majestic

MAJESTIC

Pentland Crown

CROWN

together with one extra treatment, sprayed mancozeb only and split for varieties as above, plot used for sampling (no yields recorded).

Basal applications: Manures: (13:13:20) at 1510 kg. Weedkillers:
Linuron at 1.1 kg with paraquat at 0.42 kg ion in 450 l.

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Cultivations, etc.: - Ploughed: 14 Jan, 1975. Spring-tine cultivated and NPK applied: 30 Apr. Spiked rotary cultivated and potatoes machine planted: 6 May. Grubbed: 14 May. Rotary ridged: 22 May. Weedkillers applied: 30 May. Grubbed: 25 June. Rotary ridged: 4 July. Haulm mechanically destroyed: 25 Sept. Sprayed with undiluted BOV at 170 l: 1 Oct. Lifted: 15 Oct. Previous crops: Barley 1973 and 1974.

NOTE: Tuber samples were taken for blight determination.

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TOTAL TUBERS TONNES/HECTARE

*** TABLES OF MEANS ***

APHICIDE FUNGIDE	NONE	DEMETONE	DEMETONL	MEAN
NONE	20.9	22.4	21.4	21.6
MANCOZEB	21.7	23.6	21.7	22.3
MEAN	21.3	23.0	21.5	21.9

VARIETY FUNGIDE	EDWARD	MAJESTIC	CROWN	MEAN
NONE	18.5	19.0	27.2	21.6
MANCOZEB	19.5	19.6	27.8	22.3
MEAN	19.0	19.3	27.5	21.9

VARIETY APHICIDE	EDWARD	MAJESTIC	CROWN	MEAN
NONE	18.7	18.5	26.7	21.3
DEMETONE	20.0	20.8	28.2	23.0
DEMETONL	18.4	18.7	27.6	21.5
MEAN	19.0	19.3	27.5	21.9

FUNGIDE	VARIETY APHICIDE	EDWARD	MAJESTIC	CROWN
NONE	NONE	18.3	17.9	26.6
	DEMETONE	19.3	20.6	27.3
	DEMETONL	18.0	18.5	27.6
MANCOZEB	NONE	19.1	19.1	26.8
	DEMETONE	20.6	21.0	29.1
	DEMETONL	18.8	18.9	27.5

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

TABLE	FUNGIDE	APHICIDE	VARIETY	FUNGIDE APHICIDE
SED	0.36	0.44	0.49	0.62

TABLE	FUNGIDE VARIETY	APHICIDE VARIETY	FUNGIDE APHICIDE VARIETY
SED	0.67	0.82	1.16

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

FUNGIDE	0.69
APHICIDE	0.85
FUNGIDE.APHICIDE	1.20

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TOTAL TUBERS TONNES /HECTARE

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.88	4.0
BLOCK.WP.SP	36	1.69	7.7

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

APHICIDE FUNGICIDE	NONE	DEMETONE	DEMETONL	MEAN
NONE	89.1	91.0	89.7	89.9
MANCOZEB	90.0	90.8	89.6	90.1
MEAN	89.6	90.9	89.7	90.0

VARIETY FUNGICIDE	EDWARD	MAJESTIC	CROWN	MEAN
NONE	82.2	90.5	97.1	89.9
MANCOZEB	82.4	90.6	97.3	90.1
MEAN	82.3	90.6	97.2	90.0

VARIETY APHICIDE	EDWARD	MAJESTIC	CROWN	MEAN
NONE	81.8	89.9	97.0	89.6
DEMETONE	83.7	91.8	97.1	90.9
DEMETONL	81.5	90.0	97.5	89.7
MEAN	82.3	90.6	97.2	90.0

VARIETY FUNGICIDE	VARIETY APHICIDE	EDWARD	MAJESTIC	CROWN
NONE	NONE	80.4	90.0	96.9
	DEMETONE	84.2	92.0	96.8
	DEMETONL	82.0	89.5	97.7
MANCOZEB	NONE	83.2	89.8	97.2
	DEMETONE	87.2	91.7	97.4
	DEMETONL	80.9	90.5	97.4

SUB PLOT AREA HARVESTED 0.00271