

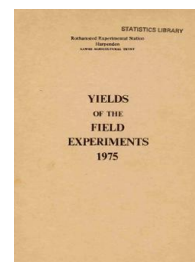
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## Yields of the Field Experiments 1975

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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<br>FUNGICIDE | 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<br>FUNGICIDE | 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<br>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 |

| VARIETY<br>FUNGICIDE | EDWARD | MAJESTIC | CROWN |
|----------------------|--------|----------|-------|
| APHICIDE             |        |          |       |
| NONE                 | 18.3   | 17.9     | 26.6  |
| DEMETONE             | 19.3   | 20.6     | 27.3  |
| DEMETONL             | 18.0   | 18.5     | 27.6  |
| MANCOZEB             | 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 | FUNGICIDE | APHICIDE | VARIETY | FUNGICIDE<br>APHICIDE |
|-------|-----------|----------|---------|-----------------------|
| SED   | 0.36      | 0.44     | 0.49    | 0.62                  |

| TABLE | FUNGICIDE<br>VARIETY | APHICIDE<br>VARIETY | FUNGICIDE<br>APHICIDE<br>VARIETY |
|-------|----------------------|---------------------|----------------------------------|
| SED   | 0.67                 | 0.82                | 1.16                             |

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

|                    |      |      |      |
|--------------------|------|------|------|
| FUNGICIDE          | 0.69 |      |      |
| APHICIDE           |      | 0.85 |      |
| FUNGICIDE.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  | NONE | DEMETONE | DEMETONL | MEAN |
|-----------|------|----------|----------|------|
| FUNGICIDE |      |          |          |      |
| 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   | EDWARD | MAJESTIC | CROWN | MEAN |
|-----------|--------|----------|-------|------|
| FUNGICIDE |        |          |       |      |
| 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  | EDWARD | MAJESTIC | CROWN | MEAN |
|----------|--------|----------|-------|------|
| APHICIDE |        |          |       |      |
| NONE     | 81.8   | 89.9     | 97.0  | 89.6 |
| DEMETONE | 83.7   | 91.8     | 97.1  | 90.9 |
| DEMOTONL | 81.5   | 90.0     | 97.5  | 89.7 |
| MEAN     | 82.3   | 90.6     | 97.2  | 90.0 |

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

SUB PLOT AREA HARVESTED 0.00271