

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1985

[Full Table of Content](#)



85/R/P/2 Methods of Applying Fungicides to Seed - Potatoes

Rothamsted Research

Rothamsted Research (1986) *85/R/P/2 Methods of Applying Fungicides to Seed - Potatoes* ; Yields Of The Field Experiments 1985, pp 326 - 328 - DOI: <https://doi.org/10.23637/ERADOC-1-19>

85/R/P/2

POTATOES

METHODS OF APPLYING FUNGICIDES TO SEED

Object: To compare spraying methods and rates of applying two fungicides to tubers on disease control and yield of potatoes - Road Piece E.

Sponsors: G.R. Cayley, G.A. Hide, R. Lewthwaite, B.J. Pye.

Design: 4 randomised blocks of 14 plots.

Whole plot dimensions: 1.5 x 9.52.

Treatments: All combinations of:-

1. FUNGCIDE Fungicides applied to seed tubers:

| | |
|----------|------------------|
| IMAZALIL | Imazalil |
| TOLC MET | Tolclofos methyl |

 2. FUNGRATE Rates of applying fungicides, per tonne of tubers:

| | |
|---|---------------------------------------|
| 1 | 5 g imazalil, 120 g tolclofos methyl |
| 2 | 10 g imazalil, 240 g tolclofos methyl |

 3. FUNGMETH Methods of applying fungicides:

| | |
|----------|---|
| CNVNTIAL | Conventional, hydraulic, sprayer in 2.0 l per tonne of tubers |
| SP DS | Spinning disc sprayer in 0.8 l per tonne of tubers |
| SP DS ES | Spinning disc sprayer with electrostatically charged particles in 0.8 l per tonne of tubers |
- plus one extra treatment
- | | |
|-------|---|
| EXTRA | |
| NONE | No fungicides to seed tubers (duplicated) |

Basal applications: Manures: (0:18:36) at 690 kg. (10:10:15+4.5 Mg) at 1960 kg. Weedkillers: Linuron at 1.3 kg with paraquat at 0.50 kg ion in 200 l. Fungicides: Mancozeb at 1.4 kg in 200 l on four occasions, applied with the insecticide on the second and third occasions. Fentin hydroxide at 0.28 kg in 200 l on two occasions. Insecticide: Pirimicarb at 0.14 kg on two occasions. Haulm desiccant: BOV at 170 l.

Seed: Desiree.

Cultivations, etc.:- PK applied: 10 Oct, 1984. Ploughed: 19 Nov. NPK Mg applied: 4 Apr, 1985. Rotary harrowed: 17 Apr. Planted by hand: 22 Apr. Weedkillers applied: 16 May. Mancozeb applied: 20 June, 6 Aug. Mancozeb with pirimicarb applied: 4 July, 23 July. Fentin hydroxide applied: 21 Aug, 11 Sept. Desiccant applied: 11 Oct. Lifted: 22 Oct. Previous crops: S. barley 1983, w. beans 1984.

NOTE: Assessments of stem base infections were made from samples taken in early August.

85/R/P/2

TOTAL TUBERS TONNES/HECTARE

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

| FUNGRATE | 1 | 2 | MEAN |
|----------|------|------|------|
| FUNGCIDE | | | |
| IMAZALIL | 66.2 | 65.6 | 65.9 |
| TOLC MET | 64.8 | 63.6 | 64.2 |
| MEAN | 65.5 | 64.6 | 65.0 |

| FUNGMETH | CNVNTIAL | SP DS | SP DS ES | MEAN |
|----------|----------|-------|----------|------|
| FUNGCIDE | | | | |
| IMAZALIL | 65.5 | 66.5 | 65.6 | 65.9 |
| TOLC MET | 64.4 | 64.0 | 64.2 | 64.2 |
| MEAN | 64.9 | 65.3 | 64.9 | 65.0 |

| FUNGMETH | CNVNTIAL | SP DS | SP DS ES | MEAN |
|----------|----------|-------|----------|------|
| FUNGRATE | | | | |
| 1 | 65.4 | 65.9 | 65.2 | 65.5 |
| 2 | 64.5 | 64.7 | 64.7 | 64.6 |
| MEAN | 64.9 | 65.3 | 64.9 | 65.0 |

| FUNGCIDE | FUNGMETH | CNVNTIAL | SP DS | SP DS ES |
|----------|----------|----------|-------|----------|
| IMAZALIL | 1 | 66.1 | 68.1 | 64.4 |
| | 2 | 64.9 | 65.0 | 66.8 |
| TOLC MET | 1 | 64.7 | 63.7 | 66.0 |
| | 2 | 64.0 | 64.4 | 62.5 |

NONE 63.2

GRAIN MEAN 64.8

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

| TABLE | FUNGCIDE | FUNGRATE | FUNGMETH | FUNGCIDE FUNGRATE |
|-------|----------|----------|----------|----------------------|
| SED | 1.15 | 1.15 | 1.41 | 1.62 |

| TABLE | FUNGCIDE FUNGMETH | FUNGRATE FUNGMETH | FUNGCIDE FUNGRATE FUNGMETH |
|-------|----------------------|----------------------|----------------------------------|
| SED | 1.99 | 1.99 | 2.81 |

SED FOR COMPARING NONE WITH ANY ITEM IN FUNGCIDE.FUNGRATE.FUNGMETH TABLE IS 2.44

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

| STRATUM | DF | SE | CV% |
|----------|----|------|-----|
| BLOCK.WP | 40 | 3.98 | 6.1 |

85/R/P/2

PERCENTAGE WARE 4.44CM (1.75 INCH) RIDDLE

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

| FUNGRATE | 1 | 2 | MEAN |
|----------|------|------|------|
| FUNGCIDE | | | |
| IMAZALIL | 89.7 | 89.1 | 89.4 |
| TOLC MET | 88.8 | 88.9 | 88.8 |
| MEAN | 89.2 | 89.0 | 89.1 |

| FUNGMETH | CNVNTIAL | SP DS | SP DS ES | MEAN |
|----------|----------|-------|----------|------|
| FUNGCIDE | | | | |
| IMAZALIL | 90.1 | 89.9 | 88.2 | 89.4 |
| TOLC MET | 88.6 | 88.8 | 89.0 | 88.8 |
| MEAN | 89.4 | 89.4 | 88.6 | 89.1 |

| FUNGMETH | CNVNTIAL | SP DS | SP DS ES | MEAN |
|----------|----------|-------|----------|------|
| FUNGRATE | | | | |
| 1 | 89.4 | 89.6 | 88.7 | 89.2 |
| 2 | 89.3 | 89.2 | 88.5 | 89.0 |
| MEAN | 89.4 | 89.4 | 88.6 | 89.1 |

| FUNGCIDE | FUNGMETH | CNVNTIAL | SP DS | SP DS ES |
|----------|----------|----------|-------|----------|
| IMAZALIL | 1 | 90.1 | 90.4 | 88.5 |
| | 2 | 90.2 | 89.4 | 87.8 |
| TOLC MET | 1 | 88.7 | 88.8 | 88.8 |
| | 2 | 88.5 | 88.9 | 89.2 |

NONE 88.0

GRAND MEAN 88.9

PLOT AREA HARVESTED 0.00143