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Yields of the Field Experiments 1995

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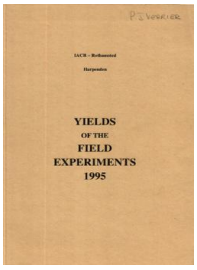

95/R/P/4 Pathogenic Fungi - Potatoes

Rothamsted Research

Rothamsted Research (1996) *95/R/P/4 Pathogenic Fungi - Potatoes ;* Yields Of The Field Experiments 1995, pp 169 - 171 **- DOI: https://doi.org/10.23637/ERADOC-1-50**

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95/R/P/4

POTATOES

PATHOGENIC FUNGI

Object: To study the effects of three potato pathogenic fungi, individually and in combination, on the growth and yield of two cultivars - Great Harpenden II.

Sponsor: P.J. Read.

Design: 3 randomised blocks of 2 x 8 plots.

Whole plot dimensions: 1.5 x 9.5.

Treatments: All combinations of:-

1. **CULTIVAR**

E	Estima
M	Maris Piper

2. **DISEASE** Inoculated with fungal cultures of:

H	None (healthy)
CC	*Colletotrichum coccodes*
VD	*Verticillium dahliae*
RS	*Rhizoctonia solani*
C+V	*C. coccodes* and *V. dahliae*
C+R	*C. coccodes* and *R. solani*
V+R	*V. dahliae* and *R. solani*
CVR	*C. coccodes, V. dahliae* and *R. solani*

Experimental diary:

07-Nov-94 : B : Ploughed.
29-Mar-95 : B : Heavy spring-tine cultivated.
13-Apr-95 : B : Heavy spring-tine cultivated.
18-Apr-95 : B : NPK as (12:20:20) at 1750 kg.
19-Apr-95 : B : Rotary harrowed.
20-Apr-95 : B : Ridged.
21-Apr-95 : B : Potatoes planted.
04-May-95 : B : Ridged.
23-May-95 : B : Campbell's Linuron 45% Flowable at 5.0 l with Gramoxone 100 at 3.0 l in 300 l.
20-Jun-95 : B : Ashlade Maneb Flowable at 2.75 l in 200 l.
30-Jun-95 : B : Ashlade Maneb Flowable at 2.75 l in 200 l.
19-Jul-95 : B : Ashlade Maneb Flowable at 2.75 l in 300 l.
01-Aug-95 : B : Ashlade Maneb Flowable at 2.75 l in 300 l.
14-Aug-95 : B : Super-Tin 4L at 560 ml with Intracrop BLA at 200 ml in 200 l.
30-Aug-95 : B : Super-Tin 4L at 560 ml with Intracrop BLA at 200 ml in 200 l.
13-Sep-95 : B : Super-Tin 4L at 560 ml with Harvest at 3.0 l in 400 l.
29-Sep-95 : B : Pulverised potato tops.
16-Oct-95 : B : Potatoes lifted.

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95/R/P/4

Previous crops: S. wheat 1993, w. barley 1994.

NOTE: In June plant height and the number of stems per plant were recorded. At the beginning of July and August samples were taken and disease assessed on stem-bases, roots and tubers; total yields and size of tubers recorded. Disease was assessed and tubers were graded by size and weighed after harvest.

TOTAL TUBERS TONNES/HECTARE

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

CULTIVAR / **DISEASE**	E	M	Mean
H	29.9	31.4	30.6
CC	27.8	27.6	27.7
VD	23.3	28.9	26.1
RS	21.0	27.5	24.2
C+V	27.2	27.5	27.3
C+R	25.9	25.0	25.5
V+R	22.7	24.7	23.7
CVR	25.1	27.3	26.2
Mean	25.4	27.5	26.4

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

CULTIVAR	**DISEASE**	**CULTIVAR DISEASE**
1.06	2.11	2.99

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	30	3.66	13.9

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95/R/P/4

PERCENTAGE WARE 5 CM RIDDLE

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

CULTIVAR / DISEASE	E	M	Mean
H	59.7	47.9	53.8
CC	59.2	48.9	54.0
VD	53.2	48.3	50.7
RS	63.9	63.4	63.6
C+V	56.9	49.0	53.0
C+R	65.2	56.8	61.0
V+R	62.3	62.2	62.3
CVR	65.0	57.0	61.0
Mean	60.7	54.2	57.4

PLOT AREA HARVESTED 0.00086

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