

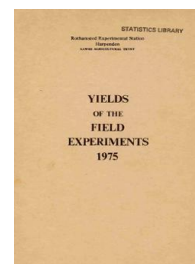
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# Yields of the Field Experiments 1975

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## 75/ R/CS/133 - Control of Pathogens - Maize

### Rothamsted Research

Rothamsted Research (1976) 75/ R/CS/133 - Control of Pathogens - Maize ; Yields Of The Field Experiments 1975, pp 221 - 223 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/CS/133

CONTROL OF PATHOGENS

Object: To study the effects of a range of chemicals on incidence of pathogens and yield of maize - Long Hoos VI/VII 6.

Sponsors: A.J. Barnard, K.E. Fletcher, D.J. Hooper, D. Hornby, R.T. Plumb, T.D. Williams, J.C. Wilson.

The second year, maize.

For previous year see 74/R/CS/133.

Design: 3 randomised blocks of 9 plots split into 3.

Whole plot dimensions: 2.13 x 18.3.

Treatments: All combinations of:-

Whole plots: 1. Chemicals applied cumulatively to 1974 treatments except where stated:

|   | CHEMICAL |
|---|----------|
| None (4 plots per block)  | NONE     |
| Aldicarb, 4.5 kg as granules to seedbed                           | ALDICARB |
| Benomyl, 11.2 kg as dust to seedbed                               | BENOMYL  |
| Dazomet, 450 kg as granules in early spring (1974 only)           | DAZ (74) |
| Phorate, 1.68 kg as granules drilled with the seed                | PHORATE  |
| Benomyl + dazomet (1974 only) + phorate, at above rates and times | BE/DA/PH |

Sub plots: 2. Nitrogen fertiliser (kg N):

|     | N   |
|-----|-----|
| 50  | 50  |
| 100 | 100 |
| 150 | 150 |

NOTE: Plots were divided for yields at forage and grain stage.

Basal applications: Manures: (0:14:28) at 820 kg. Weedkiller: Atrazine ('Vectal' at 3.4 kg in 340 l).

Seed: Cargill Primeur 170, sown at 123,000 seeds per ha.

75/R/CS/133

Cultivations, etc.: - Ploughed: 4 Feb, 1975. Spring-tine cultivated: 16 Apr and 21 Apr. PK applied: 28 Apr. Power harrowed: 2 May. Aldicarb and benomyl treatments applied: 6 May. Power harrowed, seed sown: 14 May. Weedkiller applied: 23 May. Part plots harvested for forage: 9 Oct. Part plots harvested for grain: 11 Nov.

NOTES: The following assessments were made:

- (1) Total number of plants per plot on 24 July.
- (2) Percentage of plants damaged by frit fly (*Oscinella frit*) on 24 July.
- (3) Nitrogen percentage of forage and grain was determined.

GRAIN TONNES/HECTARE

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

| CHEMICAL<br>N | NONE | ALDICARB | BENOMYL | DAZ(74) | PHORATE | BE/DA/PH | MEAN |
|---------------|------|----------|---------|---------|---------|----------|------|
| 50            | 3.54 | 3.62     | 4.01    | 3.97    | 3.74    | 4.42     | 3.77 |
| 100           | 3.58 | 3.89     | 3.52    | 3.72    | 4.16    | 4.08     | 3.74 |
| 150           | 3.78 | 4.26     | 4.11    | 4.00    | 4.61    | 4.75     | 4.10 |
| MEAN          | 3.63 | 3.92     | 3.88    | 3.90    | 4.17    | 4.41     | 3.87 |

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

| TABLE  | N     | CHEMICAL | N | CHEMICAL |
|--|-------|----------|---|----------|
| SED  |       | 0.418(1) |   | 0.523(1) |
|  | 0.162 | 0.529(2) |   | 0.662(2) |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:<br>CHEMICAL |       |          |   | 0.244(3) |
|  |       |          |   | 0.487(2) |

- (1) NONE V ANY OF REMAINDER
- (2) REMAINDER
- (3) NONE

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

| STRATUM     | DF | SE    | CV%  |
|-------------|----|-------|------|
| BLOCK.WP    | 19 | 0.648 | 16.7 |
| BLOCK.WP.SP | 42 | 0.597 | 15.4 |

GRAIN MEAN DM% 65.7

SUB PLOT AREA HARVESTED 0.00039

75/R/CS/133

FORAGE DRY MATTER TONNES/HECTARE

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

| CHEMICAL<br>N | NONE | ALDICARB | BENOMYL | DAZ(74) | PHORATE | BE/DA/PH | MEAN |
|---------------|------|----------|---------|---------|---------|----------|------|
| 50            | 6.67 | 6.50     | 6.21    | 6.73    | 7.66    | 7.27     | 6.78 |
| 100           | 6.65 | 6.03     | 6.35    | 7.25    | 7.73    | 7.08     | 6.78 |
| 150           | 7.11 | 9.03     | 8.61    | 6.89    | 8.77    | 8.95     | 7.96 |
| MEAN          | 6.81 | 7.50     | 7.06    | 6.96    | 8.05    | 7.77     | 7.18 |

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

| TABLE  | N     | CHEMICAL | N<br>CHEMICAL |
|--|-------|----------|---------------|
| SED  |       | 0.537(1) | 0.872(1)      |
|  | 0.354 | 0.680(2) | 1.103(2)      |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: |       |          |               |
| CHEMICAL   |       |          | 0.532(3)      |
|  |       |          | 1.063(2)      |

- (1) NONE V ANY OF REMAINDER
- (2) REMAINDER
- (3) NONE

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

| STRATUM     | DF | SE    | CV%  |
|-------------|----|-------|------|
| BLOCK.WP    | 19 | 0.832 | 11.6 |
| BLOCK.WP.SP | 42 | 1.302 | 18.1 |

MEAN DM% 32.2

SUB PLOT AREA HARVESTED 0.00020