

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 1976

[Full Table of Content](#)

76/R/CS/133 Control of Pathogens - Maize

Rothamsted Research

Rothamsted Research (1977) *76/R/CS/133 Control of Pathogens - Maize ; Yields Of The Field Experiments 1976*, pp 181 - 183 - DOI: <https://doi.org/10.23637/ERADOC-1-15>

76/R/CS/133

CONTROL OF PATHOGENS

Object: To study the effects of a range of chemicals on incidence of pathogens and yield of continuous 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 third year, maize.

For previous years see 74-75/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. CHEMICAL | Chemicals applied annually except where stated: |
| NONE | None (4 plots per block) |
| ALDICARB | Aldicarb, 4.5 kg as granules to seedbed |
| BENOMYL | Benomyl, 11.2 kg as dust to seedbed |
| DAZOMET | Dazomet, 450 kg as granules in early spring (not applied 1975) |
| PHORATE | Phorate, 1.68 kg as granules drilled with the seed |
| BE/DA/PH | Benomyl + dazomet (not applied 1975) + phorate, at above rates and times |

Sub plots

2. N Nitrogen fertiliser (kg 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 850 kg. Weedkiller: Atrazine ('Vectal' at 3.4 kg in 340 l).

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

Cultivations, etc.: - Rotary cultivated: 12 Nov, 1975. PK applied: 9 Dec. Dazomet applied, all plots rotary cultivated: 10 Dec. Ploughed: 6 Jan, 1976. Spring-tine cultivated: 24 Mar, 20, 22 Apr. Aldicarb and benomyl treatments applied and these plots only rotary cultivated: 11 May. Seed-sown: 17 May. Harrowed: 19 May. Weedkiller applied: 2 June. N applied: 6 June. Part plots harvested for forage: 20 Oct. Part plots harvested for grain: 25 Nov.

NOTES: (1) Frit fly (*Oscinella frit*) damage was assessed.
(2) Nitrogen percentages of forage and grain were determined.

76/R/CS/133

GRAIN MAIZE TONNES/HECTARE

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

| CHEMICAL N | NONE | ALDICARB | BENOMYL | DAZOMET | PHDRATE | EE/DA/PH | MEAN |
|---------------|------|----------|---------|---------|---------|----------|------|
| 50 | 3.28 | 3.77 | 3.57 | 3.45 | 3.37 | 3.48 | 3.42 |
| 100 | 3.27 | 3.61 | 3.44 | 3.01 | 3.72 | 3.31 | 3.35 |
| 150 | 3.27 | 3.52 | 4.27 | 4.22 | 3.45 | 3.89 | 3.60 |
| MEAN | 3.27 | 3.63 | 3.76 | 3.56 | 3.51 | 3.56 | 3.46 |

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

| TABLE | N | CHEMICAL | N | CHEMICAL |
|--|-------|----------|-------|----------|
| SED | | 0.485 | 0.646 | MIN REP |
| | 0.174 | 0.383 | 0.511 | MAX-MIN |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: | | | | |
| CHEMICAL | | | 0.522 | MIN REP |
| | | | 0.413 | MAX-MIN |
| | | | 0.261 | MAX REP |

CHEMICAL
 MAX REP WITHIN NONE
 MAX-MIN NONE V REMAINDER
 MIN-REP REMAINDER

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

| STRATUM | DF | SE | CV% |
|-------------|----|-------|------|
| BLOCK.WP | 19 | 0.594 | 17.2 |
| BLOCK.WP.SP | 42 | 0.640 | 18.5 |

GRAIN MEAN DM% 63.1

SUB PLOT AREA HARVESTED 0.00039

76/R/CS/133

FORAGE DRY MATTER TONNES/HECTARE

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

| CHEMICAL N | NONE | ALDICARB | BENOMYL | DAZOMET | PHORATE | BE/DA/PH | MEAN |
|---------------|-------|----------|---------|---------|---------|----------|-------|
| 50 | 9.61 | 11.32 | 8.56 | 9.79 | 9.34 | 11.23 | 9.85 |
| 100 | 10.59 | 9.41 | 12.75 | 9.88 | 9.86 | 9.48 | 10.41 |
| 150 | 10.90 | 12.91 | 9.72 | 10.47 | 11.30 | 11.46 | 11.05 |
| MEAN | 10.37 | 11.21 | 10.34 | 10.05 | 10.17 | 10.72 | 10.44 |

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

| TABLE | N | CHEMICAL | N | CHEMICAL |
|--|-------|----------|---------|----------|
| REP | 27 | UNEQUAL | UNEQUAL | |
| SED | | 0.898 | 1.467 | MIN REP |
| | 0.474 | 0.710 | 1.160 | MAX-MIN |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: | | | | |
| CHEMICAL | | | 1.421 | MIN REP |
| | | | 1.123 | MAX-MIN |
| | | | 0.710 | MAX REP |

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

| STRATUM | DF | SE | CV% |
|-------------|----|-------|------|
| BLOCK.WP | 19 | 1.100 | 10.5 |
| BLOCK.WP.SP | 42 | 1.740 | 16.7 |

MEAN DM% 28.5

PLOT AREA HARVESTED 0.00020