

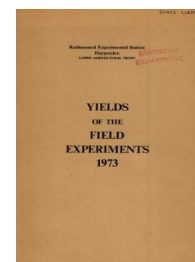
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73/R/CS/82 - Chemical Control of Soil-borne Pathogens - Beans

Rothamsted Research

Rothamsted Research (1974) 73/R/CS/82 - *Chemical Control of Soil-borne Pathogens - Beans* ; Yields Of The Field Experiments 1973, pp 227 - 228 - DOI: <https://doi.org/10.23637/ERADOC-1-98>

73/R/CS/82

CHEMICAL CONTROL OF SOIL-BORNE PATHOGENS

Object: To study the effects of a range of chemicals on pathogens and yield of beans grown continuously for seven years - Barnfield Section I Plot 3.

Sponsors: D. Hornby, G.A. Salt.

The third year, spring beans.

For previous years see 71/R/BE/1(t) and 72/R/CS/82(t).

Design: 4 blocks of 6 plots.

Whole plot dimensions: 3.73 x 2.29. Area harvested: 0.00039.

Treatments (applied cumulatively to treatments in 1971 and 1972):

| | CHEMICAL |
|---|----------|
| None | None |
| Dexon, fungicide, at 78.5 kg. Powder | Dexon |
| BHC, insecticide, at 4.48 kg. Emulsion in 68000 l | BHC |
| Aldicarb, nematicide, at 11.2 kg. Granules | Aldicarb |
| Formalin, biocide, at 3000 l of a 38% solution of formaldehyde in 64000 l | Formalin |
| Dexon, aldicarb and formalin together at the above rates | Dx/Al/Fo |

NOTE: Treatment Dx/Al/Fo received only aldicarb and formalin treatments in 1971.

Basal applications: Manures: PKNaMg rates as on Barnfield. Weedkiller: Simazine at 1.1 kg in 220 l. Insecticide: Demeton-s-methyl at 0.25 kg in 370 l.

Seed: Maris Bead, sown at 220 kg.

Cultivations, etc.:- Ploughed: 8 Nov, 1972. Formalin applied: 8 Dec. Remaining chemicals applied and all plots rotary cultivated 12 Mar, 1973. Seed sown: 13 Mar. Weedkiller applied: 16 Mar. Insecticide applied: 8 June. Harvested by hand: 29 Aug.

73/R/CS/82

NOTE: Development of wilt was recorded during July and August. Crop samples were taken for root disease assessment. Counts were made of stem eelworm. Numbers of pods, fertile nodes per plant and crop height were recorded.

Standard error per plot.

Grain, tonnes/hectare: 0.491 or 13.6% (15 d.f.)

TABLES OF MEANS

GRAIN: TONNES/HECTARE

CHEMICAL

| None | Dexon | BHC | Aldicarb | Formalin | Dx/Al/Fo | Mean |
|------|-------|------|----------|----------|----------|------|
| 2.71 | 3.80 | 3.22 | 3.83 | 4.00 | 4.16 | 3.62 |

STANDARD ERROR OF DIFFERENCES

CHEMICAL

0.347

Mean D.M. % 86.9