

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 1984

[Full Table of Content](#)



84/R/BE/11 Erynia and Aphid Control - S. Beans

Rothamsted Research

Rothamsted Research (1985) *84/R/BE/11 Erynia and Aphid Control - S. Beans* ; Yields Of The Field Experiments 1984, pp 295 - 296 - DOI: <https://doi.org/10.23637/ERADOC-1-32>

84/R/BE/11

SPRING BEANS

ERYNIA AND APHID CONTROL

Object: To study the effects of applying two amounts of the aphid-pathogenic fungus *Erynia neoaphidis* to two s. bean cultivars differing in susceptibility to black aphids (*Aphis fabae*) - Sawyers I East.

Sponsor: S.K. Mardell.

Design: 4 randomised blocks of 2 plots split into 4.

Whole plot dimensions: 2.67 x 2.13.

Treatments: All combinations of:-

Whole plots

1. VARIETY Varieties and susceptibility to black aphids:

BEAD VS Maris Bead, very susceptible
HERRA LS Herra, less susceptible

Sub plots

2. APH CONT Biological and chemical aphid control:

NONE None

E. neoaphidis applied as a powder of mummified aphids on 11 June and on 24 June, 1984:

E NEO 1 At 0.5 mg per plant on each occasion
E NEO 2 At 5.0 mg per plant on each occasion

PIRIMICA Pirimicarb applied at 0.44 kg in 530 l on 11 June

NOTE: Basal irrigation was applied as follows (mm water):

| | | | |
|---------|------|---------|-------------|
| 4 May | 25 | 3 July | 12.5 |
| 9 May | 16 | 6 July | 12.5 |
| 15 May | 25 | 13 July | 12.5 |
| 15 June | 20 | 20 July | 12 |
| 19 June | 12.5 | 25 July | 12 |
| 29 June | 12.5 | 27 July | <u>12.5</u> |

Total 185 mm

Basal applications: Manures: Chalk at 5.0 t. Weedkiller: Simazine at 1.2 l in 250 l.

Seed: Sown at 200 kg.

Cultivations, etc.: - Chalk applied: 24 Oct, 1983. Heavy spring-tine cultivated twice: 11 Nov. Ploughed: 8 Dec. Heavy spring-tine cultivated, rotary harrowed: 20 Mar, 1984. Seed sown: 22 Mar. Weedkiller applied: 23 Mar. Harvested by hand: 12 Sept. Previous crops: S. barley 1982 and 1983.

84/R/BE/11

- NOTES: (1) Samples of live aphids were examined for infection with Erynia and other fungal pathogens at weekly intervals during June and July.
 (2) Aphid numbers were assessed weekly from mid-June to early August.

GRAIN TONNES/HECTARE

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

| APH CONT VARIETY | NONE | E NEO 1 | E NEO 2 | PIRIMICA | MEAN |
|------------------|------|---------|---------|----------|------|
| BEAD VS | 3.81 | 4.34 | 4.50 | 4.82 | 4.37 |
| HERRA LS | 5.08 | 4.69 | 3.89 | 5.75 | 4.85 |
| MEAN | 4.44 | 4.51 | 4.19 | 5.29 | 4.61 |

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

| TABLE | APH CONT | VARIETY* APH CONT |
|-------|----------|----------------------|
| ----- | ----- | ----- |
| SED | 0.472 | 0.667 |

* WITHIN THE SAME LEVEL OF VARIETY ONLY

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

| STRATUM | DF | SE | CV% |
|-------------|----|-------|------|
| BLOCK.WP.SP | 18 | 0.944 | 20.5 |

GRAIN MEAN DM% 89.3

SUB PLOT AREA HARVESTED 0.00024