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# Yields of the Field Experiments 1983

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## 83/R/BE/13 Times of Applying Erynia - S. Beans

### Rothamsted Research

Rothamsted Research (1984) *83/R/BE/13 Times of Applying Erynia - S. Beans* ; Yields Of The Field Experiments 1983, pp 294 - 295 - DOI: <https://doi.org/10.23637/ERADOC-1-44>

83/R/BE/13

SPRING BEANS

TIMES OF APPLYING ERYNIA

Object: To study the effects of rates and times of applying the aphid-pathogenic fungus *Erynia neoaphidis* on the numbers of black aphids (*Aphis fabae*) and on the yield of s. beans - W. Barnfield II.

Sponsor: N. Wilding.

Design: 4 randomised blocks of 7 plots.

Whole plot dimensions: 2.67 x 2.13.

Treatments:

APH CONT            Chemical and biological aphid control:

NONE                None

Pirimicarb at 0.14 kg in 340 l:

PIRIM E            Applied on 10 June, 1983

PIRIM L            Applied on 29 June

*Erynia neoaphidis* applied as a powder of mummified aphids:

E NEO1 E           At 0.5 mg per plant on 9 June

E NEO1 L           At 0.5 mg per plant on 28 June

E NEO2 E           At 5.0 mg per plant on 9 June

E NEO2 L           At 5.0 mg per plant on 28 June

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

|         |       |
|---------|-------|
| 21 June | 20    |
| 28 June | 25    |
| 5 July  | 12.5  |
| 12 July | 12.5  |
| 15 July | 12.5  |
| 23 July | 12.5  |
| Total   | 95 mm |

Basal applications: Manures: Chalk at 5.0 t. Weedkillers: Glyphosate at 1.4 kg in 250 l. Trietazine with simazine (as 'Aventox' at 2.4 l) in 250 l.

Seed: Minden, sown at 230 kg.

Cultivations, etc.: - Chalk applied: 16 Sept, 1982. Glyphosate applied: 19 Oct. Ploughed: 25 Nov. Spring-tine cultivated twice: 8 Mar, 1983. Seed sown: 9 Mar. Rolled, trietazine and simazine applied: 12 Mar. Combine harvested: 12 Aug. Previous crops: S. barley 1981, w. wheat 1982.

NOTES: (1) Aphid numbers were estimated weekly during June and July.  
(2) Samples of live aphids were examined for infection with *Erynia* and other fungal pathogens.

83/R/BE/13

GRAIN TONNES/HECTARE

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

|          |      |
|----------|------|
| APH CONT |      |
| NONE     | 4.75 |
| PIRIM E  | 5.34 |
| PIRIM L  | 4.89 |
| E NEO1 E | 4.32 |
| E NEO1 L | 4.33 |
| E NEO2 E | 4.72 |
| E NEO2 L | 4.69 |
| MEAN     | 4.72 |

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

|       |          |
|-------|----------|
| TABLE | APH CONT |
| ----- | -----    |
| SED   | 0.203    |

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

| STRATUM  | DF | SE    | CV% |
|----------|----|-------|-----|
| BLOCK.WP | 18 | 0.287 | 6.1 |

GRAIN MEAN DM% 91.3

PLOT AREA HARVESTED 0.00024