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# Yields of the Field Experiments 1980

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## 80/R/BE/11 Spring Beans Species of Entomophthora

### Rothamsted Research

Rothamsted Research (1981) *80/R/BE/11 Spring Beans Species of Entomophthora* ; Yields Of The Field Experiments 1980, pp 292 - 293 - DOI: <https://doi.org/10.23637/ERADOC-1-31>

80/R/BE/11

SPRING BEANS

SPECIES OF ENTOMOPHTHORA

Object: To study the effects of different species of the aphid-pathogenic fungal genus *Entomophthora* on the incidence of black aphids, *Aphis fabae*, and on the yield of s. beans - Gt Knott II.

Sponsor: N. Wilding.

Design: 3 randomised blocks of 7 plots.

Whole plot dimensions: 2.67 x 2.13.

Treatments:

APH CONT            Chemical and biological aphid control:  
NONE                None  
PIRIMICA            Pirimicarb at 0.14 kg in 340 l on 23 June, 1980

*Entomophthora* species applied as a powder of mummified aphids at 5 mg per plant on 22 June:

E APH M            *E. aphidis*  
E FRE M            *E. fresenii*  
E PLA M            *E. planchoniana*  
E OBS M            *E. obscura*

*Entomophthora* applied as resting spores (ex Pasteur Institute) at  $5 \times 10^8$  spores per hectare on 19 June:

E OBS S            *E. obscura*

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

27 May	25
6 June	6
8 June	19
9 June	12
13 June	<u>12</u>
Total	74

Basal applications: Manures: Chalk at 7.5 t. Weedkillers: Trietazine and simazine (as 'Rental SC' at 2.5 l) in 250 l.

Seed: Minden, sown at 150 kg.

Cultivations, etc.: Chalk applied: 8 Oct, 1979. Ploughed: 29 Nov.  
Spring-tine cultivated: 1 Mar, 1980 and 3 Mar. Seed sown: 3 Mar.  
Weedkillers applied: 21 Mar. Harvested by hand: 15 Sept. Previous crops: W. wheat 1978, s. barley 1979.

NOTE: Visual estimates of aphid numbers were made weekly in June and July and samples of 50 live aphids per plot were examined for infection with *Entomophthora* and parasites.

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GRAIN TONNES/HECTARE

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

APH CONT	NONE	PIRIMICA	E APH M	E FRE M	E PLA M	E OBS M	E OBS S	MEAN
	3.28	4.15	4.28	3.60	2.82	3.04	3.35	3.50

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

TABLE                      APH CONT

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SED                              0.521

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

STRATUM	DF	SE	CV%
BLOCK.WP	12	0.638	18.2

GRAIN MEAN DM% 90.3

PLOT AREA HARVESTED 0.00024