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Yields of the Field Experiments 1960

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60/R/CE/1 and 60/W/CE/1 Spring Beans - Control of Aphids (Seed Rates and Spraying)

Rothamsted Research

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60/Ce/1.1

SPRING BEANS

Effect of seed rates and spraying on aphids (*Aphis fabae*) - Rothamsted
(R) Long Hoos V and Woburn (W) Warren Field N 1960.

Design (each field): 4 randomised blocks of 7 plots each, blocks and plots being split into 2 strips for the application of spray.

Area of each sub plot: 0.0118 acres. Area harvested: 0.0074 acres.

Treatments. All combinations of:-

Whole plots. Seed rate, lb per acre: 50; 100; 200; 300; 400; 600, all at 22 inch row spacing; and 600 at 11 inch.

Sub plots. Spray: None; demeton-methyl at 12 fluid oz (50% active ingredients) in 40 gallons per acre.

Basal dressing: 412 lb compound fertiliser (10% P_2O_5 , 20% K_2O) per acre placement drilled with the seed.

Cultivations, etc.:

Long Hoos V (R): Ploughed: Nov 5, 1959. Seed drilled: Mar 17, 1960.
Sprayed with simazine at 2 lb in 40 gallons per acre: Mar 22.
Appropriate sub plots sprayed with demeton-methyl: June 13.
Combine harvested: Sept 5. Variety: Garton's Tick. Previous crop: Oats.

Warren Field N (W): Ploughed: Oct 22 - 26, 1959. Ground chalk applied at 18 cwt per acre: Mar 12, 1960. Seed drilled: Mar 23. Sprayed with simazine at 2 lb in 40 gallons per acre: Mar 25. Appropriate sub plots sprayed with demeton-methyl: June 15. Combine harvested: Sept 24. Variety: Garton's Tick. Previous crop: Spring wheat.

Standard errors per plot, Grain (at 85% dry matter)

Long Hoos V (R), Whole plot: 2.21 cwt per acre or 14.3% (18 d.f.)
Sub plot: 4.21 cwt per acre or 27.3% (21 d.f.)

Warren Field N (W), Whole plot: 2.28 cwt per acre or 14.0% (18 d.f.)
Sub plot: 3.75 cwt per acre or 23.1% (21 d.f.)

60/Ce/1.2

Summary of Results

Grain (at 85% dry matter): cwt per acre

Seed rate: lb per acre

	at 22"						at 11"	Mean
	50	100	200	300	400	600	600	
<u>Long Hoos V (R)</u>								
<u>Spray</u>	(± 1.85) ⁽¹⁾							
None	8.8	7.7	9.2	11.1	12.7	16.0	20.4	12.3
Demeton-methyl	15.1	16.5	20.5	18.6	19.6	19.2	20.7	18.6
Mean (± 1.10)	11.9	12.1	14.9	14.8	16.1	17.6	20.6	15.4
Diff (± 2.98) ⁽²⁾	6.3	8.8	11.3	7.5	6.9	3.2	0.3	6.3

Mean dry matter % as harvested: 69.3

Warren Field N (W)

<u>Spray</u>	(± 1.74) ⁽¹⁾							
	None	2.2	2.4	2.7	5.9	12.0	17.3	22.2
Demeton-methyl	12.1	19.8	22.7	24.5	24.6	26.8	32.2	23.2
Mean (± 1.14)	7.1	11.1	12.7	15.2	18.3	22.0	27.2	16.2
Diff (± 2.65) ⁽²⁾	9.9	17.4	20.0	18.6	12.6	9.5	10.0	14.0

Mean dry matter % as harvested: 68.9

(1) For use in horizontal comparisons only

(2) For use only in testing the difference of two differences.