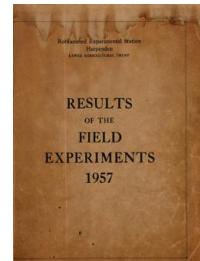


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# Yields of the Field Experiments 1957

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## 57/R/CE/3 and 57/W/CE/3 Beans - Autumn and Spring Sowing , Spraying P and K

**Rothamsted Research**

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57/Ge/3.1

### BEANS

Time of sowing, spraying, P and K - Rothamsted (R) Great Harpenden II and Woburn (W) Warren Field N 1957.

Design: 3 blocks of 4 whole plots each split into 3, with spraying on pairs of whole plots and PK partially confounded.

Area of each sub plot (each field): 0.0337 acres. Area harvested: 0.0105 acres.

Treatments: All combinations of:-

Time of sowing: Autumn; spring.

Spray: None; Methyl demeton at 12 fluid oz., 50% active ingredient in 60 gallons per acre.

Phosphate: None; 0.5; 1.0 cwt  $P_2O_5$  per acre as superphosphate.

Potash: None; 1.0; 2.0 cwt  $K_2O$  per acre as muriate of potash.

Basal dressing: None.

Cultivations, etc.:

Rothamsted. Ploughed: Oct 20, 1956. Fertilizers applied for autumn beans, seed drilled at 295 lb per acre: Nov 13.

Fertilizers applied for spring beans, seed drilled at 150 lb per acre: Mar 5, 1957. Spring beans sprayed with miscible DDT, 3 pints in 20 gallons per acre: May 29. Appropriate plots sprayed with methyl demeton (Metasystox): Autumn sown - June 7, spring sown - June 13. Combine harvested: Aug 29. Variety: Autumn - S.Q.Giant, spring - Albyn Tick. Previous crop: Oats.

Woburn. Ploughed: Nov 12, 1956. Fertilizers applied for autumn beans: Nov 13. Seed drilled at 295 lb per acre: Nov 20.

Ploughed "spring sown" plots: Jan 24, 1957. Fertilizers applied for spring beans, seed drilled at 150 lb per acre: Mar 14. Appropriate plots sprayed with methyl demeton (Metasystox): June 12. Combine harvested: Autumn sown - Aug 8, spring sown - Aug 21. Variety: Autumn - S.Q.Giant, spring - Albyn Tick. Previous crop: Potatoes.

Standard errors per plot, (Grain at 85% dry matter): cwt per acre.  
Great Harpenden II (R)

Whole plot: 1.13 cwt per acre or 4.9% (4 d.f.)

Sub plot: 2.01 cwt per acre or 8.6% (12 d.f.)

Warren Field N (W)

Whole plot: 1.49 cwt per acre or 10.5% (4 d.f.)

Sub plot: 3.22 cwt per acre or 22.7% (12 d.f.)

57/Ce/3.2

Summary of Results

		Grain (at 85% dry matter): cwt per acre								
		Sown	P <sub>2</sub> O <sub>5</sub> : cwt per acre			K <sub>2</sub> O: cwt per acre				
		Autumn Spring Diff.	None 0.5 1.0			None 1.0 2.0				
<u>Spray</u>										
None	32.4	7.6	-24.8	19.4	20.9	19.8	18.5	20.6	20.9	20.0
'Metasystox'	34.3	18.7	-15.6	26.5	26.5	26.5	25.0	27.9	26.7	26.5
Diff.	+1.9	+11.1	+9.2	+7.1	+5.6	+6.7	+6.5	+7.3	+5.8	+6.5
			(±1.14)		(±1.16)***		(±1.16)***			
<u>Sown</u>		Great Harpenden II, Rothamsted								
Autumn				(1) & (2)			(1) & (2)			
Spring				33.1 33.5 33.4			31.4 34.3 34.4			33.3
Mean (±0.58)				12.7 14.0 12.9			12.1 14.2 13.2			13.2
Diff. (±1.15)***					22.9 23.7 23.1		21.7 24.3 23.8			23.3
					-20.4 49.5 -20.5		-19.3 -20.1 -21.2			-20.15
										(±0.65)

Mean dry matter % as harvested: Autumn sown, 82.4; spring sown, 75.4

(1) ±0.81 for use in diagonal comparisons only.

(2) ±0.82 for use in horizontal and interaction comparisons only.

Warren Field N, Woburn											
					(±1.31)*		(±1.31)*				
None	16.9	8.0	-8.9	13.4	11.2	12.7	11.7	14.5	11.1	12.4	
'Metasystox'	23.3	8.7	-14.6	16.7	15.5	15.8	13.6	16.3	18.1	16.0	
Diff.	+6.4	+0.7	-5.7	+3.3	+4.3	+3.1	+1.9	+1.8	+7.0	+3.6	
			(±1.72)		(±1.86)***		(±1.86)***				
<u>Sown</u>		(1) & (2)						(1) & (2)			
Autumn				21.2 18.5 20.5			17.2 22.2 20.7			20.1	
Spring				8.9 8.2 7.9			8.1 8.5 8.4			8.3	
Mean (±0.93)				15.0 13.4 14.2			12.6 15.4 14.6			14.2	
Diff. (±1.74)***				-12.3 -10.3 -12.6			-9.1 -13.7 -12.3			-11.8	
										(±0.86)	

Mean dry matter % as harvested: Autumn sown, 79.5; spring sown, 71.5

(1) ±1.23 for use in diagonal comparisons only.

(2) ±1.31 for use in horizontal and interaction comparisons only.

\* For use in horizontal comparisons only.

\*\* For use only in testing the difference of two differences.