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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/Ce/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 ₂ O ₅ : cwt per acre			K ₂ O: cwt per acre			Mean
	Autumn	Spring	Diff.	None	0.5	1.0	None	1.0	2.0	
Great Harpenden II, Rothamsted										
				(±0.82)*			(±0.82)*			
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 (±1.14)	+7.1	+5.6	+6.7 (±1.16)**	+6.5	+7.3	+5.8 (±1.16)**	+6.5
<u>Sown</u>				(1) & (2)			(1) & (2)			
Autumn				33.1	33.5	33.4	31.4	34.3	34.4	33.3
Spring				12.7	14.0	12.9	12.1	14.2	13.2	13.2
Mean (±0.58)				22.9	23.7	23.1	21.7	24.3	23.8	23.3
Diff. (±1.15)**				-20.4	-9.5	-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 (±1.72)	+3.3	+4.3	+3.1 (±1.86)**	+1.9	+1.8	+7.0 (±1.86)**	+3.6
<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.