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Yields of the Field Experiments 1948

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48/CC/1 Beans - Cultivations and Varieties

Rothamsted Research

Rothamsted Research (1949) *48/CC/1 Beans - Cultivations and Varieties* ; Yields Of The Field Experiments 1948, pp 74 - 76

48/Cc/1.1

BEANS

The comparison of four varieties of beans and the effects on them of two methods of placement, two rates and two times of sowing.

RE - Great Field I 1948

System of replication: 4 randomized blocks of 8 plots each, the effect of time of sowing and certain high order interactions being confounded with block differences.

Area of each plot: 0.0286 acre.

Treatments:

Varieties: Giant, Essex, Lines and Wilts.

Methods of placement: Seed broadcast before ploughing, dropped in furrow during ploughing.

Rate of sowing: 2 cwt, 3 cwt seed per acre.

Time of sowing: Early, Oct 28th. Late, Nov 18th.

Basal dressings: Dung: 10 tons per acre

Superphosphate 2 cwt per acre drilled across the plots

Muriate of potash: 2 cwt per acre

Nitrochalk: 2 cwt per acre.

Cultivations etc: Superphosphate and Muriate of Potash applied: Oct 20.

Dung applied, ploughed in, beans placed in furrows, 1st sowing "Early":

Oct 27-29. Tractor rolled and disced each way after ploughing: Oct 29.

Chalk 45 cwt per acre applied: Nov 6. Dung spread, ploughed in beans

placed in furrows, 2nd sowing "Late": Nov 17-18. Harrowed "Early"

plots: Mar 16. Ring rolled all plots: Mar 30. Harrowed late plots:

Mar 31. Nitrochalk applied: May 4. Harvested: Aug 25. Previous

crop: Linseed.

Standard errors per plot :

Grain: 2.62 cwt per acre or 10.7% (11 d.f.)

Straw: 4.40 cwt per acre or 11.2% (11 d.f.)

4.8/Cc/1.2

Grain: cwt per acre

	Giant	Essex	Lincoln -shire	Wilts	Mean
(±0.92) Mean	23.8	26.5	24.4	23.2	24.5
(±1.31) Broadcast	23.2	25.3	24.4	24.1	24.3
Ploughed In	24.3	27.7	24.3	22.3	24.6(±0.65)
(±1.85) Ploughed In -Broadcast	1.1	2.4	-0.1	-1.8	0.3(±0.92)
Seed rate per acre					
(±1.31) 2 cwt	21.5	24.1	22.8	22.1	22.6(±0.65)
3 cwt	26.1	28.9	26.0	24.3	26.3(±0.65)
(±1.85) 3 cwt - 2 cwt	4.6	4.8	3.2	2.2	3.7(±0.92)
(±1.85) ^{xx} Early-Late Sowing	4.1	8.0	7.2	6.0	

	Seed rate per acre		Difference	Early- Late Sowing
	2 cwt	3 cwt		
(±0.92) Broadcast	22.4	26.1	3.7(1)	7.1
Ploughed in	22.8	26.5	3.7(1)	5.5
(±1.31) Difference	0.4	0.4	0.0(2)	-1.6(2)
Early-Late Sowing	7.3	5.3	-2.0(2)	

Standard errors (1) ±1.31

(2) ±1.85

^{xx} Standard error for comparison between main effects only

48/Cc/1.3

Straw: cwt per acre

	Giant	Essex	Lincoln -shire	Wilts	Mean
(±1.56) Mean	39.6	38.5	38.7	40.3	39.3
(±2.20) Broadcast	39.3	36.8	39.8	40.2	39.0 (±1.10)
(±2.20) Ploughed In	39.9	40.3	37.7	40.4	39.6 (±1.10)
(±3.11) Ploughed In -Broadcast	0.6	3.5	-2.1	0.2	0.6 (±1.56)
Seed rate per acre					
(±2.20) 2 cwt	36.4	34.9	36.9	37.3	36.4 (±1.10)
(±2.20) 3 cwt	42.8	42.1	40.6	43.3	42.2 (±1.10)
(±3.11) 3 cwt - 2 cwt	6.4	7.2	3.7	6.0	5.8 (±1.56)
(±3.11) [#] Early-Late Sowing	7.5	8.2	9.2	11.6	

	Seed rate per acre 2 cwt	Seed rate per acre 3 cwt	Difference	Early- Late Sowing
(±1.56) Broadcast	36.7	41.3	4.6(1)	10.8
(±1.56) Ploughed In	36.0	43.1	7.1(1)	7.4
(±2.20) Ploughed In -Broadcast	-0.7	1.8	2.5(2)	-3.4(2)
(±2.20) Early-Late Sowing	8.9	9.3	0.4(2)	

Standard Errors (1) (±2.20)

(2) (±3.11)

[#] Standard error for comparison between main effects only