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71/R/BE/9 Seed Rates, Row Spacing and Growth Regulators - Beans

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71/R/BE/9

SPRING BEANS

SEED RATES, ROW SPACING AND GROWTH REGULATORS

Object: To study the effects of plant density and growth regulators on yield of beans- Long Hoos V.

Design: 3 randomised blocks of 4 plots, split into 4.

Whole plot dimensions: 2.74 x 17.1. Sub plot area harvested: 0.00019.

Treatments:

Whole plots: All combinations of:-

1. Seed rates: 224 (1), 448 (2) kg.
2. Distance between rows: 50.8 cm (20 inches) (W), 12.7 cm (5 inches) (C).

Sub plots:

3. Growth regulators: None (0), 'B9' at 4.48 kg a.i. on one occasion (B1), B9 at 4.48 kg a.i. on each of three occasions (B3), PP412 at 4.48 kg a.i. on one occasion (F1). Each as a spray in 629 l.

Basal applications: 415 kg (0:14:28) broadcast and rotary cultivated in. Weedkiller: Simazine at 0.84 kg in 337 l. Insecticide: Demeton-s-methyl at 245 g in 337 l.

Cultivations, etc.: Ploughed: 29 Oct, 1970. Basal PK applied: 4 Mar, 1971. Rotary cultivated, seed drilled: 12 Mar. Weedkiller applied: 17 Mar. Growth regulators applied: B1 and B3 - 11 May, B3 - 2 June and 23 June, F1 - 23 June. Insecticide applied: 29 June. Harvested by hand: 6 Sept. Variety: Tarvin. Previous crops: Potatoes 1969, spring wheat 1970.

NOTE: Stem heights were measured. Counts were made of the number of stems and pods. 1000 grain weights were measured.

Standard errors per plot.

Grain, tonnes/hectare: Whole plot: 0.209 or 5.8% (6 d.f.)
Sub plot: 0.267 or 7.5% (24 d.f.)

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SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

	1	2	0	B1	B3	F1	Mean
	(±0.120)		(1) and (2)				(±0.085)
W	3.35	3.68	3.35	3.48	4.24	2.99	3.51
C	3.50	3.75	3.29	3.65	4.25	3.30	3.62
			(1) and (2)				(±0.085)
		1	3.16	3.38	4.09	3.06	3.42
		2	3.48	3.75	4.40	3.23	3.71
Mean (±0.077)			3.32	3.57	4.25	3.14	3.57

Mean D.M. %: 83.3

(1) (±0.127) For use in vertical and diagonal comparisons only

(2) (±0.109) For use in horizontal and interaction comparisons only