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81/R/BE/14 Precision Sowing - S. Beans

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81/R/BE/14

SPRING BEANS

PRECISION SOWING

Object: To study the effects of precision sowing and four seed rates on the yield of s. beans - Whittlocks.

Sponsors: J. McEwen, D.P. Yeoman.

Design: 3 blocks of 8 plots, randomisation restricted.

Whole plot dimensions: 2.84 x 8.23.

Treatments: All combinations of:-

1. DRILL Drills:

STANDARD	Standard farm drill sowing seed irregularly
PRECISN	Precision drill (Nodet Gougis) sowing seed evenly spaced

2. POPULATN Plant populations (thousands per hectare):

	Target population	Populations achieved	
		STANDARD	PRECISN
3	300	273	256
4	400	344	355
5	500	422	454
6	600	540	530

NOTE: Seed was sown in rows spaced 36 cm (14 inches) apart.

Basal applications: Manures: Chalk at 7.5 t. Weedkillers: Trietazine at 1.0 kg with simazine at 0.14 kg in 250 l. Fungicide: Benomyl at 0.56 kg in 250 l applied with the insecticide. Insecticide: Pirimicarb at 0.14 kg.

Seed: Minden.

Cultivations, etc.: - Chalk applied: 2 Sept, 1980. Ploughed: 29 Dec. Spring-tine cultivated twice: 19 Feb, 1981, 7 Apr. Heavy spring-tine cultivated: 6 Apr. Seed sown: 7 Apr. Weedkillers applied: 9 Apr. Fungicide and insecticide applied: 18 June. Combine harvested: 9 Sept. Previous crops: W. wheat 1979, s. barley 1980.

NOTES: Sowing depths were measured. Establishment counts were made. Components of yield were measured at maturity. Incidence of Sitona larvae was assessed.

81/R/BE/14

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

POPULATN	3	4	5	6	MEAN
DRILL					
STANDARD	3.37	3.36	3.31	3.55	3.40
PRECISN	3.30	3.49	3.10	3.57	3.37
MEAN	3.33	3.43	3.21	3.56	3.38

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	DRILL	POPULATN	DRILL POPULATN

SED	0.153	0.217	0.306

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	14	0.375	11.1

GRAIN MEAN DM% 86.6

PLOT AREA HARVESTED 0.00176