

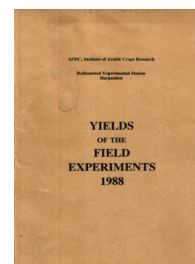
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88/R/BE/4 Varieties, Row Spacing and Plant Health - S. Beans

Rothamsted Research

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88/R/BE/4

SPRING BEANS

VARIETIES, ROW SPACING AND PLANT HEALTH

Object: To compare four varieties of spring-sown field beans at two row spacings and two amounts of pest and disease control - Long Hoos I/II.

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

Design: 3 randomised blocks of 16 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments: All combinations of:-

1. **VARIETY** Varieties sown at 60 seeds per square metre:

ALFRED
MINDEN
TICOL
TROY
2. **ROW SPAC** Spacing between rows (cm):

12
48
3. **PATHCONT** Pest and pathogen control:

STANDARD None
ENHANCED Economic enhanced to include:
Deltamethrin at 0.0079 kg in 200 l on 26 Apr, 1988 and 17 May.
Pirimicarb at 0.14 kg in 200 l on 20 May.
Benomyl at 0.50 kg with chlorothalonil at 1.0 kg and a wetting agent ('Enhance' at 0.03 l) in 200 l on 20 June.
Maneb at 0.80 kg and mancozeb at 0.80 kg in 200 l on 29 June.

Basal applications: Weedkillers: Trietazine at 1.2 kg and simazine at 0.17 kg in 200 l.

Cultivations, etc.:- Ploughed: 1 Dec, 1987. Heavy spring-tine cultivated twice: 7 Mar, 1988. Rotary harrowed, seed sown: 9 Mar. Weedkillers applied: 17 Mar. Combine harvested: 20 Sept. Previous crops: W. wheat 1986 and 1987.

NOTE: Establishment counts were made. Disease assessments were made in July and August. At maturity, plant heights, lodging and components of yield were assessed.

88/R/BE/4

GRAIN TONNES/HECTARE

***** Tables of means *****

ROW SPAC	12	48	Mean
VARIETY			
ALFRED	6.17	5.99	6.08
MINDEN	5.84	5.56	5.70
TICOL	4.54	4.68	4.61
TROY	4.86	5.28	5.07
Mean	5.35	5.38	5.36

PATHCONT	STANDARD	ENHANCED	Mean
VARIETY			
ALFRED	4.90	7.26	6.08
MINDEN	5.30	6.10	5.70
TICOL	3.97	5.25	4.61
TROY	4.33	5.81	5.07
Mean	4.62	6.10	5.36

PATHCONT	STANDARD	ENHANCED	Mean
ROW SPAC			
12	4.70	6.00	5.35
48	4.54	6.21	5.38
Mean	4.62	6.10	5.36

	ROW SPAC	12	48	
VARIETY	PATHCONT	STANDARD	ENHANCED	STANDARD ENHANCED
ALFRED		5.16	7.18	4.64 7.34
MINDEN		5.45	6.22	5.14 5.98
TICOL		3.88	5.21	4.07 5.28
TROY		4.33	5.39	4.33 6.22

*** Standard errors of differences of means ***

VARIETY	ROW SPAC	PATHCONT	VARIETY
			ROW SPAC
0.171	0.121	0.121	0.242
VARIETY	ROW SPAC	VARIETY	
PATHCONT	PATHCONT	ROW SPAC	
		PATHCONT	
0.242	0.171	0.342	

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	30	0.419	7.8
GRAIN MEAN DM%	84.3		
PLOT AREA HARVESTED	ROW SPAC		
	12	0.00330	
	ROW SPAC		
	48	0.00312	