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## Yields of the Field Experiments 1988

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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
<b>VARIETY</b>			
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
<b>VARIETY</b>			
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
<b>ROW SPAC</b>			
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	
<b>VARIETY</b>	<b>PATHCONT</b>	<b>STANDARD</b>	<b>ENHANCED</b>	<b>STANDARD ENHANCED</b>
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 \*\*\*

<b>VARIETY</b>	<b>ROW SPAC</b>	<b>PATHCONT</b>	<b>VARIETY</b>
0.171	0.121	0.121	<b>ROW SPAC</b>
			0.242
<b>VARIETY</b>	<b>ROW SPAC</b>	<b>VARIETY</b>	
<b>PATHCONT</b>	<b>PATHCONT</b>	<b>ROW SPAC</b>	
		<b>PATHCONT</b>	
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	<b>ROW SPAC 12</b>	0.00330	
	<b>ROW SPAC 48</b>	0.00312	