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77/R/LP/2 Seed Rates, Row Spacing and Pathogen Control - Lupins

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77/R/LP/2

LUPINS

SEED RATES, ROW SPACING AND PATHOGEN CONTROL

Object: To study the effects of seed rates, row spacing and pathogen control on yields and incidence of pests and diseases - Long Hoos VI/VII 1.

Sponsors: J.C. Wilson, G.A. Salt, A.J. Cockbain.

Design: 2 randomised blocks of 3 x 3 x 2.

Whole plot dimensions: 3.05 x 7.62.

Treatments: All combinations of:-

1. SEEDRATE Seed Rates (kg):

120
240
360

2. ROW SPAC Spacing between rows:

13 CM 13 cm (5 inches)
25 CM 25 cm (10 inches)
38 CM 38 cm (15 inches)

3. PATHCONT Pathogen control:

NONE None
FULL Aldicarb at 10 kg + benomyl at 32 kg to seedbed + foliar
 spray of fenitrothion at 0.7 kg in 340 l applied on
 1 June.

Basal applications: Manures: (0:14:28) at 880 kg. Weedkiller: Trifluralin at 0.9 kg in 340 l.

Seed: Kievsky.

Cultivations, etc.:- PK applied: 9 Nov, 1976. Ploughed: 15 Dec, 18 Jan, 1977. Weedkiller applied, power harrowed: 6 Apr. Aldicarb applied to PATHCONT FULL plots, all plots power harrowed: 7 Apr. Benlate applied to PATHCONT FULL plots, all plots power harrowed: 15 Apr. Seed sown: 21 Apr. Combine harvested: 8 Nov. Previous crops: Potatoes 1975, wheat 1976.

NOTE: Incidence of pests and diseases was measured throughout the season.

77/R/LP/2

GRAIN TONNES/HECTARE

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

ROW SPAC	13 CM	25 CM	38 CM	MEAN
SEEDRATE				
120	1.98	2.07	1.87	1.97
240	2.13	2.23	2.12	2.16
360	2.12	1.99	1.91	2.01
MEAN	2.08	2.10	1.97	2.05

PATHCONT	NONE	FULL	MEAN
SEEDRATE			
120	1.91	2.04	1.97
240	2.13	2.19	2.16
360	1.97	2.05	2.01
MEAN	2.00	2.09	2.05

PATHCONT	NONE	FULL	MEAN
ROW SPAC			
13 CM	2.06	2.09	2.08
25 CM	2.05	2.14	2.10
38 CM	1.90	2.03	1.97
MEAN	2.00	2.09	2.05

ROW SPAC	13 CM	25 CM	38 CM			
PATHCONT	NONE	FULL	NONE	FULL	NONE	FULL
SEEDRATE						
120	1.88	2.08	2.02	2.11	1.82	1.92
240	2.17	2.10	2.19	2.26	2.04	2.20
360	2.13	2.10	1.94	2.04	1.84	1.99

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

TABLE	SEEDRATE	ROW SPAC	PATHCONT	SEEDRATE ROW SPAC
SED	0.062	0.062	0.050	0.107

TABLE	SEEDRATE PATHCONT	ROW SPAC PATHCONT	SEEDRATE ROW SPAC PATHCONT
SED	0.087	0.087	0.151

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

STRATUM	DF	SE	CV%
BLOCK.WP	17	0.151	7.4
GRAIN MEAN DM%	64.1		
PLOT AREA HARVESTED	0.00002		