

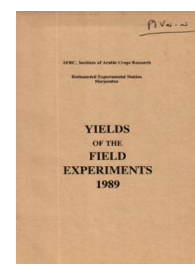
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# Yields of the Field Experiments 1989

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## Lupins

### Rothamsted Research

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89/R/LP/1

WINTER LUPINS

VARIETIES, SOWING DATES AND SEED DRESSINGS

**Object:** To compare three varieties of lupin (*Lupinus albus*) sown at two sowing dates with and without a seed dressing - Long Hoos III 6.

**Sponsors:** J. McEwen, H.L. Jones, D.P. Yeoman, A.W. Ferguson, J.F. Jenkyn.

**Design:** 2 randomised blocks of 12 plots.

**Whole plot dimensions:** 1.8 x 9.0.

**Treatments:** All combinations of:-

Whole plots

- |                     |  |
|---------------------|--|
| 1. <b>VARIETY</b>   | Varieties:   |
| C 8                 | C 8  |
| LUCKY               | Lucky  |
| VLADIMIR            | Vladimir   |
| 2. <b>SOW DATE</b>  | Dates of sowing:   |
| 21 SEPT             | 21 September, 1988   |
| 2 NOV               | 2 November   |
| 3. <b>FUNGICIDE</b> | Fungicides:  |
| NONE                | None   |
| F+C+T+B             | Fosetyl-aluminium, captan and thiabendazole, to seed plus benomyl at 0.50 kg and chlorothalonil at 1.0 kg applied in 220 l on 15 Mar, 1989 |

**NOTE:** Plots were netted from October to May.

**Basal applications:** Manure: Muriate of potash at 520 kg. Weedkillers: Terbutryne at 0.98 kg and terbuthylazine at 0.42 kg in 220 l repeated at 0.49 kg and 0.21 kg respectively in 220 l to first sowing only. Metamitron at 2.8 kg applied with the benomyl, chlorothalonil and pirimicarb in 220 l. Fungicides: Benomyl at 0.50 kg with chlorothalonil at 1.0 kg. Benomyl at 0.56 kg applied with pirimicarb in 220 l. Insecticides: Pirimicarb at 0.14 kg on two occasions. Deltamethrin at 7.5 g in 220 l. Molluscicides: Methiocarb at 0.60 kg to first sowing and at 0.27 kg to second sowing. Metaldehyde at 0.94 kg.

**Seed:** Sown at 60 seeds per square metre.

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**Cultivations, etc.:-** Ploughed: 7 June, 1988. Rotary cultivated: 5 Aug.  
K applied: 15 Sept. Rotary harrowed, first sowing date seed sown:  
21 Sept. Terbutryne and terbutylazine applied: 29 and 30 Sept to  
first sowing only. Methiocarb applied to first sowing: 26 Oct.  
Second sowing date seed sown, terbutryne and terbutylazine applied  
and methiocarb applied: 2 Nov. Metaldehyde applied: 15 Mar, 1989.  
Metamitron, benomyl, chlorothalonil and pirimicarb applied: 28 Apr.  
Deltamethrin applied: 9 May. Pirimicarb and benomyl applied: 9 June.  
Combine harvested: 23 Aug. Previous crops : Potatoes 1987, fallow  
1988.

**NOTE:** All plots sown with **VARIETY VLADIMIR** failed and have been omitted  
from the analysis.

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GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

FUNGCIDE	NONE	F+C+T+B	Mean
VARIETY			
C 8	2.10	1.31	1.71
LUCKY	2.08	1.75	1.91
Mean	2.09	1.53	1.81
SOW DATE	21 SEPT	2 NOV	Mean
VARIETY			
C 8	1.82	1.59	1.71
LUCKY	1.76	2.07	1.91
Mean	1.79	1.83	1.81
SOW DATE	21 SEPT	2 NOV	Mean
FUNGCIDE			
NONE	2.21	1.98	2.09
F+C+T+B	1.37	1.68	1.53
Mean	1.79	1.83	1.81
VARIETY	SOW DATE	21 SEPT	2 NOV
	FUNGCIDE		
C 8	NONE	2.29	1.92
	F+C+T+B	1.36	1.27
LUCKY	NONE	2.13	2.04
	F+C+T+B	1.39	2.10

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

VARIETY	FUNGCIDE	SOW DATE	VARIETY
			FUNGCIDE
0.202	0.202	0.202	0.286
VARIETY	FUNGCIDE	VARIETY	
SOW DATE	SOW DATE	FUNGCIDE	
		SOW DATE	
0.286	0.286	0.404	

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	7	0.404	22.3

GRAIN MEAN DM% 87.7

PLOT AREA HARVESTED 0.00162

89/R/LP/2

## SPRING LUPINS

### VERNALIZATION STUDY

**Object:** To study the effects of a range of periods of vernalization on the growth, date of maturity and yield of two varieties of lupins (*Lupinus albus*) - Long Hoos IV O & E S.W.

**Sponsors:** G.F.J. Milford, L.A. Mullen, D.P. Yeoman.

**Design:** A single replicate of 28 plots.

**Whole plot dimensions:** 1.5 x 2.0.

**Treatments:** All combinations of:-

1. **SOWDATE**                      Dates of sowing:

8 MARCH  
29 MARCH

2. **VARIETY**                      Varieties:

C8  
VLADIMIR

3. **VERNTIME**                      Period of vernalization at 1 degree C:

NONE  
1 WEEK  
2 WEEKS  
3 WEEKS  
4 WEEKS  
5 WEEKS  
6 WEEKS

**Basal applications:** Manures: (0:18:36) at 1080 kg. Magnesian limestone at 2.6 t. Weedkillers: Glyphosate at 0.72 kg in 220 l. Paraquat at 0.54 kg in 220 l. Terbutryne at 0.98 kg and terbuthylazine at 0.42 kg in 220 l. Insecticides: Deltamethrin at 7.5 g in 220 l. Pirimicarb at 0.14 kg in 220 l. Molluscicides: Methiocarb at 0.40 kg applied twice. Metaldehyde at 0.94 kg.

**Cultivations, etc.:-** Glyphosate applied: 13 Oct, 1988. PK applied: 26 Oct. Paraquat applied: 24 Nov. Magnesian limestone applied: 30 Nov. Ploughed: 8 Dec. Rotary cultivated, first sowing date seed sown, methiocarb applied: 8 Mar, 1989. Terbutryne and terbuthylazine applied to first sowing, methiocarb applied: 15 Mar. Rotary cultivated, second sowing date seed sown, rolled: 29 Mar. Terbutryne and terbuthylazine applied to second sowing: 30 Mar. Metaldehyde applied: 31 Mar. Deltamethrin applied: 9 May. Pirimicarb applied: 5 July. Hand harvested: 20 Sept. Previous crops: S.barley 1987 and 1988.

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NOTES: (1) All plots sown with **VARIETY** VLADIMIR failed and only the results from **VARIETY** C8 are presented.  
 (2) Grain mean dry matter percentages are not available.

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

SOW DATE	8 MARCH	29 MARCH	Mean
VERNTIME			
NONE	0.80	0.93	0.86
1 WEEK	0.42	0.59	0.51
2 WEEKS	0.09	0.92	0.51
3 WEEKS	0.81	1.14	0.97
4 WEEKS	0.53	0.85	0.69
5 WEEKS	0.88	1.29	1.08
6 WEEKS	0.21	1.14	0.67
Mean	0.53	0.98	0.76

PLOT AREA HARVESTED 0.00030