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## Yields of the Field Experiments 1997

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### 97/R/LP/3 Pod Development and Yield - Lupins

#### Rothamsted Research

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97/R/LP/3

LUPINS

POD DEVELOPMENT AND YIELD

**Object:** To monitor the role of nitrogen in pod abortion, development and yield. To determine the relationship between leaves and pods in supplying carbohydrate to the seed - Stackyard.

**Sponsors:** J.E. Leach, G.F.J. Milford, I. Shield.

**Design:** 4 randomised blocks of 5 plots.

**Whole plot dimensions:** 6.0 x 9.0.

**Treatments:**

T	Nitrogen or leaf removal:
-	None
SN	Spring nitrogen
FN	Foliar nitrogen
HL	Half leaves removed
AL	All leaves removed

**Experimental diary:**

25-Jun-96 : B : Ploughed and furrow pressed.  
26-Jul-96 : B : Rolled.  
12-Sep-96 : B : Spring-tine cultivated.  
13-Sep-96 : B : Rotary harrowed.  
16-Sep-96 : B : Rotary harrowed, DETN 20, undressed, drilled at 40 seeds per m<sup>2</sup>.  
23-Sep-96 : B : Stomp 400 SC at 5.0 l in 294 l. Spannit at 1.5 l in 294 l.  
04-Oct-96 : B : Irrigated 25 mm.  
08-Nov-96 : B : Carbetamex at 3.0 kg with MSS Simazine 50 FL at 2.3 l in 200 l. Decis at 300 ml in 200 l.  
12-Dec-96 : B : Rovral Flo at 1.0 l in 200 l. Standon Tebuconazole at 0.5 l in 200 l.  
20-Mar-97 : T : T SN: 46% N at 217 kg.  
27-Mar-97 : T : T SN: 46% N at 217 kg.  
01-May-97 : B : Compass at 3.0 l in 200 l.  
19-May-97 : T : T SN: 46% N at 217 kg.  
18-Jun-97 : B : Mistral at 1.0 l in 300 l.  
24-Jun-97 : T : T FN: 46% N at 32.6 kg.  
01-Jul-97 : T : T FN: 46% N at 32.6 kg.  
03-Jul-97 : T : T HL, AL: Leaf removal started.  
07-Jul-97 : T : T FN: 46% N at 32.6 kg.  
08-Jul-97 : B : Danadim Dimethoate 40 at 850 ml in 300 l.  
14-Jul-97 : T : T FN: 46% N at 32.6 kg.  
16-Jul-97 : T : T HL, AL: Leaf removal finished.  
05-Sep-97 : B : Harvest at 3.0 l in 400 l.  
23-Sep-97 : B : Combine harvested.

Previous crops: W. wheat 1995, set-aside 1996.

97/R/LP/3

- NOTES: (1) Dry matter was assessed regularly and light interception measured April to August. Leaf pod photosynthesis was measured frequently. Components of yield were measured at harvest and plant nitrogen content.
- (2) 46% N was applied to one half plot of T -, in error, this has been omitted from the analysis.
- (3) Because of poor emergence the yields of one block was lost and omitted from the analysis.

GRAIN TONNES/HECTARE

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

T	
-	1.75
SN	1.90
FN	1.56
HL	1.41
AL	0.91
Mean	1.51

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

T	
0.208	

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	8	0.294	19.5
GRAIN MEAN DM%	86.5		
PLOT AREA HARVESTED	0.00216		