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ROTHAMSTED RESEARCH

Yields of the Field Experiments 1990

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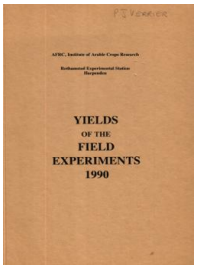

90/R/LP/1 Varieties and Growth Regulators - W. Lupins

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90/R/LP/1

WINTER LUPINS

VARIETIES AND GROWTH REGULATORS

Object: To study the effects of two growth regulators on the growth, maturity and yield of two winter lupin varieties - Long Hoos VI/VII 5.

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

Design: 2 randomised blocks of 16 plots.

Whole plot dimensions: 1.8 x 9.0.

Treatments: All combinations of:-

Whole plots

1. **VARIETY** — Varieties:

C 8	C 8
LUCKY	Lucky

2. **GROW REG** — Growth regulators:

2 CHLORO	2-chloroethylphosphonic acid
TRIAPENT	Triapenthanol

3. **G R RATE** — Rates of growth regulator (g):

	2 CHLORO	TRIAPENT
1	100	150
3	300	450
6	600	900

plus two extra treatments:

EXTRA

C 8 0	C8 without growth regulator
LUCKY 0	Lucky without growth regulator

NOTES: (1) Each block contained two additional EXTRA plots for ancillary studies.
(2) Plots were netted from October to April.
(3) Growth regulators were applied in 300 l on 17 May, 1990.

Basal applications: Manures: (0:18:36) at 1.1 t. Weedkillers: Terbuthylazine at 0.42 kg and terbutryn at 0.98 kg in 200 l. Fluazifop-P-butyl at 0.19 kg applied with a wetting agent, 'Vassgrow', in 220 l. Insecticides: Deltamethrin at 7.5 g in 200 l. Dimethoate at 0.34 kg in 400 l. Irrigation: 25 mm. Previous crops: Lupins 1988, s. barley 1989.

Seed: Sown at 60 seeds per square metre.

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90/R/LP/1

Cultivations, etc.:- PK applied: 22 Aug, 1989. Ploughed: 29 Aug. Rotary cultivated: 13 Sept. Spiked rotary cultivated and harrowed: 14 Sept. Seed sown, chain harrowed and rolled: 15 Sept. Terbuthylazine and terbutryn applied: 19 Sept. Irrigation applied: 25 Sept. Fluazifop-P-butyl with wetting agent applied: 8 Dec. Hand weeded: 27 Mar, 1990 - 6 Apr. Deltamethrin applied: 25 Apr. Dimethoate applied: 17 May. Combine harvested: 11 Sept.

NOTE: Plants were counted at establishment and in spring. Plant heights were measured and flowering dates were recorded. Components of yield were measured at maturity.

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

GROW REG	2 CHLORO	TRIAPENT	Mean
VARIETY			
C 8	4.03	4.59	4.31
LUCKY	0.45	1.38	0.91
Mean	2.24	2.98	2.61

G R RATE	1	3	6	Mean
VARIETY				
C 8	4.30	4.33	4.29	4.31
LUCKY	0.26	0.98	1.50	0.91
Mean	2.28	2.66	2.90	2.61

G R RATE	1	3	6	Mean
GROW REG				
2 CHLORO	2.15	2.20	2.37	2.24
TRIAPENT	2.41	3.11	3.43	2.98
Mean	2.28	2.66	2.90	2.61

	G R RATE	1	3	6
VARIETY	**GROW REG**			
C 8	2 CHLORO	4.29	3.96	3.83
	TRIAPENT	4.30	4.71	4.76
LUCKY	2 CHLORO	0.00	0.44	0.91
	TRIAPENT	0.51	1.52	2.09

EXTRA	C 8 0	LUCKY 0	Mean
	4.20	0.87	2.54

GRAND MEAN 2.59

GRAIN MEAN DM% 66.9

PLOT AREA HARVESTED 0.00130

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