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Yields of the Field Experiments 1982

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82/R/CS/280 *Rhizobium* Strains - Lucerne, *Melilotus alba*

Rothamsted Research

Rothamsted Research (1983) *82/R/CS/280 Rhizobium Strains - Lucerne, Melilotus alba* ; Yields Of The Field Experiments 1982, pp 181 - 182 - DOI: <https://doi.org/10.23637/ERADOC-1-33>

82/R/CS/280

RHIZOBIUM STRAINS

Object: To compare the effectiveness of five strains of *Rhizobium meliloti* in fixing nitrogen with lucerne and *Melilotus alba* - Claycroft.

Sponsor: A. Fyson.

The first year, lucerne and *Melilotus alba*.

Design: 4 randomised blocks of 2 plots split into 6.

Whole plot area: 7.0 x 39.0.

Treatments: All combinations of:-

Whole plots

1. SPECIES	Species:
LUCERNE	Lucerne, Vertus
MEL ALBA	<i>Melilotus alba</i>

Sub plots

2. RM STRN	Strain of <i>Rhizobium meliloti</i> :
RCR 2001	RCR 2001
MEL 5	MEL 5
MEL 10	MEL 10
MEL 16	MEL 16
MEL 17	MEL 17
MIXTURE	Mixture of all above strains

Basal applications: Manures: (0:18:36) at 250 kg.

Seed: Both species sown at 10 kg.

Cultivations, etc.: - Ploughed: 27 Nov, 1981. PK applied: 20 Apr, 1982.
Power harrowed, seed sown: 21 Apr. Cut by hand: 23 July, 7 Sept.
Discards cut by machine: 1 Dec. Previous crops: W. wheat 1980, w. wheat 1981.

NOTE: Yields were recorded only from the harvest on 23 July. Nodules were sampled in July and September for identification of *Rhizobium* strains.

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1ST CUT (23/7/82) DRY MATTER TONNES/HECTARE

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

SPECIES	LUCERNE	MEL ALBA	MEAN
RM STRN			
RCR 2001	4.30	10.57	7.43
MEL 5	4.67	7.00	5.83
MEL 10	4.83	7.87	6.35
MEL 16	4.60	10.67	7.63
MEL 17	5.23	9.47	7.35
MIXTURE	4.00	10.70	7.35
MEAN	4.61	9.38	6.99

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

TABLE	SPECIES	RM STRN	SPECIES RM STRN

SED	0.574	0.979	1.388
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
SPECIES			1.385

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	30	1.959	28.0
PLOT AREA HARVESTED	0.00001		