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83/R/CS/280 *Rhizobium* Strains - Lucerne and *Melilotus alba*

Rothamsted Research

Rothamsted Research (1984) *83/R/CS/280 Rhizobium Strains - Lucerne and Melilotus alba* ; Yields Of The Field Experiments 1983, pp 174 - 175 - DOI: <https://doi.org/10.23637/ERADOC-1-44>

83/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 second year, lucerne and *Melilotus alba*.

For first year see 82/R/CS/280.

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> inoculum used in 1982:
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 690 kg.

Seed: Both species sown at 10 kg, in 1982.

Cultivations, etc.: - PK applied: 11 Jan, 1983. Cut: 9 June.

NOTES: (1) *Melilotus alba* failed after cutting and the experiment ceased.
(2) N content of produce was measured.

83/R/CS/280

1ST CUT (9/6/83) DRY MATTER TONNES/HECTARE

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

SPECIES	LUCERNE	MEL ALBA	MEAN
RM STRN			
RCR 2001	4.48	5.81	5.15
MEL 5	4.21	5.47	4.84
MEL 10	4.33	5.45	4.89
MEL 16	4.58	5.14	4.86
MEL 17	4.42	5.69	5.06
MIXTURE	4.32	5.60	4.96
MEAN	4.39	5.53	4.96

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

TABLE	SPECIES	RM STRN	SPECIES RM STRN
SED	0.139	0.237	0.336
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: SPECIES			
			0.336

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	30	0.475	9.6
1ST CUT MEAN DM%	18.4		
SUB PLOT AREA HARVESTED	0.00070		