

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED  
RESEARCH

# Yields of the Field Experiments 1976

[Full Table of Content](#)

## 76/R/CS/13 N Levels to Old Grass - Old Grass

### Rothamsted Research

Rothamsted Research (1977) *76/R/CS/13 N Levels to Old Grass - Old Grass* ; Yields Of The Field Experiments 1976, pp 128 - 130 - DOI: <https://doi.org/10.23637/ERADOC-1-15>

76/R/CS/13

N LEVELS TO OLD GRASS

Object: To study the effects of a range of nitrogen rates on yield and botanical composition of very old permanent pasture given a single dressing of P and K annually. N fixed by legumes is estimated and the effect of treatments on nutrients available in the soil is also studied - Park Grass Old Plot 6.

Sponsor: A.E. Johnston.

The 12th year, old grass.

For previous years see 65/C/33(t), 66/C/14, 67/C/10(t), 68/C/8(t), 69/R/CS/13(t), 70/R/CS/13(t), 71/R/CS/13, 72/R/CS/13(t) and 73-75/R/CS/13.

Design: 4 randomised blocks of 10 plots.

Whole plot dimensions: 1.83 x 10.1.

Treatments

TOTAL N	Fertiliser nitrogen (kg N-total per annum applied in four equal dressings as 25:0:16):
0(S)	0 (sprayed with 2,4-D to control legumes, two plots per block)
0	0 (two plots per block)
75	75
150	150
225	225
300	300
375	375
450	450

NOTE: 2,4-D ester applied as 'Dicotox Extra' at 2.1 l in 280 l on 28 Apr, 1976.

Basal applications: 34 kg P as superphosphate, 224 kg K as potassium sulphate, 11 kg Mg as magnesium sulphate.

Cultivations, etc.: - Basal P, K and Mg applied: 9 Dec, 1975. N applied: 18 Mar, 1976, 14 May and 6 June. Cut: 13 May, 6 June and 3 Oct.

NOTE: Because of severe drought only three cuts were taken and hence only three quarters of the usual TOTAL N rates shown above were applied.

76/R/CS/13

1ST CUT (13/5/76) DRY MATTER TONNES/HECTARE

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

TOTAL N	0(S)	0	75	150	225	300	375	450	MEAN
	0.45	1.44	1.84	2.61	3.25	4.40	4.86	4.63	2.54

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

TABLE	TOTAL N	
SED	0.305	MIN REP
	0.264	MAX-MIN
	0.216	MAX REP

TOTAL N  
 MAX REP 0(S) V 0  
 MAX-MIN 0(S) OR 0 V ANY ONE OF THE REMAINDER  
 MIN-REP ANY OF REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	29	0.431	17.0

1ST CUT MEAN DM% 22.6

2ND CUT (6/7/76) DRY MATTER TONNES/HECTARE

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

TOTAL N	0(S)	0	75	150	225	300	375	450	MEAN
	0.25	0.45	0.43	0.57	0.81	0.71	0.54	0.54	0.50

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

TABLE	TOTAL N	
SED	0.088	MIN REP
	0.076	MAX-MIN
	0.062	MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	29	0.125	24.9

2ND CUT MEAN DM% 42.3

76/R/CS/13

3RD CUT (5/10/76) DRY MATTER TONNES/HECTARE

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

TOTAL N	0(S)	0	75	150	225	300	375	450	MEAN
	0.45	0.57	0.98	1.09	1.58	1.68	1.64	1.53	1.06

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

TABLE	TOTAL N	
SED	0.102	MIN REP
	0.088	MAX-MIN
	0.072	MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	29	0.144	13.6

3RD CUT MEAN DM% 16.5

TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

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

TOTAL N	0(S)	0	75	150	225	300	375	450	MEAN
	1.15	2.46	3.25	4.27	5.63	6.79	7.05	6.76	4.10

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

TABLE	TOTAL N	
SED	0.283	MIN REP
	0.245	MAX-MIN
	0.200	MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	29	0.400	9.8

TOTAL OF 3 CUTS MEAN DM% 27.1

PLOT AREA HARVESTED 0.00086