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Yields of the Field Experiments 1974

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74/R/CS/13 N Levels to Old Grass - Old Grass

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74/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.

Sponsors: A.E. Johnston, R.C. Flint.

The tenth 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/R/CS/13.

Design: 4 randomised blocks of 10 plots.

Whole plot dimensions: 1.83 x 10.1. **Area harvested:** 0.00086.

Treatments: Fertiliser nitrogen (kg N-total per annum applied in four equal dressings as 'Nitro-Chalk'): TOTAL N

None (sprayed with mecoprop to control legumes, two plots per block)	0(s)
None (two plots per block)	0
75	75
150	150
225	225
300	300
375	375
450	450

NOTE: Mecoprop applied 26 Apr, 6 Aug as 'Clovotox' at 11.2 l in 450 l.

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: 10 Dec, 1973. Cut: 13 May, 1974, 1 July, 19 Aug and 14 Oct. N applied: 13 Mar and after each cut except the last.

Standard errors per plot. Dry matter: tonnes/hectare:

1st cut:	0.284 or 12.3% (29 d.f.)
2nd cut:	0.230 or 10.6% (29 d.f.)
3rd cut:	0.188 or 10.1% (29 d.f.)
4th cut:	0.210 or 15.4% (29 d.f.)
Total of 4 cuts:	0.522 or 6.8% (29 d.f.)

74/R/CS/13

TABLES OF MEANS

DRY MATTER: TONNES/HECTARE

TOTAL N								
O(S)	0	75	150	225	300	375	450	Mean
1ST CUT								
0.33	1.20	1.34	2.04	3.17	4.05	4.42	4.95	2.30
2ND CUT								
0.56	2.37	2.09	2.34	2.61	2.88	2.91	3.15	2.18
3RD CUT								
0.30	1.62	1.55	2.11	2.26	2.90	2.87	3.20	1.87
4TH CUT								
0.27	0.77	1.14	1.78	1.83	2.06	2.36	2.37	1.36
TOTAL OF 4 CUTS								
1.45	5.96	6.12	8.27	9.87	11.88	12.56	13.68	7.72
STANDARD ERRORS OF DIFFERENCES. TOTAL N								
			1ST CUT	2ND CUT	3RD CUT	4TH CUT	TOTAL OF 4 CUTS	
O(S) v 0			0.142	0.115	0.094	0.105	0.261	
Between any of remainder			0.201	0.163	0.133	0.148	0.369	
O(S) or 0 v any of remainder			0.174	0.141	0.115	0.128	0.319	
Mean D.M. %			23.6	24.7	17.3	26.4	23.0	