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Numerical Results of the Field Experiments 1970

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70/R/CS/23 Simulated Grazing - Old Grass

Rothamsted Research

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SIMULATED GRAZING

(70/R/CS/23)

Old grass, plot 6 Park Grass 1970 the fourth year. For treatments, etc., and for previous years' results see 'Results' 67/C/38, 68/C/29 and 69/R/CS/23.

Treatments G+H and HG+ were replaced by treatments G+ (cuttings returned after each cut) and G- (cuttings removed). The new treatments were allocated at random for each N level in each block.

Cultivations, etc.: Basal P, K, Na and Mg applied: 4 Dec, 1969.

The following treatments were cut on the dates shown:-

24 Apr, 1970:	G+	G-	G-H		
11 May:				HG-	H
12 May:	G+	G-	G-H		
1 June:	G+	G-		HG-	
18 June:	G+	G-		HG-	
30 June:	G+	G-	G-H	HG-	H
21 July:	G+	G-	G-H		
4 Aug:	G+	G-	G-H		
2 Sept:	G+	G-	G-H	HG-	H
16 Sept:	G+	G-		HG-	
5 Oct:	G+	G-		HG-	
26 Oct:	G+	G-	G-H	HG-	H

Calcium nitrate applied on 16 Mar, 12 May, 30 June, 2 Sept.

NOTES: (1) On the G+ plots some grass returned at previous cutting was recovered by the rotary mower. Therefore these yields were overestimated.

(2) The percentages of N, P and K in the dry grass were measured.

Standard errors per plot. Dry matter, cwt:

1st Period (cuts 1-2):	3.53 or 22.7% (28 d.f.)
2nd Period (cuts 3-5):	3.18 or 19.6% (28 d.f.)
3rd Period (cuts 6-8):	2.76 or 15.8% (28 d.f.)
4th Period (cuts 9-11):	1.26 or 14.8% (28 d.f.)
Total of all 4 Periods (cuts 1-11):	4.65 or 8.0% (28 d.f.)

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SUMMARY OF RESULTS

DRY MATTER: CWT

1ST PERIOD

Treatment	H	H(G-)	G-(H)	G+	G-	Mean
Cut with	M	M	R	R	R	
			(±2.04)			(±0.91)
NO	3.3	2.3	5.4	6.0	6.7	4.7
N1	20.7	18.7	13.8	15.7	16.8	17.1
N2	29.8	29.6	20.6	23.3	20.4	24.7
Mean (±1.18)	18.0	16.9	13.3	15.0	14.6	15.5

R plots cut twice.

2ND PERIOD

Treatment	H	(H)G-	(G-)H	G+	G-	Mean
Cut with	M	R	M	R	R	
			(±1.84)			(±0.82)
NO	14.4	9.6	16.6	17.7	10.2	13.7
N1	17.5	11.6	18.5	28.8	11.7	17.6
N2	15.7	10.3	22.3	25.1	12.8	17.2
Mean (±1.06)	15.9	10.5	19.1	23.9	11.6	16.2

R plots cut three times.

M = Motor scythe

R = Rotary mower

() = Not applied in this period

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DRY MATTER: CWT

3RD PERIOD

Treatment	H	H(G-)	G-(H)	G+	G-	Mean
Cut with	M	M	R	R	R	
			(± 1.60)			(± 0.71)
NO	11.9	12.3	11.8	7.9	7.4	10.3
N1	18.4	22.2	14.2	20.3	13.0	17.6
N2	26.4	31.9	20.6	22.7	21.5	24.6
Mean (± 0.92)	18.9	22.1	15.5	17.0	14.0	17.5

R plots cut three times

4TH PERIOD

Treatment	H	(H)G-	(G-)H	G+	G-	Mean
Cut with	M	R	M	R	R	
			(± 0.73)			(± 0.32)
NO	4.9	6.4	5.4	6.6	4.9	5.7
N1	10.4	7.1	9.3	15.0	7.7	9.9
N2	9.3	6.7	12.4	13.4	7.7	9.9
Mean (± 0.42)	8.2	6.7	9.0	11.7	6.8	8.5

R plots cut three times

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DRY MATTER: CWT

TOTAL OVER ALL PERIODS

Treatment Cut with						Mean	Under same management	
	H	HG-	G-H	G+	G-		H(G-)	G-(H)
	M	M&R	M&R	R	R		M	R
			(±2.68)			(±1.20)		
NC	34.6	30.6	39.2	38.2	29.2	34.4	36.6	33.2
N1	67.0	59.6	55.8	79.8	49.3	62.3	68.7	46.7
N2	81.2	78.6	75.9	84.5	62.4	76.5	96.2	58.2
Mean (±1.55)	60.9	56.2	57.0	67.5	47.0	57.7	67.1	46.0