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Numerical Results of the Field Experiments 1968

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68/C/29 Simulated Grazing Experiment

Rothamsted Research

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68/c/29.1

SIMULATED GRAZING EXPERIMENT

(EAV)

Comparison of yields from cages, 1 yard square (as used on the Grazed Reference Plots), and from cuts by motor scythe, Plot 6, Park Grass 1968, the second year. For treatments etc. and the previous year's results see 'Results' 67/C/38.

In 1968 the comparison between cages (C) frames (F) was discontinued because in 1967 yields in each period and total yield in the year from each were alike.

Cultivations, etc.: Basal P, K, Na and Mg applied: 18 Dec, 1967. Calcium nitrate applied: 13 Mar, 1968. G+H and G-H plots cut: 18 Apr, 24 Apr, 7 May. HG+, HG- and H plots cut for hay: 7 May. Calcium nitrate applied: 9 May. HG+ and HG- plots cut: 20 May, 6 June, 24 June. G+H, G-H and H plots cut for hay: 24 June. Calcium nitrate applied: 25 June. G+H and G-H plots cut: 12 July, 26 July, 13 Aug. HG+, HG- and H plots cut for hay: 4 Sept. Calcium nitrate applied: 5 Sept. HG+ and HG- plots cut: 27 Sept, 11 Oct, 28 Oct. G+H, G-H and H plots cut for hay: 28 Oct.

NOTE: The percentages of N, P and K in the dry grass were measured.

Standard errors per plot. Grass, dry matter:

Motor scythe

1st Period (cuts 1-3):	2.16 or 14.1% (28 d.f.)
2nd Period (cuts 4-6):	2.35 or 8.5% (28 d.f.)
3rd Period (cuts 7-10):	2.41 or 8.3% (28 d.f.)
4th Period (cuts 11-13):	1.61 or 12.0% (28 d.f.)
Total of all 4 Periods (cuts 1-13):	4.14 or 4.8% (28 d.f.)

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Motor scythe and cages

1st Period (cuts 1-3):

Whole plot: 2.37 or 12.1%
(10 d.f.)

Sub plot: 1.90 or 9.7%
(12 d.f.)

2nd Period (cuts 4-6):

Whole plot: 2.49 or 7.9%
(10 d.f.)

Sub plot: 1.82 or 5.8%
(12 d.f.)

3rd Period (cuts 7-10):

Whole plot: 1.85 or 5.4%
(10 d.f.)

Sub plot: 4.66 or 13.6%
(12 d.f.)

4th Period (cuts 11-13):

Whole plot: 2.37 or 15.1%
(10 d.f.)

Sub plot: 1.82 or 11.6%
(12 d.f.)

Total of all 4 periods (cuts 1-13):

Whole plot: 5.75 or 5.7%
(10 d.f.)

Sub plot: 5.16 or 5.1%
(12 d.f.)

68/c/29.3

SUMMARY OF RESULTS

GRASS. DRY MATTER

MOTOR SCYTHE

	HH	HG-	HG+	G-H	G+H	Mean
1ST PERIOD (CUTS 1-3)						
	(±1.25)					(±0.56)
NO	6.5	7.6	7.5	6.4	5.6	6.7
N1	15.0	17.3	19.3	8.3	11.5	14.3
N2	29.9	28.5	30.8	16.1	20.4	25.1
Mean (±0.72)	17.1	17.8	19.2	10.2	12.5	15.4
2ND PERIOD (CUTS 4-6)						
	(±1.35)					(±0.61)
NO	27.9	15.4	17.3	31.4	32.0	24.8
N1	32.5	16.6	19.2	33.0	38.8	28.0
N2	33.1	19.8	19.5	40.1	37.0	29.9
Mean (±0.78)	31.2	17.2	18.6	34.8	35.9	27.6
3RD PERIOD (CUTS 7-10)						
	(±1.39)					(±0.62)
NO	26.3	28.7	29.8	18.9	19.2	24.6
N1	31.9	35.9	34.8	18.3	25.9	29.3
N2	35.4	39.4	40.9	26.7	26.4	33.7
Mean (±0.80)	31.2	34.7	35.1	21.3	23.8	29.2

68/c/29.4

GRASS. DRY MATTER

MOTOR SCYTHE

	HH	HG-	HG+	G-H	G+H	Mean
4TH PERIOD (CUTS 11-13)						
	(±0.93)					(±0.42)
NO	7.2	6.6	6.1	12.9	14.1	9.4
N1	13.1	10.9	9.7	16.7	24.2	14.9
N2	17.0	9.3	7.4	26.0	19.5	15.8
Mean (±0.54)	12.4	8.9	7.7	18.5	19.3	13.4
TOTAL OF ALL 4 PERIODS (ALL CUTS)						
	(±2.39)					(±1.07)
NO	67.9	58.3	60.6	69.6	70.9	65.5
N1	92.5	80.6	82.9	76.3	100.4	86.6
N2	115.3	97.0	98.5	108.9	103.3	104.6
Mean (±1.38)	91.9	78.6	80.7	84.9	91.5	85.5

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GRASS. DRY MATTER

MOTOR SCYTHE AND CAGES

	A	C	Mean
1ST PERIOD (CUTS 1-3)			
Mean (± 0.45)	15.9	23.5	19.7
	(1) and (2)		(± 0.97)
NO	6.6	13.3	9.9
N1	15.4	26.0	20.7
N2	25.6	31.2	28.4
	(3) and (4)		(± 0.79)
HG+	19.2	24.4	21.8
G+H	12.5	22.6	17.6

(1) (± 1.11) (3) (± 0.91) For use in vertical and diagonal comparisons only(2) (± 0.78) (4) (± 0.63) For use in horizontal and interaction comparisons only

2ND PERIOD (CUTS 4-6)			
Mean (± 0.43)	27.3	35.9	31.6
	(1) and (2)		(± 1.02)
NO	24.6	31.3	28.0
N1	29.0	38.0	33.5
N2	28.2	38.4	33.3
	(3) and (4)		(± 0.83)
HG+	18.6	32.0	25.3
G+H	35.9	39.8	37.9

(1) (± 1.14) (3) (± 0.93) For use in vertical and diagonal comparisons only(2) (± 0.74) (4) (± 0.61) For use in horizontal and interaction comparisons only

68/c/29.6

GRASS. DRY MATTER

MOTOR SCYTHE AND CAGES

	A	C	Mean
3RD PERIOD (CUTS 7-10)			
Mean (± 1.10)	29.5	39.0	34.3
	(1) and (2)		(± 0.76)
NO	24.5	35.1	29.8
N1	30.3	39.3	34.8
N2	33.6	42.7	38.1
	(3) and (4)		(± 0.62)
HG+	35.1	40.0	37.6
G+H	23.8	38.0	30.9

(1) (± 1.54) (3) (± 1.26) For use in vertical and diagonal comparisons only(2) (± 1.90) (4) (± 1.55) For use in horizontal and interaction comparisons only

4TH PERIOD (CUTS 11-13)			
Mean (± 0.43)	13.5	18.0	15.7
	(1) and (2)		(± 0.97)
NO	10.1	17.0	13.5
N1	16.9	20.6	18.8
N2	13.5	16.4	14.9
	(3) and (4)		(± 0.79)
HG+	7.7	13.5	10.6
G+H	19.3	22.5	20.9

(1) (± 1.10) (3) (± 0.90) For use in vertical and diagonal comparisons only(2) (± 0.74) (4) (± 0.61) For use in horizontal and interaction comparisons only

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GRASS. DRY MATTER

MOTOR SCYTHE AND CAGES

	A	C	Mean
	TOTAL OF ALL PERIODS (ALL CUTS)		
Mean (± 1.22)	86.1	116.4	101.3
	(1) and (2)		(± 2.35)
NO	65.8	96.7	81.2
N1	91.7	123.9	107.8
N2	100.9	128.7	114.8
	(3) and (4)		(± 1.92)
HG+	80.7	109.9	95.3
G+H	91.5	122.9	107.2

(1) (± 2.78) (3) (± 2.27) For use in vertical and diagonal comparisons only

(2) (± 2.11) (4) (± 1.72) For use in horizontal and interaction comparisons only

