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Numerical Results of the Field Experiments 1968

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68/DF/2 Nitrogen and Damage to Sward by Ammonia-injectors - Grass

Rothamsted Research

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68/Df/2.1

GRASS

(RG 201)

Nitrogen and damage to sward by ammonia-injectors - Parklands 1968.

Design: 1 randomised block of 18 plots.

Area of each plot: 0.0092. Area harvested: 0.0054.

Treatments: All combinations of:-

1. Mechanical damage by injector: None (IO), damage by 'Anhydrous' injector (IA), by 'Aqua' injector (IQ).
2. Time of damage: In autumn (A), in spring (S).
3. Nitrogen per cut: 0.3 (N1), 0.6 (N2), 1.0 (N3) cwt as 'Nitro-Chalk' broadcast by hand.

Basal applications: 900 lb (0:14:28) applied in winter.

Cultivations, etc.: Autumn injector slits made - 'aqua': 8 Nov, 1967, 'anhydrous': 21 Nov. Basal PK compound applied: 23 Jan, 1968.

Spring injector slits made - 'aqua': 12 Mar, 'anhydrous': 14 Mar. 'Nitro-Chalk' applied: 15 Mar. Cut three times: 22 May, 9 July, 14 Sept. 'Nitro-Chalk' applied after first two cuts. Previous crop: Grassland for at least 35 years.

NOTE: Grass samples were taken for dry matter and percentage of N.

Standard errors per plot.

Dry matter:

1st cut:	1.73 or 5.2% (4 d.f.)
2nd cut:	2.72 or 10.4% (4 d.f.)
3rd cut:	5.38 or 23.4% (4 d.f.)
Total of 3 cuts:	8.01 or 9.8% (4 d.f.)

68/Df/2.2

SUMMARY OF RESULTS

DRY MATTER						
	IA	IQ	N1	N2	N3	Mean
1ST CUT						
	(± 1.00)			(± 1.22)		(± 0.71)
A	33.0	33.0	29.3	34.7	35.1	33.0
S	30.8	34.6	31.8	33.9	32.4	32.7
				(± 1.22)		(± 0.71)
	Q		28.9	35.9	34.2	33.0
	IA		28.8	34.7	32.1	31.9
	IQ		32.2	33.8	35.4	33.8
Mean (± 0.71)			30.0	34.8	33.9	32.9
2ND CUT						
	(± 1.57)			(± 1.92)		(± 1.11)
A	25.4	25.9	26.3	24.7	25.9	25.6
S	26.2	26.6	27.5	25.3	26.5	26.4
				(± 1.92)		(± 1.11)
	Q		26.8	26.5	26.2	26.5
	IA		25.5	25.1	26.9	25.8
	IQ		28.3	24.9	25.5	26.3
Mean (± 1.11)			26.9	25.5	26.2	26.2
Mean D.M. %: 1st cut: 15.2 2nd cut: 15.8						

68/Df/2.3

DRY MATTER						
	IA	IQ	N1	N2	N3	Mean
3RD CUT						
	(±3.11)			(±3.81)		(±2.20)
A	20.3	24.3	23.3	20.3	23.4	22.3
S	22.9	26.6	27.1	25.5	21.7	24.8
				(±3.81)		(±2.20)
	Q		25.2	17.7	22.4	21.8
	IA		25.3	19.2	20.3	21.6
	IQ		25.1	26.6	24.8	25.5
Mean (±2.20)			25.2	21.2	22.5	23.0
TOTAL OF 3 CUTS						
	(±4.62)			(±5.66)		(±3.27)
A	78.7	83.2	78.8	79.7	84.4	81.0
S	79.9	87.9	86.4	84.7	80.7	83.9
				(±5.66)		(±3.27)
	Q		80.9	80.2	82.7	81.3
	IA		79.6	79.1	79.3	79.3
	IQ		85.7	85.3	85.8	85.6
Mean (±3.27)			82.0	81.5	82.6	82.0
Mean D.M. %: 3rd cut: 17.7						
Total of 3 cuts: 16.2						

