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Yields of the Field Experiments 1975

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75/ R/CS/144 - N & Weedkiller - Old Grass

Rothamsted Research

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75/R/CS/144

N AND WEEDKILLER

Object: To study the cumulative effects of two rates of solid and liquid nitrogen in combination with the residual effects of three frequencies of applying weedkiller the year before on weed control and yield of old grass - Bones Close.

Sponsors: A. Penny, F.V. Widdowson.

The second year, old grass.

For previous year see 74/R/CS/144.

Design: 3 randomised blocks of 20 plots.

Whole plot dimensions: 2.13 x 9.14.

Treatments: All combinations of:-

1. Form of nitrogen fertiliser (cumulative on 1974):	N FORM
Solid, 'Nitro-Chalk' 25% N.	SOLID
Liquid, urea/ammonium nitrate 26% N.	LIQUID
2. Rate of nitrogen fertiliser per cut (cumulative on 1974) (kg N):	N PERCUT
50	50
100	100
3. Frequency of applying weedkiller (2,4-DB + MCPA + benazolin) in 1974 (None in 1975):	WEEDKLLR(74)
None	0
For 1st cut	1
For 1st and 2nd cuts	2
For 1st, 2nd and 3rd cuts	3

plus four treatments given no nitrogen fertiliser (NPERCUT(0)) and receiving WEEDKLLR(74) as above.

Basal applications: Manures: (0:14:28) at 500 kg.

Cultivations, etc.:- PK applied: 16 Jan, 1975. N applied: 24 Mar, 17 June, 8 Sept. Cut: 10 June, 2 Sept, 4 Nov.

- NOTES: (1) Visual scores of leaf scorch were made within four days of application of treatments.
(2) Samples from each cut were taken for the assessment of proportions of grass and weeds, and of N in each.

75/R/CS/144

OLD GRASS

1ST CUT (10/6/75) DRY MATTER TONNES/HECTARE

*** TABLES OF MEANS ***

NPERCUT	50	100	MEAN		
NFORM					
SOLID	7.18	7.61	7.39		
LIQUID	7.02	7.69	7.35		
MEAN	7.10	7.65	7.37		
WEEDKLLR(74)	0	W1	W2	W3	MEAN
NFORM					
SOLID	7.29	7.48	7.16	7.64	7.39
LIQUID	7.20	7.09	7.60	7.52	7.35
MEAN	7.24	7.28	7.38	7.58	7.37
WEEDKLLR(74)	0	W1	W2	W3	MEAN
NPERCUT					
50	6.95	6.95	7.24	7.25	7.10
100	7.53	7.62	7.52	7.91	7.65
MEAN	7.24	7.28	7.38	7.58	7.37

NPERCUT(0)

WEEDKLLR(74)	0	W1	W2	W3	MEAN
	4.92	4.32	5.17	5.01	4.86

GRAND MEAN 6.87

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

TABLE	NFORM	NPERCUT	WEEDKLLR(74)	NFORM N PERCUT
SED	0.108	0.108	0.152	0.152

TABLE	NFORM WEEDKLLR(74)	NPERCUT WEEDKLLR(74)	WEEDKLLR(74) NPERCUT(0)
SED	0.216	0.216	0.305

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

STRATUM	DF	SE	CV%
BLOCK.WP	38	0.373	5.4

1ST CUT MEAN DM% 22.6

1ST CUT PLOT AREA HARVESTED 0.00111

75/R/CS/144

OLD GRASS

2ND CUT (3/9/75) DRY MATTER TONNES/HECTARE

*** TABLES OF MEANS ***

NPERCUT	50	100	MEAN		
NFORM					
SOLID	0.93	1.38	1.16		
LIQUID	0.72	1.14	0.93		
MEAN	0.82	1.26	1.04		
WEEDKLLR(74)	0	W1	W2	W3	MEAN
NFORM					
SOLID	1.16	1.28	1.06	1.12	1.16
LIQUID	1.00	0.95	0.94	0.82	0.93
MEAN	1.08	1.11	1.00	0.97	1.04
WEEDKLLR(74)	0	W1	W2	W3	MEAN
NPERCUT					
50	0.88	0.89	0.69	0.84	0.82
100	1.28	1.33	1.32	1.10	1.26
MEAN	1.08	1.11	1.00	0.97	1.04

NPERCUT(0)

WEEDKLLR(74)	0	W1	W2	W3	MEAN
	0.42	0.34	0.42	0.44	0.40

GRAND MEAN 0.91

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

TABLE	NFORM	NPERCUT	WEEDKLLR(74)	NFORM NPERCUT
SED	0.071	0.071	0.100	0.100

TABLE	NFORM WEEDKLLR(74)	NPERCUT WEEDKLLR(74)	WEEDKLLR(74) NPERCUT(0)
SED	0.142	0.142	0.200

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

STRATUM	DF	SE	CV%
BLOCK.WP	38	0.245	26.9

2ND CUT MEAN DM% 44.6

2ND CUT PLOT AREA HARVESTED 0.00111

75/R/CS/144

OLD GRASS

3RD CUT (4/11/75) DRY MATTER TONNES/HECTARE

*** TABLES OF MEANS ***

	50	100	MEAN
NPERCUT			
NFORM			
SOLID	1.37	1.52	1.44
LIQUID	1.01	1.48	1.25
MEAN	1.19	1.50	1.35

WEEDKLLR(74)	0	W1	W2	W3	MEAN
NFORM					
SOLID	1.42	1.36	1.54	1.45	1.44
LIQUID	1.37	1.29	1.30	1.02	1.25
MEAN	1.40	1.32	1.42	1.24	1.35

WEEDKLLR(74)	0	W1	W2	W3	MEAN
NPERCUT					
50	1.32	1.23	1.06	1.15	1.19
100	1.47	1.41	1.78	1.33	1.50
MEAN	1.40	1.32	1.42	1.24	1.35

NPERCUT(0)

WEEDKLLR(74)	0	W1	W2	W3	MEAN
	0.50	0.22	0.27	0.21	0.30

GRAND MEAN 1.14

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

TABLE	NFORM	NPERCUT	WEEDKLLR(74)	NFORM NPERCUT
SED	0.062	0.062	0.088	0.088

TABLE	NFORM WEEDKLLR(74)	NPERCUT WEEDKLLR(74)	WEEDKLLR(74) NPERCUT(0)
SED	0.125	0.125	0.177

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

STRATUM	DF	SE	CV%
BLOCK.WP	38	0.216	19.1

3RD CUT MEAN DM% 25.7

3RD CUT PLOT AREA HARVESTED 0.00084

75/R/CS/144

OLD GRASS

TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

*** TABLES OF MEANS ***

NPERCUT	50	100	MEAN		
NFORM					
SOLID	9.48	10.50	9.99		
LIQUID	8.75	10.30	9.52		
MEAN	9.11	10.40	9.76		
WEEDKLLR(74)	0	W1	W2	W3	MEAN
NFORM					
SOLID	9.87	10.11	9.76	10.22	9.99
LIQUID	9.57	9.32	9.84	9.36	9.52
MEAN	9.72	9.72	9.80	9.79	9.76
WEEDKLLR(74)	0	W1	W2	W3	MEAN
NPERCUT					
50	9.15	9.07	8.99	9.23	9.11
100	10.29	10.37	10.61	10.34	10.40
MEAN	9.72	9.72	9.80	9.79	9.76

NPERCUT(0)

WEEDKLLR(74)	0	W1	W2	W3	MEAN
	5.84	4.87	5.86	5.66	5.56

GRAND MEAN 8.92

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

TABLE	NFORM	NPERCUT	WEEDKLLR(74)	NFORM NPERCUT
SED	0.157	0.157	0.222	0.222

TABLE	NFORM WEEDKLLR(74)	NPERCUT WEEDKLLR(74)	WEEDKLLR(74) NPERCUT(0)
SED	0.314	0.314	0.444

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

STRATUM	DF	SE	CV%
BLOCK.WP	38	0.543	6.1

TOTAL OF 3 CUTS MEAN DM% 31.0

1ST CUT PLOT AREA HARVESTED 0.00111