

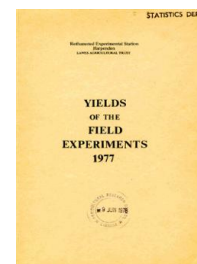
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Yields of the Field Experiments 1977

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77/R/CS/161 Injected N - Old Grass

Rothamsted Research

Rothamsted Research (1978) *77/R/CS/161 Injected N - Old Grass* ; Yields Of The Field Experiments 1977, pp 180 - 201 - DOI: <https://doi.org/10.23637/ERADOC-1-29>

77/R/CS/161

INJECTED N

Object: To study the cumulative and residual effects of injecting aqueous urea, with or without a nitrification inhibitor, at three rates and two spacings on the yield and nitrogen uptake of old grass cut for silage - Highfield IX.

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

The third year, old grass.

For previous years see 76/R/CS/161.

Design: 2 randomised blocks of 18 plots split into 2.

Whole plot dimensions: 4.27 x 15.2.

Treatments: All combinations of:-

Whole plots

1. LIQUID N Liquid nitrogen fertiliser:

 UREA Aqueous solution of urea, no nitrification inhibitor
 UREA+INH Aqueous solution of urea plus a nitrification inhibitor
 (ammonium trithiocarbonate in 1976, sodium trithiocarbonate
 in 1977)
2. SPACING Spacing between tines injecting liquid fertiliser:
 30 CM
 60 CM
3. N RATE Rate of liquid fertiliser, applied as a single annual
 dressing (kg N):

 250
 375
 500

Sub plots

4. YEARS Years of application, cumulative when applied:
 75-77 1975-77
 75-76 1975-76 only
- SOLID N plus six whole plots given 'Nitro-Chalk', dressing divided
 between cuts (kg N, total/annum):
- 0
 100
 200
 300
 400
 500

with sub plots YEARS as above.

- NOTES: (1) The whole area was grazed in 1975, yields were not taken.
(2) Sodium trithiocarbonate was applied at 18 kg to SPACING, 30 CM and at 9 kg to SPACING, 60 CM.

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Basal applications: Manures: (0:14:28) at 1000 kg.

Cultivations, etc.:— PK applied: 13 Dec, 1976. Aqueous urea and inhibitors injected: 4 Mar, 1977. 'Nitro-Chalk' applied: 10 Mar, 6 May, 2 June, 1 July, 8 Aug, 6 Sept. Cut: 4 May, 31 May, 30 June, 2 Aug, 5 Sept, 8 Nov.

NOTE: Grass samples were taken for N determinations.

1ST CUT (4/5/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	0.92	0.96	0.94	
UREA+INH	0.93	0.76	0.85	
MEAN	0.93	0.86	0.89	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	0.95	0.97	0.91	0.94
UREA+INH	0.89	0.82	0.82	0.85
MEAN	0.92	0.89	0.87	0.89
N RATE	250	375	500	MEAN
SPACING				
30 CM	0.95	0.90	0.94	0.93
60 CM	0.89	0.89	0.80	0.86
MEAN	0.92	0.89	0.87	0.89
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	1.42	0.47	0.94	
UREA+INH	1.25	0.44	0.85	
MEAN	1.33	0.45	0.89	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	1.51	0.34	0.93	
60 CM	1.15	0.56	0.86	
MEAN	1.33	0.45	0.89	
YEARS	75-77	75-76	MEAN	
N RATE				
250	1.44	0.40	0.92	
375	1.31	0.48	0.89	
500	1.25	0.48	0.87	
MEAN	1.33	0.45	0.89	

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1ST CUT (4/5/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM			60 CM			
N RATE	250	375	500	250	375	500	
LIQUID N							
UREA	0.90	0.97	0.89	0.99	0.96	0.92	
UREA+INH	1.00	0.82	0.98	0.78	0.82	0.67	
SPACING	30 CM			60 CM			
YEARS	75-77	75-76	75-77	75-76			
LIQUID N							
UREA	1.51	0.34	1.33	0.59			
UREA+INH	1.52	0.34	0.98	0.54			
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	1.51	0.38	1.39	0.54	1.35	0.47	
UREA+INH	1.37	0.42	1.22	0.41	1.15	0.49	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	1.60	0.30	1.44	0.35	1.50	0.37	
60 CM	1.28	0.50	1.17	0.60	1.01	0.59	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	1.52	0.29	1.53	0.42	1.47	0.32	
SPACING							
30 CM	1.50	0.48	1.25	0.67	1.23	0.62	
60 CM	1.68	0.32	1.35	0.28	1.53	0.43	
UREA+INH							
30 CM	1.05	0.52	1.10	0.54	0.78	0.56	
60 CM							
SOLID N	0	100	200	300	400	500	MEAN
YEARS							
75-77		0.61	0.40	0.71	0.72	1.31	0.75
75-76		0.31	0.24	0.16	0.19	0.25	0.23
MEAN	0.40	0.46	0.32	0.44	0.45	0.78	0.47

GRAND MEAN 0.75

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1ST CUT (4/5/77) DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.176	0.072	0.072	0.088

TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.054 0.083*	0.102	0.124	0.124

TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.219	0.090	0.090	0.110
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
SOLID N	0.186			
LIQUID N		0.076		
SPACING			0.076	
N RATE				0.093

TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.176	0.127	0.155	0.155
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING		0.107		
LIQUID N.N RATE			0.131	
SPACING.N RATE				0.131

TABLE	LIQUID N SPACING N RATE YEARS
SED	0.219
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:	
LIQUID N.SPACING.N RATE	0.186

* USE ONLY IN TABLES INVOLVING SOLID N

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.176	22.7
BLOCK.WP.SP	17	0.186	24.0

1ST CUT MEAN DM% 19.3

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2ND CUT (31/5/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	3.07	3.06	3.07	
UREA+INH	3.19	3.23	3.21	
MEAN	3.13	3.15	3.14	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	2.73	3.14	3.32	3.07
UREA+INH	2.97	3.09	3.57	3.21
MEAN	2.85	3.12	3.45	3.14
N RATE	250	375	500	MEAN
SPACING				
30 CM	2.89	3.11	3.39	3.13
60 CM	2.82	3.12	3.51	3.15
MEAN	2.85	3.12	3.45	3.14
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	4.04	2.10	3.07	
UREA+INH	4.04	2.38	3.21	
MEAN	4.04	2.24	3.14	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	4.19	2.07	3.13	
60 CM	3.88	2.41	3.15	
MEAN	4.04	2.24	3.14	
YEARS	75-77	75-76	MEAN	
N RATE				
250	3.90	1.81	2.85	
375	4.04	2.20	3.12	
500	4.18	2.71	3.45	
MEAN	4.04	2.24	3.14	

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2ND CUT (31/5/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM			60 CM			
N RATE	250	375	500	250	375	500	
LIQUID N							
UREA	2.84	3.04	3.34	2.62	3.25	3.31	
UREA+INH	2.93	3.19	3.44	3.01	3.00	3.70	
SPACING	30 CM		60 CM				
YEARS	75-77	75-76	75-77	75-76			
LIQUID N							
UREA	4.17	1.97	3.90	2.22			
UREA+INH	4.22	2.16	3.87	2.60			
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	3.85	1.61	4.09	2.20	4.17	2.48	
UREA+INH	3.94	2.00	3.98	2.20	4.20	2.94	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	4.04	1.74	4.20	2.02	4.34	2.43	
60 CM	3.76	1.87	3.87	2.38	4.03	2.98	
LIQUID N							
UREA							
UREA+INH							
	N RATE	250		375		500	
	YEARS	75-77	75-76	75-77	75-76	75-77	75-76
	SPACING						
	30 CM	4.00	1.68	4.17	1.90	4.34	2.33
	60 CM	3.70	1.54	4.01	2.49	3.99	2.64
	30 CM	4.07	1.80	4.24	2.14	4.34	2.54
	60 CM	3.81	2.21	3.73	2.26	4.06	3.33
SOLID N	0	100	200	300	400	500	MEAN
YEARS							
75-77		2.28	2.83	3.52	3.65	3.95	3.25
75-76		1.44	1.68	1.72	1.68	1.53	1.61
MEAN	1.09	1.86	2.25	2.62	2.67	2.74	2.21

GRAND MEAN 2.83

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2ND CUT (31/5/77) DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.192	0.078	0.076	0.096

TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.057 0.089*	0.111	0.135	0.135

TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.238	0.097	0.097	0.119
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
SOLID N	0.199			
LIQUID N		0.081		
SPACING			0.081	
N RATE				0.100

TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.192	0.137	0.168	0.168
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING		0.115		
LIQUID N.N RATE			0.141	
SPACING.N RATE				0.141

TABLE	LIQUID N SPACING N RATE YEARS
SED	0.238
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:	
LIQUID N.SPACING.N RATE	0.199

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.192	6.5
BLOCK.WP.SP	17	0.199	6.8

2ND CUT MEAN DM% 19.8

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3RD CUT (30/6/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	0.82	0.93	0.88	
UREA+INH	0.87	0.86	0.87	
MEAN	0.84	0.90	0.87	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	0.83	0.95	0.85	0.88
UREA+INH	0.76	1.00	0.85	0.87
MEAN	0.79	0.97	0.85	0.87
N RATE	250	375	500	MEAN
SPACING				
30 CM	0.70	0.97	0.87	0.84
60 CM	0.88	0.98	0.83	0.90
MEAN	0.79	0.97	0.85	0.87
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	0.85	0.90	0.88	
UREA+INH	0.81	0.92	0.87	
MEAN	0.83	0.91	0.87	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	0.76	0.93	0.84	
60 CM	0.90	0.90	0.90	
MEAN	0.83	0.91	0.87	
YEARS	75-77	75-76	MEAN	
N RATE				
250	0.80	0.78	0.79	
375	0.96	0.98	0.97	
500	0.73	0.97	0.85	
MEAN	0.83	0.91	0.87	

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3RD CUT (30/6/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM			60 CM			
N RATE	250	375	500	250	375	500	
LIQUID N							
UREA	0.71	0.94	0.82	0.94	0.96	0.88	
UREA+INH	0.69	0.99	0.92	0.83	1.00	0.77	
SPACING	30 CM			60 CM			
YEARS	75-77	75-76	75-77	75-76			
LIQUID N							
UREA	0.76	0.88	0.93	0.93			
UREA+INH	0.76	0.98	0.86	0.87			
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	0.82	0.83	1.00	0.90	0.72	0.98	
UREA+INH	0.77	0.74	0.93	1.06	0.73	0.96	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	0.67	0.73	0.95	0.99	0.67	1.07	
60 CM	0.93	0.84	0.98	0.98	0.79	0.87	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	0.65	0.77	0.99	0.88	0.65	0.99	
UREA+INH	0.69	0.69	0.90	1.09	0.69	1.15	
SPACING							
30 CM	0.65	0.77	0.99	0.88	0.65	0.99	
60 CM	1.00	0.88	1.01	0.92	0.79	0.98	
UREA+INH							
30 CM	0.69	0.69	0.90	1.09	0.69	1.15	
60 CM	0.86	0.80	0.95	1.04	0.78	0.76	
SOLID N	0	100	200	300	400	500	MEAN
YEARS							
75-77		0.96	1.16	1.24	1.15	0.97	1.10
75-76		0.63	0.67	0.68	0.76	0.86	0.72
MEAN	0.56	0.79	0.91	0.96	0.96	0.91	0.85
GRAND MEAN	0.86						

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3RD CUT (30/6/77) DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.119	0.049	0.049	0.059
TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.033 0.052*	0.069	0.084	0.084
TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.144	0.059	0.059	0.072
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
SOLID N	0.115			
LIQUID N		0.047		
SPACING			0.047	
N RATE				0.058
TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.119	0.083	0.102	0.102
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING		0.067		
LIQUID N.N RATE			0.082	
SPACING.N RATE				0.082
TABLE	LIQUID N SPACING N RATE YEARS			
SED	0.144			
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING.N RATE	0.115			

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.119	13.5
BLOCK.WP.SP	17	0.115	13.1

3RD CUT MEAN DM% 19.1

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4TH CUT (2/8/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	1.29	1.30	1.30	
UREA+INH	1.08	1.37	1.23	
MEAN	1.19	1.34	1.26	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	0.81	1.41	1.67	1.30
UREA+INH	0.80	1.42	1.47	1.23
MEAN	0.80	1.41	1.57	1.26
N RATE	250	375	500	MEAN
SPACING				
30 CM	0.68	1.30	1.58	1.19
60 CM	0.93	1.53	1.55	1.34
MEAN	0.80	1.41	1.57	1.26
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	1.68	0.91	1.30	
UREA+INH	1.39	1.06	1.23	
MEAN	1.54	0.98	1.26	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	1.45	0.92	1.19	
60 CM	1.63	1.04	1.34	
MEAN	1.54	0.98	1.26	
YEARS	75-77	75-76	MEAN	
N RATE				
250	1.01	0.60	0.80	
375	1.81	1.02	1.41	
500	1.80	1.33	1.57	
MEAN	1.54	0.98	1.26	

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4TH CUT (2/8/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM			60 CM			
N RATE	250	375	500	250	375	500	
LIQUID N							
UREA	0.67	1.36	1.84	0.95	1.46	1.50	
UREA+INH	0.68	1.25	1.33	0.91	1.59	1.61	
SPACING	30 CM		60 CM				
YEARS	75-77	75-76	75-77	75-76			
LIQUID N							
UREA	1.68	0.90	1.69	0.91			
UREA+INH	1.22	0.95	1.57	1.17			
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	1.10	0.53	1.89	0.93	2.07	1.27	
UREA+INH	0.92	0.67	1.73	1.11	1.53	1.40	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	0.80	0.56	1.68	0.92	1.87	1.30	
60 CM	1.23	0.64	1.93	1.12	1.73	1.37	
N RATE		250		375		500	
YEARS		75-77	75-76	75-77	75-76	75-77	75-76
LIQUID N							
SPACING							
UREA	30 CM	0.82	0.53	1.84	0.88	2.38	1.30
	60 CM	1.39	0.52	1.94	0.99	1.76	1.24
UREA+INH	30 CM	0.78	0.58	1.53	0.97	1.36	1.29
	60 CM	1.07	0.76	1.93	1.25	1.71	1.50
SOLID N	0	100	200	300	400	500	MEAN
YEARS							
75-77		0.66	1.00	1.62	1.66	1.87	1.36
75-76		0.40	0.41	0.58	0.70	0.87	0.59
MEAN	0.29	0.53	0.71	1.10	1.18	1.37	0.86

GRAND MEAN 1.13

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4TH CUT (2/8/77) DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.168	0.068	0.068	0.084

TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.050 0.078*	0.097	0.119	0.119

TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.208	0.085	0.085	0.104
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
SOLID N	0.174			
LIQUID N		0.071		
SPACING			0.071	
N RATE				0.087

TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.168	0.120	0.147	0.147
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING		0.100		
LIQUID N.N RATE			0.123	
SPACING.N RATE				0.123

TABLE	LIQUID N SPACING N RATE YEARS
SED	0.208
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:	
LIQUID N.SPACING.N RATE	0.174

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.168	14.2
BLOCK.WP.SP	17	0.174	14.8

4TH CUT MEAN DM% 25.5

77/R/CS/161

5TH CUT (5/9/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	0.96	1.04	1.00	
UREA+INH	0.94	1.09	1.01	
MEAN	0.95	1.07	1.01	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	0.59	1.06	1.35	1.00
UREA+INH	0.61	1.04	1.39	1.01
MEAN	0.60	1.05	1.37	1.01
N RATE	250	375	500	MEAN
SPACING				
30 CM	0.48	0.99	1.38	0.95
60 CM	0.72	1.12	1.36	1.07
MEAN	0.60	1.05	1.37	1.01
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	1.34	0.66	1.00	
UREA+INH	1.36	0.66	1.01	
MEAN	1.35	0.66	1.01	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	1.26	0.64	0.95	
60 CM	1.45	0.68	1.07	
MEAN	1.35	0.66	1.01	
YEARS	75-77	75-76	MEAN	
N RATE				
250	0.77	0.43	0.60	
375	1.43	0.67	1.05	
500	1.86	0.88	1.37	
MEAN	1.35	0.66	1.01	

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5TH CUT (5/9/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM			60 CM			
N RATE	250	375	500	250	375	500	
LIQUID N							
UREA	0.50	0.99	1.38	0.68	1.13	1.32	
UREA+INH	0.45	0.98	1.38	0.76	1.10	1.40	
SPACING	30 CM		60 CM				
YEARS	75-77	75-76	75-77	75-76			
LIQUID N							
UREA	1.27	0.64	1.42	0.67			
UREA+INH	1.25	0.63	1.48	0.69			
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	0.74	0.44	1.42	0.71	1.87	0.83	
UREA+INH	0.79	0.42	1.44	0.64	1.86	0.92	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	0.56	0.39	1.32	0.66	1.90	0.86	
60 CM	0.97	0.47	1.55	0.69	1.83	0.89	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	0.54	0.46	1.38	0.61	1.89	0.86	
UREA+INH	0.94	0.42	1.46	0.80	1.85	0.80	
SPACING							
30 CM	0.59	0.32	1.25	0.71	1.91	0.86	
60 CM	1.00	0.52	1.63	0.58	1.81	0.98	
SOLID N	0	100	200	300	400	500	MEAN
YEARS							
75-77		0.86	1.32	1.69	1.98	1.90	1.55
75-76		0.20	0.36	0.49	0.55	0.68	0.45
MEAN	0.24	0.53	0.84	1.09	1.27	1.29	0.87
GRAND MEAN	0.96						

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5TH CUT (5/9/77) DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.125	0.051	0.051	0.062
TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.053 0.083*	0.072	0.088	0.088
TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.180	0.074	0.074	0.090
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
	SOLID N 0.185	LIQUID N 0.075	SPACING 0.075	N RATE 0.092
TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.125	0.104	0.128	0.128
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
	LIQUID N.SPACING LIQUID N.N RATE SPACING.N RATE	0.107	0.131	0.131
TABLE	LIQUID N SPACING N RATE YEARS			
SED	0.180			
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
	LIQUID N.SPACING.N RATE 0.185			

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.125	12.4
BLOCK.WP.SP	17	0.185	18.4

5TH CUT MEAN DM% 20.3

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6TH CUT (8/11/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	1.04	1.38	1.21	
UREA+INH	1.06	1.27	1.17	
MEAN	1.05	1.33	1.19	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	0.80	1.34	1.48	1.21
UREA+INH	0.59	1.26	1.65	1.17
MEAN	0.70	1.30	1.57	1.19
N RATE	250	375	500	MEAN
SPACING				
30 CM	0.64	1.04	1.48	1.05
60 CM	0.75	1.57	1.65	1.33
MEAN	0.70	1.30	1.57	1.19
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	1.49	0.93	1.21	
UREA+INH	1.46	0.87	1.17	
MEAN	1.48	0.90	1.19	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	1.26	0.84	1.05	
60 CM	1.69	0.96	1.33	
MEAN	1.48	0.90	1.19	
YEARS	75-77	75-76	MEAN	
N RATE				
250	0.82	0.57	0.70	
375	1.64	0.96	1.30	
500	1.96	1.17	1.57	
MEAN	1.48	0.90	1.19	

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6TH CUT (8/11/77) DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM				60 CM		
N RATE	250	375	500		250	375	500
LIQUID N							
UREA	0.70	1.04	1.39		0.90	1.64	1.58
UREA+INH	0.57	1.03	1.57		0.61	1.49	1.73
SPACING	30 CM			60 CM			
YEARS	75-77	75-76		75-77	75-76		
LIQUID N							
UREA	1.22	0.87		1.76	0.99		
UREA+INH	1.30	0.82		1.62	0.93		
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	0.92	0.68	1.67	1.02	1.89	1.08	
UREA+INH	0.73	0.45	1.62	0.90	2.04	1.26	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	0.71	0.56	1.28	0.79	1.79	1.17	
60 CM	0.93	0.57	2.01	1.13	2.13	1.18	
LIQUID N							
SPACING							
UREA							
30 CM		0.79	0.61	1.21	0.87	1.67	1.11
60 CM		1.05	0.76	2.13	1.16	2.11	1.05
UREA+INH							
30 CM		0.63	0.51	1.35	0.71	1.91	1.22
60 CM		0.82	0.39	1.89	1.09	2.16	1.30
SOLID N							
YEARS							
75-77		0.91	1.64	1.67	2.03	2.20	1.69
75-76		0.44	0.36	0.37	0.82	0.92	0.58
MEAN	0.40	0.68	1.00	1.02	1.42	1.56	1.01

GRAND MEAN 1.13

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6TH CUT (8/11/77) DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.245	0.100	0.100	0.123

TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.065 0.101*	0.142	0.173	0.173

TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.293	0.120	0.120	0.146
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
SOLID N	0.065			
LIQUID N		0.092		
SPACING			0.092	
N RATE				0.113

TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.245	0.169	0.207	0.207
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING		0.131		
LIQUID N.N RATE			0.160	
SPACING.N RATE				0.160

TABLE	LIQUID N SPACING N RATE YEARS
SED	0.293
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:	
LIQUID N.SPACING.N RATE	0.226

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.245	20.9
BLOCK.WP.SP	17	0.226	19.3

6TH CUT MEAN DM% 22.5

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TOTAL OF 6 CUTS DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM	60 CM	MEAN	
LIQUID N				
UREA	8.11	8.67	8.39	
UREA+INH	8.07	8.59	8.33	
MEAN	8.09	8.63	8.36	
N RATE	250	375	500	MEAN
LIQUID N				
UREA	6.71	8.87	9.59	8.39
UREA+INH	6.61	8.63	9.74	8.33
MEAN	6.66	8.75	9.66	8.36
N RATE	250	375	500	MEAN
SPACING				
30 CM	6.33	8.30	9.63	8.09
60 CM	6.99	9.20	9.70	8.63
MEAN	6.66	8.75	9.66	8.36
YEARS	75-77	75-76	MEAN	
LIQUID N				
UREA	10.82	5.96	8.39	
UREA+INH	10.32	6.33	8.33	
MEAN	10.57	6.15	8.36	
YEARS	75-77	75-76	MEAN	
SPACING				
30 CM	10.43	5.74	8.09	
60 CM	10.70	6.55	8.63	
MEAN	10.57	6.15	8.36	
YEARS	75-77	75-76	MEAN	
N RATE				
250	8.73	4.59	6.66	
375	11.19	6.31	8.75	
500	11.79	7.54	9.66	
MEAN	10.57	6.15	8.36	

77/R/CS/161

TOTAL OF 6 CUTS DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

SPACING	30 CM			60 CM			
N RATE	250	375	500	250	375	500	
LIQUID N							
UREA	6.33	8.34	9.65	7.09	9.41	9.52	
UREA+INH	6.33	8.26	9.62	6.89	9.00	9.87	
SPACING	30 CM		60 CM				
YEARS	75-77	75-76	75-77	75-76			
LIQUID N							
UREA	10.61	5.61	11.03	6.32			
UREA+INH	10.26	5.87	10.38	6.79			
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
UREA	8.94	4.47	11.45	6.30	12.06	7.11	
UREA+INH	8.52	4.70	10.92	6.33	11.52	7.97	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
SPACING							
30 CM	8.38	4.28	10.86	5.73	12.06	7.20	
60 CM	9.09	4.89	11.51	6.89	11.51	7.88	
N RATE	250		375		500		
YEARS	75-77	75-76	75-77	75-76	75-77	75-76	
LIQUID N							
SPACING							
UREA	30 CM	8.31	4.34	11.11	5.57	12.39	6.91
	60 CM	9.58	4.60	11.79	7.03	11.73	7.32
UREA+INH	30 CM	8.44	4.22	10.61	5.90	11.74	7.50
	60 CM	8.60	5.19	11.23	6.76	11.30	8.44
SOLID N	0	100	200	300	400	500	MEAN
YEARS							
75-77		6.28	8.36	10.46	11.20	12.21	9.70
75-76		3.41	3.71	4.00	4.69	5.10	4.18
MEAN	2.98	4.85	6.04	7.23	7.95	8.66	6.28

GRAND MEAN 7.67

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TOTAL OF 6 CUTS DRY MATTER TONNES/HECTARE

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

TABLE	SOLID N	LIQUID N	SPACING	N RATE
SED	0.538	0.220	0.220	0.269

TABLE	YEARS	LIQUID N SPACING	LIQUID N N RATE	SPACING N RATE
SED	0.107 0.166*	0.311	0.380	0.380

TABLE	SOLID N YEARS	LIQUID N YEARS	SPACING YEARS	N RATE YEARS
SED	0.599	0.244	0.244	0.299
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
SOLID N	0.372			
LIQUID N		0.152		
SPACING			0.152	
N RATE				0.186

TABLE	LIQUID N SPACING N RATE	LIQUID N SPACING YEARS	LIQUID N N RATE YEARS	SPACING N RATE YEARS
SED	0.538	0.346	0.423	0.423
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
LIQUID N.SPACING		0.215		
LIQUID N.N RATE			0.263	
SPACING.N RATE				0.263

TABLE	LIQUID N SPACING N RATE YEARS
SED	0.599
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:	
LIQUID N.SPACING.N RATE	0.372

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.538	6.8
BLOCK.WP.SP	17	0.372	4.7

TOTAL OF 6 CUTS MEAN DM% 21.1

SUB PLOT AREA HARVESTED 0.00141