

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1974

[Full Table of Content](#)



74/R/CS/144 N and Weedkiller - Old Grass

74/R/CS/144 N and Weedkiller - Old Grass , Rothamsted Research (1975) Yields Of The Field Experiments 1974, pp 265 - 269 - DOI: <https://doi.org/10.23637/ERADOC-1-119>

74/R/CS/144

N AND WEEDKILLER

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

Sponsors: A. Penny, F.V. Widdowson, R.C. Flint.

The first year, old grass.

Design: 3 blocks of 20 plots.

Whole plot dimensions: 2.13 x 9.14. Area harvested: 0.00111.

Treatments: All combinations of:-

1. Form of nitrogen fertiliser:

NFORM

Solid, 'Nitro-Chalk', 25% N

Solid

Liquid, urea/ammonium nitrate, 26% N

Liquid

2. Rate of nitrogen fertiliser per cut (kg N):

NPERCUT

50
100

50
100

3. Frequency of applying weedkiller(2,4-DB, Na salt, 3.4 l plus MCPA, K salt, 0.67 l plus benazolin, K salt, 0.45 l): WEEDKILLR

None

None

For 1st cut

Cut/1

For 1st and 2nd cuts

Cut/12

For 1st, 2nd and 3rd cuts

Cut/123

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

NOTE: Volumes applied were:-

(a) Liquid N-50:	154 l
(b) Liquid N-100:	307 l
(c) Liquid N-50 + weedkiller:	165 l
(d) Liquid N-100 + weedkiller:	318 l
(e) Weedkiller:	318 l

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

74/R/CS/144

Cultivations, etc.:— PK applied: 21 Feb, 1974. N and weedkiller applied:
5 Apr, 18 June, 14 Aug. Cut three times: 30 May, 30 July, 9 Oct.

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
weights of grass and weeds, and of N in each.

Standard errors per plot. Dry matter: tonnes/hectare.

1st cut:	0.393 or 7.4% (38 d.f.)
2nd cut:	0.207 or 7.9% (38 d.f.)
3rd cut:	0.160 or 8.6% (38 d.f.)

74/R/CS/144

TABLES OF MEANS

1ST CUT. DRY MATTER: TONNES/HECTARE

	NPERCUT		WEEDKILLR				Mean
	50	100	None	Cut/1	Cut/12	Cut/123	
NFORM							
Solid	5.37	6.10	5.75	5.79	5.65	5.73	5.73
Liquid	5.11	5.98	5.95	5.20	5.45	5.58	5.55
	NPERCUT						
		50	5.65	5.10	5.07	5.13	5.24
		100	6.06	5.90	6.03	6.17	6.04
Mean			5.85	5.50	5.55	5.65	5.64

WEEDKILLR

	None	Cut/1	Cut/12	Cut/123	Mean
NPERCUT(0)	4.40	3.62	4.01	3.65	3.92

STANDARD ERRORS OF DIFFERENCES

NFORM	NPERCUT	WEEDKILLR	NFORM NPERCUT	NFORM WEEDKILLR	NPERCUT WEEDKILLR	WEEDKILLR NPERCUT(0)
0.113	0.113	0.160	0.160	0.227	0.227	0.321

Grand mean 5.29

Mean D.M. % 23.7

NOTE: Cut/1 = Cut/12 = Cut/123

74/R/CS/144

2ND CUT. DRY MATTER: TONNES/HECTARE

	NPERCUT		WEEDKILLR				Mean
	50	100	None	Cut/1	Cut/12	Cut/123	
NFORM							
Solid	2.75	3.56	3.22	3.33	3.08	2.97	3.15
Liquid	2.37	3.13	2.89	2.85	2.67	2.60	2.75
	NPERCUT						
		50	2.67	2.68	2.42	2.48	2.56
		100	3.44	3.50	3.33	3.10	3.34
Mean			3.06	3.09	2.88	2.79	2.95

WEEDKILLR

	None	Cut/1	Cut/12	Cut/123	Mean
NPERCUT(0)	1.15	1.27	1.22	1.19	1.21

STANDARD ERRORS OF DIFFERENCES

NFORM	NPERCUT	WEEDKILLR	NFORM NPERCUT	NFORM WEEDKILLR	NPERCUT WEEDKILLR	WEEDKILLR NPERCUT(0)
0.060	0.060	0.084	0.084	0.119	0.119	0.169

Grand mean 2.60

Mean D.M. % 23.1

NOTE: Cut/12 = Cut/123

74/R/CS/144

3RD CUT. DRY MATTER: TONNES/HECTARE

	NPERCUT		WEEDKILLR				Mean
	50	100	None	Cut/1	Cut/12	Cut/123	
NFORM							
Solid	2.05	2.88	2.59	2.49	2.34	2.44	2.46
Liquid	1.56	2.42	1.86	2.09	2.09	1.91	1.99
	NPERCUT						
		50	1.84	1.83	1.73	1.81	1.80
		100	2.60	2.75	2.71	2.54	2.65
Mean			2.22	2.29	2.22	2.17	2.23

WEEDKILLR

	None	Cut/1	Cut/12	Cut/123	Mean
NPERCUT(0)	0.37	0.35	0.40	0.34	0.37

STANDARD ERRORS OF DIFFERENCES

NFORM	NPERCUT	WEEDKILLR	NFORM NPERCUT	NFORM WEEDKILLR	NPERCUT WEEDKILLR	WEEDKILLR NPERCUT(0)
0.046	0.046	0.065	0.065	0.092	0.092	0.131

Grand mean 1.85

Mean D.M. % 18.3