

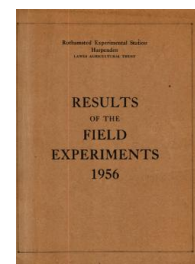
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1956

[Full Table of Content](#)



56/R/CI/1 Grass - N Fertilizers

Rothamsted Research

Rothamsted Research (1957) *56/R/CI/1 Grass - N Fertilizers* ; Yields Of The Field Experiments 1956, pp 114 - 115 - DOI: <https://doi.org/10.23637/ERADOC-1-176>

56/Ci/1.1

GRASS

Rates and times of application of nitrogenous fertilizers - Long Hoos
1, 2, 3, 1956.

Design: 4 randomized blocks of 16 plots each.

Area of each plot: 0.0075 acres. Area harvested: 0.0045 acres.

Treatments: None (4 plots per block) together with all combinations of:-

Materials and methods of application

Applied in one single dressing

Formalized casein 12.2% N

Casein 12.6% N

Ammonium sulphate 21.0% N

applied in 3 dressings of one third the single rate each

Ammonium sulphate 21.0% N

Urea 43.5% N

Calcium nitrate 15.5% N

Rates of application

0.75; 1.5 cwt N per acre.

Basal dressing: 5 cwt compound granular fertilizer (10% P_2O_5 , 20% K_2O)
per acre.

Cultivations, etc.: Ploughed: Sept 19, 1955. Basal fertilizer
applied, single dressings and first partial dressings of nitrogen
applied, seed drilled at 50 lb per acre: Apr 10, 1956. Sprayed
with MCPA, 3 pints in 40 gallons per acre: May 22. Second and
third partial dressings applied: July 11, Aug 10. Cut: three
times - July 10, Aug 9, Oct 23. Variety: New Zealand H1 Ryegrass.
Previous crop: Wheat.

Note: The ryegrass seed was sown in drills 7" apart and cross drilled.

Standard errors per plot. Grass dry matter:

1st cut	1.51 cwt per acre or 15.2% (48 d.f.)	}	*
2nd cut	1.22 cwt per acre or 10.6% (46 d.f.)		
3rd cut	1.40 cwt per acre or 9.3% (48 d.f.)		
Total of 3 cuts	2.47 cwt per acre or 6.8% (48 d.f.)		

*2 missing values.

56/Ci/1.2

Summary of Results

Dry Matter: cwt per acre

Level of N in fertilizer: cwt per acre	Fertilizer						Mean
	Single dressing			Repeated dressing			
	F	C	A	A	U	N	
1st Cut (±0.75)							
None							2.8 (±0.38)
0.75	3.4	17.2	16.7	8.4	8.2	9.0	10.5 (±0.31)
1.50	4.1	19.9	20.2	10.8	13.1	16.6	14.1 (±0.31)
Mean (±0.53)	3.7	18.6	18.5	9.6	10.7	12.8	9.9
Diff. (±1.07)	0.7	2.7	3.5	2.4	4.9	7.6	3.6 (±0.44)
2nd Cut (±0.61)							
None							3.4 (±0.30)
0.75	9.6	8.5	10.2*	14.3*	12.8	12.8	11.4 (±0.25)
1.50	15.2	15.5	16.5	19.6	16.9	18.5	17.0 (±0.25)
Mean (±0.43)	12.4	12.0	13.3	16.9	14.9	15.7	11.5
Diff. (±0.86)	5.6	7.0	6.3	5.3	4.1	5.7	5.6 (±0.35)
3rd Cut (±0.70)							
None							4.9 (±0.35)
0.75	16.6	8.4	8.9	18.2	20.6	17.6	15.1 (±0.29)
1.50	25.8	13.4	15.5	26.7	26.0	23.0	21.7 (±0.29)
Mean (±0.49)	21.2	10.9	12.2	22.5	23.3	20.3	15.0
Diff. (±0.99)	9.2	5.0	6.6	8.5	5.4	5.4	6.6 (±0.40)
Total of 3 cuts (±1.24)							
None							11.2 (±0.62)
0.75	29.7	34.2	35.8	41.0	41.6	39.5	37.0 (±0.50)
1.50	45.1	48.8	52.2	57.1	56.0	58.1	52.9 (±0.50)
Mean (±0.87)	37.4	41.5	44.0	49.0	48.8	48.8	36.5
Diff. (±1.75)	15.4	14.6	16.4	16.1	14.4	18.6	15.9 (±0.71)

*Includes 1 estimated value.

Treatments

F = Formalized casein 12.2% N
 C = Casein 12.6% N
 A = Ammonium sulphate 21.0% N
 U = Urea 43.5% N
 N = Calcium nitrate 15.5% N

Mean dry matter % as cut:

1st cut: 20.1
 2nd cut: 21.2
 3rd cut: 19.9
 Total of 3 cuts: 20.4