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Yields of the Field Experiments 1958

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58/R/CG/1 Grass - N Fertilizers

Rothamsted Research

Rothamsted Research (1959) *58/R/CG/1 Grass - N Fertilizers* ; Yields Of The Field Experiments 1958, pp 113 - 114 - DOI: <https://doi.org/10.23637/ERADOC-1-181>

58/Cg/1.1

GRASS

Slow acting nitrogenous fertilizers - Harwoods Piece 1958.

Design: 4 randomized blocks of 16 plots each.

Area of each plot: 0.0087 acres. Area harvested: 0.0050 acres.

Treatments: None (6 plots per block) together with all combinations of: -

Materials and methods of application

'Nitro-Chalk' (15.5% N): all in seed bed.

Ureaformaldehyde (37.2% N): all in seed bed (2 plots per block).

'Nitro-Chalk' (15.5% N): $\frac{1}{3}$ in seed bed; $\frac{1}{3}$ after 1st and 2nd cuts (2 plots per block).

Rates of application

1.0; 2.0 cwt N per acre.

Basal dressing: 5 cwt compound fertilizer (10% P_2O_5 , 10% K_2O) per acre applied in seed bed.

Cultivations, etc.: Ploughed: Oct 28 - Nov 22, 1957. Basal fertilizer and seed bed nitrogen applied: Apr 23, 1958. Seeds sown: Apr 24. Sprayed with MCPA at 4 pints in 40 gallons per acre: May 27. 2nd and 3rd dressings of 'Nitro-Chalk' applied: July 15 and Aug 14. Cut three times: July 8, Aug 13, Oct 23. Variety: S22 Italian Ryegrass. Previous crop: Spring wheat.

Standard errors per plot. Dry matter:

1st cut:	1.69 cwt per acre or 7.9% (54 d.f.)
2nd cut:	1.26 cwt per acre or 10.4% (54 d.f.)
3rd cut:	1.28 cwt per acre or 10.1% (54 d.f.)
Total of 3 cuts:	2.96 cwt per acre or 6.4% (54 d.f.)

58/Cg/1.2

Summary of Results

Dry matter: cwt per acre

Fertilizer

Fertilizer						Divided dressing		Mean
None	N1	N2	U1	U2	N1	N2		
<u>1st cut</u>								
Mean	(± 0.35) 13.2	(± 0.85) 29.9	32.1	22.4	(± 0.60) 27.6	22.1	27.4	21.3
Increase		16.7	18.9	9.2	14.4	8.9	14.2	
		(± 0.91)			(± 0.69)			
<u>2nd cut</u>								
Mean	(± 0.26) 7.7	(± 0.63) 12.4	15.7	9.0	(± 0.44) 12.2	17.2	21.4	12.1
Increase		4.7	8.0	1.3	4.5	9.5	13.7	
		(± 0.68)			(± 0.51)			
<u>3rd cut</u>								
Mean	(± 0.26) 7.9	(± 0.64) 11.4	16.4	10.7	(± 0.45) 12.9	18.7	21.1	12.6
Increase		3.5	8.5	2.8	5.0	10.8	13.2	
		(± 0.69)			(± 0.52)			
<u>Total of 3 cuts</u>								
Mean	(± 0.60) 28.9	(± 1.48) 53.8	64.2	42.1	(± 1.05) 52.7	58.1	69.9	46.0
Increase		24.9	35.3	13.2	23.8	29.2	41.0	
		(± 1.60)			(± 1.21)			

Fertilizers:

N 'Nitro-Chalk' 15.5% N

U Ureaformaldehyde 37.2% N

Levels of N in fertilizer: cwt per acre

1 1.0

2 2.0

Mean dry matter % as cut:

1st cut: 15.9

2nd cut: 15.9

3rd cut: 16.6

Total of 3 cuts: 16.1