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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>

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						Mean	
	None	Single dressing		Divided dressing				
		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		(±0.91) 16.7 18.9		9.2	(±0.69) 14.4 8.9		14.2	
<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		(±0.68) 4.7 8.0		1.3	(±0.51) 4.5 9.5		13.7	
<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		(±0.69) 3.5 8.5		2.8	(±0.52) 5.0 10.8		13.2	
<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		(±1.60) 24.9 35.3		13.2	(±1.21) 23.8 29.2		41.0	

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