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61/R/C/2 One Year Leys for Wheat - Ryegrass Ley

Rothamsted Research

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61/C/2.1

ONE YEAR LEYS FOR WHEAT

The comparison of various clover and grass leys as a preparation for wheat - Stackyard 1961.

Design: 4 randomised blocks of 18 plots each.

Area of each plot (acres): 0.0159. Area harvested: 1st cut - 0.0045; 2nd and 3rd cuts - 0.0114.

Treatments:

Nitrogen to leys 1961:- 3 plots per block of each of the following 6 treatments:

To clover: None (Co)

To ryegrass: None (Ro); 1 cwt (R1); 2 cwt (R2) N per acre.

To clover-ryegrass: None (CRo); 1cwt (CR1) N per acre.

The nitrogen was applied as 'Nitro-Chalk', 0.625 and 1.25 cwt N in spring, and 0.375 and 0.75 cwt N after 1st silage cut.

Note: The experiment is designed to include three rates of N applied to wheat in 1961/62.

Basal dressings per acre:

To barley nurse crop 1960: 3 cwt compound fertiliser (16% N, 9% P₂O₅, 9% K₂O) combine drilled.

To leys, combine drilled in seedbed 1960: 1½ cwt superphosphate.

Cultivations, etc.: Barley combine drilled, leys combine drilled, ryegrass at 30 lb, clover at 12 lb and clover-ryegrass at 10 lb clover and 20 lb ryegrass, per acre: Apr 19, 1960. 'Nitro-Chalk' dressings applied: Mar 13 and May 17, 1961. Cut three times for silage: May 15, July 6 and Sept 18. Varieties: Italian ryegrass S22 and Dorset Marl broad red clover.

Standard error per plot, Grass dry matter cwt per acre:*

1st cut:	3.34 cwt per acre or 6.7% (62 d.f.)*
2nd cut:	2.25 cwt per acre or 9.7% (63 d.f.)
3rd cut:	1.42 cwt per acre or 11.3% (63 d.f.)
Total of 3 cuts:	3.88 cwt per acre or 4.5% (63 d.f.)

* 1 missing value.

61/C/2.2

Summary of Results

Grass dry matter: cwt per acre

G ₀	R ₀	<u>Nitrogen to leys 1961</u>				Mean
		R ₁	R ₂	CR ₀	CR ₁	
			<u>1st cut</u>			
28.5	39.6	62.5 (±0.97)	59.6 ⁺	51.3	59.1	50.1
			<u>2nd cut</u>			
28.2	9.9	25.2 (±0.65)	32.9	15.8	26.7	23.1
			<u>3rd cut</u>			
23.7	4.9	6.7 (±0.41)	10.5	19.1	10.9	12.6
			<u>Total of 3 cuts</u>			
80.4	54.3	94.3 (±1.12)	102.9	86.2	96.8	85.8

+ Includes 1 estimated value.

Mean dry matter % as harvested: 1st cut: 21.8
 2nd cut: 30.7
 3rd cut: 31.6
 Total of 3 cuts: 28.0