

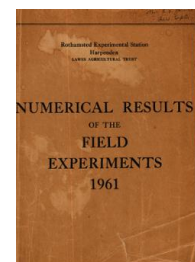
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1961

[Full Table of Content](#)



61/W/C/6 *Trefoil* and Ryegrass Green Manures - Sugar Beet (Test Crop)

Rothamsted Research

Rothamsted Research (1962) *61/W/C/6 Trefoil and Ryegrass Green Manures - Sugar Beet (Test Crop)* ; Yields Of The Field Experiments 1961, pp 99 - 100 - DOI:

<https://doi.org/10.23637/ERADOC-1-182>

61/C/6.1

SUGAR BEET

Effects of trefoil and ryegrass green manures and N - Woburn Stackyard 1961.

Design: 3 randomised blocks of 16 plots each.

Area of each plot: 0.0180 acres. Area harvested: 0.0135 acres.

Treatments. All combinations of:-

Nitrogen: None; 0.5; 1.0; 1.5 cwt N per acre as 'Nitro-Chalk' in seedbed.

Green manures undersown in barley 1960: None; trefoil; ryegrass; ryegrass with 0.6 cwt N per acre in autumn as 'Nitro-Chalk'.

Basal dressing:

To barley:- $2\frac{1}{2}$ cwt per acre compound fertiliser, 16% N; 9% P_2O_5 ; 9% K_2O combine drilled.

To sugar beet:- 5 cwt salt and 0.45 cwt K_2O as muriate of potash ploughed in; 0.45 cwt P_2O_5 , 0.45 cwt K_2O as compound fertiliser, 20% P_2O_5 , 20% K_2O in seedbed.

Cultivations, etc.: Trefoil undersown in barley at 30 lb per acre, ryegrass undersown at 40 lb per acre: Apr 27, 1960. Sprayed with MCPA/TBA at 4 pints in 40 gallons per acre: May 6. Barley combine harvested: Aug 25. 'Nitro-Chalk' applied to ryegrass: Sept 2. "Fallow" plots ploughed: Sept 8 - 26, and Jan 18, 1961. Salt and potash applied; all plots ploughed: Feb 16. Seedbed fertilisers applied: Mar 24. Sugar beet drilled at 10 lb per acre: Apr 10. Sprayed against flea beetle with DDT emulsion (25% DDT) at 3 pints in 40 gallons per acre: May 20. Singled: May 24. Sprayed with demeton methyl at 12 fluid oz in 40 gallons per acre: June 10 and again on July 10. Sugar beet lifted: Oct 17. Varieties: Ryegrass-- S22 Italian; Sugar beet - Klein E. Previous crop: Barley

Standard errors per plot.

Roots (washed): 0.900 tons per acre or 7.0% (30 d.f.)

Total sugar: 3.71 cwt per acre or 8.5% (30 d.f.)

Notes: The trefoil made very poor growth. Estimates were made of dry matter and N per acre in green manures just before ploughing.

61/C/6.2

Summary of Results

N: cwt per acre

Green manure undersown in barley	None	0.5	1.0	1.5	Mean
<u>Roots (washed): tons per acre</u>					
	(±0.520)				(±0.260)
None	9.30	11.43	11.36	12.97	11.27
Trefoil	10.77	12.95	15.02	14.78	13.38
Ryegrass	9.13	12.58	13.60	14.25	12.39
Ryegrass + N*	12.55	14.52	14.57	14.92	14.14
Mean (±0.260)	10.44	12.87	13.64	14.23	12.79

	<u>Sugar percentage</u>				
None	18.0	16.9	16.0	15.9	16.7
Trefoil	17.8	18.0	17.5	16.3	17.4
Ryegrass	18.3	17.1	17.5	16.3	17.3
Ryegrass + N*	17.6	17.9	16.7	16.5	17.2
Mean	18.0	17.5	16.9	16.2	17.1

	<u>Total sugar: cwt per acre</u>				
	(±2.14)				(±1.07)
None	33.6	38.5	36.3	41.3	37.4
Trefoil	38.3	46.7	52.6	48.2	46.5
Ryegrass	33.4	43.0	47.4	46.5	42.6
Ryegrass + N*	44.3	51.9	48.7	49.2	48.5
Mean (±1.07)	37.4	45.1	46.3	46.3	43.7

	<u>Plant number: thousands per acre</u>				
None	24.2	17.3	16.3	18.1	19.0
Trefoil	21.6	19.2	21.1	23.1	21.3
Ryegrass	25.3	23.4	21.6	20.8	22.8
Ryegrass + N*	23.9	21.5	21.3	21.8	22.1
Mean	23.8	20.3	20.1	20.9	21.2

*0.6 cwt N per acre applied to ryegrass in autumn as 'Nitro-Chalk'