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# Yields of the Field Experiments 1964

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## 64/W/WGM/B/3 Green Manuring

### Rothamsted Research

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64/B/3.1

GREEN MANURING EXPERIMENT

(WGM)

Woburn Stackyard - revised 1964.

For history, treatments, etc., see 'Details' 1962.

Area of each sub-plot: 0.0195. Area harvested: 0.0146.

Barley will be grown on all plots from 1964 onwards.

Treatments. 1964:

Old fallow plots. N1 N2 N3 N4.

Remainder. All combinations of:-

1. Green manures: none (duplicate plots), trefoil, ryegrass undersown annually (whole plots).

2. NO N1 N2 N3.

Levels: NO - none

N1 - 0.3 (cwt N as 'Nitro-Chalk')

N2 - 0.6

N3 - 0.9

N4 - 1.2

Each plot is split into 2, the N levels being paired as follows:-

(NO, N2) (N1, N3) (N2, N4).

All treatments are cumulative. Residual effects of certain past treatments are ascertainable.

Basal dressing: 3 cwt 0:20:20 combine drilled.

Cultivations, etc.:-

Barley after barley (Upper Half): 'Fallow' plots ploughed:

Nov 25, 1963. Green manure plots ploughed: Feb 3, 1964.

Barley after sugar beet (Lower Half): Ground chalk applied at

22 cwt: Dec 10, 1963. Ploughed: Jan 3, 1964.

All plots: Seed drilled at 2.75 bushels: Mar 10, 1964.

'Nitro-Chalk' applied: Mar 12. Ryegrass at 40 lb and

trefoil at 30 lb undersown: May 6. Sprayed with mecoprop/2,4-D

(Methoxone Extra at 6 pints in 40 gals) - except plots undersown

with trefoil: May 21. Combine harvested: Aug 22. Varieties:

Barley - Maris Badger, trefoil - English, ryegrass - English

Leafy Italian.

64/B/3.2

SUMMARY OF RESULTS

BARLEY AFTER SUGAR BEET

GRAIN

EXCLUDING PLOTS FALLOW UNDER OLD SCHEME

N 1964

	NO	N1	N2	N3	Mean
Mean	11.9	18.5	28.4	33.2	23.0
N 1963*					
NO	14.4	20.9	26.0	32.6	23.5
N1	13.6	15.7	29.2	32.7	22.8
N2	9.7	21.5	31.5	33.0	23.9
N3	9.7	15.9	26.9	34.6	21.8
Undersown 1964					
O	13.0	18.8	29.3	32.4	23.4
T	11.2	16.3	28.6	32.8	22.3
R	10.2	20.0	26.4	35.1	22.9
Green manures 1955 - 63					
T	11.0	17.4	24.7	33.5	21.6
R	11.3	15.3	32.8	26.4	21.4
TU	13.7	22.8	33.7	35.6	26.5
RU	11.5	18.5	22.5	37.4	22.5
Dung last applied 1953					
O	13.0	17.4	28.7	31.4	22.6
D	10.7	19.6	28.1	35.0	23.4

T = Trefoil grown as a green manure after early potatoes

R = Ryegrass grown after early potatoes

TU = as T, but with trefoil undersown in the barley

RU = as R, but with ryegrass undersown in the barley.

\*N to sugar beet 1963 at 0, 0.67, 1.33, 2.00 cwt N.

64/B/3.3

BARLEY AFTER SUGAR BEET

GRAIN

EXCLUDING PLOTS FALLOW UNDER OLD SCHEME

GREEN MANURES 1955 - 63

Dung last applied 1953	T	R	TU	RU
O	20.2	23.0	26.8	20.5
D	23.1	19.9	26.1	24.4

PLOTS FALLOW UNDER OLD SCHEME

N 1964

	N1	N2	N3	N4	Mean
Mean	14.3	24.4	34.3	37.7	27.7
N 1963*					
NO	12.1	20.8	36.2	43.6	28.2
N1	21.2	25.8	35.1	36.4	29.6
N2	10.1	29.1	25.0	35.0	24.8
N3	13.9	22.1	40.8	36.0	28.2
Dung last applied 1953					
O	17.6	25.0	37.9	39.3	29.9
D	11.1	23.9	30.6	36.2	25.5

\*N to sugar beet 1963 at 0, 0.67, 1.33, 2.00 cwt N.

64/B/3.4

BARLEY AFTER BARLEY

GRAIN

EXCLUDING PLOTS FALLOW UNDER OLD SCHEME

N 1964

	NO	N1	N2	N3	Mean
Mean	17.3	26.9	36.2	40.0	30.1
N 1963					
NO	20.2	29.4	33.8	42.1	31.4
N1	17.5	24.6	36.6	41.2	30.0
N2	15.4	28.1	38.2	40.0	30.5
N3	16.0	25.4	36.2	36.8	28.6
Undersown 1964					
O	18.2	28.2	37.9	40.4	31.2
T	14.7	24.6	30.3	39.5	27.3
R	18.1	26.5	38.8	39.9	30.8
Green manures 1955 - 64					
T	13.5	21.6	32.6	37.4	26.3
R	14.6	22.0	34.2	40.5	27.8
TU	26.1	38.9	40.4	41.6	36.7
RU	14.9	25.1	37.7	40.6	29.6
Dung last applied 1952					
O	17.2	26.1	36.5	38.3	29.5
D	17.4	27.6	36.0	41.8	30.7

T = Trefoil grown as a green manure after early potatoes  
 R = Ryegrass grown after early potatoes  
 TU = as T, but with trefoil undersown in the barley  
 RU = as R, but with ryegrass undersown in the barley.

64/B/3.5

BARLEY AFTER BARLEY

GRAIN

EXCLUDING PLOTS FALLOW UNDER OLD SCHEME

GREEN MANURES 1955 - 63

Dung last applied 1952	T	R	TU	RU
O	22.7	28.7	38.5	28.1
D	29.8	27.0	35.0	31.0

PLOTS FALLOW UNDER OLD SCHEME

N 1964

	N1	N2	N3	N4	Mean
Mean	18.9	30.8	38.8	41.7	32.6
N 1963					
NO	12.3	34.0	43.2	44.8	33.6
N1	21.4	28.1	41.8	36.0	31.8
N2	21.8	30.0	29.5	43.6	31.2
N3	20.2	31.1	40.8	42.6	33.7
Dung last applied 1952					
O	17.1	29.6	36.3	39.3	30.6
D	20.8	32.0	41.3	44.2	34.6