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# Yields of the Field Experiments 1958

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## 58/W/BD/1 Green Manuring

### Rothamsted Research

Rothamsted Research (1959) *58/W/BD/1 Green Manuring* ; Yields Of The Field Experiments 1958, pp 55 - 58 - DOI: <https://doi.org/10.23637/ERADOC-1-181>

GREEN MANURING EXPERIMENT

Woburn Stackyard - 1958, the 5th year of the revised scheme.

For history, treatments etc., see "Details of the Classical and Long Term Experiments" 1956.

Area of each plot: 0.0406 acres. Area harvested: Potatoes, 0.0221; barley, 0.0406 acres.

Cultivations, etc.:

Green manures after barley 1957 (for early potatoes 1958): Trefoil at 30 lb per acre, ryegrass at 40 lb per acre, undersown: May 11, 1957. Varieties: Trefoil-English; Ryegrass-Western Wolths. Early potatoes: Straw applied: Sept 23, 1957. "Fallow" plots ploughed: Oct 1, 1957. All plots ploughed: Feb 21, 1958. Basal fertilizer applied: Apr 14. 'Nitro-Chalk' applied, potatoes mechanically planted: Apr 15. Earthed up: June 18. Sprayed with copper fungicide at 5 lb in 80 gallons per acre: July 14. Lifted: July 29. Variety: Ulster Chieftain.

Green manures after early potatoes 1957 (for barley 1958): Trefoil at 30 lb per acre, ryegrass at 40 lb per acre, sown: July 16, 1957. Varieties: Trefoil-English; Ryegrass-Western Wolths. Barley: "Fallow" plots and "early" green manure plots ploughed: Oct 12, 1957, Feb 20, 1958. "Late" green manure plots ploughed: Feb 20. Ground chalk applied at 23 cwt per acre: Mar 5. 'Nitro-Chalk' applied, seed drilled at 2½ bushels per acre: Mar 20. Trefoil and ryegrass undersown: Apr 29. Harvested: Aug 20. Variety: Herta.

Standard errors per plot:

Potatoes. Total tubers: 1.200 tons per acre or 12.1% (18 d.f.)  
Barley. Grain: 1.97 cwt per acre or 7.9% (20 d.f.)

Estimates of produce (roots and tops) of green manure crops: cwt per acre

	Green manure	Ploughed in	Dry matter	Nitrogen
<u>For early potatoes</u>	Trefoil		14.2	0.418
	Ryegrass		16.5	0.240
<u>For barley</u>	Trefoil	Early	32.8	1.170
	Ryegrass	Early	37.3	0.619
	Trefoil	Late	10.8	0.331
	Ryegrass	Late	23.1	0.417

Errata to the "Results of the Field Experiments" 1955, 1956 and 1957.

Pages 55/Bd/1.3 & 1.4; 56/Bd/1.4 & 1.5; 57/Bd/1.3 & 1.4.

Rearrange the headings of the main barley table in the order shown in 1958: the order of the means should not be altered.

The means of Trefoil and Ryegrass in the bottom left table should be altered accordingly., e.g. 55/Bd/1.3 the table should read:

25.6    37.6 (not 40.3)    36.9 (not 34.1)    34.9

Summary of Results

Early potatoes, total tubers: tons per acre

	Straw: tons per acre		N: cwt per acre (including basal)		Dung to cabbages 1952: tons per acre		Mean
	None	1½	0.6	1.2	None	10	

Excluding plots fallow under old scheme

Undersown green manures for potatoes	(±0.424)		(±0.424)		(±0.424)		(±0.300)
None	9.70	9.73	9.64	9.80	9.12	10.32	9.72
	(±0.600)		(±0.600)		(±0.600)		(±0.424)
Trefoil	11.14	10.36	10.20	11.30	9.71	11.79	10.75
Ryegrass	9.56	10.68	9.65	10.58	9.30	10.93	10.12
Straw: tons per acre			(±0.424)		(±0.424)		(±0.300)
None			9.77	10.29	9.12	10.93	10.03
1½			9.80	10.45	9.50	10.74	10.12
N: cwt per acre (including basal)							
0.6					8.92	10.64	9.78
1.2					9.71	11.03	10.37
Mean (±0.300)					9.31	10.84	10.08

Plots fallow under old scheme

Straw: tons per acre			(±0.848)		(±0.848)		(±0.600)
None			8.44	10.17	8.58	10.04	9.31
1½			8.52	10.74	8.40	10.86	9.63
N: cwt per acre (including basal)							
0.6					7.12	9.84	8.48
1.2					9.85	11.06	10.45
Mean (±0.600)					8.49	10.45	9.47

Old scheme	Undersown green manures for potatoes				Mean
	None Fallow	None	Trefoil	Ryegrass	
	9.47	9.72	10.75	10.12	9.95
	(±0.424)	(±0.300)	(±0.424)		

58/Bd/1.3

Barley, grain per acre

	Green manures		N: cwt per acre (including basal)	Dung to cabbages 1953: tons per acre		Mean
	In barley for potatoes	After potatoes for barley		None	10	
	Under-sown	Trefoil	0.23	0.46	None	10
Excluding plots fallow under old scheme						
Green manures ploughed in	(±0.70)	(±0.70)	(±0.70)	(±0.70)	(±0.70)	(±0.49)
Early	22.2	23.6	20.8	24.7	21.9	23.7
Late	30.6	30.7	30.0	31.8	31.2	30.9
Green manures in barley for potatoes						
None		26.6	24.6	28.2	26.6	26.4
Undersown		27.7	26.3	28.3	26.4	27.3
Green manures after potatoes for barley						
Trefoil			26.0	28.3	27.2	27.1
Ryegrass			24.9	28.2	25.8	27.3
N: cwt per acre (including basal)						
0.23					25.2	25.4
0.46					27.8	28.3
Mean (±0.49)					26.5	27.2
Plots fallow under old scheme						
Green manures after potatoes for barley						
None						
Fallow	17.6	27.1			16.2	15.5
Ryegrass	(±0.70)	(±0.49)			20.1	19.7
Excluding fallow						
Mean		25.0				
Old scheme						
Fallow						
Ryegrass						
Mean						
Mean (±0.99)					18.2	17.0
Mean (±0.99)						17.6

58/Ba/1.4

Barley, straw: cwt per acre

	Green manures		N: cwt per acre (including basal)	Dung to cabbages 1953: tons per acre		Mean
	In barley for potatoes	After potatoes for barley		None	10	
	Under-sown	Trefoil	0.23	None	10	
<u>Excluding plots fallow under old scheme</u>						
Green manures ploughed in						
Early	19.3	24.1	19.6	19.8	23.4	21.6
Late	28.1	29.6	27.4	29.4	28.8	29.1
Green manures in barley for potatoes						
None		24.5	21.0	23.6	23.8	23.7
Undersown		29.2	26.0	25.5	28.4	27.0
Green manures after potatoes for barley						
Trefoil			25.4	26.5	27.3	26.9
Ryegrass			21.6	22.7	24.9	23.8
N: cwt per acre (including basal)						
0.23				23.2	23.8	23.5
0.45				25.9	28.4	27.2
Mean				24.6	26.1	25.3
<u>Plots fallow under old scheme</u>						
Green manures after potatoes for barley						
None						
Fallow						
Trefoil						
Ryegrass						
Excluding fallow						
Mean						
Old scheme						
None	15.1	26.9		12.0	13.5	12.7
Fallow				16.3	18.7	17.5
Mean				14.1	16.1	15.1