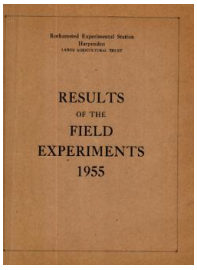
This work is licensed under a Creative Commons Attribution 4.0 International License.

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 readible, or you suspect there are some problems, please let us know and we will correct that.

Yields of the Field Experiments 1955

Full Table of Content



55/W/BD/1 Green Manuring

Rothamsted Research

Rothamsted Research (1956) *55/W/BD/1 Green Manuring ;* Yields Of The Field Experiments 1955, pp 53 - 56 **- DOI: https://doi.org/10.23637/ERADOC-1-175**

This work is licensed under a Creative Commons Attribution 4.0 International License.

GREEN MANURING EXPERIMENT

Woburn Stackyard - 1955, the 2nd year of revised scheme.

For details of treatments etc. see "Results of the Field Experiments" 1954, Section Bd/1.

Area of each plot: 0.0395 acre. Area harvested: Barley, 0.0395; Potatoes, 0.0237 acre.

Cultivations, etc.:

Green manures after potatoes: Trefoil at 30 lb per acre, ryegrass at 40 lb per acre, sown: Aug 3, 1954. Varieties: Trefoil - English; Ryegrass - Western Wolths.

Barley: "Fallow" and "early" green manure plots ploughed: Dec 22, 1954. "Late" green manure plots ploughed: Mar 14, 1955. Ground chalk at 20 cwt per acre applied: Mar 15. Nitrochalk applied, seed drilled at 2½ bushels per acre: Mar 18. Trefoil and Italian ryegrass undersown: Apr 26. Harvested: Aug 5. Variety: Herta.

Early potatoes: Straw applied, fallow plots ploughed: Sept 29, 1954. Trefoil plots patched: Nov 3, 1954. Trefoil and ryegrass plots ploughed: Mar 14, 1955. Nitrochalk and basal fertilizers applied: Apr 6. Potatoes mechanically planted: Apr 12. Earthed up: June 28. Lifted: July 26. Variety: Ulster Chieftain.

Standard errors per plot:

Barley, Grain: 2.43 cwt per acre or 7.0% (20 d.f.)

Potatoes, Total tubers: 0.368 tons per acre or 13.1% (18 d.f.)

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

	Green manure	Ploughed in	Dry matter	Nitrogen
For Barley	Trefoil	Early	27.6	0.923
	Ryegrass	Early	29.6	0.519
	Trefoil	Late	15.6	0.514
	Ryegrass	Late	26.7	0.533
For Potatoes	Trefoil		20.6	0.594
	Ryegrass		33.9	0.505

This work is licensed under a Creative Commons Attribution 4.0 International License.

55/Bd/1.2

Summary of Results

Early Potatoes, total tubers: tons per acre

Undersown green manures for potatoes	Straw: tons per acre		N: cwt per acre (including basal)		Dung to cabbages 1953: tons per acre		Mean
	None	$1\frac{1}{2}$	0.23	0.46	None	10	
Excluding plots fallow under old scheme							
	(±0.130)		(±0.130)		(±0.130)		(±0.092)
None	2.71	2.88	2.70	2.90	2.69	2.90	2.80
	(±0.184)		(±0.184)		(±0.184)		(±0.130)
Trefoil	3.01	2.92	2.86	3.08	2.64	3.29	2.97
Ryegrass	2.68	2.78	2.82	2.63	2.32	3.13	2.73
			(±0.120)		(±0.130)		(±0.092)
Straw: tons per acre							
None			2.66	2.89	2.42	3.14	2.78
$1\frac{1}{2}$			2.88	2.86	2.76	2.97	2.87
N: cwt per acre (including basal)							
0.23					2.51	3.02	2.77
0.46					2.67	3.08	2.87
Mean (±0.092)					2.59	3.05	2.82
Plots fallow under old scheme							
			(±0.260)		(±0.260)		(±0.184)
Straw: tons per acre							
None			2.34	2.76	2.38	2.72	2.55
$1\frac{1}{2}$			2.82	2.92	2.60	3.14	2.88
N: cwt per acre (including basal)							
0.23					2.48	2.68	2.58
0.46					2.51	3.18	2.84
Mean (±0.184)					2.49	2.93	2.71

Old scheme	Undersown green manures for potatoes: None Fallow	None	Trefoil	Ryegrass	Mean
		Excluding Fallow			
	2.71 (±0.130)	2.80 (±0.092)	2.97	2.73 (±0.130)	2.80

This work is licensed under a Creative Commons Attribution 4.0 International License.

55/Bd/1.3

Barley, grain: cwt per acre

	Green manures: Ploughed in Early	Green manures: Ploughed in Late	Green manures: barley for potatoes None	Green manures: barley for potatoes Undersown	N: cwt per acre (including basal) 0.23	N: cwt per acre (including basal) 0.46	Dung to cabbages 1952: tons per acre None	Dung to cabbages 1952: tons per acre 10	Mean
	Excluding plots fallow under old scheme								
Green manures after potatoes for barley	(±0.86)		(±0.86)		(±0.86)		(±0.86)		(±0.61)
Trefoil	40.5	40.2	40.3	40.4	39.5	41.1	38.9	41.8	40.3
Ryegrass	34.1	34.1	34.9	33.3	29.4	38.8	32.5	35.7	34.1
Green manures ploughed in									
Early			38.3	36.2	35.7	38.9	36.1	38.5	37.3
Late			36.8	37.5	33.2	41.1	35.4	39.0	37.2
Green manures in barley for potatoes									
None					35.4	39.8	35.5	39.7	37.6
Undersown					33.6	40.2	36.0	37.8	36.9
N: cwt per acre (including basal)									
0.23							33.3	35.6	34.5
0.46							38.1	41.8	40.0
Mean (±0.61)							35.7	38.7	37.2

Old scheme	Green manures after potatoes for barley: None Fallow	Trefoil	Ryegrass	Mean
		Excluding fallow		
	25.7	40.3	34.1	34.9
	(±0.86)	(±0.61)		

Plots fallow under old scheme

N: cwt per acre (including basal)	(±1.72)		(±1.22)
0.23	17.4	26.0	21.7
0.46	29.9	29.4	29.7
Mean (±1.22)	23.6	27.7	25.7

https://doi.org/10.23637/ERADOC-1-175

This work is licensed under a Creative Commons Attribution 4.0 International License.

55/Bd/1.4

Barley, straw: cwt per acre

	Green manures: Ploughed in Early	Green manures: Ploughed in Late	Green manures: In barley for potatoes None	Green manures: In barley for potatoes Undersown	N: cwt per acre (including basal) 0.23	N: cwt per acre (including basal) 0.46	Dung to cabbages 1952: tons per acre None	Dung to cabbages 1952: tons per acre 10	Mean
Excluding plots fallow under old scheme									
Green manures after potatoes for barley									
Trefoil	45.6	44.8	45.6	44.7	42.2	48.1	43.1	47.2	45.2
Ryegrass	34.7	35.0	35.1	34.6	27.1	42.6	32.5	37.2	34.9
Green manures ploughed in									
Early			41.0	39.2	36.2	44.1	38.0	42.3	40.1
Late			39.7	40.1	33.1	46.7	37.6	42.2	39.9
Green manures in barley for potates									
None					36.2	44.5	37.5	43.2	40.4
Undersown					33.1	46.2	38.1	41.2	39.7
N: cwt per acre (including basal)									
0.23							33.0	36.3	34.7
0.46							42.6	48.1	45.4
Mean							37.8	42.2	40.0

Plots fallow under old scheme

Old scheme	Green manures after potatoes for barley: None Fallow	Trefoil (Excluding fallow)	Ryegrass (Excluding fallow)	Mean
	24.7	45.2	34.9	37.0

N: cwt per acre (including basal)			
0.23	14.8	23.1	19.0
0.46	28.4	32.5	30.4
Mean	21.6	27.8	24.7

https://doi.org/10.23637/ERADOC-1-175