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Yields of the Field Experiments 1955

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55/W/BD/1 Green Manuring

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55/Bd/1.1

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
<u>For Barley</u>	Trefoil	Early	27.6	0.923
	Ryegrass	Early	29.6	0.519
	Trefoil	Late	15.6	0.514
	Ryegrass	Late	26.7	0.533
<u>For Potatoes</u>	Trefoil		20.6	0.594
	Ryegrass		33.9	0.505

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	1½	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
1½		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
1½	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				Mean
	None Fallow	None	Trefoil Excluding Fallow	Ryegrass	
	2.71	2.80	2.97	2.73	2.80
	(±0.130)	(±0.092)	(±0.130)		

55/Bd/1.3

Barley, grain: cwt pcr acre		Green manures barley for potatoes		N: cwt per acre (including basal)		Dung to cabbages 1952: tons per acre	
Ploughed in Early	Late	None	Undersown	0.23	0.46	None	10
Excluding plots fallow under old scheme							
Green manures after potatoes for barley		(± 0.86)		(± 0.86)		(± 0.86)	
Trefoil	40.5	40.3	40.4	39.5	41.1	38.9	41.8
Ryegrass	34.1	34.9	33.3	29.4	38.8	32.5	35.7
Green manures ploughed in		36.3	36.2	35.7	38.9	36.1	38.5
Early	36.8	37.5	33.2	41.1	35.4	35.4	39.0
Late							
Green manures in barley for potatoes				35.4	39.8	35.5	39.7
None				33.6	40.2	36.0	37.8
Undersown							
N: cwt per acre (including basal)							
0.23						33.3	34.5
0.46						38.1	40.0
Mean (± 0.61)						35.7	38.7
Plots fallow under old scheme							
Green manures after potatoes for barley		N: cwt per acre (including basal)		(± 1.72)		(± 1.22)	
None				0.23		17.4	26.0
Fallow				0.46		29.9	29.4
25.7	40.3	34.1				23.6	27.7
(± 0.86)		(± 0.61)					
Mean		Mean				25.7	

55/Ba/1.4

Barley, straw: cwt per acre									
	Green manures			N: cwt per acre (including basal)	N: cwt per acre (including basal)	Dung to		Mean*	
	Ploughed in Early	In barley for potatoes				None	tons per acre		
		Late	None						Undersown
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 potatoes									
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									
Green manures after potatoes for barley									
None							14.8	23.1	19.0
Fallow							28.4	32.5	30.4
Old scheme	24.7	45.2	34.9	Mean			21.6	27.8	24.7