

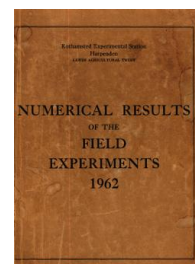
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Yields of the Field Experiments 1962

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62/W/B/3 Green Manuring

Rothamsted Research

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62/B/3.1

GREEN MANURING EXPERIMENT

Woburn Stackyard - 1962, the 9th year of the revised scheme.

For history, treatments etc., see "Details of the Classical and Long Term Experiments" 1956. Proctor has replaced Herta as the barley variety.

Area of each plot (acres): 0.0396. Area harvested: Potatoes - 0.0221; barley - 0.0295.

Cultivations, etc.:

Green manures after barley 1961 (for early potatoes 1962): Trefoil at 30 lb per acre, ryegrass at 40 lb per acre, undersown: Apr 19, 1961. Varieties: Trefoil - English; Ryegrass - Italian.

Early potatoes: Straw applied (green manure and "fallow" plots): Sept 14, 1961. "Fallow" plots ploughed: Oct 2; reploughed: Dec 18. All plots ploughed: Feb 2, 1962. Basal fertiliser applied: Mar 12. 'Nitro-Chalk' applied, potatoes mechanically planted: Mar 14. Earthed up: June 14. Haulm destroyed mechanically: July 19. Lifted: July 20. Variety: Ulster Chieftain.

Green manures after early potatoes 1961 (for barley 1962): Ground chalk applied at 21 cwt per acre: July 14, 1961. Trefoil sown at 30 lb per acre: July 15. Ryegrass sown at 40 lb per acre: July 17. Varieties: Trefoil - English; Ryegrass - Western Wolths.

Barley: "Fallow" plots and "early" green manure plots ploughed: Oct 18 and Dec 22, 1961. All plots ploughed: Feb 6, 1962. 'Nitro-Chalk' applied: Feb 20. Seed drilled at $2\frac{1}{2}$ bushels per acre: Feb 21. Trefoil and ryegrass undersown: Apr 28. Combine harvested: Aug 29. Variety: Proctor.

Standard errors per plot.

Potatoes. Total tubers:	0.410 tons per acre or 12.7% (18 d.f.)
Barley. Grain (at 85% D.M.):	5.45 cwt per acre or 22.4% (20 d.f.)

62/B/3.2

Erratum to "The Numerical Results of the Field Experiments" 1961
page 61/B/3.3. The table under 'Plots fallow under old scheme'
should read:-

N: cwt per acre	Dung: tons per acre 1952		Mean
	None	10	
	(±1.82)		(±1.28)
0.23	14.5	18.0	16.3
0.46	21.9	24.7	23.3
Mean (±1.28)	18.2	21.4	19.8

and not as given.

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

	Green manures	Ploughed in	Dry matter	Nitrogen
<u>For early potatoes</u>	Trefoil		21.0	0.657
	Ryegrass		18.3	0.231
<u>For barley</u>	Trefoil	Early	36.8	1.090
	Ryegrass	Early	50.3	0.850
	Trefoil	Late	11.9	0.317
	Ryegrass	Late	38.2	0.764

62/B/3.3

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	
<u>Excluding plots fallow under old scheme</u>							
Undersown green manures for potatoes	(±0.145)		(±0.145)		(±0.145)		(±0.102)
None	3.24	3.12	3.31	3.05	2.89	3.47	3.18
Trefoil	(±0.205)		(±0.205)		(±0.205)		(±0.145)
Ryegrass	3.67	3.66	3.60	3.73	3.50	3.83	3.66
	3.12	3.18	2.89	3.42	3.21	3.10	3.15
Straw: tons per acre			(±0.145)		(±0.145)		(±0.102)
None			3.15	3.49	3.02	3.62	3.32
1½			3.40	3.14	3.22	3.32	3.27
N: cwt per acre (including basal)							
0.6					3.09	3.46	3.27
1.2					3.15	3.47	3.31
Mean (±0.102)					3.12	3.47	3.29

Plots fallow under old scheme

Straw: tons per acre			(±0.290)		(±0.290)		(±0.205)
None			2.66	2.85	2.40	3.11	2.76
1½			2.80	3.52	2.94	3.38	3.16
N: cwt per acre (including basal)							
0.6					2.14	3.32	2.73
1.2					3.20	3.18	3.19
Mean (±0.205)					2.67	3.25	2.96

Undersown green manures for potatoes

Old scheme	None	None	Trefoil	Ryegrass	Mean
	Fallow	Excluding fallow			
	2.96	3.18	3.66	3.15	3.22
	(±0.145)	(±0.102)	(±0.145)		

62/B/3.4

Barley, Grain (at 85% dry matter): cwt per acre

	Green manures In barley for potatoes		After potatoes for barley		N: cwt per acre (including basal)	Dung to cabbages 1953: tons per acre		Mean
	Under-sown	Trefoil	Rye-grass	None		10		
Excluding plots fallow under old scheme								
Green manures ploughed in	(+1.93)		(+1.93)		(+1.93)	(±1.93)		(±1.36)
Early	23.2	21.3	24.3	20.1	20.1	21.0	23.4	22.2
Late	26.9	27.0	25.1	28.8	26.4	29.1	24.8	26.9
Green manures in barley for potatoes								
None			25.5	24.6	24.0	26.8	23.2	25.0
Undersown			24.0	24.3	22.5	23.3	25.0	24.1
Green manures after potatoes for barley								
Trefoil			22.7	26.8	22.7	25.9	23.5	24.7
Ryegrass			23.9	25.0	23.9	24.2	24.7	24.4
N: cwt per acre (including basal)								
0.23						24.2	22.4	23.3
0.46						25.9	25.9	25.9
Mean (+1.36)						25.1	24.1	24.6
Plots fallow under old scheme								
N: cwt per acre (including basal)								
0.23								
0.46								
Mean (+2.73)								
Mean dry matter % as harvested: 83.9								
Old scheme	Green manures after potatoes for barley		Mean		Dung to cabbages 1953: tons per acre		Mean	
None	Trefoil	Ryegrass			(±3.86)		(±2.73)	
Fallow	Excluding	fallow			25.4	21.1	23.3	
23.3	24.7	24.4			23.4	23.5	23.4	
(+1.93)	(+1.36)				24.4	22.3	23.3	