

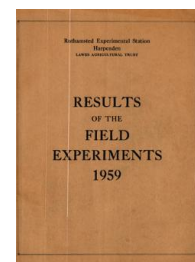
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Yields of the Field Experiments 1959

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59/W/BD/1 Green Manuring

Rothamsted Research

Rothamsted Research (1960) *59/W/BD/1 Green Manuring* ; Yields Of The Field Experiments 1959, pp 47 - 49 - DOI: <https://doi.org/10.23637/ERADOC-1-179>

59/Ba/1.2

Summary of Results

Early potatoes, total tubers: tons per acre

	Straw: tons per acre		N: cwt per acre (including basal)		Dung to cabbages 1953: tons per acre		Mean
	None	1½	0.6	1.2	None	10	

Excluding plots fallow under old scheme

Undersown green manures for potatoes	(±0.185)		(±0.185)		(±0.185)		(±0.131)
None	4.12	4.05	4.01	4.16	4.02	4.15	4.08
	(±0.262)		(±0.262)		(±0.262)		(±0.185)
Trefoil	4.21	4.40	4.37	4.24	4.22	4.38	4.30
Ryegrass	4.63	4.86	4.88	4.61	4.28	5.22	4.74
Straw: tons per acre			(±0.185)		(±0.185)		(±0.131)
None			4.24	4.29	4.09	4.44	4.27
1½			4.39	4.29	4.18	4.50	4.34
N: cwt per acre (including basal)							
0.6					4.10	4.54	4.32
1.2					4.17	4.41	4.29
Mean (±0.131)					4.13	4.47	4.30

Plots fallow under old scheme

Straw: tons per acre			(±0.370)		(±0.370)		(±0.262)
None			3.52	3.56	3.42	3.66	3.54
1½			3.96	4.07	3.84	4.19	4.02
N: cwt per acre (including basal)							
0.6					3.58	3.90	3.74
1.2					3.68	3.95	3.82
Mean (±0.262)					3.63	3.92	3.78

Old scheme	Undersown green manures for potatoes				Mean
	None Fallow	None	Trefoil	Ryegrass	
	3.78	4.08	4.30	4.74	4.20
	(±0.185)	(±0.131)	(±0.185)		

59/Ba/1.3

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

	Green manures		N: cwt per acre (including basal)		Dung to cabbages 1952: tons per acre		Mean
	In barley for potatoes	After potatoes for barley	0.23	0.46	None	10	
	Under-sown	Trefoil	Rye-grass				
	None	24.4	23.1	23.4			
	26.7	30.0	30.0	26.7			
<u>Excluding plots fallow under old scheme</u>							
Green manures ploughed in	(±1.06)	(±1.06)	(±1.06)	(±1.06)	(±1.06)	(±0.75)	
Early	22.1	24.4	23.1	23.4	22.4	24.1	23.2
Late	26.7	30.0	30.0	26.7	27.6	29.1	28.4
Green manures in barley for potatoes							
None			25.3	23.5	23.4	25.4	24.4
Undersown			27.8	26.5	26.5	27.9	27.2
Green manures after potatoes for barley							
Trefoil			25.8	27.3	25.4	27.8	26.6
Ryegrass			21.3	28.7	24.6	25.5	25.0
N: cwt per acre (including basal)							
0.23					22.5	24.7	23.6
0.46					27.4	28.6	28.0
Mean (±0.75)					25.0	26.6	25.8
<u>Plots fallow under old scheme</u>							
Green manures after potatoes for barley							
None							
Fallow							
20.7							
(±1.06)							
26.6							
(±0.75)							
25.0							
Mean							
24.8							
Green manures after potatoes for barley							
Trefoil							
Ryegrass							
Excluding fallow							
Mean							
13.2							
19.3							
26.2							
24.0							
Mean (±1.50)							
19.7							
21.6							
20.7							

Mean dry matter % as harvested: 84.4

59/Be/1.1

LEY AND ARABLE ROTATIONS

Woburn Stackyard 1959 - the 22nd year.

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

Combine harvesting: In 1959 the combine harvester was introduced for barley and rye; the whole plot area was harvested for yield estimates.

Cultivations, etc.,

Treatment crops

Ley rotations

Ley 1st year. Ploughed twice: Sept 17 and Nov 21, 1958. PK fertilizers and 'Nitro-Shell' applied: Mar 31, 1959. Seed sown at 40 lb per acre: Apr 7. Sprayed with DNEP at 9 pints in 80 gallons per acre: June 4. 'Nitro-Shell' applied: 2nd dressing - Aug 31; 3rd dressing - Oct 7. Grazed 3 circuits: June 30 - Oct 30. Seeds mixture: 20 lb S24 Perennial Ryegrass, 11 lb S143 Cocksfoot, 6 lb Late Flowering Red Clover, 3 lb S100 White Clover per acre.

Ley 2nd year. Potash and nitrogen fertilizer applied: Mar 17, June 10 and Aug 31. Grazed 5 circuits: Apr 22 - Aug 29.

Ley 3rd year. Potash and nitrogen fertilizer applied: Mar 17, June 10 and Aug 31. Grazed 5 circuits: Apr 14 - Aug 21.

Lucerne 1st year. Ploughed twice: Sept 17 and Nov 21, 1958. PK fertilizer applied: Mar 31. Seed sown at 25 lb per acre: Apr 7.* Sprayed with dieldrin at 2 pints in 40 gallons per acre against birds: June 4. Cut twice: July 10, Sept 2. Variety: Du Puits.

Lucerne 2nd year. Muriate of potash applied: Apr 13. Cut 3 times: June 12, July 10, Sept 2.

Lucerne 3rd year. Plots 3, 4, 9 and 10 were fallowed because of stem eelworm and received no potash. Ploughed: Apr 30, June 13, Sept 2, 1959.

Arable rotations

Potatoes 1st course. Ploughed twice: Sept 17 and Nov 21, 1958. Compound fertilizer applied: Mar 31, 1959. Potatoes machine planted: Apr 1. Earthed up: June 22. Sprayed with zineb at 2 lb and demeton methyl (against aphids) at 12 fluid oz (50% active ingredients) in 40 gallons per acre: Aug 15. Haulm destroyed mechanically: Sept 22. Lifted: Sept 30. Variety: Majestic.

Rye 2nd course. Ploughed: Oct 16, 1958. Seed drilled at $2\frac{1}{2}$ bushels per acre: Oct 21. 'Nitro-Shell' applied: Apr 13, 1959. Seeds hay mixture undersown on 4 plots: Apr 7. Combine harvested: Aug 18. Variety: King II.

*Sprayed with dieldrin at 2 pints in 40 gallons per acre against weevil: Apr 30.