

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



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1951

[Full Table of Content](#)



Classical Experiments

Rothamsted Research

Rothamsted Research (1952) *Classical Experiments* ; Yields Of The Field Experiments 1951, pp 4 - 12 - DOI: <https://doi.org/10.23637/ERADOC-1-171>

51/A/1

WHEAT - BROADBALK 1951

The 108th year

For details of treatments etc see Appendix Y 1950.

Cultivations, etc:

Cropped sections. Ploughed all except dung plots: Aug 24.
 Dung applied and ploughed in: Sept 8. Autumn application of
 artificials: Oct 23. Seed drilled at 3 bushels per acre:
 Oct 25. Spring application of nitrogenous fertilizers:
 Apr 11. Second dressing of nitrate of soda applied to plot
 16: May 8. Harvested: Aug 21. Variety: Squareheads
 Master (13/4).
Fallow section. Ploughed: Aug 24, Apr 24 and July 9.

Summary of Results

Section	Total Grain: cwt per acre					Total straw ²⁰ : cwt per acre				
	III	IV	V	II	Mean	III	IV	V	II	Mean
	1	2	3	4		1	2	3	4	
2A	30.7	22.7	21.6	18.9	23.5	48.9	36.9	31.6	29.7	36.8
2B	34.6	23.4	22.3	21.0	25.3	52.8	39.2	33.6	33.4	39.8
3	16.2	8.4	8.4	8.1	10.3	23.2	11.7	11.5	11.0	14.4
5	17.6	8.0	7.8	10.4	11.0	28.9	11.5	11.0	18.9	17.6
6	23.7	10.8	8.8	12.2	13.9	35.9	17.8	15.1	22.9	22.9
7	28.7	17.5	13.2	14.1	18.4	50.7	36.5	27.8	28.7	35.9
8	33.2	23.9	22.3	20.6	25.0	60.0	53.7	42.3	44.8	50.2
9	24.6	17.8	14.2	13.3	17.5	42.2	31.7	27.0	24.3	31.3
10	28.7	19.5	13.8	13.8	19.0	45.0	31.4	23.2	22.3	30.5
11	26.9	15.0	15.2	14.6	17.9	36.1	25.6	24.7	22.5	27.2
12	28.6	20.9	17.6	15.7	20.7	38.4	33.0	29.4	23.7	31.1
13	30.9	15.9	11.9	17.3	19.0	50.0	31.1	23.1	33.2	34.4
14	29.7	15.7	18.4	16.0	20.0	42.8	28.7	28.6	25.0	31.3
15	28.0	13.5	8.1	13.2	15.7	40.3	21.7	12.0	19.9	23.5
16	34.1	22.6	19.5	23.2	24.8	61.8	43.5	39.2	37.8	45.6
17	21.9	8.9	6.7	6.3	11.0	33.4	13.2	7.2	9.9	15.9
18	29.0	14.6	12.5	17.5	18.4	45.9	24.7	22.0	30.3	30.7
19	28.1	14.8	12.5	15.2	17.6	39.0	24.8	19.5	19.5	25.7
20	-	-	-	15.2	15.2	-	-	-	28.0	28.0

²⁰ Includes straw, cavings and chaff.

51/A/2

BARLEY - HOOSFIELD 1954

The 100th Year

For details of treatments etc. see Appendix Y 1950.

Cultivations, etc.: Ploughed: Sept 4. Dung applied: Feb 1.
 Fertilizers applied: Apr 21. Seed drilled at 3 bushels per
 acre: Apr 25. Sprayed with D.N.O.C. 1 gallon per acre: June 26.
 Harvested: Sept 11. Variety: Plumage Archer.

Summary of Results.

Plot		Total Grain cwt per acre	Total Straw [#] cwt per acre
1	O	8.5	6.1
2	O	8.0	4.9
3	O	6.9	5.4
4	O	11.1	6.3
5	O	6.0	5.9
1	A	9.9	6.8
2	A	13.1	9.6
3	A	15.1	12.1
4	A	12.8	11.7
5	A	7.5	10.7
1	AA	11.2	9.5
2	AA	19.5	13.0
3	AA	14.5	13.0
4	AA	18.5 [†]	14.5 [†]
1	AAS	14.3	10.6
2	AAS	16.4	13.5
3	AAS	16.5	12.9
4	AAS	19.7 [†]	16.3 [†]
1	C	14.3	11.9
2	C	21.4	14.3
3	C	16.3	11.1
4	C	19.0	13.7
7	- 1	9.8	5.9
7	- 2	21.3	13.2
6	- 1	5.9	4.2
6	- 2	6.8	5.0
1	N	16.2	13.1
2	N	14.0	11.9

[#]Includes straw, cavings and chaff.

[†]Estimated from the sum of 4 AA and 4 AAS.

51/A/3

WHEAT AFTER FALLOW - HOOSFIELD 1951

Without manure 1851 and since

For details of treatments etc. see Appendix Y 1950

Cultivations, etc.:

Cropped sections. Ploughed: Sept 14. Seed drilled at 3 bushels per acre: Oct 18. Harvested: Aug 24. Variety: Squareheads Master (13/4).

Fallow section. Ploughed: Sept 14, Apr 23 and July 10.

Summary of Results

Section	Mean yields: cwt per acre			Mean
	I	II	III	
Years after fallow	1	1	3	
Total grain	8.2	7.8	9.3	8.4
Total straw	12.6	11.9	12.7	12.4

CROPS IN ROTATION - AGDELL 1951

Wheat - 4th crop of 26th course 1948-51

Cultivations, etc.:

Ploughed: Aug 10. Seed drilled at 3 bushels per acre: Oct 19. Harvested: Aug 20. Variety: Squareheads Master (13/4).

Summary of Results

Manure to Turnips 1948	Mean yields: cwt per acre					
	None since 1848		Mineral Manure No Nitrogen		Complete mineral and nitrogenous manure	
Rotation Plot	Fallow 5	Clover 6	Fallow 3	Clover 4	Fallow 1	Clover 2
Total Grain	13.1	9.1	16.8	12.5	16.4	15.2
Total Straw	-*	17.4	24.6	26.8	24.9	25.0

*Weight of straw not available.

For details of treatments and rotation see Appendix Y.

MANGOLDS AND SUGAR BEET - BARNFIELD 1951

The 76th and 6th years

For details of treatments etc see Appendix 7, 1950

Cultivations, etc:

Dung applied: Dec 29. Ploughed: Mar 6. Fertilizer applied: May 23. Seed drilled, mangolds - 9 lb per acre, sugar beet - 18 lb per acre: May 26. Singling commenced: June 27. Top dressings applied: July 19. Mangolds lifted: Nov 23. Sugar beet lifted: Dec 8. Varieties: mangolds - Yellow Globe, sugar beet - Klein E. Seed treated with phenol and magnesium sulphate.

Summary of Results

Yields: tons per acre

Cross Dressings

Strip	O	N	A	AC	G
Mangolds: Roots					
1	4.34	15.35	13.23	17.04	16.21
2	5.33	16.57	13.49	18.97	16.65
4	2.19	(a) 11.99	8.13	9.95	12.04
		(b) 13.87			
5	1.89	11.81	5.10	3.25	4.63
6	1.68	11.03	9.69	11.19	10.68
7	2.11	11.56	10.78	12.26	12.13
8	0.89	5.71	1.88	2.35	4.06
9	7.25				
Mangolds: Leaves					
1	1.27	3.94	3.77	5.46	4.21
2	2.10	4.55	3.77	5.02	4.70
4	1.49	(a) 4.75	3.50	3.72	4.72
		(b) 4.94			
5	1.05	3.77	1.88	2.52	3.47
6	1.03	3.77	3.94	4.70	4.57
7	1.15	3.62	4.31	5.97	4.72
8	0.59	3.62	1.52	2.32	2.76
9	4.89				

51/A/4.2

Yields: tons per acre

Cross Dressings

Strip	O	N	A	AC	C
Sugar Beet: Roots					
1	5.31	6.19	9.53	9.49	10.28
2	2.62	8.75	5.86	6.21	7.54
4	1.26	(b) 5.04	5.80	7.95	6.79
5	0.83	4.94	3.28	3.18	2.97
6	1.22	4.65	7.11	6.85	6.74
7	1.30	6.58	7.56	6.67	6.30
8	1.10	4.55	2.84	3.77	3.02
Sugar Beet: Tops					
1	5.04	11.99	11.69	13.55	11.99
2	2.59	11.60	5.04	7.98	9.00
4	6.61	(b) 5.43	8.46	13.01	9.44
5	5.97	6.56	3.96	6.17	4.06
6	6.26	4.60	8.37	9.59	7.88
7	6.51	8.02	7.98	12.28	10.32
8	7.14	7.49	4.16	6.51	5.68

51/A/5

HAY -- THE PARK GRASS PLOTS 1951

The 96th year

For details of treatments etc.: see Appendix Y 1950.

Cultivations, etc: Minerals applied: Feb 28. Nitrogenous fertilizers applied: 1st dressing - Mar 22, 2nd dressing - May 5. 1st cut: June 21. 2nd cut: Oct 2.

Summary of Results

Plot	Yield of Hay: cwt per acre					
	Not limed			Limed		
	1st Crop	2nd Crop ^{NE}	Total	1st Crop	2nd Crop ^{NE}	Total
1	10.7	9.1	19.8	21.6	6.1	27.7
2	14.0	9.4	23.4	16.1	4.6	20.7
3	12.3	7.9	20.2	15.4	4.1	19.5
4-1	16.0	7.6	23.6	17.0	8.0	25.0
4-2	14.6	3.6	18.2	30.4	6.6	37.0
5-1	15.0	3.5	18.5			
5-2	18.5	8.9	27.4			
6	33.6	15.9	49.5			
7	31.2	17.1	48.3	44.1	8.8	52.9
8	29.2	13.2	42.4	23.6	6.5	30.1
9	49.1	9.9	59.0	48.5	8.8	57.3
10	27.8	11.4	39.2	39.7	8.9	48.6
11-1	44.8	20.1	64.9	62.4	13.8	76.2
11-2	61.3	21.8	83.1	75.4	21.2	96.6
12	16.8	8.9	25.7			
13	37.6	14.6	52.2	38.5	11.9	50.4
14	53.3	18.4	71.7	55.5	10.8	66.3
				44.1 ^{NE}	5.1 ^{NE}	49.2 ^{NE}
15	20.1	11.1	31.2	31.0	3.4	34.4
16	40.1	11.8	51.9	40.5	9.2	49.7
17	16.6	9.6	26.2	25.3	6.2	31.5
18	17.0	7.8	24.8	36.7 [†]	10.1 [†]	46.8 [†]
				34.7 ^{††}	9.0 ^{††}	43.7 ^{††}
19	30.6	11.9	42.5	27.2 [†]	6.0 [†]	33.2 [†]
				30.5 ^{††}	10.5 ^{††}	41.0 ^{††}
20	37.8	11.4	49.2	40.6 [†]	8.5 [†]	49.1 [†]
				41.2 ^{††}	11.0 ^{††}	52.2 ^{††}

^{NE} Shade

^{NE} These figures for the second crop are estimated hay yields calculated from the dry matter

[†] Heavy liming

^{††} Light liming.

51/A/6

BARLEY - EXHAUSTION LAND HOOSFIELD 1951

For details of previous treatments etc. see Appendix Y, 1950.

Cultivations, etc.: Ploughed: Aug 29 and Jan 27. Seed drilled at 3 bushels per acre, sulphate of ammonia drilled: Apr 16. Harvested: Sept 3. Variety: Plumage Archer.

Summary of Results

Plot	Total Grain: cwt per acre	Total Straw: cwt per acre
1	13.6	14.0
2	12.7	13.4
3	22.9	20.3
4	25.1	22.1
5	15.2	13.8
6	11.2	8.6
7	24.1	21.8
8	23.8	20.3
9	23.4	19.4
10	26.4	21.9

51/A/7

PERMANENT WHEAT - WOBURN STACKYARD 1951

For details of treatments etc. see Appendix Y 1950.

Cultivations, etc: Ploughed: Sept 8. Seed drilled at 3 bushels per acre: Oct 19. Nitrochalk applied: May 7. Sprayed with D.N.O.C: June 11. Harvested: Aug 20. Variety: Squareheads Master (13/4).

Summary of Results

Plot	Nitrochalk dressing cwt per acre	Total grain cwt per acre	Total straw cwt per acre
7	2	6.4	10.9
3	4	8.7	13.3
1	6	12.8	20.5
4	2	9.0	14.6
6	4	12.1	15.9
9	6	12.8	16.7
11b (1)	2	7.1	11.6
11b (2)	4	8.9	14.3
11b (3)	6	14.8	22.2
10b	2	6.2	12.8
11a	4	12.4	16.7
10a	6	17.5	23.5

51/A/8

PERMANENT BARLEY - WOBURN STACKYARD 1951

For details of treatments etc. see Appendix Y 1950.

Cultivations, etc: Ploughed: Sept 7 and again Feb 7. Seed drilled at 3 bushels per acre, nitrochalk applied: Apr 23. Sprayed with D.N.O.C: June 8. Harvested: Sept 24. Variety: Plumage Archer.

Summary of Results

Plot	Nitrochalk dressing cwt per acre	Total grain cwt per acre
7	2	4.0
1	4	0.6
3	6	3.3
4	2	3.9
6	4	4.6
9	6	5.2
11b (2)	2	7.8
11b (3)	4	8.7
11b (1)	6	5.2

Note Owing to the large amount of spurrey in the produce the straw was not weighed, nor was the grain for plots 10a, 10b and 11a.