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Memoranda of the Plan and Results of the Rothamsted Field Experiments - Supplement - June 1864



[Full Table of Content](#)

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MEMORANDA
OF THE
PLAN AND RESULTS
OF THE
ROTHAMSTED FIELD EXPERIMENTS,
&c.

SUPPLEMENT—JUNE, 1864.

EXPERIMENTS ON THE GROWTH OF **WHEAT** YEAR AFTER YEAR ON THE SAME LAND; WITHOUT MANURE, AND WITH DIFFERENT KINDS OF MANURE.

BROADBALK FIELD.

Previous Cropping—1839, Turnips, with Farmyard Manure; 1840, Peas; 1841, Barley; 1842, Wheat; 1843, Oats. The last four Crops Unmanured.
First Experimental Wheat Crop in 1844. Wheat every year since; and with some exceptions, nearly the same description of Manures on the same Plots each year—especially during the last 12 years.

(Area under experiment about 13 acres.)

PLOTS.	PRODUCE PER ACRE.									
	Average per Annum, over 12 Years, 1852-1863.					Twentyeth Season, 1863.				
	Dressed Corn.					Dressed Corn.				
	Quantity.	Weight per Bushel.	Total Straw.	Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.	Total Straw.	Quantity.	Weight per Bushel.
0	Bush. pks.	lbs.	cwt.	Bush. pks.	lbs.	Bush. pks.	lbs.	cwt.	Bush. pks.	lbs.
1	18 1	57 1/2	15 1/2	16 1 1/2	57 1/2	22 0 3/4	62 1/2	16 1/2	22 0 3/4	62 1/2
2	35 1 1/2	59 1/2	34 1/2	35 1 1/2	59 1/2	44 0	63 1/2	38 1/2	44 0	63 1/2
3	15 2	56 1/2	14 1/2	15 2	56 1/2	17 1	62 1/2	14 1/2	17 1	62 1/2
4	16 3 1/2	57 1/2	15 1/2	16 3 1/2	57 1/2	20 1	62 1/2	14 1/2	20 1	62 1/2
5 (a-b)	18 1 1/2	58	17	18 1 1/2	58	19 2 1/2	63	15 1/2	19 2 1/2	63
6 (a-b)	38 1 1/2	58 1/2	27 1/2	38 1 1/2	58 1/2	39 2 1/2	62 1/2	38 1/2	39 2 1/2	62 1/2
7 (a-b)	53 2 1/2	58 1/2	37 1/2	53 2 1/2	58 1/2	55 2 1/2	62 1/2	52 1/2	55 2 1/2	62 1/2
8 (a-b)	38 0	57 1/2	42	38 0	57 1/2	55 2 1/2	62 1/2	59	55 2 1/2	62 1/2
9 { a b	34 2	57	39 1/2	34 2	57	55 2 1/2	62 1/2	56 1/2	55 2 1/2	62 1/2
10 { a b	25 3 1/2	55 1/2	28 1/2	25 3 1/2	55 1/2	41 1 1/2	62 1/2	37 1/2	41 1 1/2	62 1/2
11 (a-b)	22 2 1/2	56	23 1/2	22 2 1/2	56	39 0 1/2	62 1/2	31	39 0 1/2	62 1/2
12 (a-b)	26 3 1/2	57	27 1/2	26 3 1/2	57	43 2 1/2	62 1/2	36 1/2	43 2 1/2	62 1/2
13 (a-b)	29 2 1/2	56 1/2	28 1/2	29 2 1/2	56 1/2	45 3	62 1/2	38 1/2	45 3	62 1/2
14 (a-b)	35 0 1/2	58 1/2	35 1/2	35 0 1/2	58 1/2	54 0	62 1/2	48 1/2	54 0	62 1/2
15 { a b	34 2 1/2	58 1/2	35 1/2	34 2 1/2	58 1/2	53 3 1/2	62 1/2	48	53 3 1/2	62 1/2
16 (a-b)	33 0 1/2	58 1/2	34	33 0 1/2	58 1/2	48 1 1/2	62 1/2	46	48 1 1/2	62 1/2
17 (a-b)	38 2	57 1/2	46	38 2	57 1/2	48 0	62 1/2	45 1/2	48 0	62 1/2
18 (a-b)	32 2 1/2	58 1/2	35 1/2	32 2 1/2	58 1/2	55 3 1/2	62 1/2	61 1/2	55 3 1/2	62 1/2
19	18 3 1/2	58 (9)	17 1/2	18 3 1/2	58 (9)	21 1 (11)	62 1/2	17 (11)	21 1 (11)	62 1/2
20	31 2 1/2	58	31 1/2	31 2 1/2	58	46 1 1/2 (12)	62 1/2	43 (12)	46 1 1/2 (12)	62 1/2
21	15 2 1/2	57	15 1/2	15 2 1/2	57	46 2 1/2	62 1/2	40 1/2	46 2 1/2	62 1/2
22	22 0 1/2	58	21	22 0 1/2	58	17 2 1/2	62 1/2	13 1/2	17 2 1/2	62 1/2
	21 2 1/2	57 1/2	20 1/2	21 2 1/2	57 1/2	27 2 1/2	62 1/2	22 1/2	27 2 1/2	62 1/2
	21 2 1/2	57 1/2	20 1/2	21 2 1/2	57 1/2	29 3	62 1/2	24	29 3	62 1/2

(1) Since 1858, 200 lbs. Sulphate of Potash, 100 lbs. Sulphate of Soda, and 100 lbs. Sulphate of Magnesia; for Crop of 1857-8, and previously, 300 lbs., 200 lbs., and 100 lbs., respectively.
(2) 200 lbs. Bone-ash, 150 lbs. Sulphuric acid (Sp. gr. 1.7).
(3) Equal parts Sulphate and Muriate of Ammonia.
(4) The Manures of 17 and 18 alternate.
(5) With Hydrochloric instead of Sulphuric Acid.
(6) Average of 12 years' Mineral Manures for the Crop of 1863.
(7) Plots 17 had the Mineral Manures for the Crop of 1863.
(8) Plots 18 had the Ammonia-salts for the Crop of 1863.
(9) Average of 12 years' Ammonia-salts alternated with Mineral Manures.
(10) Plots 17 had the Mineral Manures for the Crop of 1863.
(11) Plots 18 had the Ammonia-salts for the Crop of 1863.
(12) Plots 18 had the Ammonia-salts for the Crop of 1863.

ROTHAMSTED FARM.

JUNE, 1864.

SUMMARY STATEMENT OF THE PRESENT AND PREVIOUS CROPPING, &c., OF THE ARABLE LAND NOT UNDER EXPERIMENT.

(9 Years, 1856-64, inclusive.)

Name of Field.	Acres.	Previous Cropping and Manuring.							1863.	Crop, &c., Present Season, 1863-4.
		1856.	1857.	1858.	1859.	1860.	1861.	1862.		
Barn	20 {	Turnips, Artificial.	Wheat, Artificial.	Oats, Artificial.	Red Clover (peren.) Unmanured	Wheat, after Sheep-Folding.	Swedes, Dung & Artificial.	Oats, Artificial (2 cwt. Guano).	Red Clover (peren.) Unmanured.	Wheat, Artificial (2 cwt. Guano).
Thirty Acres	30 {	Oats, Artificial.	Red Clover (peren.) Unmanured.	Wheat, after Sheep-Folding.	Oats, Artificial.	Swedes, Dung & Artificial.	Oats, after Sheep-Folding.	Red Clover (peren.) Unmanured.	Wheat, after Sheep-Folded, and 2 cwt. Guano.	Oats, Artificial (2 cwt. Guano, 1 cwt. Corn Manure).
Upper Harpenden	14 {	Turnips, Artificial.	Barley, after Sheep-Folding.	Beans, Dung.	Wheat, Artificial.	Barley, Artificial.	Swedes, Dung & Artificial.	Oats after Sheep-Folding.	Red Clover, Unmanured.	Wheat, Artificial (1½ cwt. Guano, 1½ cwt. Corn Manure).
Harpenden	22 {	Red Clover (peren.) Unmanured.	Wheat, Artificial.	Oats, Artificial.	Swedes, Dung & Artificial.	Oats, after Sheep-Folding.	Red Clover (peren.) Unmanured.	Wheat, Artificial (2 cwt. Guano).	Oats, Artificial (3 cwt. Guano).	Mangolds and Turnips, Dung & Artificial.
Little Hoos	9 {	Oats, Artificial.	Turnips, Artificial.	Wheat, after Sheep-Folding.	Oats, Artificial.	Dung & Artificial.	Oats, Unmanured.	Barley, Artificial (2 cwt. Guano, 1 cwt. superphos.).	Barley, (3 cwt. Guano, and 1 cwt. superphos.).	Red Clover.
Fosters'	18 {	Wheat, Artificial.	Barley, Artificial.	Swedes, after Sheep-Folding.	Barley, after Sheep-Folding.	Red Clover (peren.) Unmanured.	Wheat, Artificial.	Oats, Artificial (3 cwt. Guano).	Barley, (5½ cwt. Artificial Manure).	Swedes, Dung & Artificial.
Knott Wood	33 {	Oats, Artificial.	Swedes, Dung & Artificial.	Barley, after Sheep-Folding.	Oats, after Sheep-Folding.	Red Clover (peren.) Unmanured.	Oats, Artificial.	Swedes, Dung and Artificial.	Sheep-Folded. Oats,	Cow Grass.
Little Knott Wood	14 {	Wheat, Artificial.	Oats, Artificial.	Swedes, Dung & Artificial.	Oats, after Sheep-Folding.	Red Clover (peren.) Unmanured.	Wheat, after Sheep-Folding.	Oats, Artificial (3 cwt. Guano).	Swedes, Dung and Artificial.	Wheat, Unmanured.
Sawpit	14 {	Red Clover (peren.) Unmanured.	Wheat, Artificial.	Oats, Artificial.	Mangolds, Dung & Artificial.	Oats, Unmanured.	White Clover, Unmanured.	Wheat, Artificial, (2 cwt. Guano).	Tares and Oats, Sheep-Folded, and 2 cwt. Guano.	Barley, Artificial (1½ cwt. Guano, ½ cwt. superphos., and 1 cwt. Corn Manure).
Rick-yard	8 {	Oats, Artificial.	Mangolds, Dung & Artificial.	Wheat, Unmanured.	Oats, Artificial.	Tares, Dung.	Oats, Unmanured.	Mangolds, Dung and Artificial.	Wheat, Unmanured.	Wheat, Sheep-Folded, and Artificial, (3 cwt. Guano).
Six Acres	6 {	Barley, after Sheep-Folding.	Trefoil, Unmanured.	Wheat, after Sheep-Folding.	Barley, Artificial.	Beans, Dung.	Wheat, Unmanured.	Oats, Artificial, (3 cwt. Guano).	Mangolds, Dung and Artificial.	Wheat, Unmanured.
Clay-Croft	5 {	Oats, Artificial.	Beans, Dung.	Wheat, Artificial.	Oats, Artificial.	Red Clover (peren.) Unmanured.	Wheat, Artificial.	Beans (Dung) and Fallow.	Wheat, Dung.	Wheat, Artificial (2 cwt. Guano, and 2 cwt. Corn Manure).
Apple Tree	18 {	Swedes, Dung & Artificial.	Oats, after Sheep-Folding.	Red Clover (peren.) Unmanured.	Wheat, Artificial.	Oats, Artificial.	Mangolds, Dung & Artificial.	Wheat, Unmanured.	Laid down in Grass Seeds.	Grass.
Ten Acres	10 {	Barley, Artificial.	Tares, Dung.	Oats, Unmanured.	Tares, Dung.	Oats, Artificial.	Red Clover (peren.) Unmanured.	Wheat, after Sheep-Folding.	Oats (3 cwt. Guano).	Oats. (2 cwt. Guano, and 1 cwt. Dried Blood).
Park Field	10 {	Wheat, Artificial.	Red Clover (peren.) Unmanured.	Wheat, after Sheep-Folding.	Wheat, Artificial.	Oats, Artificial.	Red Clover (peren.) Unmanured.	Wheat, Artificial (2 cwt. Guano).	Oats (3 cwt. Guano).	Tares, Dung.
Agdell	9 {	Barley, Artificial.	Tares, Dung.	Oats, Unmanured.	Barley, Artificial.	Garden- ground.	Oats, Unmanured.	Tares, Dung.	Barley, Sheep-Folded.	Barley, Artificial (1½ cwt. Guano, ½ cwt. superphos., and 1 cwt. Corn Manure).