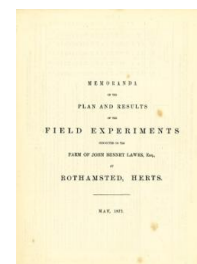


Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Memoranda of the Field Experiments at Rothamsted, May 1872



[Full Table of Content](#)

Experiments on Wheat; Broadbalk Field

Rothamsted Research

Rothamsted Research (1873) *Experiments on Wheat; Broadbalk Field* ; Memoranda Of The Field Experiments At Rothamsted, May 1872, pp 4 - 4 - DOI: <https://doi.org/10.23637/ERADOC-1-236>

BROADBALK FIELD.

EXPERIMENTS ON THE GROWTH OF WHEAT YEAR AFTER YEAR ON THE SAME LAND; WITHOUT MANURE, AND WITH DIFFERENT KINDS OF MANURE. Previous Cropping—1839, Turnips, with Farmyard Manure; 1840, Barley; 1841, Peas; 1842, Wheat; 1843, Oats; and the last four Crops Unmanured.

First Experimental Wheat Crop in 1844. Wheat every year since; and, with some exceptions, nearly the same description of Manure on the same Plots each year—especially during the last 20 years.

(Area under experiment, about 13 acres.)

PLOTS.	Manures, per acre, per annum.	PRODUCE PER ACRE.					
		Average per Annum, 20 Years, 1852-1871.			Twenty-eighth Season, 1871.		
		Dressed Corn.		Total Straw.	Dressed Corn.		Total Straw.
		Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.
0	Superphosphate of Lime (three times as much as on No. 5 and succeeding Plots)	Bushels. 17½	cwts. 15½	Bushels. 14	lbs. 56½	cwts. 14	0
1	Sulphates of Potass, Soda, and Magnesia (twice as much as on No 5 and succeeding Plots)	15½	13½	10½	57	13	1
2	Farmyard Manure (14 tons every year)	35½	60	39	60	40½	2
3	Unmanured continuously	14½	13	9½	54½	9½	3
4	Unmanured for Crop of 1852, and since; previously Superphosphate (made with Muratic Acid), and Sulphate Ammonia	15½	58½	10½	57	11½	4
5 (a and b)	200 lbs. (1) Sulphate Potass, 100 lbs. (2) Sulphate Soda, 100 lbs. Sulphate Magnesia, 3½ cwts. Superphosphate of Lime (3)	17	56½	11½	56½	12½	5 (a and b)
6 (a and b)	200 lbs. (1) Sulphate Potass, 100 lbs. (2) Sulphate Soda, 100 lbs. Sulphate Magnesia, 3½ cwts. Superphosphate of Lime (3)	20½	59½	17	56½	20½	6 (a and b)
7 (a and b)	200 lbs. (1) Sulphate Potass, 100 lbs. (2) Sulphate Soda, 100 lbs. Sulphate Magnesia, 3½ cwts. Superphosphate of Lime (3)	35½	59½	22½	56½	27½	7 (a and b)
8 (a and b)	200 lbs. (1) Sulphate Potass, 100 lbs. (2) Sulphate Soda, 100 lbs. Sulphate Magnesia, 3½ cwts. Superphosphate of Lime (3)	38½	59	27½	57½	35½	8 (a and b)
9 { a	200 lbs. (1) Sulphate Potass, 100 lbs. (2) Sulphate Soda, 100 lbs. Sulphate Magnesia, 3½ cwts. Superphosphate of Lime (3)	36½	58½	34½	58½	43½	9 { a b
b	550 lbs. Nitrate of Soda	26	56½	17½	52½	21½	
10 { a	400 lbs. Ammonia-salts alone, for 1845, and each year since; Mineral Manure in 1844	22½	57½	10½	53½	11½	10 { a b
b	400 lbs. Ammonia-salts alone, for 1845, and each year since (excepting 1846 and 1850); Mineral Manure in 1844, 748, and 50	25½	58	10	53½	12	
11 (a and b)	400 lbs. Ammonia-salts, 3½ cwts. Superphosphate	28	57½	11	54	12½	11 (a and b)
12 (a and b)	400 lbs. Ammonia-salts, 3½ cwts. Superphosphate, and 366½ lbs. (4) Sulphate of Soda	33½	59½	21	56	23	12 (a and b)
13 (a and b)	400 lbs. Ammonia-salts, 3½ cwts. Superphosphate, and 200 lbs. (5) Sulphate of Potass	33½	59½	30½	57½	33½	13 (a and b)
14 (a and b)	400 lbs. Ammonia-salts, 3½ cwts. Superphosphate, and 280 lbs. (6) Sulphate of Magnesia	33½	59½	24½	56½	26½	14 (a and b)
15 { a	200 lbs. (1) Sulph. Potass, 100 lbs. (2) Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwts. Superphosphate, (7) 400 lbs. Sulph. Ammonia	32½	59½	29½	59	32½	15 { a b
b	200 lbs. (1) Sulph. Potass, 100 lbs. (2) Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwts. Superphosphate, (7) 300 lbs. Sulph. Ammonia, and 500 lbs. Rape-cake	34	59½	32	58½	34	
16 (a and b)	(1852-64, 13 years, 200 lbs. Sulph. Potass, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Mag., 3½ cwts. Superphosphate, and 800 lbs. Ammonia-salts; average produce 39½ bush, Corn, 46½ cwts. Straw	32½	59	13½	56½	13½	16 (a and b)
17 (a and b)	400 lbs. Ammonia-salts	31½ (3)	59½ (3)	16 (11)	56½ (11)	16½ (11)	17 (a and b)
18 (a and b)	200 lbs. (1) Sulphate Potass, 100 lbs. (2) Sulphate Soda, 100 lbs. Sulphate Mg. G. sia, and 3½ cwts Superphosphate	17½ (10)	58½ (10)	28½ (13)	58½ (13)	29½ (13)	
19	3½ cwts. Superphosphate of Lime (7), 300 lbs. Sulphate of Ammonia, and 500 lbs. Rape-cake	30½	58½	22½	56	24	19
20	Unmanured continuously	15½ (12)	58 (12)	10½	55½	12	20
21	200 lbs. (1) Sulph. Potass, 100 lbs. (2) Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwts. Superphosphate, and 100 lbs. Muriate Ammonia	21½	58½	15½	56½	16½	21
22	200 lbs. (1) Sulph. Potass, 100 lbs. (2) Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwts. Superphosphate, and 100 lbs. Sulphate Ammonia	21	58½	16½	56½	16½	22

(1) 300 lbs. per annum for Crop of 1853, and previously.
 (2) 200 lbs. per annum for Crop of 1858, and previously.
 (3) Superphosphate of Lime in all cases, excepting for Plots 15 and 19, made from 200 lbs. Bone-ash, Sulphuric acid sp. gr. 1.7 (and water).
 (4) The "Ammonia-salts" in all cases, equal parts Sulphate and Muriate of Ammonia of Commerce.
 (5) 550 lbs. Nitrate Soda is reckoned to contain the same amount of Nitrogen as 400 lbs. "Ammonia-salts."
 (6) For 1858, and previously—1½ time as much.
 (7) Made with Muric acid instead of Sulphuric Acid.
 (8) The Manures of Plots 17 and 18 are, year by year, transposed.
 (9) Average of 20 years' Ammonia-salts, alternated with Mineral Manures.
 (10) Average of 20 years Mineral Manures, alternated with Ammonia-salts.
 (11) Plots 17 had the Mineral Manures for the Crop of 1871.
 (12) Plots 18 had the Ammonia-salts for the Crop of 1871.
 (13) Average of 19 years only; as in 1868, owing to a mistake in carting, the produce could not be ascertained.
 The Plots marked "(a and b)" are divided into duplicate portions: "a" and "b," respectively, which are manured alike; excepting that, for the crops of 1864-5-6 and 7, the "a" portions of plots 5, 6, 7, 8, 9, 16, and 17 (or 18) received a mixture of soluble Silicates in addition to the other Manures, but, hitherto, without any material effect; and for the crops of 1868, and since, cut straw (that produced in the previous season) has been applied (instead of Silicates) on the "a" portions of plots 5, 6, 7, 8, 11, 12, 13, 14, and 17 (or 18).