

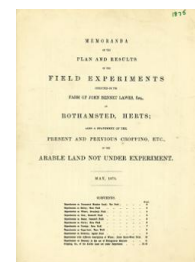
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Yields of the Field Experiments 1875

[Full Table of Content](#)



Experiments on Permanent Meadow Land; the Park

Rothamsted Research

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THE PARK.

EXPERIMENTS WITH DIFFERENT MANURES ON PERMANENT MEADOW LAND.

The Land has probably been laid down with Grass for some centuries. No fresh seed has been artificially sown within the last 40 years certainly; nor is there record of any having been sown since the Grass was first laid down. The experiments commenced in 1856, at which time the character of the herbage appeared uniform over all the Plots. Excepting as explained in the Table and in the foot-notes, the same description of Manure has been applied year after year to the same Plot.

(Area under experiment, about 7 acres.)

PLOTS.	Manures, per acre, per Annum.						Produce per Acre, weighed as Hay.					Average per Annum; 1856-1873.	PLOTS.	
	1 acre ..	1 lb. (pound avoird.) ..	1 cwt. (hundredweight) ..	1 ton ..	1 lb. per acre ..	1 cwt. per acre ..	14th Season; 1860.	15th Season; 1870.	16th Season; 1871.	17th Season; 1872.	18th Season; 1873.			19th Season; 1874.
1	(1856-63, 8 years, 14 tons Farmyard Manure, and 200 lbs. Ammonia-salts (1); average produce 49½ cwt.	0.45 Hectare ..	..	..	..	..	61	16½	43½	31½	29½	23½	41½	1
2	(1856-63, 8 years, 14 tons Farmyard Manure; average produce 42½ cwt.	(about) 0.45 Kilogramme ..	..	..	..	..	55½	13½	33½	25½	18½	16½	38½	2
3	(1864 and since, unmanured; average produce (10 years, 1864-73) 35½ cwt.	(about) 51.0 Kilogrammes ..	..	..	..	..	33	5½	25½	14½	12½	21½	38½	3
4	Unmanured, continuously	(about) 1016.0 Kilogrammes ..	..	..	..	..	40½	7½	24½	15½	13½	23½	35½	1, 4
5	3½ cwt. Superphosphate of Lime (2)	(about) 12.12 Kilogrammes per Hectare or 0.54 Zollver. Pfd. per Pr. Morgen.	..	..	..	..	45½	8½	28½	26	19½	26½	35½	1, 4
6	3½ cwt. Superphosphate of Lime, and 400 lbs. Ammonia-salts	(about) 195.5 Kilogrammes per Hectare or 0.74 Zollver. Pfd. per Pr. Morgen.	..	..	..	..	35½	5½	22½	16½	16½	27½	35½	5
7	400 lbs. Ammonia-salts	(about) 2510.0 Kilogrammes per Hectare or 1.282 Centnar per Pr. Morgen.	..	..	..	..	56½	16½	37½	25½	26	21½	31½	6
8	(1856-68, 13 years, 400 lbs. Ammonia-salts; average produce 30½ cwt.	..	..	..	..	..	54½	17½	39½	37½	34½	27½	35½	7
9	(1869 and since, 300 lbs. Sulph. Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphos.; av. prod. (5 yrs., 1869-73) 32½ cwt.	..	..	..	..	..	46½	12½	30	22½	18½	17½	31	8
10	300 lbs. Sulphate Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	68½	29½	58½	50½	43½	29½	52½	9
11	(1856-61, 6 years, 300 lbs. Sulph. Potass., 200 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate; average produce 36 cwt.)	..	..	..	..	..	57½	21½	46½	38½	33	23	47½	10
12	(1862 and since, 250 lbs. Sulph. Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate; average produce (12 years, 1862-73) 28½ cwt.)	..	..	..	..	..	75½	42½	63½	63½	46½	23½	60½	11
13	Unmanured continuously	..	..	..	..	..	78½	49½	65½	63½	56½	39½	65½	2
14	300 lbs. Sulph. Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate, and 400 lbs. Ammonia-salts	..	..	..	..	..	38½	11½	26½	20½	16½	14½	24½	12
15	300 lbs. Sulph. Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate, and 400 lbs. Ammonia-salts	..	..	..	..	..	77½	48	63	62½	57	46½	57½	13
16	550 lbs. Nitrate of Soda (3), 300 lbs. Sulphate Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate, and 3½ cwt. Superphosphate	..	..	..	..	..	76½	56½	61½	61½	55½	49	57½	14
17	275 lbs. Nitrate of Soda, 300 lbs. Sulphate Potass., 100 lbs. Sulphate Soda, 100 lbs. Sulphate Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	53½	15½	38½	32½	33½	26½	36½	15
18	Mixture supplying the quantity of Potass., Soda, Lime, Magnesia, Phosphoric acid, Silica, and Nitrogen, contained in 1 ton of Hay (commencing 1865)	..	..	..	..	..	74½	33½	57	40	41½	29½	47½	16
19	275 lbs. Nitrate of Soda, 290 lbs. Sulphate of Potass., and 3½ cwt. Superphosphate (commencing 1872)	..	..	..	..	..	54½	19½	38½	29½	25½	22½	34½	17
20	327 lbs. Nitrate of Potass., and 3½ cwt. Superphosphate (commencing 1872)	..	..	..	..	..	55½	14½	37½	33½	26½	22½	33	18

(1) "Ammonia-salts"—In all cases equal parts Sulphate and Muriate of Ammonia of Commerce.
 (2) The "Superphosphate of Lime" is, in all cases, made from 200 lbs. Bone-ash, 150 lbs. Sulphuric Acid, 5 gr. 1.7 (and water).
 (3) Plots 6, 8, and 10, had, besides the Manures specified, 2000 lbs. Sawdust per acre per annum for the first 7 years, 1856-1862, but without effect.
 (4) 200 lbs. 1856-65 inclusive.
 (5) 500 lbs. in 1862 and 1863.
 (6) Only 300 lbs. in 1859-60-61.
 (7) The application of Silicates did not commence until 1862.
 (8) 550 lbs. Nitrate of Soda is reckoned to contain the same amount of Nitrogen as 400 lbs. of "Ammonia-salts."
 (9) Average of 15 years only, as the manures specified were first applied in 1859 (previously, 1856-7 and 8, sawdust only).
 (10) Average of 6 years only, as these experiments did not commence until 1855.
 (11) Average of 9 years only, as the experiment only commenced in 1865.