

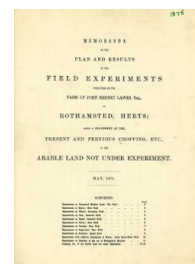
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Yields of the Field Experiments 1875

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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 Acre, 1856-1873.	Plots.
	1 acre .. 1 lb. (pound avoird.) .. 1 cwt. (hundredweight) .. 1 ton .. 1 lb. per acre .. 1 cwt. per acre .. 1 ton per acre ..	0.45 Hectare .. 0.45 Kilogramme .. 51.0 Kilogrammes .. 1016.0 Kilogrammes .. 12.12 Kilogrammes per Hectare .. 125.5 Kilogrammes per Hectare .. 2510.0 Kilogrammes per Hectare ..	.. or or or or or or or ..	1.59 Prussian Morgen. .. 0.91 Zollveretn Pfund. .. 0.02 Centner. .. 20.33 Centner. .. 0.91 Zollver. Pfd. per Pr. Morgen. .. 0.84 Centner per Pr. Morgen. .. 12.82 Centner per Pr. Morgen.	.. or or or or or or or ..	.. or or or or or or or ..	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; average produce 49½ cwt.	..	..	..	..	..	61	16½	43½	31½	29½	23½	1
2	(1864 and since, 200 lbs. Ammonia-salts alone; average produce (10 years, 1864-73) 40½ cwt.	..	..	..	..	..	55½	13½	33½	25½	18½	16½	2
3	(1856-63, 8 years, 14 tons Farmyard Manure; average produce 42½ cwt.	..	..	..	..	..	33	5½	25½	14½	12½	12½	3
4	(1864 and since, unmanured; average produce (10 years, 1864-73) 35½ cwt.	..	..	..	..	..	40½	7½	24½	15½	13½	13½	1) 4
5	Unmanured, continuously	..	..	..	..	..	45½	8½	38½	28½	26½	19½	2)
6	3½ cwt. Superphosphate of Lime	..	..	..	..	..	35½	5½	29½	22½	16½	6½	5
7	3½ cwt. Superphosphate of Lime, and 400 lbs. Ammonia-salts	..	..	..	..	..	56½	16½	37½	25½	26½	21½	6
8	(1856-63, 13 years, 400 lbs. Ammonia-salts; average produce 30½ cwt.	..	..	..	..	..	54½	17½	39½	37½	34½	27½	7
9	(1864 and since, 300 lbs. Sulph. Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	46½	12½	30	22½	18½	17½	8
10	(1856-61, 6 years, 300 lbs. Sulph. Potass., 200 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate; average produce 36 cwt.	..	..	..	..	..	68½	29½	58½	50½	43½	29½	9
11	(1862 and since, 250 lbs. Sulphate Soda, 100 lbs. Sulphate Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	57½	21½	46½	38½	33	23	10
12	(1856-61, 6 yrs. 300 lbs. Sulph. Potass., 200 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate; av. prod. 54½ cwt.	..	..	..	..	..	75½	42½	63½	63½	46½	23½	11
13	(1862 and since, 250 lbs. Sulphate Soda, 100 lbs. Sulphate Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	78½	49½	65½	63½	56½	39½	12
14	Unmanured continuously	..	..	..	..	..	38½	11½	26½	20½	16½	14½	13
15	300 lbs. Sulph. Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	77½	48	63	62½	57	46½	14
16	550 lbs. Nitrate of Soda, 300 lbs. Sulphate Potass., 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate	..	..	..	..	..	76½	56½	61½	55½	51½	49	15
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	16
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	17
19	275 lbs. Nitrate of Soda, 290 lbs. Sulphate of Potass., and 3½ cwt. Superphosphate (commencing 1872)	..	..	..	..	..	55½	14½	37½	29½	25½	22½	18
20	327 lbs. Nitrate of Potass., and 3½ cwt. Superphosphate (commencing 1872)	..	..	..	..	..	..	..	..	40	38½	34½	19
		..	..	..	..	..	..	..	..	36	38½	29½	20

(1) "Ammonia-salts"—In all cases equal parts Sulphate and Muriate of Ammonia of Commerce.

Acid Sulph. gr. 1.7 (and water).

(2) The "Superphosphate of Lime" is, in all cases, made from 200 lbs. Bone-ash, 150 lbs. Sulphuric

first 7 years, 1856-1862, but without effect.

(3) 200 lbs. 1856-63 inclusive.

(4) 500 lbs. in 1862 and 1863.

(5) Only 400 lbs. in 1859-60-61.

(6) The application of Silicates did not commence until 1862.

(7) 550 lbs. Nitrate of Soda is reckoned to contain the same amount of Nitrogen as 400 lbs. of "Ammonia-

and 8½ sawdust only, 6 years only, as the manures specified were first applied in 1859 (previously, 1856-7

(8) Average of 15 years only, as these experiments did not commence until 1858.

(9) Average of 9 years only, as the experiment only commenced in 1865.