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Yields of the Field Experiments 1876

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Experiments on Permanent Meadow Land; the Park

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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.				Twentieth Season, 1875 (3).			
		10 Years, 1866-75. (1)	20 Years, 1866-75. (1)	Cvts. 43	Cvts. 33 $\frac{1}{2}$	Flat Crop.	Second Crop.	Cvts. 17 $\frac{1}{2}$	Total.
1	1856-63, 8 years, 14 tons Farmyard Manure, and 200 lbs. Ammonia-salts (1); average produce 49 $\frac{1}{2}$ cwts. (1864 and since, 200 lbs. Ammonia-salts alone; average produce (1 $\frac{1}{2}$ years, 1864-75) 44 $\frac{1}{2}$ cwts.	48 $\frac{1}{2}$	37 $\frac{1}{2}$	43	33 $\frac{1}{2}$	53 $\frac{1}{2}$	17 $\frac{1}{2}$	51 $\frac{1}{2}$	1
2	1856-63, 8 years, 14 tons Farmyard Manure; average produce 42 $\frac{1}{2}$ cwts. (1864 and since, unmanured; average produce (1 $\frac{1}{2}$ years, 1864-75) 38 $\frac{1}{2}$ cwts.	41 $\frac{1}{2}$	32	36 $\frac{1}{2}$	26 $\frac{1}{2}$	26 $\frac{1}{2}$	11 $\frac{1}{2}$	38 $\frac{1}{2}$	2
3	Unmanured, continuously	22 $\frac{1}{2}$	20	21 $\frac{1}{2}$	20	12 $\frac{1}{2}$	11 $\frac{1}{2}$	32 $\frac{1}{2}$	3
4 (1)	3 $\frac{1}{2}$ cwts. Superphosphate of Lime (2)	23 $\frac{1}{2}$	21 $\frac{1}{2}$	22 $\frac{1}{2}$	21 $\frac{1}{2}$	15 $\frac{1}{2}$	36 $\frac{1}{2}$	36 $\frac{1}{2}$	4
4 (2)	3 $\frac{1}{2}$ cwts. Superphosphate of Lime (2)	33 $\frac{1}{2}$	30 $\frac{1}{2}$	30 $\frac{1}{2}$	30 $\frac{1}{2}$	14 $\frac{1}{2}$	51 $\frac{1}{2}$	51 $\frac{1}{2}$	1 } 4
5	400 lbs. Ammonia-salts	30 $\frac{1}{2}$	22	26 $\frac{1}{2}$	24 $\frac{1}{2}$	18	42 $\frac{1}{2}$	42 $\frac{1}{2}$	2 } 5
6	(1856-68, 13 years, 400 lbs. Ammonia-salts; average produce 30 $\frac{1}{2}$ cwts. (1869 and since, 300 lbs. Sulph. Potass, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3 $\frac{1}{2}$ cwts. Superphos.; av. prod. (4 $\frac{1}{2}$ yrs., 1869-75) 34 $\frac{1}{2}$ cwts.)	31 $\frac{1}{2}$	30 $\frac{1}{2}$	30 $\frac{1}{2}$	35 $\frac{1}{2}$	15	50 $\frac{1}{2}$	50 $\frac{1}{2}$	6
7	300 lbs. Sulphate Potass, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3 $\frac{1}{2}$ cwts. Superphosphate	33 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	40 $\frac{1}{2}$	24	64 $\frac{1}{2}$	64 $\frac{1}{2}$	7
8	(1856-61, 6 years, 300 lbs. Sulph. Potass, 200 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3 $\frac{1}{2}$ cwts. Superphosphate; average produce 36 cwts. (1862 and since, 250 lbs. Sulphate Potass, 100 lbs. Sulphate Soda, and 3 $\frac{1}{2}$ cwts. Superphosphate; average produce (1 $\frac{1}{2}$ years, 1862-75) 24 $\frac{1}{2}$ cwts.)	33 $\frac{1}{2}$	26 $\frac{1}{2}$	30 $\frac{1}{2}$	28 $\frac{1}{2}$	16	44 $\frac{1}{2}$	44 $\frac{1}{2}$	8
9	300 lbs. Sulphate Potass, 100 lbs. Sulphate Soda, 100 lbs. Sulphate Magnesia, 3 $\frac{1}{2}$ cwts. Superphosphate, and 400 lbs. Ammonia-salts	53 $\frac{1}{2}$	48 $\frac{1}{2}$	51	52	24 $\frac{1}{2}$	76 $\frac{1}{2}$	76 $\frac{1}{2}$	9
10	(1856-61, 6 yrs., 300 lbs. Sulph. Potass, 200 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3 $\frac{1}{2}$ cwts. Superphosphate, and 400 lbs. Ammonia-salts; av. prod. 55 $\frac{1}{2}$ cwts. (1862 and since, 250 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3 $\frac{1}{2}$ cwts. Superphosphate, and 400 lbs. Ammonia-salts; av. prod. (1 $\frac{1}{2}$ yrs., 1862-75) 45 $\frac{1}{2}$ cwts.)	52 $\frac{1}{2}$	39 $\frac{1}{2}$	46 $\frac{1}{2}$	43	24 $\frac{1}{2}$	67 $\frac{1}{2}$	67 $\frac{1}{2}$	10
11 (1)	300 lbs. Sulph. Potass, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3 $\frac{1}{2}$ cwts. Superphosphate, and 800 lbs. Silicate Soda (3)	61 $\frac{1}{2}$	53 $\frac{1}{2}$	57 $\frac{1}{2}$	46 $\frac{1}{2}$	50 $\frac{1}{2}$	97 $\frac{1}{2}$	97 $\frac{1}{2}$	1 } 11
11 (2)	300 lbs. Sulph. Potass, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3 $\frac{1}{2}$ cwts. Superphosphate, and 800 lbs. Silicate Soda (3)	63 $\frac{1}{2}$	61 $\frac{1}{2}$	62 $\frac{1}{2}$	60	41	101	101	2 } 11
12	Unmanured continuously	25	22 $\frac{1}{2}$	24	23 $\frac{1}{2}$	14 $\frac{1}{2}$	37 $\frac{1}{2}$	37 $\frac{1}{2}$	12
13	300 lbs. Sulph. Potass, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3 $\frac{1}{2}$ cwts. Superphosphate, and 400 lbs. Ammonia-salts	55 $\frac{1}{2}$	59 $\frac{1}{2}$	57 $\frac{1}{2}$	65	30 $\frac{1}{2}$	95 $\frac{1}{2}$	95 $\frac{1}{2}$	13
14	550 lbs. Nitrate of Soda (4), 300 lbs. Sulphate Potass, 100 lbs. Sulphate Soda, 100 lbs. Sulphate Magnesia, and 3 $\frac{1}{2}$ cwts. Superphosphate	55 $\frac{1}{2}$	60 $\frac{1}{2}$	57	62 $\frac{1}{2}$	17 $\frac{1}{2}$	80 $\frac{1}{2}$	80 $\frac{1}{2}$	14
15	(1858-75, 18 years, 550 lbs. Nitrate of Soda (4), 300 lbs. Sulphate Potass, 100 lbs. Sulphate Soda, 100 lbs. Sulphate Magnesia, and 3 $\frac{1}{2}$ cwts. Superphosphate	36 $\frac{1}{2}$	35	33 $\frac{1}{2}$	29 $\frac{1}{2}$	13 $\frac{1}{2}$	42 $\frac{1}{2}$	42 $\frac{1}{2}$	15
16	275 lbs. Nitrate of Soda	45 $\frac{1}{2}$	47 $\frac{1}{2}$	46 $\frac{1}{2}$	45	16 $\frac{1}{2}$	61 $\frac{1}{2}$	61 $\frac{1}{2}$	16
17	Mixture supplying the quantity of Potass, Soda, Lime, Magnesia, Phosphoric acid, Silica, and Nitrogen, contained in 1 ton of Hay (commencing 1865)	34 $\frac{1}{2}$	33 $\frac{1}{2}$	33 $\frac{1}{2}$	30 $\frac{1}{2}$	13	43	43	17
18	275 lbs. Nitrate of Soda	21	33 $\frac{1}{2}$	32 $\frac{1}{2}$	34 $\frac{1}{2}$	15 $\frac{1}{2}$	50 $\frac{1}{2}$	50 $\frac{1}{2}$	18
19	275 lbs. Nitrate of Soda, 200 lbs. Sulphate of Potass, and 3 $\frac{1}{2}$ cwts. Superphosphate (commencing 1872)	..	..	..	..	..	..	..	19
20	327 lbs. Nitrate of Potass, and 3 $\frac{1}{2}$ cwts. Superphosphate (commencing 1872)	..	..	..	..	..	..	..	20

(1) Ammonia-salts;—in all cases equal parts Sulphate and Murate of Ammonia of Commerce.
 (2) The "Superphosphate of Lime" is, in all cases, made from 200 lbs. Bone-ash, 150 lbs. Sulphuric Acid, 50 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. 1856-63 inclusive.
 (5) 500 lbs. in 1862 and 1863.
 (6) Only 400 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) The manures specified were first applied in 1859 (previously, 1856-7 and 8, Sawdust only).
 (10) Averages of 8 years, 10 years, and 18 years, as these experiments did not commence until 1858.
 (11) Averages of 10 years only, 1872-75.
 (12) Averages of 4 years only, 1872-75.
 (13) In previous years the second crop has either been fed off by sheep, without other food, or mown and left on the ground; but in the twentieth season, 1875, it was so unusually heavy, that it was cut, weighed as hay, and removed.
 (14) The second crop of the twentieth season (1875) is not included in these averages, as in all other years the first crop only was weighed and removed.