

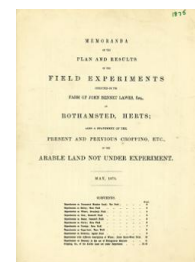
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Yields of the Field Experiments 1875

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Experiments on Barley; Hoos Field

Rothamsted Research

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HOOS FIELD.

EXPERIMENTS ON THE GROWTH OF BARLEY YEAR AFTER YEAR ON THE SAME LAND, WITHOUT MANURE, AND WITH DIFFERENT KINDS OF MANURE. Previous Cropping—1847, Swedish Turnips, with Dung and Superphosphate of Lime, the Roots carted off; 1848, Barley; 1849, Clover; 1850, Wheat; 1851, Barley manured with Ammonia-salts. First Experimental Barley Crop in 1852. Barley every year since; and, unless stated to the contrary in the Table, or in the foot-notes, the same Manure has been applied year after year to the same Plot.

(Area under experiment, about 4½ acres.)

Plots.	Manures, per acre, per annum.	PRODUCE PER ACRE.						Plots.
		Average per Annum, over 20 Years, 1852-1871.			Twenty-third Season, 1874.			
		Quantity.	Weight per Bushel.	Total Straw.	Quantity.	Weight per Bushel.	Total Straw.	
1 O.	Unmanured continuously	Bushels.	lbs.	cwts.	Bushels.	lbs.	cwts.	1 O.
2 O.	3½ cwt. Superphosphate of Lime, (1)	20	52½	11½	17½	54½	8½	2 O.
3 O.	200 lbs. Sulphate of Potash, 100 lbs. Sulphate of Soda, 100 lbs. Sulphate of Magnesia	22½	53	12½	21	56	9	3 O.
4 O.	200 lbs. Sulphate of Potash, 100 lbs. Sulphate of Soda, 100 lbs. Sulphate of Magnesia, 3½ cwt. Superphosphate	27½	53½	14½	26	56½	9½	4 O.
1 A.	200 lbs. Ammonia-salts (2)	32½	52½	18½	23½	54	12	1 A.
2 A.	200 lbs. Ammonia-salts, and 3½ cwt. Superphosphate	47	52	22½	30½	55	15	2 A.
3 A.	200 lbs. Ammonia-salts, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia	49	53	30	36	54	17	3 A.
4 A.	200 lbs. Ammonia-salts, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate	37	52	22½	30½	55	15	4 A.
(1) A.A.	275 lbs. Nitrate of Soda	38	52½	23	37½	55½	20	1 A.A.
(2) A.A.	275 lbs. Nitrate of Soda, and 3½ cwt. Superphosphate (3)	45	53	30	41	56	22	2 A.A.
(3) A.A.	275 lbs. Nitrate of Soda, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia	43	52½	28	39	55	21	3 A.A.
(4) A.A.	275 lbs. Nitrate of Soda, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate	50	53	33	44	56	24	4 A.A.
(1) C.	1000 lbs. Rape-cake	45	53	26	47	57	24	1 C.
(2) C.	1000 lbs. Rape-cake, and 3½ cwt. Superphosphate	46	53	27	48	57	24	2 C.
(3) C.	1000 lbs. Rape-cake, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia	43	53	27	45	57	23	3 C.
(4) C.	1000 lbs. Rape-cake, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate	47	53	29	49	57	24	4 C.
(1) N.	275 lbs. Nitrate of Soda	37	52½	22½	35	55	19	1 N.
(2) N.	275 lbs. Nitrate of Soda, and 3½ cwt. Superphosphate (3)	41	52½	26	42	56	22	2 N.
5 O.	200 lbs. Sulphate of Potash, 3½ cwt. Superphosphate (4)	22	52½	12	17	56	8	5 O.
5 A.	200 lbs. Sulphate of Potash, 3½ cwt. Superphosphate, and 200 lbs. Ammonia-salts	44	53	28	42	57	23	5 A.
M.	100 lbs. Sulphate of Soda, 100 lbs. Sulphate of Magnesia, and 3½ cwt. Superphosphate	21	53	12	18	55	9	M.
6(1)	Unmanured continuously	22	52½	12	16	54	8	1(1)
6(2)	Ashes (burnt soil and turf)	21	52½	12	15	54	8	2(2)
7(1)	Farmyard Manure 14 tons, 20 years, 1852-1871; unmanured since	48	54	28	46	57	26	1(1)
7(2)	Farmyard Manure 14 tons, every year	48	54	28	46	57	26	2(2)

(1) The "Superphosphate of Lime" is, in all cases, made from 200 lbs. Bone-ash, 150 lbs. Sulphuric acid sp. gr. 1.7 (and water).
 (2) 200 lbs. per annum for the first six years, 1852-7.
 (3) 200 lbs. per annum for the first six years, 1852-7.
 (4) The Ammonia-salts—in all cases equal parts Sulphate and Muriate of Ammonia of Commerce.
 (5) Five years, 1852-7, instead of Nitrate of Soda, 400 lbs. Ammonia-salts per annum; next 10 years, 1858-67, 200 lbs. Ammonia-salts per annum; 1868, and since, 275 lbs. Nitrate of Soda, per annum. 275 lbs. Nitrate of Soda is reduced to the same amount of Nitrogen as 200 lbs. Ammonia-salts.
 (6) The application of Silicate of Soda did not commence until 1864; in 1864-5-6 and 7, 200 lbs. Silicate of Soda and 200 lbs. Silicate of Lime were applied per acre, but in 1868, and since, 400 lbs. Silicate of Soda, and no Silicate of Lime. These plots ("A.A.S.") comprise, respectively, one half of the original "A.A." plots, and, excepting the addition of the Silicates, have been, and are, in other respects, manured in the same way as the "A.A." plots; and, for the sake of comparison with the latter, the average produce is given for the whole period of 20 years, 1852-1871.
 (7) 2000 lbs. Rape-cake per annum for the first six years, and 1000 lbs. only, each year since.
 (8) 3000 lbs. Sulphate of Potash, and 3½ cwt. Superphosphate of Lime, without Nitrate of Soda, the first year (1852); Nitrate alone each year since.
 (9) 550 lbs. Nitrate of Soda for 1853-4-5-6, and 7; and 275 lbs. only, each year since.
 (10) Ammonia-salts also the first year, but not since.
 (11) Average of 19 years only.
 (12) Average of 14 years only.