

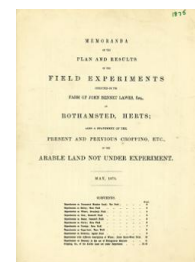
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Yields of the Field Experiments 1875

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Experiments on Barley; Hoos Field

Rothamsted Research

Rothamsted Research (1876) *Experiments on Barley; Hoos Field* ; Yields Of The Field Experiments 1875, pp 3 - 3 - DOI: <https://doi.org/10.23637/ERADOC-1-239>

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	24	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	31	56½	9½	4 O.
1 A.	200 lbs. Ammonia-salts (4)	32½	52½	15½	23½	54½	12½	1 A.
2 A.	200 lbs. Ammonia-salts, and 3½ cwt. Superphosphate	47	52½	27½	30	54½	20	2 A.
3 A.	200 lbs. Ammonia-salts, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia	35	52½	26½	30½	55½	18½	3 A.
4 A.	200 lbs. Ammonia-salts, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate	46½	54	28½	45½	57	28½	4 A.
(1) A.A.	275 lbs. Nitrate of Soda	37	52	22½	30½	55	15	1 A.A.
(2) A.A.	275 lbs. Nitrate of Soda, and 3½ cwt. Superphosphate	49½	53	30½	43	54	27½	2 A.A.
(3) A.A.	275 lbs. Nitrate of Soda, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia	37	52½	24	32	55½	18½	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	49½	53	32½	51½	57	27½	4 A.A.
(1) A.A.S.	275 lbs. Nitrate of Soda, 400 lbs. Silicate of Soda, (5)	38½	52½	23½	37½	55½	20	1 A.A.S.
(2) A.A.S.	275 lbs. Nitrate of Soda, 400 lbs. Silicate of Soda, and 3½ cwt. Superphosphate, (6)	48½	53	30½	51	56½	28½	2 A.A.S.
(3) A.A.S.	275 lbs. Nitrate of Soda, 400 lbs. Silicate of Soda, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, and 100 lbs. Sulph. Magnesia	41	52½	25½	41½	55½	23½	3 A.A.S.
(4) A.A.S.	275 lbs. Nitrate of Soda, 400 lbs. Silicate of Soda, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, and 3½ cwt. Superphosphate	50½	53	33½	54½	56½	33½	4 A.A.S.
(1) C.	1000 lbs. Rape-cake	45½	53	26½	47½	57½	24½	1 C.
(2) C.	1000 lbs. Rape-cake, and 3½ cwt. Superphosphate	46½	53	27	49	57½	24½	2 C.
(3) C.	1000 lbs. Rape-cake, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia	43	53	27½	45½	57½	23½	3 C.
(4) C.	1000 lbs. Rape-cake, 200 lbs. Sulph. Potash, 100 lbs. Sulph. Soda, 100 lbs. Sulph. Magnesia, 3½ cwt. Superphosphate	47½	53	29½	49½	57	24½	4 C.
(1) N.	275 lbs. Nitrate of Soda	37½ (1)	52½ (1)	22½ (1)	35½	55½	19	1 N.
(2) N.	275 lbs. Nitrate of Soda, and 3½ cwt. Superphosphate	41½ (1)	52½ (1)	26½ (1)	42½	56½	23½	2 N.
5 O.	200 lbs. Sulphate of Potash, 3½ cwt. Superphosphate (6)	22½ (1)	52½ (1)	12½ (1)	17	56½	8½	5 O.
5 A.	200 lbs. Sulphate of Potash, 3½ cwt. Superphosphate, and 200 lbs. Ammonia-salts	44½ (1)	53 (1)	28 (1)	42½	57½	25½	5 A.
M.	100 lbs. Sulphate of Soda, 100 lbs. Sulphate of Magnesia, and 3½ cwt. Superphosphate	21½ (1)	53 (1)	12½ (1)	18½	55	9½	M.
6 (1)	Unmanured continuously	22	52½	12½	16½	54½	8½	1 (1)
6 (2)	Ashes (burnt soil and turf)	21½	52½	12½	16	56	9½	2 (1)
7 (1)	Farmyard Manure 14 tons, 20 years, 1852-1871; unmanured since	48½	54½	28½	46½	57½	26½	7 (1)
7 (2)	Farmyard Manure 14 tons, every year	48½	54½	28½	46½	57½	26½	7 (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 commences 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.