

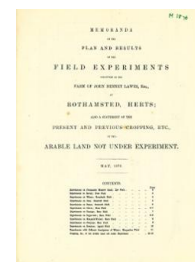
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Yields of the Field Experiments 1876

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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, 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.					Twenty-Fourth Season, 1876.					
		Dressed Corn.					Dressed Corn.					
		Quantity.	Weight per Bushel.	12 Years, 1852-75.	24 Years, 1852-75.	24 Years, 1852-75.	Quantity.	Weight per Bushel.	12 Years, 1852-75.	24 Years, 1852-75.	Total Straw.	
1 O.	Unmanured continuously	Bushels.	lbs.	Bushels.	lbs.	Cwts.	Cwts.	Cwts.	Bushels.	lbs.	Cwts.	1 O.
2 O.	3½ cwt. Superphosphate of Lime (1)	21½	52½	18½	52½	11	12½	12½	12½	50½	6½	2 O.
3 O.	1 lb. cwt. Sulphate Potass, 100 lbs. ♂ Sulphate Soda, 100 lbs. ♂ Sulphate Magnesia	27½	52½	20½	52½	10½	10½	10½	10½	50½	7½	3 O.
4 O.	200 lbs. ♂ Sulphate Potass, 100 lbs. ♂ Sulphate Soda, 100 lbs. ♂ Sulphate Magnesia, 3½ cwt. Superphosphate	30½	52½	21½	52½	10½	10½	10½	10½	51½	8½	4 O.
1 A.	200 lbs. Ammonia-salts (2)	34½	52½	29	52½	15½	15½	15½	15½	51½	15	1 A.
2 A.	200 lbs. Ammonia-salts, and 3½ cwt. Superphosphate	47½	52½	45½	52½	26½	26½	26½	26½	50½	16½	2 A.
3 A.	200 lbs. Ammonia-salts, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	32½	52½	17½	17½	17½	17½	50½	21½	3 A.
4 A.	200 lbs. Ammonia-salts, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	44	52½	26½	26½	26½	26½	51½	21½	4 A.
1 AA.	275 lbs. Nitrate Soda	39½	52½	32½	52½	18½	18½	18½	18½	51½	17½	1 AA.
2 AA.	275 lbs. Nitrate Soda, and 3½ cwt. Superphosphate	50½	52½	47½	52½	20½	20½	20½	20½	50½	16½	2 AA.
3 AA.	275 lbs. Nitrate Soda, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	50½	52½	32½	52½	25½	25½	25½	25½	50½	16½	3 AA.
4 AA.	275 lbs. Nitrate Soda, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	50½	52½	46½	52½	28½	28½	28½	28½	53½	22½	4 AA.
1 AAS.	275 lbs. Nitrate Soda, 400 lbs. Silicate Soda, and 3½ cwt. Superphosphate (3)	47½	52½	37½	52½	21½	21½	21½	21½	51½	19½	1 AAS.
2 AAS.	275 lbs. Nitrate Soda, 400 lbs. Silicate Soda, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	42	52½	24½	24½	24½	24½	52½	20½	2 AAS.
3 AAS.	275 lbs. Nitrate Soda, 400 lbs. Silicate Soda, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	42	52½	24½	24½	24½	24½	52½	23½	3 AAS.
4 AAS.	275 lbs. Nitrate Soda, 400 lbs. Silicate Soda, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	42	52½	24½	24½	24½	24½	53½	25½	4 AAS.
1 C.	1000 lbs. Rape-cake	47	52½	44½	52½	22½	22½	22½	22½	52½	20½	1 C.
2 C.	1000 lbs. Rape-cake, and 3½ cwt. Superphosphate	48½	52½	46½	52½	24½	24½	24½	24½	53½	20½	2 C.
3 C.	1000 lbs. Rape-cake, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	41½	52½	23½	23½	23½	23½	53½	19½	3 C.
4 C.	1000 lbs. Rape-cake, 200 lbs. ♂ Sulph. Potass, 100 lbs. ♂ Sulph. Soda, 100 lbs. ♂ Sulph. Mag.	47½	52½	41½	52½	23½	23½	23½	23½	53½	22½	4 C.
1 N.	275 lbs. Nitrate of Soda	38½	52½	37	52½	20½	20½	20½	20½	50½	19½	1 N.
2 N.	275 lbs. Nitrate of Soda, and 3½ cwt. Superphosphate	43½	52½	41	52½	23½	23½	23½	23½	51½	19½	2 N.
5 O.	200 lbs. ♂ Sulphate of Potass, 3½ cwt. Superphosphate (4)	24½	52½	21½	52½	9½	9½	9½	9½	51½	5½	5 O.
5 A.	200 lbs. ♂ Sulphate of Potass, 3½ cwt. Superphosphate, and 200 lbs. Ammonia-salts	22½	52½	18½	52½	29	29	29	29	51½	22½	5 A.
M.	Sulphate of Soda, 100 lbs. Sulphate of Magnesia, and 3½ cwt. Superphosphate	24½	52½	16½	52½	10½	10½	10½	10½	50½	9½	M.
6(1)	Unmanured continuously	24½	52½	20½	52½	13½	13½	13½	13½	51½	7½	6(1)
7(1)	Asbes (burnt soil and turf)	48½	52½	47½	52½	27½	27½	27½	27½	51½	6	7(1)

(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), for the first six years, 1852-7. (2) 300 lbs. per annum for the first six years, 1852-7. (3) The "Ammonia-salts" are, in all cases, equal parts Sulphate and Nitrate of Ammonia of Commerce, 1858-67, 200 lbs. Ammonia-salts per annum; 1868, and since, 275 lbs. Nitrate of Soda per annum, 275 lbs. Nitrate of Soda is reckoned to contain the same amount of Nitrogen as 200 lbs. "Ammonia-salts." (4) The application of Silicates 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 ("AAS") comprise, respectively, one half of the original "AA" plots, and, excepting the addition of the Silicates, have been, and are, in other respects, manured in the same way as the "AA" plots. (5) 2000 lbs. Rape-cake per annum for the first six years, and 1000 lbs. only, each year since. (6) 300 lbs. Sulphate of Potass, and 3½ cwt. Superphosphate of Lime, without Nitrate of Soda, the first year (1852); Nitrate alone each year since. (7) 550 lbs. Nitrate of Soda for 1853-4-5-6, and 7; and 275 lbs. only, each year since. (8) Ammonia-salts also the first year, but not since. (9) Averages of 11 years, 12 years, and 18 years. (10) Averages of 9 years, 12 years, and 18 years. (11) Averages of 20 years (with dung), 4 years (unmanured), and 24 years.

was so wet that it could not be got into favourable condition for sowing, and the plant was very irregular.