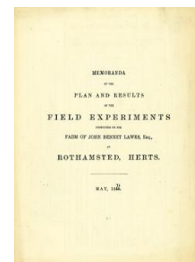


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# Memoranda of the Plan and Results of the Field Experiments, May 1870



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## Experiments on Oats; Geescroft Field

### Rothamsted Research

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EXPERIMENTS ON THE GROWTH OF OATS YEAR AFTER YEAR ON THE SAME LAND; WITHOUT MANURE, AND WITH DIFFERENT KINDS OF MANURE.

GEESCROFT FIELD.

Previous Cropping—1847 and 1848, Clover, Experimental Manures; 1849—1859, Beans, Experimental Manures; 1860, Fallow; 1861 and 1862, Wheat, Unmanured; 1863, Fallow; 1864, Beans, Dunged; 1865, Wheat, Unmanured; 1866, Beans, Unmanured; 1867 and 1868, Wheat, Unmanured; 1869, First Experimental Oat Crop in 1869.

(Area under Experiment,  $\frac{2}{3}$  acre).

PLOTS.		PRODUCE PER ACRE.											
		1ST SEASON, 1869.					2ND SEASON, 1870.						
		Dressed Corn.		Total Straw.		Dressed Corn.		Total Straw.		Dressed Corn.		Total Straw.	
		Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.	Quantity.	Weight per Bushel.
1	Unmanured	36 $\frac{3}{4}$	36 $\frac{3}{4}$	19 $\frac{1}{2}$	19 $\frac{1}{2}$	16 $\frac{3}{4}$	35	16 $\frac{3}{4}$	19 $\frac{1}{2}$	35 $\frac{1}{2}$	17 $\frac{1}{2}$	35 $\frac{1}{2}$	
2	Mixed Alkalies (1) ; and Superphosphate of Lime (2)	45	38 $\frac{1}{2}$	24 $\frac{1}{2}$	24 $\frac{1}{2}$	19 $\frac{1}{2}$	35 $\frac{1}{2}$	19 $\frac{1}{2}$	35 $\frac{1}{2}$	30	34 $\frac{1}{2}$	36	
3	400 lbs. Ammonia-salts (3)	56 $\frac{1}{2}$	37 $\frac{1}{2}$	36 $\frac{1}{2}$	36 $\frac{1}{2}$	30	34 $\frac{1}{2}$	30	34 $\frac{1}{2}$	50 $\frac{3}{4}$	36	28 $\frac{3}{4}$	
4	400 lbs. Ammonia-salts ; "Mixed Alkalies" ; and "Superphosphate of Lime"	75 $\frac{1}{2}$	39 $\frac{1}{2}$	54	54	36 $\frac{1}{2}$	35 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	50	35 $\frac{1}{2}$	23	
5	550 lbs. Nitrate of Soda (4)	62 $\frac{1}{2}$	38 $\frac{1}{2}$	42 $\frac{1}{2}$	42 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	50	35 $\frac{1}{2}$	28 $\frac{3}{4}$	
6	550 lbs. Nitrate of Soda ; "Mixed Alkalies" ; and "Superphosphate of Lime"	69 $\frac{3}{4}$	39 $\frac{1}{2}$	49 $\frac{1}{2}$	49 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	50	35 $\frac{1}{2}$	28 $\frac{3}{4}$	

Manures per Acre, First Season—1869.

1 acre .. .. = (about) 0.40 Hectare .. .. or 1.59 Prussian Morgen.  
 1 bushel .. .. = (about) 0.36 Hectolitre .. .. or 0.66 Prussian Scheffel.  
 1 lb. (pound avoird.) .. .. = (about) 0.45 Kilogramme .. .. or 0.91 Zollverein Pfund.  
 1 cwt. (hundredweight) .. .. = (about) 51.0 Kilogramme .. .. or 1.02 Centner.  
 1 bushel per acre .. .. = (about) 0.9 Hectolitre per Hectare .. .. or 0.42 Pr. Scheffel per Pr. Morgen.  
 1 lb. per acre .. .. = (about) 1.12 Kilogramme per Hectare .. .. or 0.57 Zollv. Pfl. per Pr. Morgen.  
 1 cwt. per acre .. .. = (about) 125.5 Kilogramme per Hectare .. .. or 0.64 Centner per Pr. Morgen.

(1) 200 lbs. Sulphate of Potash, 100 lbs. Sulphate of Soda, and 100 lbs. Sulphate of Magnesia.

(2) 200 lbs. Bone-ash, 150 lbs. Sulphuric Acid (sp. gr. 1.7).

(3) Equal parts Sulphate and Muriate of Ammonia of Commerce.

(4) 550 lbs. Nitrate of Soda is reckoned to contain the same amount of Nitrogen as 400 lbs. "Ammonia-salts."