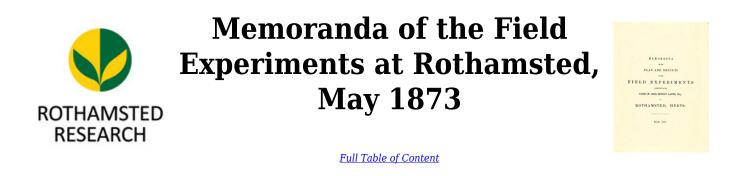
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Experiments on the Economy of Nitrogenous Manures

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(11)

EXPERIMENTS WITH A VIEW TO ECONOMY IN THE USE OF EXPENSIVE NITROGENOUS MANURES.

that a considerable quantity may remain in the soil in a com-paratively inactive state, yielding increase very slowly; and that a considerable quantity may be carried away by drainage, and lost. It seemed desirable, therefore, to commence a series of different crops.

It is found that generally less than half the nitrogen supplied experiments to determine whether any saving can be effected by applying comparatively small quantities near to the seed, instead of larger amounts in the usual mode of broadcast sowing and

It is also intended to make experiments with a view to ascertain the best periods of the year for the application of such manures to

FIRST SEASON, 1871.

Experiments upon Wheat. Little Hoos Field. Plots 1 acre each.

		PRODUCE PER ACRE.		
Manures per Acre, &c.	Dressed Corn.		, <u>es</u>	
	Quantity.	Weight per Bushel.	Total Straw.	
Unmanured. Seed 1 bushel, dibbled 6 inches apart in the rows	Bushels, 23 ³ / ₄	lbs. 59•3	cwts. 24 1	
146 lbs. (1) Sulphate Ammonia. Seed 1 bushel;	31 <u>1</u>	59·1	36 1	
(292 lbs. Sulphate Ammonia. Seed 1 bushel;	28 3	58.3	35§	
	Unmanured. Seed 1 bushel, dibbled 6 inches apart in the rows	MANURES PER AGRE, &c. Dressed Unmanured. Seed 1 bushel, dibbled 6 inches apart in the rows	MANURES PER AGRE, &c. Dressed Corn. Quantity. Weight per Bushel. Unmanured. Seed 1 bushel, dibbled 6 inches apart in the rows	

(1) Containing Nitrogen equal to that in 15 bushels of grain, with its average proportion of Straw.

Experiments upon Barley. Thirty-acres Field. Plots 1/2 acre each.

				PRODUCE PER ACRE.	
Drom	LOT. MANURES PER ACRE, &c.		Dressed Corn.		
No.			Weight per Bushel.	Total Straw.	
1	Unmanured. Seed 3 bushels; drilled	Bushels. 40 ¹ / ₂	lbs. 53•9	cwts. 245	
2	{1 cwt. Superphosphate, 1 cwt. Nitrate Soda. Seed 3 bushels; }	497	53.3	30 1	
3	(1 owt. Superphosphate, 1 owt. Nitrate Soda. Seed 3 bushels;	49 <u>1</u>	53•4	28 <u>1</u>	
4	(1 cwt. Superphosphate, 1 cwt. Nitrate Soda. Seed 3 bushels;)	51	53 •0	30g	
5	(1 cwt. Superphosphate, 1 cwt. Nitrate Soda. Seed $1\frac{1}{2}$ bushel;,,,,,,,	51 <u>1</u>	53.3	28 1	
6	(2 cwts. Superphosphate, 2 cwts. Nitrate Soda. Seed 3 bushels; }	56 1	<mark>51</mark> •6	327	

SECOND SEASON, 1872.

Experiments upon Barley. Thirty-acres Field. Plots 1/2 acre each.

-		PRODUCE PER ACRE.		
Plot. No.	Manures per Acre, &c.	Dressed Corn.		
		Quantity.	Weight per Bushel.	Total Straw.
1	Unmanured. Seed 2 ¹ / ₂ bushels, drilled	Bushels. 33 <mark>1</mark>	lbs. 54·4	cwts. 19 <u>1</u>
2	(3 ewits. Superphosphate, 2 ewits. Nitrate Soda. Seed 2½ bushels;	461	54·1	30 <u>1</u>
	3 cwts. Superphosphate, 2 cwts. Nitrate Soda. Seed 2½ bushels;	47 7 8	53.6	31 <u>¦</u>
4	(1 cwt. Superphosphate, 1 cwt. Nitrate Soda. Seed 24 bushels; Manures and Seed made up to 15 bushels per acre with Ashes, and the whole (Manure, Seed, and Ashes) drilled together	42§	54·1	261
5	(1 ewt. Superphosphate, 1 ewt. Nitrate Soda. Seed 2½ bushels;	43 <u>1</u>	53.1	27

THIRD SEASON, 1873.

Some experiments are in progress in which a given quantity of Nitrate of Soda (generally at the rate of 1 cwt. per acre) has, by means of plaster of Paris and other substances, been made to adhere to the seed, forming a coating upon it. Experiments in pots, well watered and kept in a greenhouse, showed that barley so coated germinated well, and gave strong and healthy plants; but owing to the wetness of the weather previously, to the consequent lateness of sowing, and to the scarcity of rain since, the coated seeds sown in the field have not come up regularly, and it remains to be seen whether the result will eventually be favourable. Even if it were so, there are practical difficulties the weather of the section of difficulties in the way of so preparing the seed, which might render the method inapplicable in ordinary practice.