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## Guide to the Experimental Plots - 1913

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### Hoos Field - Inoculation of Leguminous Plants

#### Rothamsted Research

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HOOS FIELD

INOCULATION OF LEGUMINOUS PLANTS

Since the land on which potatoes had been formerly grown (see Plan on page 42) is known to have carried no leguminous crop for the last fifty years, it was decided to use those plots which no longer showed much residue of the manures previously applied, *i.e.*, Plots 5-10, for testing the comparative effects of different media for inoculating leguminous plants with their appropriate bacteria. In 1905, therefore, Plots 6, 8, and 10 were divided transversely into four plots; on A, soil inoculated with Hiltner's preparation from Munich; on B, soil inoculated with Moore's preparation from the United States; on C, soil from a field which had carried red clover in 1904, were sown on 7th April; D being left uninoculated. Red clover seed was sown on 15th May over the whole area, and was continued each year to 1911 inclusive; in 1912 a crop of oats was taken. See yield in Table XX.

Plots 5, 7, and 9 were similarly divided into three plots and sown with cow peas (*Vigna catjang*), a leguminous plant quite new to this land. On E, the seed was inoculated with Moore's medium just before sowing; on F, soil obtained from an old cow pea field in the United States was spread; and G was not inoculated. The cow peas were sown on 16th May, but failed to give a satisfactory plant, and were ploughed up. The plots were sown with red clover in 1906, as part of a further trial of the continuous growth of clover. This continued to 1911 inclusive; in 1912 oats were grown on the plots. For results, see Table XX.

TABLE XXI.—*Experiments on Wheat, alternated with Fallow, without Manure (Hoos Field), 62 years (1851-1912); and grown continuously without Manure (Broadbalk Field), 62 years (1851-1912).*

Average produce of Grain per acre, and Produce last two years, 1911 and 1912.

	Dressed Grain.		
	Wheat after Fallow each year (Hoos Field).	Wheat after Wheat each year (Broadbalk).	After Fallow + or - after Wheat.
AVERAGES—Produce after Fallow, reckoned at the yield per Acre of the half in Crop each year.			
5 years (1851-55) . . . . .	Bushels. 19·2	Bushels. 14·7	Bushels. + 4·5
10 ,, (1856-65) . . . . .	26·1	15·9	+ 10·2
10 ,, (1866-75) . . . . .	13·5	11·9	+ 1·6
10 ,, (1876-85) . . . . .	14·8	11·3	+ 3·5
10 ,, (1886-95) . . . . .	15·1	12·1	+ 3·0
10 ,, (1896-1905) . . . . .	14·3	11·7	+ 2·6
50 ,, (1856-1905) . . . . .	16·7	12·5	+ 4·2
57 ,, (1851-1912) . . . . .	16·0	12·2	+ 3·8
1911 . . . . .	17·0	12·5	+ 4·5
1912 . . . . .	4·2	4·5	- 0·3