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Report for 1937

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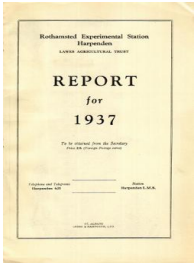
Rothamsted Experimental Station
Harpenden

REPORT
for
1937

Maize

Rothamsted Research

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Response to	1935 Spacing		1937 Spacing	
	18 ins.	24 ins.	16 ins.	24 ins.
Dung	+3.8	+7.4	+2.5	+1.4
Nitrochalk	0.0	+2.4	−0.4	+1.2
Potash	−0.4	+5.8	+1.8	+3.1
Superphosphate	−3.0	−0.9	+2.7	+3.8
Standard error	±1.69		±1.89	

The standard errors per cent. per plot ranged from 10.3 to 18.4. Beans have proved more variable than most farm crops in our experiments.

TABLE XLII

Effect of Various Manures on the Yield of Beans (cwt. per acre). Rothamsted 1934-1937

Year	Dung			Nitrochalk			Superphosphate		Muriate of potash			Drill width		Standard error
	No dung	D_1	D_2	No nitrogen	N_1	N_2	No phosphate	P_1	No potash	K_1	K_2	18ins.	24 ins.	±
Grain :														
1934	17.2	18.9	20.1	18.2	18.7	19.3	—	—	18.7	17.8	19.4	—	—	0.647
1935	18.2	23.8	—	20.4	—	21.6	22.0	20.0	19.6	—	22.4	22.4	19.6	0.845
1936	16.8	16.8	—	17.9	—	15.7	16.6	16.9	16.9	—	16.6	—	—	0.430
1937	28.0	30.0	—	28.8	—	29.2	27.4	30.7	27.8	—	30.2	32.9	25.2	0.947
Straw :														
1934	13.4	14.6	16.7	14.9	14.7	15.3	—	—	15.2	14.3	15.3	—	—	0.549
1935	21.4	31.2	—	25.1	—	27.5	25.4	27.2	24.9	—	27.7	28.6	24.0	0.892
1936	31.2	34.5	—	32.0	—	33.8	32.6	33.1	32.0	—	33.8	—	—	—
1937	29.4	32.0	—	30.5	—	30.9	29.5	31.9	29.4	—	32.1	34.2	27.2	—

$D_1 = 7\frac{1}{2}$ tons 1934, 10 tons 1935-1937. $N_1 = 0.4$ cwt. Nitrogen. $K_1 = 1.0$ cwt. K_2O. $P_1 = 0.6$ cwt. P_2O_5 per acre. D_2, N_2, K_2, applications double D_1, N_1, K_1. Narrow drill 16 inch in 1937.

POSSIBLE NEW CROPS: SOYA BEANS AND MAIZE

In 1934 experiments on the possibility of finding varieties of maize and soya beans suited to this country were begun at Rothamsted and Woburn by Prof. W. Southworth, who had been very successful in similar work at the Manitoba Agricultural College.

Maize

Seed of Manitoba Flint and Manalta were obtained from the Manitoba Agricultural College where they originated and sown both at Rothamsted and Woburn in the spring of 1934. The season was hot and sunny. The seed ripened well and was saved for 1935. This season also was sufficiently good to allow of ripening and by this time it was clear that Manalta was in our conditions earlier than Manitoba Flint. The latter, therefore, was discarded.

1936 was cloudy and wet; during July and September, two important months for both maize and soya beans, there were no less than 152 hours less sunshine than the normal; seeding was, therefore, not good. 1937 was better and at Woburn we obtained a good crop of well ripened Manalta seed.

Meanwhile two varieties of sweet corn, Golden Bantam, from the Manitoba Agricultural College, and Dorinni from the Central Experiment Farm, Ottawa were grown at Rothamsted in 1935. The former proved less suitable and was, therefore, discarded. The two varieties had been grown side by side and cross pollination took

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