SIX YEARS' EXPERIENCE IN IMPROVING A LIGHT, UNPRODUCTIVE SOIL.¹

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The land upon which the experiment was conducted adjoins the college property on the north and was leased from E. Sweet. The soil is classified as Warwick sandy loam, of which there is considerable easily tilled area in the State. The field had not been tilled, cropped, nor manured for many years. The turf had become very thin, and moss had taken the place of grass to such an extent that a season's growth did not yield a quarter ton of hay. The subsoil was a coarse gravel, and leaching could take place readily. Aside from manurial requirements, the fundamental needs appeared to be for lime and for organic matter to conserve moisture. Six apparently uniform, level plats of a quarter acre each were used in the experiment, which was begun in 1913.

The plan was to prepare in different ways for a uniform planting of potatoes in 1917, with the hope that the effect of the various procedures might be shown on this cash crop. Winter wheat was sown uniformly following the potatoes and harvested in 1918, after which the station gave up the land. The general cropping system followed on the different plats will now be described briefly.

On plat 1, the plan was to grow on the acid soil such crops as might develop there, with the main object of increasing the organic matter. They comprised lupine for green manuring, followed by rye as a cover crop, in 1913; soybeans for green manuring in 1914, followed by redtop in the fall and alsike clover in the spring; this, on account of failure, was replaced by corn in 1915. At the last cultivation of the corn, grass and clovers were again sown, to be harvested for hay in 1916.

On plat 2, lime was used more liberally and corn planted in 1913, in which grasses were seeded, supplemented by a seeding with clover the next spring. Hay was harvested each year until the turf was turned under in the autumn of 1916 in preparation for the potatoes in 1917.

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