a large loss of organic matter. For the next 6 years the results ranged from no loss to a slight gain for low rates of fertilizer, but considerable gain of organic matter for high rates of fertilizer. High rates of fertilizer produced high yields of vegetation which, when plowed under, added more organic matter to the soil.

TABLE 35.—ORGANIC MATTER AS AFFECTED BY RATES OF FERTILIZER ELEMENTS.

Pounds per Acre			Organic Matter			Percent Difference* from	
						1947 to 1951	1951 to 1957
N	P_2O_5	K_2O	1947	1951	1957		
21	25	20	2.5	1.8	1.8	—0.7	0.0
42	50	40	2.1	1.8	2.0	—0.3	0.2
63	75	60	2.4	1.8	2.0	—0.6	0.2
21	75	60	2.2	2.0	1.9	—0.2	—0.1
42	75	60	2.3	1.8	2.0	—0.5	0.2
63	75	60	2.4	1.8	2.0	—0.6	0.2
63	25	60	2.4	1.8	1.9	—0.6	0.1
63	50	60	2.5	1.8	1.9	—0.7	0.1
63	75	60	2.4	1.8	2.0	—0.6	0.2
63	75	20	2.4	1.9	1.9	—0.5	0.0
63	75	40	2.4	1.8	2.0	—0.6	0.2
63	75	60	2.4	1.8	2.0	—0.6	0.2
Average						—0.5	0.2

* Minus sign indicates loss of organic matter.

The moisture equivalents (*2*) of the soils from the plots of the rotation and continuous crop experiment for the first, fourth and tenth years of the test are given in Table 36. The gain or loss is compared for 4 and 6 years consecutively. For the first 4 years there was a large decrease in the moisture equivalent for all systems of cropping. For the next 6 years the loss was less and in the case of continuous corn there was a gain.

The moisture equivalents of the soils from the plots of the fertilizer experiment for the first, fourth and tenth years are presented in Table 37. There was a large loss in moisture equivalent for the first 4 years, but little or no loss for the next 6 years.

The effect of rotation systems and fertilizer on percent moisture equivalent is correlated with the loss of organic matter