

ginning of the experiment in 1924, and the experiment was discontinued in 1928.

Variations in results of analyses of the soils of the plots of the two rotations were very small. The results of the loss on ignition, carbon and nitrogen determinations on the soils of the plots growing the different summer cover crops have been averaged and are given in Table 6. Very small differences in the organic matter (loss on ignition), carbon and nitrogen contents of the soil were found, indicating little or no gains of these components in the soil which might be attributed to the planted summer cover crops.

TABLE 6.—AVERAGE LOSS ON IGNITION, CARBON AND NITROGEN CONTENTS OF THE SOIL OF THE DIFFERENT COVER CROP PLOTS.

Summer cover crops	Depth	L. I. ¹	C	N	C/N
	inches	percent	percent	percent	
"Florida pusley"	0- 6	0.899	0.437	0.034	12.8
	6-12	0.831	0.409	0.031	13.2
<i>Crotalaria striata</i>	0- 6	0.953	0.488	0.036	13.6
	6-12	0.878	0.437	0.032	14.0
Velvet beans	0- 6	0.948	0.482	0.035	14.3
	6-12	0.820	0.423	0.030	14.6
Beggarweed	0- 6	0.859	0.442	0.032	13.8
	6-12	0.876	0.423	0.030	14.5
Cowpeas	0- 6	0.954	0.457	0.025	13.3
	6-12	0.827	0.411	0.029	14.3
Average	0- 6	0.923	0.461	0.034	13.6
	6-12	0.846	0.421	0.030	14.1

¹ The loss on ignition is a measure of the organic matter in sandy soils.

That additions of large quantities of summer cover crops add only slightly to the content of well-decomposed organic matter in the deep phases of sandy soils has been observed in other studies. Results of analyses of soil from summer cover crop studies in a pineapple orange grove have been reported in Florida Experiment Station Bulletin 253. The analyses show no specific effect of any of the summer cover crops on the well-decomposed organic matter of the soil. The residual effect of the summer cover crops on the sandy soils under the climatic conditions of Florida evidently must be sought in the undecom-