

non-irrigated. In the roots of the plants from the plats differently treated, less difference was shown in percentage of total carbohydrates during this period (1926-1929, inclusive). In percentage of total nitrogen, the roots and crowns of the Napier grass plants from the effluent irrigated plats were consistently higher, except those dug in 1929, in which case the roots of the plants from the non-irrigated plats were slightly higher.

The average percentage of total carbohydrates in the crowns and roots of the plants for this period (1926-1929, inclusive), was slightly higher in these plant parts from the irrigated plats. The average percentage of nitrogen in the plant parts for this same period showed a more significant difference in favor of the crowns and roots of the plants from the effluent irrigated plats.

The quantities of dry matter, various carbohydrate compounds, total carbohydrates, and total nitrogen in the crowns of the plants from the sewage irrigated plats were approximately 3.5 times that of similar materials in the crowns of plants from non-irrigated plats (Table V).

TABLE V.—AVERAGE WEIGHT IN GRAMS OF DRY MATTER, SUGARS, HIGHER CARBOHYDRATES AND TOTAL NITROGEN IN CROWNS OF SEWAGE IRRIGATED AND NON-IRRIGATED NAPIER GRASS DUG PREVIOUS TO THE PRODUCTION OF SPRING TOP GROWTH FROM 10 FEET OF ROW (OR AN AREA OF 60 SQUARE FEET) FOR YEARS 1926 TO 1929, INCLUSIVE.

Compound	Crowns	
	Irrigated with sewage effluent	Not irrigated
	grams	grams
Dry matter.....	2,064.747	621.460
Reducing sugar.....	72.535	21.453
Total sugar.....	99.335	28.830
Starches, dextrins, hemicellulose.....	534.955	150.033
Total carbohydrates.....	634.043	178.862
Total nitrogen.....	25.396	6.693

All carbohydrates given in terms of glucose. All compounds calculated on a dry weight basis except dry matter.

RATIO RELATIONS

The ratio between the Napier grass silage yields of the non-irrigated and irrigated plats in 1922 at the end of the first year's