NOTE

PLANT ROOT DEVELOPMENT AND DISTRIBUTION BY SOIL TYPE

Soil scientists and ecologists are likely to find in the paper, "Some Studies of Root Habits of Sugar Cane in Cuba," recently published as Scientific Contribution No. 21, Tropical Plant Research Foundation (1086 N. Broadway, Yonkers, N. Y.), by James H. Jensen, some very interesting fundamental data pertaining to the effect of soil environment on root development and distribution of sugar cane. These studies relate to root distribution, as actually plotted through the soil profile, at ages of 4, 6, and 10 to 11 months on a very dense, plastic clay (Alto Cedro clay); a moderately friable clay, containing an increasing amount of sand downward (Rio Cauto clay); a highly porous clay of lateritic character (Francisco clay); and a clay with a hardpan-like subsoil and high water table (Navajas clay).

The marked effect of these widely different soil characteristics are strikingly brought out in this paper. It is shown that soil type plays a very important rôle in relation to correct tillage and planting methods. For example, the root development of Alto Cedro clay is largely in the surface zone, indicating the necessity for keeping this fact in mind in connection with cultural operations; whereas, on Rio Cauto clay the roots strike downward into the more friable subsoil material to a very much greater degree. The soils discussed in this paper are described briefly and are more fully described in *The Soils of Cuba* (Tropical Plant Research Foundation).

Another recent publication by the Tropical Plant Research Foundation, "The Utilization of Varieties in the Field Control of Sugar Cane Mosaic and Root Disease in Cuba" (Scientific Contribution No. 20), by James A. Faris, formerly of the Foundation and now of the U. S. Dept. of Agriculture Bureau of Plant Industry, relates pertinently to variety tests and spacing and cultural tests of sugar cane on a large number of definite soil types. It is significant that the results of these tests do not stop merely with the obtaining of yields but are carried on to the finished manufactured product, giving the final outturn of sugar, as well as the purity, Brix and sucrose content of the cane juices, as measured in the mill. This is a type of experimental work which differs from most experiments in that the results are carried on beyond the point of production.—H. H. BENNETT, U. S. Dept. of Agriculture, Washington, D. C.