Soils of the Central Romana Plantation in the Dominican Republic

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HISPANIOLA is the second largest island of the four Greater Antilles in the West Indies: Cuba, Hispaniola, Jamaica, and Puerto Rico. It occupies an area of about 30,025 square miles divided between the Republic of Haiti in its western third and separated by a frontier of about 193 miles long from the Dominican Republic that occupies about the eastern two-thirds.

Published reports of the soils of Hispaniola are probably limited to that of Pippin (4, 5) on the soils of the Artibonite Plain in Haiti and to that of Balzarotti (1) on the podzolic soils in Santo Domingo. This paper presents information obtained on a reconnaissance 2-week tour made by the writer in August 1947, in the fields of the Central Romana Sugar Corporation in the southeastern coastal plain of the Dominican Republic.

PHYSIOGRAPHY OF THE DOMINICAN REPUBLIC

The Dominican Republic lies in the torrid zone between 17.5° and 20° north latitude and between 68.3° and 72° west longitude. It has a coastline of about 1,017 miles, an area of about 19,121 square miles, and an estimated population for 1947 of 2,151,000. Sugar, cacao, coffee, rice, corn, beans, tobacco, plantains, bananas and livestock are the chief products.

On the basis of Vaughan and Cooke's (8) work, Schuchert (7) reports six physiographic provinces in the Dominican Republic. In this paper they are extended to eight to include the Samaná and the southern peninsulas (Fig. 1), as follows:

1. The Northern Range, which is known as the Monte Cristi range, is a faulted area extending in a northwesterly-southeasterly direction. It consists of several, more or less, parallel ranges and a few isolated masses, none rising higher than 2,214 feet according to Schuchert, but which according to Vaughan and Cooke attain elevations between 3,280 and 4,592 feet above sea level.

2. The Samaná Peninsula has a mean width, from north to south of about 7 miles and extends about 30 miles from east to west. It is made up of a group of steep mountains, which may vary in height from 1,312 to 1,830 feet above sea level. In some places there are areas of gently rolling land.

3. The Cibao Valley borders the Northern Range on the south. It is partly bounded by faults and has a mean width from 8 to 28 miles. The floor of the valley is formed by gently tilted marine sediments of Oligocene and Miocene age which in some places are covered by alluvial deposits of Quaternary age.

4. The Central Range which lies to the south of the Cibao Valley, is wide and its long axis extends from a northwesterly to southeasterly direction. It is the main mountainous backbone of the Dominican Republic and of Haiti where it is called the Massif du Nord. The loftiest summit is Loma Tina, 10,300 feet, the highest peak of the island of Hispaniola.

Fig. 1.—Physiographic regions of the Dominican Republic.