I. INTRODUCTION.

"Moko disease" of bananas was first recorded by J. B. Rorer in Trinidad in 1909 (29). He described the disease and isolated a bacterium, which, when inoculated into bananas, reproduced the disease. Although he found that the bacterium resembled Bacillus solanacearum (E. F. Smith), he could not obtain infection of solanaceous plants with it; so he called it "Bacillus musae (n. sp.)."

E. F. Smith in Washington, with material he received from Rorer, was also unable to infect tomatoes, although it was still pathogenic to bananas (33).

It was not until 1926 that S. F. Ashby (1, 2) after considering the similarity of the causal organism to B. solanacearum and its then recently demonstrated ability to infect Monocotyledons (24), here at the Imperial College of Tropical Agriculture inoculated the organism into tomato and tobacco plants and obtained infection; thus he considered that Moko disease of bananas was caused by Bacillus solanacearum (E. F. Smith).

Similar diseases of bananas have been reported from other parts of the West Indies, South America, South-East Asia and Africa since then and confirmation that the causal organism is able to infect solanaceous plants has been obtained in some instances (50, 32); but generally only symptoms, with possibly some cultural characteristics of the organism have been taken as sufficient evidence for calling the disease "Bacterial wilt" or "Moko disease" caused by Pseudomonas solanacearum (E.F.S.), as the organism is now generally called.

It was after considering the rather scanty evidence on which Ps. solanacearum is stated to be the causal organism of Moko disease that it was decided to carry out some investigations on the etiology of the disease. These have been along two main lines.

The first has been an attempt to determine the distribution of Moko disease in Trinidad with a view to finding out if there are any possible correlations of its incidence with soil and

climatic conditions and if these conditions are similar to those noted for other bacterial wilt diseases caused by Ps. solanacearum.

The other investigation has been an attempt to determine whether the causal organism is Ps. solanacearum by means of cross-infection experiments on to other known host plants, and comparing their reaction with the results of infection by other isolates of the organism from solanaceous plants. The physiological characteristics of various isolates have also been compared.