# A PRELIMINARY STUDY OF THE PLANT VIRUS DISEASES OF TRINIDAD.

## INTRODUCTION.

In recent years great progress has been made in the study of plant virus diseases. Holmes(1) in his book (1939) lists what he considers to be 129 distinct plant viruses; Smith(2) (1937) had described a slightly larger number, some of which Holmes considered to be merely strains of other entities, this accounting for most of the differences in the two lists. Further work will certainly add new records, whilst some diseases of different plant species will probably be shown to be caused by the same virus, or allied strains of the same virus. The great majority of the diseases so far described are found on cultivated plants, which have naturally claimed primary attention.

In Trinidad there has been little study of this type of disease, although several viruses, and symptoms thought to be of virus cause, have been recorded. The aim of this investigation was to provide more information about the viruses of the island, and to form a basis for future work.

The nomenclature of virus diseases is not yet stabilised, and there are often many synonyms for the same disease. The oldest system names a virus according to the symptoms it produces — e.g. Tobacco Mosaic Virus or Tomato Bunchy Top Virus etc. This system is not international in its application, and variation in symptom expression under different environmental conditions can lead to a further multiplicity of names. Other synonyms arise when the same virus affects more than one host; Tobacco Mosaic, for example, is caused by the same virus as Tomato Mild Mosaic. On the other hand, similar symptoms may be produced on a plant by different viruses, which are then liable to be

confused under this system.

Smith(2) devised a system by means of which viruses are grouped according to their most important or first recorded hosts, and then numbered. Thus, Tobacco Mosaic becomes Nicotiana Virus 1 and the other viruses affecting the tobacco plant become Nicotiana Virus 2, 3, 4 etc. This is an adaptation of Johnson's system in which the English name of the plant was used to designate the virus(3). Holmes (1 & 4) worked out a Latin binomial system of classification. It is claimed that the system indicates the relationships of the viruses, but it is doubtful if these relationships have yet been sufficiently demonstrated to warrant the acceptance of such a system. Valleau(5), disliking Holmes' classification, has since produced another of a similar nature.

Smith's system suffers from the difficulty of remembering numbers, but used in conjunction with the older descriptive terminology it is the most satisfactory at present available; such a combination is used in this investigation.