

TABLE (1)

1.1. Introduction.

A long term project of investigation of the soils and agricultural conditions in the central region of the Caparo River drainage basin in west-central Trinidad was instigated in 1956.

The land was chosen because it contains an impressive array of semi-derelict and unproductive upland soils, most of which were marked for acquisition by Crown as being totally unsuitable for agriculture. Chenery (1952) has mapped this area in no great detail, largely because a great number of soil types of widely differing physical and chemical properties occur in complex association within small areas.

Before any suggestions concerning land utilisation and improvement could be satisfactorily formulated, it was essential that the classification and morphology of the soils and their related topographical and geological features be recognised.

Detailed soil and vegetation surveys and maps of sample strips sited to elucidate the major topographical sequences as far as possible were completed during 1956-57 (Clarke, Dickin, Orr, Schedler, Smethurst and Weare). Following this, work of a similar nature was conducted by Briggs (1958), whilst the information gained from the previous surveys was utilised by Isherwood (1958) and McDonald (1958) who did a semi detailed soil survey of 600 acres within the region.

Utilisation of the information gained from the above reports must essentially be of an agronomic rather than a purely pedogenic nature. Table (1) shows the summarised information from these surveys according to topography and parent material. It is possible from this to select those soils which merit closer attention. The investigation having reached this level, there are two somewhat divergent interests which might be served by further work on agronomic features. From the point of view of further development of the area, the most promising soils would normally be selected for study, these consisting of the clays, especially the Ecclesville and Talparo series.

The alternative objective is to study a soil which represents as near as possible the major part of the soils of the humid tropics. For instructive purposes, this second alternative was chosen, rather than proceed with the shorter-term objects of the first, which would be more realistically tackled by the local department of agriculture.

From this point of view, the Las Lomas and the Phoenix series seem most appropriate to study. Considerable areas of Las Lomas series occurs in the locality studied, and this therefore seems the most suitable available. (see sections 1.2 and 1.3 of this report). According to Chenery (1952) the Las Lomas soil is a fine sandy loam to loam having a type profile as follows:

"The topsoil consists of about 24" of bright yellowish brown loam or sandy loam, which merges into a broad horizon of faintly orange mottled heavier loam. At about 5 feet reddish orange mottling appears in the heavier loams, or if the soils are more sandy it will be uniformly reddish orange colour or even brick red. The whole profile is extremely acid and low in plant nutrients. Severe dry season dessication is a further limiting feature".

As Chenery remarked, and the sample surveys also showed, colour changes are just as variable laterally as vertically, and cannot be used as a feature in mapping these soils. The variability of the profile, is of course associated with the complex manner in which the parent sedimentary material was laid down, and the subsequent pedological and topographical processes.

Fertility studies of the Las Lomas series were started in 1958 by Obihara. A summary of responses obtained in these experiments is shown in Table (2). Definite responses were obtained to applications of nitrogen, phosphorus and potassium.