INTRODUCTION.

The survey was intended to define the range of variation of the Criollo cacao in Valle del Cauca (Colombia) before a selection programme is started.(1) The material reported upon comes from the cacao trees growing in three different estates, which latter, according to their histories, have a good deal of the primitive Criollo cacao population originally grown on the Cauca river basin.

Material.

The data recorded are from the cacao population of three plots. The first two with 100 trees and the third one with 80. Each tree was numbered and every one which bore fruits at the time of the research, was recorded. A complete record of the available pods during part of the June - July 1943 crop has been kept. The three plots are planted with the ordinary crop trees typical of the commercial cacao grown in Cauca Valley.

Specific Methods.

The most interesting characters tabulated were:

1. Habit of the tree - whether a jorquette was present or not.
2. Colour of the pods - classified on pods which were fully grown but not ripe. The pods were classified according to the plates Number I, II and III of the Second Annual Report on Cacao Research, Trinidad 1943.
3. Length & Diameter of the pod - these measures were taken on ripe pods when harvested. Other records were made in which the shape of the pod describes features not easily measured; e.g. depth of furrows, degree of wartiness, development of the point, bottleneck, etc.
4. Thickness of the wall (shell) - This, as well as all the pod measurements, was made on every pod obtained from each tree.
5. Weight of cacao per pod - This measure was done in every pod harvested. A spring balance was used for the purpose.
6. Number of beans per pod -
7. Average bean weight - calculated from (5) and (6)
8. Shape of the beans - expressed by the cross section exposed when the beans were cut to see the colour of the cotyledon. The shape of the beans is classified as round, plump or flat.
9. Colour of the Cotyledon - Recorded as white, slight purple and purple