

Introduction.

During the last two or three years, maize growing in the fields of the College Farm, as well as in peasant plots throughout Trinidad, has been noticeably affected by pathogenic symptoms not hitherto described in this island. While not causing any great loss, since the symptoms occurred chiefly at a relatively late stage of growth, this condition appeared to be sufficiently widespread to call for some investigation.

In order that it might conveniently be studied under natural conditions, seed of the kind grown locally, consisting of a mixed population of a variety of types, was sown in the field on the College Farm belonging to the Mycology Department (Field C arable). This field had already been planted with papaws occupying 42 rows eight feet apart, and the maize was inter-planted with these, two rows of maize being sown ^{each} in 8-foot strip. The complete sowing was not performed at once but in seven operations at intervals for a fortnight, six strips chosen at random being sown on each occasion.

The dates of sowing extended from October 15th., which is about the middle of the wet season, to January 7th. when the dry season may be expected to begin. By this means it was hoped firstly to correlate the occurrence of the disease with the type of weather prevailing during growth, and secondly to obtain a supply of affected material at every stage of development.

On the day before each sowing, the strips to be drilled were ploughed and then harrowed. No manure was applied to the maize, the field having been under a leguminous crop for two years, and a small quantity of blood-meal having been given to each papaw plant. As soon as the maize was well above ground, it was kept under observation and individual plants thought to be showing early signs of disease were labelled, numbered and described, and were inspected from time to time.

Further, an attempt was made to estimate the amount of disease present in each sowing. Unfortunately the later sowings were subjected to severe drought which prohibited successful growth and rendered disease observations valueless.

The disease was found to be widespread on the earlier sowings in the experimental field as well as on the maize crops in other fields on the farm. An account of the symptoms observed and conclusions which were drawn as to the nature of the disease are given in the pages which follow.