PART I - ACCOUNT OF TOBACCO EXPERIMENTS AT THE COLLEGE SINCE 1951.

1. INTRODUCTION.
   Up to 1951 air cured tobacco had been grown at the College old farm continually since 1923, the leaf being sold locally. In 1951-52 it was decided to investigate the possibility of producing flue cured tobacco in Trinidad. If successful, a considerable saving on tobacco imported for manufacture into cigarettes would be possible.

   During the intervening years ten post-graduate students have studied the possibilities of flue cured tobacco in great detail and at the beginning of this year it was felt that most of the problems had been solved. The major part of this report has therefore been devoted to a summary of this work.

   Most of the experiments have been carried out on the Market garden area of the New Farm, so that the results are applicable to this soil type. Chenery (1952) defines it as a River Estate loam and a typical soil analysis is included in Appendix 1.

   For convenience and clarity the report has been arranged so that problems are discussed in the order in which they occur when tobacco is grown.

2. VARIETIES.
   Preliminary work in 1951-52 compared two locally selected varieties with four imported ones: Bonanza, Gold dollar, Delcrest and Yellow Mammoth. Yields of Gold dollar were lower than those of other varieties but when judged on an air-cured sample, Gold dollar and Delcrest gave the better quality. Dunbar in 1952-53 again found Gold dollar to be low yielding, but of good quality, when compared with Bonanza, Kentucky one Sucker, Yellow Mammoth...
and Harrisons Special. Following these trials Gold dollar was selected as the standard variety.

Successively poor results in the ensuing years led to further trials by Orpin in 1956-57, who compared Gold dollar, Dixie Bright, Cokers 139 and Virginia 45. Dixie Bright gave the best yields and higher quality of leaf and was slightly superior to Cokers 139. It had also been grown with success in Tobago and Trinidad and was therefore recommended for use in future experiments at the College.

   (a) Preparation.

   Seedbed size has been constant at 30 ft. by 4 feet, with paths 2 feet wide between beds. From a practical point of view a width of 3 feet, as recommended by McGregor (1937) and Collins (1955), would make it possible to reach all the bed from one side, but this is not essential.

   The beds are formed by throwing soil from the pathways, so raising the bed about 3 inches above ground level. The edges are then lined with split bamboo canes, to retain the soil, and bamboo soil is added to give a final height of 4 to 6 inches. The term bamboo soil refers to topsoil of high organic matter content, obtained from a nearby plantation. A typical analysis of the soil is given in Appendix 1.

   Experiments by Hanger (1955-56) showed that the River Estate loam soil gave better results when it was topped with about 2 inches of this bamboo soil.

   (b) Sterilisation.

   Preliminary experiments in 1951 had shown that loss of seedlings, due to damping off, was likely to occur, so in 1952-53 Wytenbach carried out detailed experiments on chemical methods of control. A series of box experiments were laid down to determine the suitability of several chemicals. Various rates of Formalin...