INTRODUCTION

In the introduction to his thesis, Purseglove (1936) discussed the gap between production and demand for maize in Trinidad, and came to the conclusion that the island could and should become self-supporting in this respect. His work and that of others at the College (Bruce and Savile 1928, Maher and Prentice 1929, Jones 1932, Preston 1932, Welch 1937 and Harper 1938) was directed towards the production of maize with increased yielding capabilities, chiefly by means of mass selection and line breeding within the material to be found in the island. By 1938, Harper was able to say that the work done by post graduates at the College had assumed the aspect of a breeding programme, and had become almost a matter of routine. In the light of recent import figures, his confidence in the ability of the College breeding programme to answer the demand without continued research by post graudates, and in the absence of a full time scientist, was definitely over-optimistic. In fact his advice was not followed, and it appears no organised maize breeding was carried on at the College between 1938 and 1952. This was the very situation he deplored. Then as now, the need was for an uninterrupted breeding programme, maintained indefinitely.

It is instructive to peruse the figures for maize imports, as Purseglove did twenty years ago :-

Year	Maize Imports lbs.	Value $BWI	Oats Imports lbs.	Value $BWI
1928	1,544,292	42,028		
1934	2,943,633	34,598		
1949	2,177,392	128,470	5,949,408	282,314
1951	941,946	74,613	5,413,591	367,974
1952	817,145	75,388	4,986,349	363,209

Apparently after some thirty years of maize breeding in this island, Trinidad is still not self-supporting with regard to this crop. It is true that 1951 and 1952 imports are but a third

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of the 1934 level, though the monetary value has been doubled. The really disturbing feature is that in a poor harvest year, such as 1949 imports are still some three-quarters of the level twenty years previously. Unfortunately no data is available to show the actual trend of production in the island, and it is unwise to assume that this has not increased by a larger amount than that shown in the decreased requirement for supplementary supplies in the shape of imports. This is because the human population, which consumes considerable quantities of green corn, has increased rapidly during the period, though there has been no corresponding increase in the numbers of stock kept.

Figures for imports of oats are included since quantities of this cereal, which can virtually be replaced by maize for most stock feed purposes, are included in rations made up by the Marketing Board for distribution to farmers. Dried citrus pulp is now becoming an additional substitute in this respect. There are no figures to show how much oats is used to feed horses in the island.

What has been done to fulfil Purseglove's belief that Trinidad can meet all its internal maize requirements, and build up a small export trade? By the summer of 1938, the College breeding programme had reached the stage where bulk production of improved corn for commercial distribution was already in sight (Harper 1938). No more is heard of this programme from then onwards. However, the Report of the Department of Agriculture for 1940 states that selected seed corn was distributed to small proprietors, free of charge. This seed was presumably derived from the College, but an entry in the 1946 Report says that 10,696 lbs. of seed of three selected maize types were made available in that year, the Department having been responsible for its production. According to the 1952 Report a further "programme of selection to improve yields and quality was started during the year", but there is no close cooperation between the Department and the College.

Whilst the College breeding programme lapsed before the war, simple mass selection on visible plant and ear characteristics has been done as a routine to maintain and improve the maize normally

grown on the College Farm. Today, the Farm maize displays great vigour inasmuch as the average plant grows strongly, stands well, shows great resistance to the effects of insect attack, and bears exceptionally uniform cobs with a mode of 14 rows/cobs, and slightly dented flat-ended grain with uniform orange-yellow endosperm. Maize nowadays purchased by the Marketing Board likewise displays a notable uniformity. A photograph in Purseglove (1936) shows Farm maize of that day to have varied from a red flint type to a full dent type with much soft starch at the grain tip, besides wide variation in cob morphology.

Figures to demonstrate yield trends over the years, and yield is what matters to the farmers, are less encouraging. There follows a table of yields of hulled maize in pounds per acre, prepared from data collected in the course of experiments involving College Farm maize :-

Year	Yield lbs./acre - hulled	Source
1928	1206	Bruce and Savile
1929	3146	Maher and Prentice
1938	1664 to 3812	Harper (selections)
1953	+ 3600	Dickson (control plots)
1954	3176	Reed (control plots)

+ Assuming 80% hulling percentage.

Under somewhat comparable experimental conditions yields have remained virtually static for 25 years.

The following table gives yields per acre of maize grown as a normal College Farm crop.

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