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COMMODITY PAPER ON COFFEE RESEARCH POLICY AND MANAGEMENT IN
 TRINIDAD AND TOBAGO
 Prepared by
 The Ministry of Agriculture, Lands and
 Food Production
 Trinidad and Tobago

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1. Structure of the Coffee Industry

The total acreage under effective cultivation of coffee was estimated (in 1973) at 14,772 hectares of which, only 2,394 hectares (16.2%) was in pure stand. The total number of individual coffee farms as recorded through the Farmers' Registration Programme of April 1978, was 5,650, 56% of which is located in the Counties: St. Andrew/St. David, Caroni and St. George. The average yield for Trinidad as a whole was estimated at 255kg/ha in Victoria to a low of 80.2kg/ha in Caroni.

Coffee is quite a significant commodity in the national economy since it is marketed domestically as well as on the export market. Historically, the export market has been the dominant market in the coffee industry due mainly to Trinidad and Tobago's membership in the International Coffee Organization. Membership in this organization entitles the country to an export quota, based on the general export performance of the territory over a period of years. Originally, a basic quota of 44,000 bags (2.2mkg) was granted and this was later increased to 69,000 bags (3.5mkg) in 1969. This was to be increased at the rate of 10% per year with a projected total of 100,000 bags (5mkg) by 1973. The country has failed to achieve these estimates since coffee production has declined over the years. From 1975, however, the emerging dynamism within the coffee industry has been towards satisfying the domestic market for raw coffee and trends of increasing local utilization of coffee beans are continuing particularly in the processing industry.

2. Research Policy

There is a lack of any detailed scientific investigations into the agronomy of the Coffee Crop under Trinidad conditions and much of the practices recommended to farmers by Extension staff may have been based on information available from other coffee producing countries. More recently, there has been significant interest in the crop by farmers due to the increased price on the world market, and in 1972, a programme for coffee production research was proposed by the then Technical Officer, Crop Research, Ministry of Agriculture. This programme aimed at covering:

i. Agronomic investigation on:

- a) Population density;
- b) Fertilizer and shade response;
- c) Pruning practices; and

- ii. Breeding to provide a germ plasm collection to ensure selection of good parents for cross-pollination and development of high yielding progeny.

This programme was unfortunately not fully implemented due to a shortage of staff, and to date, research work has been limited only to a selection of superior mother trees and establishment of small seed gardens planted with clones derived from these selections.

3. The research programme for coffee is directly supervised by an agronomist who belongs to the Crop Research Division of the Ministry of Agriculture. The research programme aims to improve coffee yields by breeding and by the introduction of new material under strict quarantine measures from other coffee growing countries in order to develop hybrids with vigour, resistance to pests and diseases and which mature evenly. Agronomic investigations involve the following:

- a) Shade vs no shade;
- b) Spacing trials to determine optimum plant density;
- c) Nutritional needs for optimum yields (Fertilizer trials);
- d) Irrigation trials;
- e) Mulching, green manuring and cover crops; and
- f) Pruning methods.

The results of past and on-going research have not yet made any significant impact on production and productivity. The national research system does not have any active link with OGIAR or any other regional or international research institutions.

COMMODITY PAPER ON COCOA RESEARCH POLICY AND MANAGEMENT IN TRINIDAD AND TOBAGO

The most recent data available estimates the current acreage of cocoa under cultivation in Trinidad and Tobago to be 54,833 hectares. Of this total acreage, 11,902 hectares constitute units less than 20 acres; 18,240ha are farms 20-50 acres; 6,562ha are farms 50-100 acres, and the remaining 18,107ha are farms of 100-500 acres.

According to the Gill and Duffus and the Cocoa Producers' Alliance (C P A) figures, cocoa production in Trinidad for the period 1974-1981 was as follows:

<u>Years</u>	<u>Gill and Duffus</u>	<u>C P A</u>
1974-1975	5,000 metric tons	5,052 metric tons
1975-1976	3,000 metric tons	2,183 metric tons
1976-1977	4,000 metric tons	3,471 metric tons
1977-1978	4,000 metric tons	3,432 metric tons
1978-1979	3,000 metric tons	2,860 metric tons
1979-1980	2,000 metric tons	4,200 metric tons
1980-1981	2,000 metric tons	2,690 metric tons

This decreasing trend in production may be as a result of the abandonment of certain areas, shifting to other crops, or lack of crop husbandry due to high labour costs and unprofitability of cocoa.

The research policy for the cocoa industry has been to aim at a Rehabilitation Programme. The objectives of this programme as approved by Cabinet Minute No. 218 are as follows:

- i. to double the production of cocoa on existing acreage within ten years and to improve the industry to the point where local processing becomes an economically feasible prospect in the future;
- ii. to achieve a target of replanting 17,600 hectares of cocoa with high yielding varieties with the maximum disease resistance attainable;
- iii. to aim at separating the cultivation of cocoa and coffee, establishing pure stands of cocoa and replacing cocoa by coffee on marginal soils where feasible;
- iv. to improve the cultivation and post - harvest practices of cocoa to producers and to improve productivity of both land and labour; and
- v. to transform the industry from a relatively static, uneconomic condition to a dynamic viable one.

The programme has been well planned and contains the technical recommendations and procedures essential for accomplishment of the proposals. However, a well-defined chronogram of activities, a selection of priority areas and farmers and an adequate allocation of resources and personnel are absolutely necessary in order to activate the programme.

Past and on-going research have made quite a significant impact on production and productivity of the cocoa industry. Research by Freeman (1970) has encouraged farmers to change the traditional spacing of the crop from 12' x 12' with overhead immortelle shade to spacings of 6' x 6' or 8' x 8' with no overhead shade. This allows the crop to respond significantly to fertilizer application and consequently results in much improved yields. Breeding and selection work, also carried out by Freeman have given rise to the TSH clones (Trinidad Selected Hybrids) which have a high pod index, and tolerance to both Witches Broom (Crinipellis) and cocoa wilt (Ceratocystis). These clones are currently being screened for tolerance to Black Pod disease (Phytophthora palmivora), and only tolerant material will be distributed to farmers either as clones or as seedlings of controlled crosses. At present, there is a Cocoa Agronomist, an Agricultural Officer and an Agricultural Assistant responsible for the Cocoa Research Programme. This research programme includes studies on rehabilitation methods, transplanting by bare-root, training of clonal plants to seedling habit, use of fertilizers (rates and times of application), hand pollination

studies, compatibility studies and pod and bean evaluation of the clones.

The main constraint to carrying out the existing research programme is a lack of staff. It is important that staff allocated to research of a tree crop should remain more or less permanently posted to a particular line of research so that continuity and experience are developed.

The national research systems has had links through IICA, with Ceplac (Brasil) and CATIE in Costa Rica. It also has links with the Cocoa Research Unit of the University of the West Indies, St. Augustine.

