

## MERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE IICA OFFICE IN TRINIDAD & TOBAGO

IICA AND THE AGRICULTURAL SECTOR
IN
TRINIDAD AND TOBAGO





# IICA AND THE AGRICULTURAL SECTOR IN TRINIDAD AND TOBAGO

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#### PREFACE

This document entitled "IICA and the agricultural sector in Trinidad and Tobago" has been prepared with the following objectives:

- 1. to provide IICA staff members who are visiting Trinidad and Tobago with a quick comprehensive view of the nature of the agricultural sector and the role of the IICA Office in Trinidad and Tobago
- 2. to provide our visitors to our office with some general information on Trinidad and Tobago which may be useful during their visit

This document is in the draft stage and I propose to improve the document by up-dating the chapter on "Agriculture Sector Agencies" and adding a chapter on "The Activities of Institutions of Agricultural Training and Research".

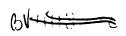
I would appreciate your comments as to the usefulness of this draft and any suggestions for its improvement.

Chelston W.D. Brathwaite

Director

IICA Office in Trinidad & Tobago

N.B. This document was prepared in early 1986 and is currently being revised.



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1. GENERAL INFORMATION ON THE IICA OFFICE IN TRINIDAD AND TOBAGO

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#### 1. GENERAL INFORMATION ON THE IICA OFFICE IN TRINIDAD AND TOBAGO

The IICA Office in Trinidad and Tobago was opened at 3A Queen's Park West, Port of Spain in January 1978 following the signing of the basic agreement with Trinidad and Tobago in August 1977. From its inception, the office sought to support activities destined to improve the agricultural sector in Trinidad and Tobago. The office has cooperated closely with the Ministry of Agriculture, Lands and Food Production and with other national, regional and international organizations and institutions of the agricultural sector. These include:

- (a) The Faculty of Agriculture of the University of the West Indies
- (b) The Caribbean Agricultural Research and Development Institute (with which it signed a Memorandum of Understanding on May 15, 1980)
- (c) The Economic Commission for Latin America and the Caribbean (ECLAC)
- (d) The Food and Agriculture Corporation of Trinidad and Tobago
- (e) Caroni (1975) Limited.

The Office is also headquarters of the IICA Regional Plant Protection Programme which operates in nine countries of the Caribbean region.

The current staff of the office consist of:

#### International Professional Staff

- (1) Plant Protection Specialist (Director) Dr. Chelston W.D. Brathmaite
- (2) Agricultural Marketing Specialist Dr. Rafael E. Salazar

#### National (General Services)

(1) Executive Secretary \_\_ Vacant

(2) Administrative Assistant 111 \_\_ Miss Maureena Fabien

(3) Secretary - Miss Francilla Stewart

(4) Office Assistant/Cleaner - Mrs. Ruby D'Arceuil

(5) Messenger/Driver - Mr. Edwin Franco

The office was relocated to Pannell Kerr Forster Building, Orange Grove Road, Tacarigua in June, 1984.

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2. GENERAL INFORMATION ON TRINIDAD AND TOBAGO

#### 2. GENERAL INFORMATION ON TRINIDAD AND TOBAGO

**HISTORY** 

The first inhabitants of Trinidad and Tobago included two Amerindian tribes, the Arawaks and the Caribs. The first European colonists were Spaniards. Trinidad remained in spanish hands for 300 years from 1498 until it was surrendered by a Spanish Governor to a British naval expedition in 1797.

Colonial exploitation of Trinidad decimated the Amerindians who were replaced in the 17th century by African slaves forced here as a source of labour for the sugarcane industry. With the abolition of slavery in the 18th century, East Indian indentured labourers and Chinese workers were brought into Trinidad.

Trinidad and Tobago became self governing in 1956 and independant of Britain on August 31, 1962. On September 26, 1976 it became the Republic of Trinidad and Tobago.

THE GOVERNMENT

The people of the Republic of Trinidad and Tobago pride themselves on a stable democratic way of life, with great store of freedom of speech, of worship, of association and the absence of racial conflict. Legislative power is vested in Parliament which consists of the President as Head of State. Since Independence of 1962, general elections have been held every five years.

THE CAPITAL PORT OF SPAIN

The capital of the Republic of Trinidad and Tobago is the city of Port of Spain - the commercial centre of the Republic, where most of the business activities are found.

The city is bounded on one side by a deep-water habour with its modern container terminal and on the other by a Botanic Garden which includes a wonderland of tropical and subtropical plants. The Emporer Valley Zoo which specialises in local wild animals is sited adjacent to the Botanic Gardens. Port-of-Spain has an olympic-size stadium and a 200 acre savannah which incorporates a horse-race course with grand stand as well as facilities for football, hockey, athletics and cricket. Port-of-Spain is within easy access to the beaches of Maracas, Las Cuevas, Chaguaramas and the famous Blue Basin Waterfall.

THE CAPITAL CONT'D

The road from Port-of-Spain runs along the West-Coast, passing the Caroni Bird Sanctuary, the sprawling sugarcane plantations, through the Point Lisas Industrial Estate and the TRINTOC (formerly TEXACO) oil refinery to San Fernando, Trinidad's second largest town. From the Borough of San Fernando one can travel through the oil producing fields to the famous Pitch Lake at La Brea and to the Borough of Point Fortin.

ECONOMIC ACTIVITIES

The major economic activities in Trinidad and Tobago include the production and export of crude and refined petroleum, heavy manufacture based on natural gas (fertilizers, steel, methanol, urea) and tourism. The principal agricultural products include sugar, cocoa, coffee, citrus and coconut. The manufacturing industry is based on domestic requirements of essential goods, in the area of food processing, textiles, clothing, furniture and building materials as well as the assembly of some consumer durables.

**AREA** 

Trinidad covers 4,288km sq (1,864 sq ml). Tobago covers 300 km sq. (116 sq ml). Trinidad froms a rough rectangle with two westward extensions thrusting into the sea - a short one in the north, and a long one in the south. East to West the maximum distance is nearly seventy miles; north to south it is about fifty miles.

Tobago which rises to a height of 1,800ft. in the centre of the island, is oval shaped. Tobago is twenty-seven miles long and seven miles wide.

**POPULATION** 

The total population of Trinidad and Tobago is estimated at 1,168,227 (1984). The average annual growth of the population is 1.4%.

LANGUAGE

English is the principal and official language in this highly literate society, together with some French, Spanish, Chinese and Hindi.

**EDUCATION** 

The national education programme provides free education at the primary and secondary levels, in all technical schools and colleges, and in some faculties of the local campus of the regional University of the West Indies. The Government of Trinidad and Tobago provides annually a large number of scholarships and other forms of financial support to enable students to acquire qualifications in areas

EDUCATION CONT'D

which are not catered for by the local or regional educational institutions. The Government also allows private citizens access to necessary foreign exchange to enable them to secure education abroad.

MASS MEDIA -THE PRESS

Trinidad and Tobago has two (2) daily morning newspapers, two (2) evening newspapers, one (1) bi-weekly newspaper and half  $(\frac{1}{2})$  dozen weekly newspapers.

**RELIGION** 

Trinidad and Tobago has a multi-religious background.

**CULTURE** 

Trinidad and Tobago is proud to have given birth to the Steel Drum or "Pan". Originally created as a do-it-yourself entertainment. The steelpans were made from the tops of steel oil-drums. They gradually became more sophisticated, in varying sizes for different tonal quality, painstakingly hammered to the key. With this incredibly versatile instrument, steelband ochestras now play any style of music from calypso to classical, from religious to contemporary musical forms.

**CALYPSO** 

Trinidad and Tobago's calypso songs have won fame and are played all over the world. The calypso has undergone many changes and the calypsonian has entered the international arena as entertainers on excellence. Calypso songs are heard everywhere and on the lips of every Trinidadian and Tobagonian, young and the aged. It is a lively voice of a lively people.

\_CARNIVAL

For sheer excitement and fun, nothing more can beat the spectacular colours, costumes and carefree abandon of Carnival in Trinidad and Tobago. Carnival is held on the two days preceeding Ash Wednesday and provides the thrilling experience of a lifetime and is one of the world's greatest tourist attractions. Preparations for this great festival begin many months in advance as groups of masqueraders plan their costumes, Calypsonians sing in "Calypso Tents" around the nation and steelbands practice new tunes in preparation for "Panorama", the national steelband music championship. Carnival is pre-eminently the national festival in which the entire population becomes involved.

MUSIC AND DRAMA

There is an annual Best Village Competition in music, handicraft, fine art, and other performing arts. National Music Festivals, Festival of Arts, Steel Band Music Festivals and other festivals which have become regular features of the national life.

#### **SPORTS**

Although cricket is the national game, there are several hundred sports clubs and organizations in Trinidad and Tobago representing diversified interest. Among the most popular are football, netball, basketball, hockey, cycling, rugby, swimming, sailing and speed-boat racing. In recent years, track and field sports, boxing, cycling, weightlifting golf, wrestling and netball have become increasingly popular with nationals of Trinidad and Tobago earning laurels in regional and international competitions.

## FOREIGN RELATIONS

Trinidad and Tobago was admitted to the United Nations in 1962, shortly after attaining Independence. On January 1, 1985 the Republic was elected to the 15 nation Security Council of the United Nations and was Chairman of the UN Security Council for the month of June, 1985.

Trinidad and Tobago is the first Commonwealth Caribbean country to become a member of the Organization of American States (OAS) and is an active participant in over thirty (30) specialized international and regional agencies.

Trinidad and Tobago is a beneficiary under the Caribbean Basis Recovery Act, the CBI and is a founder-member of the Caribbean Community Common Market, CARICOM.

#### MEMBERSHIP OF IICA

Trinidad and Tobago ratified and signed a basic agreement with IICA on October 14th, 1977 in Washington D.C. Trinidad and Tobago has also ratified and signed the New Convention of IICA on 5th December, 1980. A new basic agreement between IICA and the Government of Trinidad and Tobago is now pending.

## 3. GENERAL SOCIO-ECONOMIC REVIEW OF THE COUNTRY AND THE ROLE OF AGRICULTURE IN NATIONAL DEVELOPMENT

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#### 3. GENERAL SOCIO-ECONOMIC REVIEW OF THE COUNTRY AND THE ROLE OF

#### AGRICULTURE IN NATIONAL DEVELOPMENT

Trinidad and Tobago is a twin island state that gained independence from Britain in 1962. The islands are situated at the South-Eastern end of the Caribbean Archipelago and at one point Trinidad is seven miles from the South American Continent. Trinidad, the larger island, has an area of 1,864 square miles (4,828 sugare kilometres) and Tobago, an area of 116 square miles (301 square kilometres). Trinidad is situated between ten and eleven degrees North Latititude and sixty-two degrees West Longitude. Tobago is centred at approximately Latitude 11.5 degrees and Longitude 60.5 degrees W

Trinidad consists of rolling plains broken by the Northern, Central and Southern Ranges. The highest elevations, over 3,000 ft., occur in the Northern Range and there is little costal plain between the Northern Range and the sea. The western and eastern coasts of Trinidad have extensive costal plains and are swampy in parts. Tobago "... has generally rugged terrain with elevations up to 1,800 ft., the only extensive lowland is a coral platform at the south-western end." 1/

The population of Trinidad and Tobago in 1984 was approximately one million, one hundred and sixty eight thousand (1,168,000) of which 49.5 % are classified as urban and 50.5% are classified as rural. The birth rate per 1000 is estimated at 26.4 (1980), the annual rate of population growth at 1.4% infant mortality at per 1000 live birth at 19.7% mortality per 100 persons at 6.9 and life expectancy at 66.3 years. Percentage of literacy at 97.2%.

The major religions were Christian (63.4%), Hindy (24.7%) and Muslim (6.3%). the birthrate which fell sharply between 1940 and 1970 had shown a slight increase since then and amounted to just over 25 per thousand in 1978. the death rate is low and falling and amounted to approximately 7 per thousand in 1970. The population density of Trinidad and Tobago in 1977 was 565/square mile (218/square kilometre). Population density was highest in San Fernando: 14,660/square mile (5,656/square kilometre) and Port-of-Spain: 11,608/square mile (4,483/square kilometre). The lowest population density was 88/square mile (34/square kilometre) in Nariva/Mayaro in the South east of Trinidad. The population density of Tobago was 340/square mile (131/square kilometre).

A recent statistical profile for Trinidad and Tobago prepared by the Inter-American Development Bank has been reproduced as table 1. (8).

A recent policy document by the MInistry of Agriculture, Lands and Food Production (1) reviews the agricultural economy as follows:

The economy of Trinidad and Tobago has for many years been dependent on export agriculture (sugar in particular) and petroleum. Like its sister Caribbean islands, Trinidad and Tobago developed initially as a plantation oriented economy geared towards the almost exclusive cultivation of tropical crops - first sugar, then cocoa, coffee, citrus and bananas - for metropolitan (largely British) markets to the neglect of the domestic food production.

<sup>1. 2</sup>nd 5 - Year Plan 1964-1968

The discovery in the 1920s of crude petroleum im commercial quantities led to the development of a thriving petroleum industry. Subsequent expansion in the petroleum sector resulted in a gradual decline in the relative importance

of export agriculture, particularly sugar, as a major hard currency earner.

Up to the mid-1960s food production remained a traditional peasant oriented activity with inadequate institutional support, fiscal incentives and investment. In essence the dualism which characterized agriculture still existed a relatively thriving export subsector on the one hand and on the other domestic subsector ill-equiped to meet the food needs of the people.

Since the mid-1960s, this dichotomy between plantation (export) and peasant (domestic) agriculture has been the focus of attention of the Government of Trinidad and Tobago.

The major policy statement on agriculture of the pre-independence era was in 1943. This evolved against the background of two World Wars which led to severe disruption of international trade and the declining production in export agriculture.

The objectives proposed at that time covered:

- (1) Conservation of natural resources
- (11) Stability of farming and security of food supply for town dwellers.

### TABLE 1

## A STATISTICAL PROFILE OF TRINIDAD AND TOBAGO

(from 1984 IDB Report)

Area (Km²)	• • • •	5.120	4
Total population 1984 Shows and at labelitaries			
Annual rate of provide of total population		1,100	• •
Average 1970-94 (percentage)	•••	1.4	
Birth rate per 1,000 inhabitants (1900)		20 4	
Mortelly per 1,000 inhebitants (1900) Infant mortelly per 1,000 live births (1900) Vers of life expectancy of birth (1900)	••••	~;;	
The state of the s	• • • •	19 7 <b>00</b> .3	
Percentage of Merecy (1980)	••••	97.2	
Libor force by sector (1904)		Percerte	
	•••	7	
Mining		1.5	
Construction	••••	130	
Others	•••	20.7	
		<b>5</b> 5.4	
Real. preduction	1902	1902	190
Total GDP (market subset)		Joseph Loy	
	44	-50	-13 -13
Mining sector  Menufacturing sector  Construction	ŎŽ	-66	11
Construction sector	0.3	-ÒĞ	-Ġ(
	4.1	-12.3	- 13.1
Control government Carrent evenues Carrent expenditures Carrent expenditures	(Perc	enleges of	GDP1
Cathori descriptions	36 9	<b>34.</b> 0 .	33
		25 4	35
	8 <b>6</b> 21 <b>8</b>	19 2	
	44.4	- 17 \$	17 1 - 17.0
Domestic Financing	14.0	16.4	13.
Money and prices	_	Browth sole	
Consumer prices	11.4	18 8	13:
Money supply Domentic credit	35.7	1.3	<b>5.</b> i
TWING ASSASSASSASSASSASSASSASSASSASSASSASSASS	n.e.	M.O.	n.s
Private	R.L 20.B	n.a. 15.9	7.4
Exchange rate, average			
(units of national currency per dollar)	2.4	2.4	2.
Belence of payments  Merchandra average (COM)	(NA)	None of do	Hers)
Merchandise exports (FOB) Merchandise imports (FOB)	2,2112	2.272 9	2.101.
AAAAACI MAAADAHA CHARAFACA	2.778 0	2,156 8	1.001
	-566 8 -94 7	116 1	499
	-744	-925 8 ·	- 1.054 ( - 786 -
	96 4	25.6	196
Private capital Change in net reserves ( - Incresse)	375 1	85 7	116
	-200.5	974.6	<b>570</b> .
Enternal public debt Total	Lin	llans of sta	Aers)
Dishursed Debt service (interest and amortization) Debt service as a processor of	943.5 771.9	1,034.2 <b>99</b> 2.1	7.5
Debt service (interest and amortization)	70.1	217.4	1,004 (
Debt service as a percentage of exports of goods and non-lector services			****
	3.0	7.9	18.0
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Profesionary antimote.	J.		

- (111) Security of land tenure
  - (1V) Security of regularity of occupation
    - (V) Assurance of remunerative returns for agricultural export and greater stability of family income
  - (VI) Efficiency in the operations of production, processing and distribution of agricultural products; and
- (VII) Improvement in the stability of rural living.

In addition, proposals relating to the reorganization of the Department of Agriculture were made. Despite this, the role and performance of export agriculture never regained the pre-eminent position of the 1930s, and the domestic subsector did not achieve the desired take-off.

Significant changes took place in the economy during the 1960s. Principal among these were:

(1) Slowing down of the rate of growth of the Gross Domestic Product.

Annual rate of growth of the Gross Domestic Product declined declined from approximately 9 per cent in the 1950s to 3-4 per cent by 1965. This resulted primarily from a drop in land production of crude oil.

#### (11) Rising unemployment

Consequent upon (1) the level of unemployment in the country rose from an estimated 5.4 per cent in 1957 to about 13.7 per cent in 1964, with significant levels of under employment in the work force. Moreover, the labour force was growing at the rate of about 2 per cent per annum over the period.

(111) Decline in the rate of growth of Agriculture

Depressed world market prices for international exports, adverse terms of trade and the absence of a dynamic domestic subsector resulted in the fact that the period 1962-66 the rate of growth of the agricultural sector was the lowest, 1.6 per cent, compared with others - petroleum, 3.4 per cent, manufacturing and construction, 5.5 per cent, trnasport and communication, 4,9 per cent, and wholesale and retail, 6.3 per cent.

(1V) Shortfall in Domestic Food Production

Total agricultural output for domestic food consumption increased at the slow rate of 0.4 per cent annually over the period 1954-1966. This compares with a population growth rate of approximately 3.3 per cent annually for the same period.

The inevitable result was an increasingly heavy dependence on imports for food. The food import bill by 1966 stood at \$90 billion.

It is against this background that the Government of Trinidad and Tobago in formulating the Second Five-year Plan took decisive action to change the structure of the economy. 1 The Plan pointed to the necessity of bringing about sustained increases in agriculture production and a retreat from the dualistic nature of the traditional system.

The guiding policy as stated in the Plan was:

"to establish the basis for a productive small and mediumsized farm system geared to produce increasing quantities of milk, eggs, poultry, green vegetables, root crops, pork and pulses for the local market and in some instances, for export in processed form. The establishment of such a system should do much to encourage existing small farmers to stay on the land and make use of the opportunities that exist in farming."

The basic objective of the agricultural policy since then has been to modernize and diversify the agricultural sector in order to reduce the dependence on the traditional export crops and provide a greater proportion of our food requirements from domestic sources.

This was emphasized in the Third Five-year Plan 1 in which the strategy outlined called for:-

- (1) continued increases in producion of food, livestock and fish products, primarily for the domestic market
- (11) an expansion of earnings from the present acreages devoted to our traditional export industries by reduction in costs and increases in yields per acre (in some cases, as in the case of cocoa, it will be necessary to remove marginal lands from production of a particular crop).
- (111) a deliberate attempt to reduce the taste for inessential imported goods and services in favour of locally produced goods and services.

To give substance to the policy objectives outlined in the 2nd and 3rd Five -year Plans, definitive action was taken to correct the inadequacies identified in respect of institutional support, fiscal incentives, and the flow of investment into the sector. Major resource in-flows and institutional changes related to:

- (1) finance
- (11) institutions
- (111) staffing and training
  - (1V) land distribution
    - (V) physical infrastructure

The Trinidad and Tobago economy experienced very rapid growth in the post 1974 period, with measurable improvements in the standard of living. These developments were due to the performance of the petroleum sector and were shared by most oil-exporting countries. With a low price elasticity of demand for petroleum in most of the decade, purchasing power was transferred from the mature industrial countries to the oil-exporting countries, which provided the opportunity for economic transformation. This windfall led Trinidad and Tobago into a mix of policies including a degree of financial prudence and management, increased tax relief and welfare benefits, transfer payments and subsidisation of the cost of living, increased aid to Caricom and a public sector investment programme emphasizing energy-based industries, with a view to maximising the use of the country's major natural resource. (3) Gross Domestic product increased from 65.9 million in 1976 to 16.4 billion in 1984 (TT\$).

Concurrently, there was marked expansion of social and physical infrastructure including health, education, water, electricity, transportation, communication and housing. The combined effect of these interacting factors has been that Trinidad and Tobago is rapidly becoming a more urbanized and industrialized society.

The transformation process has had both direct and indirect impact on agriculture. The creation of opportunites elsewhere in the economy for more attractive financial reward has diverted resources, including capital, arable land and productive labour, away from agriculture. Aditionally the demonstration effect of urbanization and industrialization has influenced the attitudes of the society, particularly in the rural sector, towards agriculture thereby accelerating the rural-urban drift. Further, taste and preferance patterns have tended to become more metropolitan oriented as evidenced by the composition and increasing volume of food imports.

The principal problems affecting the development of Trinidad and Tobago today have been outlined by the Prime Minister in his 1983 Budget Speech. These difficulties relate to the reduced revenues from petroleum on the world market. This has led to reduced economic activity. According to the 1984 IDB Report (8) the current development problems of Trinidad and Tobago may be summarised as follows:

"In 1984 the economy of Trinidad and Tobago continued to face the difficulties that had emerged in the previous year. The continued deterioration in the competitiveness of important production items, persistence of heavily depressed oil revenue and the severe restrictions on domestic liquidity brought about a further sharp fall in real produciton and investment and an increase in unemployment. Despite the modest progress made during the year, results as a whole continued to be very negative in the areas of balance of payments, public finances, and inflation.

The fall in the real product affected all sectors with few exceptions. In the agricultural sector, whose value added fell 1.9 per cent, traditional export agriculture (sugar, cocoa,coffee, and citrus fruits) continued its downward trend due to profitability problems, the deterioration of plantations and the shortage and high cost of manpower.

Manufacturing, which faced: (a) reductions in domestic demand, (b) stringent restrictions on the availability of credit, and (c) a sharp decline in itsection caribbean Community (CARICOM) market again reduced its output, this time by 8.6 per cent. Construction was affected by a strong contraction in public investment and limited financial resources for housing, which produced a 13.5 per cent fall in its activity. The service sectors, such as commerce, transportation, and financial services, reduced their activities at varying rates, because of the lower production and sales of the productive sectors. As a result of these developments, the gross domestic product (GDP), which in the previous year had fallen by 6 per cent, further declined by 6.4 per cent in 1984.

The continuation of the economic recession, combined with the rapid increase in the labour force due to general deterioration in the real family income led to a new rise in the unemployment rate, from 11.1 per cent in the middle of the previous year to 12.8 per cent in mid-1984. Unemployment primarily affected construction workers, 25 per cent of whom were jobless.

The unfavourable situation of the international oil market, coupled with the low levels of drilling and work-over activities in recent years, caused a marked downward trend in oil-exporting earnings. Although he fall in output (and of shipments) was halted in 1984 by: (a) the reduction in rate of the Supplemental Petroleum Tax (SPT) and (b) more favourable tax treatment of outlays for work-over activities, the value of oil exports fell by about 10 per cent. The remaining exports- about 15 per cent of the total - continued the upward trend as in recent years and grew by 11 per cent. These exports have been increasing in response to promotion programmes, the development of industries of the state, and the special advantages offered by the CARICOM market, although those advantages were recently reduced by economic difficulties and restrictive measures in several of the member countries.

While total exports fell by 7.6 per cent, merchandise imports are estimated to have declined by just over 25 per cent. This sharp decline in imports was due to the recessionary conditions and affected consumption, production, and investment, insufficient domestic liquidity, direct restrictions on certain imports, and the increase on customs duties.

As a result, the positive merchandise balance increased fourfold relative to the modest level achieved in the previous year, which was a factor in reducing the deficit on current account from \$942 million in 1983 to \$787 million in 1984. The persistence of the high deficits on current account highlights the problem of the considerable and growing deficits in the services account. Net outlays for external factor payments have been rapidly increasing because of the sharp fall in interest income from abroad and the rapid increase in interest payments on the external debt. The net outflow for travel expenses – even though the country is a center of tourist attraction – continues to increase and the fees the country received from processing imported crude disappeared completely. The modest net capital inflows increased because of growing external borrowings by the public sector while international reserves again fell, this time by \$579 million.

The adverse effect on tax revenue of the sharp fall in economic activity and the continuing deterioration in oil completely annulled the expected benefits from some increases in the rates and in the tax base of indirect taxes, including customs duties.

Current revenue as a percentage of GDP fell from 34 per cent in 1983 to 33 per cent in 1984.

Efforts to reduce the fiscal deficit did not affect current expenditure since all its principal items - with the exeption of subsidies - increased. While interest on the increasing public debt continued to rise, operating expenditure and transfer payments were affected by inflation. Consequently, current expenditure as a proportion of GDP remained virtually unchanged, and savings on current account of the Central Government disappeared. For its part capital expenditure fell from 19.2 per cent to 17.2 per cent of GDP between 1983 and 1984 since works in progress were being rapidly terminated without being replaced by new large scale projects. As a result of the fall in capital expenditure the overall deficit of the Central Government was held to a level (17 per cent of GDP) half a percentage point below that in 1983.

As in earlier years, the principal source of financing the deficit was the liquid balances accumulated up to 1981, when the Central Government enjoyed high surpluses. In view of the tradual exhaustion of those resources and the size of the deficit, the Government has increasingly made use of external credit as a complementary source and has acclereted the accumulation of external debt and its corresponding service obligations in foreign exchange. In 1984 net external credit to the Government increased by 109 per cent and covered about one-third of the fiscal deficit.

The performance of the balance of payments and of public finances, combined with the restrictive monetary policy, led to increasing lack of liquidity in the economy, which helped curb inflationary pressures while depressing the normal growth of several productive activities. Indeed, the use of liquid reserves and of domestic credit by the Central Government for financing two-thirds of its highest deficit had an expansionary monetary effect that offset the contrary effect caused by the drain of international reserves. For its part, the increase in legal bank reserve requirements enable a modest expansion of the monetray base to be translated into increases in means of payment and credit to the private sector, although they were smaller than the growth of domestic prices. As it was, in 1984, the expanded money supply (M2) grew by only 5.8 per cent while credit to the private sector expanded by just about 7.4 per cent.

Despite the monetary restrictions designed to contain it, inflation continued to be high, as reflected by the 13.3 per cent increase in the consumer price index. This inflexibility in the growth of prices, even in conditions of a marked lack of liquidity in the system, was associated with the continuous in wages and salaries, the growing substitution of imported consumer durables by-products assembled nationally, the increases in indirect taxes, including customs duties, and the correction of various important prices and rates of public enterprises and of others that were previously subsidized.

#### **ECONOMIC POLICIES**

Given the conditions that prevailed at the beginning of 1984, the objective of the economic policy was to contain the growth of the fiscal deficit, control the disequilibrium in the balance of payments, and halt the increase in domestic prices. Efforts were made to achieve these objectives while having the least possible adverse effect on domestic economic activity, priority development programs, and welfare programs designed to protect the population groups with the lowest incomes.

The improvement in public finances was the result in part of tax increases. The rates of the purchase taxes were simplified, and the average rate was increased and its base enlarged. Other indirect taxes were also raised while new products were included in the list of imports subject to duties. In addition, an income tax surcharge was levied and, as provided for, will later form part of the base for financing a future national health program. Furthermore, subsudies on oil derivatives and a number of basic food products were reduced, as were transfer payments to public enterprises for covering their operaing deficits. These fiscal measures and the consequent adjustments of rates and prices had a negative effect on inflation control. Finally, the fiscal program provided for selective reductions in public investments.

To contain the disequilibrium in the balance of payments, the Government has instituted a system of exchange control, which, together with a restrictive domestic credit policy (and the fall in economic activity), has halted the expansion of imports and other items of current payments abroad. The programs for the promotion of non-traditional exports have continued, which is reflected in the increasing, albei modest, amount of earnings from those exports.

The central objectives of the monetary policy have been to reduce inflationary pressures and the disequilibrium of the balance payments while attempting to direct the allocation of the limited domestic credit resources towards production. To that end, the authorities pursued a restrictive monetary policy that limited the expansion of bank credit to the private sector basically through strict control of the provisions governing the legal reserve requirements of the banks. The management of those legal reserves, together with the recessionary conditions and the neutralizing effect of the total deficit, produced an extremely limited expansion of the means of payment and of credit to the private sector relative to the growth of domestic prices.

Meanwhile, measures for controlling the distribution of credit have had some effects since the share of credit intended for consumption has tended to fall."

#### THE ECONOMIC OUTLOOK IS PRESENTED AS FOLLOWS

"The basic conditions that determined the adverse economic situation in 1984 appear unlikely to change sufficiently to produce any significant improvement in 1985. An increase in exploratory or production well drilling in the oil industry in 1984 could generate a moderate increase in output. In contrast, oil price prospects are not very positive and the possibilities of again refining imported crude continue to be extremely poor. The conditions that for several years have been reducing the output of export agriculture continue to persist. Investment is expected to again be depressed and, consequently, construction and related industries as well. Consumption, which is affected by unemployment, real wages, and the prevailing credit conditions, should affect the level of economic activity of the manufacturing sector, commerce and transportation.

For three consecutive years the Treasury has been able to support high deficits, which it has financed out of liquid reserves and external or domestic borrowings. The possibility of reducing the deficit by increasing taxes is limited by the heavy (non-petroleum) tax burden and because there is resistance to such increases. Investment outlays have already been reduced considerably and will probably continue to be depressed; therefore, such a reduction does not appear to be an alternative to possible additional cuts in expenditure.

As in other countries, the operating expenses of the Government appear to be very resistant to reduction, while a drastic cutback in subsidies and current transfer payments could require adjustments in rates and prices that have a strong impact on inflation. Furthermore, the problem with the maintainance of high fiscal deficits is that the liquid reserves that have largely financed them are being rapidly exhausted and that the use of external credit has an inescapable real cost.

The external imbalance is primarily determined by exogenous conditions (oil,CARICOM market) and deterioration in the the competitiveness of the country. This lack of competitiveness is reflected in the loss of opportunity for exporting and refining imported crudes, pressures for importing final goods, and spending on travel abroad and other services. The policies of preparing a foreign exchange budget and of giving incentives to minor exports can only prevent the disequilibrium from becoming more acute, but they can hardly create the conditions for a substantial improvement in the balance of payments.

Possible changes in domestic prices in 1985 are less clear. on the one hand, the continuation of the monetary policy and the recessionary conditions can put a brake on the upward trends in prices. The maintenance of the exchange policy eliminates the exchange rate as a factor in inflationary pressure in the adjustment process. On the other hand, the fiscal and balance of payments deficits and their net effect on the monetary base could be expansionary factors. Adjustments is subsidized prices and rates, and high wage increases could help keep inflationary pressure alive"

4. PRINCIPAL PROBLEMS AND CONSTRAINTS OF
THE AGRICULTURAL SECTOR

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#### 4. PRINCIPAL PROBLEMS AND CONSTRAINTS OF THE AGRICULTURAL SECTOR

According to the most policy document (1), the major problems which have been identified as affecting the agricultural sector in Trinidad and Tobago are:

- (1) Historical
- (11) Inadequate data base
- (111) Age structure of the Farm Population
  - (1V) Inadequacy of the Institutional Infrastructure
    - (V) Agricultural Labour Supply
  - (V1) Alienation of Agricultural Land
- (V11) Praedial Larceny

#### HISTORICAL

1. Many of the problems now besetting the agricultural sector evolve from its historical legacy. The initial inequitable distribution of land between the plantation and peasant subsectors, aggravated by traditional systems of inheritance, has led to fragmentation of holdings and the proliferation of uneconomic sizes of agricultural holdings.

The 1963 Agricultural Census indicated that farms of 200 acres and over represented a mere 8 per cent of all farms in the country, yet they controlled 41 per cent of the total available farm land. On the other hand, farms under 5 acres in size were over 46 per cent of all farms, but occupied only 7 per cent of total acreage.

The significance of this was:

- (1) the larger holdings perpetuated systems of mono culture (export oriented) with little willingness to adjust their product mis
- (11) whatever diversification had taken place resulted largely from the efforts of the small farmer (even those in export crop production), who contributed (60%-75%) of domestic food production
- (111) there was a tendency for a significant percentage of the larger holdings to be left uncultivated.

In addition, poorly developed land tenure systems, characterized by insecurity of tenure and unsatisfactory lanlord-tenant relationships have militated against the more rational use of scarce agricultural land. This, too, has seriously impeded the development of the sector.

#### 2. INADEQUATE DATA BASE

Proper planning for the agricultural sector has been impeded by paucity of data. The formulation of land use policy was handicapped by the absence of land capability data.

It was only in the late 1960s that the Land Capability Studies Phase 1 produced data on the physical and chemical characteristics of these soils. Data on their economic potential became available in 1973 with the completion of the Land Capability Studies Phase 11.

Similarly, data limitations in respect of the nutritional status and requirements of the population inhibited the development of a strategy to link the food supply system to nutritional needs. It was not until the 1970 Food Consumpstion Survey that the required information became available.

#### 3. AGE STRUCTURE OF THE FARM POPULATION

An examination of the age structure of farmers in Trinidad and Tobago shows the extent of the concentration of the farm operators in the advanced age groups. (Appendix 1X) of the total number of 24,168 farmers registered up to 1978, 68 per cent were 45 years and over, 43 per cent were 55 years and over, and 30 per cent 60 years and over. Further examination reveals that only 1.7 per cent were under 25 years of age and less than 12 per cent 35 years and under. This reflects, in part, increasing migration of rural youth in search of urban occupations.

The natural consequences of an aging farm population are:

- (1) Progressively fewer acreages are cultivated
- (11) increasing orientation towards subsistance levels of production
- (111) declining productivity
  - (1V) decreasing credit worthiness, especially for projects with long repayment periods
    - (V) adherence to traditional systems of production and resistance to adopt innovations

The implications of an aging farm population also extend to the surrounding rural communities. the decline in farm production weakens the community economically and lessens the effective leadership role of the farmer. This retards rural development and acclerates rural-urban migration particularly among the younger people.

These factors probably explain to a great degree the unsatisfactory performance of the agricultural sector in spite of the expanded range and forms of Government assistance provided over the years.

#### 4. INADEQUACY OF INSTITUTIONAL INFRASTRUCTURE

A major factor of concern has been the inability of existing institutional infrastructure to adjust to, adopt and implement new programmes, innovations and added resources necessary to achieve the desired transformation of the agricultural sector.

Rapid expansion and diversification created tremendous demands for increases in the complement of high calibre staff. Despite the emphasis given to training over the period, the rate of recruitment into the system did not keep pace with the increasing demand. This shortage of skilled man-power pervaded all the relevant institutions in the sector and adversely affected the transformation process. The absence of well defined mechanisms for coordinating the activities of the various institutions compounded the effect of staff shortages.

In addition there remained certain weaknessnes peculiar to the organization and operations of the individual institutions.

#### These include:

#### (1) MARKETING

Despite the reorganization of the marketing system, certain deficiencies still persist. These include inadequate facilities related to grading, packaging, storage and transportation; ineffective price support mechanisms, limited market intelligence, and minimal promotion of the consumption of locally produced foods.

#### (11) CREDIT

Great strides were made in increasing the availability of credit to the farming community. Nonetheless, collateral arrangements and the approval and disbursement procedures tend to impede the timely release of funds.

#### (111) EXTENSION

Expansion of the Extension Services tended to increase the level of contact with the farming community. However, the wide geographic area still under the control of the Extension Officer, the expanded and increasing range of services demanded and the absence of effective inter-institutional co-ordination impaired the efficiency of the service and reduced its ability to act as a motivating force in the farming community.

#### (1V) RESEARCH AND DEVELOPMENT

Significant achievements were recorded in the research and development effort both in terms of the traditional export crops and the domestic subsectors. However, the efforts were largely uni-dimensional and did not provide the desired thrust in tackling the totality of the problems associated with the expansion of domestic agricultural production.

#### 5. AGRICULTURAL LABOUR SUPPLY

Current levels of technology in the agricultural sector continue to palce reliance on labour as a key input factor. However, rapid urbanization and industrialization have led to a continuous depletion of the available agricultural albour supply. A complex of factors contributes to this situation. These are:

- (1) the drudgery associated with traditional systems of production
- (11) the influence of urbanization and education on attitudes towards agricultural pursuits as a means of livelihood
- (111) the presence of high wage sectors, particularly petroleum and construction, which ahs tended to increase the supply price of labour to agriculture. This is further aggravated by the inability of the sector to pay competitive wages and to offer regular year round employment.

#### 6. ALIENATION OF AGRICULTURAL LANDS

Urban, industrial and commercial expansion have, in combination, exerted severe pressures on the agricultural economy. Urbanization and industrialization have virtually swallowed up large tracts of prime land thereby effectively excising them from agricultural use. Moreover, values of agricultural land throughout the country have sky rocketed in the light of rapid development of new housing and industrial estates.

#### 7. PRAEDIAL LARCENY

The prevalence of praedial larceny has had damaging and lasting psychological effects of agricultural development. This has severely deterred the productive efforts of even the most enterprising amongst the farming community.

A recent FAO review has included lack of organized agricultural interest groups and lack of competitiveness as additional problems of the sector. This report states:

"Lack of competitiveness has contributed to declining output, low productivity and abandonment of estates. Increased competition from lower cost producers and stagnant demand for the country's main export crops have brough world market prices to levels lower than

domestic production costs; in addition, the small size of the country's economy places it in the vulnerable situation of a "price taker" in world markets. Smallness also inhibits agricultural development in Trinidad and Tobago, because the absence of economies of scale reduces the competitive capacity of local against imported foodstuffs."

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5. NATIONAL STRATEGIES AND POLICIES FOR RURAL
AND AGRICULTURAL DEVELOPMENT

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# 5. NATIONAL STRATEGIES AND POLICIES FOR RURAL AND AGRICULTURAL DEVELOPMENT

Over the years several strategies and policies have been enunciated for attending to the problem areas identified in Chapter 11 of this document. The most recent policy document identifies the agricultural development policies as follows: (1)

- (1) to increase the production of food (including fish) in order to achieve the greatest possible measure of self-sufficiency and a consequent reduction of the proportion of imports in food consumption
- (11) to ensure the production and distribution of foods of high nutritional value at reasonable consumer prices thereby reducing the incidence of malnutrition in the population
- (111) To provide greater utilization of local foods
  - (1V) to raise productivity and income levels in the agricultural (including fisheries and forestry) sector
  - (V) to ensure security in food supplies
  - (V1) to promote the rational exploitation of the forest and wild life resources, and to maintain and increase future timber supplies by undertaking suitable regeneration methods after exploitation
- (V11) to stimulate employment through creation of greater linkages between agriculture (including fisheries and forestry) and industry and tourism
- (V111) to promote the development of rural communities by stimulating the growth of a vibrant agricultural sector
  - (1X) to increase output from the traditional export agricultural sector through use of yield increasing technology on existing or reduced acreages
  - (X) to promote proper land use and natural resource conservation measures
  - (X1) to promote the development of non-traditional export agricultural commodities
  - (X11) to effect savings in foreign exchange by reducing imports

# The strategies to effect implementation of this policy include:

- a. Reorganization of the Institutional Infrastructure
- b. Development of subsector plans
- c. Expansion of the land Resource base
- d. Intensification of Research

# The following actions have been taken

- 1. the creation of the Agricultural Development Bank (ADB) Central Marketing Agency (CMA) and Food and Agricultural Corporation (FAC)
- 2. the comprehensive restructuring of the Ministry of Agriculture
- the distribution of sizeable tracts of state land under a settlement scheme oriented towards the establishment of livestock production
- 4. the expansion of the subsidy system to stabilize and increase farmer's incomes

# Actions which are required include:

- the provision of security of tenure to farmers (in 1983), 47% of farmers were squatters or farming on the basis of short-term rented or leased holdings
- 2. the enactment of land taxation aimed at penalizing land idleness and encouraging its use for priority food production according to the strategy
- 3. the expansion of the cooperative movement within an appropriate legal framework
- 4. raising the level of farmer's aprticipation in the planning and implementation of developmnet programmes
- the introduction of a system to ensure better planning, programming and coordination of investment programmes and agricultural policies.

Undoubtedly, the recommendations implemented were important for the improvement of the agricultural sector. Some development programmes, regardless of their costs and other limitations, were successful in creating practically from zero, industries which are producing a substantial proportion of d mestic supplies of several basic foodstuffs (e.g. dairy, beef, poultry and pork). Similarly, the increase in the production of vegetables, although it may not be directly linked to specific development packages as in the case of the abovementioned commodities, was strongly influenced by the sunsidies given to farmers for the purchase of vehicles, machinery and fertilizers.

However, despite all these efforts, the basic situation in the agricultural sector did not change substantially over the long period covered by the reports under review. In this connection it is noteworthy that, during these years, the country's economy experienced marked cyclical movements as well as quite different government approaches to economic development. Infact, periods of boom and slump succeeded eachother without modifying to any significant extent the basic characteristics of, the trends in the agricultural sector (FAO Report).

The recent national strategies and policies for agricultural development derive mainly from new government policies which were reiterated in the Prime Minister's 1985 budget speech. These include:

- 1. Redirection of resources previously used for export crops to local food production.
- 2. Discontinuation of production subsidies.
- 3. Development of production contracts with farmers for the production of selected crops.
- 4. Production of sugar for local consumption only
- 5. Increased agricultural productivity.

Details of the proposed strategies for attainment of the policy objectives are given as follows:

#### (1) EXPORT AGRICULTURE

#### a. Cocoa and Coffee

A comprehensive review fo the cocoa industry has been undertaken and a package of proposals developed for its rehabilitation. A similar exercise is now being done for coffee.

#### B. Sugar

The rationalization of the sugar industry has been the subject of study by a specially appointed Committee. This will no doubt have tremendous implications, not only for developments in the sugar industry, but the agricultural sector as a whole.

#### 11. DOMESTIC AGRICULTURE

#### a. Livestock

- 1. Milk: A dairy Rehabilitation Programme aimed at increasing the strength of the national dairy herd has been initiated. The programme entails the importation of approximately 3,000 herd of cattle over the next 3 to 4 years. An initial shipment of 50 heads has already been received from Jamaica. This will contribute to increased milk production in future years. Further developments in the dairy industry relate to the establishment of a calf rearing programme and adairy heifer replacement scheme on lands located at Rio Claro, formerly owned by Forres Park Ltd.
- 2. Beef: Proposals are being worked out for a national project to increase domestic beef production. This will be undertaken jointly between the Ministry of Agriculture, Lands and Food Production and Caroni Limited on a portion of the land indicated at (1).
- 3. Sheep: A sheep development project has been developed at Blenheim Estate, Tobago. It is intended to contribute to improvements in the quality of local breeding stock.
- 4. A Commission of Enquiry has been established to investigate into all aspects of the Dairy and Meat Industry in Trinidad and Tobago. The scope of the Commission's activities embraces production, imports, marketing and distribution and nutritional aspects related to the industry.

#### b. Citrus

A review of the industry has recently been completed and a Cabinet appointed committee is at present implementing the recommendations. This will not only arrest the downward trend in production but provide greater impetus to the rapid rehabilitation of the industry.

#### c. Rice

The Rice Mill is in operation. The assured outlet provided, together with improvements in the physical infrastructure in rice producing areas and the provision of an incentive price will contribute significantly to increased domestic production of rice.

# (111) FISHERIES

A fish marketing system is being developed to permit more extensive usage of our local resource. In this regard, the National Fisheries Company Limited has been given the managerial contract for establishing and operating the new Central Fish Market Authority. A General Manager has been appointed and with the assistance of the Food and Agriculture Organization expertise a report on the physical and administrative organization of the market has been prepared and is being studied. In addition, the programme of upgrading beach facilities is continuing and negotiations are being held with the European Economic Community for funding of certain major projects in the St. Patrick area.

# (1V) FORESTRY

Three major projects are currently being undertaken in the forestry subsector:

- a. An inventory of the country's indigenous forests is being carried out assistance from the Canadian International Development Agency. This will provide qualitative and quantitative data on the forest resources and will form the basis for future planning and management.
- b. A St. Patrick Forest Action Plan is being initiated with financial assistance for the European Economic Commission. This project will create additional employment opportunities in the area; enhance the economic value of the forests through teak and pine plantings; increase food production and provide recreational outlets.
- c. The establishment of a system of National Parks and protected areas is being planned in collaboration with the Organization of American States. This will add immeasurably to environmental improvement.

# (V) APICULTURE

The Apiaries Unit with the Extension Service Division of the Ministry of Agriculture, Lands and Food Production is being reorganized and expanded both in terms of staff and equipment and Laboratory facilities. Special emphasis is being placed on intensifying the research and development effort with a view to increasing honey production. Major aspects of the programme relate to:

- a. breeding, selection and queen bee production
- b. production of bee nuclei
- c. identification and control of pests, predators and diseases
- d. nutrition
- e. pollination
- f. beekeeping indemnity programme, and
- q. training

In addition a preventative programme and been mounted in preparation for the impending arrival of the Africanized Bees.

Major efforts are being made related to increasing the available land resource base for expanded agricultural production. These include:

#### (1) RECLAMATION OF SWAMP AREAS

In vestigative studies are being undertaken on the Nariva Swamp with a view to expandind the arable land base. A feasibility study on the Oropuche Lagoon has already been completed with financial assistance from the European Economic Commission. The implementation phase of this letter project is soon to be started.

Both these projects also have implications for improvements in fisheries (fresh water species) and conservation of wildlife

#### (11) LAND ACQUISITION

Both the Ministry of Agriculture, Lands and Food Production and the Agricultural Development Bank are currently developing programmes aimed at arresting the trend towards abandonment and underutilization of scarce agricultural alnd., Idle agricultural lands will be acquired, developed and distributed under a closely monitored programme to ensure increased agricultural production. The research and development effort is continuing in critical areas. The programme includes continuous study on:

- (1) the crippling diseases affecting the Coconut industry
- (11) the close spacing of cocoa to effect greater yields per acre
- (111) development of multi-prupose food processing unit to identify and determine relevant avenues for expanding possibilities for agro-industrial activity
- (1V) evaluation of sugar-cane as a feed for cattle
- (V) agronomic studies on a wide range of vegetable, food and fruit crops.

Moreover, the harmonization of the research and development effort is being effected through greater collaboration between the Ministry of Agriculture, Lands and Food Production and U.W.I. CARDI and CARIRI.

The plans and programmes instituted thus far, and those currently being developed are consistent with the thrust towards agricultural development. Indeed, they form a solid base from which the bold, renewed attempt to modernize the sector will be launched.

#### EXPORT DEVELOPMENT

The Government is seeking to strengthen its thrust in the area of marketing and in 1983, established an export development corporation. The export Development Corporation was established in February 1984, with the following objectives:

- (1) To provide general advisory services on exports and establish a trade information service
- (11) To give financial assistance to exporters by means of market development grants
- (111) To assist exporters in penetrating foreign markets
  - (1V) To stimulate an export awareness generally in Trinidad and Tobago

While the Corporation has a broad mandate to promote the expansion of export generally, exporters or potential exporters of agricultural commodities can qualify for assistance, in the form of grants related to the following activities:

- Costs incurred for undertaking research in foreign markets for agricultural products
- b. Market testing of potential agricultural products in target markets abroad
- c. Overseas travel for the purpose of conducting research and other market identification excersises for agricultural products
- d. Product testing of agricultural products by approved foreign institutes and similar agencies for ensuring adherence to standards and other technical and statutory requirements.

Grants for the above activities would be limited to 50% of total expenditure for approved projects.

For the purpose of promotional programmes for agricultural products, the industry can also benefit from a 150% tax deductible facility on the value of the expenses actually incurred related to the following activities:

- a. advertising in foreign markets
- b. promotional literature for overseas distribution
- c. particiaption in trade fairs, trade missions and similar promotioanl activities
- d. overseas travel for the purpose of conducting promotional exercises
- e. providing free samples and technical information on products to clients
- f. inviting potential buyers to Trinidad and Tobago
- g. recruiting of specialist sales personnel for a minimum of two years, during which period training of local personnel to assure responsibility must be undertaken.

Also available to agriculture are export financing facilities which are administered by the Trinidad Export Credit Insurance Company Limited (EXICO). These include:

- export credit insurance

- pre and post shipment credit guarantees, and rediscounting facilities at concessionary terms.

The Government is also seeking to strengthen and improve the domestic marketing of fruits and vegetables and has requested IICA's assistance in marketing.

# 6. PRINCIPAL INSTITUTIONS AND AGENCIES OF THE AGRICULTURAL SECTOR

Reprint from

"The Agricultural Sector of Trinidad and Tobago"

by

Byron Noble

To be up-dated soon

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#### The Institutional Infrastructure

The institutional infrastructure provided to the farmers of Trinidad and Tobago comes in part from local institutions and also from international organizations. The chapter that follows will consider first the indigenous and then the international organizations.

#### I. The Ministry of Agriculture, Lands and Food Production.

Public sector support for agriculture in Trinidad and Tobago is effected through the Ministry of Agriculture, the Agricultural Development Bank, the Central Marketing Agency, the recently formed Food and Agriculture Corporation and other corporations and organizations. Of these agencies only the Agricultural Bank and the National Fisheries Company are not fully owned by the Government.

The non-ministerial agencies will be considered separately but should be viewed in the context of recent calls for greater coordination of the activities of governmental agencies involved in agriculture. It is proposed to bring under a single policy framework the various services such as extension, marketing and credit, and so provide the farmer with a "package" of services at minimum cost and time to himself. 1/

Table 3B:1

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	Governa	nent I	Expendit	ure (l	Develop	mental	and Rec	urren	t) for S	Select	<u>ed Minis</u>	tries	<u> 1970-'</u>
•	1970 (	(%)	1971	(%)	1972	(%)	1973	(%)	1974	(%)	1975	(%)	197
ul-	19,968 (	(6.6)	24,410	(6.3)	27,796	(6.2)	36,390	(7.6)	50,583	(6.5)	53,543	(5.0)	67,86
tion	49,171 (	(16.3)	76,382	(19.9)	84,236	(18.7)	89,622	(184)	148,760	(19.1)	152,379	(142)	196,05
ng	10,373	(3.4)	16,090	(4.2)	19,238	(4.3)	7,402	(1.5)	14,789	(1.9)	16,121	(1.5)	11,63
fies	21,019	(7.0)	24,007	(2 5)	27,072	(6.0)	28,517	(5.9)	36,540	(4.7)	42,970	(4.0)	47,80
h	32,247	(10.7)	41,123	(10.7)	48,617	(10.8)	55,664	(116)	71,927	(9.2)	90,205	(8.4)	112,770
1	301,480 (100.0)	•	384,428 (100.0)		450,814 (100.0)		480,553 (100.0)		777,668		1,070,0 (100.0)		1,868,( (100.0)

White Paper on Agriculture. Ministry of Agriculture, Lands and Fisheries, Republic of Trinidad and Tobago, December 1978. 34 p. Sec 6.2.4.

Ibid. from Appendixes I and II.

Table 3B:l shows the total Ministerial Expenditure (development as well as recurrent) for selected areas for the years 1970 to 1976. Expenditure in the Ministry of Agriculture, Lands and Fisheries 1/1 fell over the period from 6.6% of total government ministerial spending in 1970 to 3.6% in 1976. The dollar value of expenditure in the Ministry rose from \$20 million in 1970 to \$67m. in 1976. The fall in the relative size of expenditure in the Ministry was largely

<sup>1/</sup> Hereafter referred to as the Ministry; other ministries will be named.

due to great increases in total government ministerial expenditure. The average annual percentage increase of expenditure in the Ministry over the period was 23.1% which would seem to be a fairly substantial rate of increase.

Table 3B:2

Expenditure in the Ministry of Agriculture, Lands and Food Production

	1970	1971	1972	1973	1974	1975	1976
Value (\$000)	19,968	24,410	17,796	36,390	50,583	54,543	67,869
Value Index	100	122	139	182	253	268	339
7 Increase over Previous year		22.2%	13.9%	30.9%	39.0%	5.9%	26.8%

The role of the Ministry is seen by the Government as pivotal to the organization and management of the national agricultural system. The Ministry seeks to fulfil three functions:-

- a. policy formulation and planning;
- b. the provision of funds;
- c. the provision of an institutional infrastructure.

# A. Policy Formulation and Planning

It is this role that will make the Ministry "pivotal" within the national agricultural system. The Ministry, in the execution of this function, will assist in the identification of policy measures and in the reassessment of objectives in the light of changes (and required changes) in the socio-economic conditions of Trinidad and Tobago. The Ministry will also be alert to international developments and their possible effects on the agricultural sector.

The formulation and execution of agricultural policy will obviously involw the Ministry and government agencies such as the Agricultural Development Bank, the Food and Agriculture Corporation and the Central Marketing Agency. The "White Paper on Agriculture" (1978) proposed the creation of a National Agricultural Advisory Committee consisting of, in addition to the above, farmers groups, representatives of Regional Coordinating Committees and international organizations that operate in Trinidad and Tobago. 1/ The National Agricultural Advisor Committee will be involved in all aspects of national agricultural policy—formulation, implementationand evaluation.

<sup>1/</sup> These organizations include the University of the West Indies and the Caribbean Agricultural Research and Development Institute.

At a level closer to the individual farmer, the Ministry will seek to coordinate agricultural activity. There is at present a high degree of compartmentalization of the agricultural services offered to the farmer. The establishment of Regional Agricultural Centres is an attempt to alter this situation and so improve the effectiveness of the operations of government agencies.

Co-ordination at the regional level, as at the national level, is to be achieved by the use of committees. Regional Co-ordinating Committees will be created and will, among other functions, act as forums for farmer participation in the formulation, implementation and evaluation of programmes. At the level of implementation these committees of farmers will be able to co-ordinate effectively the field activities of the Ministry. The committees will identify factors unique to the particular region and, through the representatives on the National Agricultural Advisory Committee, will contribute to the national agricultural policy.

The "White Paper on Agriculture" (1978) called for the co-ordination of the efforts of the Agricultural Development Bank, the Food and Agriculture Corporation and the Central Marketing Agency. A feature of this effort will be the creation of Regional Agricultural Complexes. The White Paper makes no mention of the management structure of these complexes. It is possible that the various agencies will simply share office space within the same building or that genuine efforts will be made at co-ordination. In any event, physical proximity will be helpful to farmers who must do business with the various agencies.

# B. The Provision of Funds

Funds are provided to the agricultural sector directly and indirectly. The major vehicle of direct investment by the Trinidad and Tobago Government in the agricultural sector is the Developmental Programme of the Ministry. Table 3B:3 compares the allocations to agriculture with that to other sectors. After 1973 much of the developmental efforts of the Government seem to harbeen channelled through non-ministerial agencies. 1/ This would explain the fact that the percentages do not add up to 100% and in fact, in 1976 allocations to the ministries cited amounted to only 9% of total Developmental expenditure.

<sup>1/</sup> Such as Government-owned companies.

	Comparison of Expenditure - Developmental Programme (\$000)										
(	1970 (%)	. 1971 (%)	1972 (%)	1973 (%)	1974 (%)	1975 (%)					
Agricul-	9,967(28.1)	11,146(22.5)	12,425(25.0)	17,099(36.4)	18,492(12.0)	22,234(7.7)	28.				
Education	5,895(16.6)	11,015(22.2)	14.779(29.8)	8,648(18.4)	29,339(19.0)	18,167(6.3)	13.				
Housing	9,523(26.8)	15,276(30.9)	8,117(16.4)	6,500(13.8)	12,831( 8.3)	12,714(4.4)	7				
Public Utilities	9,221(26.0)	11,317(22.9)	12,174(24.5)	11,207(23.8)	12,372( 8.0)	18,930(6.5)	25,				
äealth	904( 2.5)	759(1.5)	2,148(4.3)	3,014( 6.4)	3,572( 2.3)	5,758(2.0)	10.				
[otal	35,510	49,514	. 49,634	46,992	154,210	289,746	90				

Table 3B:4 shows the allocations, estimates and expenditures for these funds.

Table 3B:4

Development Fund: Allocations Estimates and Expenditure 1/

Developmen	t Fund: A	Allocati	lons, l	<u>Estimate</u>	es and	Expend:	ture -	
		1974		1975		1976		Total
	Alloc.	Estim.	Expen	Estim.	Expen	Estim.	Expen.	
Food Development	250,000	10,000	165	20,000	1,617	4,658	4,978	6,760
Fisheries "	50,000	13,000	154	11,000	5,371	18,113	12,576	1,801
C. M. A. "	10,000		_	4,000	_	1,000	_	
Drainage "	100,000			_	_	4,201	1,436	1,463

1/ White Paper....op. cit. appendix III.

Expenditure on all funds was slow at the start and for the first two years but by 1976 only the Central Marketing Agency Fund was not implemented. The Drainage Fund was largely unused because of technical problems involved with the massive Oropuche Drainage Project.

The Government, through the Agricultural Development Bank also provides financial support for direct on-farm investment. The functions of the Agricultural

Development Bank will be discussed in a seperate section.

Indirect investment by the Trinidad and Tobago Government takes the form of fiscal incentives. Machinery used on farms and for fishing enjoys various levels of duty exemption. Subsidies and price support may be thought to be "direct, indirect investment" and up to 1978 \$11 million had been paid out in the production subsidy programme of the Ministry.

# C. The Provision of Institutional Infrastructure

The White Paper on Agriculture (1978) acknowledges that the institutional infrastructure of the agricultural sector is inadequate. The Ministry seeks to correct this situation by the direct provision of some inputs such as extension services and indirectly through agencies such as the Agricultural Development Bank. The semi-autonomous agencies, the Agricultural Development Bank, the Food and Agriculture Corporation and the Central Marketing Agency will be described in later sections. The present section will describe that portion of the institutional infrastructure that is the direct responsibility of the Ministry.

Extension services: these are inadequate and are to be expanded. More staff is to be hired and the control of their activities is to be decentralized, presumably as part of the development of the regional agricultural centres. The expanded activities of the extension services are to include fisheries and forestry as well as the usual agronomy.

<u>Public information</u>: there is to be a Public Information section of the Extension Division charged specifically with the dissemination of information to the general public. This section may be used to assist the efforts of the Central Marketing Agency in the marketing of locally produced foods.

Education and training: a key feature of the development programme of the Ministry will be an increase in the demand for trained personnel in the Ministry and on the farms. The "fria"rv will seek to define priority areas for training and then effect the training of personnel in these areas. The Ministry is directly responsible for the operations of the Eastern Caribbean Institute of Agriculture and Forestry and the Farmers Training Centre at Centeno, and through these institutions the agricultural sector may obtain some of the skilled personnel required. In addition, the Ministry will establish agricultural training institutes and effect the reorganisation of the Caribbean Fisheries Training and Development Institute. Other more general educational institutions also provide personnel for the agricultural sector and the Ministry will cooperate with the Ministry of Education in the teaching of agriculture in schools and on youth . This programme is at present well established. The University of the West Indies has traditionally been a source of high-level training for personnel in agriculture. By the judicious use of the available training resources the Ministry may train farmers, future farmers and those who will work with farmers.

Research and development: the Ministry seeks to establish and maintain collaborative machinery between itself and the University of the West Indies, the Caribbean Agricultural Research and Development Institute and any other international organizations in Trinidad and Tonago which conduct research useful to the agricultural sector.

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The Government of Trinidad and Tobago through the Ministry, maintains institutions specifically responsible for research.

- 1. The Chaguaramas Agricultural Developmet Project was set up in 1970 as a joint venture between the Governments of the Republic of Trinidad and Tobago and the Federal Republic of Germany. The aims of the project are to establish a pilot commercial farm for the large-scale mechanical production of specified crops and to establish a seed breeding and multiplication unit. To date, the project has provided seeds for the following crops:— corn, red kidney bean, black—eyed bean, tomato cucumber, sweet pepper and soya bean. These seeds are for sale locally and throughout the Caribbean. The project also includes tests on varieties, spacing and timing as well as herbicide and fertilizer trials.
- 2. The Piarco Seed Project was established in 1974 to determine the feasibility of cultivating corn and soya bean on soils other than class I. The project has established approximately 500 acres of corn, soya bean and sorghum which will increase the domestic production of these crops. A major purpose of the Piarco project is to test in another part of Trinidad, the results of the mechanical cultivation of corn and soya bean by the Chaguaramas Agricultural Development Project. The project at Piarco is also intended to promote and demonatrate the mechanical cultivation of corn and soya bean to the farming community.
- 3. The horticultural division has the responsibility of co-ordinating efforts aimed at plant propagation.
- 4. The Central Experimental Station (Centeno) was established in 1946. The role of the C.E.S. has changed over the years. During the early years the main activity was the research and development of export crops. After the first years of independence the emphasis shifted to a wide range of domestic crops such as carrots, root crops and selected fruits. The C.E.S. provides short-term research services aimed at solving the immediate needs of farmers as problems are identified by them or by extension workers. The C.E.S. also engages in long-term research aimed at the satisfaction of a need for improved varieties of planting material. The programme involves the on-going evaluation of new varieties developed locally and abroad. The C.E.S. also provides the more mundane but essential services of collection of meteorological data, soil testing and controlling the importation and exportation of agricultural products.
- 5. The Animal Production and Research Division is intended to improve the productivity of the livestock sector. In particular, the division conducts research relevant to the breeding sector and breeds multiplies and distributes breeds that are adapted to local conditions. At present the division confines its activities to cattle, pigs, goats and water buffaloes. Cattle are propagated largely by artificial insemination and stud services are provided for goats and other small ruminants. The division, apart from research into the breeding and multiplication of livestock, also engages in research into livestock feed management and seeks to lower feed costs in Trinidad and Tobago.

State Lands Development Division. This division of the Ministry is responsible for the control and monitoring of the Land Settlement Programme. The White Paper on Agriculture (1978) states that the process of land distribution is to be streamlined. There is at present a move to enable the Government to acquire abandoned or under-utilized land. This land will be redistributed in an effort to reduce the incidence of illegal squatting. The staff of the division has recently been increased in an effort to fulfil the expanded role.

Field Engineering Division. This division has responsibility for most agricultural engineering undertakings of the Ministry "moreso where service to small and medium size farmers is involved." 1/ The division assists in all aspects of agricultural engineering including the design, construction and maintenance of farm power and machinery, farm structures, irrigation, drainage and land development, as well as facilities for the processing of agricultural products. It is expected that this division will play a vital role in the future development of agriculture because agricultural engineering services have not always been available and there is much to be done.

The foregoing discussion on the activities of the Public Sector in agriculture was based largely on the White Paper on Agriculture (1978) and on the Souvenir Brochure - National Agricultural Exhibition, 1977. The Government of Trinidad and Tobago is involved in agriculture through organizations other than those directly controlled by the Ministry. A consideration of these will follow.

#### II. Other Public Sector Organizations in Agriculture.

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The Agricultural Development Bank (ADB). The Bank was established by Act of Parliament number 3 of 1968. The main objective of the Bank is to encourage the development of agriculture by ensuring adequate supplies of low-interest credit to the agricultural sector. The original funding of the Bank was done by Government with the stipulation that each borrower had to purchase shares from the Bank to the value of 5% of any loans received. As a result of this stipulation the dollar value of non-government shares has increased steadily, but because of an increased level of government funding the relative percentage of these shares has remained small.

The Bank may make loans for the following purposes:-

- farming: dairy, pigs, poultry, fruit and vegetables;
- fishing: to acquire engines and equipment for inshore and offshore fishing;
- forestry: timber extraction and saw-milling;
- agro-industry: food processing and refrigeration.

Commemorative and Souvenir Brochure - National Agricultural Exhibition, 1977, Ministry of Agriculture, Lands and Fisheries, Republic of Trinidad and Tobago.

Loans for farming include funds for the acquisition of farm housing and buildings and for machinery and equipment such as tractors and ploughs. The ADB also allows loans for land acquisition. There is no limit on the size of loans and steps are taken to see that loans are adequate to ensure the manageability and effectiveness of the project. 1/ The Bank makes loans to individuals or to co-operative societies. Most loans include a moratororium on laon repaymnets to allow a cash flow from the project so that the borrower will not be forced to make repayments from his non-farm income. A further feature of loans made by the ADB is the provision of free technical advice in the preparation and operation of projects. Advice is offered in the areas of accounting and agronomy and where the ADB does not have the expertise available efforts are made to incorporate the extension division of the Ministry.

The ADB depends heavily on government funds; during the economic depression of 1972-1974 the Government was unable to provide adequate financing and the Bank was forced to curtail its lending activities. 2/ This situation no longer exists and the ADB is able to fulfil the credit needs of farmers, fishermen and food processors.

In 1980 loans totalling \$88m. were made to 1,200 borrowers. The major classifications were:— land acquisition \$12.8m.; forestry \$1.9m.; agro-industry \$6.1m.; fishing, poultry, dairy, beef and pigs \$24.3m.; and food crops \$8.4m. Loans were made at 3% for food production and land preparation and  $6\frac{1}{2}\%$  for agro-industry and capital acquisition.

The shortage of agricultural labour has caused an increase in the number of loans made for farm machinery and equipment. For the period  $19\,\%76-1980$  the ADB made 1152 loans that were distributed in the following manner:- 3/

1976		38	loans
1977		51	11
1978	•	331	**
1979		358	••
1980		374	- "
		1,152	_

These 1,152 loans totalled \$31.6m. and were distributed thus:- tractors \$7.5m.; farm vehicles \$17.0m.; and farm equipment \$7.1m.

<sup>1/</sup> The villager, vol.8 #1, April 1981. The Agricultural Development Bank of Trinidad and Tobago.

<sup>2/</sup> Commemorative and Souvenir.....op. cit.

<sup>3/</sup> The Villager. op. cit.

Default may well prove to be a problem faced by the ADB in the future. The 1976 annual report indicates that of 3,243 loans outstanding at 31st. December, 1976, 2,286 were in default of interest payment, principal repayment or both. With the increasing buoyancy of the petroleum sector this will not be an immediate problem. The ADB stands poised to assist in the development of the agricultural sector.

# The Food and Agriculture Corporation and the Central Marketing Agency

The Central Marketing Agency (CMA) was created by Act of Parliament number 18 of 1966. The Agency was assigned the following roles:-

- to regulate the wholesale marketing of agricultural and handicraft products;
- to control and operate wholesale outlets and to regulate the flow of agricultural and handicraft products into retail outlets;
- to develop and carry out a co-ordinated programme for the producing, selling, handling storing, pricing, distributing, and transporting of agricultural and handicraft products.

The C.M.A. at first operated a minimum guaranteed price scheme designed to encourage the production of certain crops deemed vital to the national diet. The minimum price was used only in periods of glut; at other times the C.M.A. used the prevailing wholesale price. The guaranteed price scheme was not thought to be successful and a contract system was instituted. The contract system was designed to increase production control thus stabilizing supplies to export markets and also facilitating the introduction of new crops. The system included a minimum guaranteed price which again was only used in times of glut.

The C.M.A. buys from producers at the central depot in Port-of-Spain as well as at purchasing depots located in the areas of high production. The purchasing depots are conveniently located and so are able to provide the farming with inputs such as planting material and fertilizer. Mobile purchasing depots are occasionally sent to other areas such as the state lands settlement farms.

Agricultural products are sold by the C.M.A. through a number of channels. Some porduce is sold to institutions in Trinidad and Tobago such as prisons and hospitals. Small quantities are sold through the super market type outlets located in Port-of-Spain and some was exported to Canada. (Exports to Canada have since been discontinued.) Most produce is sold to wholesalers who then sell to retailers operating in the many markets of Trinidad and Tobago.

The C.M.A. acts as a buying agent for pigs, informing the Trinidad and Tobago Meat Processors Ltd. of pigs that are available for sale. The meat processors then collect the pigs and arrange payment.

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The responsibilities of the C.M.A. will be completely absorbed by the National Food and Agriculture Corporation (FAC). In fulfilling its functions the FAC will collaborate closely with the ADB and the National Fisheries Company. The FAC will therefore assume all the functions of marketing described

above. In addition, the Corporation will seek to initiate or expand the following functions:-

- the identifying, planning and implementing of production and development projects:
- organizing and facilitating the purchase of agricultural inputs,
   including feed stuffs;
- organizing and monitoring marketing and associated services; 1/
- pricing, packaging, storing, transporting and distributing agricultural products.

The FAC will devote particular attention to Tobago to achieve the intensification of agricultureal production on a broad base. Tobago will also be provided with an efficient marketing system that will include guaranteed prices, transport and refrigeration. Refrigeration facilities are also to be provided for the marketing of fish.

Finally the FAC will aperate the Agricultural Marketing Protocol of the Caribbean Community.  $\underline{2}/$ 

The National Fisheries Company is not a major link in the marketing chain. The Company exists primarily to harvest fish. Recently however, the Company has been awarded a management aontract to operate a new wholesale fish market and jetty at Sea Lots in Port-of-Spain.

# III. International Organizations

The Caribbean Agricultural Research and Development Institute (CARDI). 3/

CARDI is supported by and conducts research in the following countries:—Antigua, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts/Nevis, St. Lucia, St. Vincent and Trinidad and Tobago. With headquarters on the University of the West Indies campus at St. Augustine in Trinidad, a separate unit has been created for Trinidad and Tobago and it is based on the Central Experimental Station at Centeno.

CARDI conducts research in the following areas:-

- legumes and cereals;
- root crops;
- vegetable crops;
- other crops (e.g. pineapple, nutmeg, banana, sugar-cane);
- small farm recording and accounting systems;
- animal production;
- small farm/multiple cropping systems.

<sup>1/</sup> The previous responsibilities of the C.M.A.

<sup>2/</sup> The Agricultural Marketing Protocol regulates the movement of agricultural products throughout the Caribbean community.

<sup>3/</sup> Annual Report, 1978/79. Caribbean Agricultural Development Institute.

The Institute also provides analytical services and pesticide residue analysis.

Research work has been conducted in Trinidad on crops such as maize, tropical wheat, beans and peanuts. Efforts are made to test results in various countries and so verify their applicability to local conditions. Research conducted in any individual country is documented and made available to researchers in all the other member countries so that the agricultural sector of Trinidad and Tobago may benefit from all the research of the Institute.

The University of the West Indies (UWI). UWI is supported by the countries of the Commonwealth Caribbean and maintains campuses in Barbados (Cave Hill), Jamaica (Mona), The Bahamas and Trinidad (St. Augustine). In addition, research is conducted as encessary on all the islands. Guyana maintains a separate university (The University of Guyana) and the relationship between Guyana and UWI is unclear to the writer.

The Faculty of Agriculture of UWI is based at St. Augustine and the faculty maintains the University Field Station nearby. In addition, the Faculty of Agriculture and Texaco collaborate to operate the Star farm on a semi-commercial basis. The field station and Star farm are valuable as a part of the on-going research of the Faculty. Research is conducted by the Faculty in the following areas:- 1/

- root crops;
- grain legumes (a notable achievement is the UW17 pidgeon peathat may be mechanically cultivated);
- cereal legumes and forage legumes;
- agricultural economies;
- horticulture:
- livestock;
- soils;
- extension.

In addition to the above, research needs to be conducted in the areas of land systems, agricultural finance, agricultural marketing and the formulation and testing of theoretical models.

The research of the Faculty is conducted by the teaching and full-time research staff as well as by post-graduate and undergraduate students. In addition, the Faculty collaborates on projects with international organizations such as the U.S. Agency for International Development. 2/

<sup>1/</sup> Ibid.

Examples are the Caribbean Agricultural Extension Project (UWI/USAID) and the Multiple Cropping Project (UWI/USAID).

The Caribbean Food Corporation (CFC). The Corporation is a tangible attempt by the Caribbean community to attack the problem of food needs in the Caribbean area. The food import bill of the area is over one billion dollars. 1/ It is expected that the Corporation will get under way in 1981. So far, the staff has been involved in the identification of project priorities and the mobilization of funds from outside of the region. So far, forty projects have been identified and they include marketing, fisheries, irrigation, mixed farming systems, the production of hatching eggs and livestock feed, food processing, mariculture and vegetable production.

It is hoped that a regional agricultural programme to include the entire Caribbean community will widen the marketing scope and provide for increased profitability. The CFC goes beyond the agricultural marketing protocol of the Caribbean community and presents a golden opportunity for any member of the community that can stimulate sufficient interest in agricultual production and marketing.

<sup>1/</sup> The Villager. op. cit.

7. NATURE AND PURPOSES OF IICA

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#### 6. NATURE AND PURPOSES OF IICA

The Inter-American Institute for Cooperation on Agriculture (IICA) is the specialized agency for agriculture of the Inter-American System. With its present structure, it is the institutional continuation of the Inter-American Institute for Agricultural Sciences, which was created by the Council of Directors of the Pan American Union in October of 1942.

The Convention governing the Institute states that IICA's purpose is to "encourage, promote and support the efforts of the Member States to achieve their agricultural development and rural well-being." IICA is an International Organization, with full legal capacity. It is governed by its Member States, which are responsible for providing guidance, following up on activities and evaluating the Institute's actions. The Inter-American Board of Agriculture (IABA) is the Institute's highest governing body, and the General Directorate, its Executive body.

The Inter-American Board of Agriculture (IABA) is composed of representatives of all the Member States. It meets every two years, and its responsibilities include improving policy guidelines and the two year program budget. In order to perform these duties, the Board has the Executive Committee as an executive body, acting on its behalf. The Executive Committee is composed of representatives of twelve Member States, elected on the principle of rotation and geographic distribution. Its functions include examining proposals for the biennial program budget, submitted to the Board by the Director General, and making preliminary comments and recommendations to the Board, in its role as a preparatory body.

The General Directorate is comprised of technical and administrative units responsible for coordinating and implementing of the Institute's actions, in accordance with policies established by the Board.

# 1.2 HISTORY OF IICA'S ACTIVITIES AND PRIORITIES

IICA is an organization dedicated to meeting the needs of its Member States, which derive from their efforts for agricultural development and rural well-being. The Institute's actions and priorities have gradually shifted over the course of the years, fitting themselves to new problems and meeting new needs in the countries. The process of change is noticeable both in the issues targeted through the Institute's action and in its approach to technical cooperation.

Initially, the Institute concentrated on developing agricultural sciences. In accordance with the mandate of its 1944 Convention, IICA's action was to encourage and promote the development of agricultural science in the countries through research, graduate training and dissemination of agricultural theory and practice. To meet its objectives, the Institute focused on two lines of action, training and research. It carried out activities in five major areas: agronomy, animal health and production, entomology, plant science and soils. At that time, the Institute was organized to meet the need for a training and research center, operationally and structurally, it was divided into units specializing in research and graduate instruction.

During the 1950's IICA expanded its sphere of activities, adding a third lime of action for rural development. Regional Offices were opened in Montevido, Uruguay in 1951, and in Lima, Peru and Havana, Cuba in 1952. This marked the beginning of the Institute's shift of focus toward the countries. At that time the regional offices were used as the abse for regional cooperation projects with the countries. The key component of IICA's new operating approach was the performance of regional actions by a group of experts concentrating on areas in which the countries lacked native technical capacity. The countries' technical teams were still being developed at the time, and international experts were required to fill national needs and to help develop capacities in the countries through the graduate training program in Turrialba.

During the 1960's profound changes occurred in international relations. Many countries assumed new commitments and geared themselves for development in the framework of the Alliance for Progress. Studies forthcoming from ECLA influenced intellectual currents of the time, which raised awareness of the problems of underdevelopment and helped redefine the role that should be played by government institutions.

The countries undertook agrarian reform and began to develop public institutions, which rapidly grew. IICA had a new administration and had received a number of recommendations from the fifth and sixth meetings of the Technical Advisory Council (Lima, March 1960 and San Jose, March 1961). The Institute revised its programs with the assistance of external experts and its own staff members, and in consultation with national authorities in the countries. New directions and priorities were adopted for the 1960's, calling on IICA to Project its action throughout the hemisphere and establish general projects to benefit all the Member States.

IICA took on a new dimension, requiring substantially increased resources to extend its programs, and this was achieved with a contribution from the Special Fund of the United Nations. IICA's three lines of action from the previous period grew to six: rural development, institutional strenghtening, utilization of the tropics, agriculture in arid and humid regions, the regional cooperative program for graduate training and research in crop breeding and livestock production, and agricultural communication.

The "new dimensions" of IICA's action induced major structural changes: the institute was transformed from a research and training center into an Inter-American agency designed to provide technical assistance to its member countries. The regional offices were consolidated, the Institute's General Directorate moved from Turrialba to San Jose, and the Latin American Agricultural Credit Center was set up in Mexico, where it would operate from 1961 until 1966, under OAS project 201. Finally, the process of expanding and decentralizing the Institute's geographic coverage began with the establishment of offices in the Member States. All of these actions produced a diversification of IICA's technical teams and gave the Institute a permanent presence in the countries.

The changes experienced during the 1960's were incorporated into the Institute's first General Plan, approved in 1970. This plan established a new program structure based on seven lines of action designed to expedite the consolidation and improvement of institutional systems for agricultural and rural development in the Member States. The lines of action were: information and documentation for rural development, agricultural research and technology transfer, agricultural production, productivity and marketing, regional rural development, structural change and campesino organization, and development and administration of agricultural policy.

Each one of these lines of action in turn contained one or more programs. Thus, the Institute had a total of 28 technical programs by the end of the 1970's. During this period, IICA experienced rapid growth in its budget and in the number of Member States. Once again, growth sparked a process of renewal and expansion of the Institute's technical team, a trend which slowed toward the end of the decade.

Significant changes which occurred during the 1970's included the assignment of high priority to cooperation in the countries and the consolidation of a network of offices in all the Member States. These changes shifted emphasis to regional directorates, which were now made responsible for coordination and supervision. IICA's actions focused on strenghtening the capacity of other institutions playing an important role in the guidance of agricultural development and supporting organizations for sectoral planning and for policy implementation. The Institute also contributed by developing operational models for agrarian reform and supporting the countries in efforts to change patterns of land tenure and to organize farmers.

Area directors were transferred back to San Jose in 1980 as a means of overcoming difficulties inherent in their wisespread geographic distribution, streamline operating procedures, and allow them to provide more efficient support for the offices.

IICA's process of gradual change eventually transformed the Institute into an organization for technical cooperation and institutional strengthening in the agricultural sector, the process culminated with the ratification of the new Convention by the Member States in 1980.

The Convention introduced essential changes. It clearly defined the relationship between the Institute and the countries, specifically established IICA's functions and organs, programs and operations and consolidated the Institute's role as the specialized agency for agriculture of the OAS system.

IICA's functions as established by the new Convention are to:

- a. Promote the strengthening of national education, research, and rural development institutions, in order to give impetus to the advancement and the dissemination of science and technology applied to rural progress.
- b. Formulate and execute plans, programs, projects and activities. in accordance with the needs of the governments of the Member States, that will help them meet their objectives for agricultural development and rural welfare policies and programs.

- c. Establish and maintain relations of cooperation and coordination with the Organization of American States and with other agencies or programs, and with governmental and nongovernmental entities that pursue similar objectives.
- d. Act as an organ for consultation, technical execution and administration of programs and projects in the agricultural sector, through agreements with the Organization of American States, or with national, Inter-American or International agencies and entities.

The Inter-American Board of Agriculture, at its first regular meeting held in Buenos Aires, Argentina in August 1981, decided it was necessary to review the 'Institute's policies and operations to make them consistent with the new Convention. Consequently the Board requested the Director General to form a group of five external experts in agricultural and rural development to conduct a general review of IICA's operations and policies.

The group of five experts studied the problems affecting agricultural and rural sectors in the countries and recommended that the Institute adopt basic programs, with the approval of the Member Sattes, that would anticipate problems in Latin America and the Caribbean during the following decade. The group of experts suggested that programs be designed to complement policies for agricultural and rural well-being defined by the countries themselves.

The Board adopted the 1983-1987 Medium Term Plan, written after careful consideration of the study of problems affecting countries in the region, and following consultation with the governments of the Member States. This plan replaced the earlier seven lines of action with ten programs to serve as a support structure for IICA's action. These programs were: 1. Formal Agricultural education, 11. Support of National Institutions for the generation and transfer of agricultural technology, 111. Conservation and Management of renewable natural resources, 1V. Animal Health, V. Plant Protection, V1. Stimulus for agricultural and forest protection, V11. Agricultural marketing and agroindustry, V111. Integrated rural development, 1X. Planning and management for agricultural development and rural well-being, X. Information for agricultural development and rural well-being.

Changes were made in IICA's organization and operational structure to provide more effective and responsive technical cooperation to the coutries. In 1983 the Institute adopted a matrix structure with technical channels and operational channels and divided the hemisphere into four areas: Central, Caribbean, Andean and Southern. It set up 27 national offices and established CEPI, CIDIA, and CATIE as specialized centers, the latter being an associated unit. Area directorates were once again located in the countries to conduct functions of supervision and coordination.

Rapid development in the countries, especially in technical areas and in human resources, made it necessary to review the Institute's approach to technical cooperation and its areas of action. It soon became evident that a technical cooperation model based primarily on the work of specialists with limited operating resources and acting in relative isolation from one another was no responding to the needs of the countries. The countries had developed their own capacities in many fields, and this obliged the Institute to find ways of maximizing its impact in solving the problems.

Today the Institute needs to make better use of scarce resources, of continuous and rapid change in its environment and of the growing move toward regional and subregional integration. Not only should it concentrate resources and activities in a smaller number of areas, but it also needs more effective instruments and procedures for cooperation so as to increase its technical expertise and exercise effective leadership in latin America and the Caribbean.

#### 1.3 MEDIUM TERM PLANS

Medium Term plans were introduced in 1961 as tools to guide IICA's action. The first mention of them can be traced back to the fourth meeting of IICA's Technical Advisory Council, held in San Jose, Costa Rica, Which requested the Director General to present to the new Board of Directors a general program on organization and future actions.

The general program, which was based on the long term objectives contained in IICA's Charter, the OAS Charter, and the objectives for the coming decade, defined objectives, basic priorities and 28 technical programs for a five year period. It stipulated that upon completion of the term of this plan, a new general program was to be prepared.

In 1970, on the basis of the report of an advisory commission and ideas expressed by the new Director General in his message to the Board of Directors 1/, A General Plan 2/ was developed for the 1971-1980 period. The doctrinary basis of the plan was the idea of a humanistic approach to development, and the basic strategy was institutional strengthening and education was IICA's principal tools of aciton.

In 1977 the Board of Directors adopted the Medium Term Indicative Plan for the period 1978-1982. This plan was designed to implement the policies and guidelines established in IICA's General Plan: it defined programs and methods for cooperation and gave guidelines for resource allocation. The plan's basic tenet was to make IICA's policies and services more flexible and adapt them to needs in the countries. It euipped the Institute to mold its capacities to diverse technical options for solving specific problems.

<sup>1/</sup> Message by Dr. J.E. Araujo, "IICA in the Seventies. A Humanistic Hemispheric Projection."

<sup>2/</sup> Approved by IICA's Board of Directors on November 26, 1970 (Resolution IICA/JD-730-13).

Using the directives established in the document "General Policies of IICA," in 1982 the Institute developed a new Medium Term Plan for the 1983-1987 period. This Plan, which was approved by the Inter-American Board of Agriculture in October of 1982  $\underline{1}$ , has since served to guide the Institute's actions.

The fifth regular meeting of IICA's Executive Committee, held in San Jose, Costa Rica from July 29 to August 2 1985, called for a review and evaluation of the medium term plan in effect, although only 60 percent of its planned actions had so far been carried out. The decision was prompted by events and changes in the international economic scence, the region's political situation and the need to study the impact of IICA's actions.

In response to this decision, the Inter-American Board of Agriculture, at its third regular meeting, held in Montevideo, Uruguay in October 1985, instructed the Director General to set up a group of six experts of recognized prestige, so that the Institute and the Member States could proceed jointly to analyze and evaluate the 1983-1987 Medium Term Plan. This evaluation was to focus on the results obtained from the implementation of the plan, in accordance with shifting economic, technological social and political currents and changing problems in the Member States, and the International experience that had been accumulated. The evaluation was to serve as a basis for developing a new medium term plan to be presented for approval by the Board at its special meeting scheduled to be held in Mexico in October of 1986.2/

The group of experts (G-6) presented its findings to the Director General in March, 1986. Among its major conclusions, the report recommended that the Institute maintain an updated analytical record of economic changes in the countries, the regions and the hemisphere, and that it work to develop leadship by concentrating its efforts in five programs. The G-6 also gave guidelines for future development and proposed that advisory committees of external experts be set up for each program. Program Directors should have more particiaption in the preparation of the budget and in technical supervision amd implementation of actions, and a number of specific measures were recommended to alter the role of units at headquarters and in national offices and strengthen their work. Mention was made of the need to increase CEPI support of the countries in the identification and preparation of projects and to link its work more closely to program action. Continued support was recommended for the Inter-American Agricultural Documentation and Information Center (CIDIA).

<sup>1/</sup> Resolution IICA/JIA/Res.14 (11-E/82), dated October, 1982

<sup>2/</sup> The group of experts was made up of the following people: Mr. Emilio Madrid, Chile; Dr. Domingo Marte, Dominican Republic; Dr. Gerard Ouellette, Canada; Dr. John Pino, United States of America; Dr. John Spence, Trinidad and Tobago; and Dr. Juan Jose Salazar, Colombia.

Finally, the group of experts recommended that the functions of the area directors be clearly defined, and that these officers be given more authority for decision making. The group recommended that the directors no longer serve simultaneously as national office directors, and that the Southern, Andean and Central area directorates be located at headquarters to facilitate the discharge of their supervisory responsibilities.

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# 8. IICA'S CONTRIBUTION TO THE AGRICULTURAL SECTOR IN TRINIDAD AND TOBAGO

(1978 - 1985)

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#### 7. IICA'S CONTRIBUTION TO THE AGRICULTURAL SECTOR IN TRINIDAD AND TOBAGO

The IICA Office has been involved with the following projects:

- 1. Technical cooperation to the Ministry of Agriculture, Lands and Food Production for the establishment of a National Agricultural and Bibliographic Information Network
- Technical cooperation to the Ministry of Agriculture, Lands and Food Production and ADB in the Establishment of a Crop-Credit Insurance Program
- 3. Technical assistance to Develop a Cocoa Rehabilitation Project in Trinidad and Tobago
- 4. Technical cooperation with the Rural Youth Program of Trinidad and Tobago
- 5. Assistance to Food and Agriculture Corporation of Trinidad and Tobago
- 6. Animal Health in the Caribbean (Regional Project with activities in Trinidad and Tobago)
- 7. Research and Technical Collaboration with Regional Caribbean Agricultural Organizations
- 8. Technical Cooperation with the Ministry of Agriculture, Lands and Food Productions for Improvement of the Marketing Systems for Food Crops in Trinidad and Tobago
- 9. Rehabilitation and Development of Tree Crop Production in Trinidad and Tobago
- 10. Other Activities
  - 10.1 Provision of a Base for contact with the Agricultural Sector in Latin America
    - 10.2 Facilitating Participation of Trinidad and Tobago in Regional and International Meetings
- 11. Regional Plant Protection Programme for the Caribbean

1. TITLE

# Technical Cooperation to the Ministry of Agriculture, Lands and Food Production for the Establishment fo the National Agricultural and Bibliographic Information Network

#### **OBJECTIVES**

Collaborate and give technical support to the Ministry of Agriculture, Lands and Food Production in establishing a national system of agricultural information.

#### **DURATION**

3 years (Date of Initiation: January, 1984)

#### SOURCE OF FUNDS:

**Quotas** 

#### **OUTPUTS AND IMPACT**

- (a) Review of the situation of the agricultural bibliographic information services in Trinidad and Tobago
- (b) Training of 8 staff members of the Ministry of Agriculture and CARDI
- (c) Assistnace to three libraries of the Ministry of Agriculture on organization of bibliographic resources and services.
- (d) Assistance to the Ministry of Agriculture on the production and publication of two information sources.
- (e) Technical assistance to two countries of the Caribbean region on the Preparation of Project proposals for the establishment of National Documentation Centres.
- (f) Preparation of an Agricultural Bibliography of Trinidad and Tobago.
- (g) Production of six technical documents.
- 2. TITLE Technical Cooperation to Ministry of Agriculture, Lands and Food Production and ADB in the Establishment of a Crop Credit Insurance Program

#### **OBJECTIVES**

Collaborate with the Minsitry of Agriculture, Lands and Food Production (MALFP) in establishing an agricultural credit insurance program.

#### **DURATION**

l year

#### SOURCE OF FUNDS

**Quota Funds** 

#### **OUTPUTS AND IMPACT**

During 1980 a Round Table on Crop Credit Insurance was organized with the participation of Personnel of the Ministry of Agriculture, Lands and Food Production and the contributions of Mr. William Gudger, IICA Specialist in Crop-Credit Insurance, Dr. L Rankine and Dr. C Pemberton of the Department of Agricultural Economics and Farm Management of the University of the West Indies. Twenty professionals were trained and the program was set to develop a Crop-Credit Insurance Program. The University of the West Indies subsequently signed a contract with the MilFP in 1982 to develop a program.

3. TITLE: Technical Assistance to Develop a Cocoa Rehabilitation
Project in Trinidad and Tobago

### **OBJECTIVES**

To develop an IICA Project in Trinidad and Tobago which will collaborate with the proposed cocoa production thrust of the Cocoa Rehabilitation Committee.

### <u>DURATION</u>

3 Years (conjunctural activity which led to formulation of project cited at 4.2.7.9)

#### SOURCE OF FUNDS

Quota Funds

#### OUTPUTS AND IMPACT

As a result of the discussions with the Ministry of Agriculture, lands and Food Production on the needs of the Cocoa Rehabilitation Committee, the Ministry of Agriculture, Lands and Food Production requested the consulting visit to Trinidad and Tobago of Dr. Jorge Soria an IICA Specialist in cocoa. Dr. Soria made a consulting visit to Trinidad and Tobago during March 28 to April 8, 1982. Copies of Dr. Soria's consulting report were delivered on April 19, 1982 to Dr. Patrick Alleyne, Permanent Secretary in the Ministry of Agriculture, Lands and Food Production and President of the Cocoa Rehabilitation Committee (CRC), Dr. Ronald Barrow, Mr. Ian McDonald and Mr. H. Waldron, members of CRC. One of the recommendations of the sonsulting report was a study-tour of cocoa growing areas and research stations by senior officials of the Ministry of Agriculture, Lands and Food Production.

The IICA Office in Trinidad and Tobago with the collaboration of the IICA Office in Brazil, organized a study tour of Brazil for Mr. Kent Villafana and Mrs. Cheryl Gonzales of the Ministry of Agriculture, Lands and Food Production. They visited research and production programs in cocoa and coffee during October 1 to 30, 1982, in Campinas, CEPLAC in Itabuna and CEPLAC in Belem. The trip was financed by the Trinidad and Tobago Government.

One of the major bottlenecks isolated in the cocoa industry has been the lack of labour to attend the cultural practices and harvesting of cocoa. The IICA Office in Trinidad and Tobago contracted Dr. Winston Harvey, Agricultural Engineer of the Department of Crop Science of the University of the West Indies, St. Augustine, Trinidad, to evaluate the economic feasibility of the mechanization of cocoa production in Trinidad and Tobago, using the "ARGO" machine as a base. Dr. Harvey has prepared his report which is now under study by the Ministry of Agriculture, Lands and Food Production.

The Cocoa Research Unit of the University of the West Indies has been revitalized and at the request of the Faculty of Agriculture of the University of the West Indies, the IICA Office in Trinidad and Tobago arranged the consulting visit of Dr. Basil Bartley to the University of the West Indies from IICA-CEPLAC in Brazil during November 29 to December 13, 1983. Dr. Bartley assisted in the identification of cocoa germplasm of the Trinidad collection and assessment of the probable value of the plant material for future use in the collection. Advice was given on plant material which should be brought into Trinidad.

# TITLE Technical cooperation with the Rural Youth Program of Trinidad and Tobago

### **OBJECTIVES**

Support and stimulate a broadened range of 4-11 projects, improve leadership training, and promote interchange with rural youth programs in other countries.

#### **DURATION**

2 years

#### SOURCE OF FUNDS

Quota Funds

#### **OUTPUTS AND IMPACT**

IICA arranged for Trinidad and Tobago to send one professional 4-H leader, one 4-H club member and a volunteer leader, Miss Marlene George of Tobago (sponsored by IICA), to the 1X Rural Youth Conference of the Americas and Spain, held in Santo Domingo, Dominican Republic between 5-11th July, 1981. In October, 1982 a "Situation Study of Rural Women in Trinidad" was made. Three Trinidad and Tobago delegates attended the Tenth Inter-American Conference on Rural Youth which was held in Panama from February 20-24, 1984. The delegates were Garnet Edwards, Dr. David Abdool and Miss Judith Medina.

5. TITLE: Assistance to the Food and Agriculture Corporation of Trinidad and Tobago

#### **OBJECTIVES**

To assist the Food and Agriculture Corporation to evaluate the pests risks associated with the establishment of commercial banana production at Orange Grove.

#### **DURATION**

2 Months

#### SOURCE OF FUNDS

Quota Funds

#### **OUTPUTS AND IMPACT**

The Food and Agriculture Corporation of Trinidad and Tobago, an agency set up for corporate action in the agricultural sector under the aegis of the Ministry fo Finance and Planning is cooperating with the Orange Grove National Sugar Company of Trinidad and Tobago in the development of a banana enterprise geared to the production of green bananas either for fruit market or for use as a basic carbohydrate food item to partially displace rice and other wheat derived staples. Based on discussions with the Inter-American Institute for Cooperation on Agriculture (IICA) for close cooperation in technical matters, the Corporation sought the assistance of IICA through its national office in Trinidad and Tobago to evaluate the incidence of pests and diseases in the existing plantings of banana at the estate and to develop a strategy for management of these pests and diseases in the future. The study was carried out during the month of May 1983 and a report submitted on which the Corporation has taken the appropriate action.

6. TITLE: Animal Health in the Caribbean (Regional Project with Activities in Trinidad and Tobago

### **OBJECTIVES**

Develop information on animal disease incidence and control in the Caribbean. Promote training and research in the subject of animal disease control.

#### DURATION

On going (Initiated in 1979)

#### SOURCE OF FUNDS

**Quota Funds** 

#### **OUTPUTS AND IMPACT**

A quarterly disease reporting system for the Caribbean has been developed.

Trinidad and Tobago sent a delegate (Dr. Vincent Moe) to the Animal Health Meeting in Buenos Aires during the 5th-8th August, 1981 and the Antilles Animal Health Meeting in Barbados during June 1981. The Regional Animal Health Specialist Dr. Franz Alexander, met the Permanent Secretary and the Trinidad and Tobago Health Officer on the 28th May 1982 in relation to Animal Health problems in Trinidad and Tobago. Dr. Sam Rawlins, IICA Consultant in Animal Health visited Trinidad and Tobago during 28th June to 7th July, 1982, providing consulting services on the Screwworm disease to the Government. Trinidad and Toabgo sent delegates to the REPAHA course organized by IICA Guyana during the 16th to 20th August, 1982 and the 11 Resantillas Meeting in Haiti during the 22nd-25th November, 1982.

A workshop on Management of Poultry Disease is be held by IICA and the MALFP from the 22nd-26th May, 1984 at CENTENO. Dr. Franz Alexander, IICA Regional Animal Health Specilaist, will be participating in the owrkshop.

7. TITLE Research and Technical Collaboration with Regional Caribbean Agricultural Organizations

#### **OBJECTIVES**

IICA-CARDI, IICA UWI, collaboration to increase their capacity to program and implement projects. Cooperative use of facilities and materials to strengthen the capabilities of each institution. Collaboration with and support to the Caribbean Agro-Economic Society (CAES).

#### **DURATION**

February 1981 - December 1985

#### SOURCE OF FUNDS

Regular Funds

#### **OUTPUTS AND IMPACT**

- (1) Organization of "Caribbean Workshop on the Organization and Administration of Agricultural Research" held in Barbados during 22-29 February, 1981. Attendance by 30 delegates including Caribbean Directors of Agricultural Research and representatives of UWI and CARDI. Publication of the Proceedings in 1982.
- (2) Signing of the IICA-CARDI Cooperation Proposal on 20 July, 1981. IICA collaboration with CARDI in November 1981 in preparing a work programme for EDF financed "Increased Land, Forest Products, and Biomass Production of the Eastern Caribbean through Improved Soil and Water Construction and Management". The approved work program provided CARDI with funding for 1,276,500 EUA for the 5-year project. IICA consulting in soil and water conservation was provided.

-02

- (3) IICA organized and financed the following visits:
  - (a) The participation of Dr. N. Ahmad, Head of the UWI Soil Sciences Department to the workshop on the Management of Low Fertility Acid Soils held in Suriname during November 1982.
  - (b) The visit of Dr. Julian Duncan of UWI to the Tissue Culture Laboratory of CATIE in September 1982.
  - (c) Visit of Dr. Lawerence Wilson, Dean of the Faculty of Agriculture of UWI to CATIE and IICA Headquarters in Costa Rica in June, 1983.
- (4) Course on the "Identification, Design and Presentation of Research Projects in support of Agricultural Development" at UWI in April, 1984, for staff members, 22 participants.
- (5) Stimulus and support for the change of the CAES to have concurrent sessions in Economics, Agronomy, Animal Production and Fisheries in January, 1984, a a logical step in transforming the society into an umbrella organization for agricultural research in the Caribbean. CAES has 162 members.
- (6) IICA participation in the Meeting of Directors of Agricultural Research of the Caribbean in Jamaica in December, 1984 to consider the Caribbean Cooperative Research Programme. IICA was proposed as the adminsitrative agency for the Programme, to be financed by IDB.
  - 8. TITLE Technical Cooperation with the Ministry of Agriculture
    Lands and Food Production for the Improvement of the Marketing
    System for Food Crops in Trinidad and Tobago

#### **OBJECTIVES**

To improve the marketing of Food Crops in Trinidad and Tobago by assistance in the improvement of human resources and the marketing infrastructure.

#### **DURATION**

One year (on going)

#### SOURCE OF FUNDS

Quota

#### OUTPUTS AND IMPACT

An analysis of the marketing systems for food crops in Trinidad has been carried out by a team of specialists from IICA. The team prepared a document entitled- "Proposals for the Improvement of the Domestic Marketing of Fruits and Vegetables in Trindiad and Tobago". The proposals include improvements in marketing infrastructure, the establishment of a national course in postharvest technology and the establishment of a market intelligence system. An officer of the Ministry has been trained in procedures for the establishment of a market intelligence system.

# 9. TITLE Rehabilitation and Development of Tree Crop Production in Trinidad and Tobago

#### **OBJECTIVES**

The rehabilitation and development of the tree crop production particularly through the development and testing of cost effective technologies for the mechanization of tree crop cultivation, and their influence on soil erosion.

#### **DURATION**

June 1986-December 1987

#### SOURCE OF FUNDS

1981 - 1983 SBF, 1984 and after, Regular and Caroni Limited Funds.

### **OUTPUTS AND IMPACT**

Preliminary Activities developing the Project

- (1) The consulting visits of IICA Cocoa Specialist, Dr. Jorge Soria from Costa Rica in 1981 to advise the Trinidadian Ministry of Agriculture on cocoa rehabilitation.
- (2) The consulting visit of Dr. Basil Bartley of IICA-CEPLAC (Brazil) in 1983 to assist the Cocoa Project of UWI.
- (3) Dr. Winston Harvey, Agricultural Engineer, The Faculty of Agronomy of UWI, was contracted by IICA to prepare "Preliminary study of Cocoa Meahanization in Trinidad and Tobago". which was submitted to the Ministry of Agriculture in 1984. As a result, the all terrain vehicle the "ARGO" was granted tax exempt status in the 1985 Government Budget.
- (4) During October 1985 Dr. Marc Berthouly of PROMECAFE paid a consulting visit to Caroni (1975) Limited in relation to the expansion of mechanized Robusta Coffee production in Trinidad on sloping lands. He was accompanied by Dr. Warren Forsythe, IICA Soil and Water Management Specialist.

# 10. TITLE OTHER ACTIVITIES

10.1 <u>Provision of a Base for Contact with the Agricultural sector in Latin America</u>

The Trinidad and Toabgo Office of the Inter-American Institute for Cooperation on Agriculture acts as a link between the agricultural sector in Trinidad and Tobago and that in other Latin American and Caribbean countries. This is eveidenced by the establishment of contacts for individuals and institutions here with CATIE (Tropical Agricultural Research and Training Centre in Turrialba, Costa Rica), CIAT (International Centre for Tropical

Agriculture, Cali, Colombia) and CIP (The International Potato Centre at Lima, Peru), and with Ministries of Agriculture and Universities in the Dominican Republic, Haiti, Mexico, Uruguay, Argentina, Venezuela and Brazil. The Office also serves as a point of contact for the Inter-American Agricultural Information System (AGRINTER) and has been involved in supplying bibliographies and output services from this system tp persons and organizations in the agricultural sector in Trinidad and Tobago.

# 10.2 <u>Facilitating Participation of Trinidad and Tobago in Regional and International Meetings</u>

The IICA Office in Trinidad and Tobago has facilitated and/or sponsored participants of official delegates of Trinidad and Tobago in the following meetings:

- (1) Annual meetings of AGRINTER (Latin American and Caribbean Agricultural Information System) (Dominican Republic, 1981, Puerto Rico, 1983).
- (2) Meeting of Directors of Animal Health in Latin America and the Caribbean (Haiti, 1982, Mexico City, 1983).
- (3) Meeting of Directors of Plant Protection in Latin America and the Caribbean (San Jose, Costa Rica, 1979, Mexico City, 1980, Caracas, Venezuela, 1982).
- (4) Meetings of the Inter-American Board of Agriculture (Buenos Aires, Argentina, 1981, Trinidad and Tobago, 1983).
- (5) Meetings of the Society of Plant Protection in the Caribbean, Kingston, Jamaica, 1981, Trinidad and Tobago, 1983).
- (6) Meeting on the Harmonization of Pesticide Registration in the Caribbean (Port-of-Spain, Trindiad and Tobago, August, 1983).
- (7) Meeting on Post Harvest Quarantine Treatment for tropical fruit, (Miami, Florida, March, 1984).
- (8) Meeting on Herd Health Testing (Georgetown, Guyana, 1983).
- (9) Meeting of the Inter-American Council for Rural Youth (Panama, February, 1984).
- (10) Meeting on Agricultural Research in the Caribbean (Port-au-Prince, Haiti, 1981).
- (11) Meeting of the Inter-American Rural Youth Conference (Panama, 18th to 25th February, 1984).
- (12) Meeting on alternatives to Ethylene Dibromide as a postharvest fumigant (Miami, Florida, U.S.A., March, 21-24 1984).

- (13) Training course on AGRINTER Information Systems (Costa Rica, November
- (14) Training course in Library Management (CIDIA, Costa Rica, 18th November to December 9th, 1984).
- (15) Fourth Meeting of Heads of Plant Protection in the Caribbean (BArbados 5th to 8th November, 1984).
- (16) Veterinary Workshop (Georgetown, Guyana August 13th to 18th, 1984).
- (17) AGRINTER Meeting in Brazil (May 12th-15th 1984).

5th to 9th, 1984)

- (18) Tick Eradication Workshop (Puerto Rico, 2nd to 7th September, 1985).
- (19) Fourth Meeting of Plant Protection Technical Committee (Guatemala, 11th to 15th November, 1985)
- (20) Meeting on Pests and Diseases as constraints in the production of fruits in the Caribbean (Barbados, 29 September to October 3rd 1985).
- (21) Course on Design and Preparation of Agricultural Projects, (Jamaica 29th July to September 20th, 1985).

### 11. TITLE REGIONAL PLANT PROTECTION PROGRAMME FOR THE CARIBBEAN

#### **OBJECTIVES**

To promote and support the efforts fo the countries to prevent and reduce crop losses caused by pests, diseases and weeds.

#### DURATION

On going (Initiated in 1981)

#### SOURCE OF FUNDS

Quota Funds

### **OUPUTS AMD IMPACT**

This programme which was initiated in 1981 seeks to assist the countries of the Caribbean region to limit and control the incidence and spread of pests and disease by cooperative regional activities and to harmonize research, training and information in plant protection in the region. The programme recognises that the spread of pests, diseases and weeds that affect basic food and export crops aggravate the food foreign exchange and energy needs of Caribbean countries. Coordinated regional action can contribute to reducing the spread of these pests and diseases since the individual capabilities of the national plant protection institutions are usually limited by low levels of physical, human and financial resources with which to attain their objectives.

The following are some of the main achienvements of the programme since its inception:

# (a) Establishment of a Regional Training Programme for Plant Quarantine Inspectors

So far twenty-one plant quarantine inspectors have been trained. This includes six from Barbados, two from Dominica, two from Grenada, two from Guyana, one from Haiti, two from Jamaica, one from St. Kitts, one from St. Lucia and six from Trinidad and Tobago.

# (b) <u>Establishment of a Regional Newsletter in Plant Protection</u>

The Caribbean Plant Protection Newsletter was initiated in 1981 and is now in its fifth year. The Newslatter collects up to date information on plant protection from international and regional sources and communicates it to the plant protection personnel of the Caribbean.

# (c) <u>Establishment of a Society for plant Protection in the Caribbean</u>

The establishment of a Society for Plant Protection in the Caribbean in 1981 responded to the needs of the region for a professional body to give professional stimulation and also to act as a mechanism for communication and coordination of palnt protection activities. The society which now has some 121 members throughout the region has as its objectives the following:

- to strengthen inter-governmental and inter- institutional cooperation in plant protection in the Caribbean
- to establish a forum for the discussion of plant protection issues affecting Caribbean Agriculture
- to act as a forum for the exchange of ideas and information among plant protection personnel in the Caribbean
- to promote and stimulate research and teaching in plant protection subjects, viz., Entomology Plant Pathology, Weed Science etc., and to ensure that these are integrated into the discipline of plant protection
- to stimulate discussions and actions to ensure that the Caribbean environment remains free from contamination from pesticides
- to carry out all other activities which may be associated with preserving the plant genetic resources of the Caribbena from destruction by pests and diseases as may be defined by the Executive Committee.

IICA assisted in the establishment of the Society for Plant Protection in the Caribbean at the Second Regional Meeting of Plant Protection in Latin America and the Caribbean held in Mexico City in October 1980.

The Society has held two meetings so far. In 1981 it met in Jamaica and discussed urgent plant pests and disease problems in the Caribbean. In 1983, it met in Trinidad and Tobago and discussed the harmonization of pesticides legislation in the Caribbean. A document describing the Society has been prepared and is available.

# (d) <u>Harmonization of Pesticide Legislation in the Caribbean</u>

There has been a dramatic increase in pesticide usage in the Caribbean during the last decade and like many parts of the world there is concern with respect to the potential human and environmental hazards of pesticide use. The concept of the harmonization of pesticide legislation and registration requirements in the region stemmed from the initiatives developed by the FAO in 1977 to seek to harmonize the legislative aspects of pesticide use throughout the world. A meeting to consider the harmonization of pesticide legislation and the registration process in the region was held in Trinidad and Tobago under the auspices of IICA and with financial assistance from the National Agricultural Chemical Association (NACA) and GIFAP.

Teh meeting considered the status of pesticide legislation in the region and established guidelines for harminization. The meeting had as its objectives:

- to examine and analyse the status of pesticide legislation in the Caribbean
- to become familiar with measures currently in operation and to recommend others for standardizing the diverse requirements for pesticide use.

- to provide guidelines to those countries that need to enact legislation to regulate the use of guidelines, norms and technical procedures (chemical, analytical, biological, toxicological).
- to examine the status of establishment or acceptance of the maximum residue levels of pesticide (tolerance) in food in each country
- to analyse the environmental impact of the large scale application of pesticides in the Caribbean
- to stimulate training in pesticide registration procedures and in the safe and efficient use of pesticides.

Forty-five delegates from throughout the Caribbean and from Regional and International Organizations attended the meeting.

The meeting recommended, among other things, that the Pesticide and Toxic Chemicals Act of Trinidad and Tobago should be used as a model in the formulation of Regional pesticide legislative actions. Follow-up action in this is now being taken in the development of a Regional Training Programme in pesticide safety in collaboration with the World Bank and the University of Miami, School of Medicine. A 263 page document has been prepared as a result of the meeting.

### (e) Provided Training in Integrated Pest Management

In collaboration with the Caribbean Agricultural Research and Development Institute (CARDI) the University of the West Indies, Faculty of Agriculture and the Consortium for International Crop Protection (CICP) a two week training programme on Integrated Pest Management was held at the Faculty of Agriculture, University of the West Indies, St. Augustine, Trinidad and Tobago 10th-21st, 1981. The seminar was attended by twenty-one participants from thirteen countries in the Region and together with participants from Trinidad and Tobago there was an average daily attendance of thirty-five persons. Lecturers were drawn from the Consortium for International Crop Protection, the University of the West Indies, Ministry of Agriculture of Trinidad and Tobago, the Commonwealth Institute of Biological control, the Caribbean Agricultural Research and Development Institutes, Caroni Limited and IICA.

The course dealt with the basic concepts of integrated pest management and their application to the solution of pest and disease problems of crops grown in the Caribbean. While most participants expressed a high level of satisfaction with the training programme, it was the opinion of all that a more sustained effort and long-terrm training in this area was necessary. Certificates were presented at the end of the course.

# (f) <u>Production of a Bibliography Representing 100 years of Research in Plant Protection in the Caribbean</u>

The document entitled a "A Bibliography of Plant Disease Investigations in the Caribbean from 1880-1980". This publication which contains references to cover 3,000 publications on plant disease work in the Caribbean, is intended to serve as a reference source for Plant Pathologists, Nematologists, Agronomists, Research students and other persons interested in Agriculture in the Caribbean.

The bibliography covers all aspects of Plant disease and their control, including diseases caused by Fungi, Bacteria, Viruses and Nematodes. The geographic area covered by the references includes all the territories of the Commonwealth Caribbean. The Material covered by the Bibliography dates from the 1880's to 1980.

The entries were compiled mainly from primary sources, many of which have not been indexed previously. It would be impossible to list all the titles searched; however, the main sources of information were Agricultural News, Tropical Agriculture, West Indian Bulletin, the Journal of the Jamaica Agricultural Society, the Journal of Agricultural Society of Trinidad and Tobago, and the Annual Reports and Publications of the Departments and Ministries of Agriculture throughout the Region. The Secondary sources included Regional bibliographies on agriculture and related topics and computerized literature searches of the Commonwealth Agricultural Bureau data bases. Copies of this bibliography have been sent to all plant protection personnel in the Caribbean.

### (g) Production of a Book on the Diagnosis of Plant Disease

A book on Plant Disease Diagnosis was prepared by the Specialist to provide plant protection personnel with an introductory handbook for the paractical study of plant disease. The Book outlines the basic steps, facilities and procedures which are necessary for the accurate diagnosis of plant diseases.

This publication is especially valuable to laboratory assistants who are being introduced to Plant Pathology for the first time, to give them the rudimentary principles and techniques which are required for plant disease diagnosis.

In addition to the above the programme has financed and organized seminars and workshops on:

- (a) Pests and Diseases as constraints to the marketing of fruits in the Caribbean.
- (b) Urgent plant pests and disease problems.
- (c) Pesticide safety.
- (d) Postharvest losses.
- (e) Pest and Disaese Diagnosis.

The programme has also initiated actions on the following:

- (1) The establishment of a data base of plant protection information for the Caribbean.
- (2) Preparation of a comprehensive project to assist in the establishment of a facility for research and training in plant protection.

- (3) Coordination of plant protection legislation as it relates to pesticides and plant quarantine.
- (4) The reorganization of plant protection capability within Ministries of Agriculture in order to obtain a more harmonious and integrated system between plant protection, production and marketing. The model of a pest management unit is being considered.
- (5) Establishment of a survey for fruit flies in the Caribbean.

# PROPOSALS FOR A REGIONAL FACILITY FOR PLANT QUARANTINE TRAINING, RESEARCH AND DIAGNOSTIC SERVICES.

The programme has recently prepared a project proposal to support the establishment of a regional facility for training and research on plant quarantine and for providing diagnostic services for the identification of pests, diseases and monitoring pesticides. The proposed project has the following objectives:

- (1) To establish a Regional Research and Diagnostic Laboratory for Plant, Pests and Diseases in order to investigate and to formulate standard diagnostic procedures for identifying and controlling pests and diseases.
- (2) To serve as a source data bank on plant, pests and diseases and to support national and regional information systems on plant pests, diseases and insecticides.
- (3) To monitor the introduction of pesticides and advise on their proper use and application.
- (4) To provide support services and advice for testing of chemical residues and their harmful effects on the environment.
- (5) To support national and regional agencies in their efforts to monitor, control and eradicate plant pests and diseases.
- (6) To organize and collaborate in national and regional training programmes related to the control and eradication of plant, pests and diseases.
- (7) To provide advisory and technical assistance and to respond to requests for assistance from the participating governments and agencies.

To achieve the specified objectives, the project will organize and support, the following complementary components:

- (1) Regional Research and Diagnostic Laboratory Facilities and Services.
- (2) Support Research and Research Facilities.
- (3) Technical Assistance Training and Collaboration in the areas of:
  - Plant Quarantine
  - Plant Protection
  - Pesticide Management.

This project is now relevant to Caribbean Agricultural Economics as they seek to export fruits and vegetables to the markets of developed countries. Contamination of agricultural exports with pests and diseases continue to represent one of the most effective non-tariff barriers to the export of fresh fruit, vegetables and food crops to these countries.

At a recent meeting of Heads of Plant Protection of countries of the Western Hemisphere held in Guatemala City, the United States Delegate informed the meeting of an immediate change in policy in the United States. In the past, the United States normally accepted the products from developing countries and inspected it at the port of entry, in view, however, of the frequency of recent introductions and the cost of recent eradication programmes in the United States, it has been decided that any country that proposes to export to the United States must demonstrate either that they do not have pests that are of quarantine importance to the United States as verified by appropriate survey or that they have in place the necessary plant quarantine infrastructure to detect, treat or eliminate these pests from exportable commodities. In view of this disclosure, the meeting passed the following resolution:

### Resolution 16

"The delegates to the meeting having heard the proposals from the representatives of the United Sattes regarding modified conditions for the entry of agricultural products into the United States market suggested that the situation should be brought to the attention of all members of the Caribbean Community and other Governmental Organizations. They stressed that all governments and CARICOM should be informed and actions should be taken by CARICOM to evaluate the situation and establish mechanisms for a solution".

The increasing trend toward diversification and the tendancy of most Caribbean countries to aim to export fresh fruits, vegetables, food crops and flowers to the United States make it mandatory for these countries to improve their plant protection services especially their plant quarantine services. Moreover, the position being taken by the United States is likely to become common policy among developed countries as they seek to protect their agriculture.

In the light of these developments, the project proposal submitted for the development of a diagnostic laboratory and plant protection services for the Caribbean, should be considered against this background and should be supported, because these services are necessary if the Caribbean countries are to become successful and effective exporters of fresh agricultural produce.

9. DOCUMENTS AND PUBLICATIONS PRODUCED BY

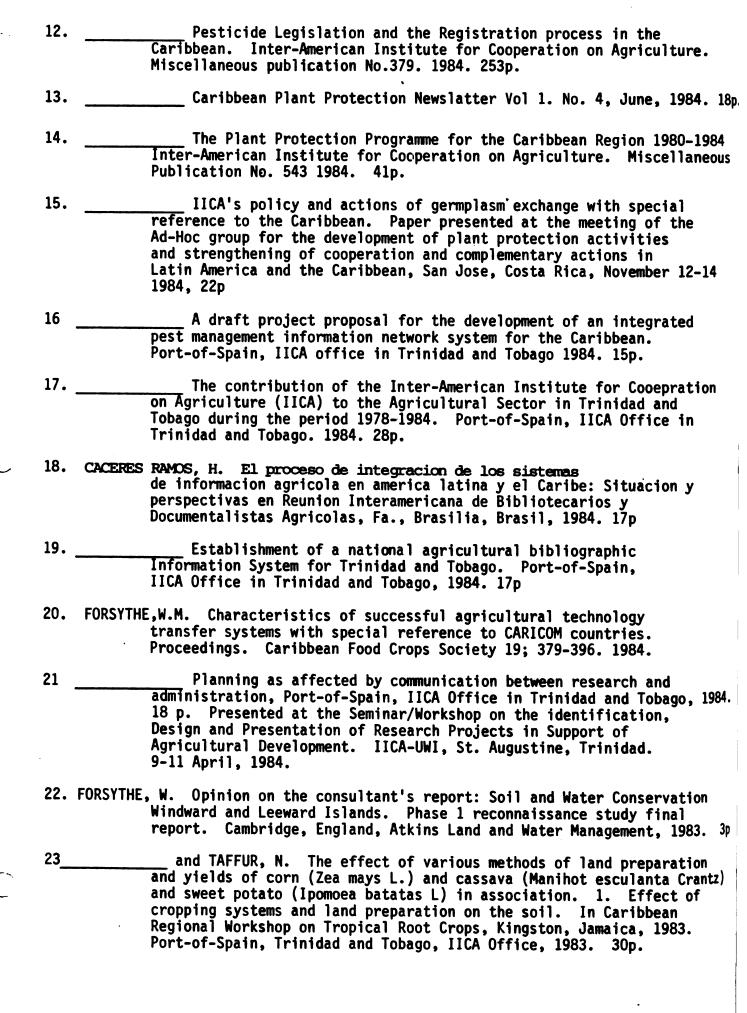
IICA OFFICE IN TRINIDAD AND TOBAGO

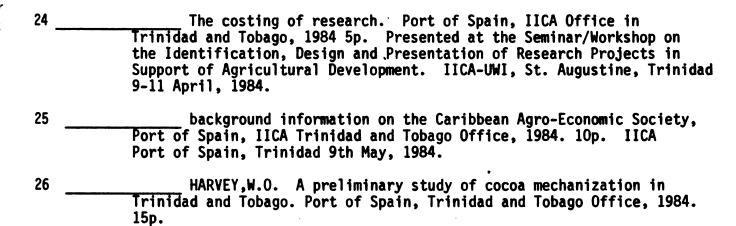
(1978 - 1985)

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Agriculture Miscellaneous Publication No. 419. 1983. pp. 56-80.





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10. APPENDIX

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# NATIONAL DIRECTORY OF OFFICIAL RELATIONS TRINIDAD AND TOBAGO

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OFFICE IN TRINIDAD AND TOBAGO

FIRST SECTION: PRESIDENT AND PRIME MINISTER

Emitida el Modificada el Hoja 1

APRIL 1980 APRIL 1987 · JANUARY 1988 De 1

#### PRESIDENT

624-1261

His Excellency
Mr. Noor Hassanali
President of the Republic of Trinidad and Tobago
President's House
Circular Road
St. Anns's
TRINIDAD AND TOBAGO, W.I.

#### PRIME MINISTER

622-3141/3

The Honourable
Mr. Arthur Napoleon Raymond Robinson, M.P.
Prime Minister of the Republic of Trinidad and Tobago
Office of the Prime Minister
Whitehall
Maraval Road
Port of Spain
TRINIDAD AND TOBAGO, W.I.



OFFICE IN TRINIDAD AND TOBAGO

SECOND SECTION: MINISTER OF GOVERNMENT

Emitida el Modificada el Hoja 1
APRIL 1980 APRIL 1987 . JANUARY 1988 De 4

The Honourable Mr. Arthur Napoleon Raymond Robinson, M.P. Minister of Finance and the Economy Office of the Prime Minister Whitehall Maraval Road PORT OF SPAIN

622-3141/3

Senator The Honourable Dr. Sahadeo Basdeo M.P.
Minister of External Affairs and International Trade
"Knowsley"
Queen's Park West
PORT OF SPAIN

623-4116

The Honourable Mr. Selwyn Richardson, M.P. Attorney General and Minister of Legal Affairs Attorney General's Office St. Vincent Street PORT OF SPAIN

623-2971

The Honourable Miss Pamela Nicholson M.P.
Minister of Settlement and Public Utilities
4th Floor
Sacred Heart Building
16-18 Sackville Street
PORT OF SPAIN

623-8705



OFFICE IN TRINIDAD AND TOBAGO

SECOND SECTION: MINISTERS OF GOVERNMENT

Emitida el	Modificada el				Hoja	2	
APRIL 1980	APRIL 1987	٠	JANUARY	1988	De	4	

The Honourable Mr. Lincoln Myers, M.P. Minister of Food Production Marine Exploitation Forestry and the Environment St. Clair Circle St. Clair PORT OF SPAIN	622-2559 622-1221/9 622-5481
Senator The Honourable Mr. Kenneth Gorden M.P. Minister of Industry Enterprise & Tourism Level 15 Riverside Plaza Besson Street PORT OF SPAIN	623–2931/4
Dr. The Honourable Albert Richards, MP Minister of Energy, Labour and Manpower Resources Riverside Plaza Besson Street PORT OF SPAIN	623-4241
The Honourable Mrs. Jennifer Johnson, M.P. Minister of Youth, Sport, Culture and Creative Arts 69 Eastern Main Road LAVENTILLE	625-8874/5
Senator The Honourable Mr. Herbert Atwell M.P. Minister of National Security and Citizenship Knox Street PORT OF SPAIN	623–2441
Senator The Honourable Mr. Clive Pantin M.P. Minister of Education Alexandra Street St Clair PORT OF SPAIN	622-2181/5 622/3121 622-3129 622-4163 622-3115



OFFICE IN TRINIDAD AND TORAGO

SECOND SECTION: MINISTERS OF GOVERNMENT

Emitida el APRIL 1980 Modificada el JANUARY 1988 De 4

The Honourable Mr. Winston Dookeran, M.P. Minister of Planning and Reconstruction 14th Floor Eric Williams Finance Building Eric Williams Plaza Independence Square PORT OF SPAIN

627-9700 627-9675

Dr. The Honourable Emmanuel Hosein, M.P. Minister of Health, Welfare and Status of Women 35-37 Sackville Street PORT OF SPAIN

625-4611/3

The Honourable Mr. Bhoendradath Tewarie Cabinet Minister without Portfolio N.A.R. Headquarters Albion Street PORT OF SPAIN

The Honourable Mr. Selby Wilson, M.P.
Minister in the Ministry of Finance and the Economy
8th Floor
Eric Williams Finance Building
Eric Williams Plaza
Independence Square
PORT OF SPAIN

627**-**9700 627**-**9675

The Honourable Mr. Joseph Toney, M.P. Minister in the Ministry of Settlement and Public Utilities
Sacred Heart Building
16-18 Sackville Street
PORT OF SPAIN

627-7001



OFFICE IN TRINIDAD AND TOBAGO

SECOND SECTION: MINISTERS OF GOVERNMENT

Emitida el	Modificada el		Hoje	4
APRIL 1980	APRIL 1987 .	JANUARY 1988	De	4

•	
The Honourable Miss Pamela Nicholson, M.P.	622-2181/5
Minister in the Ministry of Education	622-3121
Alexander Street	622-3129
St. Clair	622-4163
PORT OF SPAIN	622–3115
Dr. The Honourable Carson Charles, M.P.	
Minister in the Ministry of Works	
Settlements and Infrastructure	
Edwards Street	(05 0(0) /0
PORT OF SPAIN	625–2691/9
Dr. The Honourable Brinsley Samaroo, M.P.	
Minister in the Office of the Prime Minister	
c/o Department of Information	622-9324
St. Clair Avenue	622-3853
St. Clair	622-4156
PORT OF SPAIN	622-1131
The Honourable Mrs. Gloria Henry M.P.	
Minister of Community Development Welfare and	•
Status of Women	
35-37 Sackville Street	•
PORT OF SPAIN	625-4611/3
Local Government	
Kent House	628-1323/5
Long Circular Road	622–1979
MARAVAL	622-2130



OFFICE IN TRINIDAD AND TOBAGO

THIRD SECTION: MEMBERS OF THE SENATE

Emitida el Modificada el Hoja 1
APRIL 1980 APRIL 1987 · JNAUARY 1988 De 5

Senator the Honourable Michael J. Williams President of the Senate 1, Century Drive P.O. Box 808 TRINCITY

Senator Alloy Lequay c/o Rahaman Printery Gulf City LA ROMAIN

Senator the Honourable Herbert Atwell Minister of National Security Ministry of National Security Knox Street PORT OF SPAIN

PORT OF SPAIN 623-2441

Senator the Honourable Clive Pantin
Minister of Education
Ministry of Education
Alexandra Street
St. Clair
PORT OF SPAIN

622-2181/5
622-3121
622-3129
622-4163
622-3115

Senator the Honourable Kenneth Gordon Minister of Industry Enterprise and Tourism Ministry of Industry Enterprise and Tourism Riverside Plaza Besson Street PORT OF SPAIN

623-2931/4



OFFICE IN TRINIDAD AND TOBAGO

THIRD SECTION:

MEMBERS OF THE SENATE

Emitida el

**APRIL 1980** 

Modificada el

APRIL 1987 .

JANAURY 1988

Hoja <sub>2</sub>

**De** 5

Senator Carlyle Walters Vice President 36, Sackville Street PORT OF SPAIN

Senator Amrika Tiwary 86, Abercromby Street PORT OF SPAIN

Senator Vishnu Ramlogan Department of Management Studies The University of the West Indies ST. AUGUSTINE

Senator George Weekes 99A, Circular Road SAN FERNANDO

Senator Fyard Hosein 932, Nelson Road Lange Park CHAGUANAS

Senator Benedict Armstrong Maritime Building Milford Road Scarborough TOBAGO

Senator Horace Wilson Port Authority Scarborough TOBAGO



OFFICE IN TRINIDAD AND TOBAGO

THIRD SECTION:

MEMBERS OF THE SENATE

Hoja

De

5

Emitida el Modificada el APRIL 1980 APRIL 1987 JANAURY 1988

Senator Leonard Bradshaw Administration Building Trintoc POINTE-A-PIERRE

Senator Una Charles Irvine Trace Chase Village CARAPICHAIMA

Senator John Gonzales Grant Street COUVA

Senator Augustus Ramrekersingh Industrial Relations British West Indies Airways (BWIA) PIARCO

664-4871

Senator Robin Montano 20, New Street PORT OF SPAIN

Senator Kenneth Valley 17-19Pembroke Street PORT OF SPAIN

Senator Donna Prowell 39, Edward Street PORT OF SPAIN



OFFICE IN TRINIDAD AND TOBAGO

THIRD SECTION:

MEMBERS OF THE SENATE

Emitida el

Modificada el

1.7

Hoja 4

**APRIL 1980** 

APRIL 1987 .

JANAURY 1988

**De** 5

Senator Dr. Keith Rowley 8, Dennis Mahabir Street PORT OF SPAIN

Senator Winston Moore National Insurance Board 2A Ciprani Boulevard PORT OF SPAIN

Senator Louise Horne 8, Lopez Street ARIMA.

Senator Gerald Furness-Smith Fitzwilliam, Stone, Furness-Smith & Morgan 78, Independence Square PORT OF SPAIN

Senator Dr. Krishna Bahadoorsingh 6, Victoria Avenue PORT OF SPAIN

Senator Allan Alexander
Principal Finance Building
3rd Floor
Corner Duke and Edward Streets
PORT OF SPAIN

Senator Dr. Ramesh Deosaran Department of Social Sciences The University of the West Indies ST. AUGUSTINE

663-2042 Ext. 2027



OFFICE IN TRINIDAD AND TOBAGO

THIRD SECTION: MEMBERS OF THE SENATE

Emitida el Modificada el Hoja 5
APRIL 1980 APRIL 1987 . JANUARY 1988 De 5

Senator Fr. Winston Joseph 'All Sainta' Rectory 13, Queen's Park West PORT OF SPAIN

Senator Micheal Mansoor Pannell Kerr Forster 53-55 Abercromby Street PORT OF SPAIN

623**–**1105 623**–**1177

Senator John Rooks 31-39 Fran Street SAN FERNANDO

Denator Professor John Spence Department of Plant Science and Biochemistry The University of the West Indies ST. AUGUSTINE

663-2042 Ext. 2045



OFFICE IN TRINIDAD AND TOBAGO

FOURTH SECTION: PARLIMENTARY SECRETARY

Emitida el Modificada el Hoja 1
APRIL 1980 APRIL 1987. JANUARY 1988 De 1

Mr. Eden Shand, M.P.

Parlimentary Secretary in the Ministry of Food Production

Marine Exploitation Forestry and the Environment

St. Clair Circle

St. Clair

PORT OF SPAIN

622-1221/9

625-5481

Mrs. Margaret Hector, M.P.

Parlimentary Secretary in the Ministry of Health,

Welfare and the Status of Women

35-37 Sackville Street

PORT OF SPAIN

625-4611/3

Mr. Kenneth Butcher

Parlimentary Secretary in the Ministry of Youth, Sport

Culture and Creative Arts

69. Eastern Main Road

LAVENTILLE

625-8874/5

Mr. Arthur Sanderson

Parlimentary Secretary in the Ministry of Settlement and

Public Utilities

4th Floor

Sacred Heart Building

16-18 Sackville Street

PORT OF SPAIN



#### OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL

ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS
Emitida el Modificada el

Modificada el Hoja 1

APRIL 1980

APRIL 1987 ·

JANUARY1988

De 10

H.E. Sir Martin Seymour Berthoud High Commission of Britain British High Commission Furness House 90 Independence Square PORT OF SPAIN

625-2861/6

Miss Jane Debenest Ambassador Embassy of France 3 Rapsey Street St. Clair PORT OF SPAIN

622/7446/7

H.E. Mr. James C. Best High Commissioner of Canada Canadian High Commission Huggins Building 72-74 South Quay PORT OF SPAIN

623-7254 623-4757

623-1941/3

Mr. José Joaquin Gori Charge d'Affairs Embassy of Colombia 5, Rookery Nook, Maraval P.O. Box 664 PORT OF SPAIN

622-5904 622-5938

H.E. Mrs. Maria Clemencia Lopez-Jimenez

Ambassador of Venezuela Embassy of Venezuela

627-9821 627-9823

"Venezuelan Centre" 16 Victoria Avenue PORT OF SPAIN

627**-**9824 627**-**9506



OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Modificada el Emitida el Hoja

**APRIL 1980** APRIL 1987 . January 1988 De

H.E. Mrs. Ellen Bogle High Commissioner of Jamaica Jamaica High Commission #2 Newbold Street St. Clair PORT OF SPAIN

622-4995/7

10

H.E. Mr. Carlos Adelmar Ferro Ambassador Embassy of Argentina 23, Eagle Crescent Fairways

628-0385

MARAVAL

622-0397

H.E. Mr. John Leefmans Ambassador Embassy of the Royal Netherlands 3rd Floor Life of Barbados Building 69-71, Edward Street PORT OF SPAIN

625-1722 625-1210

H.E. Mr. Joseph Frank Da Silva High Commissioner of Barbados Barbados High Commission # 82, Long Circular Road MARAVAL

622-0866 622-0492

H.E. Mitsuo Iijima Ambassador Embassy of Japan # 5 Hayes Street St. Clair PORT OF SPAIN

622-6105 628-1632



#### OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL

ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Emitida el Modificada el **APRIL 1980** 

APRIL 1987 . JANUARY 1988

De

Hoja

10

3

H.E. Dong Woon Chu Ambassador Embassy of the Republic of Korea Ground Floor "Albion Court" # 61, Dundonald Street

PORT OF SPAIN

627-6791/3

H.E. Mr. P.N.G. Subramaniam Acting High Commissioner of India Indian High Commission # 87, Cipriani Boulevard PORT OF SPAIN

627-7480/1

H.E. Mr. Joachim-Richard Vogel Ambassador Embassy of Germany 7-9 Marli Street

Newtown

628-1630

PORT OF SPAIN

628-1632

Mrs. Hazel Burnett Director United Nations Information Centre P.O. Box 130 # 15, Keate Street PORT OF SPAIN

623-4813

Mr. Jaime Mantilla PAHO Advisor on Administrative Methods P.O. Box 898 PORT OF SPAIN



#### OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL

ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Emitida el Modificada el Hoja 4

APRIL 1980 | APRIL 1987 · JANUARY 1988 | De 10

Dr. Walter Chin Country Representative Pan American Health Organization/ World Health Organization PAHO/WHO 49, Jerningham Avenue Belmont

624-7424

624-7524

PORT OF SPAIN

PORT OF SPAIN

624-4376

Dr. Roy Neehall
General Secretary
Caribbean Conference of Churches (CCC) and
Christian Action for Development in the Caribbean (CADEC)
# 15, Carlos Street

627-1837

Fr. Gerard Pantin Executive Director SERVOL Limited c/o St. Mary's College Frederick Street PORT OF SPAIN

623-8835

Mr. M. Smart
Senior Agricultural Advisor
FAO Representative a.i.
Food and Agricultural Organization of the United Nations (FAO)
P.O. Box 822
17, Keate Street
623-5175
PORT OF SPAIN
623-0467/8





OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL

ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Emitida el Modificada el Hoja 5

APRIL 1980 APRIL 1987 · JANUARY 1988 De 10

Mr. Berhanu Legesse
FAO Farm Management Expert
Agricultural Planning Division
Ministry of Food Production
Marine Exploitation
Forestry and the Environment
St. Clair Circle
St. Clair
PORT OF SPAIN

622-5953

Mr. Keith Shaw
The Delegate of the Delegation of the Commission of the European Communities in Trinidad and Tobago
P.O. Box 1144
# 2, Champs Elysees

# 2, Champs Elysees 622-6628
Long Circular Road 622-0465
MARAVAL 622-0591

Mr. Mario Jorquera
Director
Office of the General Secretariat of the
Organization of American States (OAS)
P.O. Box 1231

P.U. Box 1231

3A, Queen's Park West

PORT OF SPAIN

625-4192

625-4802

Mr. Hugh G. Greenidge
Resident Representative of the
United Nations Development Programme (UNDP)
# 19, Keate Street
PORT OF SPAIN

623-7056/9 623-1826 623-5091



#### OFFICE IN TEINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

	COSTITUDION				
Emitida el	Modificada el		Hoja	6	
APRIL 1980	APRIL 1987 ·	JANUARY 1988	De	10	

•	
Dr. David Bassett	
Director a.i.	
Caribbean Epidemiology Centre (CAREC)	
P.O. Box 164	622-4261
16-18, Jamaica Boulevard	622-3277
Federation Park	622-4262
PORT OF SPAIN	622–2294
H.E. Mr. Sheldon J. Krys	
Ambassador of the United States of America	
United States Embassy	
15, Queen's Park West	
PORT OF SPAIN	622-6371/6
•	
H.E. Mr. Octavio Luiz De Berenguer Cesar	
Ambassador of Brazil	
Embassy of Brazil	
	600 5770
#6, Elizabeth Street	622-5779
St. Clair	622-2076
PORT OF SPAIN	622–4323
Mar Course D. Wordham	
Mr. Garnet R. Woodham	
Resident Representative	
Inter-American Development Bank (IADB)	
TATIL Building 4th Floor	622-0873
11, Maraval Road	622-8367
PORT OF SPAIN	622-8800
Mr. Oliver Francis	
Director of the Caribbean Office	
International Labour Organization (ILO)	
P.O. Box 1201	
19. Keate Street	623-7661
•	623-6394
PORT OF SPAIN	023-0394



#### OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL

ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Emitida el Modificada el

Hoja 7

**APRIL 1980** 

**APRIL 1987** 

JANUARY 1988

**De** 10

Mr. Clyde Applewhite

Director

Economic Commission for Latin American and the

Caribbean (ECLAC)

Room 300

Salvatori Building

P.O. Box 1113
Frederick Street
PORT OF SPAIN

623-5595

623-5428 623-1969

Dr. Curtis McIntoch

Agricultural Economist (Programmes and Training)

Caribbean Food and Nutrition Institute c/o The University of the West Indies

ST. AUGUSTINE

663-2701

Mr. Derrick Dyer

Executive Director

Caribbean Agricultural Research and

Development Institute (CARDI)

The University of the West Indies

ST. AUGUSTINE

645-1205/8

Dr. Pascal Osuji

Head of the Trinidad and Tobago Unit of CARDI

The University of the West Indies

ST AUGUSTINE

645-1205/8

Dr. Samsundar Parasram

Director of Planning and Development

CARDI Multiple Cropping Systems Project

The University of the West Indies

ST. AUGUSTINE

645-1205/8



OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEAD OF REGIONAL AND INTERNATIONAL

ORGANIZATIONS, EMBASSIES AND HIGH COMMISSION

Modificada el Emitida el

Hoja 8

**APRIL 1980** 

APRIL 1987 '

JANUARY 1988

10 De

Mr. Hollis Charles	
Director	622-7161
Caribbean Industrial Research Institute (CARIRI)	622-7164
The University of the West Indies	622-7165
ST. AUGUSTINE	622-5954
	•
Mrs Barbara Gumbs	
Head of the Technical Information Services (TIS)	
CARIRI The University of the West Indian	
The University of the West Indies ST. AUGUSTINE	662-7161
SI. AUGUSIINE	002-7101
	•
Mrs. Sharon I. Laurent	•
Information Specialist, (TIS)	•
CARIRI	
The University of the West Indies	400 B141
ST AUGUSTINE	622-7161
H.E. Mr. Cui Mingtang	
Ambassador	
Embassy of the People's Republic of China	
# 39 Alexandra Street	
PORT OF SPAIN	622–6976
H.E. M.Z. Anka	
High Commissioner of Nigeria	
High Commission of the Federative Republic of Nigeria	
# 3, Maxwell-Phillip Street	
St Clair	622-6834
PORT OF SPAIN	622-6836



#### OFFICE IN TRINIDAD AND TOBAGO

HEADS OF REGIONAL AND INTERNATIONAL FIFTH SECTION: ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Emitida el Modificada el Hoja 9

APRIL 1980 APRIL 1987 · JANUARY 1988 De 10

H.E. Monsignor Manuel Monteiro De Castro Apostolic Nuncio Embassy of the Vatican # 11 Mary Street ST. Clair PORT OF SPAIN

622-5009

Dr. Francisco Alvarez-Gorsira Counsellor Venezuelan Embassy # 6 Mary Street St. Clair PORT OF SPAIN

622-2468/9

622-2019

To be appointed
Consul Ad Honorem for Costa Rica and the
Dominican Republic
# 9 Knightsbridge Road
Cascade
PORT OF SPAIN

624-1217

Mr. Vincent Quesnel
Consul General Ad Honorem of El Salvador
# 20 Abercromby Street
PORT OF SPAIN

Mr. Augustus M. Querino Consul General Ad Honorem of Guyana 51-53 Frederick S reet PORT OF SPAIN

623-1366/9



#### OFFICE IN TRINIDAD AND TOBAGO

FIFTH SECTION: HEADS OF REGIONAL AND INTERNATIONAL ORGANIZATIONS, EMBASSIES AND HIGH

COMMISSIONS

Emitida el Modificada el Hoja 10
APRIL 1980 APRIL 1987 JANUARY 1988

Mr. Jack De Lima Consul Ad Honorem of Peru # 23 Frederick Street PORT OF SPAIN

623-1366/9

De

10

Mrs. Wilma Primus
Project Coordinator
Caribbean Documentation Centre
Economic Commission for Latin America and the
Caribbean (ECLAC)
P.O. Box 1113
PORT OF SPAIN

623-5595

Dr. H.A.D. Chesney
Managing Director
Caribbean Food Corporation (CFC)
# 30 Queen's Park West
PORT OF SPAIN

622-5211

622-5231 622-5827



#### OFFICE IN TRINIDAD AND TOBAGO

SIXTH SECTION: HIGH-LEVEL OFFICIALS IN THE AGRICULTURAL SECTOR

Emitida el	Modificada el		Hoja	1
APRIL 1980	APRIL 1987 .	JANUARY 1988	De	4

Dr. E. Patrick Alleyne
Pernament Secretary
Ministry of Food Production
Marine Exploitation
Forestry and the Environment
St. Clair Circle
St. Clair
PORT OF SPAIN

622-2559

Mr. Mannie Dookeran Chief Technical Officer Ministry of Food Production Marine Exploitation Forestry and the Environment St. Clair Circle St. Clair PORT OF SPAIN

622-1221

Mr. Winston Rudder
Permanent Secretary
Ministry of Food Production
Marine Exploitation
Forestry and the Environment
St. Clair Circle
St. Clair
PORT OF SPAIN

622-5953

Dr. Vincent Moe
Director of Veterinary Services
Ministry of Food Production
Marine Exploitation
Forestry and the Environment
St. Clair Circle
St. Clair
PORT OF SPAIN



OFFICE IN TRINIDAD AND TOBAGO

HIGH-LEVEL OFFICIALS IN THE

SIXTH SECTION:

AGRICULTURAL SECTOR

Emitida el Modificada el

Hoja

4

**APRIL 1980** 

APRIL 1987 .

JANUARY 1988

De

Dr. Edmond Jones Acting Director Agricultural Services St. Augustine Nurseries CUREPE

622-5775

Dr. John Pegus Technical Officer for Horticulture La Reunion Propagation Station CENTENO

664-4336

Mr. George Ramtahal Technical Officer for Field Engineering Central Experimental Station CENTENO Via Arima Post Office

664-4334/6

Dr. Reginald Griffith Director Red Ring Research Central Experimental Station CENTENO Via Arima Post Office

664-4334/6

Mr. Horatio Nelson Director of Extension Services Ministry of Food Production Marine Exploitation Forestry and the Environment St. Clair Circle St. Clair PORT OF SPAIN



#### OFFICE IN TRINIDAD AND TOBAGO

SIXTH SECTION: HIGH-LEVEL OFFICIALS IN THE

AGRICULTURAL SECTOR

Emitida el Modificada el Hoja 3 **APRIL 1980** APRIL 1987 JANUARY 1988 De

Mr. Lawrence Cross Technical Officer and Director of the Chaguaramas Agricultural Department Project P.O. Box 389 PORT OF SPAIN

625-1333

Mr. Claude Job Technical Officer for Tobago Ministry of Food Production Marine Exploitation Forestry and the Environment Botanical Station Scarborough Tobago

639-2234

Dr. Bal Ramdial Conservator of Forests and Chief Game Warden Forestry Division

622-7476

Long Circular Road PORT OF SPAIN

622-4521

Mr. Kelvin B. Joseph Director of Surveys and Sub-Intendant of State Lands and Surveys Division Red-House St. Vincent Street PORT OF SPAIN

623-2971

Mr. Roy C. Phillip General Manager Agricultural Development Bank 86 Duke Street PORT OF SPAIN

623-6261/5



OFFICE IN TRINIDAD AND TOBAGO

HIGH-LEVEL OFFICIALS IN THE

SIXTH SECTION: AGRICULTURAL SECTOR

Emitida el Modificada el Hoja 4
APRIL 1980 APRIL 1987 . JANUARY 1988 De 4

Mr. Carlyse Jordan
Senior Fisheries Officer
Fisheries Division
Ministry of Food Production
Marine Exploitation
Forestry and the Environment
St. Clair Circle
St. Clair
PORT OF SPAIN

622-1221

Mr. Felix Pierre a.i.
General Manager
Food and Agricultural Corporation
Laughton Building
Wrightson Road
PORT OF SPAIN

625-4384/5

Dr. Lennox Sealy
General Manager
Central Marketing Agency
Beetham Highway
PORT OF SPAIN

623-1853

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OFFICE IN TRINIDAD AND TOBAGO

SEVENTH SECTION: PERMANENT SECRETARIES

Emitida el Modificada el Hoja 1

APRIL 1980 APRIL 1987 JANUARY 1988 De 7

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## **DIRECTORIO NACIONAL DE RELACIONES OFICIALES**

OFFICE IN TRINIDAD AND TOBAGO

SEVENTH SECTION: PERMANENT SECRETARIES

Emitida el Modificada el Hoja 2

APRIL 1980 APRIL 1987 · JANAUARY 1988 De 7

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OFFICE IN TRINIDAD AND TOBAGO

SEVENTH SECTION: PERMANENT SECRETARIES

Emitida el Modificada el Hoja 3

APRIL 1980 APRIL 1987 . JANUARY 1988 De 7

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Mr. Wilfred Naimool
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SEVENTH SECTION: PERMANENT SECRETARIES

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APRIL 1980	APRIL 1987 .	JANAURY 1988	De	7

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Miss Cynthia Bishop	622-2181/5
Permanent Secretary	622-3121
Ministry of Education	622-3129
Hayes Street	622-4163
St. Clair	622-3115
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#### OFFICE IN TRINIDAD AND TOBAGO

SEVENTH SECTION: PERMANENT SECRETARIES

DECEMBER DEC						
Emitida el	Modificada el		Hoja	5		
APRIL 1980	APRIL 1987 ·	JANUARY 1988	De	7		

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OFFICE IN TRINIDAD AND TOBAGO

SEVENTH SECTION: PERMANENT SECRETARIES

Emitida el Modificada el Hoja 7

APRIL 1980 APRIL 1987 - JANUARY 1988 De 7

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OFFICE IN TRINIDAD AND TOBAGO

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Emitide el Modificade el Hoja 1

APRIL 1980 APRIL 1987 JANUARY 1988 De 3

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OFFICE IN TRINIDAD AND TOBAGO

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Emitida el Modificada el Hoja 2
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Emitida el Modificada el Hoja 3

APRIL 1980 | APRIL 1987 | JANUARY 1988 | De 3

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## **DIRECTORIO NACIONAL DE RELACIONES OFICIALES**

OFFICE IN TRINIDAD AND TOBAGO

NINTH SECTION:

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AND SCHOOLS

Emitida el Modificada el Hoja 1
APRIL 1980 APRIL 1987 - JANUARY 1988 De 2

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#### OFFICE IN TRINIDAD AND TOBAGO

NINTH SECTION:

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AND SCHOOLS

Emitida el Modificada el Hoja 2

**APRIL 1980** 

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JANUARY 1988

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11. LIST OF REFERENCES

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