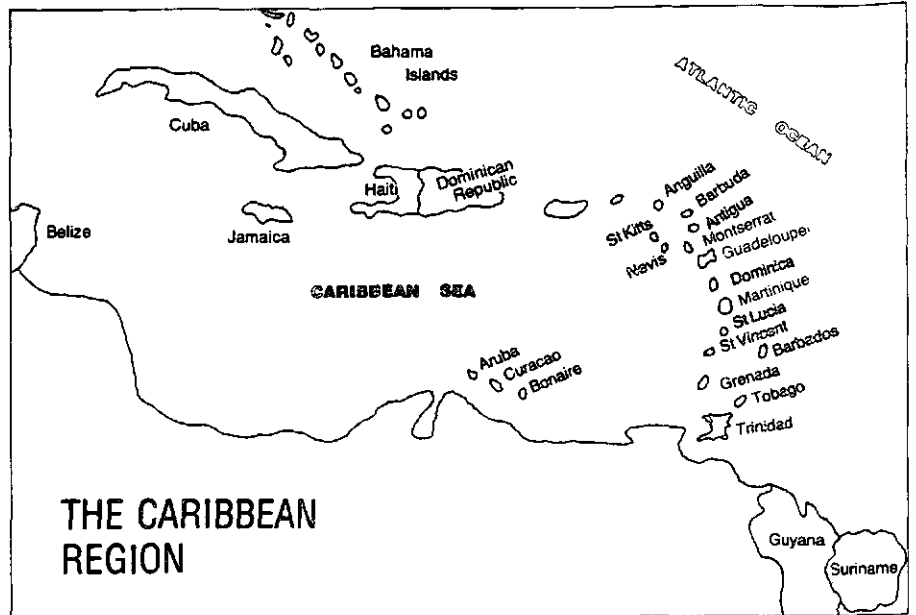


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COCOA RESEARCH POLICY MANAGEMENT IN
 TRINIDAD AND TOBAGO
 Prepared by
 The Cocoa Research Unit - U.W.I.
 St. Augustine

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UNITED NATIONS

ECONOMIC COMMISSION FOR LATIN AMERICA Office for the Caribbean

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1. Structure of the Cocoa Industry in Trinidad and Tobago

The total area of land in Trinidad and Tobago under cocoa cultivation is estimated to be 54,811 hectares. These plantings are distributed amongst small holdings and large plantings as shown in Table 1.

Table 1
Distribution of Cocoa Farming in Trinidad and Tobago

Size of Unit hectares	No. hectares	Percentage of Production Units
0 - 8	11,902	75.0
8 - 20	18,240	20.0
20 - 40	6,562	2.5
40 - 200	18,107	1.5

Total production over the past decade has shown a steady decline as reflected in the Gill and Duffus, Cocoa Market Report for May 1983:

Year	Production (Thousand metric tons)
1972-1973	5
1973-1974	4
1974-1975	5
1975-1976	3
1976-1977	4
1977-1978	4
1978-1979	3
1979-1980	2
1980-1981	3
1981-1982 (est.)	2
1982-1983 (forecast)	3

The 1974/75 production (5,000 tons) is only 17% of the highest production in Trinidad and Tobago of 30,000 tons achieved in the 1930's.

It is hoped that Cocoa will in the future reassume its important role in the national economy as a major agricultural export. It seems likely that its importance as a foreign exchange earner within the agricultural sector will be increased when the policy to lower sugar production to meet only local demand is implemented.

2. Research Policy and Organization

The research policy in Trinidad and Tobago is dominated by the need to make cocoa production more cost effective. This implies the need for highly productive trees showing disease and pest resistance linked to a cultural package that uses resources more efficiently. Systems for mechanization and the development of varieties suited to these systems are the broad aims of the research.

There are two cocoa research groups in Trinidad and Tobago. The Cocoa Research Unit (CRU) of the Faculty of Agriculture, University of the West Indies which is engaged on the fundamental research problems and the Ministry of Agriculture, Cocoa Research Department which is dealing with application and extension of research findings. These two groups work in close collaboration.

3. Programmes and Projects

The CRU programme of research falls into three main projects:

- i. Breeding and selection for disease resistance and high productivity;
- ii. Research into disease control; and
- iii. Germ plasm collection and maintenance;

Within the Ministry of Agriculture the major projects are:

- i. Trial and selection of elite clones;
- ii. Agronomic practices involving spacing and management;
- iii. Disease monitoring and control; and
- iv. Production of planting material for distribution to farmers.

All research programmes on cocoa, or any tree crop, are of necessity long term and problem solving efforts through disease and pest control along with the introduction of new agronomic, management practices are considered relatively short term. On the other hand the development of new varieties is inevitably a very long term operation having a minimum of 15-20 years as a time frame.

4. Effects of Past and Present Research

The major effects of past research on the productivity of the local industry were two-fold. Firstly, the selection of high yielding ICS clones by the then Imperial College of Tropical Agriculture (ICTA), now the U.W.I. Secondly, the identification of source of resistance to Witches Broom Disease at ICTA. Witches' Broom was at that time the major constraint to productivity in Trinidad and Tobago.

Present research at the Ministry of Agriculture, Cocoa Research Department making selections that combine the Witches' Broom resistance with Black Pod resistance and high yield has made a significant contribution to the potential for increased cocoa production. These TSH (Trinidad Selected Hybrid) clones along with new spacing and shade management practices will have a major impact on the productivity of farms now using this technology.

5. Personnel and Resources

The UWI, Cocoa Research Unit, Faculty of Agriculture at present has four professional members of staff as well as technical and field support. They are an Agronomist, Pathologist, and Breeder in St. Augustine and a Pathologist/agronomist located in Jamaica. However, the Unit supervises final year B.Sc. Agriculture projects for undergraduates and offers training to postgraduates (M.Sc and Ph.D) students. The CRU is currently training two M.Sc students and one Ph.D student and two more postgraduate students will register with the Unit in October 1983. Postgraduate students are from the Caribbean, Uganda and South America. Such undergraduate and postgraduate research projects both within the CRU and in the Faculty of Agriculture as a whole extends the research capacity in cocoa at the UWI.

Funding for the CRU is obtained from the Governments of Trinidad and Tobago, Jamaica, the Cocoa, Chocolate and Confectionery Alliance (CCCA) and the European Development Fund (EDF). At present, the resources of CRU are a bare minimum of laboratory and field facilities.

The Ministry of Agriculture, Cocoa Research Department consists of an Agronomist/Breeder and the services of specialist personnel from the Central Experiment Station.

6. Constraints on Research

The pool of expertise and support staff in Trinidad and Tobago is very small. This inevitably results in a narrower range of research activities than is required. The major constraint to expansion of the human resources devoted to cocoa research is finance. Because of the nature of cocoa research, its time span and need for land resources to be committed over a long period, it is, and has been difficult to secure the necessary stable financing for research. This applies particularly to the basic fundamental research projects involving genetics and breeding and the biology of diseases in cocoa.

7. External Linkages

The CRU receives funding from two agencies external to the Caribbean. The Breeding is supported by the CCCA of the U.K. The European Development Fund (EDF) has contributed funds under a Technical Aid Agreement for an initial period of three years. Representatives from these agencies as well as Governments of Trinidad and Jamaica and the UWI constitute a Cocoa Research Advisory Committee (CRAC) which advises the UWI on policy matters concerned with cocoa research. This EDF project is specifically to consolidate the germplasm collection of the Unit onto a single site at a new field station - The University Cocoa Research Station (UCRS). The germplasm collection has been designated an International collection by the IBPGR and has been named the International Cocoa Genebank Trinidad (ICGT). At present the trees are dispersed at four (4) sites and some trees are 40 years old. The EDF financing will allow all of these trees to be repropagated and planted systemically at the newly acquired field station.

The EDF funding also provides for the training of personnel from ACP countries at the CRU in both cocoa research and cocoa technology.

External funding, for two years, has also been secured to develop a data bank and descriptor list for the genebank. This project is in the form of scholarships provided by IBPGR.

The CRU is in touch with the ACP countries through the ACP Secretariat and has longstanding relationships with South American countries through its cocoa collecting and research collaboration activities. The Head of CRU recently visited Costa Rica to strengthen linkages with CATIE and IICA.

The most urgent problem of cocoa farmers in Trinidad and Tobago is that a low productivity due to the cost or absence of labour. This, combined with a high proportion of very old plantings, for the small holder in particular, deficient access roads and drainage, has led to unprofitable cocoa farming. The outcome of these combined factors is a spiral of low and poor management input that inevitably leads to more and more abandoned cocoa plantings.

Abandoned plantings can themselves aggravate problems in productive plantings since they are a source of disease and insects to provide inoculum for infection of managed plots.

The solutions to these problems must come from research into:

- i. Methods of mechanization to overcome labour shortages and costs;
- ii. Rehabilitation of old plantations;
- iii. Replanting with high yielding new varieties with appropriate agronomy;
- iv. Development of high quality varieties that will command a high price on the market;
- v. Disease control technology; and
- vi. Long-term breeding of varieties that combine all the required characteristics and perform well in newly developed agronomic practices.

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