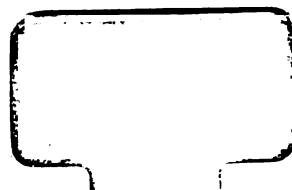


IICA
E14
65



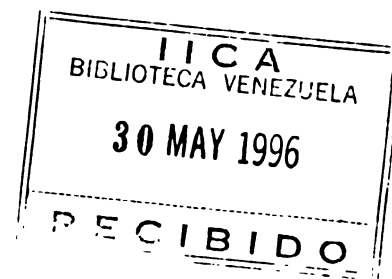
***An Overview of the Current
Status of Agriculture in
Tobago***

Implications for the Future



IICA-CIDIA

IICA



***An Overview of the Current
Status of Agriculture in
Tobago***

Implications for the Future

00004246

11 CA
E 14
65

Willard Phillips

Policy Analysis and Planning Specialist

Inter-American Institute for Cooperation on Agriculture (IICA)

***AN OVERVIEW OF THE CURRENT STATUS
OF AGRICULTURE IN TOBAGO:***

IMPLICATIONS FOR THE FUTURE

**Paper presented as part of the NIHERST Seminar , "Food Security, Sustainable Agriculture
and Export Development - A Tobago Challenge", held on June 28-29, 1994.**



TABLE OF CONTENTS

	<i>Page</i>
Introduction	2
1. Tobago's Agriculture - Historical Perspective	2
1.1 Early Settlement and the Dominant Sugar Economy	2
1.2 Post Annexation to Independence - The Agricultural Economy	5
1.2.1 The Megayage System	6
1.2.2 Other Factors	7
2. Post-Independence - Further Agricultural Decline	7
2.1 Hurricane Flora	8
2.2 Expansion of the State Sector	8
2.3 Oil-boom of the Seventies and Early Eighties	9
2.4 Administrative and Political Changes	10
2.5 Subsequent Economic Decline	11
2.6 The Present Status of Agriculture in Tobago	12
2.6.1 Resources	12
2.6.2 Labor and Farm Population	14
2.6.3 Farm Structure and Production	16
2.6.4 Institutional Framework	17
3. Implications for the Future	18
3.1 A New Approach	18
3.2 Recognition of the Imperatives of National Macro and Sector Policies	19
3.3 Environmental Sensitivity	19
3.4 Market Development	19
3.5 Enhanced Extra-institutional Support	20

TABLE OF CONTENTS

(continued)

	<i>Page</i>
4. Conclusion	20
References	22
List of Figures:	
Figure 1	4
Figure 2	11
List of Tables:	
Table 1: Crop Cultivation in Tobago - 1963 & 1982 (Ha.)	8
Table 2: Employment by Industrial Group and Parish, 1991 (%)	9
Table 3: Contribution of Agricultural Income to Total Household Income - 1982	10
Table 4: Land Capability by Sub-Regions - Tobago	13
Table 5: Estimated Land Use, Area - 1973 and 1982	14
Table 6: Number of Registered Farmers by District - 1992	15
Table 7: Age Distribution of Farmers in Tobago - 1976 and 1982	15
Table 8: Number of Holdings & Area by Size Category, 1982	16
Table 9: Fish Landings for Selected Sites 1988-1993	17



An Overview of the Current Status of Agriculture in Tobago - Implications for the Future

Introduction:

The history of Tobago bears ample record of a rich agricultural legacy. This legacy explains, in part, Tobago's central role in a period of intense rivalry which, according to Ottley, saw the island change hands some thirty-two times among European imperial powers. From the period of early settlement to the immediate post-independence periods, Tobago enjoyed possibly two epochs of spectacular agricultural production from which the island earned international and national respect as an important agricultural production center.

Notwithstanding this rich agricultural heritage, since the early seventies Tobago's agriculture has suffered significant decline. The result is that the island is now a net importer of agricultural products, and is largely dependent on Trinidad for its food supply. What are the factors which explain this development, and what are the implications of the current scenario for future agriculture in Tobago?

This paper will examine these questions, based on a thematic which embraces three main issues. Firstly, that the socio-economic regime of the past was sufficient to explain Tobago's dominance in the pre-independence period. Secondly, that a mix of newly emerging factors after independence, precipitated the decline to the current state. Finally, the paper will posit that based on the island's agricultural history as well as the current developmental scenario, Tobago cannot expect a return to the past regime of agriculture. Instead, successful agricultural diversification in the future will require a focussed approach which is based on optimal use of resources in a manner that makes Tobago's agriculture competitive, environmentally sensitive and closely linked to other economic sectors of the wider national economy.

1. Tobago's Agriculture - Historical Perspective:

1.1 Early Settlement and the Dominant Sugar Economy:

Tobago as an island was a source of contention among rival European powers for almost 150 years. After numerous exchanges between the various imperial powers, the island was finally ceded to Britain in 1763. Soon after this occurrence, the British government began the preparation of detailed plans and proposals for the settlement of the island



with the first sale of agricultural lots to early settlers. The average size of these lots varied between 100 - 300 acres, and the purpose of sales at the time was to prevent the speculative and consequent holding of lands in a state of idleness.

By the early 1770's close to 58,000 acres had been granted to settlers who also imported more than 7000 slaves ostensibly to support the cultivation of sugar. There was subsequent rapid development of the sugar economy, and by 1773, Tobago boasted some 103 sugar estates. By this time too, a significant production of cocoa, coffee and cotton was already in evidence. This early period was Tobago's first golden era in agriculture, and it was a time when, according to Williams, "sugar was king". At the time, Tobago held pride of place in this colonial kingdom, with its dominance of the sector being demonstrated by a production of roughly 2.5 million pounds of sugar and 1.4 million pounds of cotton. By then, the island had a total population of 15,014 persons of which 14,170 were slaves. Hence, Tobago towards the end of the eighteenth century was essentially a slave society, and the supply of free labor to the sugar industry through slavery was central to the dominance of the island's agricultural sector.

It should be noted also that during this time, major elements of the British representative system of government were introduced to the island. By 1793, in spite of several skirmishes between the British and the French for possession, Tobago enjoyed the benefits of a Legislative Council with ten appointed members, and a House of Assembly with 15 members.

The primary characteristics of Tobago's agricultural economy at that time may be summarized as follows:

- Skewed pattern of land distribution where almost all productive land was held by a small group of settlers.
- Free slave labor.
- Guaranteed market for agricultural produce in the imperial market place.
- Administrative center and locus of decision-making external to the economy.
- Virgin agricultural land which yielded high output.
- A colonial empire which essentially amounted to a trading block in which price was determined by oligopolistic competition.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

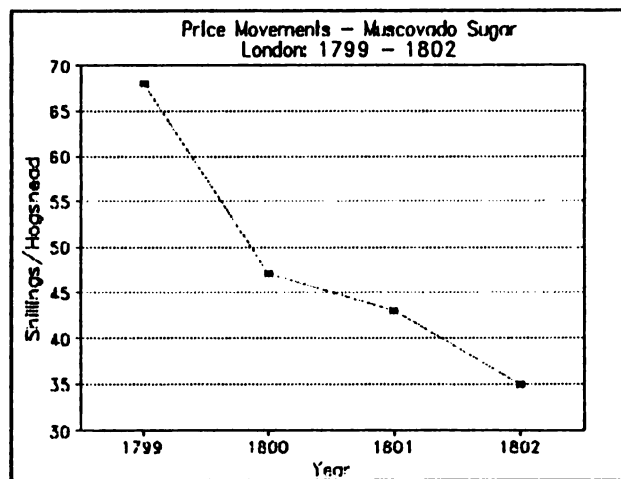
The island's agricultural dominance did not last however, and by the year 1810, a complex of factors operated to precipitate a rapid decline of the economy.

First among these factors were repeated changes in the islands sovereignty, a consequence of continued wars among the European colonial powers (particularly the British and French). This scenario led to high levels of uncertainty among the planters thereby dampening their willingness to invest substantially in sugar cultivation. Moreover, changes in sovereignty also meant changes in supplies to the British market with consequent large variations in prices of agricultural commodities in the London market.

Secondly, the British government imposed increasing levies on colonies supplying agricultural products to the metropol in order to finance its war efforts. This made it even more difficult for Tobago planters to be viable in the production of sugar.

Thirdly, with the further acquisition and cultivation of new territories in the West Indies, rapidly increasing supplies to the British market, led to declines in the prices of many commodities thereby undermining Tobago's competitiveness. Such competition was also intensified with the production of tropical commodities by non-British colonies such as Brazil and Cuba. Figure 1 shows price movements for sugar over a five year period on the London sugar market.

Figure 1:



Source: Douglin, M. History of Tobago 1815-1854

Yet another important factor which impacted severely on Tobago, as well as other colonies was the eventual independence of the United States, which rendered trade with this former colony illegal under the then British Navigation Act. An ensuing trade war between the British and the US operated to drive up significantly the cost of and



availability of supplies to planters in the colonies, with a deterioration of the terms of trade between Tobago and the US. Prior to its independence, the US was an important and cheaper source of supplies for many of the British colonies in the West Indies.

Finally, possibly the most important blow to Tobago's economy, was the effect of the movement towards, and the ultimate abolition of the slave trade. The push towards amelioration of slave conditions served as an important pre-cursor to the abolition of slavery, and Tobago planters, being an almost insignificant minority in a dominant slave society, were obliged to undertake substantial expenses in the improvement of the slave conditions. This was important in order to avoid the spread to Tobago of an apparently contagious disposition to slave revolts, which by that time was very evident in neighboring islands. Amelioration therefore meant additional costs for better clothing, food, shelter, medicines and insurance which further reduced the competitiveness of the island's agricultural economy. It is important to note as well, that from as early 1822, Tobago planters also began to cite declining soil fertility as a factor limiting their ability to increase both agricultural productivity and quality.

All of the above effected negative factors on Tobago, so that by 1822, the island's agricultural economy was virtually destroyed. Many sugar estates went into bankruptcy, sparking a significant decline of the planter population by migration.

Despite subsequent attempts to resuscitate the economy, fierce competition from newly emerging colonies combined with imperial indifference and finally a devastating hurricane in 1847 resulted in a total collapse of the island's economy. According to Williams, the history of Tobago in the nineteenth century was one of economic decline, a protracted situation which eventually led to Tobago's annexation to Trinidad in 1889. This change was to herald a new era in the development of the island's agricultural economy.

1.2 Post Annexation to Independence - The Agricultural Economy:

The annexation of Tobago brought significant changes to the island. The most important of these was in terms of the island's administration which now meant that the locus of decision-making with respect to Tobago was now shifted from Scarborough to Port-of-Spain. Annexation also meant that Tobago had now surrendered its direct communications with the wider colonial empire, with all trading arrangements now being administered via Trinidad.

In terms of agriculture, the abolition of the slavery and the ensuing labor shortage resulted in the diversification of agricultural production with the evolution of new relationship between the plantations and the newly emancipated Africans. In an effort to deal with the

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

severe shortage of estate labor, there was the introduction of the metayage system which served to dampen the effects of this shortage. This system was a key economic survival mechanism introduced to stave off the nineteenth century economic decline, and operated well enough to stimulate substantial agricultural output during the period from annexation to post independence. This period can be described as Tobago's second golden era in agriculture.

These individuals in an effort to generate an income for themselves, sought paid labor on the estates, and supplemented this with a mixed farming done on marginal estate lands. This relationship, as established under the metayage system was responsible for genesis of a fledgling peasant agriculture, which was to become quite substantial by the mid twentieth century. Phillips (1987) describes a number of variants to the system which by the mid-nineteen forties amounted to the peasant estates relationship then commonly known as "corn ground".

1.2.1 The Metayage System:

Under the early metayage system, landless peasants were employed on the estates, and were offered incentives in the form of the use of marginal tracts of estate land. Such land was used to produce crops for supplementing their meager wages. This arrangement required that the peasant, in return for the use of the land, tended to the permanent crops which fell within the boundary of his plot. Given the socio-cultural dynamics of the day, many peasant farmers often excelled in their management of their plots in an effort to gain the praises of the landowner, and produced far more than their subsistence requirements. It is this excess, collected from a widely dominant peasant agriculture which generated the agricultural output for which Tobago became known during the decades from the 1920's to the early seventies. Chief among the products were rootcrops (yams dasheen, sweet potato, cassava, tannia, eddoes), pigeon peas, plantains and bananas. In terms of livestock, common fowls, sheep and goats and pigs were commonly reared, albeit at a subsistence level.

During this time too, and up to the mid-twentieth century, the estates, in struggling to remain productive, shifted their production to mainly cocoa, coconuts and smaller productions of coffee and tobacco. Both sugar cane and cotton were almost non-existent by this time, and given Tobago's new constitutional arrangement with Trinidad, all agricultural produce from the estates were sold to commodity associations in Trinidad. In the case of cocoa, a local agent of the Cocoa board handle all purchasing and shipping arrangements from the island. A similar arrangement obtained for the marketing of copra from the coconut estates.

1.2.2 Other Factors:

Along with the elements of the metayage system, a number of other important factors favored the success of Tobago's agriculture at that time. In the case of the estates, low farm wages made it possible to economically operate especially when substantial quantities of land remained out of production. Moreover lack of employment opportunities outside the agricultural sector, a non-existent trade union involvement in agriculture and a more positive social disposition to agriculture in general, conspired to encourage a vibrant estate and small-farmer agricultural regime.

Finally, and most importantly, Tobago by the mid-twentieth century enjoyed a well-organized public marketing infrastructure in which boats, travelling around the island, collected produce from coastal depots for eventual transshipment to produce markets in Trinidad. This trade was sustained by a number of private agents who handled the sale produce in Trinidad and the transfer of monies to producers in Tobago. This system operated well until its decline soon after independence resulting in another significant contraction of the islands agricultural economy.

2. Post-Independence - Further Agricultural Decline:

In describing the experience of Tobago's agriculture during the period from independence to the present, at least five major factors may be cited as having profound, and generally negative effects on the island's agricultural development. These are:

- the passage of hurricane Flora in 1963.
- expansion of the state sector, and improved access to education after independence.
- oil-boom of the seventies and early eighties with its accompanying further expansion of the state sector in Tobago.
- administrative and political changes - the setting up of the Tobago House of Assembly.
- subsequent economic decline accompanied by small but significant expansion of the tourist and service sectors.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

2.1 Hurricane Flora:

In September 1963, Tobago was severely affected by Hurricane Flora. This hurricane effected a serious blow to what was then a struggling plantation agricultural sub-sector as well as a thriving peasant sector. The island's coconut and cocoa estates were seriously affected having sustained major damage to tree-crops. This resulted in a subsequent long term decline of Tobago's output of long term crops.

The output of the peasant sector, while showing greater resilience was also dampened by the passage of the storm. Hence by the mid to late 1970s, Tobago's output of foodcrops such as yams, dasheen, sweet potatoes and pigeon peas had been significantly reduced. Table 1 below shows changes in cultivated crop acreage in Tobago in 1963 and 1982.

Table 1: Crop Cultivation in Tobago - 1963 & 1982 (Ha.)

Crop	1963	1982
Tree Crops:		
Cocoa	3,766	972
Citrus	51	43
Coffee	4	1
Coconut	3,719	5,931
Bananas	176	133
Plantains	100	144
Other	45	44
Total Tree Crops:	7,861	1,930
Non-tree Crops:		
Pigeon Peas	868	93
Ground Provisions	491	256
Other	435	303
Total Non-tree Crops	1,794	652
Total (All-Crops)	9,655	7,920

Source: Agricultural Sector Study of Tobago

2.2 Expansion of the State Sector:

With the coming of independence, there was also the expansion of state activities in Tobago. This was necessary in order to provide for the administrative and civil servicing

of the island, and meant new avenues for state employment. Many islanders found new employment in the protective services, administration, and public utilities, resulting in a movement of agricultural labor from the estates and other agricultural holdings towards the public service. This movement was further enhanced with the expansion of public education opportunities on the island, a result of deliberate national development policy at the time. The regime of state expansion manifests itself even up to the present in that today, the state sector is the largest employer in Tobago. A profile of employment by industrial group in Tobago is shown in Table 2 which follows.

Table 2: Employment by Industrial Group and Parish, 1991 (%)

Industrial Group	Total	St. George	St. Mary	St. Andrew	St. Patrick	St. David	St. Paul	St. John
Agric. Hunting, Forestry/Fishing	6.0	8.3	19.6	3.4	4.9	2.0	14.2	6.5
Mining/Quarrying	0.3	-	2.2	0.6	-	-	-	-
Manufacturing	2.0	2.5	-	1.5	4.5	1.4	-	-
Electricity, Gas & Water	3.8	4.2	2.2	4.5	4.1	5.3	-	3.2
Construction	22.2	16.7	30.4	16.2	15.8	27.3	35.7	48.4
Wholesale & Retail Trades	8.4	8.3	10.9	12.3	6.9	6.0	4.7	3.2
Restaurants/Hotel	6.7	5.8	4.3	7.2	8.5	7.3	1.9	6.5
Transport/Storage & Communication	8.2	6.7	6.5	6.3	11.4	10.7	5.8	8.0
Finance/Insurance & Real Estate	4.7	3.3	2.2	6.3	5.3	3.3	4.7	1.6
Community/Social/Personal Services	37.7	44.2	21.7	41.7	38.6	36.7	33.0	22.6

Source: Central Statistical Office

2.3 Oil-boom of the Seventies and Early Eighties:

Yet another important development which contributed to the further economic decline of the Tobago agricultural sector was the economic boom of the seventies and early



eighties. This period saw a rapid increase in fiscal expenditure which supported a growing public sector. Significant wage increases in the public sector further stimulated the flow of labor from the agricultural sector as workers sought to avoid the drudgery and negative social stigma of associated with the traditional agriculture of the day. Hence, higher remuneration, job security, generally better working conditions and other social factors helped to reduce the productivity and output of Tobago's agriculture during this period. Even up to the present, it is estimated that the average monthly income from agriculture is only slightly more than 50% of the average income from all occupations in the country¹. Table 3 presents a summary of the contribution of agricultural incomes to total incomes in Trinidad and Tobago in 1982.

Table 3: Contribution of Agricultural Income to Total Household Income - 1982

Agricultural Income % of Total Income	% Households Trinidad	% Households Tobago
< 25	40	41
25 - 49	21	29
50 - 74	14	17
75 - 100	22	09
Not Reported	03	03

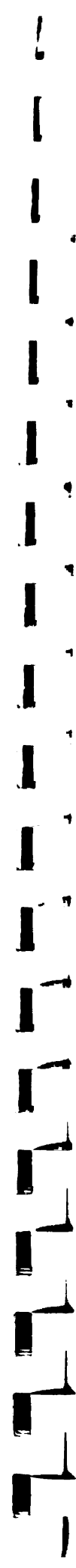
Source: 1982 Agricultural Census

2.4 Administrative and Political Changes:

Arguably, the most important development to affect all economic sectors in Tobago during the post-independence period was the coming into being of the Tobago House of Assembly (THA). This body evolved out of a period of intense political lobbying between Tobago and Trinidad, for what was considered a more equitable participation of Tobago in the national development process. The THA, which since that time has been constituted of a majority of elected members in opposition to the central government², was set up to manage the developmental and daily affairs of Tobago with the exception of certain areas deemed to be of important national importance. At the time of its inception in 1979, the THA presented a ten-year development plan in which it proposed to transform Tobago from a dependent consumer status to "productive self reliance". In this regard, there was renewed interest in developing all sectors of the island's economy,

¹ Estimated from CSO's Labor Force Report, 1991

² From its inception, the THA has comprised a majority of elected members from one of the opposition parties, the only exception being from 1986 - 1991 when this opposition party actually became the government.

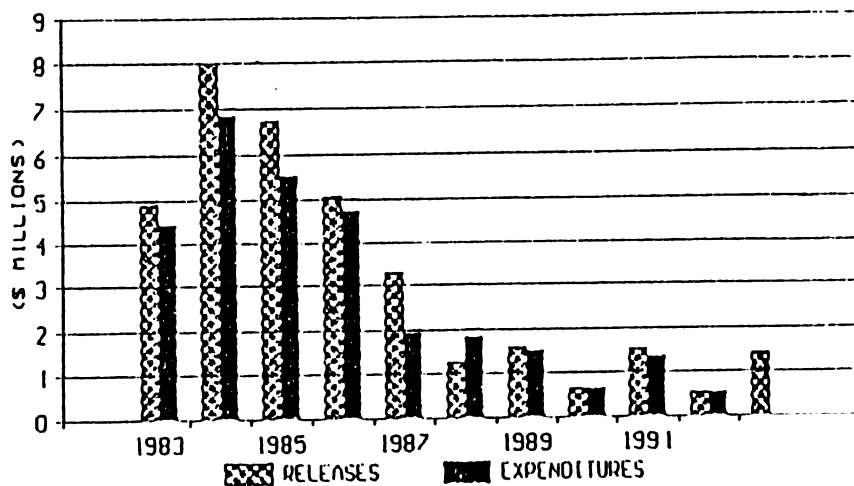


and a number of new initiatives were undertaken to this end. However, because Tobago at that time endured a very poor state of public and social infrastructure many new public ventures such as road construction, port development and other social services had the effect of competing for resources in the agricultural sector thereby stifling agricultural development initiatives. Indeed, most of the agricultural initiatives themselves were continuations of state-run projects which did not establish economically feasible linkages with the local farming public. Hence, many services such as tractor pool, propagation and veterinary services, were provided at heavily subsidized rates which in the long term did not foster the development of an efficient and self-sustaining agricultural production regime.

2.5 Subsequent Economic Decline:

Finally, the subsequent contraction of the national economy from the early 1980s has also had mixed effects on agricultural development in Tobago. On the one hand, the decline of the economy forced a reduction in government spending, which in the case of Tobago has had significant impact, especially over the last two years. While data for the period 1983-1992 show government's releases for recurrent expenditures (in nominal terms) to the THA's Division of Agriculture to be fairly stable, real development expenditures for the period peaked in 1984 and declined significantly since that time. Figure 2 shows this trend.

Figure 2: Budget Releases to the Division of Agriculture (THA) for Recurrent and Development Services, 1983-92 (\$).





As a result the Division of Agriculture, and by extension the state sector has been unable to sustain its level of employment in all sectors of the Tobago economy. Moreover, it has not been able to undertake sustained job creation projects in the island except for interim public projects for the development of the island's air and sea ports.

On the positive side however, the economic decline has had the effect of focussing attention once again on the agricultural sector in Tobago and has mobilized a number of fora for discussing the re-vitalization of the island's agriculture. The decline has also slowed the movement of labor out of the sector as other sectors have been unable to absorb additional labor. Also, the economic decline along with the positive effects of public infrastructure development have stimulated the development of the local tourist sector which, in addition to generating some employment possibilities, has created limited markets for local agricultural produce.

2.6 The Present Status of Agriculture in Tobago:

Arising out of the historical experience, as well as the developments of the post independence period, the present status of agriculture can be subsistence level. This is evidenced on the examination of the status of the main resources applied to agriculture on the island (land, farmer population), the current commodity production profile, and the institutional framework in which agriculture is currently managed.

2.6.1 Resources:

Although it is widely held that Tobago possesses a high quantity of very fertile lands, in reality, this is not actually the case. The island possesses a total land area of 30,044 ha³, two-thirds of which is deemed unsuitable for cultivation on account of its high erosion risk factor, poor accessibility and poor soil conditions. Soil classification assessments have identified seven capability classes of soils in Tobago. The first four of these classes, while still suitable for agriculture, are limited by slope and moisture conditions. These amount to the most arable lands in Tobago and approximate some 56% of the total acreage. Only 1% of Tobago's soils is actually classified as capability class I. Table 4 shows the distribution of land by capability classes in Tobago.

³ Agricultural Sector Study for Tobago - CEPP/IICA - San José

Table 4: Land Capability By Sub-Regions - Tobago

SUB REGION	CLASS I, II & III LAND (HA)	%
North Coast	151.84	1.3
North East	158.47	1.4
Windward	3,591.48	31.8
Central	1,641.51	14.5
South West & Scarborough	5,745.89	50.8
TOTAL	11,289.19	99.8

Source: Agricultural Sector Study for Tobago

Apart from the physical characteristics of the land, the issue of land ownership and tenure also has significant impact on the development of agriculture in Tobago. In the case of ownership, Tobago maintains a strong legacy of the ownership pattern evidenced during the early settlement period, whereby the majority of its arable lands are held by private estates and the state.

Up to 1993, the Division of Agriculture noted fifteen private estates in Tobago, which together held at least 2433.7 hectares of land⁴. The state is however the dominant land owner, having in its control approximately 10,770 ha, or roughly 33% of Tobago's total land acreage. This pattern of ownership has serious implications for effecting future agricultural development initiatives where such is contemplated upon private investment in agriculture. The current situation has amounted to an effective shortage of land for private investment in all sectors on the island which, compounded by speculative holding by largely external landlords, has fuelled strong upward movements in land rents.

Although the state has been seeking to make land available to farmers under a state-lands distribution programme, its management of this function has been weak, and is not supported by an appropriate system of land recording. The process of selecting applicants is extremely bureaucratic, and where leases are eventually granted, there is poor enforcement of lease conditions and collection of rents. This situation is further exacerbated by the generally unclear regime of entitlement of a significant number of land occupiers in Tobago. Hence many private farmers are constrained in using land as collateral for agricultural investment purposes, and are even unwilling to undertake significant agricultural investment ventures on lands where valid entitlement has not been adequately established.

⁴ Figures for three of these not available



In recent times, competition for land among other sectors has been intensified resulting in the diversion of a substantial amount of land from agriculture to built development. While, for instance, more than 66% of Tobago's total land area was under crops and forests, only 11% remained this way by 1982 (see Table 5). With the diversion of land has come increasing evidence of environmental compromise as various sectors seek to maximize their use of the land resource. The resolution of the land ownership, management and use in Tobago is therefore a key factor in the future development of the island's agriculture.

Table 5: Estimated Land Use, Area 1973 and 1982

LAND USE	1973		1982	
	HECTARES	%	HECTARES	%
Croplands	5,472.9	18.2	2,527.8	43.1
Grasslands	1,813.8	6.0	966.7	16.5
Land under fallow	1,500.4	5.0	278.2	4.7
Abandoned and semi-abandoned croplands	1,150.6	3.8	652.6	11.1
New lands prepared for crops/pasture	--	--	185.9	3.2
Natural and other forest	19,521.0	65.0	873.2	14.9
Built on and service area	492.7	1.6	233.2	4.0
Other lands	92.6	0.3	154.4	2.6
Total	30,044.0	100.0	5,872.0	100.0

Note: Data for 1973 is for the entire island while data for 1982 is based on holdings surveyed.
Source: Land Capability Study, 1973 and Agriculture Census, 1982.

2.6.2 Labor and Farm-Population:

The 1982 agricultural census records 1,727 registered farmers in Tobago. By 1992, the Division of Agriculture acknowledged some 2,727 farmers distributed, as shown in Table 6 below. The majority of these were part-time operators, with farm labor supplied mainly by the farm family.

Table 6: Number of Registered Farmers by District -1992

DISTRICT	NUMBER	%
Mt. St. George	501	18.4
Roxborough	404	14.8
Goldsborough	401	14.7
Bethel	346	12.7
Runnemedede	315	11.6
Plymouth	297	10.9
Belle Garden	238	8.7
Charlotteville	225	8.2
Total	1,727	100.0

Source: Division of Agriculture, Forestry & Marine Affairs

For the few operations which were large enough to hire full-time labor, such labor was considered to be expensive, scarce and unreliable. Average daily agricultural wage rate in 1993 was \$40⁵ although higher rates were often paid for special tasks. In terms of age distribution more than two thirds of Tobago's farmers are above the age of 44 yrs. Only fifteen percent were under 35 yrs reflecting an ageing farming population. Moreover the sector has not been able to attract new entrants, and in spite of rising unemployment in recent years, is regarded as a place of last resort. Table 7 shows the age distribution of farmers for 1976 and 1992.

Table 7: Age Distribution of Farmers in Tobago - 1976 and 1992

YEARS	1976		1992	
	NUMBER	%	NUMBER	%
Under 25	24	1	81	4
25-34	181	7	184	9
35-44	392	16	317	16
44-54	555	23	480	25
55-64	593	25	455	23
65 and Over	674	28	427	22
Total	2,419	100	1,944	100

⁵ Draft Sector Study for Tobago - CEPPIICA, San José, Costa Rica - 1993.

2.6.3 Farm Structure and Production:

According to the 1982 agricultural census, there were 1966 agricultural holdings in Tobago, with a total acreage of 5,872 ha. The majority of these holdings were less than 2 ha. (71%) and occupied approximately 15% other the total area of these holdings. The average size of these small holdings was 0.6 ha. The larger holdings comprising mainly state-lands and private estates averaged 160.8 ha (Table 8)

With respect to technology, Tobago farmers generally do not use a high level of technical inputs in production. Production technologies are by and large traditional, a possible consequence of the small sizes of operations, as well as the undulating terrain on which most agricultural plots are located.

Table 8: Number of Holdings & Area by Size Category, 1982

SIZE (Ha)	NUMBER	% OF HOLDINGS	HECTARES	% OF AREA	AVERAGE SIZE/HOLDING
< 1	1,022	52.0	389.8	6.6	0.38
1 < 2	373	19.0	509.6	8.7	1.37
2 < 5	444	22.5	1288.0	21.9	2.90
5 < 10	77	3.9	532.0	9.1	6.91
10 < 50	34	1.7	580.5	9.9	17.09
50 < 100	7	--	495.7	8.4	70.82
Over 100	9	--	2,076.4	35.4	230.71
	1,966	100.0	5,872.0	100.0	2.99

Source: Agricultural Census - 1982

In terms of production, Tobago was known in the past for its rootcrops, pigeon peas, plantains, as well as tree crops such as cocoa, coffee and coconuts. With the decline of the sector however, there remains only rudimentary evidence of such production. Much of the island's agricultural production now takes place in backyard gardens. However there has been significant development in the island's fisheries sub-sector particularly with respect to the flying-fish industry. In 1991, Tobago reported 31 landing beaches for fish, and some 840 registered fishermen were deemed to be operating 275 fishing boats from nine major sites. Fishing operations are largely artesanal in nature employing small (<7.6 metres) open-decked vessels. Most of these vessels are powered by out-board motors. The flying fish sub-sector is much more organized, however, and landings for the 1990/91 fishing season are estimated at 359 metric tons. Table 9 profiles the performance of the fishing sector for the last six years.



In terms of livestock, this sector study remains largely under developed in Tobago.

Table 9: Fish Landings for Selected Sites 1988-1993

Species	1988	1989	1990	1991	1992	1993*	Total
Flying Fish	64,517	62,665	132,768	105,496	151,327	115,722	632,495
Dolphin	23,757	36,362	21,571	24,148	12,909	9,893	128,640
King Fish	1,867	2,388	740	1,541	1,379	3,547	11,462
Tuna	1,663	2,559	818	2,158	2,632	1,227	11,057
Shark	1,824	1,713	1,711	1,643	2,583	1,361	10,835
Total Landings	93,628	105,687	157,608	134,986	170,830	131,750	794,489

Source: Extracted from Sector Study for Tobago

2.6.4 Institutional Framework:

The Division of Agriculture, Forestry and Marine Affairs is the agency responsible for managing the development of the agricultural sector in Tobago. However other agents involved in the agricultural development process include the Marketing Division, the Planning Division of the THA and the Agricultural Development Bank (ADB). The Marketing Division is seen as holding pivotal responsibility by providing a market for agricultural produce in Tobago. However, the operational mandate of this unit has rendered it inefficient as it is charged with the responsibility of purchasing farmers' produce regardless of supply conditions, and produce quality. The re-organization of this unit is a critical pre-requisite to the future development of agriculture in Tobago.

The ADB is the major agent for agricultural credit in Tobago. Generally, most of its loans to the agricultural sector have been small (less than TT\$20,000), reflecting the current level of agricultural activity on the island. However the ADB has been making progressively larger loans to the fisheries sub-sector particularly to finance the development of processing activities.

Cooperatives and Farmers Associations form the major other institutional actors in the agricultural sector in Tobago. While there are a relatively large number of these bodies registered with the cooperatives division, their activities are generally low-keyed and operations are on a small scale.

In general therefore, the institutional framework for agricultural development in Tobago is weak, with poor inter-institutional coordination both within and outside of Tobago. There is, however, limited human and technical resources to support an enhanced



development regime. This is especially the case within the Division of Agriculture, Forestry and Marine Affairs, where the management of the sector is centered.

3. Implications for the Future:

On the basis of the historical profile and current situation thus far described for agriculture in Tobago, five clear implications for development emerge. These are:

1. The need for a new approach to developing the agricultural sector.
2. Recognition of the imperatives of macro and sector policies of the broader nation-state of Trinidad and Tobago.
3. The need for future agricultural development to be environmentally sensitive.
4. Market development in order to establish the island's agriculture in the national and international market place.
5. An enhanced regime of extra-institutional support to in order to support a new development thrust.

3.1 A New Approach:

While Tobago's dominance in agriculture in the past was explained by socio-cultural elements associated with slavery and a thriving peasant sector, developing this sector today requires a new approach. This approach must be focussed with emphasis on promoting the production and marketing of a selected range of commodities, in a competitive manner, for clearly targeted markets. Moreover, the future development of agriculture must also allow for and encourage the fomentation of inter-sectorial linkages as a critical basis for ensuring economic sustainability of this and all sectors in Tobago.

This new approach means, therefore a conscientious effort to identify and evaluate the critical resource requirements in order to attain clearly specified sector goals, at the same time recognizing that goals will not be achieved unless critical resources are forthcoming. Such resources include adequate and suitable agricultural land, targeted and trained farmer population, available technical support, dynamic and broad-based institutional support, access to credit, trade and marketing infrastructure, and an encouraging macro and sector policy framework.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

3.2 Recognition of the Imperatives of National Macro and Sector Policies:

Future agricultural development in Tobago will also require a broadening of the perspectives in terms of Tobago's role in national agricultural development. Hence, instead of seeing the movement of agricultural produce from Trinidad to Tobago as a threat, opportunities for Tobago's agriculture can also be explored and exploited. Also recent developments in Trinidad and Tobago with respect to new international trading arrangements, macro-economic policies, exchange rate management among others, must ultimately impact on Tobago, and cannot be ignored when the future development of the sector is contemplated.

3.3 Environmental Sensitivity:

In the past, agriculture in Tobago demonstrated very little sensibility to the consequences of its practice on the environment. However, as competition for scarce resources intensifies, the need to preserve the natural environment becomes even more critical.

To the extent therefore that agriculture directly impacts on the natural environment, future thinking in agriculture must treat this issue as an urgent imperative if the island's total development is to be realized. Hence the extensive hillside cultivation practiced up to the early seventies needs to be extensively studied in order to determine its place in a future Tobago agriculture.

Inter-sectorial competition also demands greater attention to the management of water resources, the use of agricultural chemicals, the deforestation, and preservation of the watersheds, and the use of coastal and internal wetlands. This is of particular importance if the tourist sector is expected to link naturally with the agricultural sector.

3.4 Market Development:

Many have bemoaned the inadequacy of the market for agricultural produce in Tobago, citing this factor as a real constraint to future agricultural development. Indeed, the market for agricultural produce in Tobago is very small given the size of the population, as well as the well-established regime of backyard gardening. Therefore, future agricultural development will require an enhanced institutional capability in seeking out and characterizing markets for agricultural produce, and communicating this information to capable farmers in Tobago. Moreover, this process should be supported by a production system geared towards yielding a highly differentiated product which is competitive.

Future agricultural development cannot be sustained by a reliance on the local market, and the evolution of an 'export culture' among farmers, farmers groups and other agribusiness entrepreneurs will have to be accorded high priority.

Finally, this approach to agricultural marketing will require enhanced institutional machinery to undertake functions such as the gathering and dissemination of market information, target market characterization, costing, market promotions, financing and grading and standardization. This function must become closely linked to similar initiatives already underway at a national level.

3.5 Enhanced Extra-institutional Support:

At present, Tobago does not possess the institutional capacity to support an improved agricultural development initiative. For the future, there will be the need for greater institutional support from agencies both at the wider national level, as well as at the international levels. Such support can be in the form of technical support, funding, rendering of specialized technical disciplines, provision of information, training and liaison.

This implies greater proactive effort on the part of Tobago-based agricultural development agencies to establish linkages with external agencies in order to be able to bring the resources of these organizations to bear on the agricultural development process in Tobago.

4. Conclusion:

The history of agriculture in Tobago shows that for the two occasions when agriculture flourished, a number of non-economic factors contributed to this boom. Among these were the initial development of the sugar industry through slavery, and after its subsequent decline, the evolution of a fledgling peasant sector which generated spectacular outputs of tree crops and other food crops. On examination of the current socio-economic framework however, it is clear that the variables which operated in the past to realize these outputs are no longer relevant to an enhanced level of agricultural output in the future. Slavery and the plantation economy has disappeared, and Tobago now being enfolded in the nation state of Trinidad and Tobago is affected by the socio-economic, and political realities of this constitutional entity. Agriculture in Tobago must now compete with other national economic sectors for resources. More importantly, these other sectors represent a preferred option for the investment of both capital and labor, given the social stigma associated with agriculture in the wider national economy.



Additionally, developments in social infrastructure, such as education, health-care and housing has resulted in improved lifestyles, which have fuelled a movement out of the rural sector, and has further constrained the participation of rural youth in a predominantly traditional agricultural regime.

Of significance also, are the new policy directions in which the country has embarked, in terms of new trade regimes, fiscal and exchange rate policies, and even the participation of the state itself in the operations of the overall economy.

All of the factors form the new mix in which Tobago's future agricultural development must take place. In this regard, there is need for a new approach to the development of the sector. This approach should be focussed towards clear sector performance targets, and should integrate the elements of environmental sustainability, competitiveness of production, intersectorial linkages, and an adequate institutional framework for sustaining the process.



References

- Balintulo, M. "Sociocultural Impacts of Tourism in Tobago", Economic Commission for Latin America and the Caribbean, 1991.
- Caribbean Agricultural Research and Development Institute, "Caribbean Sheep Production and Marketing Project - Tobago Sondeo Report", October 1990.
- Central Statistical Office, "1982 Agricultural Census", Ministry of Finance and Planning, Trinidad and Tobago, 1986.
- Central Statistical Office, "Annual Statistical Digest, 1991", Office of the Prime Minister, Trinidad and Tobago, 1993.
- CEPPI, "Agricultural Sector Study of Tobago", IICA, San José, Costa Rica, 1994.
- Division of Agriculture, Forestry and Marine Affairs, Tobago House of Assembly, "Administrative Report 1992."
- Douglin, Monica Y. "A History of Tobago 1815 - 1854". Thesis, UWI, St. Augustine, Trinidad 1986.
- Food and Agriculture Organization, "A Review of Planning Methodologies and Guidelines Relating to Agricultural Commodity and Area Development Programmes - A Mission Report", Vol. 1, 1989.
- Griffith, R. "A New Industry for Tobago - A Citrus Processing Programme", Ministry of Agriculture, Land and Marine Resources.
- James, V. "Business Failure and Success in Tobago", Department of Economics, UWI, St. Augustine, 1992.
- Ministry of Agriculture, Land and Marine Resources, Agricultural Data and Information Unit, "Annual Statistical Report" 1992.
- Ministry of Agriculture, Land and Marine Resources, "Report of the Team Appointed by Cabinet to Prepare a Draft National Policy for Food and Agriculture (Green Paper)", June 1993.
- Ottley, C.R. "Tobago - Robinson Crusoe's Island in the West Indies". PNM Publishing Company, Trinidad 1969.



- Ottley, C.R. "The Story of Trinidad and Tobago in a Nutshell". Horsham's Printerie, Port of Spain, 1972.
- Ottley, C.R. "Constitutional Changes in Tobago from House of Assembly 1770 to House of Assembly 1980". Trinidad, 1980.
- Phillips, A. "Constraints on Business Growth and Development in Tobago" , Small Business Development Corporation 1993.
- Phillips, R.O. "The Role of the Marketing Division in the Development of Agriculture in Tobago", Division of Agriculture, Tobago House of Assembly.
- Phillips, R.O. "Agricultural Development in Tobago - Past, Present and Future" - Division of Agriculture, Forestry and Marine Affairs, Tobago House of Assembly, September 1987.
- Tahal Consulting Engineers Ltd., Agrocon Ltd. "Basic Agricultural Sector Studies - Final Report", Ministry of Agriculture, Land and Marine Resources Trinidad and Tobago, 1992.
- Tobago House of Assembly - Division of Agriculture, "Rationalization of the Agriculture and Marketing Sectors in Tobago", 1987.
- Tobago House of Assembly, "Report on Conference on Agriculture of Tobago", June 1984.
- Trinidad and Tobago Tourism Development Authority, "Strategic Plan - 1990 to 1994", January 1990.
- Williams, Eric E. "History of the People of Trinidad and Tobago 1911 - 1961". A. Deutsch, London, 1964.

INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE
OFFICE IN TRINIDAD AND TOBAGO
AERO SERVICES CREDIT UNION BUILDING, Orange Grove Road, Trincity, Trinidad and Tobago
P.O. Box 1318 Cable: IICAPOS. Telephone: (809) 645-3023/3031/6481 Fax: (809) 645-3070
Internet E-mail <iicatt@opus-networx.com>