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# THE ROLE AND STRUCTURE OF AGRICULTURE IN BARBADOS AND THE AGRICULTURAL DEVELOPMENT PROGRAMME

E. C. Pilgrim.

Chief Agricultural Officer, Ministry of Agriculture, Labour and National Insurance, Barbados

## THE ROLE AND STRUCTURE OF BARBADIAN AGRICULTURE

### Agriculture as a Contributor to Gross Domestic Product

Agriculture has always been, and still remains, the most important contributor to the Gross Domestic Product of Barbados. The early explorers from Europe in the 16th Century quickly determined that the Island had no gold or other precious metals to offer. The first settlers in the early 17th Century concentrated on the production of tobacco and cotton and the sale of these products in Europe.

The more recent position of Agriculture can be seen from Table 1. In 1966, Agriculture provided 24.2 per cent of the Gross Domestic Product, with its nearest competitor being Distribution, with a contribution of 23 per cent. The performance of agriculture is all the more impressive when one realizes that Distribution depends indirectly on the performance of Agriculture and oscillates with any rise or fall in the agricultural sector. Furthermore, the manufacture and sale of rum which is a by-product of the sugar industry, contributes a substantial portion of the 14.4 per cent contributed by Manufacturing and Mining.

### Agriculture as an Employer of Labour

Tables 2, 3 and 4 give some indication of the value of Agriculture as an employer of labour in Barbados.

Agriculture employs approximately 21,900 persons, including the self-employed. This constitutes 27 per cent of the total labour force of 93,300 persons and makes Agriculture the largest employer of labour. Approximately 13 per cent of the total labour force is, however, unemployed, and it will be noted from Table 4 that the projection for employment in the sugar industry indicates a decline in the importance of the industry as an employer of labour.

### Sugar

Agriculture in Barbados is dominated by the production of sugar. Its contribution to the Gross Domestic Product for the years 1963 to 1966 inclusive has averaged 32.6 million dollars annually as against 8.3 million dollars for all other types of agricultural enterprise. From Table 5 it can be seen that, as an earner of foreign currency, sugar has played an even more dominant role than it did over the six year period 1961-66. The sale of sugar, molasses and rum has provided annually an average of 88.2 per cent of the total domestic exports of Barbados.

In addition to sugar and its by-products, Barbados produces food crops — mainly starchy root crops — milk, some beef, pork, poultry products and green vegetables. These items are grown mainly for local consumption and, in sharp contrast with sugar, full and accurate information is largely non-existent on the production, movement and local consumption of these products.

### Food Crops

Food crops are grown mainly on sugar plantations on land from which the final ratoon crop has been reaped and which is awaiting the planting of a new crop of plant cane. These crops are planted under the Local Food Production (Defence) Control Order of 1942 under which plantations are required to plant not less than 12 per cent of their arable acreage each year in such crops. Acreages planted in such crops are shown in Table 6.

The statistics show that, although there has been a slight decline in the total acreage planted to food crops, there have been substantial changes in the totals for different crops. Sweet Potato acreage has, for example, declined substantially while the acreages planted to corn, pulses and other crops (including green vegetables) show a modest upward trend. The actual production of these acreages planted is unknown.

### Milk and Beef

Accurate information on milk production is available only for milk supplied to the Pine Hill milk processing plant. Supplies to that plant, which commenced operations in April 1966, have been as shown in Table 7.

It is believed that Barbados consumes approximately 4.9 million gallons of milk per annum, of which 3.4 million gallons are imported in the form of evaporated milk and milk powder, while some 1.5 million gallons are believed to be produced locally from approximately 5,000 head of cattle, most of which are owned in groups of 1 to 3 animals by small farmers.

Beef production is at present limited to the slaughter of old and barren cows and unwanted "veal" calves.

### Pork

The pig industry is at the moment geared only to the production of pork. Barbados has a population of some 21,000 pigs which provides about 1,300,000 pounds of pork annually for local consumption. Most of these animals are slaughtered at

the Barbados Marketing Corporation, which has produced figures of numbers and weights as shown in Table 8.

However, Barbados in 1966 imported some 4,500,000 pounds of fresh and processed pork valued at approximately 2½ million dollars, and this figure does not include sausages and canned pork loaves.

### Poultry Products

The size of the industry producing locally grown chickens and eggs for local consumption is unknown. It is believed that the larger commercial poultry farms are now producing annually about 677,000 chicks for sale locally and abroad and 334,000 dozen eggs and 641,000 pounds of meat for sale locally. To this must be added the unknown amount of eggs and meat produced by the numerous householders who keep 100 or less birds.

Barbados nevertheless imports poultry products to a value of approximately \$1,176,000 annually.

### Structure of Agricultural Holdings

Of the 106,240 acres of land which comprise Barbados, 66,000 acres are regarded as arable, and sugar is grown on a more or less permanent basis on 64,000 of these acres. In any one year, approximately one-fifth of the sugar cane lands is temporarily relieved of its sugar crop while awaiting re-planting of cane, and this acreage is available for short term food crop production.

An indication of overall land utilization is given in Tables 9, 10, 11 and 12. The situation is one in which 70,190 acres or 83 per cent of the arable acreage is found in 210 farms of 10 or more acres. Most of these farms are in units of 200 or more acres with an average size of 325 acres. The remaining 14,268 acres or 17 per cent of the arable acreage is subdivided into farms of which the average size is 0.77 acre.

Most of the Island's crop production comes from the 210 larger farms, with the small farms of under 10 acres producing mainly sugar cane and some vegetables. The small farms produce slightly more livestock than do the large farms. Outstanding amongst these farms of small acreage are the few highly specialized and highly capitalized poultry farms which, on a basis of investment and production, could be classed as large farms.

The persons who pursue agriculture on the farms of under 10 acres are in the main part-time farmers who are also employed in other work in the larger plantations or in other sectors of the economy. They tend to cultivate sugar cane because of the relative ease of supervision when compared with crops such as green vegetables and they keep a few livestock which can be converted into ready cash when this is needed.

The farms of over 10 acres are with few exceptions

fully cultivated. A casual observation of the farms of under 10 acres suggests that under-utilization of this land is widespread.

## POLICY PROBLEMS AND THE PROGRAMME FOR DEVELOPMENT

### The Search for Substitutes for the Sugar Crop

For the past 300 years sugar production has been the mainstay of agriculture and there is much truth in the local saying that "if sugar sneezes the remainder of the economy catches pneumonia".

The value of the sugar crop as an earner of foreign exchange and an employer of labour has already been shown. There are, however, other factors which have contributed to the pre-eminence of this crop. The arable land in Barbados, unlike land in most of the other territories of the English-speaking Caribbean, is comprised of a thin soil of approximately 2 feet in depth over relatively inert limestone. In addition, the annual rainfall in Barbados is relatively low for the production of most tropical crops and the island is subject to salt-laden drying winds of relatively high velocity for most of the year and especially in the dry season. The difficulties of climate are further aggravated by the high winds and occasional storms, with cloudbursts, which occur during the hurricane season.

The sugar cane is one of the few tropical crops which could withstand these unfavourable climatic conditions and maintain a reasonably steady level of production year after year without causing the eventual loss of the thin layer of soil on which Barbadian agriculture exists. It also maintains a relatively high gross return per acre which even at present prices yields approximately \$400.00 per acre for the growing of the cane and if the manufacturing of the sugar is added, increases that gross return to approximately \$600.00 per acre. Certain crops such as tobacco and cotton have been tried over the years, and have had to be abandoned. Many other crops do not permit the intensive land use and high return per acre needed in land-hungry Barbados with a population density of 1,495 persons per square mile.

Sugar cane, however, has its own problems in the form of world over-production and the competition from the new and rapidly expanding beet sugar industry. These factors have resulted in a situation in which sugar is being sold on the world market at prices which are so much lower than the cost of production in Barbados that termination of the Commonwealth Sugar Agreement or any substantial lowering of the price now paid under this Agreement for Commonwealth sugar would probably spell immediate ruin for the Barbados sugar industry and, automatically, for the Barbados economy.

The urgency with which Britain is pursuing her bid to enter the European Economic Community casts a further uncertainty on the long-term prospects for Commonwealth sugar, although this uncertainty has now been somewhat mitigated by the recent signing of a new International Sugar Agreement.

What is needed, therefore, is a crop or combination of crops which can perform the functions which are now performed by the sugar cane and can provide on an annually recurring basis at least the same returns per acre as are now being produced by the sugar industry. The search for such a crop or combination of crops continues, and is being intensified, but results achieved to date are not encouraging.

Research has already pointed to certain crops which may be grown in the place of sugar on lands which are marginal for sugar cane. Prominent amongst these are grass for livestock, vegetables, cotton and coconuts. These two last mentioned crops, in addition to their main product of cotton-lint and coconut-oil respectively, produce by-products of great value in the production of livestock feeds, and lend themselves to the creation of ancillary manufacturing enterprises. The major limiting factors in the expansion of production of these crops are the lack of adequate marketing facilities and, in the case of certain of the crops such as vegetables and some livestock enterprises, the island shortage of water for irrigation. Efficiency of production is also adversely affected in some cases by shortages of capital and credit, by the difficulties of obtaining skilled labour, by a lack of production know-how and by the unfavourable farm size structure in the small farm sector.

#### Import Substitution

Apart from its role as an earner of foreign exchange, an employer of labour and a provider of the basic starchy root crops, Agriculture in Barbados has an important role to play in the area of import substitution. The need for production of foods which could replace present imports may be gauged from the fact that, in 1964, of a total domestic export figure of \$45 million, \$29 million was utilized in importing food and food products into Barbados, of which amount the importation of meat, milk, fruit and vegetables accounted for approximately \$12 million. The quantity and value of certain selected food commodities imported in the years 1957, 1960, 1963 and 1966 are given in Table 13.

The aim therefore is to stimulate local agriculture to produce as much as possible of the food now imported where this can be achieved at a reasonable cost, thus releasing hard-earned foreign exchange for the purchase of commodities which cannot be produced in Barbados.

#### Soil Conservation

Sugar cane cultivation, with its annual heavy soil blanket of leaf, has been the most important factor in controlling soil erosion in Barbados, although this erosion controlling effect is now being threatened to some extent by the enormous increase in the incidence of cane fires during the last three years.

Apart from the rolling coralline soils, however, there exists in the precipitous Scotland Area in the North East of the Island an area of approximately 15,000 acres, or one-seventh of the total land area of

the Island, which is not covered by the limestone cap and which consists of layers of sedimentary soils of varying texture which were brought to the surface of the sea during the geological upheavals which created Barbados.

The soils of this area are capable of growing many crops which do not thrive on the limestone soils, but the area is subject to severe surface erosion and especially to a deep-seated slippage of soil which threatens not only that area but the remainder of the coralline land mass of Barbados.

Government has embarked on an intensive and relatively costly programme to prevent the continuing slippage of soil in the Scotland Area and to cover the land surface with crops suited to the soils and terrain.

#### The Overall Programme

The first aim of the agricultural programme is to continue producing the present output of sugar with less land and other resources whilst, at the same time, the production of other agricultural commodities is increased with the resources so released. The Barbados sugar industry now appears to be on the verge of substantial internal change. Measures such as field testing of cane before reaping, improved cane varieties and improved field cultivation and drainage techniques are expected to produce higher yields of sugar per acre, while the urgent need to reduce production costs and the increasing difficulty encountered in obtaining hand labour for cultivation and reaping are pointing to the need for increased mechanization of sugar cane cultivation and especially of sugar cane harvesting.

It is expected that, over the next ten years, improvements such as those just mentioned will enable the growing of the present tonnage of sugar on approximately 54,000 acres of land, thus releasing 10,000 acres of the less productive sugar cane lands for other agricultural enterprises. This 10,000 acres, coupled with the 2,000 acres which are not now being used for sugar cane cultivation, will make available a total of 12,000 acres for the planting of other crops.

The exact proportion of this 12,000 acres which will be devoted to the non-sugar cane enterprises will ultimately depend on the marketing facilities available for the end products of these enterprises, and on the degree to which Barbados can structure the size of agricultural holdings to produce units of adequate size for the economic production of the crops envisaged. The speed with which local research and advisory services and credit facilities can be developed to provide the farmers with the knowledge and capital which will be needed, will also be important. Present indications are that the 12,000 acres could with advantage be planted to the crops listed :

Grass (for livestock)	4,000 acres
Cotton	4,500 acres
Coconuts (with grass beneath) and Fruit Trees	2,000 acres
Vegetables	1,500 acres.

## SOME FURTHER PROBLEMS OF POLICY AND PROCEDURE

### The Magnitude of Effort Required for Diversification

Barbados agriculture has for many generations depended on the initiative, drive, energy and monetary provisions generated in and for the production of sugar. The public sector has over the years concentrated mainly on assisting to a limited extent with the production of sugar. Development of non-sugar agriculture has been very limited, and the success of most of the various and limited programmes which have been initiated to encourage crop and livestock diversification is open to doubt, and their value as a contribution to the economy is yet to be proven.

An immense effort is needed by way of planning, the provision of adequate research and extension staff, the provision of training, capital and equipment for farmers, and the modification and coordination of agencies involved in the development of agriculture. It is perhaps difficult for a public sector long used to very modest commitment to accurately assess the quantum of effort and expenditure now needed. It is not without significance that the percentage of public funds allocated to agricultural development in Barbados has been substantially lower than the percentage allocated to agriculture in Commonwealth Caribbean territories such as Jamaica, Trinidad and Guyana.

### Distribution of Land Resources and Land Prices

Table 10 shows that 83 per cent of the land in Barbados is owned by 1.1 per cent of the farmers. This land is in holding sizes which are by no means large by world standards. The remaining 98.9 per cent of the farmers occupy holdings which average 0.77 acres in size, and most of the owners of such holdings are of necessity only part-time farmers. The shortage of agricultural land in Barbados and the rapidly growing tourist and building industries have resulted in a situation in which only the economically marginal lands ever come on the open market and small parcels of land sell at prices ranging between \$1,800.00 and \$6,000.00 per acre.

This situation makes the establishment of medium sized farms of the 10 to 50 acre size an extremely difficult operation, and often such farms are precluded from ever becoming economically viable because of the initial exorbitant price of the land. It is with the greatest difficulty that the minimum size into which agricultural land is permitted to be subdivided has been held at 4 acres, and there is mounting pressure for subdivision into smaller units to enable as many persons as possible to own agricultural land and to keep the price of an agricultural holding within the reach of the individual who can find \$4,000.00 to \$6,000.00 with which to purchase such land. There is growing evidence that in Barbados, as in so many other countries, such fragmentation leads to underutilization and sometimes abandonment of land.

This does not take into account the 10,000 to 12,000 acres which will be thrown out of sugar cane each year for replanting in sugar cane later in the same year or early in the following year, and which will therefore be available for crops other than sugar cane for a period of several months. This "thrown out" land will be expected to produce the root crops, cereals and pulses needed as the basic carbohydrate foods for man and livestock in Barbados. With adequate processing and marketing facilities, these foods can continue to supply a large proportion of the carbohydrate foods consumed in Barbados and can also be substituted for—and so replace—a substantial portion of the main carbohydrate foods which are now imported.

Research has shown that the yields of the major root crops now grown on "thrown out" land in Barbados could easily be doubled if the market for the increased production was available either at home or abroad. In the case of maize, the present average yield can be increased at least four-fold and unit costs consequently reduced by methods which have already been tried and proven. This potential for increased production will be utilized as improved processing and marketing facilities provide the outlet needed for such production.

In the livestock sector, proposals have been made for increasing the efficiency of milk production and raising the average yield of milk per animal; for producing a limited quantity of beef from male animals and culls from the dairy herds; for substantially increasing the production of pork through a project based on the erection of a processing plant; and for making Barbados completely self sufficient in poultry products.

In summary the overall aims of the agricultural sector may be stated as follows:

- (1) To reduce the cost of production of sugar and to increase the yield of sugar per acre.
- (2) To diversify agricultural production and to develop an adequate system of local and overseas marketing for agricultural produce other than sugar.
- (3) To increase the production and local consumption of root crops, fruits and vegetables with a view to reducing to a minimum the importation of these and substitute commodities.
- (4) To increase the production and local consumption of milk and other dairy products, pork, beef and poultry products, with a view to reducing to a minimum the importation of these and substitute commodities.
- (5) To develop industries based on agriculture.
- (6) To conserve and protect existing land resources by arresting soil erosion, especially in the Scotland District, and to make optimum use of all cultivated, uncultivated and undercultivated land.

The 18,000 odd farmers who occupy land of less than 10 acres are in the main part-time farmers who are not organized for co-operative or community action, and who lack the required capital and farming skills for growing high-priced crops such as vegetables, which alone can make their farming ventures economically sound. Some of these are middle class business or professional men who have little time for agriculture and who either hire labour or rent their land to small farmers. The need for rapid crop and livestock diversification would indicate concentration on the larger farms, especially when the limited development resources are taken into account. Neglect of the small farmer might however have unpleasant social and political consequences, and his presence in such numbers and in such need demands that he be given substantial help.

It would therefore seem that Barbados must decide, as a matter of policy, whether the part-time farmer on his small acreage, with no implements other than the hoe and fork, has a significant role to play in the future agricultural development of the country; whether the large farm, the medium sized family farm or the co-operative farm would give a more suitable answer; or whether there should be a combination of two or more of these types of farm and, if so, in what proportion. A conscientious effort towards the maintenance or creation of farms of suitable type and size would then be indicated.

#### **Modification and Coordination of Development Agencies**

Several agencies have been created for the purpose of assisting in the diversification of agriculture.

The Agricultural Credit Bank has been set up to provide credit to small farmers who are unable to obtain credit from the commercial banks or from the Agricultural Bank which finances the sugar plantations.

The Barbados Marketing Corporation, a statutory body, has been given the onus of providing facilities for the purchase, grading, processing and sale at home and abroad of agricultural produce other than sugar; thus enabling the production of such produce to proceed in an orderly manner and without the deterrent of an uncertain market.

The Agricultural Development Corporation, another statutory body, has the task of taking the new crops and techniques developed by research and translating them into viable projects conducted on a plantation scale on the 8 plantations which are under its control.

The Farm Board administers a Farming Incentive Scheme which provides grants of money to farmers as an incentive for the growing of certain approved grasses for livestock and the provision of certain other facilities.

The Cooperative Department has, as one of its functions, the grouping and training of farmers for cooperative action in the obtaining of information,

credit, machinery and services for farming and in the growing and marketing of produce.

Some of these agencies need modification and coordination in order to perform their roles satisfactorily. For example, the great majority of the loans granted by the Agricultural Credit Bank are for the growing of sugar cane, with its assured market and repayment facilities through the sugar factories which process the cane. No satisfactory system of repayment for loans for other agricultural enterprises has yet been found. Cooperative credit and a closer link with the activities of the Barbados Marketing Corporation could provide the necessary stability for making such loans.

#### **Limitations of Development Staff**

A dynamic and sustained programme of agricultural development can be planned and implemented only if the agencies involved are staffed with the requisite number of staff adequately trained in their respective fields of endeavour.

The programme in Barbados has suffered acutely from a shortage of such staff, occasioned in some instance by failure to provide the necessary posts and in other cases by the inability of Government or the development agency to find suitable recruits to fill posts which have been created. The professional and technical services of the Agricultural Department, the development agencies and the Co-operative Department in particular suffer in this respect.

#### **Shortage of Irrigation Water**

The sugar cane crop in Barbados is not irrigated. Most of the agricultural enterprises which could with advantage replace sugar cane in some areas—enterprises such as dairying and especially vegetable growing—require far more water than is available through rainfall. It is estimated that by 1974, there will not be sufficient water in excess of the domestic water requirements for the irrigation of more than 1,200 acres of land. Even where available, irrigation water will not be present in sufficient quantity in any one locality for the irrigation of more than a small acreage in that locality.

Household and manufacturing requirements therefore compete with agriculture for the available water. The metering of all households, business premises and factories, and the installation of an island-wide system of payment for water used, would in the short run release supplies of water adequate for the initial stages of the agricultural diversification programme, but this island may well have to turn to desalination of sea water in order to obtain its requirements of fresh water.

#### **Cost of Livestock Feeds**

Apart from molasses and a small quantity of corn (maize) Barbados does not at present produce any of the ingredients of the concentrate feeds needed for livestock production. Representative prices for such feeds are as in Table 14.

These prices increase the difficulty of producing milk, pork and poultry products at prices which would be considered competitive in the Commonwealth Caribbean, and there is some doubt as to whether modern pig keeping, utilizing concentrate feeds instead of swill, is at the moment an economic proposition in Barbados.

The provision of facilities for adequate drying and storage of corn could be expected to stimulate increased production of this commodity for feeding livestock. Development of coconut and cotton industries would also be of value in providing coconut and cotton seed meal. A modern flour mill, and the importation and storage of feed ingredients in bulk would still further assist in reducing the cost of concentrate livestock feeds.

#### **The CARIFTA Agricultural Marketing Agreement**

Barbados, in company with other territories of the Commonwealth Caribbean, has been pursuing an overall agricultural policy of producing the maximum for export and the earning of sorely needed foreign exchange, while at the same time importing the minimum through the production at home of as many of the imported items of food as is possible, thus releasing funds for the importation of those commodities which this island cannot produce.

This policy will most probably persist with respect to trade outside the Caribbean area. A long and hard look must however be taken at the territories encompassed by the CARIFTA Agreement, most of which are capable of producing all of the items which are most likely to be available for trade within the Area.

It is still too early to predict precisely how the CARIFTA Agreement will affect Barbados. This island has offered to export under the Agreement, during the 9-month period commencing 1st January, 1969, limited quantities of carrots, tomatoes, sweet peppers, onions, sweet potatoes, string beans, okros, fresh pork and eggs. It is hoped, however, that the Agreement will lead to some rationalization of agricultural production in the Region as a whole.

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**Table 1** *Gross Domestic Product at Factor Cost by Industrial Origin:  
Barbados, 1960 — 1966*

Sector	1960	1961	1962	1963*	1964*	1965*	1966*
( ..... million dollars ..... )							
Sugar	25.5	25.9	25.3	37.0	29.7	31.5	32.0
Other Agriculture	8.1	8.1	8.4	8.2	8.2	8.3	8.3
Construction	11.8	13.6	14.0	14.2	14.2	14.3	14.4
Manufacturing & Mining	10.0	12.2	13.3	13.5	14.0	14.1	14.4
Transport & Public Utilities	6.8	7.9	8.3	8.5	8.7	9.0	10.3
Distribution	27.6	28.0	29.2	33.6	34.1	35.6	37.3
House ownership	6.2	6.2	6.4	6.4	6.5	6.5	6.8
Services	12.1	14.5	14.6	15.0	15.4	17.0	17.5
Government	11.7	12.3	13.6	15.0	16.5	17.6	21.3
<b>Total</b>	<b>119.8</b>	<b>128.7</b>	<b>133.1</b>	<b>151.4</b>	<b>147.3</b>	<b>153.9</b>	<b>162.3</b>

\* Provisional estimates

**Table 2** *Labour Force: Barbados, 1966*

	('000 persons)
Adult population	143.1
Total labour force	93.3
Total employed	81.1
Total unemployed	12.2

Source: Barbados Statistical Service, Labour Force Survey, April 1966

**Table 3** *Employment in Agriculture: Barbados,  
1965 and 1966*

	Out-of-Crop	In-Crop
(..... '000 persons .....)		
November 1965	15.1	April 1965 21.8
October 1966	16.1	April 1966 21.9

Source: Barbados Statistical Service, Labour Force Surveys



**Table 4** *Estimated Distribution of Labour in Agriculture: Barbados, Selected Years*

Sector	1966	1970	1975
(..... '000 persons .....			
Sugar Cane	15,800	13,500	12,000
Other	6,000	6,600	7,200
All Agriculture	21,800	20,100	19,200

Source: *Development in the Eastern Caribbean Islands* (Draft Report), I.S.E.R., Series 4, U.W.I., Cave Hill, Barbados.

**Table 5** *Value of Selected Items of Domestic Export and Value as a Proportion of the Value of Total Domestic Export: Barbados, 1961 — 1966*

	1961	1962	1963	1964	1965	1966
(..... dollars .....						
TOTAL DOMESTIC EXPORT	37,062,500	37,070,214	53,505,685	45,125,151	47,617,385	50,055,554
Sugar, Molasses and Rum (as % of Total Domestic Export)	35,889,178 (96.8)	33,733,089 (91.0)	49,373,208 (92.3)	38,263,621 (84.8)	39,760,722 (33.5)	40,407,898 (80.7)
Other Agricultural Produce (as % of Total Domestic Export)	264,205 (0.7)	123,788 (0.3)	165,465 (0.3)	275,033 (0.6)	535,688 (1.1)	395,041 (0.8)
All other Domestic Exports (as % of Total Domestic Export)	909,117 (2.5)	3,213,337 (8.7)	3,967,012 (7.4)	6,586,497 (14.6)	7,320,975 (15.4)	9,252,615 (18.5)

Source: For 1961 — 1965, the *Overseas Trade Reports* for Barbados  
For 1966 the figures were provided by the Statistical Service

**Table 6** *Area Planted to Food Crops on Plantations: Barbados, 1961 — 1968*

Year	Yams	Sweet Potatoes	Corn	Eddoes	Pulses	Cassava	Other <sup>1</sup> Crops	All Food Crops
(..... acres .....								
1961—1966*	2,637	2,510	814	472	281	65	225	7,004
1966/67	2,521	1,847	812	334	337	65	229	6,136
1967/68	2,668	1,730	1,067	394	312	38	286	6,495

<sup>1</sup> Includes green vegetables and bananas

\* The average for the years 1961/62 — 1965/66 was used

Source: Unpublished data supplied by Economics Division of the Ministry of Agriculture, Barbados

**Table 7** *Fresh Milk Supplied to Pine Hill Processing Plant: Barbados, 1966 — 1968*

Year	Fresh Milk Received (pounds)
1966 <sup>1</sup>	1,405,095
1967	3,764,097
1968	4,052,879

<sup>1</sup> From April 24th, 1966

Source: Information supplied by Barbados Dairy Industries Limited

**Table 8** *Pigs Slaughtered at Barbados Marketing Corporation: Barbados, 1963 — 1967*

Year	Pigs Slaughtered (number)	Estimated Weight of Dressed Pork (pounds)
1963	6,588	803,736
1964	11,198	1,254,176
1965	8,059	983,198
1966	12,548	1,634,491
1967	11,909	1,617,624

Source: Reports of the Supervisor, Barbados Marketing Corporation

**Table 9** *Land Utilization: Barbados, 1961*

Cropland	Grassland	Forest and Woodland	Built-on and Service Area on farms	Other, including ruinate	Total Area
(..... '000 acres .....)					
62.2	10.8	0.9	3.4	7.2	84.5

Source: West Indies Census of Agriculture, 1961

**Table 10** *Area and Distribution of Holdings: Barbados, 1961*

Holdings with land of less than 10 acres	Holdings with land of 10 acres and over	Holdings without land	Total Holdings
(..... number .....)			
18,603	210	9,109	27,922
Area in farms of less than 10 acres	Area in farms of 10 acres and over	Total Area	
(..... acres .....)			
14,268	70,190	84,458	

Source: West Indies Census of Agriculture, 1961

Table 11

*Arable Cropping by Size of Holding: Barbados, 1961*

Crop	Less than 10 acres				10 acres and more			
	No. of Holdings	Pure Stand	Mixed Stand	Total Area	No. of Holdings	Pure Stand	Mixed Stand	Total Area
	(number)	(..... acres .....	)		(number)	(:..... acres .....	)	
Sugar Cane	13,386	3,911	3,039	6,950	266	36,529	1,299	37,828
Maize	6,477	81	1,224	1,325	188	894	376	1,270
Pigeon Peas	6,528	2	167	169	199	10	251	261
Sweet Potatoes	4,918	445	422	867	219	2,397	517	2,914
Yams	2,636	40	241	281	222	1,678	588	2,266
Eddoes	1,576	0	123	123	154	299	124	423

Source: West Indies Census of Agriculture, 1961

Table 12

*Distribution of Livestock by Size of Holding: Barbados, 1961*

Livestock	Less than 10 acres			10 acres and over		
	Males <sup>1</sup>	Females	Total	Males <sup>1</sup>	Females	Total
	(..... number .....					
Cattle	456	5,930	6,286	341	5,121	5,462
Pigs	5,352	4,423	9,780	9,442	520	9,962
Chickens (Poultry)	65,447	65,278 <sup>2</sup>	130,725	41,212	51,730	92,942
Sheep	6,174	7,872	13,046	8,762	712	9,474
Goats	1,341	3,904	4,245	1,909	1,302	3,211
Horses	—	—	262	—	—	367
Mules and Asses	—	—	894	—	—	638

<sup>1</sup> Including animals whose sex has not been declared<sup>2</sup> Hens and pullets

Source: West Indies Census of Agriculture, 1961

Table 13

Quantity and Value of Certain Selected Food Commodities: Barbados, Selected Years, 1952 — 1960

Commodity	1957		1960		1963		1966	
	Quantity (No.)	Value (dollars)	Quantity (No.)	Value (dollars)	Quantity (No.)	Value (dollars)	Quantity (No.)	Value (dollars)
Live Animals for Food	71,499 (pounds)	34,843	185,500 (pounds)	77,234	250,932 (pounds)	110,678	36,953 (pounds)	32,085
Meat—Fresh & Processed	9,761,692	3,744,688	8,925,536	3,917,975	11,407,708	5,011,444	15,598,028	9,178,712
Dairy Products and Eggs	7,424,431	2,907,355	9,519,331	4,034,345	13,297,997	4,682,976	12,829,813	5,358,418
Fish & Fish Preparations	4,235,908	1,417,907	3,413,064	1,198,231	3,350,735	1,296,059	3,481,896	1,650,904
Cereals (including Rice)	50,516,571	4,885,950	51,555,819	4,858,570	61,755,802	5,968,914	53,902,245	6,163,916
Fruit & Vegetables (including Juices)	23,856,241	2,036,012	26,983,433	2,556,623	32,286,956	3,215,618	30,443,584	3,861,593
Sugar & Sugar Confectionery	1,196,489	285,229	1,503,295	312,492	1,396,290	353,023	2,035,504	362,121
Animal Feeds	31,995,974	2,167,105	35,797,620	2,508,926	45,321,599	3,325,186	48,539,483	4,137,177
Food Preparations (n.e.s.)	—	366,279	—	639,902	—	711,376	—	861,056
Oilseeds, Nuts and Kernels	8,264,020	1,156,495	9,642,268	1,512,802	8,479,193	1,337,175	7,684,313	1,204,030
Animal & Vegetable Oils & Fats	—	831,286	—	484,397	—	550,676	—	763,605
Total	—	19,833,149	—	22,101,497	—	26,563,125	—	33,573,617

**Table 14**      *Representative Prices of Livestock  
Feeds: Barbados, 1969*

Type of Feed	Cost ( \$ per 100 pounds <sup>1</sup> )
Dairy Feed (20% protein)	10.44
Sow Feed	10.92
Pig Grower	11.24
Pork Ration	10.44
Poultry Growing Ration	12.38
Egg Ration	12.48
Broiler Starter	14.78
Broiler Finisher	14.10

<sup>1</sup>  
All prices are for minimum lots of 2,000 pounds in 50-lb. bags.