Population and resources of Barbados / by Lord Simon of Wythenshawe.

POPULATION AND RESOURCES OF BARBADOS

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FOREWORD

The death rate, especially in under-developed countries, has in the last generation been reduced by medical science with extraordinary success and rapidity. In most under-developed countries the result has been an unprecedented and dangerously rapid increase in population.

The Food and Agriculture Organisation of the United Nations refers in its latest report to " burdensome surpluses " of food in the United States and other countries. But these surpluses are not available where they are needed: an American wheat surplus never reaches the hungry millions of India or Japan (except for gifts in famines). Increased " world " production of food is meaningless to the under-nourished peoples—well over half the world's population. Yet there are many optimists who are persistently blind to the serious and urgent problem of population pressure.

Believing that the dangers of over-population could be most convincingly proved in an island like Barbados, dependent on a single crop, I spent three weeks there in August 1954 investigating the problems of food and population. I am grateful to the Governor, to the Prime Minister and other Ministers, to the Civil Service, and to planters and other leading citizens for so willingly giving me the information which made this report possible. But I alone am responsible for the report.

The conclusion is plain: energetic and effective birth control, or else a declining standard of living leading inevitably to catastrophe.

Sir John Saint[1] of Barbados, the leading authority on the growing of sugar in the West Indies, and Sir John Russell,[2] author of the latest and most authoritative book on world agricultural production, both write that they believe the report makes out an unanswerable case.

S. of W.

October 1954

[1] See Report of the 8th Congress of the International Sugar Cane Technologists. Presidential Address by Sir John Saint, p. 966.

[2] Author of *World Population and World Food Supplies* (Allen & Unwin), 1954.

CONTENTS

I

INTRODUCTION

Barbados is a small island in the Tropics with an area of 106,000 acres; it has a delightful climate cooled by trade winds, and ecological conditions which, while specially suitable for the cultivation of sugar cane, are not equally suitable for any other high-value export crop.

The Report of the West India Royal Commission written in 1939 states: "In some colonies absolute over-population exists in an acute degree. In Barbados the population is over 1,200 to the square mile. This represents a much greater density than that of the United Kingdom with its immense industrial development . . . The annual increase in the population is about 1½ per cent and is likely to approach 2 per cent in the near future . . . The continuance of the present birth rate would seriously endanger the maintenance of even the present standard of living . . . The outlook for the island is extremely grim if the present rate of natural increase is maintained." Since this was written, the population has increased from 180,000 to 220,000 and the annual natural increase of population has risen from 1,800 to over 4,000.

Barbados is almost entirely dependent on the sugar industry which provides about 98 per cent of its exports. The island has hitherto escaped the "grim" fate forecast by the Royal Commission owing to the unexpected and almost unparalleled increase both in the quantity and the price of the sugar crop. The sugar industry has been most efficiently and intensively developed; indeed, having regard to the climate and soil, it is probably as efficient as any in the world. In 1953 one acre of cane produced on an average 3.8 tons of sugar which was sold at about £40

per ton. The money yield is about £150 per acre, which is much more than double the yield from any other crop which can be grown successfully in Barbados, and for which a large world market exists: compare the yield of about £20 per acre for wheat in Britain.

Royal Commissions and Governments in Barbados have constantly recognised the risks and disadvantages of relying almost exclusively on a single crop, and in particular the danger of being so dependent on the importation of foodstuffs from abroad. From time to time Barbadian Governments have made conditions that certain lands should be used for growing food crops for local consumption. But the extra yield of cane in money represents so great an incentive both to the individual planter or peasant and to the island, that Barbados appears now to be irrevocably committed to devoting practically the whole of its available arable land to sugar.[1]

Barbados can hardly be called an under-developed country. It has no resources, in the form of land or minerals, which could be developed by applying capital to them.[2]

The sugar industry is fully developed and all available land is efficiently used. On the other hand, Barbados is a relatively poor country,[3] though the income per head (about £60) is greater than Ceylon or even Japan. But it is only about one quarter of that of the United Kingdom. On Western standards there is an immense amount of development work required in the social welfare field, housing, education, health, if and when funds become available.

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[1] The total farm lands are used as follows:

Cane to be reaped	43,000 acres.
Young cane	15,000 ,,
Arable under other crops ...	8,000 ,,
Pasture	17,000 ,,
Other (roads, yards, unusable)	12,000 ,,
	95,000 ,

[2] Except possibly oil.

[3] K. H. Straw, *Budgets and Nutrition in Barbados*, Social and Economic Studies, published by the University College of the West Indies, June 1954.

During the last thirty years, and especially for the last five years or so, both the weight and value of the sugar crop have been increasing with great rapidity. The sugar crop has increased during the last five years by an average of $7\frac{1}{2}$ per cent per annum, whereas the population has increased about $1\frac{1}{2}$ per cent.

There has therefore been a rapid increase in prosperity, and the voters are naturally optimistic and indeed confident that the standard of living will continue to improve. The object of this article is to prove that this is unfortunately the reverse of the truth, and that unless the population increase is stopped, the standard of living must inevitably decline.

II

THE SUGAR CROP 1852 TO 1952

The following table summarises the yield of the Barbados sugar crop at critical dates. The figures represent the average for five years centred on the year stated. The table ends with the last five years 1950–54 (centred on 1952) which gave an average yield far in excess of all previous records.

Year	*Sugar crop (in tons)*	*Period (in years)*	*Average annual rate of crop increase*
1852	43,000	—	—
1922	57,000	70	$\frac{1}{3}\%$
1947	119,000	25	3%
1952	170,000	5	$7\frac{1}{2}\%$
Period			
1922–52		30	$3\frac{1}{2}\%$

It will be seen that during the seventy years from 1852 the crop increased by 14,000 tons, or an average of $\frac{1}{3}$ per cent per annum. About 1922 there was a most remarkable change, and during the following twenty-five years the crop increased by no less than 3 per cent per annum. During this period there was practically no increase in the acreage. So large an increase over so long a period has been very rare with any crop in the history of the world. But the most surprising thing is that the average increase during the following five years, 1947 to 1952, was no less than $7\frac{1}{2}$ per cent per annum.

It might be reasonable to assume from these figures that some similar rate of increase is likely to continue in the future.

Unfortunately, the prospects of further increases are considered

by all authorities to be bad. In the first place, the giant crops of the last five years have been largely due to outstandingly good rainfall. The sugar crop is very dependent on rainfall; only three times in the last hundred years has the average rainfall over five years been equal to that during the quinquennium 1950–54. The following table shows the startling effects of rain.

Year	*Sugar (in tons)*	*Inches of Rain*
1948	78,000	51 (lowest in 20 years)
1951	187,000	103 (highest in 50 years)

The increase of sugar yield over the last century has been almost entirely due to nine factors;[1] every one of these appears to have achieved something near its maximum effect during the last few years. These factors were discussed with the present Director of Agriculture and with Sir John Saint, the leading authority on sugar in the British West Indies, if not in the world.

1. *Acreage.* All available land is now in sugar; as the population increases and as demand for houses, schools, hospitals and factories increases, the acreage available for sugar cultivation will inevitably tend to decrease.

2. *Varieties of Cane.* At the end of the last century diseases almost ruined the West Indian sugar industry. Other varieties of cane were successfully introduced at the beginning of the century, and an immense amount of work has been done in developing new varieties to resist pests and disease and to increase yield, both in Barbados and all over the world. The results of this work were outstandingly successful in producing high-yielding and disease-resisting varieties. Something approaching the ideal variety for Barbados seems to have been produced by 1940. Since

[1] Presidential Address by Sir John Saint; Report of the 8th Congress of the International Sugar Cane Technologists, p. 966.

then no new strains have been introduced of any great importance, and the future seems to be doubtful, though certain quite new lines of research are being undertaken.

3. *Diseases.* These have been practically eliminated and have done no substantial damage in recent years.

4. *Pests.* In spite of scientific advance, some damage is still being done by pests; this may be reduced. On the other hand, there is always the risk that new pests may arise and may do serious damage, at least for a time.

5. *Cultivation of Soils.* Cultivation of the various soils in Barbados is now well understood. The plantations have during the last few years been well equipped with powerful, modern machinery which has made important improvements. There is no reason to expect much future progress.

6. *Manuring* is well understood and well carried out.

7. *Factories.* The sugar is extracted from the cane, purified and crystallised in factories owned by the planters. A generation ago the factories were inefficient and there was a great loss of sugar. Improvements have been steadily carried out. The factories have today, on the whole, efficient plant, and are well run, though extensions are still required to enable them to deal effectively with any very large crop. No substantial increase in yield can be expected from the factories in the future.

8. *Rain and Irrigation.* It has already been explained how dependent the crop is on the rainfall, how disastrous the effects of drought years may be. There is little or no irrigation; nothing has in the past been done to help the crop in drought years. It is believed now that there is a possibility of irrigation in some areas,[2] and the matter is being actively investigated. Irrigation

[2] A distinguished geologist reported in 1946 that after allowing 40 gallons of water a head per day for a population of 375,000 (!) there remained enough to irrigate from 7,000 to 15,000 acres—say from one-sixth to one-third of the sugar crop.

will have little effect in good years, but it is hoped that it may play an important part in preventing disastrous crops like that of 1948.

9. *Management.* In 1952 36,500 acres of sugar were reaped by planters, 8,500 by peasants.[3] Thirty years ago the planters pursued old-fashioned methods; today the great majority thoroughly understand scientific cultivation in all its branches, and closely follow the excellent advice of the Department of Science and Agriculture. The Department has a number of agricultural advisers who give all the help they can to the peasants; with such success that their yield per acre approaches that of the planters.

Conclusion

Thirty years ago the science and technology of sugar growing was in an early stage. Sir John Saint, who has during the last generation played the leading part in the technological development of the industry in Barbados, was regarded as unduly optimistic when he forecast that the crop would average 100,000 tons per year, and again later on when he forecast an average of 150,000 tons per year. In both cases he was proved right. He now believes that all the main factors affecting the yield of the sugar crop are near their maximum efficiency. He takes the view that the technology of the sugar industry has reached a high level, and that the knowledge is, on the whole, very effectively applied by the planters, and even by the peasants, of Barbados. Barbados is now recognised as being one of the world's efficient sugar producers, having due regard to climate and soil.

It must be emphasized that the average yield of 170,000 tons during the last five years was largely due to quite exceptional rainfall. Looking ahead for a generation, it would appear to be quite impossible, in view of the records over the last century, that the same high average level of rainfall will be maintained. It is

[3] Annual Report of the Barbados Department of Science and Agriculture for 1952, p. 16.

practically certain that the average will often be less than during the last quinquennium, and that the crop will suffer accordingly. Taking a long-term view, Sir John expects that technical progress will continue, but at a very slow rate compared to the last thirty years; probably on the average of $\frac{1}{4}$ per cent per annum. He sees no hope at any date of crops averaging over any quinquennium more than 200,000 tons per annum.

And this conclusion is endorsed by all the leading authorities in Barbados; indeed, the general feeling is that it is most unlikely that average crops of 200,000 tons over five years will ever be achieved, at least in the foreseeable future.

III

THE MARKET FOR SUGAR

Barbados produces less than ½ per cent of the world's annual crop of sugar. It is therefore entirely dependent on the outside world for markets and prices.

There is a complicated series of agreements covering quotas, subsidies, prices, and preferences for the world as a whole, and within the world agreement for the Commonwealth. Under the Commonwealth sugar agreement, Barbados is assured of a market mainly in the United Kingdom for a quota which is at present 163,000 tons per annum. Home consumption in Barbados is something over 10,000 tons per annum, so that Barbados is assured of a market for 173,000 tons, and has in fact hitherto been able to sell at a good price all she has been able to produce.

The price is at present determined by a formula settled in 1950. The position is complicated because there is a guaranteed price for most, but not all of the quota. The average price in recent years has been about £40 per ton, which is estimated to have been some £8 to £10 above the price which Barbados would have secured if it had received no preferential treatment under the Commonwealth sugar agreement. Both political parties in Britain have a strong sense of responsibility for the Colonies, and so far as can be foreseen, a preferential price of this sort may be expected to continue. It is guaranteed for the next six years under the Commonwealth agreement.

The importance to Barbados of this agreement lies in the assurance it gives that there will be a market for satisfactory quantities of their sugar at an economic price and over a long period—in short, security and stability. If this agreement were

abolished, it would mean a very serious reduction in the national income of Barbados.

If Barbados succeeds in increasing her crop beyond an average of 175,000 tons, it would be necessary to secure Commonwealth agreement in order to get the quota raised; whether this can be achieved depends on many factors and must remain uncertain.

IV

OTHER SOURCES OF NATIONAL INCOME

Professor Beasley[1] points out that over a period of years imports into Barbados were larger than exports (98 per cent of which consist of sugar and its by-products) by an amount equivalent to an additional national income of about 25 per cent of the value of the sugar exports. The increase was accounted for by:

(*a*) Remittances by Barbadians living and working abroad.
(*b*) Dividends on capital invested abroad.
(*c*) Transhipments and harbour earnings.
(*d*) Grants from overseas.
(*e*) The tourist trade.

If times are good there is every reason to hope that these "invisible exports" will grow steadily, if slowly. Some people have hopes that the tourist trade may expand substantially; but it is pointed out that other West Indian Islands have in some ways advantages for tourists greater than Barbados.

If sugar exports increase in value (as suggested above) by about $\frac{1}{4}$ per cent per annum, it might reasonably be hoped that these invisible exports might increase rather faster.

[1] See *A Fiscal Survey of Barbados*, 1952.

V

INDUSTRY

There is one further possibility of increased income: the development of industry. Apart from the growing of sugar, the main existing industry consists of the sugar factories. As has been stated, some slight expansion of these may be required if the sugar crop increases. There is also the manufacture of fancy molasses and of rum. There does not seem to be any possibility of important expansion in either of these. There is one further possibility of an industry based on sugar; that is, the production of wax as a by-product of sugar cane. This is being developed in different parts of the world, and active experiments are being carried on in Barbados. There is a possibility of a small but perhaps profitable industry in this field.

Apart from sugar, the possibilities of industrial development in the British West Indies have been discussed by the Royal Commission of 1939, and more recently by Professor Arthur Lewis[1] and the Steel Commission,[2] and by Professor Beasley.[3] Professor Beasley stated in 1952: "The economy of Barbados has been almost stagnant for a decade except in the sugar industry". Others deny this.

The latest report is the Steel report,[4] which states that Trinidad and Jamaica doubled their industrial output in the last decade and may well double it again in the next decade.

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[1] *Industrial Development in the Caribbean* published by the Caribbean Commission, 1950.

[2] *Industrial Development in the British West Indies,* 1953. Colonial No. 294.

[3] *A Fiscal Survey of Barbados,* 1952.

[4] Steel (p. 5) makes clear that the successful industrial development of Puerto Rico is due to Puerto Rico being a low-wage island within the U.S.A. customs union. This is an immense advantage which Barbados does not share.

Unfortunately, Barbados has no minerals (apart from the possibility of striking oil)[5] and a population so small that the home market can only hope to support quite minor factories. One or two have recently been started, based on copra or sugar as their raw material.

The Steel report points out that the average cost of the labour component in manufacturing in Barbados would be at least as great as in the United Kingdom. There are no raw materials except sugar, freights are high, communications irregular, skilled management not available. It takes the view that there is no possibility of an export industry; any industrial developments could only be for the home market and therefore on a very small scale.

The Government of Barbados has done a good job in providing roads and a pure supply of domestic water. Unfortunately, the electric supply is grossly inadequate, and negotiations to secure the necessary extensions have not yet been successful.

The Government in its Five Year Plan has proposed to create an industrial development corporation, and to tackle the question of irrigation for the sugar crop. It is also taking active steps to secure the building of a deep water harbour at a cost of probably five million pounds, in the hope of making Barbados again a shipping port of importance and of giving help to industry.

Many people think that a customs union for the whole of the British West Indies, with a strong development corporation for the same area, would be a great help to the development of industry in Barbados.

But, in the absence of minerals and with a market to meet the needs of only 220,000 people, it seems clear that the possibilities of any substantial development of industry are far from encouraging.

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[5] The prospects of discovering oil are good enough to justify two companies spending substantial sums in making deep borings. If they strike oil on a large scale, this would provide the one possibility of substantially increasing the national income. But the employment given would in any case be small.

VI

THE NATIONAL INCOME DURING THE NEXT THIRTY YEARS

Barbados has had five years of great prosperity based on record sugar crops (at record prices) on which the national income depends almost exclusively. There is a risk that the average crop in the next five years may be substantially lower, resulting inevitably in a lower national income. On a long-term view, however, there may be a gradual increase in the yield of the sugar crop which is not likely to amount to more than $\frac{1}{4}$ of one per cent per annum.

Allowing for some increase in the invisible exports, especially the tourist trade, and for some development of industry, it would seem to be possible that the average national income may increase by as much as $\frac{1}{2}$ of one per cent per annum. To assume more than this would, in my opinion, be unjustified optimism.

VII

POPULATION: RATE OF INCREASE

No reliable figures are available as to population before the 1921 census. The main figures since then are shown in the following table:

Period	*Mean Population*	*Average Birth Rate per 1,000*	*Average Death Rate per 1,000*	*Rate of Natural Increase %*	*Total Natural Increase over 5 years*	*Increase due to Migration over 5 years*
1921–25	155,043	35.03	32.89	0.2	1,659	4,876
1926–30	158,754	34.34	26.95	0.7	5,857	4,014
1931–35	164,676	32.08	23.58	0.8	6,971	9,773
1936–40	175,698	32.32	19.93	1.2	10,813	2,298
1941–45	183,381	32.08	18.44	1.3	12,438	4,927
1946–50	203,049	31.5	15.6	1.6	15,543	3,318
1951–53	219,028	32.8	14.1	1.9	12,205	—904

It will be seen that the fall in the birth rate during the last generation has been almost negligible. The death rate, on the other hand, has fallen from 33 to 14, with the result that the annual rate of natural increase has grown steadily from 0.2 per cent to 1.9 per cent, averaging about 1 per cent over the whole period. It is a startling fact that the reduction in the death rate achieved in Barbados during the past thirty years took over one hundred and seventy years in Britain.

The death rate is still slightly higher than most other West Indian islands and is almost certain to fall further during the next few years, so that, if the birth rate remains constant, the

natural increase will be something over 2 per cent. This means at present an increase of over 4,000 persons per annum. But if the 2 per cent annual increase should continue for the next thirty years, the population would be about 400,000, with an annual increase at the end of the generation of over 8,000.

VIII

EFFECT OF POPULATION GROWTH ON STANDARDS

The following table shows the growth of the population and the growth of the sugar crop during the last generation:

Years	*Sugar Crop (Tons)*	*Population*	*Tons per Head*
1921–5	57,000	155,000	0.4
1951–3	170,000	219,000	0.8

It will be seen that in thirty years the sugar crop has trebled, but this has not meant a trebling of the portion of each citizen, because the population at the same time increased about one-third; the yield of sugar per head of the population therefore was only doubled from 0.4 to 0.8 ton per head.

Looking ahead over the next generation, if sugar increases at ½ per cent (an optimistic assumption) and if population is allowed to continue to increase at 2 per cent, the share of each person, instead of increasing each year by about 2 per cent as it did during the last generation, will *decrease* by about 1½ per cent per annum. By 1982 the share will be about half a ton per head: three-quarters of the hard-earned gains of the last generation will have been lost.

IX

WHAT IS THE OPTIMUM[1] POPULATION FOR BARBADOS?

There are no statistics of unemployment or of under-employment in Barbados.[2] But there is a large amount of unemployment and still more under-employment.

In 1881 the number of persons engaged in agriculture was 46,000; today it is estimated at not more than 26,000, and further economies of labour are likely to be made as mechanisation becomes more complete.

Employment in the sugar industry is seasonal. For about six months each year employment is about 20 per cent less than during the crop season. During that time planters endeavour to create work for the unemployed; I saw a dozen women filling baskets with soil, carrying it about a hundred yards, and dumping it in another position in the field. They were paid about 1*s.* an hour for this. The work could have been done for a tenth of the price by suitable plant.

Professor Lewis[3] states: "The growth of unproductive jobs has been very marked. Being unable to get productive jobs women have poured into domestic service, which is the occupation of 18 per cent of the occupied population of Barbados—the highest proportion in the world. This kind of mal-distribution of labour is the clearest index of over-population."

The number of persons employed on the sugar estates in 1951 was 12,000 male and 10,000 female.[4] The total employment in

[1] The problem is only considered here from the economic point of view.
[2] A statistician arrived in Barbados in September 1954 to study this question.
[3] *Industrial Development in the Caribbean* published by the Caribbean Commission, 1950.
[4] Colonial Office Annual Report on Barbados for 1951.

agriculture and sugar, including the sugar factories, is certainly not more than 30,000.

How many persons are needed to provide all the necessary services for the sugar industry as well as the other essential services for the population? Nobody knows. But it seems probable that all this could be done efficiently by another 30,000 workers. The young and old dependants of the 60,000 workers would probably amount to another 60,000 or 70,000.

These figures would suggest that a populaton of 130,000 could produce all the wealth which Barbados now enjoys; in that case 130,000 would appear to be the optimum population for the country.

I consulted many of the leading authorities on this matter. Their opinions as to the optimum population varied between 120,000 and 180,000.

Another way of looking at the problem is as follows. The increased population each year consists of 4,000 new births additional to those required to maintain the population. There is no work for these children and never will be, but of course they must be fed and educated.

In spite of its increasing prosperity, Barbados has not been able to introduce compulsory education because although the Government spends over 20 per cent of its income on education, it has not been able to afford enough schools or teachers to educate all the children in elementary schools between the ages of 9 and 14. And clearly, if my forecast of the future income is right, it is going to be very difficult indeed for the Government ever to find the money for universal compulsory elementary education. If the increase of population remains at 4,000 a year, in due course there will be about 40,000 more children who ought to have elementary education at an estimated cost of £400,000 a year. Taxation in Barbados is already high. It is inconceivable that the Government should ever be able to afford to educate these children properly.

X

EMIGRATION

Thoughtful Barbadians universally regard the island as over-populated, and the first remedy which everybody thinks of is emigration.

Barbadians have the reputation for being good workers, and there has been a good deal of emigration in the past; indeed, between 1891 and 1921 the number of emigrants was so great that, in spite of a moderate excess of births over deaths, the population fell in those years from 193,000 to 157,000. Between 1921 and 1950 the net *immigration* amounted to about 29,000; just under an average of 1,000 each year. This is said to have been due to the return of Barbadians who had emigrated in the previous generation. It is thought and hoped that the period of heavy repatriation is ended; and the fact that there was an average net *emigration* of about 300 annually during the years 1951–53 lends support to this view.

But the problem of securing emigration on a substantial scale remains very difficult: hardly any country[1] is willing to accept Barbadians as permanent emigrants, and the prospects of emigration in the coming decades, excepting a few hundreds per annum, seem to be remote.

However, the Government is making increased efforts in this matter, and in so far as they may be successful, the pressure of population will, of course, become less acute.

[1] The Evans report indicated that British Honduras and British Guiana between them might take immigrants from the overcrowded West Indian countries of about 2,500 per annum. Since this report was written the rate of natural increase in both these countries has risen to over 2 per cent per annum; they are both now democratically governed countries and unwilling to accept any immigrants from Barbados or elsewhere.

XI

BIRTH CONTROL

Like all other countries, Barbados has been slow to realise the danger of a rapidly increasing population; until quite recently, the problem of birth control was not even discussed. The churches have been against birth control, and the traditions of the country are still in favour of large numbers of children.[1] But during the last two or three years opinion, especially among the middle classes, has begun to change. It has become abundantly clear to far-sighted Barbadians that the only way to stop the increasing pressure of over-population is by the control of births. There has been a good deal of discussion in the Press, in the main favourable to family planning, and a Family Planning Association has been founded.

In 1952 a joint committee was appointed by the two Houses of the Legislature to examine the question of overcrowding in Barbados. The committee reported in July 1954. The following are extracts from the report.

"In seven and a half years the increase in population amounted to approximately 30,000. It is interesting to note that the total number of people employed on the sugar estates and the sugar factories amounts to 25,000, thus the increase in the population in the past seven and a half years far exceeds the entire labour force required for the growing and manufacture of sugar."

"The Committee is completely convinced that this problem can no longer be left to the sporadic and unorganised efforts of a few individuals and that the Government must take action.

[1] The fact that more than half the children are (from a Western point of view) illegitimate may add to the difficulties.

The issue is clear cut. It is manifestly impossible for the Island to feed, house, clothe, educate and provide work for eleven additional people every day, year after year . . ."

" The Committee takes a most serious view of these staggering figures and urges that steps be taken with the least possible delay to alleviate the situation. It points out that if early action is not taken, the result must be an increasingly lower standard of living with consequent misery for everyone . . ."

" The first objectives of the health programme should be the development of means whereby *the birth rate is reduced as rapidly as modern science and services have reduced the death rate*. It is therefore recommended most strongly that family planning be incorporated in the work of the Health Centres immediately and that the work be extended as soon as possible to embrace the General Hospital, the Maternity Hospital, the Almshouses and all privately-run Maternity Child Welfare Clinics."

" It is recommended that Family Planning Clinics should be set up and be operated directly by the Government."

The report was signed unanimously by the ten members of the Committee, though two of them made reservations stressing the prior importance of emigration.

The report gives the considered and unanimous view of all the main political parties in Barbados. The extracts show that the report is vigorous and emphatic in stressing the vital importance of limiting the numbers of the people by effectively controlling births so as to reduce the birth rate as rapidly as the death rate has been reduced.

It took 30 years to reduce the death rate from 33 per thousand to 14 per thousand. If the birth rate is steadily reduced so as to become equal to the death rate in the same period, i.e. thirty years, and if there is no migration, then the increase in the population during the next 30 years would be 60,000, making the total population of the island 280,000.

XII

CONCLUSION

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1. There is only one thing fundamentally wrong with Barbados —there are too many people. Barbadians are unanimous that Barbados is over-populated. The 220,000 people live on the product of the highly efficient and fully developed sugar industry. There is no other source of income in sight (unless oil should be found). We have shown that the national income cannot be expected to increase by more than ½ per cent per annum over the next generation.

2. There are no statistics of unemployed or under-employment. Different authorities estimate that some 40,000 to 100,000 of the present population contribute nothing to the national income, though as consumers they share in the product. It seems probable that the optimum population for the island under present and prospective economic conditions may be about 150,000. Any population in excess of that number serves to crowd the land and to reduce the income of those who do the work.

3. There are no statistics which make it possible to compare the present standard of living with that at any earlier date. There is no doubt that nutrition has improved substantially in recent years; consumption today is about 2,500 calories per head. Since milk and biscuits began to be distributed to the school children ten years ago signs of malnutrition among children have, according to the Minister of Social Services, been scarce. The national income has increased by 3 per cent or 4 per cent per annum during the last generation; the population by less than 1 per cent; standards of living and wages have accordingly steadily increased.

4. The prospect for the future is, unfortunately, very different. The population is increasing at nearly 2 per cent per annum and the rate of increase is steadily growing. It is almost certain that the national income will increase at less than ½ per cent per annum. If these conditions continue, there will inevitably be a gradual decline in the standards of living and in the national financial situation, which might become alarming if there were one or two bad sugar crops in the next few years.

5. The future depends fundamentally on two things: the sugar crop and the size of the population. Every possible effort is being made, and will continue to be made, to increase the sugar crop. No effort has been made to do anything to stop the recent terrifyingly rapid increase in population, with the exception of the efforts to increase emigration, which have been, and unfortunately are likely to continue to be, unsuccessful.

6. If the population continues to increase at 2 per cent per annum it will double itself in thirty-five years. This will mean a population of, say, 400,000 at the end of another generation. Unless population growth is stopped long before that, it will mean misery and disaster. But the birth rate will not fall unless active steps are taken.

Two hundred years ago Britain's birth rate was the same as that of Barbados today. The death rate began to fall steadily; the birth rate remained unaffected for 130 years. The result was that Britain's population was increased six times over in about one hundred and fifty years. This was a great advantage to Britain as she had any amount of room and raw materials; it helped to make Britain a great world power; it would spell complete disaster to Barbados, which has no minerals and no room whatever for expansion.

7. The welfare and happiness of Barbados from now on depend on preventing any further increase of the population, and preferably on a gradual reduction to some lower figure, perhaps 150,000.

8. Since emigration can almost certainly offer little or no help towards a solution, there is only one way to solve Barbados' population problem: to bring down the birth rate as quickly and as far as the death rate has fallen in the last thirty years. In England a recent Royal Commission recommended that in order to maintain the population at its present level the average family should consist of rather less than two and a half children. In India, whose population problem is perhaps more acute than that of Barbados, the Government has voted half a million pounds to a campaign to lower the birth rate. They have stated that they regard more than three children as " improvident motherhood ".

9. On these analogies it would appear that Barbados ought to aim at an average family of not more than two or three well fed and well educated children.

While it is true that it has usually been a slow business to reduce the birth rate, recently, owing to tremendous population pressure, certain countries have made successful efforts in this direction. The outstanding achievement was that of Japan, where the birth rate in 1947 was 34.3 per thousand, roughly that of Barbados today. In 1953 it was estimated at 21.5, a decline of over 12 points[1] in five years: " a five-year decline unprecedented in the annals of vital statistics anywhere in the world ".[2] It is understood that this remarkable achievement was largely due to legalized abortion.

10. The task before Barbados is a double one. First and most difficult, to break down the old prejudice against birth control, to convince all the people in all the districts of the island of the need to limit the number of births so as to secure small families of healthy, happy children. The second task is to establish clinics with well-trained staff in all parts of the island to give instruction and help in methods of birth control. This will cost some money to do it well, but only a tiny fraction of what would have to be

[1] Note that in 1947 Japan was at the height of the " baby boom ".
[2] Population Bulletin (Population Reference Bureau Inc.), April 1953.

spent on the housing, health and education of the 4,000 surplus children who are now being born every year.

11. This is, in my opinion, the supreme task before the people and Government of Barbados. A deep water harbour, an industrial development corporation, a better electrical supply, all are no doubt desirable; millions could and, if available, should be spent on health, housing and education. But nothing the Government can do is in any way comparable in importance with success in stopping the increase of the population.

If they fail in this, Barbados will become poor, desperately overcrowded and discontented. If they succeed, then there is every reasonable hope that they will make Barbados (with its glorious climate) one of the pleasantest places in the world in which to live and work.

Barbados is perhaps unique among the countries of the world in having a permanently limited income and a rapidly increasing population. The 4,000 excess children born every year will of course be consumers; it is as nearly as possible certain that there will never be a job for a single one of them except by taking a job away from somebody else.