

# AGRICULTURAL DIVERSIFICATION IN THE COMMONWEALTH CARIBBEAN

## Some Basic Issues

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### INTRODUCTION

The purpose of this paper is to direct attention to some of the basic issues which we should consider when we are dealing with the more applied problems of agricultural diversification during the course of this Conference.

### THE RATIONALE FOR DIVERSIFICATION

It is a general view in the Commonwealth Caribbean that there is need for the transformation of agriculture into a more diversified pattern. The need for agricultural diversification has been mentioned so often and policies to pursue it are so frequently items of news that there is a tendency to lose sight of the reasons why diversification is needed. Agricultural diversification has come to be regarded almost as an end in itself.

But if we are to pursue sensible policies, we need to keep in view the rationale for agricultural diversification. Only in this way can we build up some idea of the extent of the need for diversification and the level that may be suitable for a particular country, region or farm.

An agriculture with a narrow production base usually involves high risks and diversification is pursued to reduce these risks. But besides risks, profitability is also important and assuming an agriculture of a given size, two crops would be better than one only if together they give higher risk-discounted prospective returns than the one.

It should be noted though, that where a one-crop agriculture involves high risks as is likely to be the case, replacement of the one crop partly by a second crop may be justified even if expected profits are lower in the case of the second crop. This is because with the lower risks involved with the two crops, risk-discounted returns from them may still be higher. Whether this is so or not, however, would depend on whether the lower risks from both crops compensate for the lower expected profits from the second crop.

These considerations apply both to the national economy and an individual farm. In the case of the national economy also, gains may accrue from diversification which are not reflected in the profitability to farmers of moving into the new crops. For example economic stability provided by a diversified agriculture may assist the process of planning for future development. The economy concerned may be facing a shortage of foreign exchange and diversification may have a favourable effect on the balance of pay-

ments. Contributions to employment in a labour surplus situation and to economic growth, because of linkages with other sectors, are some of the gains which are not taken into account in the calculation of profitability to farmers. These situations may justify diversification even when risk-discounted returns from the more diversified agriculture are less than those of the less diversified agriculture. It will depend on whether these gains compensate for the lower risk-discounted returns. It should also be pointed out that any of these gains accruing from the existing or less diversified agriculture would have to be taken into account in these comparisons.

Where gains accruing to the national economy are not reflected in the private calculations of individual farmers, then diversification policy, because of these gains, would justify subsidies.

For example movement from a one-crop to a two-crop economy may be more efficiently done if there is regional<sup>1</sup> specialisation rather than diversification on individual farms. Varying physical conditions and varying requirements for the different crops may make this a better economic proposition. In such a situation if the second crop is less profitable than the first, but diversification is justified because of national gains, then subsidies would be needed to induce farmers who are required to grow the second crop, to replace the first crop with this crop.

It is important to note, in this matter of the discounting of returns for risks, that in the Commonwealth Caribbean we are dealing with less developed countries and because of the low level of living standard of most small farmers, they may regard the difficulties associated with a lowering of their standard of living so seriously that they may tend to discount heavily the ventures with high risks. This is of importance in considering the issue of diversification in the Commonwealth Caribbean because the prospects for diversification are in crops with high risks and the farms which are regarded as suitable for these crops are the small farms. This is perhaps one of the important reasons for the poor response to diversification so far.

It is of interest to note that in most countries of the Area it is hoped to achieve diversification in the process of agricultural expansion rather than in the substitution of new crops for part of the output of traditional crops.

<sup>1</sup> 'Region' is used in this paper to refer to an area within a country and not to the Commonwealth Caribbean area as a whole, as the word is commonly used today.

In discussing the rationale for diversification so far, the situation discussed was one in which diversification would require the replacement of some proportion of output of existing important crops. Nevertheless the principles to be used in determining whether it is better to promote agricultural expansion with existing crops or with new ones are the same. A new element in the situation would be the difference in the size of the agriculture and this of course would have some bearing on risks both to individual farms and the national economy.

#### DIVERSIFICATION AT FARM LEVEL

Even when diversification is achieved at the national level this need not result in diversification at the farm level. In fact this situation is likely because unlike a farm, physical conditions are likely to vary over the large area of a country and such varying conditions may give each region advantage in a different crop. The influence of physical factors may however be strongly modified by economic factors. A strong market position for a crop may make it competitive with another crop even in an area where agronomic conditions are more suited to the other crop.

Diversification at the national level seems to have been the main concern of policy in the Commonwealth Caribbean. While this can assist stability at the national level it does not attempt to solve the risk problems of the large number of farmers who would still be growing one or two crops. Diversification is more difficult and perhaps less desirable at this level because of the counteracting advantages of specialisation in one or two crops, for example increased knowledge and skills in the growing of the crops concerned, the possibility of scale economies and the lack of influence or the small influence of varying physical conditions.

#### ECONOMIC STRUCTURE AND AGRICULTURAL DIVERSIFICATION

Besides the riskiness of agriculture, the need for agricultural diversification depends on the relative importance of agriculture in the national economy. Both from the standpoint of the economic stability of an economy and of the incomes of farmers, the need for diversification would be stronger, the larger the importance of agriculture in the economy. The riskiness of the existing agriculture and of the non-agricultural industries are, however, qualifying factors.

The relevance of this point to the Commonwealth Caribbean is that diversification is a greater need in the less-developed economies of the Area. However with the agricultural enterprises which are held in the area to have possibilities for diversification — food products for the local market — it is doubtful that these Economies have prospects which are as good as those of the more developed economies. This is because of considerations both of market size and resource endowments. Even with regional agricultural

integration, it may be worth considering whether advantages in the production of many of these products would lie with the less developed countries. It is perhaps being erroneously assumed in some circles that greater dependence on agriculture means an advantage in agricultural production generally. (I am assuming that these points will be dealt with more fully in the papers dealing with size of economies and economic integration.)

Limitations on the scope for diversification in food production for the local and regional market—if there is such scope in these less-developed economies — would mean that diversification policy in them would have to pay greater attention to the extra-regional export trade. The need for a larger continuing dependence on agriculture than is the case in the more developed countries reinforces this point.

#### INTEGRATION AND AGRICULTURAL DIVERSIFICATION

The freeing of intra-regional agricultural trade will lead to some specialisation in agricultural production. It would tend therefore to operate against agricultural diversification. The gains from trade creation together with the greater scope for import substitution with common restrictions against agricultural imports from third countries would increase agricultural efficiency and the scope for expanding agricultural production. Hence, although diversification may be adversely affected, agriculture in the Region would gain. It is not unlikely though that in some countries both diversification and agriculture generally would suffer.

#### EXPORT ORIENTATION

The agricultural economy of most Commonwealth Caribbean countries is export orientéd. This has come to be regarded as an undesirable situation by many people including some economists. When one looks at the market situation facing our traditional export crops and opportunities for import substitution in food crops in terms of demand and production possibilities, scope for encouraging economic expansion through local food production is revealed. This however tends to be exaggerated. This point is dealt with later. Even if one is over-optimistic in this matter, the scope for reducing dependence on export crops to a large extent even if agriculture is only maintained at its present size, just does not exist. The problem therefore is not export orientation as such but perhaps too much dependence on export crops in terms of existing economic opportunities.

It is perhaps necessary to point out that even with economic integration, economic development in the Area cannot reach a high level without some large dependence on exportation (whether of agricultural products or industrial products or both) in view of the small size of the economies. Hence the expansion of exports whether in agriculture or in the other sectors must continue to be an important feature of economic

policy in the Area. This points to the need for some emphasis in developing new export lines even in agriculture where attention has come to be focussed almost wholly on import substitution.

### **Historical Factors and Export Orientation**

A market of any significant size for food developed late in the Commonwealth Caribbean. This is because of the small size of the economies. It was only perhaps in the post-war years that production for this market could have promoted a significant level of economic expansion.

Besides the small market, commercial food production was hindered by the policy of duty-free or low-duty importation of food items. Since the production of many imported products would also have been subsidised in their country of origin, local food production was further handicapped.

The policy of low duties was no doubt influenced by the strong political position of the plantation owners who were interested in keeping food prices down in order that wages could be kept low. This is perhaps one of the important ways in which the plantation system helped to hinder local food production.

Another factor which would have operated against the local production of food was the advantageous position given to export crops by the preferential position granted to empire-produced goods in the British market.

### **Cropping Pattern and Size of Economies**

The small size of Commonwealth Caribbean economies in terms of land area and population size helps to explain their large dependence on one or two export crops. These countries were supplying a large market — the United Kingdom—with their traditional export crops. Any crop which tended to do well quickly spread to cover a large proportion of the cultivated land because of the small amount of these lands relative to the size of the market the country was supplying. This was especially the case where small size meant a small variation in the environmental conditions and these conditions were suitable for the crop concerned. This explains for instance why the islands of St. Kitts and Barbados have such a large proportion of their cultivated land under sugar-cane production. Recently we have seen the spread of banana cultivation to cover nearly the whole of the cultivated acreage in St. Lucia and a large proportion of that in St. Vincent, Dominica and Grenada. The large size of the British market for bananas relative to the extent of cultivated land in these islands helps to explain this large importance of bananas in these islands.

The predominance of sugar-cane in the islands of St. Kitts and Barbados and of bananas in St. Lucia, and the utilisation of nearly all of the cultivable land

for these crops in the former two islands and a large proportion of that of St. Lucia, means that the scope for diversification through agricultural expansion is limited unless of course large increases in yields take place which will allow land to be transferred to other uses without reducing the output of these crops.

### **Fixed Capital and Diversification**

The traditional agricultural export industries are highly capitalised. This is especially the case with the sugar industry. The large amount of fixed capital in the form of factory buildings, factory equipment and bulk storage facilities is highly specific to the industry and therefore has low salvage value. This means slow adjustment to changing economic circumstances. For instance, as long as returns can cover operating costs and provide an adequate return to the salvage value of the capital, it would be feasible to continue in operation.

The same consideration applies to a tree-crop agriculture. The fixed capital in the form of the trees has no opportunity cost and as long as returns can cover operating costs and provide a reasonable net income to farm families, it would pay to continue in operation regardless of the initial investment undertaken in establishing the trees.

The slow adjustment of farm enterprises with these crops to new economic opportunities means that economies with a predominance of these crops would make slow progress in diversification. The slow adjustment of Grenada to the new opportunities offered in banana production in the 1950's seems to a large extent to be due to its predominant tree crop agriculture. It should be noted that this adjustment increased in pace only when a large proportion of the tree crops was destroyed by hurricane.

Besides capital, technical knowledge and management skills on a farm may also be specific to a particular crop in these large export industries. This would tend also to lead to a lack of flexibility in the agriculture.

### **Farm Size Structure and Diversification**

The farm size structure of an economy has an important bearing on diversification. If large farms predominate and the existing crops are suitable for large-scale production and the new crops which are suitable for the diversification of the agriculture are not, then diversification would be more difficult to achieve. This is an important problem in the Commonwealth Caribbean in view of the importance of large farms and the suitability of most of the new crops for small farm production. It helps to explain for instance the small amount of food produced and lack of progress in diversification.

Even where small farms exist and the new crops are suitable for them, because of inadequate size for

full-time farming, their owners may prefer to combine the extensive agriculture involved in growing export crops with a full-time job as agricultural labourer or outside of farming. This helps to explain the importance of sugar-cane cultivation and part-time farming among Barbadian small farmers.

### The Competitive Position of Export Crops

On the whole, despite the apparent good prospects for production of food products such as vegetables and livestock products, efforts to diversify into these products have generally not met with any significant degree of success. In fact for most countries it is safe to say that no success has been achieved.

In this situation farmers are very often blamed for irrationality in the choice of crops. It is possible, however, that the advantages to farmers of the traditional export crops, relative to the new lines that are recommended, are not sufficiently realised. Their marketing is well organised. Commonwealth preference has enabled higher prices to be obtained than would have otherwise been the case. Research and experimentation have improved yields and cultivation practices and have reduced production risks. The predominance of large producers has facilitated capitalisation and this has helped the industries to adjust themselves to wage levels which are rising at a faster rate than prices.

The adjustment that these industries have been able to make to the unfavourable economic circumstances they have been facing is evidence that their position is not as weak as is usually made out.

This is not to deny that these industries face long-term uncertainties and poor market prospects. But when one looks at these industries in relation to other industries in the Area, for example, the highly protected manufacturing industry, one realises that they are not isolated areas of weakness in the economies.

### COMMONWEALTH PREFERENCES AND DIVERSIFICATION

The view has been expressed that the preferences enjoyed by our major export crops in the British market have prevented diversification and have not therefore benefited agriculture. In fact they only serve to keep in survival industries that will eventually have to go out.

In helping to provide higher prices, preferences have hindered progress in import substitution. It is not possible to say with any certainty what would have happened to Commonwealth Caribbean agriculture in the absence of protection but it seems unlikely that it would have been in a better position. Progress in food production would have been greater and this sector does provide good prospects for growth in view of the rising population and high income elasticity of demand of many of the products.

However the extent of this progress would have depended on the efforts that would have been made to solve the marketing and supply problems of this sector. It should be noted too that the possibilities offered by these lines of production would scarcely have been adequate to take up the slack from declining export industries and still promote agricultural expansion. It would not have been easy to find other agricultural industries which would have helped the situation because of the difficulty in developing alternative lines in agriculture due to world demand and supply conditions of agricultural products.

In the light of these factors and the fact that resources of land and labour are available in the present situation for the development of these new lines, it would seem that the abolition of protection would not have resulted in an improvement in agriculture. The availability of unused agricultural resources show that there are other reasons besides protected export crops which are responsible for the slow progress of food production.

Besides assistance to particular crops, it should be noted that from the general economic standpoint, protection would seem to have had some favourable dynamic economic consequences.

### IMPORT SUBSTITUTION

Import substitution in food production offers scope for the expansion of economic activity in the Commonwealth Caribbean region and all the governments have embarked on this policy. However, it is doubtful that the scope is as large as is made out. It seems that both the demand and supply possibilities are over-estimated.

It is true that in assessing demand prospects, food items which cannot be produced in the Area are excluded from the calculations but insufficient attention seems to be paid to cost of production locally relative to the price at which the imported product or an imported substitute is available.

The problem is not wholly one of the competitive position of the imported product relative to the local one but very often it arises because of the cheaper forms of the product which can be made available from foreign sources and the suitability of these forms for the demand structure of the Area. One can cite such products as powdered milk, condensed and evaporated milk, salted beef and pork and chicken necks and backs. The substitute forms of these products which are available from local production fetch much higher prices.

In this situation, protection for the local product in many cases cannot be justified because of the large difference in price and because of the fact that with this difference in price protection would scarcely increase consumption of the local product to the extent that it restricts consumption of the foreign product. Cost-of-living and nutritional considerations also

reinforce the point. For example restriction on the importation of poultry necks and backs in Barbados is unlikely to have a significant effect on the consumption of whole chickens which are more than twice the price. Besides, such a policy has the other adverse features already mentioned. These products constitute a significant proportion of the food import bill of Commonwealth Caribbean countries and most of them are not excluded in assessments of the scope for import substitution.

On the side of supply, past performance does not give ground for optimism. Risks are high in the production and marketing of vegetables and livestock products. Small farmers make an important contribution with their production and the point made before about the high discounting of risks on the part of poor farmers may be an important reason for poor supply response. Research, experimentation and advisory work which were neglected in the past could help to reduce production risks as well as improve the efficiency of production. Improvement in market organisation especially with a view to stabilising prices and facilitating services such as grading, packing and cold storage could reduce market risks, improve the competitive position of the local product and increase returns. Market size in each country is small but regional integration and greater attention to export outlets could give some scope for market expansion.

Because of the problems indicated above, the

returns from foodcrops are lower than those shown to be possible by using yields from experimental work. The opportunities which have existed in recent years for emigration and for jobs in the tourist, manufacturing and other sectors of the economies, and the incomes possible in these alternative activities, have made these returns not attractive enough to encourage people to move into these lines of production or remain in them. What seems to have happened here is that against the background of the level of development of the societies and the consequent aspirations of the people, the technology used in the non-export agricultural sector seems to have failed to keep up to a level which would have enabled this agriculture to provide incomes and to take a form which would have made it attractive to rural peoples in the Area.

The view is widely held in the Area that lack of attractiveness of agriculture is due to the low status associated with it and its history of slavery and the plantation system is regarded as being mainly responsible for this low status. I am not in a position to evaluate the importance of past agricultural organisation on present attitudes to agriculture but this view does seem to me to neglect the importance of low incomes earned in this sector relative to others in determining the status of agricultural work, and thus the usual close relationship between status and incomes in modern societies.

## Discussion Report

The discussion was mainly centred around three topics :

- (1) The risks of diversification and size of farm
- (2) The problem of how to encourage regional specialisation and the practical difficulties of introducing new crops
- (3) The choice of the most appropriate analytical framework within which to discuss agricultural diversification policy in the West Indies.

On the first topic, it was pointed out that in Barbados, due to the difficulties of extending credit, extension advice and other government aids to a large number of small farmers, the feasibility of developing new crops on small farms was a real policy problem. By comparison, large farm operators were generally better able to capitalise new developments and take risks. It was stated that in Jamaica small farms tended to be too diversified producing for export markets with limited prospects.

On the second topic, a questioner asked what practical measures a government could take to encourage regional specialisation in agriculture within its own territory. Attention was drawn to the especial difficulties of introducing new crops in small territories with limited research and extension staffs. Another speaker maintained that inadequate numbers of professionally qualified staff were a major constraint on the switch to alternative farm enterprises in practically all territories.

On the third topic, several speakers took the view that the analytical approach adopted in the paper was too static and that insufficient emphasis was put on the long-term benefits of rapid transformation of the agricultural sector even though the short-term costs might be high. It was maintained that the case for diversification needed re-examination at the macro-economic level, using a model which was explicit about the conditions under which Caribbean farmers actually operate. It was held that the domestic agricultural sector remained subservient to the traditional export sector; further, that a number of consequences follow from domestic agriculture's inferior standing. These are first, that in certain sectors a labour shortage co-exists with unemployment; second,

that local commodity markets are absent or poorly developed; third, that credit sources are highly fractured and that farmers producing for the domestic market are not well served; fourth, that the social and economic infrastructure is a legacy of the plantation system and is not well adapted to the needs of domestic agriculture; fifth, that the pattern of consumer tastes and producer technology continue to be set from outside the Region. It was further argued that in order to overcome these constraints on the development of domestic agriculture it would be necessary to create conditions in which local entrepreneurs would emerge in the rural sector. Moreover, entrepreneurship would have to be combined with opportunities for accumulating the capital needed for development. It was suggested that this end could be achieved by isolating the domestic from the external price system by means of appropriate import controls.

In reply to this argument, several discussants held that the crucial problem was that of getting an adequate response from agriculture at the individual farm level. The relevance of criticising the paper at the macro-economic level was therefore questioned and such criticism was considered to be unhelpful to governments confronted with the task of evolving policies to evoke a response at the micro-level.

In replying to the discussion Persaud agreed that political and social factors might well have an important bearing on production response at the farm level and that a multi-disciplinary approach to the problems of diversification was desirable. He was not in principle opposed to agriculture price supports or subsidies but considered it necessary to point out that the prices of food crops grown in the Commonwealth Caribbean were already high compared with the prices received by producers of the same crops in other countries. Although it was undoubtedly feasible to exclude food imports in order to encourage diversification, it was necessary to consider the nutritional and cost of living implications of such a policy. Persaud advanced the view that, in the past, a principal constraint on economic transformation in the rural sector had been the small size of the local market and this could not be attributed to the plantation system. Moreover, he did not consider that the policy implications of the macro-economic approach advocated by his critics had been adequately spelled out.