A PRELIMINARY APPRAISAL OF THE SCOPE FOR RATIONALISATION OF THE WEST INDIAN BANANA INDUSTRY[a]

by

George Beckford
Institute of Social & Economic Research
University of the West Indies
Mona, Jamaica.

The pattern of agricultural development in the West Indies has, to a large extent, been determined by external political and economic factors. Political colonization of the area has led to the establishment of export crop industries serving the economic needs of the metropolis. And there has been little or no variation in the pattern to date. The area is still dependent on protected markets for its export crops and it imports large quantities of its own food requirements. Several factors call for a serious re-appraisal of the situation. The possibility of losing protection, relatively high-cost export production, deteriorating terms of trade, expanding food imports, and the strategic importance of Agriculture for further economic growth emphasise the need for a rationalisation of Agriculture as a whole.

The present study of the banana industry can be regarded as a kind of case study of the problem. Whether or not, the rationalisation of such an important industry could hardly be carried through without repercussions on the agricultural sector as a whole. And the spread effects need to be given explicit consideration in the discussion. The reconstruction of West Indian Agriculture which is required at this time cannot be achieved without far-reaching structural changes and bold new policies. It is in this light that the analysis proceeds.

The Need for Rationalisation

In relation to other banana exporting countries, the West Indies are high cost producers. Some rough indication of this can be gained from a comparison of yield data for a number of countries, as shown in the following tabulation:

	Tons per acre[a]
Jamaica	2.7
Windward Islands	2.5
Ecuador	5.4
Colombia	5.0
Costa Rica	10.8
Martinique	8.8
Guadeloupe	8.8
West Cameroon	2.3
Canary Islands	4.0

a
Calculated from data in Commonwealth Economic Committee, Fruit, 1963.

Average yields in South America are double those of the West Indies; in the French West Indies three times and in Central America four times as high.

Up to now the protection provided by the United Kingdom has served to insulate the West Indies from competition from low-cost exporters.[1] It has also no doubt served to inhibit cost reducing adjustments within the industry itself. In view of the possibility that protection will not continue indefinitely, the West Indian industry must begin to secure economies of a type that can place it in a more favourable competitive position. Even if protection is not withdrawn entirely, if Britain's entry into the European Common Market is realised with associate status for the West Indies, the latter will have to compete with other associated territories which, like the French West Indies, may be relatively low-cost producers.

Another long-run consideration pointing to the need for rationalisation of the industry is the projected slow growth of demand in relation to supply, indicating a secular decline in prices over the next few years. This situation is

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[1]
In addition to a preferential duty of ₤7.10 per ton, non-Commonwealth bananas are limited to a quota restriction of 4,000 tons per year.

expected to obtain not only for overall world trade in
bananas but also for the particular British market on which
West Indian exporters now depend. Using projections of
population growth and per capita incomes in the U.K., and
applying an income elasticity of +0.5, it has been estimated
that banana consumption in Britain will approximate 420,000
long tons in 1970 as compared with about 380,000 tons in
1965. Export supplies to the British market on the other
hand, are projected to reach a level of about 544,000 tons[2]
in 1970. On the basis of 1965 prices, an excess supply
of 124,000 tons is suggested by these projections. Declining
prices will demand cost reducing adjustments to keep the
industry viable even in this protected market.

A more immediate consideration is the current
oversupply of fruit which has resulted directly from
simultaneous expansion of supply from the Windward Islands
and Jamaica during the last two years (See Table 1). Several
attempts by these suppliers to rationalise the marketing
of fruit in Britain have failed and stiffening intra-regional
competition over the past 18 months has resulted in low
and fluctuating prices. In both 1964 and 1965, the
'greenboat price' of bananas in the U.K. reached a December
trough of ₤39.5 per ton - a record for the postwar period.
For the period 1960-63, the greenboat price was adjusted
an average of nine times each year. By 1964 there were 11
changes and in 1965, there were 21 adjustments during the
year (See Table 2).

Low and fluctuating prices have already affected
growers adversely, and in the case of the Windward Islands
where the banana industry is a leading sector, development
of the island economies has been materially retarded. The
trading losses of Jamaica's Banana Board and appeals by the
Windwards for financial assistance from Britain are manifestations
of the effect. It would seem, therefore, that rationalisation
of the industry should involve some kind of regional
collaboration in respect of marketing and, perhaps, production.[3]

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[1]
There are several findings of a comprehensive study of world
banana production and trade conducted by the Harvard Business School
and now in process of publication.

[2]
Of this total 288,000 tons represent the projected Jamaican supply;
266,000 tons, the projected Windward Island supply; with 30,000 tons
from other sources, such as British Guiana.

[3]
The possible entry of British Guiana into the market further
underscores the need for regional collaboration.

Nature, Structure and Organisation of Production and Marketing

Bananas for export are produced more or less indiscriminately in various parts of Jamaica and the four Windward Islands. Production in many areas not suited to banana production involves extra costs to adjust the ecological environment; for example, heavy fertilisation and drainage works to improve soil fertility and structure where soils are deficient in terms of banana requirements; and irrigation where rainfall is inadequate. In Jamaica, production is scattered over the entire island even though the southern parishes are, in a strict ecological sense, eminently unsuited to bananas. Table 3 shows the geographical distribution of acreage and export production for Jamaica.

It is of some interest to note at this point that banana production in Central and South America (the international low-cost suppliers) is on the whole restricted to the most suitable ecological areas and is serviced by an infra-structure of railways, roads and ports developed specifically for bananas. This is a result of the fact that the industries there were developed by private foreign-owned fruit companies that got an option on the most suitable areas. By contrast, West Indian banana production developed through the initiative of numerous smallholders with limited access to the more suitable areas and was grafted on to an infrastructure designed for sugar production and trade. It would, therefore, not be surprising to find locational diseconomies in the West Indian industry.

Bananas are a very demanding crop in respect of management, particularly when the natural environment is unsuitable. Planting densities, cropping patterns, fertilisation, irrigation and disease control depend on management decisions that influence yields and costs. To date, much emphasis has been placed on technological improvements in production as a means of improving yields and reducing costs. But these have not had the kind of effect necessary to place the industry in a strong competitive position. This is not to say that expenditures on research and extension have been misplaced. Far from it. What is implied is that rationalisation of the industry seems to demand much more than improvements in the general technology of production.

The export banana industry in Jamaica consists of about 35,000 growers cultivating some 85,000 acres;[1] and is serviced by the All-Island Banana Growers Association (and an insurance board) in respect of production and by a statutory body - the Banana Board - in respect of marketing. In the Windwards, .there were about 29,000 growers in 1958, occupying a total of some 31,000 acres with grower associations servicing the industry in respect of both production and marketing. Table 4 shows the distribution of growers, acreage and production according to size of farm and the following tabulation summarises the size distribution of growers:[2]

	Jamaica	Dominica	St. Lucia	St. Vincent	Grenada
Under 10 acres	34,066	7,460	8,050	6,000	5,810
Over 10 acres	484	170	940	310	500
Total	34,550	7,630	8,990	6,310	6,310

By and large, the number of growers in the West Indian industry exceeds by a considerable margin the number of growers in other banana exporting countries.[3]

The predominance of small growers in the industry is to be noted. In this respect, the tabulation above obscures the fact that the greatest concentration of growers is on farms of less than five acres. In Jamaica, Dominica, St. Lucia, St. Vincent and Grenada, the respective percentages of growers in this category were 96, 77, 75, 85 and 83. The shares of acreage and output which are accounted for by small growers are, however, disproportionately less. For

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[1] These data refer to "recognised growers" - those who utilise the disease control facilities of the AIBGA-and relate to 1964. It should be noted that there are a larger number of growers registered with the Association, and that additional acreages with subsistence production or production only for the domestic market are excluded.

[2] The data for Jamaica are based on 1964 estimates and relate only to recognised growers while those for the Windwards are 1958 estimates of all banana producers.

[3] Grenada, and St. Vincent, each with about one-sixth the number of growers .in Jamaica, individually have three times the number of growers in Ecuador (1,820).

example, in Jamaica the 96 per cent of growers on farms
of less than 5 acres occupy only 58 per cent of total
acreage and produce roughly one-third of total output;
while the 0.2 per cent of all growers that operate farms
over 100 acres in size occupy 23 per cent of total acreage
and produce roughly 30 per cent of output.

The inference is usually made that because average
yields are lower on small farms than on the large estates,
the former represent the high cost element in the industry
and that rationalisation should be in terms of a trans-
formation which eliminates or reduces the participation of
small growers. This conclusion is very misleading since
it does not fully recognise the factors accounting for the
observed differences in average yields. Small growers, on
the whole, operate on lands which are less suited to bananas
than the large growers; the former are usually located on
steep hillslopes with shallow soils while the latter are
generally located in fertile, alluvial valleys and plains.
Furthermore, small growers generally follow a mixed cropping
pattern and consequently have lower planting densities than
large growers who produce bananas as a main enterprise.
Thus although the data indicate that yields per acre are
lower on small farms, this may purely be a reflection of the
use of inappropriate acreage data.[2]

A better indication of the relative performance
of small growers is provided by the following tabulation which
shows the percentage distribution of roots and production,
by size of farm for Jamaica:[3]

Acres	Roots	Production
Under 5	30.1	30.8
5 - 25	26.6	27.4
25 - 100	9.9	10.2
100 - 500	8.1	7.9
Over 500	25.3	23.7
Total	100.0	100.0

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[1] Ideally the raw data need to be adjusted to account for mixed
cropping and to make the data for small growers directly
comparable to that for large growers before comparative yield
data can be meaningfully discussed.

[2] These data relate to the sample census year 1961 and were
calculated from data in Jamaica Dept. of Statistics, Agricultural
Census 1961-62 (Bulletin No. 2, 1963). Production is given
in terms of number of stems.

These data suggest that stem output per root is higher
on small farms than on the larger farms where the share
of total production is disporportionately less than the
share of plant population.[1] Furthermore, it cannot be
assumed that relatively low yields necessarily reflect
relatively high costs of production. For one thing, large
farms rely heavily on hired labour for which they must pay
competitive wages whereas small growers rely more heavily
on family labour which may have a low opportunity cost.[2]
Besides, large specialised farms may have heavy overheads
directly chargeable to bananas while the low overheads on
small farms are spread over a range of crops with only a
portion chargeable to banana production.

All of this implies that the traditional argument
that rationalisation of the industry can be achieved simply
by eliminating the small grower may well be misplaced, or
at best deceptive.

The compex nature of banana production resulting
mainly from the problem of disease control has, not un-
naturally, led to the development of grower associations
in the industry. These associations coordinate disease
control, organise fertiliser issue and administer production
schemes of one sort or another. Any grower with a minimum of
50 roots in Jamaica and 30 roots in the Windwards can
register as a member; financial resources of these
associations are derived from a cess on exported fruit.
The associations serve a very useful purpose in an
industry where coordination would otherwise be difficult
because of the large number of scattered smallholders.

Marketing arrangements in the Windward Islands
are also supervised and administered by the grower
associations, each of which has a contractual agreement with
Geest Industries Ltd. for the shipside purchase of total

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[1]
This conclusion may not, however, apply to weight yields in
terms of exportable supply since average stem weight may be
higher on large farms and since the rate of reject may also
be lower for production on these farms.

[2]
As Clayton has suggested, "The peasant cultivator is, in
certain circumstances, a low-cost producer of cash-crop
products. At least three conditions need to be present for
this to apply. That only food crops are production alternatives
to a cash crop. That little or no hired labour is used -
implying a small cash outlay. That production and processing
of cash crops on a small scale are relatively simple." (See
Eric Clayton, Agrarian Development in Peasant Economies (Per-
gammon Press, Oxford 1964, pp. 74 - 75).

available export supply.[1] Under the terms of the existing
agreement, the price paid by Geest Industries to the
association consists of a 'basic payment', a shipping
discount, and a share of ripening profits. The basic
payment is determined by the 'green market price' - the
price at which bananas are sold to green ripeners in the
U.K. (which is determined by consultation between Windward
Islands Banana Growers Association (WINBAN)and the Company) -
and is calculated by deducting company allowances and
expenses.[2] The shipping discount is based on utilisation
of available capacity and is calculated annually for
loadings above 80 per cent of capacity. The four
associations share, according to the ratio of sales, one-
half of the net profit realised by Geest from the sale of
Windward Island bananas ripened by the company at its own
centres in the United Kingdom.

The associations establish and operate buying
stations (in the respective islands) where they purchase
fruit from growers to be transported at the associations'
expense to the ports where the company's reception depots
are located. (Growers with more than 50 stems per shipment
may be allowed to select, pack and arrange their own transport
to the ports; but they are reimbursed for transportation by
the association and for packing by the company). This
method of purchasing involves an equalisation principle
whereby all growers share transportation costs equally,
regardless of their location in relations to ports. Under
this scheme growers closer to the ports subsidise those
located further away.

In Jamaica, the Banana Board purchases fruit
from growers at buying stations located all over the country;
and it retains ownership of the fruit until delivered to
wholesalers in the United Kingdom. The equalisation principle
also obtains here since the Board bears all expenses involved

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[1]
The contract is actually negotiated by WINBAN on behalf of the
four island associations but the standardised contract is
signed by each association. WINBAN is a company limited by
guarantee and was set up to integrate the island associations
in respect of insurance, research, material purchasing and
marketing.

[2]
These include purchase and loading costs, export tax, hurricane
insurance, incentive bonus and operating expenses in the West
Indies; unloading and distribution expenses, insurance,
materials, allowances to ripeners, and costs of shrinkage
and waste on the U.K. side; and ocean freight and commission
(2½ per cent).

in transporting the fruit (by road and rail) from buying
stations to ports and in loading on to boats. The Board
arranges shipping and overseas distribution by means of
shipping and marketing agreements with two agents.
Elder and Fyffes Ltd. (a subsidiary of United Fruit Co.
Ltd.) which handles 75 per cent of the trade; and Jamaica
Banana Producers Association Ltd., contracted to handle
25 per cent.

The marketing agents in addition to providing
shipping space are responsible for the discharge of fruit
in the U.K. and subsequent distribution to ripening centres
where the fruit is sold at the 'greenboat' price. It is
important to note that the two marketing agents operate
their own ripening rooms and account for a substantial share
of the quantities ripened in the U.K.[1] The greenboat price
which is realised by the Board must cover a number of
payments: growers' receipts, transportation to ports of
shipment, selection and loading, freight and insurance,
unloading and discharge at U.K. ports, transportation to
distribution points in the U.K. and a commission (2½ per
cent) for the agents. The price is determined and adjusted
on the basis of assessment of market conditions by the agents.

On the whole, the Jamaican industry has a heavy
administrative superstructure which creates substantial
organisational diseconomies. This has been pointed out
by the Sharp Commission[2] and, subsequently, by a firm of
marketing consultants.[3] Since the structure is now in
process of reform, no detailed attention is given to the
scope for organisational economies in what follows.

The Basis for Rationalisation of Production

Agricultural policy in the West Indies should be
guided by the principle that in economies with low land/labour

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[1]
Elders and Fyffes ripen the bulk of their purchases from the Board
and sell only a small share to private wholesaler-ripeners. Pro-
ducers, on the other hand, sell the bulk of their cargo green to
these ripeners and has a limited ripening operation.

[2]
See Report of the Commission of Enquiry into the Banana Industry
of Jamaica 1959. (Government Printer, Kingston, 1960)

[3]
Urwick, Orr and Partners International Ltd.

ratios (a land-scarce/labour-abundant factor endowment)
land should be carefully economised. In effect, this
means that land should not normally be used to produce
crops for which it is ill-suited or which would bring lower
returns per acre than some alternative crop.

One important reason why the existing pattern
of land use has emerged is that the prices of export crops
have more often than not been artificially high in relation
to alternative production for the home market. Another
reason is that the organised marketing of export crops assured
farmers of outlets for these products. Bananas have a
further advantage in that the crop offers continuous cash
receipts throughout the year and is therefore attractive
as a steady source of cash income, especially where alternative
land use involves seasonal variations in receipts (as in the
case with melons, sugar cane, etc.).

In Jamaica, it seems that substantial economies
could be derived from shifts in the location of production
of all crops. In the case of bananas, a committee of
experts from the Ministry of Agriculture have recommended
that export production should be restricted to two regions -
an eastern zone consisting of the parishes of St. Mary,
Portland and St. Thomas, and a western zone including parts
of St. James, Hanover and Westmoreland.[1] Such locational
shifts would have several major effects. First, the
elimination of marginal producing areas would lower the
overall average cost of banana production. It is not
possible to derive quantitative estimates of this effect
since data on costs of production by areas are not available.
Second, the concentration of production would facilitate
disease control and improvements in the technology of
production. Third, the costs of purchasing and transporting
fruit to ports would be considerably reduced. Fourth,
administration of the industry would be less unwieldy and
administrative economies would thus be secured. Fifth, production
of foodstuffs for the home market could be increased if,
as it appears, land withdrawn from bananas is suitable for the
purpose.

It would also be desirable to transfer the
administrative body of the industry from Kingston to the eastern
zone, and to give growers a greater opportunity to influence
policy and action relating to the industry through some
appropriate form of local government. This would have
favourable social and political effects.

It would be partly a matter of policy as to whether
the shifts in location would increase or reduce the volume
of exportable supply. One proposal that has been made is
that there should be no change in total banana acreage.

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[1]
Information provided by Jamaica Ministry of Agriculture

Acreage expansion should take place in the selected zones
sufficient to offset the withdrawal of acreage elsewhere.
Table 5 summarises this proposal. This would no doubt have
the effect of increasing the supply since average yield
in the selected zones are probably higher than that in
the marginal areas. Alternatively, if no expansion were
to take place in the selected regions, total acreage would
be reduced by some 15,000 acres and export supply would
fall by about 30,000 tons.[1] Clearly, the appropriate choice
can only be determined after a decision is taken on what are
desirable levels of output in terms of market availability
and the relationship between output and revenue.[2]

Some indication of the economies that would be
derived from this kind of rationalisation can be gained from
an analysis of the implied savings in transportation costs
alone. Table 6 shows current transportation costs from
various buying stations to ports of shipment and the following
tabulation shows the average transportation cost per ton
of fruit for a number of parishes:

Parish	£.	s.	d.
St. Thomas	£1.	6.	5.
St. Mary	1.	17.	1.
Portland	0.	17.	1.
Trelawny	5.	6.	5.
Clarendon	5.	0.	4.
Manchester	5.	0.	4.
St. Catherine	3.	14.	10.
St. James	1.	17.	1.
St. Elizabeth	2.	12.	1.

Average transportation costs in the selected zones are one-
third to one-fifth of those in areas from which it is recommended
that acreages should be withdrawn. This means that if the
30,000 tons now being produced in the marginal areas were
instead produced in the selected areas, the cost of moving this
volume of fruit to ports of shipment would be reduced from
about £120,000 to approximately £38,000 (based on assumed
average rates of £4 and £1. 5. for marginal and selected areas,
respectively).

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1
This is a rough estimate based on the assumption that average
yield in the southern parishes is about 2.0 tons per acre
as compared to the national average of 2.7 tons. The actual
figure may be slightly higher - perhaps around 2.3 tons per
acre.
2
The latter depends on the price elasticity of demand. If
demand is inelastic then an increase in supply will, ceteris
paribus, lead to a fall in the total revenue.

It has been pointed out by McFarlane that "the
Jamaican industry is run at a higher overall cost /than that
of the Windward Islands/ ... that whereas at the point of
purchase from the grower the value per ton of export
banana is lowest in Jamaica, at the point of shipping the
cost per ton is the highest in the West Indies."[1] Trans-
portation, buying operations, hurricane insurance, leaf spot
cess, shipping and loading and administrative expenses
("consisting largely of grants to the A.I.B.G.A. and payments
for company services") are all relatively high cost elements
in comparison to the Windward Islands. The cost of almost
all of these items would tend to be reduced as a result of
the proposed shifts in the location of production.

Rationalisation of production in the Windward
Islands will be examined in more detail for the final version
of this study. At this point, it is sufficient to say that
rationalisation must be considered in the light of the
desirability for diversification of production to reduce the
dependence of these economies on bananas. Clearly, some
new dynamic is required to sustain the economic development of
these territories as the growth rate of banana output
declines. And the island economies are now very vulnerable
to market fluctuations and the vicissitudes of nature.
This introduces new dimensions beyond that of securing cost
economies and may necessitate shifts in the location of
production, and policies designed either to reduce acreages
in bananas or to discourage further expansion of capacity.

It would be useful to consider briefly what scope
exists for other kinds of production adjustments which may
help to improve the competitive position of the industry.
These need not be regarded as being alternatives to the
proposed locational adjustments; they could in fact be
supplementary. Such cost of production data as are available
suggest that labour is an important component of cost. Labour
seems to account for over one-half of total production costs.[2]
Consequently, any reduction of labour costs would materially
reduce total costs. However, banana production will only
accommodate a limited amount of mechanisation even if this
were desirable.[3] Only a national income policy which restrains

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[1]
Dennis McFarlane, "The Future of the Banana Industry in the
West Indies", Social and Economic Studies, March 1964, p. 73.
[2]
See McFarlane, ibid, p. 62.
[3]
Even if it were possible, consideration would have to be given
to the cost of machine inputs in terms of scarce foreign
exchange and the employment effect of such mechanisation in
labour surplus economies like the West Indies.

advances in wages could have a significant impact on labour
costs. But this would need to be considered in the light
of the total economy and not simply in terms of improving
the competitive position of the banana industry.

Materials are also a major item of cost in
producing bananas. It has been estimated, for example,
that materials may represent as much as 40 per cent of the
cost of establishing an acre of bananas.[1] Though it seems
that the share may be normally considerably lower than this
(note 1), it is reasonable to conclude that any possible
reduction of the cost of materials (fertilisers, wadding wrap,
boxes, etc.) would secure significant cost economies. So
also would improvements in the general technology of
production.

Discussion of the kinds of policy mechanisms which
could be introduced to promote the proposed rationalisation
of production is provided in the Section below. It is
sufficient at this stage to recognise that such shifts
in the location of production are as conceived here will
result in tremendous dislocations in the rural sector. But
since it will secure considerable economies for the industry
and at the same time set the stage for rationalisation of
Agriculture as a whole, it deserves serious consideration.
It seems almost unnecessary to mention that careful planning
and appropriate policy mechanisms hold the key to the process
of reconstruction.

The Scope for Realising Shipping and Marketing Economies

It is useful to begin by examining present shipping
and marketing expenses to detect the high cost elements
through which the most significant economies can be secured.
Table 7 provides the necessary data for Jamaica. These data
indicate that freight charges are most important, accounting
for roughly two-thirds of the total marketing expenses
involved in moving the fruit from Jamaican ports to wholesalers
in the United Kingdom. Distribution expenses and discharge
at U.K. ports rank much lower, but are next in importance.

It appears that there is not much room for manoeuvre
in respect of discharge and distribution costs. The former
involves unloading of fruit at U.K. docks, reloading on to
trucks and railroad cars, cargo dues or wharfage, and wages
to riggers. These costs are strongly influenced by prevailing
wage rates on British docks; but it is likely that the shift
over to boxed bananas that is now in process will alter the

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[1]

Information derived from the Jamaica Ministry of Agriculture and
Lands.

techniques of unloading in such a way as to lower the labour input and this may reduce costs. Distribution expenses are the actual railway charges for the movement of fruit from U.K. docks to wholesale points of sale and payments by the Banana Board are made on the basis of railway and trucking vouchers submitted by the two marketing agents.

From all accounts, it seems most profitable to concentrate attention on the possibilities of securing shipping economies. In the case of Jamaica, the freight rate is tied to the greenboat price in the following manner. The rate is Ŀ19.5 per ton when the price is Ŀ63.15 and it is increased or decreased by Ŀ1.1 per ton for every Ŀ3.10 unit adjustment in the greenboat price, with a stipulated minimum rate of Ŀ16.10 and a maximum of Ŀ23.10 per ton. An incentive is provided for optimum utilisation of shipping space by allowing a 50 per cent discount on the existing rate for cargo in excess of 80 per cent of ship capacity. A freight adjustment is also made for waste and unsaleable fruit by basing the charges on the outturn weight of fruit at the port of discharge.

Studies undertaken by the G.A.T.T. indicate that for a banana boat with refrigerated hold capacity of 250,000 cubic feet, average speed of 17 knots, a load of 95 per cent capacity, a 4 per cent allowance for shrinkage, and <u>no return cargo</u>, the cost per ton of transporting bananas from Jamaica to the United Kingdom can be as low as Ŀ14. 5. 8. per ton.[1] According to Table 7, the actual freight charges on Jamaican fruit over the past few years have been substantially higher than the G.A.T.T. estimate which is based on no return cargo. Over the period 1962-64, for example, the average freight charge was actually Ŀ19. 17. 2. The disparity seems to be related to the age and ownership of ships in operation and the underutilisation of available capacity.

The majority of boats operated by the two shipping agents have been at sea for anywhere from 18 to 42 years. These are normally slower boats and operational costs therefore tend to be high. Ownership is of some importance since it appears that freight costs are lower in the case of chartered vessels. The cost per ton for fruit carried in chartered boats on the Jamaica-U.K. run in 1964 was less

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[1] General Agreement on Tariffs and Trade (G.A.T.T.) "Studies on the Banana Trade and Industry" (mimeo. report W(5)3, 20th March, 1965. It should be noted that whereas the G.A.T.T. estimate is based on a boat with 250,000 cubic feet capacity, the average capacity of boats currently on the Jamaica-U.K. run is about 200,000 cubic feet.

than £15 as compared with an overall cost of over £20.[1]
The Banana Board has not been able to achieve optimum
utilisation of shipping space. In recent years, average
annual averages of the utilised share of capacity range
from 74 to 85 per cent; less than 80 per cent was used
in 1965.

It is also necessary to analyse the effect of the
escalator provision in the Shipping Agreement which ties
freight rates to the greenboat price. This arrangement seems
to give the marketing agents a distinct advantage since they
are engaged in ripening activities in addition to shipping.[2]
The greenboat price is a cost price to the ripener. A unit
increase in the greenboat price of £3.10 raises the shipper-
ripener's cost by only £2.9 as the Banana Board loses £1.1
of the increase with extra freight charges. And although a
fall in the greenboat price reduces the freight, the shipper-
ripener stands to gain on the ripening end through lower input
costs. It seems that only the Board stands to lose as the
agents can hedge profits on shipping transactions against
that on their ripening operations. Windward Island producers
seem to be in a happier position in that Geest Industries
shares its ripening profits with the growers' associations
(See Section - Nature, Structure and Organisation of Pro-
duction and Marketing - above)

Close inspection of the pricing policy in the
Jamaica trade suggests further that determination of the
greenboat price is itself strongly influenced by the profit
margins of ripeners and wholesalers. Interest is focussed
on the rationale used in determining the greenboat price
since it is the basis on which other prices in the marketing
process are determined. It is crucial to the West Indian
industry since it directly influences the sales realisation
of the Board and grower associations; and ultimately the
receipts and incomes of growers. The greenboat price is
actually based on the following considerations: (i) the
wholesale selling prices of branches - when wholesale
prices cover branch costs more than adequately the greenboat
price may be increased; (ii) the quantity of fruit at sea
for early arrival; (iii) the stocks of unsold fruit in
ripening rooms - if incoming supplies and stocks are high,
the price is likely to be lowered or at best maintained;

1
 Information provided by the Ministry of Trade and Industry.
2
 The advantage applies a fortiori in the case of Elders and
 Fyffes which ripens the bulk of the fruit transported by
 that firm.

(iv) the expected influence of weather on sales; (v) the availability of competetive fruits; and (vi) the extent of branch losses - an increase in the greenboat price may be deferred for a time to allow branches to recoup losses.

Table 8 shows the monthly changes in wholesale and greenboat prices and the derived ripening margins during 1964. Some interesting observations can be made on the basis of these data. First, the average gross margin was for most of the year (in 8 months) well in excess of 50 per cent of the average greenboat price. No firm judgement can be offered here as to whether this is a reasonable mark-up but it may be instructive to note that the absolute margins tend to exceed similar margins in France and West Germany.[1] Second, it appears that the Jamaican grower may sometimes absorb most of the loss resulting from adverse changes in market conditions. The fall in the greenboat price between March and April was associated with an increase in the wholesale price. Third, the growers do not seem to always benefit sufficiently from improved market conditions. The wholesale price rose consistently from March to June and it took the full three months before the greenboat price returned to its March level. Some kind of reform of the pricing policy is indicated.

The gross realisation of the Banana Board consists of returns from U.K. sales at the greenboat price, a premium paid by the marketing agents for stems wrapped in Diothene and a quality bonus for boxed fruit, and sales of rejected fruit at Jamaican ports. Net realisation is derived after deducting overseas marketing expenses; and from this the Board meets domestic expenses and payments to the grower. Table 9 shows some relevant data for a few years. It indicates that the growers' share of gross realisation has been declining steadily. This suggests an upward trend in marketing expenses.

The foregoing discussion in this section leads to the general conclusion that substantial economies can be secured in respect of shipping and that returns to the industry could be increased if an appropriate pricing policy is introduced within the framework of existing marketing arrangements. The difficulties encountered in negotiating new shipping and marketing agreements in Jamaica in recent years suggests that no substantial improvement in the terms, in favour of the Jamaican industry, are likely to be achieved. Industry officials may, however, try to secure some profit sharing agreement similar to the Windward-Geest arrangement.

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[1]
G.A.T.T., op cit.

It is suggested that the most promising type of
marketing reform would be one that is based on the establish-
ment of a West Indian shipping service relying heavily on
chartered vessels. In this way, the industry would be able
to secure shipping economies and would continue to meet
discharge and distribution costs as at present but it would
be in a position to determine and asjust the greenboat price
more appropriately. It should also be a long-run strategy to
operate ripening rooms in the consuming market.

The Jamaica Banana Producers Association could
provide the nucleus for what is proposed. The company is
based on share capital subscribed by Jamaican growers and
it now operates 5 of the 15 boats which service the
Jamaican trade in addition to ripening centres in the
United Kingdom. One factor limiting the expansion of the
company is its complete dependence on the Jamaican trade
with corresponding high risks. A spread of sources of
supply to include the Windwards would reduce risks[1] and
facilitate expansion. This would necessitate some change
in existing marketing agreements in both Jamaica and the
Windwards, and the broadening of the share capital base of
Producers to encourage subscriptions from Windward growers.
A high degree of regional collaboration would be required
for this. It is suggested in the next section that a start
could be made in this direction if a new market for West
Indian fruit can be secured. The recent regional collaboration
in respect of supplies to the Italian market indicates that
the approach suggested here will not face formidable
obstacles.

In addition to the effects it would have on shipping
and marketing costs for bananas, a regional banana shipping
service would have favourable balance of payments effects since
it would reduce current out-payments for shipping services.
It would also increase government revenues through the payment
of company taxes in the West Indies[2] and would create incomes
and employment for West Indians.

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[1]
The probability is very low that a hurricane will hit all four
Windwards and Jamaica in the same year.

[2]
A firm like Elders and Fyffes which is incorporated in the
United Kingdom pays company taxes to the U.K. government and
not to the West Indian governments.

Policy Implications and the Scope for Regional Collaboration

The proposals for reform in the production and
marketing of bananas presented in the last two sections have
far-reaching policy implications. To begin with, they
require a firm determination of the governments of the area
to come to terms with the fundamental problems of Agriculture
and of the export crop-industries in particular.[1] The present
study departs from the traditional approach which seeks
marginal adjustments within the existing framework and
pattern of production and marketing. It suggests that
substantial benefits are to be derived from structural and
organisational change.

The shifts in location of banana production which
are proposed for Jamaica and the proposal for diversification
of agricultural production in the Windward Islands can go a
far way toward improving the competetive position of the
industry in international trade and at the same time lay the
foundation for the required import substitution in Agri-
culture. The proposal must be viewed, in policy terms at
least, as applying to the whole agricultural sector and not
just to the banana industry. What this means is that the
principle of zoning must be extended to all agricultural
activity and that policy must be introduced to induce
farmers to fall in line with the desired pattern of land
use. Since farmers tend to be guided by the relative profitability
of alternative enterprises, price policies are of great
importance. An appropriate structure of output prices is a
major initial step; but supplementary measures relating
to marketing and other services would be required.

The measures required for making the transition in
the case of bananas will illustrate the general case. Initially,
the present practice of buying export bananas throughout
Jamaica should be discarded. Instead, the Board should
operate buying stations only in the two selected banana
zones. In order to continue in export production, then,
growers outside of these zones would have to transport their
fruit to some point in the selected areas. This would tend
to increase their cost of production, reduce current profits
on bananas and improve the competetive position of alternative
enterprises. But it may be further necessary for government
to actively encourage the transfer of land to particular uses by
offering guaranteed prices and markets and technical assistance

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[1]
The two are intimately related since the reconstruction of
Agriculture is contingent on rationalisation of the export
crop-industries.

for the particular crops into which the land should be transferred.[1] The savings in banana transportation costs could justifiably be used to subsidise these farmers in making the transfer. It will also be necessary to recognise that bananas provide a steady income flow so that some provision must be made to adjust whatever seasonal income flows alternative crops may involve.

The price level of export bananas will need to be adjusted in accordance with the desirable total banana acreage. This, in turn, will depend on market requirements - a matter that is discussed below. If, for example, an expansion of acreage is required, part of the economies secured from the rationalisation should be passed on to growers in the selected banana areas in terms of higher grower prices. But to maintain current acreage, no change in grower prices would be necessary.

Studies of the cost of producing bananas in the selected areas of Jamaica and those of the Windward Islands could help to establish relative advantages within the region as a whole. And at some stage, regional shifts in the location of production could be seriously contemplated as a means of further improving the competitive position of the regional industry and of rationalising Agriculture on a regional basis. In this connection, an "export sub-stitution" policy would be relevant. McIntyre spells out the possibilities in his discussion of the potential for regional economic cooperation as follows:

> "... a participating country may be willing to trade quicker access to its internal market than the transitional period requires for greater access to markets in the rest of the world, where it is competing with another participating country. In this case, the latter country will increase its exports to the regional market, at the expense of fore-going increases in exports to the rest of the world. This may lead over time, to an increase in exports for both countries, if they are giving up market opportunities for producing goods with low-growth potential for opportunities to export goods with a higher growth potential" (our emphasis)[2]

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[1] Guaranteed prices, marketing facilities etc. for particular crops should only apply in those regions selected for production of those crops. Some knowledge of relevant supply elasticities in all cases would, of course, be essential.

[2] Alister McIntyre, "Some Issues of Trade Policy in the West Indies", New World Quarterly, Croptime 1966, pp.18-19. This article is also published in a somewhat different form under the title "Decolonisation & Trade Policy in the West Indies" in The Caribbean in Transition (Proceedings of the Second Caribbean Scholars Conference, eds. Fuat Andic and Tomas Mathews, Institute of Caribbean Studies, Univ. of P.R.,1965).

He continues to consider the case of Jamaica and the
Windward Islands in banana exports by hypothesising that
"if Jamaica's incremental comparative advantage is in
light manufactures, while that of the Windwards is in
bananas, it may be to their mutual advantage for the Windwards
to encourage their residents to consume Jamaican manufactures,
if Jamaica agrees in turn to hold off some of her bananas
from the world market. This may not necessarily involve
a reduction in Jamaican exports of bananas; all it may mean
is that Jamaica will aim at a much slower rate of increase
in her banana exports" (our emphasis).[1]

In fact, the immediate possibilities for such
export substitution in the case of bananas will depend on
market opportunities and on internal development priorities.
Thus, for example, the Windwards may wish to concede some
(perhaps only the incremental growth) of the external banana
Market to Jamaica if the latter provides an assured market for
a range of foodstuffs which the Windwards could produce in
the process of diversifying their economies.[2] It is clear
that regional collaboration would be necessary to establish
what is mutually desirable.

Existing market constraints underscore the need
for collaboration along these lines. There seems to be little
or no immediate prospect for easing the current oversupply in the
British market. Any market sharing agreement should be based
on the foregoing policy considerations. But it may be (as
has been suggested elsewhere[3]) that the appropriate and
desirable rationalisation of supplies to the U.K. market is now
being impeded by what impeded by what appears to be a market-
control struggle between the major agents handling West
Indian fruit - Elders and Fyffes and Geest Industries. This
points to the desirability of intervention by West Indian
governments at the policy level, along the lines suggested
above. It also suggests that, in addition to the possibilities
of securing shipping and marketing economies, a regional
banana shipping and marketing service is a desirable objective
since it would reduce the scope for artificial conflict of
interests within the region. However, there are legal or
contractual constraints which will inhibit the development
of this service in the short run.

1
 Ibid. p.19.
2
 The companion project studies of import substitution and the
 feasibility of freeing trade in the Commonwealth Caribbean will provi
 much relevant data on the existing possibilities for trade pro-
 motion through this process of export substitution.
3
 See "Issues in the Windward-Jamaica Banana War", New World
 Quarterly, Dead Season 1965, pp. 3 - 11.

A new market could obviate some of the short-term difficulties in terms of easing supplies to the traditional market and exploring export substitution possibilities and also in terms of shirting existing contractual obligations. In this connection, it should be noted that the prospects for securing a share of preferential Canadian market is being explored.[1] If, as seems possible at this stage, the West Indies are guaranteed an outlet in Canada, then that trade should be given exclusively to the proposed expanded Banana Producers Association (based on regional grower share capital). The Association could charter vessels for the trade and sell directly to green ripeners in Montreal and Toronto. Some adjustments in existing contracts to relate them to the traditional U.K. trade may be necessary but should not be too difficult to negotiate. The experience in breaking into a new market would be invaluable for this West Indian firm and would help prepare it for the long-run take-over of the regional trade.

Since freight costs would be lower on Jamaica-Montreal traffic than on supplies coming from the Windwards, it would be more reasonable to service Canadian requirements with Jamaican fruit, even though the agreement with Canada is negotiated regionally. This would require that producers should have an option on Windward fruit in the case of a hurricane affecting Jamaica. It would also require regional agreement for the diversion of part of Jamaica's supplies from the British market; and some equalisation formula to adjust for differentials in the prices realised in the two markets.

The need to press for a share of the Canadian banana market at the governmental level is emphasised since a new market offers considerable scope for short-term manoeuvre in the process of moving toward long-term rationalisation of the industry. It requires a high level of regional collaboration not only to secure the market but also to set the stage for the long-term development of the regional economies and the industry, along the lines indicated in this study.

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[1] The study was independently commissioned by the recent Conference of West Indian Government officials in preparation for the forthcoming Canada-West Indies Conference scheduled for July of this year, and has been assigned to the authors of this paper. Research is in progress.

Table 1. Sources of Banana Imports into the United Kingdom, 1956-1965.

Year	Jamaica	Windward Islands	Cameroons	Others	Long tons Total
1956	146,331	36,421	67,108	65,814	315,674
1957	151,703	46,104	85,046	34,121	316,974
1958	188,949	60,319	83,450	45,721	318,439
1959	134,619	89,970	65,765	45,707	336,031
1960	138,542	96,160	78,269	31,424	344,395
1961	140,469	101,741	80,427	40,917	363,554
1962	152,317	111,109	76,271	34,944	374,641
1963	152,031	118,237	67,584	18,895	356,747
1964	174,383	141,144	n.a.	n.a.	355,293
1965	190,263	n.a.	n.a.	n.a.	380,343

Source: Commonwealth Economic Committee, Fruit, annual issues.

Table 2.   Changes in the Greenboat Price for Full Standard
Jamaican Bananas in the United Kingdom, 1960-1965.
(Ŀ per ton)

1960		1964	
Jan. 1 - May 15	Ŀ60.15	Jan. 1 - Feb. 8	Ŀ63.15
May 16 - May 28	65.15	Feb. 9 - Feb. 29	67.5
May 29 - July 9	70.15	Mar. 1 - April 11	70.15
July 10 - Aug. 27	75.15	April 12 - May 2	63.15
Aug. 28 - Nov. 20	70.15	May 3 - May 9	67.5
Nov. 21 - Dec. 3	65.15	May 10 - Oct. 18	70.15
Dec. 4 - Dec. 17	55.15	Oc. 19 - Nov. 8	63.15
Dec. 18 - Dec. 31	45.15	Nov. 9 - Nov. 29	56.15
		Nov. 30 - Dec. 13	49.15
1961		Dec. 14 - Dec. 26	46.5
Jan. 1 - Jan. 7	45.15	Dec. 27 - Dec. 31	39.5
Jan. 8 - Jan. 28	50.15		
Jan. 29 - Feb. 18	55.15	1965	
Feb. 19 - Feb. 25	60.15	Jan. 1 - Jan. 16	39.5
Feb. 26 - April 15	65.15	Jan. 17 - Jan. 30	42.15
April 16 - Dec. 9	70.15	Jan. 31 - Feb. 13	46.5
Dec. 10 - Dec. 24	60.5	Feb. 14 - Feb. 20	49.15
Dec. 26 - Dec. 31	46.5	Feb. 21 - Mar. 27	56.15
		Mar. 28 - April 10	60.5
1962		April 11 - May 1	63.15
Jan. 1 - Feb. 3	46.5	May 2 - May 15	56.15
Feb. 4 - Feb. 17	53.5	May 16 - May 29	60.5
Feb. 18 - May 12	60.5	May 30 - June 19	63.15
May 13 - Aug. 4	67.5	June 20 - July 24	60.5
Aug. 5 - Aug. 25	60.5	/June 27 - July 3/a	56.15
Aug. 26 - Sept. 15	67.5	July 25 - Sep. 18	56.15
Sept. 16 - Nov. 10	70.15	Sept. 19 - Oct. 9	60.5
Nov. 11 - Nov. 24	63.15	Oct. 10 - Oct. 30	63.15
Nov. 25 - Dec. 8	56.15	Oct. 31 - Nov. 20	67.5
Dec. 9 - Dec. 31	46.5	Nov. 21 - Nov. 27	60.5
		Nov. 28 - Dec. 4	56.15
1963		Dec. 5 - Dec. 18	49.15
Jan. 1 - Mar. 16	46.5	Dec. 19 - Dec. 25	46.5
Mar. 17 - April 6	56.15	Dec. 26 - Dec. 31	42.15
April 7 - May 18	60.5		
May 19 - June 16	67.5	1966	
June 17 - July 6	70.15	Jan. 2	39.5
July 7 - July 20	67.5		
July 21 - Aug. 3	60.5	a	
Aug. 4 -Sept. 21	67.5	Elders and Fyffes only. Producers	
Sept. 22 - Oct. 19	60.5	maintained their price level at	
Oct. 20 - Nov. 23	67.5	Ŀ60.5	
Nov. 24 - Dec. 28	70.15		

Source : Annual Reports of the Jamaica Banana Producers Association.

Table 3. Estimated Acreage and Production of Bananas in Jamaica, by Parishes

Parishes	Estimated Acreage (1964)	Total Export Production ('000 stems)
St. Mary	27,000	5,177
Portland	10,500	2,135
St. Thomas	17,000	1,512
St. James	12,500	2,405
Westmoreland	1,300	n.a.
Hanover	1,300	144
St. Andrew	2,000	60
Clarendon	2,600	388
St. Catherine	7,600	845
Other Parishes	2,900	1,317
Total	84,700	13,982

Source: Data provided by A.I.B.G.A. and the Banana Board.

Table 4. Percentage Distribution of Growers, Acreage and Production by size of farm in the West Indian Banana Industry[a]

	0 - 1	1 - 5	5 - 10	10 - 50	50 -100	100+
Jamaica[b]						
Growers	67	31	2	1	0.1	0.1
Acreage	17	47	8	8	5	16
Production	4	32	38[c]	--	5[c]	20
Dominica						
Growers	33	44	22[c]	...	1	1
Acreage	8	27	22[c]	...	6	38
Production	8	32	26[c]	...	5	30
St. Lucia						
Growers	34	41	14	9	0.6	0.7
Acreage	6	16	14	22	4	38
Production	5	19	16	22	5	32
St. Vincent						
Growers	35	60	10	4	0.2	0.5
Acreage	4	32	36[c]	...	2	26
Production	5	28	27[c]	...	1	39
Grenada						
Growers	37	46	9	6	0.7	1
Acreage	1	5	2	17	4	72
Production	5	17	5	8	4	59

a
 Based on rounded percentages of 1958 data; production in thousand stems.
b
 Note that the data used for Jamaica in the text is based on 1964 estimates while these relate to 1958.
c
 Applies to combinations of adjacent groups for which separate data are not available.

Source: Dennis McFarlane, ibid, p. 55.

Table 5. Estimated and Recommended Acreages of Bananas in Jamaica.

Parish	Estimated Acreage (1965) (Acres)	Recommended Acreage (1975) (Acres)	Recommended Area of Concentration in Parish
St. Mary	27,000	32,000	Yellow limestone and shales of St. Mary.
Portland	10,500	15,500	River Valleys of Buff Bay, Spanish, Swift and Rio Grande (2) Windsor, Forest, Manchioneal.
St. Thomas	17,000	22,000	Golden Grove - Bowden, Morant Bay.
St. James	12,500	12,500	John's Hall - Kensington.
Westmoreland	1,300	1,300	Bethel Town - Cambridge.
Hanover	1,300	1,300	Lucea - Dias.
St. Andrew	2,000	-	
Clarendon	2,600	-	
St. Catherine	7,600	-	
Other Parishes	2,900	-	
Total	84,700	84,600	

Source : Ministry of Agriculture and Lands.

Table 6. Transportation Cost Per Ton from Buying Stations to Port of Shipment in Jamaica.

Buying Station	Port of Shipment	Distance Road Miles	Rail	Cost per ton
(a) St. Thomas				
Phillipsfield	Bowden	22		Ŀ1. 1. 10.
Llandewey	Bowden	29		2. 0. 0.
Trinityville	Bowden	25		1. 7. 0.
Morant Bay	Bowden	9½		1. 5. 7.
Golden Grove	Bowden	8		17. 10.
Mean = Ŀ1. 6. 5d. per ton				
(b) St. Mary				
Albany	Port Antonio	32		1. 13. 0.
Highgate	Port Antonio	37		2. 2. 9.
Richmond	Port Antonio	39		2. 9. 5.
Belfield	Port Antonio	29		1. 10. 11.
Annotto Bay	Port Antonio	25		2. 0. 6.
Windsor Castle	Port Antonio		20	15. 10.
Mean = Ŀ1. 17. 1d. per ton.				
(c) Portland				
Manchioneal	Port Antonio	22		1. 2. 7.
Long Bay	Port Antonio	16		1. 14. 8.
St. Margaret's Bay	Port Antonio		5	7. 6.
Orange Bay	Port Antonio		13	18. 3.
Hope Bay	Port Antonio		9	10. 5.
Buff Bay	Port Antonio		16	6. 1.
Mean = Ŀ0. 17. 1d. per ton.				
(d) Trelawny				
Spring Gardens	Port Antonio		123	5. 1. 5.
Freeman's Hill	Port Antonio		130	5. 18. 11.
Ulster Spring	Port Antonio		132½	5. 11. 2.
Warsop	Port Antonio		132½	5. 12. 2.
Litchfield	Port Antonio		123	5. 1. 5.
Mean = Ŀ5. 6. 5d. per ton.				

Table 6 (cont'd).

Buying Station	Port of Shipment	Distance Road Miles	Rail	Cost per ton		
(e) Clarendon						
Frankfield	Port Antonio	107		Ƚ6.	12.	9.
Trout Hall	Port Antonio	104		6.	2.	10.
Crooked River	Port Antonio	103		1.	6.	4.
Chapelton	Port Antonio	97		6	15.	4.
Alston	Port Antonio	117		5.	0.	0.
Ritches	Port Antonio	118		5.	0.	0.

Mean = Ƚ5. 0. 4d. per ton.

(f) Manchester						
Porus	Port Antonio	114		5.	3.	8.
Kendal	Port Antonio	106		5.	0.	0.
Craighead	Port Antonio	123				
Dobson	Port Antonio	119				
Christiana	Port Antonio	115				
Highgate Hall	Port Antonio	119				

Mean = Ƚ5. 0. 4d. per ton

(g) St. Catherine						
Troja	Port Antonio	44		2.	15.	7.
Riversdale	Port Antonio	48		2.	16.	6.
Bog Walk	Port Antonio	54		3.	6.	11.
Linstead	Port Antonio	57½			16.	0.
Spanish Town	Port Antonio	63		4.	11.	1.
George Lane	Port Antonio	66		4.	5.	7.
Gregory Park	Port Antonio	68		5.	12.	0.
Old Harbour	Port Antonio	74		5	11.	6.
Bushy Park	Port Antonio	71		4.	11.	4.

Mean = Ƚ3. 14. 10d. per ton

(h) St. James						
Stonehenge	Montego Bay	26		2.	12.	1.
Catadupa	Montego Bay	23		1.	17.	9.
Cambridge	Lucea	37		1.	11.	7.

Mean = Ƚ1. 17. 1d. per ton.

Table 6 (cont'd)

Buying Station	Port of Shipment	Distance		Cost per ton		
		Road Miles	Rail			
	(i) St. Elizabeth					
Balaclava	Port Antonio	121		£2.	18.	1.
Magotty	Port Antonio	131		2.	4.	6.
Ipswich	Montego Bay	41		.2.	12.	1.

Mean = £2. 12. 1d. per ton.

Source : Calculated from data provided by the Banana Board.

Table 7. Marketing Expenses per ton of Bananas, Port of Shipment in Jamaica to Wholesaler in U.K., 1959 - 1964.

(a) Actual Expenses

Year	Wholesaler Allowance			Freight			Commission			Insurance			Discharge			Distribution Expenses			Total Expenses		
	£	J		£	J		£	J		£	J		£	J		£	J		£	J	
1959	-	5.	9.	20.	15.	2.	2.	8.	5.	-	1.	11.	3.	4.	4.	4.	1.	3.	30.	14.	10.
1960	-	13.	1.	19.	18.	9.	2.	6.	5.	-	1.	9.	3.	7.	8.	3.	13.	9.	30.	1.	5.
1961	-	4.	3.	20.	10.10		2.	7.	9.	-	1.	10.	3.	10.	-	3.	9.	1.	30.	13.	9.
1962.	-	9.	6.	19.	2.11		1.	17.	11.	-	2.	-	3.	11.	4.	4.	6.	8.	29.	10.	4.
1963	-	9.	8.	19.	14.10		2.	2.	5.	-	2.	-	3.	18.	3.	4.	10.	4.	30.	7.	6.
1964.	-	8.	4.	20.	13.11		2.	4.	3.	-	2.	8.	4	0.	3.	4.	16.	7.	32.	6.	0.

(b) Percentage Distribution of Marketing Expenses

Year	Wholesaler Allowance	Freight	Commission	Insurance	Discharge	Distribution Expenses	Total Expenses
1959	.9	67.3	7.9	.3	10.4	13.2	100
1960	2.2	66.3	7.7	.3	11.3	12.2	100
1961	.7	67.0	7.8	.3	11.4	12.8	100
1962	1.6	64.9	6.4	.3	12.1	14.7	100
1963	1.6	64.9	6.9	.3	12.8	14.5	100
1964	1.4	68.0	7.3	.4	13.2	15.9	100

Source : Data provided by the Banana Board

Table 8. Movements in Wholesale and Greenboat Prices and Derived Ripening Margins for Jamaican Bananas, by months, 1964.

Month	Wholesale Price (per long ton)	Average Greenboat Price	Gross Margins	.Average Gross Margin
	Ł	Ł	Ł	Ł
January	96 - 116	70. 15. 0	25. 5. 0- 45. 5. 0.	35. 5. 0.
February	112 - 128	70. 15. 0	41. 5. 0- 57. 5. 0	49. 5. 0.
March	96 - 104	70. 15. 0	25. 5. 0- 35. 5. 0.	29. 5. 0.
April	104 - 112	67. 5. 0.	36.15. 0- 44.15. 0.	40. 15. 0.
May	120 - 128	69. 0. 0.	51. 0. 0- 59. 0. 0.	55. 0. 0.
June	120 - 128	70. 15. 0.	49. 5. 0- 57. 5. 0.	53. 5. 0.
July	104 - 112	70. 15. 0.	33. 5. 0- 41. 5. 0.	37. 5. 0.
August	104 - 112	70. 15. 0.	33. 5. 0- 41. 5. 0.	37. 5. 0.
September	104 - 112	70. 15. 0.	33. 5. 0- 41. 5. 0.	37. 5. 0.
October	88 - 104	67. 5. 0.	20.15. 0- 36.15. 0.	28. 15. 0.
November	76 - 96	63. 15. 0.	12. 5. 0- 32. 5. 0.	22. 5. 0.
December	64 - 84	45. 2. 6.	18.17. 2- 38.17. 2.	28. 17. 2.

Source : Data provided by Ministry of Trade and Industry in Jamaica.

Table 9. Sales Realisation per ton of Fruit Discharged and Payments to Growers, Jamaica
1958 and 1962 - 64.

Year	Total	Gross Realisation		Jamaican Sales	Net Realisation	Payment to Growers	Grower Share of Gross Realisation
		United Kingdom Sales					
		Fruit	Premium				
	Ł	Ł	Ł	Ł	Ł	Ł	%
1958	74. 19. 2.	72. 1. 8.	1. 13. 10.	0. 3. 8.	40. 17. 9.	23. 16. 0.	31.7
1962	61. 1. 2.	59. 6. 3.	1. 13. 7.	0. 1. 4.	31. 10. 10.	16. 13. 3.	27.2
1963	61. 16. 8.	60. 1. 6.	1. 13. 8.	0. 1. 6.	31. 9. 2.	14. 12. 6.	23.6
1964	68. 7. 2.	63.13. 8.	4. 12. 9.	0. 0. 9.	36. 1. 2.	15. 1. 9.	22.0

Source : Jamaica Banana Board.