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GROUNDNUT PRODUCTION IN THE LESS DEVELOPED COUNTRIES OF THE CARIBBEAN
COMMON MARKET:¹ CONSTRAINTS AND POTENTIAL

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The CARICOM region is a net importer of groundnuts (*Arachis hypogea* L.) even though ecological conditions are favourable for the growth of the crop and regional agreements have been entered into by governments with the objective of encouraging production by ensuring markets.

The agreement establishing the Caribbean Free Trade Association (CARIFTA) and the treaty establishing the Caribbean Community and Common Market (CARICOM) include an Agricultural Marketing Protocol (AMP) agreement under which 22 agricultural commodities, including groundnuts, are traded on preferential markets within the Region.

The AMP was designed to promote and stabilize the domestic agriculture of the Region by "*ensuring that commodities capable of being produced in the area are in fact produced and distributed at prices remunerative to growers and reasonable to consumers*". Since economic activity in the LDCs is centered around agricultural production, the AMP gives preference to the LDCs by granting their products priority on the regional market.

In efforts to further promote agricultural production in the LDCs, the Member Countries of CARIFTA agreed to establish a Guaranteed Market Scheme (GMS). Under this arrangement, the More Developed Countries (MDCs) i.e. Barbados, Guyana, Jamaica, and Trinidad and Tobago are required to purchase specified quantities of selected commodities annually, including groundnuts, from the LDCs. Provision is made for annual increments in the volume of commodities traded and an annual review of prices.

The criteria used to determine the selected commodities include favourable ecological conditions, capability to produce the crop, potential for expanding production, available marketing facilities, and favourable returns to the producer who utilizes reasonable standards of crop husbandry. Consideration was given also to the size of the regional market and its potential for expansion.

Given such conditions, response at the national level to ensure marked increases in the production of groundnuts was anticipated. However, no serious effort has been made in any of the LDC territories to increase production.

¹The Less Developed Countries (LDCs) are Antigua, Belize, Dominica, Grenada, Montserrat, St. Kitts/Nevis/Anguilla, St. Lucia and St. Vincent. Due to geographical location, Belize is not included in this paper.

The purpose of this paper is to examine briefly the constraints of production, and to identify areas with possible potential for groundnut production.

Regional Demand and Production

The bulk of locally produced nuts is used fresh or roasted for human consumption. In recent years, canned nuts, peanut butter and paste have been processed in some of the MDCs using mainly extra-regional raw material. Additional processing facilities have been proposed for some MDCs and at least two LDCs.

Comprehensive import data for the region are not available. It is estimated that the annual importation of groundnuts and groundnut products from extra-regional sources is now equivalent to 9,000 metric tons dry nuts in shell. Production in the LDCs is estimated at 135 to 170 metric tons and the total CARICOM production at 1,135 to 1,1360 metric tons per year.

Major Constraints to Production

The main constraints to production of groundnuts in the LDCs are associated with factors which contribute to low yields and high production costs. These are as follows:

- (i) complete dependence on rainfall for production;
- (ii) use of unimproved varieties;
- (iii) absence of supplies of high quality planting material;
- (iv) low levels of cultural practices including sub-optimal plant population, inadequate plant protection and significant post-harvest losses;
- (v) production in small plots on hilly lands, and complete dependence on manual harvesting;
- (vi) high incidence of "false nuts" i.e. pods without developed seeds in particular when the crop is grown on calcium-deficient soils such as those developed from recent volcanic ash;
- (vii) inadequate agricultural advisory services to assist farmers to optimise production; and
- (viii) lack of programmes to promote and expand cultivation of the crop.

Overcoming Production Constraints

Information now available indicates that most of the constraints to production can be removed or their adverse effect minimised through the use of improved genetic material and cultural practices. For example, bunch-types have shorter growing periods, allow for more efficient harvesting, and produce higher yields than the runner-types if optimum plant populations are used. In low rainfall areas, it is likely that the bunch types will produce higher yields by virtue of their shorter growing period which may result in less water stress during the critical periods of flowering and seed development.

Weed control, which had been a major production problem, can now be carried out efficiently by the use of pre-emergence herbicides combined with high plant populations. Technology for the control of pests and

diseases, and mechanical aids to assist with various operations are available in the Region. It is known that the incidence of "false nuts" can be reduced by the application of calcium to the rooting zone or by foliar applications at the onset of flowering.

The intensification of cropping systems offer potential for making more efficient use of scarce land resources by growing more than one crop per year. A major constraint to multiple cropping is the poor distribution of rainfall. However, crops such as groundnuts which have short growing periods and a requirement for dry conditions at maturity, offer opportunities for production during the short rainy season plus a late crop at the end of the main wet season.

A system of intensive land use appears to favour the small farmer and the rural worker. The small farmer's land resource is usually sub-optimal and employment in rural areas seasonal. Increased production and employment opportunities are therefore likely to have pronounced beneficial influences on the economy of the rural sector.

Cost Price Relationship

The minimum AMP price for groundnuts increased from EC\$0.88 per kg f.o.b. in October 1972 to EC\$2.65 per kg f.o.b. in October 1974. It is known that there have been largely increases in production costs during this period. In St. Vincent it is estimated that the cost of production increased from EC\$1540 per ha. where land preparation, planting and weed control can be carried out mechanically, to EC\$2070 per ha. where all operations except harvesting are carried out mechanically. The mean yield of dry nuts in shell is estimated at 1000 kg per ha. There is obvious need to increase production efficiency and yields and also to reduce costs and prices.

Potential for Production

Present land tenure patterns indicate that production in large units is possible in Antigua, St. Kitts and St. Vincent. Small farmer participation appears to be favourable in most of the islands.

A first estimate of the total acreage that may be phased into groundnut production in the various islands is shown in Table 1.

Table 1. Estimate of Total Acreage of Groundnut Production in Various Islands

Island	Total hectares					
	1975	1976	1977	1978	1979	1980
Antigua	-	20	40	80	120	120
Grenada	-	5	10	20	40	60
Montserrat	2	5	7	10	12	20
St. Kitts	55	100	120	140	180	180
St. Lucia	7	20	40	60	100	120
St. Vincent	60	80	100	140	160	160
	124	230	317	450	612	660

Assuming that average yields will increase from 1120 kg to 1800 kg dry nuts per ha during the period 1975 to 1980 the total LDC production could be increased from 139 metric tons in 1975 to approximately 1,188 metric tons per year by 1980.

The peculiar conditions in each island can be summarised as follows:

Antigua: There are large areas of unused land in suitable ecological zones with topography and soil conditions which permit a high degree of mechanisation that can be used for groundnut production. In addition, the crop was previously grown in Barbuda and can be re-introduced if supporting services are provided.

Grenada: Ecological conditions and existing cropping patterns indicate that large scale production is unlikely.

Montserrat: Small quantities of groundnuts are produced for local use. The hilly terrain that restricts mechanical operations and the limited land resource tend to restrict cultivation to those crops which are in high demand locally or those likely to ensure highest returns per acre. Only a small quantity of groundnuts can be expected from this island.

St. Kitts/Nevis/Anguilla: Ecological conditions in St. Kitts are highly favourable for groundnuts. Commercial production was initiated in 1972 on estates and production now totals about 68 metric tons per year. Average yields of 2,200 kg nuts per ha are being realized but this can be increased to some 2,500 kg with improved cultural practices. Extended planting and harvesting is possible in St. Kitts but dry conditions in Nevis are likely to restrict production to small acreages with one crop each year.

St. Lucia: Groundnuts are not widely grown in St. Lucia. However, significant areas of suitable land which presently are underutilized can be located in the south, east and north of the island. Groundnuts can become an important crop in an agricultural development and diversification programme for this island.

St. Vincent: There is a tradition of groundnut production, but cultural practices need to be improved, in particular plant population and plant protection. If the incidence of "false nuts" can be reduced to insignificant levels and mechanized harvesting introduced successfully, then the acreage of groundnuts may exceed the estimates given above.

Although the ecological conditions may be favourable, it is apparent that increased production will be realized only through the introduction of programmes that are designed to overcome the constraints that are peculiar to each island. Advisory services will need to be well organized to introduce what is in effect a new crop to most farmers other than those in St. Vincent.

Information relating to cost of production, yield potential, and the relative advantage of groundnuts in relation to other crops which may compete for the same land resource is needed for each island.