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26 May 1992
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ESTABLISHMENT OF A FOOD-PROCESSING
DEPARTMENT AT JAMPRO

DP/JAM/88/009/11-01

JAMAICA

Terminal report*

Prepared for the Government of Jamaica
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of John C. Wilson,
international project coordinator

Backstopping officer: Boris Galat,
Agro-based Industries Branch

United Nations Industrial Development Organization
Vienna

* This document has not been edited.

V.92 54616

Explanatory Notes.

Currency

In 1988 when this project was drafted the parity between the Jamaican Dollar and the US Dollar was 5 : 1 steady.

At the actual beginning of the project it had slipped to 7:1 but steady. The currency was freed from foreign exchange regulation in September 1991 with a consequent fall from 14 to a current 22.5.

The slide in the value of the J\$ against the US\$ is listed and summarized in: Annex ¹

Bank Interest Rates.

The bank lending rate for industry rose gradually to 18% in December 1990, but from that time interest rates on lending soared to 32% and has now reached over 50%. Concessionary rates for agriculture seem not to be available as it would violate the IMF agreements.

Abbreviations

Ganja - Jamaican term for marijuana
FTI - Food Technology Institute
CARTIS - Caribbean Trade Information System
STATIN - Statistical Institute of Jamaica
RADA - Rural Agricultural Development Agency
STAS - Short Term Advisors Mission - (Agro-21)

Metrication

Currently, there is a program of Metrication to move away from the influence of the Imperial Measures scales as well as the influence of the measurement scales of the USA. The current use of the two measures is quite disconcerting. One processor has been using the wrong standard on some containers and giving away more than 9% of product. EEC is demanding metric sizes as well as contents in metric scale. The standard metric sizes is proving to be a difficulty since USA is not moving towards metrication at the same speed, if moving at all, so that at unbearable costs, metric containers will be required for EEC and non-metric for North America.

COMMENTS BY THE BACKSTOPPING OFFICER
OF THE PROJECT

Mr. J. Wilson, the International Project Coordinator of the project spent about two years in Jamaica, working in close cooperation with the national counterpart staff of JAMPRO.

In order to meet the project objectives and to prepare a programme for processed food products numerous activities took place during the implementation phase of the project, which are described in detail in the report. The expert's terminal report is very comprehensive, well prepared from the technical point of view and fully describes these project activities.

The report is acceptable to the Agro-based Industries Branch and will be used as an important technical and planning instrument for further modernization and improvement of Jamaica's fruit processing industry and with a view to strengthening the linkages and cooperation among fruit growers, processors and exporters.

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Abstract.

Number and Title of the Project.

JAN/88/009/A/01/37

Assistance in Developing the Processed Food Program at JANPRO.

Duration

Twenty four (24) months. March 15 1990 - March 16, 1992.

Extension for one year is proposed but not yet approved.

Description

The project addresses the need in the food processing industry for an institutional unit which, on a continuing basis, provides information and advisory services in business development, marketing management, manpower development, food processing technology, plant maintenance, raw material sourcing and issues of co-operation. The project combines the primary function of institution-building with direct support as the supportive secondary function and has a special regard to enhance private sector development. The ongoing project is to develop the program of productivity for the agro food processing industry thereby increase the level of competitiveness.

Subject matter covered

This is a terminal report of the project as of January 1992. The project has built up a department in the Agro Industry Division of JANPRO, which has from the outset been "customer oriented."

Currently, the industry can sell all it has to offer in the overseas marketplace. Restriction is in the supply of raw materials. While it was true that the main processors have, since many years, preferred to import their raw materials from overseas, the situation now, after the September liberalization of the foreign exchange controls, is quite different. No enterprise can survive without access to foreign funds. We hope the advantages are permanent.

Statistical information gathering has been problematical and needs coordination with other institutions of government.

Organisational restructuring in industry promises the most rewarding solution.

Main Conclusions and Recommendations in brief.

Main Conclusions in brief:

1. That the work of the project has addressed the needs of the industry best in moving the emphasis from the machinery, plant and process to the organisational needs of restructuring the industry. It was early realised that renewing the machinery side of the industry would not necessarily solve any of the lingering problems.
2. That the work of the project on the machine and process side was only helpful where there was already existing a well functioning management organisation.
3. That research, development and teaching of food technology and engineering is in a state of need.
4. The demands of the first world nations for higher quality standards could put the greater part of the small processors at risk, due to the cost of rebuilding and retooling and the cost of testing so many small batches and the cost of holding inventory while the tests are performed.
5. That while industry on the whole may benefit from the better J\$ returns from the liberalised foreign currency, there have developed certain trade practices which have halved the returns in hard currency. This among many other matters points up the need for a central overseeing body to guide the policies of the industry, even if the trading house part of the industry sees no need for such a body.
6. In rebuilding a whole food processing industry which has been in a state of decline for decades, the primary need is found to be organisational skills at corporate level.

Problems facing the new organisations are daunting. Devaluation of the local currency to one fourth in the years since 1988 when the project document was drawn up; The interest rates have climbed to over 50%; The burden of debt on the country and on companies; The poor quality of the existing packaging and the scarcity of it; The high cost of energy; The problems of the customs for imported packaging and the problems of certification for exports.

As well as a policy guiding of the industry there needs to be a source of funds at

reasonable rates that will not put the country's foreign debt burden in further crisis. This will need special ingenuity from the financial sector.

Main Recommendations in brief:

1. That organisational assistance be given to articulating the interrelationship between the agricultural producers, especially the small producers in associations, and the processors, especially small processors in association developing common services.
2. That UNIDO and JAMPRO jointly continue to support the fledgling Association of Small Processors to come to a suitable organisational strategic plan and operational base and develop the articulation with the growers and growers associations. Also the setting up of women's and village community associations for the preparation of fruit from the hillside projects for sale to the processor associations factories.
3. That UNIDO and JAMPRO jointly set in organisational expertise for investigating the setting up of the proposed Agro Food Industry Policy Council with particular emphasis on the initiative from industry, especially that part of the industry which is not controlled by the larger trading houses.
4. That UNIDO and JAMPRO jointly continue the excellent work of support started with the reorganisation of the Citrus Growers Association. There is interest and drive from inside the organisation itself and from JAMPRO. But it would be a national calamity if this did not push through to its final goals.
5. That Government recognise the work of the food industry in servicing the tourist industry as "foreign or export earnings" and that it be found fair and reasonable that portion of the proceeds be recognised as "export" and that portion of payment for all goods and services shall be in the hard currency required for the payment of machinery, packaging and necessary imported materials.
6. In order to facilitate immediate diversification in case of a change in world sugar price or quota policy, that a program be drawn up for the eventual rotational or partial diversification of the sugar lands for the supply of agricultural production raw material for fresh fruit and vegetable export as well as for processing for domestic and export. That this should be already being phased in now through the

experimental stages to experimental commercial production.

7. That Government give urgent attention to the need for integration of the existing research, development and teaching institutions focusing on food processing technology and engineering, to serve the industry with maximum efficiency. The gap between the University of West Indies campus at St Augustine with the faculties of Agriculture, Engineering and Food Technology should have a "satellite" in Kingston, with an envoy of the deans of those faculties to build up a special service to developing the agro processing industry in Jamaica in the same way as it has played its roll in fostering the same industry in Trinidad.

I. INTRODUCTION

The purpose of the project and time span.

This project began in mid March 1990 and will terminate March 1992 unless an extension of the project is confirmed. The reasons for the extension may be tabulated as follows:-

- * The decision making process in an industry that is itself resistant to change, is taking much longer than could reasonably have been anticipated.
- * Industry restructuring at corporate level takes time to investigate, time to create a corporate consensus for action, and time to implement. It cannot be achieved before March 1992.
- * The availability of funds and experts to come in and make special mission and intervention. Experts of this calibre are not easily available. Funds for a continuity must be allocated.
- * In implementing the project, given the philosophy that we shall not duplicate the work of other departments and institutions, the tardiness of response from those organizations has been a delaying influence on the project, particularly in the area of statistical data information exchange.

Project Working Philosophy.

The scope and complexity of the project combined with the fact that the project scope coincided with similar responsibilities for the same subject matter by other institutions of Government of Jamaica and private sector organizations, made it imperative that the implementation of this project would of necessity need to coordinate with those other institutions to ensure that minimum duplication occurred and maximum coordination and sharing of information and resources.

The Food Processing Industry can only survive to the good of the nation and serve the agricultural production sub-sector if there exists a good and functioning articulation between the two sub-sectors. This was and is to a large extent still not the case. It was for this reason that this project had to focus outside the scope of agro food processing to study the interface between producer and processor. For a study into the status of the existing systems of marketing agricultural production and the reasons for the dismal lack of agricultural production available for processing, Dr Daniel Perraud was appointed and his findings and recommendations are part of the project

The goal of restructuring and resuscitating the whole of the processed food industry does not deviate in any way from the original project goals but the method of achieving those goals may vary according

to the needs of the industry.

We have examples of modern food factories lying idle over many years due, not to the need for modern machinery, but the need for organizational restructuring and strategic initiative and strategic objectives set. The full scope of the industry must be seen as one unit. Agricultural production cannot be divorced from processing or marketing. Nor can processing depend, as it has done over decades, by importation of raw materials to the isolation of the agricultural sector.

For that reason the project is seeking to make meaningful and lasting change at organizational level, with the observation already that once investigation starts the existing organizations themselves start making their own change, machinery and engineering improvement follow. It will also take responsibility for the betterment of the worker and for the safeguarding of the environment.

Original and Revised Objectives.

The original objectives stand for the present project as well as for the proposed extension. However the extension proposes to use its resources on the organizational inputs rather than the concrete. If an industry organization is healthy it will take care of its own technological needs, machinery needs, its maintenance needs. For these inputs resources are already available from the Toolmakers Institute and JAFPRO's Training Unit program.

The goals attained.

The project has built up a department in the Agro Industry Division of JAFPRO, which has from the outset been "customer oriented." We have had the view that partners in industry and government sectors are in fact "clients" to the department. The clients have from the first day of operations received technical and statistical information, or if that information is not immediately available, we have sought to import the information.

Statistical information has not been as forthcoming as the technical information. The project has had interminable delays in receiving information from STATIN. 1990 statistics were received only in November, while up until the date of writing no statistics are to hand for 1991, not even the first quarter. From CARTIS we have waited for eighteen months for the connection to the international networks, with which we may access the international market information. From CARTIS it will not now be available for the foreseeable future. Until the delivery of the project computer, Nov 1991, hardware limitations were a hindrance to making our own connections

to the international network and comparing statistical information. Monetary constraints and inter-department coordination are still a limitation.

The actual situation for the industry is not a problem of statistics, or of overseas markets. Currently, the industry can sell all it has to offer in the overseas marketplace. The area of restriction is in the supply of raw materials. While it was true that those main processors which are owned by the larger trading houses, which are also involved in banking or finance operations, have preferred to import their raw materials from overseas, e.g. tomato paste, pineapple concentrate, passion fruit concentrate, etc, the situation now, after the September liberalization of the foreign exchange controls, is quite different. No enterprise can survive without access to foreign funds and this may well mean conserving the foreign funds available, by importing less, or earning more foreign funds by exporting more, of their own manufacture or what other smaller manufacturers can manufacture for them. The larger trading houses are at the point of hysteria to export anything that can earn foreign funds. They have competed against other Jamaican exporters on the same export market and reduced selling prices on those markets drastically in order to have the foreign funds in hand. One can observe that profit is not the motivation in selling for foreign funds, but the foreign funds themselves. With those funds the larger trading houses can import their traditional commodities for the Jamaican domestic market for which they receive good margins of profit.

One can question if this enterprise is the real meaning of the liberalization of the foreign exchange and if the exercise is in the best interests of Jamaica, the food processing industry and Jamaican agriculture.

II. SUBSTANTIVE

A. Activities and B. Outputs

Please refer to the organogram Objectives, Activities and Outputs for the original project document for two years duration. Annex²

Job Description

Please refer to the job description JAM/88/009/A/01/37/11-01
Food Processing Expert/International Projects Coordinator

Annex³

Main Duties of the Job Description and Objectives

- a. To build and institution within JAMPRO, (The Economic Development Agency of the Government of Jamaica.
- b. To select and coordinate the training of the National Counterpart
- c. To arrange and coordinate interventions in selected enterprises in the food processing industry sub-sector for effecting the articulation between the agricultural producer and the agro food industry processor on to the consumer, be that consumer in the domestic or international market place.
- d. To coordinate the creation of a data base for the statistical recording and analysis of data from the domestic and international processed food industry and the subsequent timely publication of that data in bulletins and republishing via in place and functioning data networks.
- e. The economic development of the industry in terms of organizational management, modern as well as existing technology and engineering and packaging systems.
f. Recommending the organization of the Food Processing Department in JAMPRO for sustained action in the industry subsequent to the end of the project.

A.a Appointment of a National Counterpart

The project document had foreseen the location of the Food Processing Division as a division or a department in the then active Agro-21. Agro 21 had a very good library and data system but not a grass roots agricultural and agro industry support structure in the sense that JAMPRO had in then Agri Business area. JAMPRO on the other hand had a working department with the project's National Project Director, Mr Norman Prendergast as its head and Mr Aaron Park as the Agri Director. Mr Lennox Picart was already installed as the Director of the Agro Industry Division.

The National Counterpart in the sense of the original project document may be understood to mean that

a person of the stature of the National Project Director would be appointed. This was just not a budgetary possibility. The project directors were pleased to appoint Ms Kathleen Goldson to the position of National Counterpart with the Title in JAMPRO of Processed Food Specialist.

With very sound academic qualifications and long experience in the microbiological laboratory of the Jam. Bureau of Standards, she was most suited to the appointment which she took up in August 1990.

She undertook one combined study tour in Canada and USA in the end of 1990, but subsequently, the proposed fellowship for Nov 1991 was canceled due to administration decision in Asia. She seeks a new fellowship for 1992, and is applying, provided the project extension is approved.

She has been singularly active with the processors in finding information and problem solving and in arranging seminars, workshops, training programs, and especially the communications with other institutions for the flow of data and statistical information as needed and as to be used by the industry, as seen in the project document. She is the editor of the quarterly bulletin launched in July 1991, a magazine which brings information to the food processing industry

We wish her well and hope that she will remain many years in the post to continue the building up of the Agro Industry Unit/Department and service to the industry.

JAMPRO as the Government of Jamaica institution for economic development especially in the Agro Business sector, accents on economic development and does not have any facilities for technical research and development. The environment for the project was therefore economic development. That may mean studies and seminars for new investment, or coordinating product and process information for new products, or uplifting the quality of existing ones.

A. b. Scope and Vision

The project was to support the economic development of the proc. food industry.

From the beginning it was planned to limit the scope of the project to the Non Traditional Agro Industry. By that we mean that part of the agro industry which is not incorporated in the "Traditional" agriculture and export commodities already covered by statutory boards, e.g. Sugar, Coffee, Cocoa. Dairy was not included, it being a project dimension in itself and may require its own initiative.

The first statistical information revealed a huge importation of cereals, oil seeds, dairy products, and meat. Please see :

Annex 4

This graph is based on Jamaica Bureau of Statistics reports of import and export of food commodities

summarised in the table

Annex 5

It was clear that if economic development was the criteria for the project as per the project document and the business mission of JANPRO, the limited resources should be directed towards reducing the importation of the unnecessary. Much attention was drawn to the matter but the means of rectifying the imbalance lies outside the scope of the project.

The raw material supply limitations have been the subject of every study and this project was early confronted with the problem. But this is agriculture and not the scope of the project. Nevertheless, no project can address the problems of the food processing industry without addressing the supplies of raw material.

Therefore the project had to "dig deeper." The agro industry is not existing for the benefit of the processor in which, to a large extent, the producer has no part in the management or the profits. Without actually expanding the project as such, the project had to "put the links in the chain together," i.e. from supplier to market.

Larger agricultural enterprises are able to manage the whole affair from the land to the consumer. But the small agriculturalist, of which Jamaica has more than 100,000 is at the mercy of the trader and the trader's buying agent, of whom much may be lacking in sympathy for the small farmer and fairness in business dealings.

The farmer has not a central commodities market to which he may send his produce in expectation of a fair price. Nor were there effective farmers cooperative marketing systems. This picture is changing for the better with the activity of organizations like the St Catherine Small Farmers Association.

Larger enterprises cannot have the personnel to individually meet and contract with individual small farmers. The numbers are prohibitive. 5000 potato farmers in Christiana have each 1/5 of an acre on average. One could add as many carrot farmers, and to that again similar numbers for guava, citrus, ackee etc. Without the existence of farmers associations, larger processors have no alternative but to use middle men. The action of the middle men is seen as the action of the larger trading houses. But what the middle men do in those isolated places with largely uneducated farmers, can not possibly be controlled. Only the farmer can do anything about it by the building up of marketing cooperatives which will contract on his behalf and tell him what to plant for the farmer's profit and the processor's needs.

Small processors are starting to assemble themselves into consortia to iron out problems from their side and to coordinate their buying. Some, whose main accent is on trust have themselves developed links with the small farmers and the small farmers associations for the supply of raw materials under gentleman's agreement. This is light in a tunnel. It is working and developing.

So with these "interfaces" between the agricultural sector and the processors there is now developing a code of practice and an alignment of trust as against the unscrupulous. Without this there can be no development of the food processing industry.

The first statistics gave a grey picture of seemingly unnecessary importation of raw materials due to the lack of the raw materials locally or the lack of them in an orderly delivery schedule so that the processors can use the produce to process and profit. For that reason the project sponsored the study of the agricultural supply.

B.a Study of the Jamaican Agro Production and Marketing

The fact that the Food Processing Industry can only survive to the good of the nation and serve the agricultural production sub-sector if there exists a good and functioning articulation between the two sub-sectors. This was and is to a large extent still not the case. It was for this reason that this project had to focus outside the scope of agro food processing to study the interface between producer and processor. A study into the status of the existing systems of marketing agricultural production and the reasons for the dismal lack of agricultural production available for processing. Dr Daniel Perraud was appointed to the study and his findings and recommendations are part of the project in his report entitled, "The Agro-industry system of fruits and vegetables. Analysis and recommendations"

Dr Perraud found great variations in the prices of commodities within the course of one week in different locations on the island. The main reasons for this variation were :-

- distance and isolation, the farmers have no possibility of transporting their commodities to the markets in the large towns.
- Lack of Information when there is no information at hand to the farmer the middle men or "higgler" may offer the farmer any price for the commodity since the farmer has no idea what is a fair and reasonable price in the city. He knows only the price received by the neighboring farmer and this could have been sold to the same trader.

This study was published and considered widely in the agricultural industry with a view to addressing the problem. This project tried to access the farm gate information from RADA and the Ministry of Agriculture. This is more than a month old when it is published. So the publication of it is not "timely" Timely in the sense of information to the farmer for expectations of selling prices should be at least once weekly. This problem is being addressed now in a joint effort between the Ministry of Agriculture, RADA, Agricultural Development Corporation, and Jamaica Agricultural Development Bank. Morning radio information is being beamed to the farmer.

The development needs to be studied in the coming months to evaluate if this project needs to concern itself more with the information service to the farmer. The information from the agricultural surveys to give a continual update on crop expectations is still vitally necessary.

B.b Pre Feasibility study into the Processing of Purees of Tropical Fruit

Consultant was Mr Christer Cronberg.

It was recognised already by the UNIDO "STAS" team of short term consultants who made the STAS report, in 1988, that with the poor state of the industry in general, it would be advisable to install one production plant capable of converting that part of the production of tropical fruit which is surplus to the export and domestic needs for fresh fruit into first quality tropical fruit purees packed in aseptic bag in drum not requiring freezing.

Christer Cronberg made a study of the markets in Europe and North America before coming to Jamaica. It was immediately obvious at that time that the only fruit which had any surplus in quantities available in sufficient scale and on a regular basis and at a reasonable price for processing and marketing in the world commodities was banana.

The rapidly increasing cost of interest on loan, (then 32% now 50%+), made the possibility of planting orchard crops for processing to be not feasible. Suitable investors for the project have been sought in the last ten months since the study.

At first it seemed wise that the investor should have already plantations of banana and maybe other crops like papaya or mango. Suitable investors were identified and nominally gave the word that they were interested. No decision has to date been forthcoming from them. They have not dropped the matter but due to present investments in process of installation and start up, the puree plant must wait for the precise investment moment.

In the light of the huge devaluations from 8 to 20 in the months from the time of the study and Dec 91,

as well as the need to bring the study into line with Jamaican conditions, it was decided to revise the calculations in December 1991. The revision is available from JANPRO, who, due to budgetary constraints are required to put a nominal price tag on the information to recover costs.

At least two are interested and one is already building the building and proceeding with the fruit handling segment. The puree processing plant is approved in principle and is expected to be ready for the mango crop 1993. I am confident this is a proposal of substance in which the industry may have faith. It will service the owner's large holding of mango and citrus, as well as the bush mango, black mango and No.11 which is growing without actual orchard cultivation in the western half of the island.

The Technical Report is entitled "Techno-economic study on processing and marketing of tropical fruit juice and concentrate and fruit purees in Jamaica"

C. Interventions in Selected Processed Food Establishments

C.a Scotts Preserves

This intervention was hosted by this project in coordination with the project of Productivity, UNIDO funded within the Technical Assistance Unit of JANPRO. The intervention coordinated many factors, technical and organizational with the goal of transforming the structure of the organization and production, for the sustained improvement in economic productivity and finally resulting in better conditions for the workers as well as improved export earnings for Scotts and Jamaica.

The expert was Prof. Robert Hopley. The intervention took place in several short term missions, July, 1991, Nov 1991, and Jan 1992. Prof Hopley's report is entitled "Productivity Mission at Scott's of Jamaica Ltd.

The intervention has first resulted in a new vision for the management. There is a decentralised decision making process. It has started and will take time to mature. There has been a strategic planning in that certain products and markets are targeted and others are to be wound up for the sake of utilizing the limited resources to the strategic plan.

There had been about six small projects inside the intervention the most important of which were:-

- Production planning
- Warehouse removal and inventory control.
- Quality Control Laboratory certification so that their own lab could certify goods for

export, reducing export inventory awaiting certification by up to four weeks. This also included a major "clean up" inside and outside.

- * Reducing Down time. First of all recording the down time and the causes.
- * Reorganizing the ackee processing.

Not included but coming out of the intervention was an identification of rather serious losses in over filling or spilling. But all these losses had been, over the years with successive managements, been built into the yield expectations of a batch. There is still much to be done in this matter but has been waiting on the re-installation of the equipment after the relocation of the machinery in a more "flow" oriented system.

A video presentation of the project with interviews before and after has been shot and is still being put together. It will be available for those in the unit to use with other processors to encourage the development of practices for the betterment of productivity in the food industry.

C.b Outline of a Food System Strategy for the Gov. of Jamaica, a study of the food sector by Mr Robin Murray, under UNIDO Productivity Project

This intervention was hosted by this project in coordination with the project of Productivity, UNIDO funded within the Technical Assistance Unit of JANPRO.

Mr Murray's study was in October - November 1991.

Mr Murray observed how the food system is a complete integrated chain from agricultural producer through processor, trader, supermarket to consumer, with certain horizontal constraints and encouragements coming at almost every level. In particular the horizontal influences are most seen or most absent at:-

- Agricultural market organization.
- Quality control, from factory floor to management.
- Consumer organization.
- Environmental Purity (the green revolution)

Mr Murray calls for new policies and new instruments to implement those policies, to start with the industry as it is where it is and move upwards from there. He calls for specialization into the special novelty and ethnic market lines with special attention to the increasing demands for "green" product without sugar, without preservatives, without the use of pesticides and

other chemicals commonly used on the farms for the control of pests and weeds. Customers will pay a 20% premium.

"Links in the Food Chain," were visited and points of view expressed from both sides. The links were from the level of buying the raw material at farm gate or at factory gate, the processing factory and its buyers, the trading organizations, the Bureau of Standards, The West Indies Glass factory, numerous hotels involved in catering to the tourist trade, the Kingston Airport air catering organization, the banking sector, the Food Technology Institute.

Whereas it is found in Europe that the corporate buyers for supermarket chains have their own quality control laboratory and make a thorough search of the organization behind a product and the raw materials that go into the product before the product itself is considered. The examination may take six to nine months before a product is finally accepted. Stringent requirements are laid upon the supplier. In Jamaica there exists no such system. The supermarkets take no such responsibility.

The reason for that could be two, viz:-

1) that there existed at the time of the study no effective consumer movement to influence the quality and packaging of products on the supermarket shelves. A Consumer League movement is in the beginning stages arising out of the previous Prices Commission which was disbanded after deregulation in Sept 1991.

2) that the supermarkets themselves are to about 90% controlled by the trading houses, which in turn are the warehouse, which are in turn the processor or the main contractor of numerous small processors and they are in the main connected with a banking institution. The supermarket management has nothing to say.

This situation may be perfect for the organization but it holds the industry backwards, extracting the last dollar out of the old plant and machinery. There is no incentive for investment in tooling up for better product quality. For this reason the industry is ill-prepared for placing itself on an export market which is accenting quality in terms of the whole system of production, from farm to consumer.

It was found that with few exceptions the marketing thrust was to market that which was made, with little or no thought to the demands of the consumer.

European and North American consumers are demanding "fresh," "no sugar," "no preservatives," "no antibiotics," "no pesticides, weedicides etc" This is foreign language to the processor. He knows not how to go about the change nor how to market it, nor how to label it. It is a frightening prospect and will never happen unless a guiding hand in a marketing organization with motivate for change.

Mr Murray spoke with many processors about "just in time" principles, but at the time of Mr Murray's visit, the stocks were guarantee against devaluation. Every shipment of raw materials brought in were more expensive than the last. That which was in stock had added value in the successive devaluations. This problem cannot be resolved till the exchange rate stabilizes.

C.c Intervention in the Citrus Growers Association

It was early identified within the project the strategic necessity of making an intervention in the Citrus Growers Association. It is the longest surviving agricultural producers cooperative in the country. Begun in 1949 with contractual marketing support from UK. It is a non profit association of 13500 citrus growers with a system of representation to the board level of the parent association and the boards of the two production factories, one in Bog Walk and one in May Pen.

This intervention is sponsored by UNIDO through this project and the Processed Food Unit in Jampro. Earlier considerations to make an intervention at the factory floor level upon investigation was found to be second in priority due to the great need of supporting an organizational investigation and restructuring which would develop:-

A central vision for the numerous enterprises in the association.

A reorganisation of the ownership and authority between farmer Branches, Regional Councils, Board of C.G.A. and the boards and General Management of the Manufacturing Companies, (Jamaica Citrus Growers, Bog Walk and Citrus Development Company, May Pen.) as well as the newly formed marketing company which is designed to remove the dependency on marketing agents.

The first short term mission for this intervention in September was by Mr William Ennen. The intervention was moved forward in successive stages with the missions of Prof Robert Hopley in November, and again two missions in January. Mr William Ennen also came back in January for the meetings with the board of directors and the subsequent meetings of the working groups. The final report to this segment is entitled, "Final report on the Strategic Management

Process, Intervention at the Citrus Growers Association," by Professor Robert Hopley and Mr William Eanen.

The board appointed Board Member, Mr Ken Newman to be the Chairman of the committee making the strategic analyses. There were several sub groups appointed to report to Mr Newman on the situation in various sectors of the enterprise. It covers two factories, two major products, citrus and milk, and various markets, export and a strong domestic, built upon "box" juice. Two main sources of money, J\$ from domestic sales and US\$ from exports. Two currencies for payments, J\$ for domestic and US\$ for machinery and packaging. Two main suppliers of raw material, citrus growers who are up to about 13500 member/shareholders and 500 dairy farmers who are not. Debt funding is now costing 50%.p.a.

C.d Small Processors Consortium. (Originally referred to as the Cannery Association?)

It has been the goal of the project to coordinate and amalgamate the efforts and influence of the small processors to assist them to sustainably solve their own numerous problems. The plan is to make intervention in the organization of a consortium of small processors, in such a way as that consortium will not be controlled by the "big brother" organizations, mainly trading houses which purchase the product processed by the small processors, export it for hard currency which will sustain the trading houses propensity to maximize the import consumer goods and raw materials for processing.

Under the mission of Prof Robert Hopley in January 1992, a nucleus small processor consortium was formed of five companies. It has yet to form an articles of association but the next meeting is set at Westico May Pen in 19 February 1992.

There are existing organizations such as the Jamaica Manufacturers Association, Jamaica Exporters Association, The Processors Association, and it was not the meaning to keep duplicating these organizations. However, the main objective in the minds of this group of processors is the establishment of an association with the highest moral code, with the exclusion of all who cannot accept that code or are found to be transgressing. From that base they will form an association for mutual benefit.

A problem exists in that though the partners are mostly not happy to include the one large trading house as member, all are subcontracting for the same, so the question is what kind of relationship can exist if the larger entity is admitted into the fold.

The five foundation members of the association are:-

| | |
|------------------------|----------------------|
| Canco | Mr Norman McDonald. |
| Plantation Pride | Mr and Mrs. Bernard. |
| Caribbean Exotic Foods | Mr Ira Ashman. |
| Westico | Mr Keith Rodman. |
| Cottage Industries | Mr Rodrick Edwards |

Prof. Robert Hopley's report please find as: 'Small Processors Consortium, (Canners Association) Report on the meetings of the founding members.' Prof. R Hopley.

Counterpart Staff as of January 1992.

Please find list attached as:

Annex 6

Inventory of the Food Processing Industry.

In 1988 the STAS mission made an inventory of the industry which was subsequently updated by the JANPRO Industry Modernisation Program, 1989-1990, and in 1990-1991 by the CAIC inventory. JANPRO has its own inventory from the continuity of certification of exporters applying for export certification. JANPRO also keeps close to the exporters by giving the overseas marketing support in the form of arranging exhibitions and promotions. The Jamaican Food Processor's Inventory is attached as:

Annex 7

Companies visited are indicated on the list.

Technical assistance given to the industry.

Please find table attached as:

Annex 8

Training Courses and Symposia

Please find list attached as:

Annex 9

Trade Statistics in Import/Export Data Base with graphs examples:

Annex 5

A data base has been in the course of loading and updating since August 1990 with a base year of 1985.

Statistical information gathering.

Other statistical information such as the domestic production and consumption of agro food commodities have been found exceedingly difficult to access from the Statistical Bureau of Jamaica.

Technical information gathering.

The Science and Research Council, The Bureau of Standards, Agro 21 (ADC) and others are the custodians of almost all the technical information one could wish for. Our project has limited itself to searching for and holding that information referring to the modern methods of processing and packaging of agro food products.

Information dissemination

The organ of information dissemination for the project is the bulletin named, "The Jamaican Food Processor" Two editions have been published and distributed. Copies may be requested from the National

Counterpart, Ms Kathleen Goldson, JAMPRO.

Problem solving

From the first operational day of the project the processed food industry has had available to it a source of help and information on problem solving and improvement. This has been much appreciated by the industry.

Findings

Equipment Provided by UNIDO

One P.C. computer with 120mb hard disk, math co-processor, 3.5" and 5.25" f/drives, and one printer type Epson LQ 1170. Total value US\$3500.

Photographs

Ackee Product and preparation: a slide set available for copy from the IPC.

"Jams and Jellies Seminar, Practical demonstration on the making of jams and jellies." This is a video presentation, professionally made by Jamaica Television of about five minutes duration. It is available for hire from UNIDO Vienna or from JAMPRO Jamaica.

A video presentation of the Intervention at Scotts of Jamaica is partially completed and is waiting upon Scotts to undertake certain work before the final interviews are recorded. Expected finishing date May 92. Could be available for hire from JAMPRO Jamaica. Suitable for showing to other food processors to initiate improvements in organisation.

D. Results of the Activities and their Utilization

1) Restructuring and reorganisation of the 13500 strong Citrus Growers Association with the likely incorporation of 500 dairy farmers in the Association or in a new and independent branch of the Citrus Growers Association or a separate cooperative association altogether for the dairy farmers. Meaning is clearly from all sides to give the dairy farmers a stake in the enterprise and a control in the "dairy food chain" from farm to consumer. It will happen in 1992.

2) Transformation of the Scotts enterprise in the whole thinking and philosophy of the enterprise and the management, developing a strategic plan, participation in the decision making process at ever lower levels of the organization, quality control decisions being taken at floor level, minimizing losses, minimizing down time, controlling production program and the logistics of materials supply. The experience gained by this intervention is already spreading to other sections of the Pan Jam enterprise, to whom Scotts belongs, as well as to other enterprises who have witnessed the transformation.

3) New products development in several fields.

3.1) Scotts with modified sugar content in preserves.

3.2) Scotts and Grace in the development of storage of raw materials without preservative.

3.3) Scotts and Cottage Industries in reducing the thermal processing time to attain better product, fresh flavour.

3.4) Scotts in a simple method of controlling the colour of guava jelly.

3.5) FTI and others in the development of solar dried fruit. The solar drier unit is being moved this week to a new location in the north where a village cooperative of women will take over the responsibility. Fruit is plucked from the forrest, without sprays, and is to be solar dried.

3.6) Citrus Development Company in the development of grapefruit segments in juice (no sugar syrup), seemingly an instant success.

3.7) Grace in the development and possible commercialisation of a tomato like ketchup from banana.

3.8) Grace Canning in the development of a process for the manufacture of vinegar from banana.

3.9) J Wray and Nephew for the planned installation of a puree plant primarily for mango in 1993. There will possibly be more than one such.

3.10) There is a growing awareness of the need to increase quality standards for accessing the markets of the European Community and the North American confederation.

- 3.11) The information bulletin is launched and carrying information to the industry. It has been well received.
- 3.12) The project and the Processed Food Unit is established as a center for technical assistance in products, processes or machinery. The industry knows where it can go for help. If the need is for research and / or product development the Unit coordinates these activities with the Food Technology Institute.
- 3.13) The project has brought together the numerous institutions involved in technical service to the industry. Not always an easy task but budgetary limitations prohibit duplication.
- 4.14) The project has pointed the way to a coordination of effort and sharing the use of the common resources for the sourcing of statistical information from the other institutions involved in statistics to the agro food industry. Likewise it has led the way to sharing the access to the international market information which is used by numerous departments within JAMPRO as well as numerous organizations and businesses outside JAMPRO.
- 4.15) The project has provided the vision of the industry in the future and fostered thought on achieving that vision. The vision is being taken on by individual organizations and a new wave of thinking interesting the planners of industry and government. ~~Some~~¹⁰
- 4.16) The project has from the early stages warned of the risk of secure food supply to the people. In 1991 the government embarked on a massive planting program involving idle land and thousands of small farmers.
- 4.17) This project has informed the industry in the problems of increasing costs of cold storage and distribution. That it will have to look in due time to aseptic filling of a package which is locally manufactured. One such installation is already installed waiting for commissioning and commercialisation. The other enterprise has, I am informed, ordered the machinery. Both are dairies, but will have the possibility to pack juice in consumer pack for export.
- As participants in the Modern Processing Methods training course in September, the enterprises have had a chance to prepare themselves for the techniques needed for processing the product.
- 4.18) The Projects for the People in Maidstone, a cooperative association of farmers, have benefitted by the technical assistance in improving the production methods of manufacturing cheddar cheese.
- 4.19) Proferm for the manufacture of yoghurt under the Lafayette brand name. Also for drinking yoghurt and cottage cheese, all of which are commercial.

- 4.20) Canco for the technical advice in improving the factory machinery and for the new products, mango conserve, banana jam.
 - 4.21) Cottage Industries for the assistance in the design of the new food processing complex including a tourist attraction. And for technical assistance in the manufacture of products.
 - 4.22) College of Agriculture. Technical assistance for the resuscitation of the Food Processing Factory which is part of the college Food Technology Faculty. A action has now resulted.
- 5.0) Certain disappointments.
- 5.1) The rebuilding and restructuring of the Food Technology Institute. The industry needs this institute. The proposals of rebuilding have fallen on rocks due to the original estimates being made at an exchange rate of 7 to the US\$ now with 22 to the \$ the whole project becomes unattainable. This project has supported the need for a modern and viable FTI.
 - 5.2) That nothing has been possible with the modern milk processing facility at Montpelier, Cornwall Dairy. It is the most modern dairy in Jamaica, but stands idle without a roof since Hurricane Gilbert. Presently in the process of passing hands to National Commercial Bank who are investing in a citrus enterprise in the area.
 - 5.3) That nothing can be done with National Cassava Factory which has stood idle since start up due to lack of supply of raw material. The energy demanding drying system should be sold and an extruder installed instead.

E

The Potential Usefulness and Expectations for the Future Utilization of the Project

I believe, it is agreed on all sides, that this project is vitally necessary to the industry from farm to consumer. The potential for the future is greater as the difficulties increase. As EEC moves into the next stage after the end of 1992, and USA moves into the ISO 9000 era, the demands upon the processed food institution which has been set up by the project will be ever increasingly important.

The stress on the ordinary person due to the devaluations of the Jamaican dollar, means that the processed foods the ordinary person has been buying in the last five to ten years cannot be afforded any longer. Warnings for malnutrition have been sounded by the Jamaican Medical Association. With such a stretch on the public purse as is at the moment, and such rises in prices, there comes a limit even with the most docile of Jamaica's population when they will publicly object.

In the light of scientific evidence now to hand based on studies in UK, USA and Belgium, as reported in The Lancet and on TV media by QED, there is a definite co-relation between vitamin and mineral deficiencies and "IQ" achievements and even with criminal propensity. The studies were carried out by Schoenhaller, (USA) Beaton, Whitehead and Roberts (UK) This seriously affects the social situation in certain social/geographical groups and could be extremely meaningful for Jamaica.

Our project has a role to play in finding means of conserving the harvest of the country so that it can be broadly and efficiently distributed bringing the food to the ordinary person as well as to the sophisticated.

There arises now a very serious need for a child feeding program, a school lunch program. But without resources the Government of Jamaica cannot manage to do this thing which is in its own interests to do. Donor countries and organizations must soon be mustered to fulfill the roll. This project sounded the warnings of the impending crisis in the end of 1990. This project must continue to make politicians and bureaucrats aware of the facts upon which sound decisions can be made.

III. CONCLUSIONS

a) The Articulation between the Agro producers and the Agro Processors

The larger processor connected to a trading house has little or no need to busy himself with the problems of farmers. It is still much easier to import the raw materials though now the raw material may be less expensive.

The agricultural enterprise large enough to handle its own export is not in need of any reorganisation either. The agricultural enterprise large enough to invest in its own processing facility has no need of small farmer interface either except in the periods of time when his machinery is not in full production and small farmer fruit is available at a competitive price.

The small farmer is still out in the cold unless he can agree to organise himself into an association for mutual benefit. In this way alone, he can control his own business from the farm to the consumer and make things better for himself.

Interdependence

The agro food processing sector is a group of a few large and many very small enterprises. The very large are, through their buying agents, making contracts with the farmers for the supply of certain commodities as raw materials. This trend will accelerate now that the drive to earn and conserve foreign funds is so pressing. The small processor has little chance to make similar arrangements with the farmers although we have noted the trend to make person to person contact and supply agreements based largely on trust and good will. These seem to work while the contractual are fraught with disappointments from both sides. And in any case no litigation can be brought against a farmer.

The day of free importation of raw materials is closing. This leaves the processor large or small in a state of dependency on the agricultural producer. The agricultural producer is a little less dependent than one would think because of :-

- 1) There is always a "higgler" ready to buy his goods for cash over the farm gate and probably a few cents higher than the contract price. This may change with the expected harvest of the orchard crops planted some three and four years ago as well as with the hillside project plantings. This could supply such a flood of fruit that predial larceny becomes less and less interesting to take the risk.

- 2) There is quite often the likelihood of a small plot of ganja up in the hills which though

small in size brings in earnings out of all proportion to the investment in effort and cost.

If ganja is legalised, a prospect which I find exceedingly difficult to accept seeing the disastrous effects, it may well be that the economic effects of such a move may reduce the value of ganja and put it into the range of legitimate crops from which a farmer may earn a living. I do not hope to see the day, but it is being talked of very seriously. In that day, there may be a less fragile communication and interdependence between the farmer and the processor.

Except in the case of the Citrus Growers Association of some 13500 members, the farmer has little or no part in the processed food chain after it leaves his farm gate. The Citrus Growers control their destiny up until the overseas buyer. No other small farmer has the same share partnership.

If the small farmer is mobilised to form associations and make joint business, there is no doubt the problem of interfacing grower and processor will be quickly solved.

Mutual Benefit the Goal

Whether the processor is a large trading house, or a small processed food enterprise, or a cooperative association, there must exist a mutual respect and social responsibility. Both parties earn the right to a fair existence. Some middle men may also come into the category of benefitting the industry. Some do not.

In order to restrict the illicit trading in the products of predial larceny, middle men must be certified by the council for the industry. Likewise the processors and traders must be certified. If either one is found trading with those trading in drugs or the proceeds of predial larceny, that middle man or trader or processor shall be struck from the list. There has to be a determination on the part of all to stamp out the evil. With the estimate of stolen coconuts on sale in Kingston as being 50% of the total sales, the business is not small and should not be hard to track down some of the offenders. There does lack a determination. The problem cannot be solved up until now by police action. Nor is it likely to be in the future.

Trust the Missing Link

The interface between farmer and processor has been notably one of mistrust. Only patient

person to person communication and keeping good to one's word can build trust. Without it no enterprise will progress.

The Small Processors Consortium.

The fine thing about this movement is that element of trust. It is not primarily a matter of being small but of being independent and free to trade or to export without the dependence upon the larger trading houses.

Five processors banded themselves together for mutual benefits in the month of January 1992, and are now in the process of formalising their inter-relationship. Under the guidance of Prof Robert Hopley the first two meetings were moving towards an articles of association. The next meeting will be held at Westico Foods in Mandeville on Wed 19th Feb.

It is the hope of the writer that this consortium will develop into the responsible policy making body that we have been wishing the industry to develop of their own initiative. It is all industry and not JANPRO or Government.

Even before the development of the consortium or association, the members had of their own wise counsel developed a system of farmer relations and farmer's cooperative relations, based on good faith and trust. It is not perfected yet since there are still middle men involved in some of the business, the impossibility of covering the whole island by so few persons is the inhibiting factor. Farmers cooperatives would solve that problem. Instead of making arrangements with one farmer at a time a processor could make contractual arrangements with five thousand at a time. This happens also as in the St Catherine Farmers Association.

Assistance will be needed to make this progress, to take on the responsibility the industry needs of it and not just the needs of the individual processor.

An overseeing association may yet arise out of this association and the farmers associations and certain government and service organisations to make the long proposed Agro Food Policy Council. Time must be given for these developments to happen spontaneously and not be forced upon them. In this way the articulation between the agro sector and the processing sector can be harmonised so that the complete food chain is covered by independent links in harmony from agriculture to the consumer. Who will succeed in Jamaican Agro or Agro Processing Industry must

cover the whole of the food chain in all its articulation and interlinking systems.

b) The difficulty of the coordination within inter-Government departments

Jamaica is not unique in the world when it comes to politics and the influence of the bureaucracy upon industry for good and for less good. But what is striking is the insular tendencies of the independent bureaucratic units. Over the years probably twenty organisations have been instituted for research and development in Agro/agro food industry. The logical thing is for these units to coordinate into one common purpose even if they maintain their independent bureaucratic status.

This is not realistic when it comes to operation, since each unit is jealously guarding its own rights and territory. It might be questioned if this stance is for the good of the industry or the survival of the institution or its personnel. Whatever, the system does not function well for the industry.

Even to bring all the sundry research and development bodies together under one umbrella is not so easy as JANPRO have experienced. Loyalties to the original institutions remain strong. It is difficult to rally all under one banner and one goal and purpose.

For this reason there exists and even today develops duplication which is a waste of precious resources. This is particularly so with regard to data bases and networks. They mushroom and duplicate work, difficult to coordinate to specialised fields of activity with overall common goals, and with interdependency for inputs and outputs. It seems not work, up until today.

Nevertheless with the limitations of resources from Government and donor institutions there must as of now be inter coordination and an overall management of data bases in the Government and quasi government institutions.

Public / Private Sector Relationship.

One can expect some competition between the public and the private sectors. However there tends to exist a certain stand off in this country. The roots of this isolation may go back long into the colonial history. Nevertheless the private sector still expects miracles from the public sector, and only sometimes gets it. JANPRO has tried to bridge this gap and to go out and identify certain persons and organisations in the private sector which if enlightened and energised and encouraged with certain economic advantages will invest in new enterprise.

This has given good success in some of the agricultural enterprises such as papaya and mango and yams. Some have not been so successful, and the public and media may remember the failures longer than the successes.

Private sector stands fairly solidly opposed to government interference, unless it is economic benefits.

In the case of the intervention with the Citrus Growers Association, there appears to be a new beginning. While government in the person of JANPRO give their support, and with UNIDO initiated the enterprise, the actual motivation is rolling inside the board and management structure of Citrus Growers Association itself.

c) The Rebuilding of the whole Agro Food Processing industry

As Robin Murray points out in his preliminary report, there have been many reports on the food processing industry over many years, all pointing out the dilapidated state of the industry and the need for rebuilding. Neither successive governments nor the industry itself has been motivated to action by the repetition of the obvious.

The first real dramatic move for betterment of the industry has come from the devaluation of the Jamaican dollar and the scarcity of hard currency for necessary imports. The financial sector and the industrial sector had called upon government for the freeing of the economy. Government for their own good reasons did that, even if it had to hurt the poorer section of the community. The financial sector is said to have made significant gains on the change, but as Robin Murray warned the banking sector, if the gains in the financial sector are not backed by gains in the manufacturing sector with hard currency export earnings the gains will very soon disappear like a house of cards.

It may be observed that the industrial sector is in a state of paradise lost, for now it can be seen

how comparatively easy it was to import before. The food industry was taken by surprise at the instant liberalisation and were frankly not ready for it. It will take some time to adjust to the new conditions. The food industry exporters have subsequently been competing with each other in specific international market places. In a matter of months the international ackee price has dropped from approx US\$80 to US\$30 per case and Jamaica is the only exporter.

From the agricultural production standpoint, if the sugar industry is suddenly in a position of being without quotas it will take many years to diversify. The food industry looks on patiently waiting for agricultural raw material to come on stream from sugar lands. This process should be in the experimental to preliminary commercial stage now! Large scale mechanised and irrigated crop cultivation could be a reality on those lands and give Jamaican agriculture the best chance of economies of scale outside sugar.

In rebuilding a whole food processing industry which has been in a state of decline for decades, the primary need is found to be organisational from corporate level to factory floor so that they are prepared and educated and ready to choose wisely the retooling of the industry and how it should be financed and how it should be operated when it arrives.

But even while that is being achieved the problems facing the new organisations are daunting. The devaluation of the local currency to one fourth in the years since 1988 when the project document was drawn up; The interest rates have climbed to over 50%; The burden of debt on the country and on companies; The poor quality of the existing packaging and the scarcity of it; The high cost of energy; The problems at the customs for imported packaging and the problems of certification for exports.

Nevertheless, it must be done and it will be done, even if it must be paid by barter. As well as a policy guiding of the industry there needs to be a brilliant initiative for the financing at reasonable rates, that will not put the country's foreign debt burden in further crisis. The financial sector owes it to itself, to the country and to the industry.

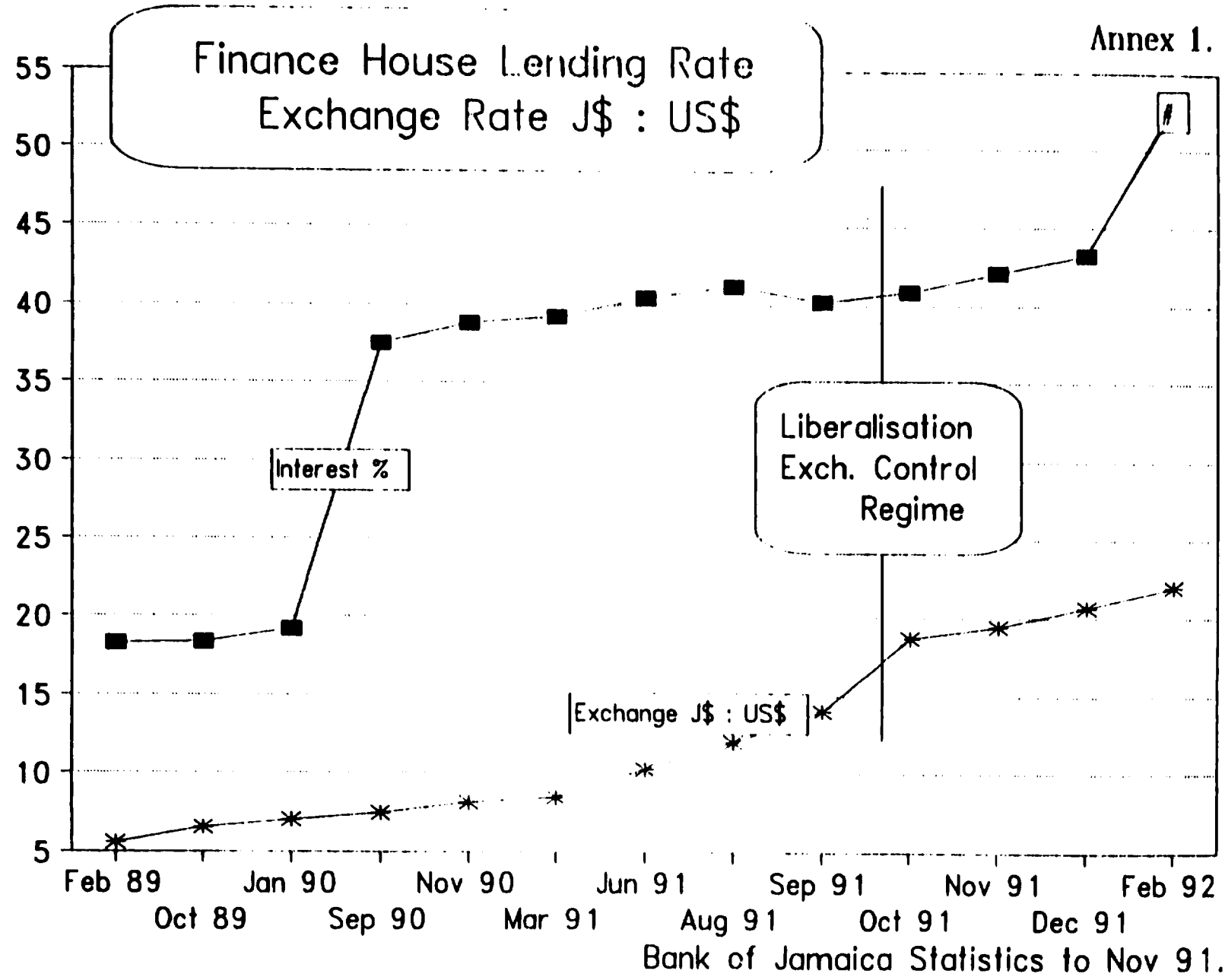
IV. RECOMMENDATIONS

1 - Since the industry has not demonstrated that kind of responsible self government that is needed for the good of Jamaica in general and the whole integrated industry itself in particular, (not so particularly individual quick profits) our recommendation is for the creation of a Agro Food Industry Policy Council, responsible to, perhaps, the Executive Council rather than to any one of the three minister involved, viz:

- 1.1 The Minister for Finance and Planning.
- 1.2 The Minister for Agriculture.
- 1.3 The Minister for Industry, (to which the board of JANPRO are responsible)
This council would have a guiding roll in moving the industry ahead and in cutting across the bureaucratic boundaries that isolate each segment of the industry into water tight compartments. A September 1991 terms of reference proposal for such a council is in draft form as:
Annex 11
- 1.4 That the Council for the industry and the Industry itself draw up its own charter, seeing forward in time, a vision of how things should be by the end of the century, now only nine years away and form suitable policies and mechanisms whereby the vision may be brought to reality.
- 2.0 That organisational assistance be given to articulating the interrelationship between the agricultural producers, especially the small producers in associations, and the processors, especially small processors in association.
- 3.0 That UNIDO and JANPRO jointly continue to support the fledgling Association of Small Processors to come to a suitable organisational strategic plan and operational base and develop the articulation with the growers and growers associations, and the setting up of women's and village community associations for the preparation of fruit from the hillside projects for sale to the processor associations factories.
- 4.0 That UNIDO and JANPRO jointly continue the excellent work of support started with the reorganisation of the Citrus Growers Association. It must not loose impetus now. There is excellent interest and drive from inside the organisation itself and from JANPRO. But it would be a national calamity if this did not push through to its final goals.
- 5.0 In order to facilitate immediate diversification in case of a change in world sugar price or quota policy, that a program be drawn up for the eventual rotational or partial diversification of the sugar lands for the supply of agricultural production raw material for fresh fruit and vegetable export as well as for processing for domestic and export. That this should be already being phased in now through the experimental stages to experimental commercial production.
- 6.0 That Government give urgent attention to the need for integration of the existing research,

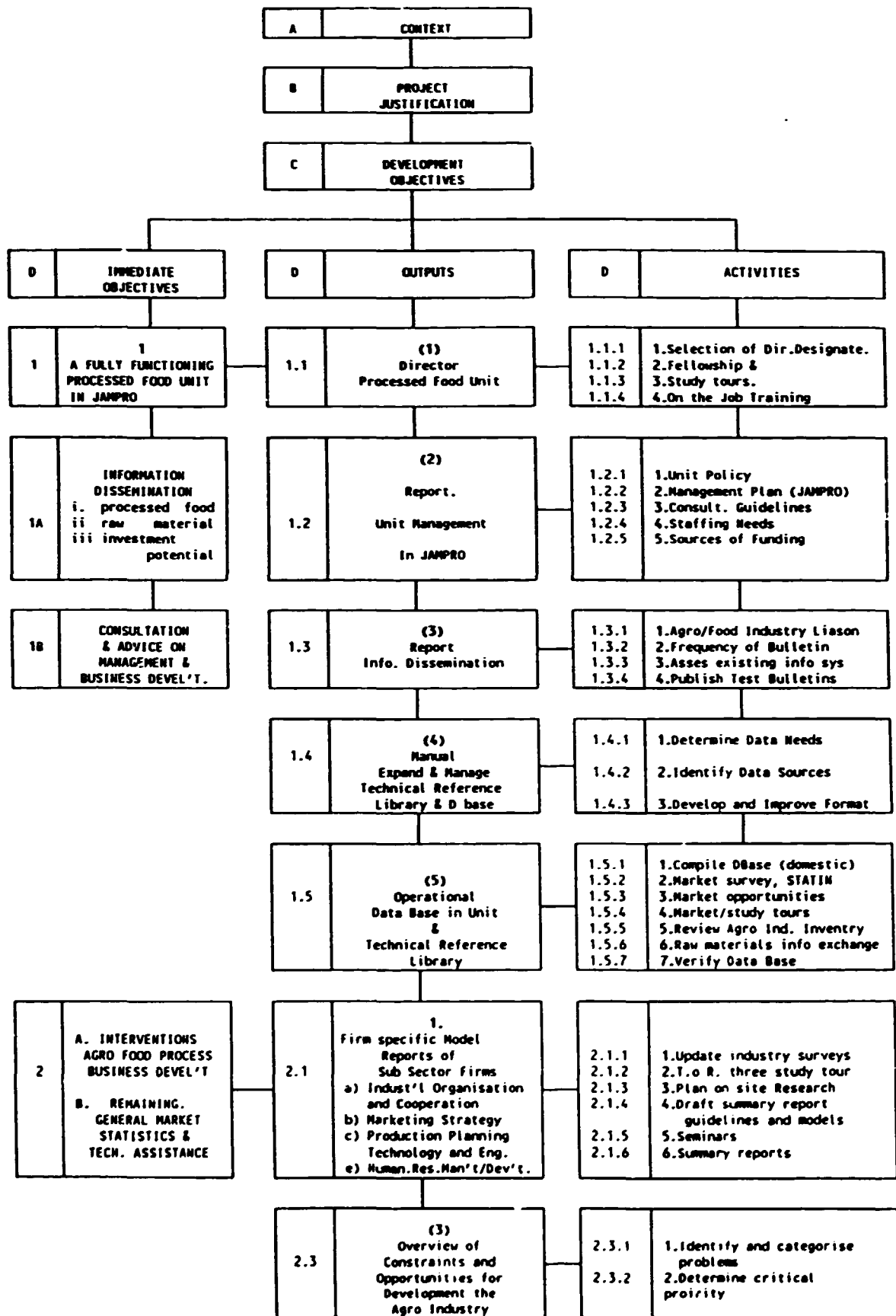
development and teaching institutions focusing on food processing technology and engineering, to serve the industry with maximum efficiency. The gap between the University of West Indies campus at St Augustine with the faculties of Agriculture, Engineering and Food Technology should have a "satellite" in Kingston, with an envoy of the deans of those faculties to build up a special service to developing the agro processing industry in Jamaica in the same way as it has played its roll in fostering the same industry in Trinidad.

- 6.1 The investigation of the need for an interim bridging facility to reduce the distance between the technical and engineering support at the University of the West Indies at St Augustine, Trinidad, and the agro food processing industry here in Jamaica.
- 6.2 N.B. It should be ascertained if the reason for the considerable growth of the agro food industry in Trinidad as compared to the depletion of the same industry in Jamaica has any connection with the influence of the UWI faculties of Agriculture, Food Technology and Engineering and Jamaica's complete lack of influence from these faculties due to the need for US\$ to pay for the travel of the faculty heads to Jamaica.
- 6.3 That there should be a study of the whole of the research and development facilities coupled with the training facilities available in Jamaica. A recommendation must be made as to how these institutions can be coordinated and all effort be put in towards making one success.
- 7.0 Support the formation and training of a consumer watchdog committee which may influence the processed food industry to ever higher standards of quality achievement.
- 5.0 Support the formation and training of watchdog committee for the protection of the environment that can influence the food processing industry to a responsible between profit and protection of the environment.
- 6.0 Recognition of the trading efforts of the food processing industry in selling products and produce to the tourist industry as a "Blue Chip Export Earning" with special privileges. Part of the tourist industry US\$ earnings must be accredited to the agro/agro food industry and in particular, dollars for the whole chain of enterprise in the supply, i.e. farmer, processor. (Assuming that the trader is the enterprise of the agro/agro food industry.)



PROCESSED FOOD PROJECT IN JAMPRO

Scheme of Project Document (Original)



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

U N I D O

ANNEX 3

JOB DESCRIPTION

JAM/88/009/A/01/37/11-60

Post Title: Food Processing/International Project Co-ordinator.

Duty Station: Kingston (Jamaica).

Duration: Three (3) months.

Date Required: April, 1992; August, 1992; February, 1993.

Purpose of Project: To establish an Agri-Food Processing Unit at JAMPEO capable of providing information and advisory services to the Food Processing Industry and simultaneously selected services.

Duties: The Food Processing Expert is also International Co-ordinator and responsible for the management of the UNDP/UNIDO inputs as prescribed by the key activities of the project.

The expert will co-ordinate the establishment of a Food Processing Department and the provision of selected pilot advisory services to the food processing industry. His/her main technical responsibilities are, designing of management systems and procedures for the department, training of a national counterpart, i.e. the Director Designate of the Food Processing department; advising on the establishment of an information dissemination system, including a data base and; developing models and strategies for overall business development, management and marketing.

Specifically the expert will:

1. Review the qualifications, knowledge

and skills of the Director Designate in light of those required for effective performance as Director, Food Processing Department.

Plan a one-month fellowship in agro-industrial management;

Develop specific terms of reference for, plan and conduct three study tours (USA, Canada, Europe) focussing primarily on market research but also investigating issues and gathering information relevant to food processing business development, production technology, plant maintenance and resource management and development;

Plan and conduct structured on-the-job training

- (a) developing co-operative industry-wide management strategies and overseeing their implementation;
- (b) the basics of modern food processing technology;
- (c) basic problems and principles for plant maintenance;
- (d) assessing human resource constraints, promote appropriate development strategies, designing and supervising the implementation of trade programmes to meet common needs of the industry;
- (e) preparing project proposals securing funds and planning and managing consultancies to meet food-processing industry needs.

2. Draft guiding policy, Terms of Reference and operational procedures and Job Description for the Food Processing Department;

Review the overall management system at JAMPRO develop administrative and reporting procedures for the

Department, which adequately relates to the existing management environment;

Prepare guidelines and standards for the provision of consulting and advisory services;

Assess the core staffing needs of the Department estimate the capital and recurrent operational as well as sub-contract and related overhead/sub-costs and;

Identify with the food processing industry/Jamaica Manufacturer's Association and assess information needs;

Determine the most appropriate frequency, type of publications and formats for disseminating the information;

Assess the appropriateness of the existing dissemination system and recommend changes as necessary and

Produce test issues and evaluate and adjust the dissemination systems and formats as necessary.

4. Determine the date needed in order to generate the necessary information;

Identify the most appropriate data sources and describe procurement and

Determine the format for storing the data, as well as loading and updating procedures.

5. Supervise the gathering/compilation of data as well as their storing in the data base.
6. Review the updated inventory on the food processing industry as well as previous studies on the sub-sector, identify pertinent characteristics of the local sub-sector and, as

appropriate, major international competitors, and determine additional information requirements relevant to:

- (a) business environment, corporate and financial structure, management systems, business strategy, raw material sourcing, joint ventures inter-firm co-operation, etc:
- (b) product range, quality volume, cost and pricing structure, key market, distribution and marketing systems, etc.;
- (c) production systems and techniques, equipment, quality control, etc;
- (d) maintenance standards, production flaws and "down time", parts replacement schedule and source, etc., and
- (e) labour laws and regulations, staffing profiles and skill levels, recruitment sources, turn-over, labour costs, training institutions, etc.

7 Plan and conduct on-site research of selected food processing firms assessing:

- (a) the appropriateness of present corporate policies in the context of the present and expected future business environment;
- (b) the effectiveness of present internal marketing management information systems and marketing methods as well as determine current and potential future markets and appropriate marketing strategies.

Prepare draft summary reports of recommendations, guidelines and

models.

8. Plan and conduct a series of seminars for executive/managers of food processing firms and representatives of relevant business organizations and associations on research findings and proposals related to:

- (a) internal management systems and corporate policy as well as mechanisms for sub-sector co-operation/collaboration/co-ordination;
- (b) principles for international marketing in the sub-sector, market opportunities and appropriate marketing strategies;
- (c) production technology appropriate to small and medium size firms (in collaboration with short-term consultant) and
- (d) plant maintenance, (in collaboration with short-term consultant) and
- (e) human resource management and development (in collaboration with short-term consultant)

Prepare final firm-specific and summary reports.

9. Identify and categorize the various problems and constraints through a review of the previous (and present) project reports and surveys on the food processing industry in Jamaica and;

Determine the areas of critical and priority importance and prepare specific proposals to address identified constraints and potential opportunities;

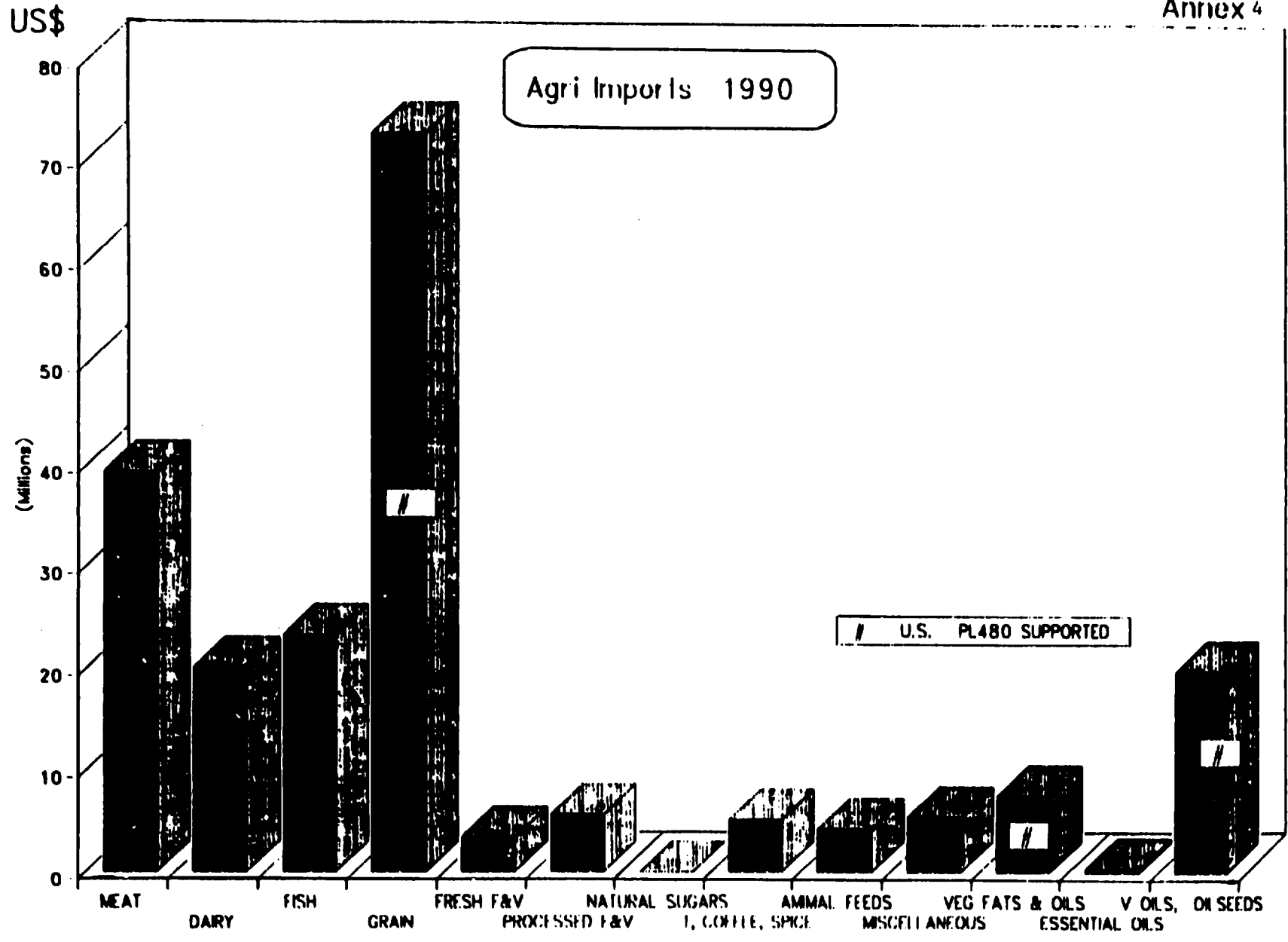
10. Report on a regular basis on the progress of the project and prepare a final report setting out the findings and recommendations to Government on further action which might be taken;
11. Undertake other such work as may be agreed upon with the Director Designate and the National Project Director relevant to the establishment of a Food Processing Department.

Language:

English

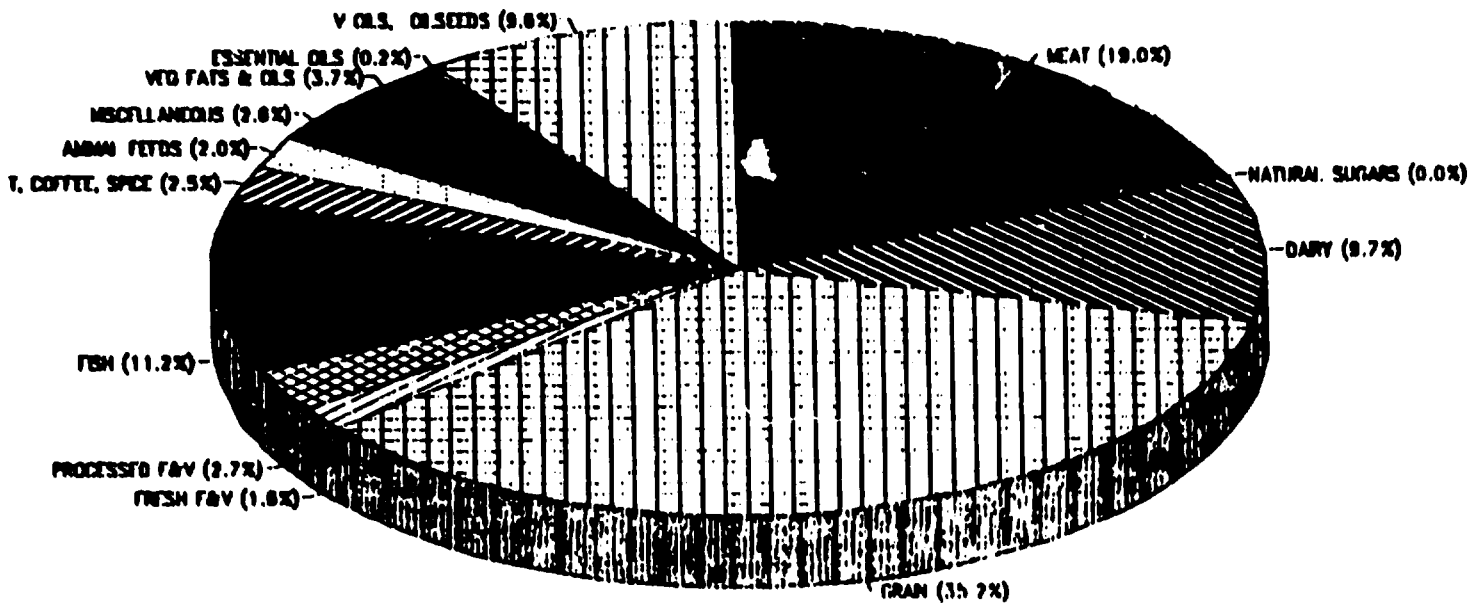
Qualifications:

The Food Processing Expert must have an academic degree in business administration and at least 20 years of experience in management of food processing enterprises and consultancy. The Expert must have successful experience in international marketing and a broad knowledge on food processing technology. He/she must also have experience from previous similar institutional building projects.



Agri Imports 1990

Annex 4.1.



Statistics from the Jamaica Bureau of Statistics

SUMMARY OF ANNUAL IMPORT and EXPORT VALUES (Food)

PAGE 5

| YEAR | MEAT | | DAIRY (not including eggs) | | FISH | | GRAIN | |
|------|---------------|--------------|----------------------------|--------------|---------------|--------------|---------------|--------------|
| | CATEGORY - 01 | | CATEGORY - 02 | | CATEGORY - 03 | | CATEGORY - 04 | |
| | IMPORT | EXPORT | IMPORT | EXPORT | IMPORT | EXPORT | IMPORT | EXPORT |
| 1985 | 19,899,020.00 | 316,650.00 | 18,162,680.00 | 68,180.00 | 18,057,740.00 | 1,937,030.00 | 88,342,383.00 | 2,501,574.00 |
| 1986 | 26,339,881.45 | 395,723.09 | 18,541,671.27 | 1,066,246.18 | 25,549,911.45 | 2,300,288.18 | 68,222,087.09 | 2,063,728.00 |
| 1987 | 27,708,049.27 | 269,198.36 | 23,040,638.18 | 485,874.00 | 22,558,683.82 | 2,613,169.45 | 68,323,427.82 | 2,875,766.36 |
| 1988 | 31,278,031.00 | 449,629.00 | 21,389,799.00 | 42,457.00 | 35,926,015.00 | 2,208,276.00 | 89,678,178.00 | 3,550,223.00 |
| 1989 | 31,103,018.00 | 59,402.00 | 45,801,891.00 | 71,655.00 | 34,736,838.00 | 1,832,662.00 | 81,087,684.00 | 4,637,829.00 |
| 1990 | 39,375,208.73 | 1,040,269.64 | 20,151,894.00 | 1,051,841.00 | 23,247,037.00 | 1,980,688.00 | 72,920,889.00 | 4,770,144.00 |

| YEAR | FRUIT & VEGETABLES | | NATURAL SUGARS | | TEA, COFFEE, LOCOR, SPICES | | FEEDS | |
|------|--------------------|---------------|----------------|---------------|----------------------------|---------------|---------------|--------------|
| | CATEGORY - 05 | | CATEGORY - 06 | | CATEGORY - 07 | | CATEGORY - 08 | |
| | IMPORT | EXPORT | IMPORT | EXPORT | IMPORT | EXPORT | IMPORT | EXPORT |
| 1985 | 1,982,936.00 | 27,013,771.00 | 1,619,633.00 | 45,969,279.00 | 1,467,702.00 | 21,339,183.00 | 1,581,549.00 | 853,501.00 |
| 1986 | 2,099,405.82 | 31,016,362.55 | 4,286,771.00 | 62,234,456.00 | 2,017,799.82 | 20,864,129.09 | 2,005,495.82 | 1,201,095.09 |
| 1987 | 4,173,343.09 | 40,596,000.91 | 6,151,200.00 | 74,679,003.00 | 3,468,028.73 | 19,421,410.55 | 3,483,297.45 | 582,512.73 |
| 1988 | 4,894,243.00 | 39,674,863.00 | 413.00 | 91,858,084.00 | 3,606,871.00 | 19,919,664.00 | 4,403,140.00 | 613,027.00 |
| 1989 | 10,769,031.00 | 38,821,097.00 | 3,580,615.00 | 62,987,958.00 | 5,954,929.00 | 17,840,537.00 | 4,701,356.00 | 803,389.00 |
| 1990 | 8,913,438.24 | 83,344,271.45 | 0.00 | 73,671,377.00 | 5,097,037.09 | 28,567,245.09 | 4,216,242.00 | 661,797.00 |

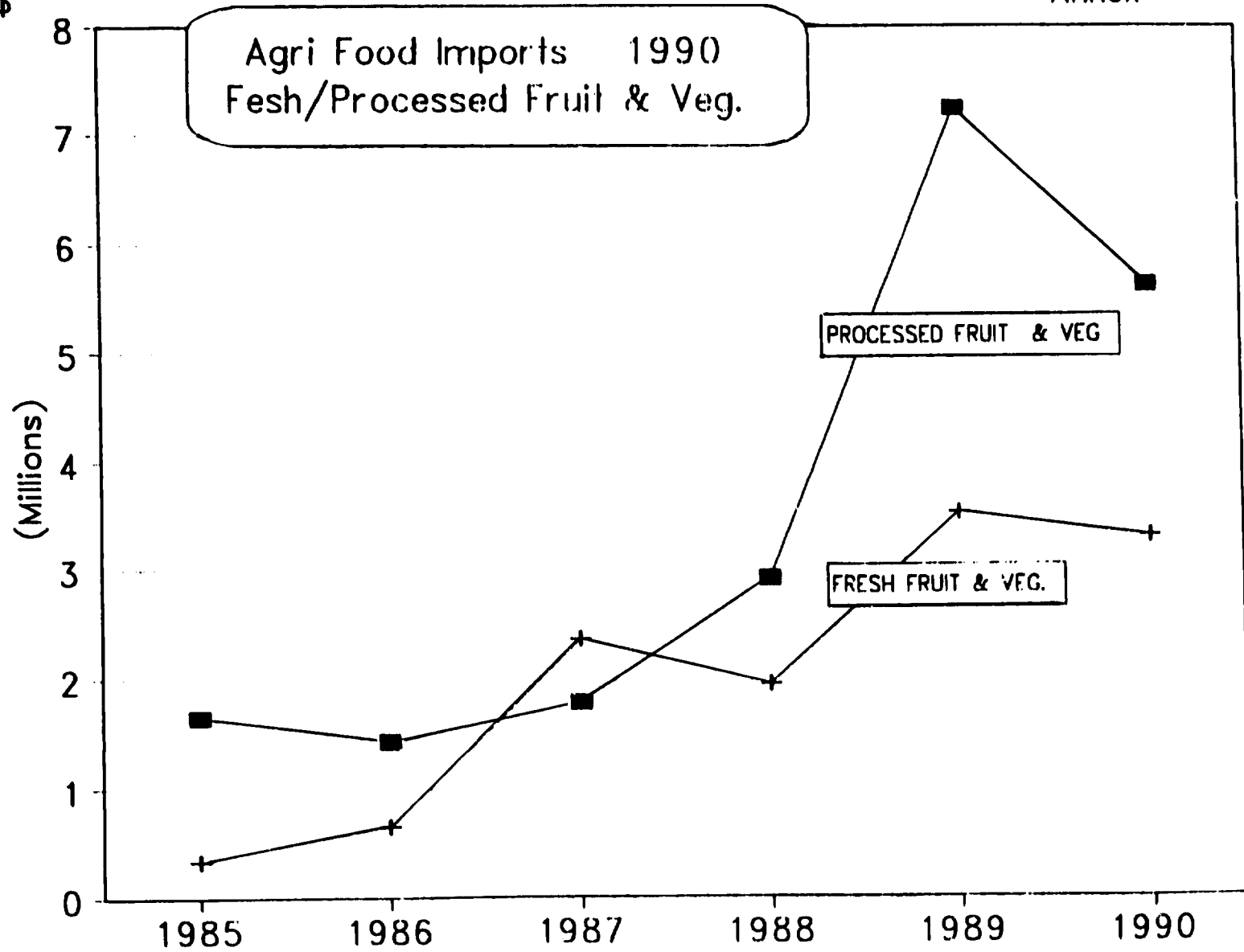
| YEAR | MISCELLANEOUS (Peanut butter) | | VEGETABLE FATS, OILS, WAXES | | ESSENTIAL OILS | | VEGETABLE OILS, OIL SEEDS | |
|------|-------------------------------|--------------|-----------------------------|-----------|----------------|--------------|---------------------------|------------|
| | CATEGORY - 09 | | CATEGORY - 42 | | CATEGORY - 55 | | CATEGORY - 22 | |
| | IMPORT | EXPORT | IMPORT | EXPORT | IMPORT | EXPORT | IMPORT | EXPORT |
| 1985 | 2,377,705.00 | 3,707,087.52 | 10,456,781.00 | 21,762.00 | 321,273.00 | 904,469.00 | 11,407,189.00 | 355,865.00 |
| 1986 | 1,618,673.26 | 4,461,799.82 | 3,599,603.64 | 45,784.18 | 211,342.73 | 550,687.09 | 10,737,018.00 | 27,729.00 |
| 1987 | 3,139,113.36 | 4,920,039.82 | 3,532,598.00 | 14,656.73 | 305,719.45 | 498,659.09 | 14,440,043.00 | 1,243.00 |
| 1988 | 179,542.00 | 0.00 | 2,676,329.00 | 21,045.00 | 318,382.00 | 1,202,620.00 | 19,260,533.00 | 15,637.00 |
| 1989 | 0.00 | 0.00 | 4,660,670.00 | 17,100.00 | 413,378.00 | 1,011,295.00 | 19,991,616.00 | 5,734.00 |
| 1990 | 5,432,959.00 | 5,541,641.00 | 7,587,380.00 | 25,513.00 | 345,791.00 | 1,087,393.00 | 19,867,317.00 | 834.00 |

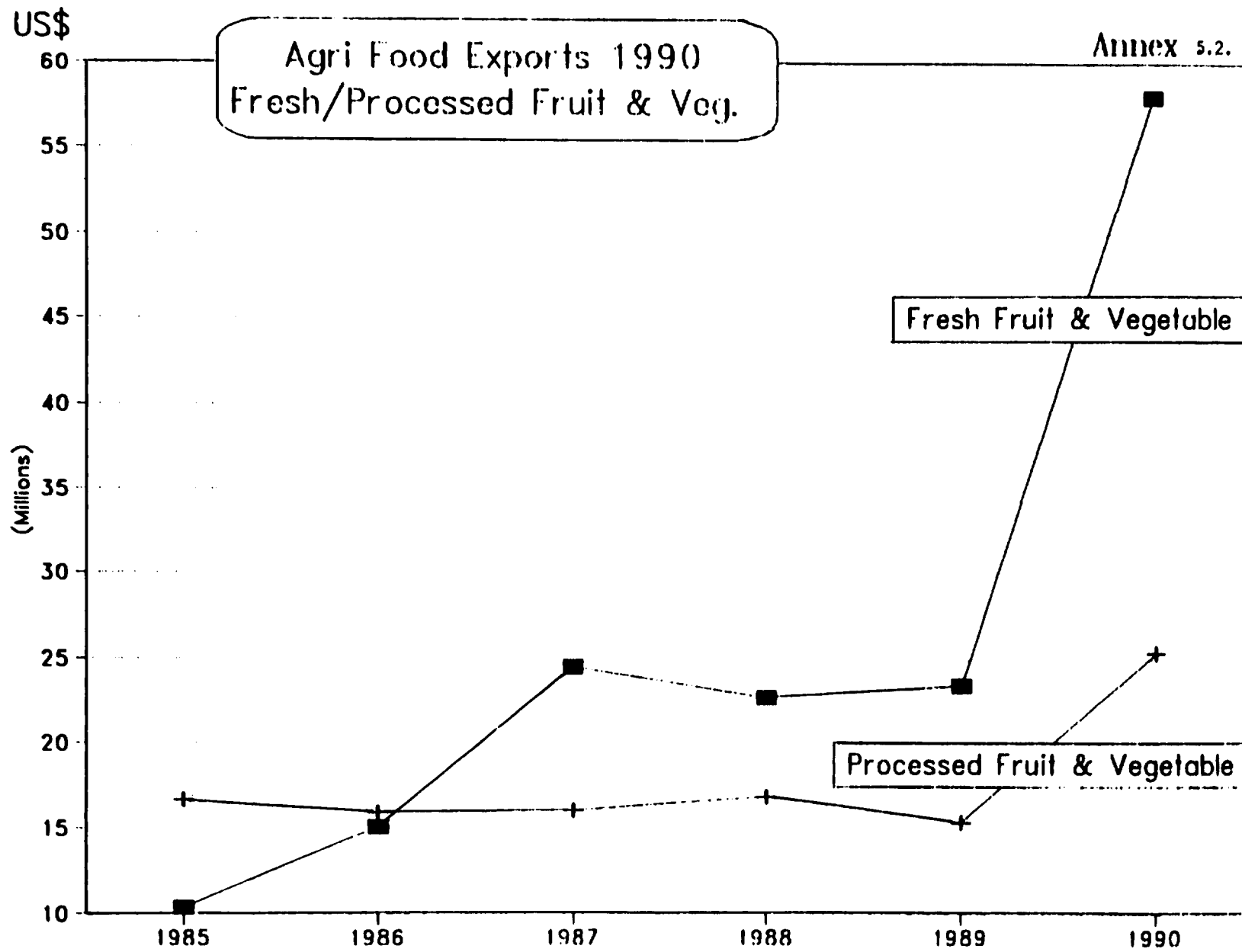
| YEAR | CATEGORY - Fresh Fruit & Veg | | CATEGORY - Proc'd. Fruit & Veg | |
|------|------------------------------|---------------|--------------------------------|---------------|
| | IMPORT | EXPORT | IMPORT | EXPORT |
| 1985 | 334,020.00 | 10,359,548.00 | 1,648,916.00 | 16,654,223.00 |
| 1986 | 659,820.55 | 15,103,615.64 | 1,439,585.27 | 15,912,746.91 |
| 1987 | 2,379,807.27 | 24,547,229.64 | 1,793,535.82 | 16,048,771.27 |
| 1988 | 1,961,502.00 | 22,796,772.00 | 2,932,741.00 | 16,878,091.00 |
| 1989 | 3,524,329.00 | 23,436,491.00 | 7,244,702.00 | 15,384,606.00 |
| 1990 | 3,303,634.00 | 58,007,869.00 | 5,609,814.00 | 25,336,404.00 |

| YEAR | OVERALL | |
|------|----------------|----------------|
| | IMPORT | EXPORT |
| 1985 | 165,541,083.00 | 105,891,058.52 |
| 1986 | 161,841,400.44 | 126,732,931.18 |
| 1987 | 177,097,263.63 | 147,441,536.37 |
| 1988 | 211,253,529.00 | 160,737,100.00 |
| 1989 | 238,553,734.00 | 129,082,853.00 |
| 1990 | 199,913,604.06 | 202,804,894.18 |

Note #1. Values are quoted in US dollars

US\$





1985 - 1990

PROCESSED FRUIT and VEGETABLES

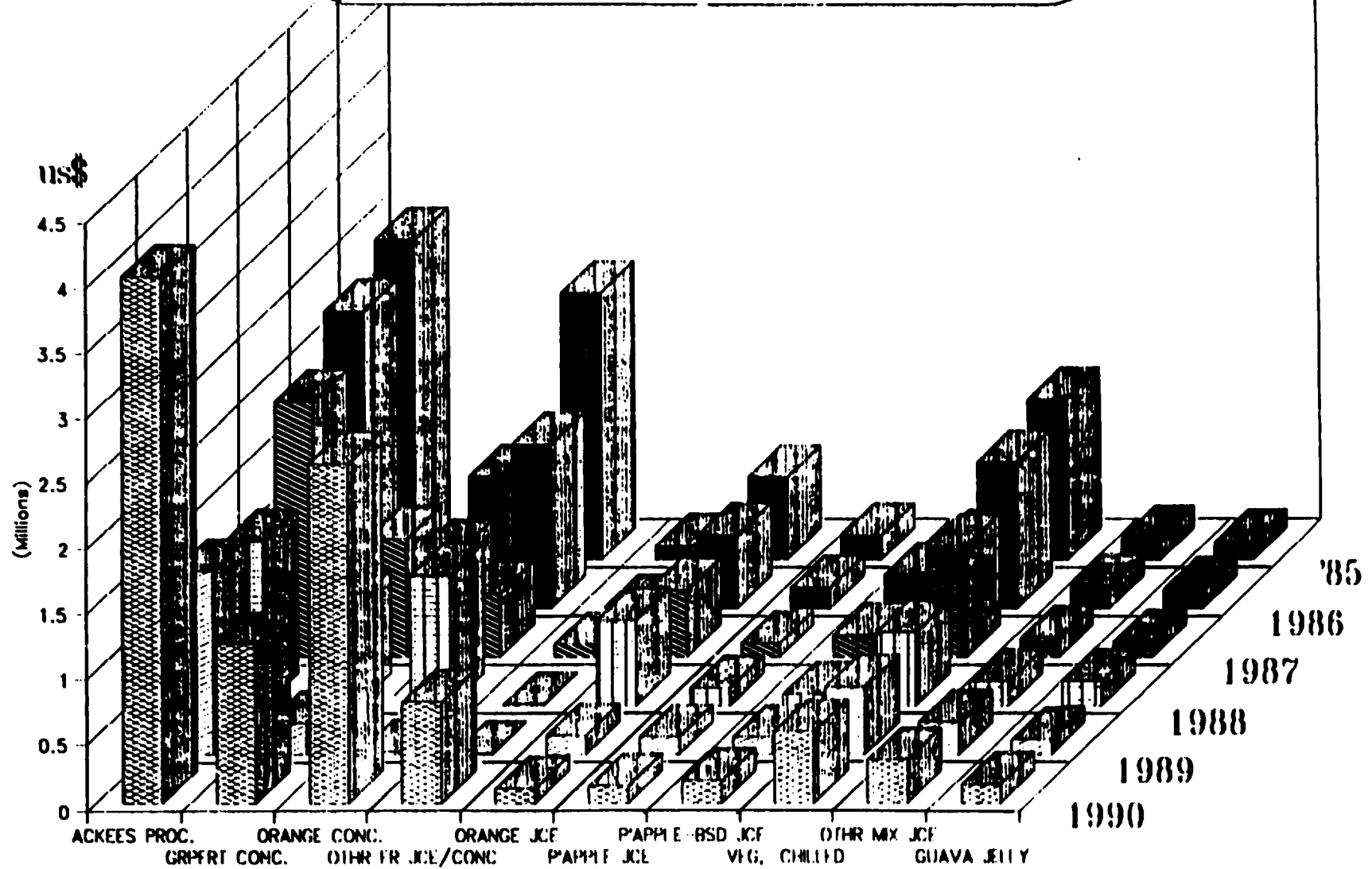
ANNEX 5.3.

MAIN EXPORT COUNTRIES

| SITC CODE | COMMODITY | 1985 US\$ | 1986 US\$ | 1987 US\$ | 1988 US\$ | 1989 US\$ | 1990 US\$ |
|------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|
| 10545999 | 10 OTHER VEGETABLES, FRESH OR 1 CHILLED | 1,225.27 | 1113 | 851 | 554 | 515 | 541 |
| 10548000 | 1 VEGETABLES PRODUCTS, ROOT AND 1 TUBER, FRESH OR DRIED | 6,054.27 | 7415 | 9452 | 10044 | 10791 | 13089 |
| 10585110 | 1 ORANGE JUICE, CONCENTRATED | 2,044.56 | 1,751 | 484 | 494 | 20 | 2590 |
| 10585120 | 1 ORANGE JUICE, NOT CONCENTRATED | 631.22 | 554 | 506 | 653 | 138 | 113 |
| 10585210 | 1 GRAPEFRUIT JUICE, CONCENTRATED | 625.63 | 424 | 099 | 785 | 234 | 1211 |
| 10585220 | 1 GRAPEFRUIT JUICE, NOT CONC. | 71.44 | 32 | 79 | 50 | 33 | 16 |
| 10585390 | 1 OTHER FRUIT JUICE, WHETHER OR 1 NOT CONCENTRATED | 98.02 | 7 | 85 | 0 | 1 | 770 |
| 10585400 | 1 PINEAPPLE JUICE | 100.47 | 149 | 101 | 120 | 127 | 135 |
| 10585820 | 1 PINEAPPLE-BASED JUICES | 125.64 | 251 | 159 | 92 | 129 | 172 |
| 10585890 | 1 OTHER MIXED JUICES N E S | 165.47 | 164 | 145 | 181 | 240 | 323 |
| 10589920 | 1 PINEAPPLES (AS FOR MANGOES) | 31.60 | 26 | 57 | 31 | 37 | 238 |
| 10589930 | 1 GRAPEFRUITS (AS FOR PINEAPPLES) | 1,657.76 | 1513 | 623 | 1256 | 1126 | 624 |
| 10589940 | 1 ORANGES (AS FOR GRAPEFRUITS) | 325.65 | 59 | | | | |
| 10589992 | 1 JACKES, PREPARED OR PRESERVED | 2,440.16 | 2271 | 1948 | 1256 | 1393 | 4025 |
| 10589999 | 1 OTHER FRUIT OTHERWISE PREPARED, 1 WHETHER OR NOT CONTAINING ADDED 1 SUGAR OR SPIRIT | 77.85 | 34 | 28 | 19 | 10 | 113 |
| T O T A L S ---> | | 15763 | 15262 | 15416 | 16049 | 14795 | 24760 |

Processed Ft. & Veg 1985 - 90

Annex 5.4.



NATIONAL COUNTERPART PERSONNEL

- (a) One National Project Director, Group Director Agri Business, JAMPRO., (2.4 M/M). (Mr W. Norman Prendergast, Agronomist)
- (b) One Director for the Agro-Industries Division, JAMPRO., (24 M/M) (Mr Lennox Picart, Administrator, Coordinator, Manager)
- (c) One Strategic Planning Adviser, Director of Strategic Planning, JAMPRO (2.1 M/M). (Mr Ambrose DaCosta, Economist, Strategic Planner)
- (d) One Director Designate of Food Processing Unit, JAMPRO (20 M/M) (Ms Kathleen Goldson, Food Technologist)
- (e) One Marketing and Investment Officer, (6 M/M)(Mrs Leasine Royér.)
- (f) Two full-time secretaries (30M/M). (Ms Hope Brown and Ms Marcia Archibald)
- (g) One Information Management Technician, part-time (4.8 M/M) (Mr George Robertson, Data Processing Officer)

THE JAMAICAN FOOD PROCESSORS INVENTORY

| COMPANY | EXPORT STATUS | MOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|---|
| ACME CONE CO. LTD. 13A National Heroes Circle Kingston, CSO Tel: 922-1076 Contact: Mr. Lloyd Moore | | | | | | Ice cream cones |
| AGRO PAK CORPORATION 50 Main Street Santa Cruz, St. Elizabeth Tel: 966-2211 Contact: Rev. Ivan W. Evans | | | | | | |
| AROSA LIMITED Drax Hall Estate St. Ann's Bay Tel: 972-2310-3 Contact: | | x | | | | Meat (pork) processing e.g. hams, sausages, bacon smoked pork chops |
| B & D FISHING LTD. 11 1/2 Ardenne Road Kingston 10 Tel: 923-9375 Contact: Mr. R. Francis | | | | | | |
| BENJAMIN P. A. MFG. CO. LTD. 97 East Street Kingston Tel: 922-8350-3 Contact: | x | | | | x | Organic oils, food colourings |
| B-MARTS CORPORATION LTD. 46 Trinidad Terrace Kingston 5 Tel: 982-5065 (Factory) 929-6776/929-9236 (Off) Fax: 929-7394 Contact: Mr. Richard Burgher Managing Director | | | | | x | Pre-cooked meals, pickled beef, pickled pork ackee in brine (16 oz pouch) |
| BOB'S CANDIES LIMITED 35 Shannon Drive Kingston Freezone Kingston 15 Tel: 923-5613 Contact: Mr. Phillip Vendryes | | | | | | Confectionery |

| COMPANY | EXPORT STATUS | HOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|---|
| BI-BEST FOODS LTD. 3 Acacia Avenue Kingston 5 Tel: 926-5418/926-4619 Contact: Mr. Ruel Grant General Manager | X | | | | | Pine colada, syrup, coconut cream, frozen callaloo, frozen ackee & salted fish |
| BUSHA BRONNE CO. LTD. Mechedo Industrial Complex Building 5 22-24 Victoria Avenue Kingston 2 Contact: | | | | | | Jellies, marmalades, guava jelly, chutney |
| BUSH BOAKE ALLEN JA. LTD. 226 Spanish Town Road Kingston 11 Tel: 923-5111/8777 Contact: Mr. Paul Marston | | | | | | Essential oils |
| BUTTERKIST LIMITED 2 Valentine Drive P.O. Box 453 Kingston 19 Tel: 925-9418 Contact: Mr. Wayne Sutherland | | | | | | Biscuits |
| C & H TRADING HOUSE LTD. 7 Chambers Lane Liguanea Kingston 6 Tel: 927-6220 Contact: Mr. St. John D. Mutton | | | | | | Bulk Rum |
| CANCO LIMITED Seaforth, St. Thomas (Factory) 62 Grants Pen Road (Hd. Off) Kingston 8 Tel: 925-6222 (Off.) Contact: Mr. Norman McDonald Chairman | | | | | | |

| COMPANY | EXPORT STATUS | MOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|---|
| CARIBBEAN EXOTIC FOODS Greyground, Mandeville JIDC Complex Tel: 962-2251 Contact: Mr. Ira R. Ashman Managing Director | | | | | | Vegetables in brine ackees, in brine, callaloo, canned fruits, soup |
| CARIBBEAN FOODS LTD. 449 Spanish Town Road Kingston 11 Tel: 923-5051/4 Contact: Mr. Lauritz O. Ramson Managing Director | X | | | | X | Breakfast cereal (Foska Oats) |
| CARIBBEAN GUM & CANDY LTD. 159 Stockfarm Road Golding Spring P.O. P.O. Box 183, St Andrew Kingston 8 Tel: 942-2358/942-2359 Fax: 942-2444 Contact: Mr. Cecil Beharry Managing Director | X | | | | | Chewing gum, bubble gum |
| CENTRAL FOOD PACKERS LTD. P.O. Box 75 Kingston 6 (Mailing Add.) Central Village St. Catherine (Factory) Tel: 984-3118 Contact: Mr. Patrick Jarrett Managing Director Mr. Paul Bravo | X | | | | X | Canned ackees, breadfruit, callaloo in brine, diced carrot, crushed pineapple |
| CHALLENGE ENTERPRISE 67 Constant Spring Road Kingston 10 Tel: 926-7531-4 Contact: | | X | | | | Ice cream, fruit flavoured juices |
| COFFEE INDUSTRIES LTD. 9 Barbados Avenue Kingston 5 Tel: 929-2227/67266 Contact: Mr. Patrick A. Sibbles Managing Director | | | | | X | Roasted coffee beans and grounds |
| CONTENT AGRICULTURAL PRODUCTS (Division of Jamaica Broilers Group) McCooks Pen Office Tel: 984-5166 Contact: Hugu H. Bryan General Manager | | | | | | |

| COMPANY | EXPORT STATUS | HOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|--|
| COMMODITY ENTERPRISES LTD. 129 1/2 Old Hope Road Kingston 6 Tel: 927-4304 Contact: Mr. Barrington Stennett | | | | | | |
| CONSOLIDATED BAKERIES (JA) LTD. 111 Red Hills Road Kingston 19 Tel: 924-1151 Contact: Mr. Rufus Ronald Chang | | | | | | |
| COTTAGE INDUSTRIES Walkers Hood P.O. St. Ann Tel: 974-2546 (Ansng. machine) Fax: 972-2021 Contact: Mr. Hoodrow Mitchell Managing Director Mr. Rodrick Edwards Marketing Director | | | | | | Cereal, condiments/jerk seasoning, confectionery, jams and jellies |
| CREMO LIMITED 284 Spanish Town Road Kingston 11 Tel: 923-6136/35063-64 (Off.) 923-6136 (Factory) Fax: 923-4472 Contact: Dr. D McNeal General Manager | | | | | | Milk, orange juice, box drinks, ice cream, fudge |
| DAIRY INDUSTRIES (JA) LTD. 111 Washington Blvd. Kingston 20 Tel: 925-0010-12 Fax: Contact: Mr. Mark Lee Sales Manager | | X | | | X | Cheese, malted milk |
| DANIEL FINZI & CO. (SUCC) LTD. 234 Spanish Town Road Kingston 11 Tel: 923-9291-9 Contact: Mr. William McConnell | | | | | | Rum |

| COMPANY | EXPORT STATUS | HOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|--|
| DARLISTON COMMUNITY FOODS 10 Belvedere Crescent Forest Hill P.O. Box 685 Kingston 19 Contact: Mr. Donald Evans | | | | | | |
| DESNOES & GEDDES LTD. 214 Spanish Town Road P.O. Box 190 Kingston 11 Tel: 923-9291 Cable: Desnoes Tlx: 2298 Fax: 923-8599 Contact: Mr. John Otway V.P. Export | X | X | | | | Beer & stout, malt & soft drinks, wines, spirits, bottle caps |
| ESTATE INDUSTRIES LTD. 232 Spanish Town Road P.O. Box 3 Kingston 11 Tel: 923-7462/8830 Contact: Mr. Herbert G. Russell Managing Director | | X | | | | Coffee liqueur, aperitifs |
| FACHOV FOODS LTD. Carib Road Molland Falmouth P.O. Box 155 Tel: 954-3507 Contact: Mr. K. Lea | X | | | X | | All purpose sauces, 5 spice soy sauce, ginger soy soy, soy sauce, roasting sauce, king pepper hot sauce, king pepper pickled hot pepper, mango/papaya chutney, Jamaica |
| FLETCHER BOWMAN LTD. 113A Constant Spring Road Kingston 10 Tel: 925-3322 Contact: Mr. Canute Saddler Managing Director | X | X | X | | X | Ackee in brine, mangoes in brine, pepper, sauces hot/brown, callaloo, crystallized fruits |

| COMPANY | EXPORT STATUS | HOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|--|
| FOOD SPECIALITIES LTD. (Nestle Ja. Ltd.) 60 Knutsford Blvd. Kingston 5 Tel: 926-1300 Fax: 926-7388 Contact: Mr. Anthony Laurence Marketing Manager Factory: 998-5221-2 985-2580/2282 Contact: Mr. Anthony Long Factory Manager | X | X | | | | Fortified food drink, milk based drink, dehydrated soups & broths, gravies |
| FRUITS OF JAMAICA LINTIED c/o FMC Agro Export Complex 188 Spanish Town Road Kingston 11 Contact: Mr. Donald Duncanson Managing Director | | | | | | |
| GAURON FOOD PRODUCERS LTD. | | | | | | Jerk seasoning, spices |
| GRACE FOOD PROCESSORS (CANNING) Lot 2-6 Twickenham Close Kingston 11 Tel: 923-6062 Fax: 923-5687 Contact: Mr. Patrick Duncan General Manager | X | | X | X | | Fruit drinks and syrup |
| GRACE KENNEDY EXPORT 39-41 2nd Street Port Bustamante Kingston Tel: 923-5173/5190/5322 Contact: Mr. Cecil Ho General Manager Mrs. Marlene Murphy-Roache New Product Devl. Mgn | | | | | | Fresh & processed pork e.g. : hams, hscuns and Fresh pork cuts |
| GRAINS JAMAICA LTD. Pimento Way, Montego Freeport Montego Bay, St. James Tel: 953-2350 Contact: William Taylor | | | | | | Grains and cereals |
| GRAY'S PEPPER PRODUCTS P.O. Box 81, Chantilly Savanna-La-Mar Westmoreland Tel: 955-2700 Contact: Mr. Lloyd M. Gray Managing Director | X | | | | X | Hot pepper and other spicy sauces, meat seasoning, curry |

| COMPANY | EXPORT STATUS | NOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|--|
| GTZ/SIRI PROJECT "NEW SUGAR TECH. JA" 8 Manor Court Meus Kingston 8 Tel: 924-1399 Contact: Dr. H. Bourzutschky | | | | | | |
| MAK HAS MANUFACTURING LTD. Agro Export Centre 188 Spanish Town Road/62a Waterloo Rd. Tel: 923-4160/4177 Contact: Mr. Ricky Hacker Managing Director | | | | | | Soye sauce, hot sauce |
| HIGHGATE FOOD PRODUCTS 63 Half-May-Tree Road Kingston 10 Tel: 929-1161-2 Fax: 929-1164 Contract: Mr. Claude Fletcher General Manager | X | X | | X | X | Chocolate confectionery, breakfast cocoa, beverage mix |
| INTERNATIONAL INGREDIENTS | | | | X | | |
| ISLAND BEES EXPORTS 26 Lancaster Road Kingston 10 Tel: 929-8190 Contact: Mrs. Pauline Davies | X | | | | | Honey |
| ISLAND DAIRIES LTD. P.O. Box 9 Ocho Rios Tel: 974-2259 Fax: 974-2543 Contact: Mr. Evrod Man Managing Director Ms. Donna Man Operations Manager | | | | | | Cows Milk |
| ISLAND FOOD PROCESSORS 39 Slipe Road Kingston 5 Tel: 922-3991 Contact: Mr. Michael Canton | | | | | | |

| COMPANY | EXPORT STATUS | NOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|--|
| JAMAICA BISCUIT CO. LTD. 206 Spanish Town Road P.O. BOX 209 Kingston 11 Tel: 923-6477/6571/9-2001 Contact: Mr. Everard Nelson Managing Director | X | X | | | | Biscuits and crackers |
| JAMAICA BROILERS LTD. 15 Hope Road Kingston 10 Tel: 926-3670 Contact: Mr. David Hildish Executive Chairman Mr. Andrew Hildish Co-Managing Director | | | | | | Chicken, fresh-water fish |
| JAMAICA CITRUS GROWERS ASSO. 1A North Avenue, Kingston Gardens Kingston 4 Tel: 922-8230-2 Contact: Mr. Ivan Tomlinson Chairman | X | | | | X | Citrus concentrates, juices marmalades, jellies, lime oil |
| JAMAICA FLOUR MILLS 209 Windward Road Kingston 2 Tel: 920-7221-5 Contact: Mr. John M. Ruland Managing Director | | | | | | and waffle mixes, wheat cereal |
| JAMAICA EXTRACTS LTD. P.O. Box 2 Milliensfield, Manchester Tel: 962-4211 Contact: Mr. John O. Minott | | | | | | |
| JAMAICA GRAINS & CEREALS 3 Felix Fox Blvd. Kingston Tel: 922-1220 Contact: | | X | | | | Snacks-e.g: cornflakes, oats, wheat bread cereal |

| COMPANY | EXPORT STATUS | MOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|---|
| JAMAICA GINGER EXPORT 10 Liguanea Way Kingston 6 Tel: 927-3478 Contact: Mr. Woodrow Francis | | | | | | Ginger |
| JAMAICA HERBS | | | | | | |
| JAMAICA MACARONI FACTORY LTD. 2 Valentine Drive Kingston 19 Tel: 925-5942 Fax: 925-5942 Contact: Mrs. H.V. Chen General Manager | | | | | | Pasta products and macaroni spaghetti, lasagne, noodles fettuchini, macaroni & cheese |
| JAMAICA SOYA PRODUCTS IND. LTD. P. O. Box 27, Rhoden's Pen Old Harbour P.O. St. Cath. Tel: 983-2244 Fax: 983-2217 Contact: Mr. George Neita General Manager | M | | | | M | Soya meal, soya oil, sound recorders |
| JAMAICA STANDARD PRODUCTS CO. LTD. P.O. Box 2 Williamsfield, Manchester Tel: 963-4211 Fax: 963-4309 Contact: Mr. Jack Minott Managing Director | | | | M | | Roasted & ground coffee |
| KING PEPPER PRODUCTS LTD. Carib Road, P.O. Box 43 Falmouth, Trelawny Tel: 954-3681 Contact: Mr. Dudley Eaton | | | | | | Pepper |
| KINGSTON FISHING ENTERPRISES LTD. 27 National Heroes Circle Kingston 4 Tel: 922-2865 Contact: Mr. Sydney A. Francis | | | | | | Fresh Water Fish |
| LAKESIDE SNACK FOODS 29 Burlington Avenue Kingston 10 Tel: 968-0017/926-2326 Contact: Mr. Brascoe Lee Mrs. Pam Hebley | | | | | | Banana and plantain chips |

| COMPANY | EXPORT STATUS | HOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|--|
| LAMBERT SEAFOODS LTD. P.O. Box 21 Lionel Town, Clarendon Tel: 986-4933 Contact: Ms. Olive Sinclair | | | | | | |
| LEVY'S SPICES 3 Nigan Drive Kingston 2 Contact: Mr. John Levy Managing Director | | | | | | Spices |
| LINE COMPANY OF JA. LTD. (THE) 42-53 Harbour Street Kingston Tel: 922-3809/8340/923-4262 Contact: Mr. Gordon Sharp Managing Director | M | | | | X | Line oil, juice concentrates essential oils |
| MANCHESTER PACKERS Grove Heights, P.O. BOX 307 Mandeville, Manchester Tel: 962-3237 Fax: 962-3237 Contact: Mr. Garfield B. Thomas Managing Director | | | | | | Ground provisions, processed foods, spices |
| MASTER BLEND FEEDS P.O. Box 24 Old Harbour, St. Catherine Tel: 983-2305/6 Contact: Mr. Winston Booth | | | | | | |
| MCCALLA'S LABORATORIES LTD. Unit 13, Mense Pen Industrial Est. Heymouth Close Kingston 20 Tel: 923-4416/7 Contact: Mr. Edward G. Knight | | | | | | Pharmaceuticals and condiments |
| MEAD JOHNSON MFG. (JA.) LTD. 16 Half-Way-Tree Road P.O. Box 159 Kingston 5 Tel: 926-3680/4 Contact: Mr. Mervin L. Walker | | | | | | Infant formula |

| COMPANY | EXPORT STATUS | NOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|-------------------------------|--------|---|
| MFV LIMITED 33 Brenton Road Kingston 5 Tel: 926-8141-3 994-2307 (Factory in Port Maria) Contact: Mr. Carlton Walker Managing Director | | | | | | peppers, hot peppers sauces fresh produce |
| MUSSON JAMAICA LTD. 178 Spanish Town Road Kingston 11 Tel: 923-6078, 39008/38922 Contact: Ms. Diane Hanson Export Manager Leonard Green - Dir Duke Street Paul Hanson - Plant Mng. Marcus Garvey Dr. Mr. Desmond Blades Chairman | x | | | Questionnaire not received | x | Canned peas, fruit juices, callaloo, breadfruit in brine, syrups, spices, Irish Moss drink |
| NATIONAL CONTINENTAL CORP. LTD. 45 Half-Way-Tree Road Kingston 5 Tel: 926-3770/72 Contact: Mr. Karl R. Hendrickson Chairman | x | | | | x | Bread, biscuits, snacks |

| COMPANY | EXPORT STATUS | MOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|--|---------------|----------|------|------|--------|---|
| NATIONAL RUMS OF JAMAICA LTD. The Towers 25 Dominica Drive Kingston 5 Tel: 926-7548 Contact: Mr. Roy Evan Brown | | | | | | Rum |
| NATIVE FOOD PACKERS LTD. 7 East Avenue Kingston 5 Tel: 926-2147-9 Contact: Mrs. Barbara Grant Marketing Director | x | x | | | x | Snacks - banana products e.g.: banana & plantain chips, roasted nuts, popcorn and cornmeal based extruded snacks pizza sticks, banana preserves |
| NATURAL PRODUCTS LTD. 5 Bryants Crescent May Pen, P.O. Box 340 Clarendon Tel: 984-2404 Contact: Mr. Seebert J. Allison Managing Director | | | | | | Syrup, strawberry, orange, sorrel drink |
| NATURE TREATS LTD. 2a Hillcrest Avenue Kingston 6 Tel: 927-9168 Contact: Mrs. Hope Lopez Managing Director | | | x | | | Cereal bars & breakfast foods e.g. granola bars, whole wheat bread, muffins |
| NEAL & MASSY (JA) LTD. 63 Knutsford Blvd Kingston 5 Tel: 929-1800-1/92731 Fax: 926-5124 Contact: Mr. Vernon Bell Managing Director | | | | | | Ketchup, barbecue sauce, hot pepper sauce, mayonnaise, salad dressing |
| NEGRIL PRIDE DISTBRS. (JA) LTD. 14 Central Road Kingston 10 Tel: 929-8536-7 Contact: | | | | | | |

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| COMPANY | EXPORT STATUS | NOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|------------------------------------|
| OVER FRONT LIMITED Shop 22 Central Plaza Kingston 8 Tel: 929-8042 Contact: Ms. Claudette Ferguson | | | | | | |
| PICK-A-PEPPA CO. LTD. Shooters Hill Manchester Tel: 962-2928/2809 Contact: Mr. Joe Kee Chow, Snr. Managing Director | X | X | | | X | Hot pepper sauce, pickapeppa sauce |

| COMPANY | EXPORT STATUS | NOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|---|
| PIONEER CHOCOLATE CO. LTD. Williamsfield, P.O. Box 27 Manchester Tel: 963-4216/4276 Contact: Mr John Jay Cunningham Snr Managing Director | | | | | | Cocoa butter, chocolate - unsweetened, peppermint sticks confectionery items, peanut butter |
| PLANTATION PRIDE LIMITED Palmers Cross P.O. Box 426, May Pen Clarendon Tel: 986-4090 Contact: Mr. Basil M. Bernard Managing Director | | | | | | Banana chips, plantain chips |
| PROFORM LIMITED 3 East Avenue Off Beechwood Avenue Kingston 11 Tel: 92-90164/97034 Mrs. Marcia McLaughlin Manager | | | | | | |
| ROBERTS PRODUCTS LTD. 7 Norwich Avenue P.O. Box 372, Kingston 11 Tel: 923-9040/34609 Contact: Mr. Robert Evelyn Managing Director | X | X | X | | X | Fruit juices and nectars, orange and guava marmalade callaloo, breadfruit |
| SALADA FOODS JR. LTD. 20 Bell Road P.O. Box 71, Kingston 11 Tel: 9237114/6 Fax: 923-5336 Contact: Mr. John Fletcher Managing Director | X | | | | X | Instant coffee, roasted and ground coffee |
| DR. IAN SANGSTER & CO. LTD. 17 Holborn Road Kingston 10 Tel: 926-8888 926-8211 Fax: 909-8465 Contact: Dr. Ian Sangster Managing Director Mr. Brodber | | X | | | X | |
| SCOTT'S PRESERVES LTD. Twickenham Park P.O. Box 94 Spanish Town St. Catherine Tel: 984-3897-8 Fax: 984-3896 Contact: Mr. Steve Watson Managing Director | X | X | X | | X | |

| COMPANY | EXPORT STATUS | MOI PROG | STAS | CAIC | CARTIS | PRODUCT LINE |
|---|---------------|----------|------|------|--------|---|
| SEA-VIEW ENTERPRISES LTD. 11 Beechwood Avenue Kingston 5 Tel: 929-1647/926-0729 Contact: | | | | | | |
| SEPROD LIMITED 3 Felix Fox Blvd. Kingston 11 Tel: 922-1220/1602/0317/1582-4 Contact: Mr. John Harrison Managing Director | | | | x | | |
| SERGE ISLAND DAIRIES | | | | x | | |
| SHIMS WHOLESALE LIQUORS 113 Orange Street Kingston Tel: 922-5706/1316/7 Contact: Mr. Glen Chin General Manager | x | | | x | | |
| SOUTHERN FOOD PROCESSORS | | | | | x | |
| TIA DONNA LIMITED 3 East Avenue Kingston 5 Tel: 926-4773 Contact: Mrs. Donna March-Chuck Managing Director | x | | | x | | Sauces and mustard pickle |
| TIJULE CO. LTD. 30 Paisley Avenue May Pen Clarendon Tel: 986-2531 Contact: Dr. Juliette Newell Managing Director | x | | | x | x | Condiments, sauces, jellies jams, marmalades |
| TRINJAM FOOD PROCESSORS LTD. Ferry St. Catherine Tel: 933-3391-2 Contact: Ms. Lorna McKenzie | | | | | | Questionnaire not received |
| | | | | | | Tomato ketchup, salad dressing |
| WEST INDIES YEAST CO. LTD. 38 Jobs Lane P.O. Box 82 234 Spanish Town Road Kingston 11 Tel: 923-6141/9 Fax: 923-8619 Contact: Mr. William A. McConnell Managing Director | x | | | x | x | Baking powder, active dry yeast, powdered soft drink mix, icing sugar |
| WESTICO FOODS Mandeville P.O. Manchester Tel: 962-2204-7 Contact: Mr. Keith Rodman Managing Director | | | | | | Baked products |

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**TECHNICAL ASSISTANCE
OFFERED TO THE JAMAICAN PROCESSED FOOD INDUSTRY**

ANNEX 8

| NAME OF COMPANY | TECHNICAL ASSISTANCE OFFERED |
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| CANCO Limited Kingston and Seaforth | Plant and machinery flow and design proposal for Jama jellies and marmalades. New product development, jams/jellies and marmalades from mango, banana and lime. Ackee handling. Steam use and control. |
| Proform Limited Kingston | Improvement in product (yoghurt). New product development, drinking yoghurt, cottage cheese, (American grainy) and (European, pasty, quarg type) Sour cream. Proposals for filling apparatus. |
| Nature Treats Kingston | Soy milk and Tofu processing line proposals. |
| Serge Island Dairies Serge Island/Seaforth | Advice on products in Jamaica suited for UHT processing and subsequent aseptic filling. (Longlife products) Technical advice on the machinery in the existing and the new factories. |
| Island Dairies Ocho Rios | Preliminary proposals for a new factory and processing line. |
| Citrus Growers Association Kingston, Bog Walk and May Pen | Milk and "box" juice processing plant for C.D.C. May Pen. Organisational Intervention in the ongoing missions of Prof Hopley and Mr W Ennen. |
| Food Technology Institute Kingston | Recommendations for the revitalising of the existing FTI and the eventual relocation and refurbishing. Proposed new products and process lines. Inspection and comment on the two proposed new sites for the relocation. Since this project has no process laboratory nor any intention to make such investment, the project has cooperated with FTI for the development work to be done for customers and industry |
| Jamaica Banana Producers Association Kingston | Proposed puree plant to convert the masses of waste banana into hard currency by the manufacture of banana puree. |
| Content Meats (Broilers Group) Bog Walk. | Proposal from UNIDO for the utilization of the offal by products for extraction of insulin and other enzymes. |
| Jamaica Broiler Kingston, and McCooks Pen. | Strategic planning, together with Mr Robin Murray. |
| Nestle Jamaica Kingston | Introduction of and proposal for a plastic/aluminium foil laminate can as alternative to the metal can. Still under consideration. |
| Fletcher Bowman Limited The Yallas | Site inspections and recommendations for the refurbishing of the plant already very old and partly destroyed by Hurricane Gilbert. |
| Desnoes & Geddes Kingston | Proposed new product in cooperation with Coconut Industry Board, Coconut water in aseptic pack. Proposed joint venture with French company for mineral water for export to USA. Proposed soy milk products. |

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| <p>College of Agriculture Paaley Gardens</p> | <p>Proposal for the finishing and commissioning of the new and existing Food Processing Plant, part of the proposed faculty of Food Technology. New plant required and proposed products that could be manufactured for demonstration, market development, teaching and / or profit.</p> |
| <p>West Indies College Mandeville</p> | <p>This has been a work of proposing the organisation of the small processors association and how this can function to their good. They have hosted the main inaugural meeting 19 Feb. 1992.</p> |
| <p>Chateau Farm May Pen</p> | <p>Chateau Farms in May Pen installed an extremely old milk pasteurising and packaging plant as their part for the modernisation of industry program. With the problems of quality and spare parts we have given assistance.</p> |
| <p>Cottage industries Walkers Wood</p> | <p>Cottage Industries arose out of the Community development project in Walkers Wood in the 1970's. The jerk seasoning has been most successful on the international market. We have assisted them to draw up new plans for the new factory for which financing is now approved. The marketing part of the Processed Food Unit also assisted with regard exhibiting their product at international exhibitions. Assistance with jams and jellies.</p> |
| <p>CAST Kingston</p> | <p>This was an attempt to coordinate the efforts of those technical institutions which have or had expertise in the solar drying techniques. With the engineering department this was not successful. We have expectation to coordinate this matter with the CAST entrepreneurial center.</p> |
| <p>Grace Kennedy Kingston</p> | <p>This has been an on going technical assistance with various departments within Grace, from proposed development of new products, such as mango jams to the production department with the need for developing a puree system for their own processing needs. The utilisation of banana in the making of a "tomato like" ketchup, the use of banana in the manufacture of vinegar.</p> |
| <p>National Cassava Products, Goshen.</p> | <p>This factory lies idle. Built some ten years ago, it was started up but lack of raw materials starved the enterprise to death. The way it is cost of energy today prohibits it's resuscitation in it's original form. It could function in combination with modern extrusion technology which is much less energy consuming. This tech assistance was to draw up a proposal that could encourage investors.</p> |
| <p>Fruits of Jamaica Kingston</p> | <p>This enterprise has developed from mod. 4 beginnings and though still primitive by international standards, if, as the owners hope there is international funding available, then they need a project proposal. This tech. assistance was to present the possibilities of product and process.</p> |
| <p>Green Castle Estates. Green Castle.</p> | <p>This is a very successful papaya estate, with also banana and pimento. The intention 18 mths ago was to solar dry the surplus papaya since it was expected that rejects would climb to enormous proportions. A solar drier of large proportions was designed with the assistance of the UWI, Engineering Faculty in St Augustine, Trinidad. A small drier was loaned by JAMPRO till the larger plant was built. The larger was never built since the rejects never rose above manageable proportions. The small unit is now to be transferred to a village community in St Ann.</p> |
| <p>Musson Kingston</p> | <p>One of the large trading houses this factory processes for the group's many supermarkets a range of products in cans and sauces in bottles. Technical assistance was general. More specific is now under request for things like coconut processing.</p> |

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| <p>Wray & Nephew Agricultural Division, Newton Estates. Lacovia.</p> | <p>This enterprise has planted large acreages of mango, valencia orange and papaya. They are beginning to harvest the mango and need a processing facility, as it is more suitable for their business than export of fresh fruit. They have received maximum assistance from the puree plant feasibility study and the JAMPRO updating of it in January 92. They have taken the decision to proceed with the investment for a puree plant to be in operation in the summer of 1993.</p> |
| <p>(Project for People) Maidstone Milk Producers Association. Maidstone. (Factory) Kingston. (Admin. Office)</p> | <p>This is a NGO and is a loose association of small farmers who despatch their milk to the Maidstone plant for processing into cheddar cheese. There are about ten workers and receive about 250 to 500 liters of milk daily. This technical assistance was a monthly Saturday training session where the basic elements of milk technology were presented and discussed in relation to the actual work of cheesemaking going on in the room next door. It lasted over a period of about eight months. Practical points on improving starter propagation and cheese cheddaring were demonstrated.</p> |
| <p>Scotts Preserves. Spanish Town</p> | <p>This factory manufactures a range of products from jams, jellies, marmalades, a range of Jamaican spices and sauces, fruit juices and punches, pineapple in cans and ackee. The intervention was in the beginning to increase the efficiency of manufacturing by reorganisation of the management and supervisory structure at the factory level. However the outworking of the intervention incorporated many other technical interventions such as: lowering the sugar content, avoiding the use of preservatives in raw material storage, reducing the losses from manufacture to filling, control of the colour in making jellies, mechanical extraction of guava and of mango, assistance in applying for laboratory certification, systems for control of inventory and production, downtime control, more efficient handling of ackee.</p> |
| <p>St. Theresa's Church - St. Mary Development Project - Annotto Bay</p> | <p>This is a community association sponsored by St Theresa's church for the manufacture of jams, jellies and marmalades. This technical assistance was to assist them in finding a suitable product for sale to the market of their choice, (domestic) and to assist them to source containers and ingredients.</p> |
| <p>Cornwall Dairy, Montpelier.</p> | <p>This dairy was commissioned in approx 1977. It had the best machinery and process till the new UHT processing plant was installed in Serge Island Dairies. Due too many misfortunes to be mentioned here, the dairy fell out of operation in about 1982, and in 1988 the roof was lost to Hurricane Gilbert. The finest dairy installation was lying idle this time and the existing dairies existed on ancient and outmoded equipment. The value of this asset to Jamaica was pressed on the Government of Jamaica through the project and that these assets must be utilized. A survey of the machinery was made and reported. In the latter part of 1991 the plant with land in the district was divested to the Western Citrus enterprise. The trees have to be planted so the conversion of this plant to citrus production is still three years down the line. It is my estimate that the replacement cost of the equipment, pipe-work and installation and engineering, would be in the region of US\$10 m. Most of the equipment is in good shape, though the electrical system would have to be completely renewed.</p> |

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| <p>United Estates Bog Walk</p> | <p>This is a group of estates that were in past time primarily sugar producers. They have diversified and have become the island's largest citrus producers. Besides selecting the best for fresh citrus export, the next best is exported in bulk for juicing in UK. A juice extraction, pasteurisation and packaging plant at Bog Walk is currently under extension to include a concentration process. They have together with D & G planted orchards of mango. Their business connections with J.B.P.A. and D & G made the right constellation for the proposed puree plant. They together with the two other proposed partners have a general nodding agreement that this is interesting. But currently they are so involved with the extension of the factory that they cannot look at the puree plant. Other technical assistance has had to do with the problems of oxidation of the citrus peel oil in the package. This is a combination of pasteurising temperatures and time, as well as the quality of the packaging and the lack of an air penetration barrier.</p> |
| <p>Western Citrus Project Montpelier</p> | <p>This technical assistance had to do with in JAMPRO information for a European alternative process line for the building of the proposed citrus processing factory at Montpelier.</p> |
| <p>Crema Limited Kingston</p> | <p>This milk and ice cream factory on the outskirts of Kingston is partly owned by local investors and Beatrice Foods. Technical assistance in this case had to do with the possible use of "soy base" the aqueous extract from soybeans for use in ice cream as a replacer of imported skim milk powder.</p> |
| <p>Sovereign Supermarket. Kingston</p> | <p>This concerned a project to extract the juice from Star Fruit, Carambola, and process it into Longlife pack. Samples were imported from Asia. It was suggested that the same plant could also process other juices, coconut water and soy products.</p> |
| <p>Doreen Kohn Kingston</p> | <p>This is a family enterprise making german whole grain bread and also yoghurt and quarg. This technical assistance was in the form of advice for the better pasteurising temperatures for yoghurt and quarg.</p> |
| <p>Virginia Dare Kingston</p> | <p>This company is processing essential oils and flavouring compounds. The technical assistance was concerning the growing of special varieties of ginger for processing, methods of solar drying various commodities, modern methods of food processing including aseptic.</p> |
| <p>Exotic Foods Jamaica Ltd Mandeville.</p> | <p>This family company in Mandeville is currently moving to another building. The technical assistance was concerning strategic planning. They have become one of the founding members of the Association of Small Processors.</p> |
| <p>Pride of Jamaica, May Pen</p> | <p>This firm is owned by Mr and Mrs Bernard processing ackee, mango, callaloo and other fruit and vegetable. Technical assistance has been along the lines of strategic management with a view to the formation of the Association of Small Processors of which they are a founding members.</p> |
| <p>Tijule Limited</p> | <p>The technical assistance was mostly listening to the problems of the small processor. Dr Newel is a competent food technologist.</p> |
| <p>North Clarendon Producing Company Morgan's Pass</p> | <p>This is a factory set in a very isolated location processing green banana, green papaya and the skin from the giant citron into candied peel for baking and confectionery. Ackee is also canned. Passion fruit juice is extracted and canned on small scale. Technical assistance was in the beginning with the idea of setting a puree plant in Morgan's Pass. This plant is now coming to reality by funding from the Hillside Project. Other technical assistance has to do with strategic management. They have now joined the small processor's association.</p> |

TRAINING COURSES AND SYMPOSIA

| NAME OF COURSE | PERSONS CONDUCTING | DATE OF COURSE |
|---|---|------------------------|
| Elements of Modern Food Processing Technology & Aseptic Processing. | Mr John Wilson, UNIDO/JAMPRO Mr Alwyn Lynch - FTI Ms Kathleen Goldson-JAMPRO Mrs Audia Barnett- A B & Assoc. | September, 1991 |
| The Manufacture of Quality Jams, Jellies, Marmalades, Pie Fillings, Ice Cream and Stabilized Fruits for Yoghurt. | Mr Alwyn Lynch, FTI Ms Kathleen Goldson, JAMPRO Mrs. Velta Nicholson, JBS Mr. John Wilson, UNIDO/JAMPRO | September, 1991 |
| Productivity Improvement Seminar/Workshop | Prof. Robert Hopley - Unv. of Massachusetts | January, 1992 |
| Collaboration between the Public & Private Sector in an effort to increase productivity | Mr. William Ennen - Univ of Massachusetts | January, 1992 |
| Solar Drying & Maintenance | Dr. Oliver Headley UWI - Tri. Dr. Clement Sankat " - " Mr. Alwyn Lynch - FTI | April, 1992 |

A Future Vision of the Jamaican Agro Food Processing

This document attempts to visualise how the Agro Food Processing Industry should be functioning a few unspecified years into the future.

This paper takes the assumption that the agro food processing industry in its total chain from the land to the consumer, will not automatically become a bed of roses without hard effort and that the industry itself takes its own initiative.

It assumes that with the European market opening to the world of those who meet the ever increasing standards, the Jamaican agro food industry having experienced quite a number of difficulties, its directors have come to the decision that the only way to survive, is to have a common production and marketing goal; that competition among the processors will gain nothing; a central policy making body is agreed upon, initiated and elected by the industry itself with specific government appointees by invitation, the decisions of that body are binding upon the members and a very strong lobby influence on the government.

The agro food processing industry then as today is divided into three blocks. 1) the larger trading houses with their processing plants and integrated network of business interests, 2) the smaller processors who largely sub contract to the larger trading houses and 3) the farmers associations which have gone through very hard times but which if rallied to united action will rise like a sleeping giant and do the things that are not being done today by industry or government for the more than 120000 small farmers and their estimated five dependents and the whole infrastructure that surrounds their success or failure. Neither the banking sector which has grown by twenty times in the last ten years nor the trading sector which has for succeeding generations and governments used the available foreign funds for maximising domestic profits, have demonstrated any determined interest that the small farmers should become strong in the way that is visualised below.

The Government of Jamaica has by the point in time of this vision, come to the difficult decision that the smallest farm lot must be of a size that a rural family can live upon and gain a living which will give adequate shelter, adequate food and clothing, good schooling and health care for the children, a TV and nearness to a telephone or two way radio. Not as luxurious as their brothers and sisters who have elected a career in the financial sector in the cities; but adequate. The family has adequate transportation; simple as it may be, so that children in shoes go to school with only reasonable effort; goods come to a fair market; the aged to a community care home and the sick to a hospital. This was not possible to be done on two acres of hillside, unless it was growing ganja.

Small farmers have banded themselves into district associations all over the country for their mutual interest. The farmer now has a fair share in the proceeds from the sale of his crops in the type of currency earnings that will buy him a radio or a TV of a small tractor or fertilizer of medicine.

The farmers in the association and similar associations have joined together to make a Farmer's Cooperative Bank, owned by themselves, for themselves. The profits come back to themselves. They have revolving funds to support the stocking and the planting of crops. The bank has now widened its activities to include the activities of farmers cooperative insurance including health insurance. In order to control the runaway costs on health the bank and insurance has set up clinics at its cooperative which are clean, simple and efficiently managed for the care of suffering human beings.

The farmer is given daily prices for yesterday's sales of fruit and vegetables and prognosis for fruit and vegetables in one month or two month or suitable forecasts.

The farmer has protection from predial larceny which, up until today, has been the cause of more than 20% of his crops, year after year. The protection comes from the police and the military in coordination and cooperation with the farmers association's own watchdog organisation.

Communications systems of radio or telephone or another suitable alternative has been found for two way urgent communication twenty four hours per day with the farmer's association district office. It acts as the focal point for all commercial and social activity.

The farmer is joined in a loose association with the other farmers of the district and as one unit, contract to supply fruit and vegetables to their own facility which selects the best for export fresh and the next best to the Kingston market. The rest goes to the processing facility in which the association has a share holding. The farmer gets a monthly check in Jamaican Dollars and another in hard currency. The latter he lodges in an account so that he can buy a refrigerator from the local "Friendly Store" where one can purchase the things not available in the ordinary stores but where one must use hard currency.

The farmer's association has market outlets in Kingston, nicely run like a modern supermarket, they attract a huge buying public. The public know the produce is fresh and just slightly cheaper than the supermarkets. The profits are going into the services the association makes to the members. All sorts of farm and home goods are available at the most competitive prices. The obvious advantage is that the profits from the sale of fresh and processed produce in the Farmers Association Market outlet store, all return to the land from which the produce came. It is building the industry not bleeding it.

The farmers associations have elected to invest in a small agricultural machinery making enterprise for the manufacture of agricultural implements which are sold through the association store in J\$.

The main virtue of the new associations over the country is "Trust"

The association's collection vehicle comes on time, picks up the goods and weighs them on the spot and the whole is recorded by radio contact on the district association's computer immediately into the registry right when the farmer is along side. The vehicle brought also certain goods needed for a sick animal as well as necessities for the home. Mail also comes this way, the farmers association has long since taken responsibility for the distribution of the mail in the district.

The association has a regular monthly meeting to advise the farmers on planting and market expectations for the next few months or year. New techniques are demonstrated. The association's tractor is made available with a driver to the members at cost plus a minimal margin, for as yet not all the small farmers have their own tractor, carry over from the difficult days in the early 1990's.

The processing plant coordinating manager is regularly present at the meetings and gives an update on what is happening in the factory and in the world to where the goods are being exported. He/she is a person and knows most of the farmers by name and has visited some of their farms, he still cannot get around to all since the numbers are so vast. But numbers are getting smaller since the government decision on the smallest holding.

Some of the older farmers are still living on the properties as subsistence existence but most have been long since vacated the farm and moved to the association's great houses in return for the use of their land. The association combines the small holdings and leases them to young well educated farmers, who, with the facilities of the association manage a fairly good living.

The processing plant is a new enterprise partly owned by the association and partly by the factory owner who had the old factory in the town before it became obsolete.

It happened, very fast. One day the people in Hamburg who had been buying the canned product for many years, came to make an inspection of the premises. The factory machinery and the premises were found to be unacceptable and no more could be ordered. The factory owner was not able or not

willing to invest in the kind of money to build a new and modern factory. But the association seeing the predicament of both the factory owner and the effects upon its members, having the resources of the Farmers Cooperative Bank behind them, made their own investment and invited the former factory owner to participate in shares. His land was taken as assets for the new enterprise. It is only a small factory but the product coming out of there is very special and a first class product on the world market. The product is so consistently good. It is purchased direct by three large ice cream and yoghurt manufacturers. They purchase the whole production. They come once a year for inspections and good will and give their ideas for new product lines they are planning for the next European summer season.

The product is packed aseptically in bags. The bags of 200 kg are in drums or in collapsible pallets containing up to 1½ tons, the latter of which are returned from Europe every two weeks on the returning banana boat. The product needs no refrigeration till it gets to the destination, saving much energy and cost.

There are a small number of the "independent processors" who have survived and profited from the early ninety's by the formation of a small processors association. They also rely upon "trust" and had very solid agreements with some of the farmer's societies and the women's consortia for the supply of fruit and vegetables which are cultivated on the small farms or plucked from the hillside projects.

Other associations are being set up over the country and though they are independent they are being guided by the Food Industry Policy Council elected by the combined associations, and a few of the remaining small processors, the larger trading houses having elected to restrict their activities to taking care of their own interests.

The larger enterprises which in previous years have been primarily trading houses have specialised in certain items which are profitable for export. With this foreign exchange earning they are able to put imported product on the shelves of their supermarkets. They also own banks and have moved into having some well educated young farmer managers contract farm the land owned by the enterprise. It is another way that is working.

There are a few of the old food processing factories left, principally for special products for the domestic market. Domestic now means of course the Caricom countries, but it remains difficult to make business within the Caricom, trust and the need for hard currency are still the reasons.

The Ministry of Health and the Bureau of Standards make regular stops at the factory to see that the whole quality standards system is functioning from the factory floor up to and including the manager. There are short courses for the operators and supervisors in Kingston twice per year, held partly at the Bureau of Standards, partly at the University of the West Indies "Food Technology and Engineering Unit," which is a satellite of the faculties located at St Augustine, and also partly held at the Food Technology Institute a revived and rebuilt FTI which is able to make bench and small kitchen experimentation. When it is necessary to demonstrate or to use a modern continuous processing machine for commercial sample, the leaders from FTI use the machines located in various factories around the island. Which machine for which purpose was originally recommended by the Agro Food Industry Policy Council. The machines are used commercially most of the time but FTI has the right of access to the machines for experimentation and product development a certain minimum/maximum hours per month.

The domestic market has only gradually picked up from the liberalisation and devaluations of the early 1990's but the export market is functioning due to the foresight of the industry fathers in preparing for the difficult days and making it possible to process products to the highest world market criteria. This rebuilding was in all three segments of the industry, 1) the larger processors supported

by the larger financial institutions, 2) the small processors, the only ones which have survived are those which have bound themselves to the "Small Processors Association" and 3) the Association of Small Farmers.

The central committee of the associations has its own quality control laboratory. Gone are the days when the export shipments had to wait six weeks for clearance before shipment.

All factories are built with an effluent treatment unit so that the waste from the factory is processed in such a way that the water is sweet enough for fish to live in the stream into which the waste water is fed.

The University of West Indies at Mona campus and the affiliated institutions responsible for agriculture, horticulture and food technology have worked together in close cooperation with each other and with the association at farmers level to develop systems of agriculture and horticulture to avoid the need for the use of pesticides and weedicides. For farm animals the use of extracts from the tropical trees and plants have replaced the use of chemicals for the control of parasites.

For this reason the Bureau of Standards is able to affix their special mark on each container of the product from the factory or each individual fruit so that the end user in the importing country knows that the product is "green" or "biodynamic" This is worth much to the enterprise for there exists a 20% premium for a "green" product.

The association uses the "Banana Boat" regular sailings every ten days. The produce is in Europe in eleven days. This means payment within two months of processing. The empty containers are returned on the same transport system.

Marketing in Europe is handled by a consortium of the Jamaican Small Farmers Associations and the existing Jamaica Banana Growers Association. The trading houses still handle their own exports and when they have a special order, the association processes for them. But payment is 40% in hard currency.

The North American market has not been so easy since the inclusion of Mexico into the N. American common trading area. FDA have become increasingly difficult despite repeated missions by USDA officials to assist Jamaican processors. Specialised items are being imported by american importers, who handle the whole import clearance. Some of these importers are of Jamaican origins. Some are the North American offices of the Jamaican trading houses.

On the domestic scene the dairy industry has installed one hundred small dairy plants in the hilly inaccessible areas for making various types of cheese. Some of the cheese is of goat milk origin and can be exported to Europe at a handsome profit. Domestic cheese production has already reduced imports of cheese by 63% since the 1990 level. Despite the increase in dairy production it will take fourteen more years to completely make Jamaica independent of dairy imports.

There are several very special yoghurt and cottage cheese companies which are making ever so delicious products the tourists practically come just to have daily serving. The Jamaican tropical fruits in the yoghurt with the art of yoghurt making, make the product so special. One line has a fortification with genuine pot still rum. Tourists try to smuggle it back into USA but usually the customs officer puts a stop to it.

Milk is being distributed only once per two weeks in aseptic packages not needing refrigeration. This has reduced costs in the transport and distribution from near 30% to 9% of all costs. The paper laminate brick containers aseptically packed containing a popular range of tropical juices and drinking

yoghurts (30% pure juice) for export are much more sophisticated than those which milk and juice products are domestically distributed in. The domestic distribution is for a small portion of the market in paper/aluminum laminate for the top 10% of the market which pay in hard currency. Soft plastic pouches serve the next level of the market, the product can last 21 days without refrigeration and the plastic laminate is extruded in Jamaica.

In the depressed areas and in schools the milk comes in 20, 50 100, or 200 ltr plastic b \bar{e} s which need no refrigeration or for those in the corporate area in an insulated tank. It is dispensed in bulk from the dairy "Bulk Outlet," direct into the customer's own container. The system was inspected in Delhi India where the same system has been in used by the National Milk Board since the 1970's.

Milk substitute products based on soybean extraction, already well known and accepted overseas, has been most difficult to gain acceptance in Jamaica. Similar products marketed by international companies under brand names and without mention of the product origins are with heavy advertising gaining ground on the beverage market. By the year 2000 it is expected that this soybased product will enjoy greater sales than the milk based beverage products.

The farmers associations have encouraged the use of silage from sugar cane made on the farms, since sugar cane gives a fine silage and in producing sugar cane the land gives more calorific value per hectare than with any other crop. Soybeans, domestically grown, are supplying the bulk of the stock protein requirements. Marginal land from sugar cane is being recovered from salination with new methods and growing sorghum grain.

The salination and nitrate concentrations of the ground water have continued to increase making special control of chemicals and septic tank discharge to seepage a necessity, as well as special new forms of agriculture to combat the losses of land cultivation.

The Hillside Projects which sponsored the hillside plantings with fruit trees, herbs and spices are now in production. Hundreds of women's village associations are responsible for the plucking and delivery to the processing factories. They make a good living since there is no cultivation costs. The product is classified as "green" so they receive a bonus. Part of their payment is in hard currency. Some of the women's associations have invested in locally made solar drying units. The dried fruit are sent to Kingston for sorting, grading and packing. The fruit trees in the hills are carefully watched by rangers from their own villages to prevent predial larceny. The whole village is involved in the Neighborhood Watch.

The association has sponsored the investment in cultivating passion fruit after the success of the first trials. Small farmers are also harvesting from a couple of hundred vines. They have the family members manually pollinate every day to ensure the yields are very satisfactory. There is no more need to import passion juice and the UHT/aseptic filling plants are exporting a premium Jamaican passion fruit juice product which draws a double premium for being Jamaican and also that it is "green"

Almost all the export products in consumer containers are branded in the highly prized Jamaican brand, which is also very cleverly advertised over the European satellite TV media. Each container also carries the JBS standards logo, as well as the "green" logo if applicable, and the Jamaican producer's own identification. Most of the advertising is piggy backing on the Jamaican Tourist board advertising. The tourists are being introduced to the selection of Jamaican food specialty tastes at the tourists hotels and tourist parks where the genuine historic and cultural heritages are lived and told. Doves of tourists come to the food processing factories which give guided tours and invite them to sample the wares. They buy some samples from every visit to take back with them. (Hard currency too!)

The Farmers Association arranges tours to other parts of Jamaica for the farmers to see how the other associations have it. There is a spirit of rivalry in the hospitality given and in the achievements which can be demonstrated. Many of the participants have never been outside their own parish before.

This year the association arranged three tours overseas. One to Ecuador to look at the tropical fruit industry in that country, one to Dominican Republic and one to Israel. Next year it is intended to visit Italy and Spain as well as planning another to the Far East.

As previously mentioned the associations have also purchased seven great houses over the country. They have been renovated and modified to be used as serviced pension apartments for groups of retired members. There are kitchen facilities to take care of themselves as long as they can and land to make gardening. There is also a registered nurse on 24 hour duty if needed. They have the TV they never had the chance to buy for themselves in the days before the farmers associations were formed. There are also walks and games arranged to ensure all are kept active. Art classes have discovered some elderly members with remarkable artistic gifts. There is a kraft workshop where there is found wood carving and lace and embroidery. All these are sold to the tourist hotels in each of which the association has a shop, which is a window for all its products and a shop window for all its members. The sales are all hard currency.

Our small farmers have never had it quite like this before.

**PROPOSED
AGRO FOOD INDUSTRY COUNCIL
TERMS OF REFERENCE
DRAFT 8 Sept 1991**

It is proposed the council have the following representation:-

1. *A President or Chairperson elected by but not necessarily from among the council members. (Management oriented)*
2. *A councilor representing the Ministry of Planning.*
3. *A councilor representing the Ministry of Agriculture and RADA,*
- 4&5. *Two councilors representing the technical and educational and research institutions in Jamaica.*
- 6-8. *Three councilors representing the agricultural sector of production, viz.*
 - One elected by the small farmers PMO's*
 - One elected from the farmers organizations, JAS*
 - One elected by the larger estates ?*
9. *A councilor elected from among the banking community which is mostly involved in the area of credit for agricultural development.*
- 10-11
 - Two councilors representing the manufacturing and exporting community of the food processors.*
 - One elected from among the processors themselves*
 - One elected from among the manufacturers and exporters organizations.*
- 12-13
 - Two councilors appointed from JAMPRO, The Jamaican Economic Development organization.*
 - One senior administrator*

One technical administrator

The committee will assume the responsibility for the general policy making decisions concerning the agricultural and agro food processing industry.

- 1 It will report to and will represent the industry to Government. It will advise the government on the needs of the industry and will at the same time seek to clarify the policies of Government to the industry.
- 2 It will not have every day management of the industry down to the existing administrative levels but will coordinate the activities of the sub-sector.
3. It will create a form of representation whereby the members of the committee are responsible for and represent to the committee the matters concerning specific sections of the sub-sector so that the whole of the sub-sector has representation.
- 3 It will identify and decide the right course of development to follow within the industry and seek to concentrate all the resources of the industry and government towards that end.
4. It will identify those administrative and legislative areas which are a hindrance to progress towards the goals set (in point 3) and use the good offices of the committee and it's chairperson to remove those hindrances.
5. It will identify those impediments to progress which lie in the industry itself and call the problem sectors to meet with the committee to rapidly find a solution.
6. It will foster a planned information dissemination system to transfer information from export market, to processor, to agricultural organization to farmer for the planned production of exportable and marketable commodities at a competitive price.

It will inform the processors in a continuing form the status of the crops in production and planned so that the processors can be prepared.

It will coordinate the efforts of all the data information bases in the industry, existing and planned, to remove the existing and any future hindrances to function.
7. It will foster the setting up of farmers collective marketing systems and their responsibility to contract on behalf of their members for the short and long term marketing of their produce to :-

- 7.1 Fresh produce export at maximum price.
- 7.2 Fresh produce domestic sale at next best return
- 7.3 Fresh produce to processors under contractual obligations.

8. It will seek to deter all growing of ganga and other drugs and to find rewarding crops for moving all existing growers to legitimate forms of agriculture.

9. It will take particular care with the matter of drug smuggling invading the existing food processing industry and seek to break those administrative practices which provide loop holes.

- 10 It will address the problem of the size of small holder lots in relation to the maximum possible returns from legitimate agriculture that those returns should provide a reasonable family living equal in comparison to that living a small farmer would have if he/she had elected to find career in the cities.

11. The committee will set up a network of communication so that even when the committee is not in session the industry has representation through it's councilor network.

12. The committee will meet monthly or at such intervals as the committee decides is necessary from time to time.

- 13 The committee will call an annual meeting at which members of the industry may request invitation and at which they have the right to petition by prior notice.

- 14 The committee will choose for itself the form of election and representation whereby the varicus segments of the industry all have their own form representatives at committee level. Please see attached Scheme of the Industry. (Page 4.)

The Committee may be deemed to have at this time responsibility over those areas of the agro & agro-food processing industry where there exists no executive board of management. Thus it is not intended to take responsibility for coffee or sugar. However other boards may elect or it may be cosidered by the ministers of government in the best interests of the industry to join the responsibility of two boards together. e.g. logically cocoa and maybe pimento should follow coffee. However the interests of the coconut industry may be better served by coordinating with this proposed board even while retaining The Coconut Industry Board's current management function.

Scheme of the industry as it affects the proposed committee:-

Minister of Planning
Minister of Industry
Minister of Agriculture

SCIENCE AND TECHNOLOGY COMMITTEE

AGRO, AGRO-FOOD INDUSTRY POLICY COMMITTEE

DIRECTORATES

| | | | | | | |
|---|--|--|---|---|---|--|
| Farmer's Marketing Co-Operative's | Transport & Energy | Agro Industry | Standards Health Environment Safety Drugs | Overseas Trade | Research Development Education TechBase Engineering | Security Statist Base |
| TEAM | | | | | | |
| JIS SEDA Min Ag JANGRO ADC/AMC Estates Prog/Peop Other | UKI Engin. Min M & E JEGA JAS JANGRO | Min Indus Min Plan'g JANGRO Min Agr JAS JCGA ADC Bostd. | Min Plan'g S. & Sd. M & E JANGRO Consumer P.S.S. JangZaf Schools | Min Indus Min Finan JANGRO B & Sd M & E JEA JMA JEGA JCGA | Min Plan'g JANGRO SIC/STI UKI Min Agr | Min Finan & Plan'g STATIX JANGRO NGB JADB Other bank |