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ASSISTANCE IN DEVELOPING THE PROCESSED
FOOD PROGRAMME AT JAMPRO

DP/JAM/88/809/11-58

JAMAICA

Technical report: Assistance to selected food
processing firms with a view to introduce
ISO 9000 quality standards*

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 Mr. P. Arnaud,
specialist in quality management

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United Nations Industrial Development Organization
Vienna

* This document has not been edited.

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INTRODUCTION

The consultant, specialist in quality management, has worked closely with the Processed Food Unit of JAMPRO and provided information and advisory services to the Jamaican food processing industry from 22 March to 8 April 1993.

The Job description is reproduced in Annex I.

This activity is part of the UNIDO programme of assistance to the Agri-Food Processing Unit at JAMPRO. The result of this activity can be summarized in three main subjects.

1) Plant visits

Four plants were visited with Ms. K. Goldson, Food processing specialist at the Agro Industry Division of JAMPRO. Each visit resulted in a report especially oriented towards an organization of good manufacturing practices and quality assurance.

Numerous discussions took place with the local management regarding the existing position of ISO 9000 certification in the European food business.

A list of the plants visited and a summary of the reports is given in Annex II.

2) Seminars

Two seminars in "Quality Assurance Management and ISO 9000 Certification" were conducted.

The first seminar of two and a half days was held for Production Managers and Quality Managers. The major points which lead a company to a good quality assurance system have been discussed in detail, which enabled the managers to understand the existing situation of ISO 9000 in the food business and its importance in the Jamaican food industry.

The second seminar was addressed to the top managers of Jamaica's food industries. After a short statement on quality assurance organization an interesting round table discussion took place on the possibilities for the Jamaican products to be certified ISO 9000 and the positive impact with regard to their access to the European market.

3) Guidance and recommendations

In order to improve the quality of Jamaica's products and to develop the export opportunities for these products, three steps should be taken :

1. Develop and promote the use of good manufacturing practices in Jamaica's food processing plants.
2. Adjust them for the use of the Jamaican logo at the Jamaican Bureau of Standards.
3. Meet the ISO 9000 requirements and get the certification. (There is no reason to rush to that step first, but there is also no reason to ignore this opportunity).

Three points of concern were considered by the consultant.

- * The consistency in quality for Jamaica's agricultural raw materials.
- * The monopolistic situation of the local packaging industry.
- * The cost of applying for ISO 9000 certification which would require some assistance from non-governmental or international organizations.

4) Promotional activities

The JAMPRO External Relations Department has organized media support for our activities :

- ⇒ Through the local press, where an article has been published about the seminars.
- ⇒ Through a "breakfast talk" in a morning radio station, where P. Alexander from Grace and P. Arnaud answered questions regarding ISO 9000 and TQM. (Total Quality Management).

I. THE PLANTS VISITS

These visits were organized by JAMPRO and gave us the opportunity to visit industries with different types of activities, mainly oriented to the production of typical Jamaican products like seasonings or exotic fruit juice, purées or marmelades for the local market or for export. Also the size was different: varying from a typical cottage activity to a real industrial plant.

Good manufacturing practices are known even if they are not 100% applied everywhere.

⇒ The common issue with these industries is the non consistency of the local agricultural raw materials due to the lack of organization on the farmers'side. This often obliges a food processor to buy from other tropical countries materials which could be made locally (fruit purée, tomato paste...) This is also a sign that there is a missing link between the farmers and the food processors for the first processing of agricultural products.

⇒ Another point which could be considered as an issue is to force the local food industries by law to release their products only after sampling, analysis and approval by the Bureau of Standards.

This practice is in fact a good guarantee, showing that the Jamaican products put on the market conform to the approved specifications.

However two questions remain :

⇒ The sampling made under the manufacturer's responsibility.

⇒ The time needed for analysing and obtaining results is too long which leads to a reduction of the shelf life of the products and loss of money due to longer storage time. This situation could be improved if the Bureau of Standards was implementing a self-control system vis à vis the local industry. They will then be responsible for the approval of the companies in terms of quality management. The Bureau of Standards has realized this problem but still emphasis should be put on accelerating the creation of the self-inspection system.

⇒ The situation regarding packaging is an other point of concern.

Firstly, since the monopolistic situation of some suppliers prevents natural competition, and influences price and quality. But it is also important to understand that the needs of the food industry in terms of packaging are limited, which implies less diversification in the packaging production.

Secondly, due to this situation, the food processor is not able to influence the specification of the packaging materials. For instance, based on his own experience, the consultant thinks that the thickness of the metal used for metallic cans could be reduced (some influence on the price); but this means the possibility to produce such a package in the can supplier's facility and to perform a series of experiments on the user's side before implementation. This probably applies to cartons, plastics and glass jars.

⇒ Almost all the industries visited are seeking ISO 9000 Certification. They know what has to be done and are partly well advanced in their preparation but none of them has a real idea of the cost of the Certification.

⇒ At most of the places visited the consultant handed over to the responsible staff a copy of the FAO document entitled : "Good Manufacturing Practices in the Food Industry". These guidelines were produced as a practical application of the Codex Alimentarius, EEC Directive on hygiene and different food guidelines and application to the food industries more generally.

II. SEMINARS

Two seminars have been conducted.

A) Seminar for managers

A two an a half day seminar was conducted : "Implementing ISO 9000 in the food industry". This seminar was addressed to quality control and quality assurance managers but there were also representatives of purchase and production departments among the participants.

A list of the topics presented at this seminar is summarized in Annex III.

14 participants were from quality departments
2 " " from production
1 " " from purchase

Mrs. J.Y. CLARKE, Deputy Group Director for Quality Management at the Bureau of Standards took the opportunity to explain and promote the use of the Jamaican logo and the position of the Bureau of Standards regarding its role in the ISO 9000 certification.

The overall evaluation of the seminar by the participants gives :

Acceptable	7,5%
Good	38,5%
Very good	54,0%

B) Seminar for top managers

A half day presentation was made to top managers on "TQM and the Implementation of ISO 9000 in the food industry" followed by a round table discussion.

The programme of this Top Management seminar is shown in Annex IV.

15 Companies were represented at that seminar. Their overall opinion on the seminar was satisfactory.

III. GUIDANCE AND RECOMMANDATIONS

Following these three weeks of contacts with the Jamaican food industry it seems that a way to improve the existing situation regarding good quality of Jamaican products and competitiveness on international markets is :

- 1) To work on the availability and consistency in quality and quantity of Jamaica's agricultural products. (Raw material)
- 2) To set up associations or cooperatives to improve the logistics and maybe the pre-processing of fruits and vegetables prior their delivery to the food processing plants.
- 3) To promote through the Bureau of Standards good manufacturing practices in food industries and develop the self certification system and the use of the Jamaican and/or Caribbean logo.
- 4) To create a "club" of food processing industries or an association of Jamaica's quality assurance managers in order to stimulate and gather the efforts and search of the different companies for ISO certification.

The cost of consulting or training will then be minimized.

- 5) Governemental assistance should be given to the companies which try to apply the ISO standards.
- 6) The quality should further be stimulated through a Jamaican consumer organization.
- 7) The presence of Jamaica at the major food fairs all over the world should be maintained and at the same time the Jamaican Logo should be promoted (Quality label).
- 8) Promotional activities for Jamaican food should be undertaken, particularly in the hotels of the major touristic areas.
- 9) The working relations between JAMPRO and the BUREAU OF STANDARDS should be improved, with a better coordination of the quality matters.

ANNEX I

September 1992

Request from the Government of Jamaica

JOB DESCRIPTION

DP|JAM|88|009|11-58|J 13103

title Specialist in quality management

duration 21 days

start date As soon as possible

location Kingston, Jamaica

purpose of project To establish an Agri-Food Processing Unit at JAMPRO capable of providing information and advisory services to the Food Processing Industry and simultaneously selected services.

The consultant will be assigned to the Processed Food Unit at JAMPRO, the implementing agency of the Government of Jamaica. He will work closely with the JAMPRO Processed Food Unit and the Cooperative Associations or the private manufacturing firms of the agro industry subsector, which are identified in this project for intervention. The main responsibilities of the consultant will be as follows:

- To conduct interventions in selected food processing firms towards improvement of their organization and improvement of product quality and productivity. This will include:
 - a) Seminars in quality management for executives, managers and quality managers;
 - b) Assistance and guidance on a one-to-one basis in developing specific plant programmes and further training needs. This will include documentation in a form to satisfy ISO9000 quality standards;
 - c) Conducting of special training in in-plant auditing to facilitate monitoring;
 - d) Guidance in the establishment of appropriate quality policy objectives, systems and organization in each company.

Applications and communications regarding this Job Description should be sent to:
Project Personnel Recruitment Section, Industrial Operations Division
UNIDO, VIENNA INTERNATIONAL CENTRE, P.O. Box 300, Vienna, Austria

- The consultant will also be expected to prepare a technical report setting out his findings and recommendations to the Government for further action which might be taken.

Qualifications

At least 10 years of experience in quality management. Experience in training and working with companies in quality planning. Experience in working with developing countries.

Language

English

Background information

The agro-processing industry constitutes the main manufacturing sub-sector in Jamaica, contributing approximately 34% of the total manufacturing production value and employing approximately 21,500 persons or, over 20% of the workforce in the manufacturing industry. The food processing component of the sub-sector accounts for approximately 15% of the total manufacturing production. In the latest sub-sector survey, conducted in 1983, 72 agro-processing firms were registered. Approximately 50 of these are food processing plants. However, the bulk of the firms are small and medium-scale enterprises with annual sales of less than J\$ 6.0 million. The predominant technology is labour-intensive.

The sub-sector suffers from high unit production cost, low capacity utilization, outdated and inappropriate equipment and production lay-out, high factory down-time, poor product quality, inadequate packaging, poor marketing and weak management. The supply of local raw material is very unstable and over 50% of the raw material is imported with only a very limited amount of locally grown tropical fruits being currently processed.

Agro-industry is one of seven priority sub-sectors for attention in the Government's modernization of the industry programme, a major element of the Government's overall structural adjustment efforts. The Government is aiming at strengthening the competitiveness of the sub-sector to become a main exporting and import displacing industry. Through increased export earnings, particularly from hard currency markets, and foreign exchange savings, the sub-sector is foreseen to contribute to the improvement of the balance of payment situation. By developing new investment opportunities and productive activities, the Government is aiming at attracting new technologies, skills and markets to Jamaica which, in turn, will strengthen the dynamics of the sub-sector and create employment.

The Food Technology Institute, under the direction of the Scientific Research Council has the responsibility to conduct R & D activities in the field of product development and to provide related services.

The Jamaica Bureau of Standards is charged with the responsibility to provide services in the field of quality control, i.e. documentation, consultancy, training and testing and certification of samples. The newly established JAMPRO (Jamaica Promotions Ltd.) combines the services previously provided by the now merged

Jamaica National Export Corporation (JNEC), Jamaica National Investment Promotion Ltd. (JNIP) and Jamaica Industrial Development Corporation (JIDC). The services are provided in the fields of export promotion, investment promotion and technical assistance. These services are provided to the industry in general.

JANPRO, as the Government agency to promote agricultural development, has been chosen by the Government to also become the focal point to encourage and assist with market-led business development and enhance the technical and managerial development of the agro-processing industry.

ANNEX II

PLANT VISITS

A. COTTAGE INDUSTRIES LIMITED. WALKER'S WOOD

This company is currently manufacturing condiment/jerky seasoning, confectionery, jams and jellies. The plant is well located on the top of a hill and the surroundings are favourable for hygiene keeping.

During the plant visit organized by the production manager particular attention was paid to good manufacturing practices.

Afterwards a meeting was organized with the management team, where the situation of the plant and the efforts made in order to be certified ISO 9002 were discussed.

The need for technical assistance to build a new plant has been expressed by the management.

B. SCOTT'S PRESERVES. SPANISH TOWN

This plant is located in an industrial area near Spanish Town. The various activities cover jam, jelly, fruit syrup, sauce production, guava preparation.

A plant tour was organized with particular interest in the good manufacturing practices.

This plant has been certified by the Jamaica Bureau of Standards. This means that they are processing under self-control, and can implement the ISO 9000 requirements. Some points regarding these requirements were discussed.

C. GRACE FOOD PROCESSORS CANNING LTD - KINGSTON

This factory is producing tomato ketchup, fruit juices, spices and several types of sauces. It is located in an industrial area and a safe environment.

The purpose of this visit was to make a plant tour and check the conformity with good manufacturing practices.

A short review of the visit and discussions regarding the ISO 9000 requirements took place.

D. GRACE FOOD PROCESSORS MEAT DIVISION - SAVANAH-LA-MAR

This plant, dedicated to meat products, is located in the western part of the island in a well organized area.

Like all Grace production centers also this plant's management intends to apply the ISO 9000 requirements together with the TQM.

A lot has been done in terms of training and motivation of the staff and a review of all the administrative documents requested by ISO 9000 has been made.

A team approach on quality cost is being promoted and several cost saving and quality improvement projects have been identified and are in progress. The project is due to finish before the end of 1993.

ANNEX III

Programme of the seminar APRIL 1-3, 1993
"Implementing ISO 9000 in food industry"

1) QUALITY

- * Historical and economical context
- * Definition
- * The role of marketing - consumer needs

2) MARKETING BRIEF

- * Product brief
- * The role of R/D in design and development
- * Prototype and final approval

3) QUALITY ASSURANCE

- * Definition - The quality loop
- * Job description - The Q/A manager
- * Job description - The production manager
- * Job description - The purchase manager

4) QUALITY ASSURANCE SYSTEM

- * The Deming PDCA
- * The Juran quality planning
- * Raw materials packaging specifications
- * Procedures format - How to set a procedure
- * Finished product specifications
- * Consumer complaints

5) HACCP

- * Definition
- * The implementation of HACCP

6) G.M.P.

- * Definition
- * Descriptive of a GMP Guideline for the food industry

7) ISO 9000

- * Definition - The three models
- * The route to the certification
- * Descriptive of a questionnaire for ISO 9002
- * The role of the Bureau of Standards of Jamaica by Mrs. J. Y. CLARKE, Deputy Group Director - Quality Assurance.

8) AUDIT

- * Definition
- * The audit procedure

9) TOTAL COSTS OF QUALITY

- * Definition
- * Costs of failure
- * Costs of prevention
- * Costs of appraisal

10) TQM

- * Definition
- * Customer - Supplier relationship
- * Self-control
- * "Do it right the first time"
- * Communication

During this seminar two video tapes were shown : - "Juran on quality planning".
- "Crosby on the four attributes".

ANNEX IV

Programme of the seminar APRIL 6, 1993
"TQM and the implementation of ISO 9000 in the food industry"

1) Principles of TQM and ISO certification

By P. Arnaud, UNIDO consultant.

Starting with the flow chart of a typical food plant the consultant has presented the component of the ghost plant that any performing plant has apart from operations.

The total cost of quality was explained as a sum consisting of :

cost of failure
cost of prevention
cost of appraisal

The optimal situation is when the total cost of quality is made up of 10% cost of failure + 50% cost of prevention + 40% cost of appraisal.

The following definitions were explained : HACCP, AUDIT, GMP, QUALITY, QUALITY ASSURANCE. Special emphasis was put on the fact that ISO 9000 auditors request that all these points are well understood by the company which applies ISO 9000.

The ISO 9000 norm itself has been explained as descriptive of an effective and powerful quality assurance system. Also the route to be certified was explained during this presentation.

Then TQM was explained as a philosophy, a system based mainly on the four following points :

- "Customer - supplier" relationship
- Self-control attitude
- "Do it right the first time"
- Communication

2) Bureau of Standards presentation

By Mrs. J. CLARKE, Group Director

A presentation of the activities of this organization was made, mainly regarding the requirements to apply the Jamaican logos.

Mrs. Clarke also explained the route to follow in order to get these certificates.

The Bureau of Standards which has already one approved certifying auditor able to perform the official ISO 9000 audit is progressing on the way to have another auditor approved and internationally recognized among the other equivalent organizations.

To apply to the Bureau of Standard in order to get the Jamaican logo is a preliminary step before going to the ISO certificate.

3) Grace Kennedy experience

By Mr. P. Alexander, Quality Assurance Director.

It has been explained how that company has started the implementation of ISO 9000 and TQM eighteen months ago.

They are following the route of certification on most of their plants. The following points have been explained as being critical : Procedures, documentation, prevention training, "customer-supplier" concept, "do it right the first time"...

Mr. Alexander insisted on the importance of training at all levels in the company. Also the move from a "manufacture-oriented company" to a "customer-oriented company" has been explained as the key to success regarding quality and the right route to ISO 9000 certification.

During this seminar one Video tape was shown : "Crosby on the four attributes".

ANNEX V

LIST OF PEOPLE MET

UNIDO	Mr B. CROWSTON	UCD, Kingston
	Mr K. KARTANO	JPO
	Mr J.E. LOWER	JPO
JAMPRO	Mr W. GOODEN	Vice President, Production and Promotion
	Mr A. PARKE	Group Director, Agriculture and Agro Industry
	Mrs V. VEIRA	Group Director, Productivity Centre
	Mr L.A. PICART	Director, Agro Industry Division
	Miss K. GOLDSON	Processed Food Specialist
BUREAU OF STANDARDS Management	Miss I. THAME	Senior Training Officer
	Mrs B.C. MILLER	Deputy Group Director - Regulatory Services
	Mrs J.Y. CLARK	Deputy Group Director - Quality
	Mrs C.R. BROWNE	Quality Specialist
QUALITY IMPROVEMENT SERVICES LTD	Mrs M.A. O'CONNOR	Managing Director/Consultant
CONTENT AGRICULTURAL PRODUCTS	Mr M.A.A. WILDISH	Manager Director
GRACE KENNEDY Co, LTD	Mr U.P. ALEXANDER	Quality Director
	Mrs Y. BROOKS	Quality Assurance
	Mrs M. CAMPBELL	Quality Assurance
	Mr G. ROSE	Production

**GRACE FOOD
PROCESSORS
CANNING, LTD**

**Mr E. FINDLAY
Mr L. LOWE**

**General Manager
Quality Manager**

**GRACE FOOD
PROCESSORS
MEAT DIVISION**

**Mr A. HO
Mrs Y. GOODEN**

**General Manager
Quality Assurance Manager**

**SCOTT'S
PRESERVES**

**Mr E. WIGGINS
Mrs O.J. BURROWES**

**Factory Manager
Quality Assurance Manager**

**COTTAGE
INDUSTRIES**

**Mr R. EDWARDS
Mr W. MITCHELL
Mrs PERKINS
Miss L. GUY**

**Chairman
Administration
Production
Quality Assurance**

ANNEX VI

COMMENTS BY THE PROJECT BACKSTOPPING OFFICER

Four selected plants were visited and their status assessed in terms of good manufacturing practices and ISO 9000 certification; the management staff was briefed on these issues.

The two seminars conducted by the expert in the above fields have contributed towards the establishment of an appropriate quality policy and organization system in Jamaica's food industries.

The report contains important guidelines and recommendations for the improvement of the existing situation regarding the quality of Jamaica's products and their competitiveness in the international market.

With a view to ISO 9000 requirements Mr. Arnaud's report is an interesting reference for the Jamaican producers of foodstuffs.