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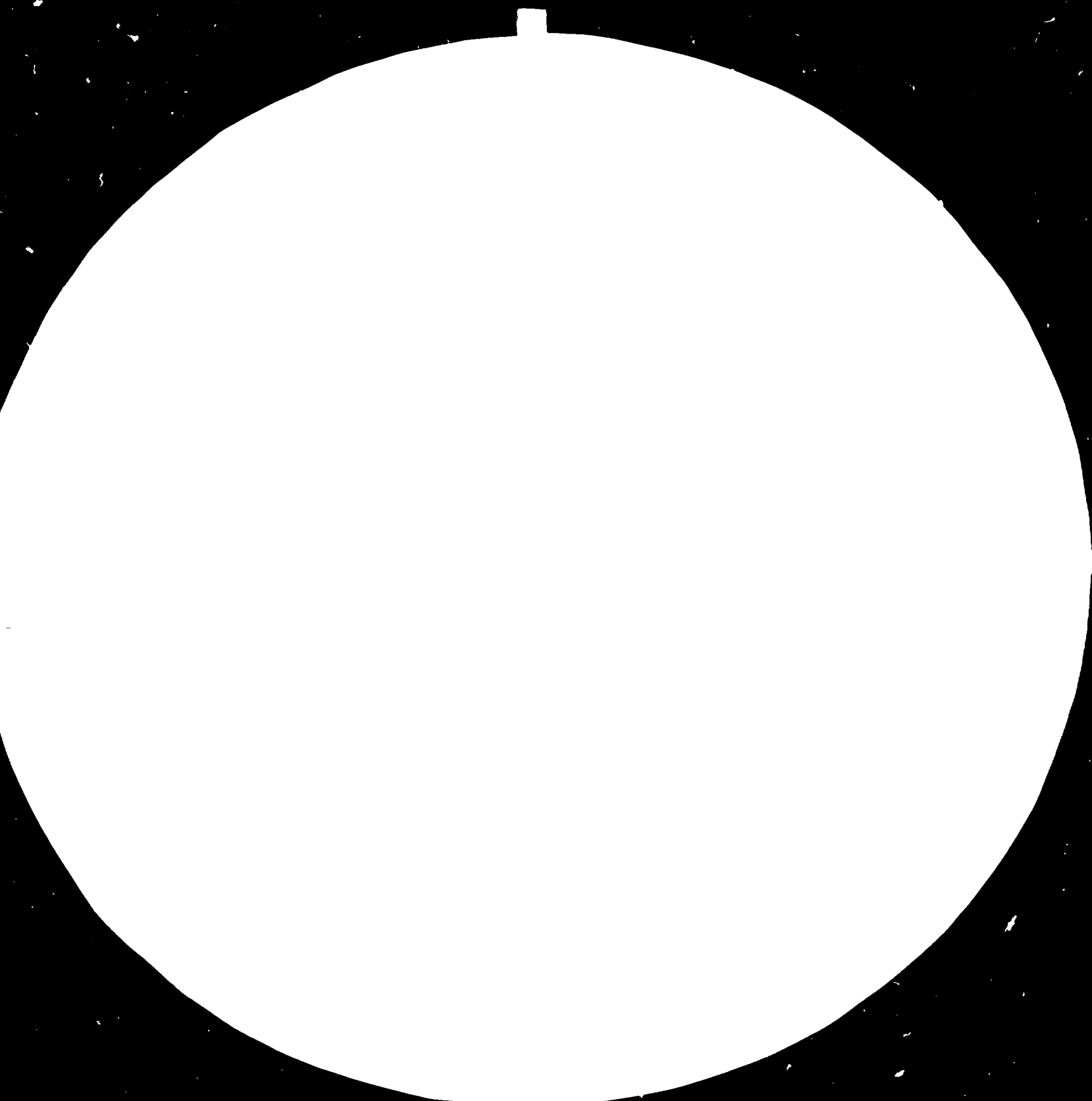

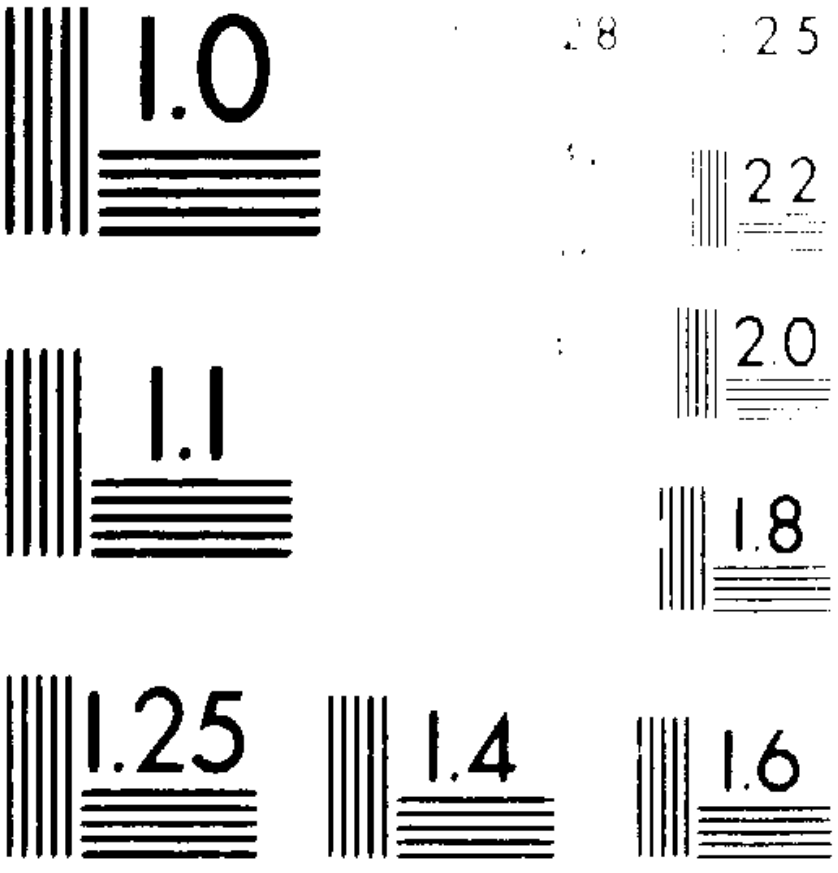
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Problems of industrial management and administration of "Things Jamaican"

DP/JAM/81/002/11-56/ 31.3. L

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 Rudolf Eder
Industrial Advisor

Vienna

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1.1. Summary

1.1.1. Terms of reference:

The consultant was requested to advise on immediate organizational and administrative planning requirements (job description): Owing to crucial problems the emphasis had to be put on the following issues:

- financial plan and related issues,
- problems to be solved and measures to be taken to make T.J. profitable. Accordingly, priorities were set. Because of the limitation of time available, only part of the envisaged broad analysis of the company could be achieved and /or initiated. The analysis may be completed at a later stage by the T.J. staff or outside consultants.

1.1.2. Achievements of the present consultation.

In co-operation with T.J.-staff and the staff of the chartered accountant the following aspects and tasks could be analysed resp. fulfilled:

- market and markting issues,
- raw material
- some aspects of engineering,
- organization and management,
- economic evaluation,
- preparation of the balance sheet as at 31 st of Dec. 1983
- projection of the consolidated cash-flow for the period of 1983/84 to 1993/94,
- preparation of a draft financial plan for 1984/85.

The presentation in the report taks into account that missing aspects will be dealt with at a later stage. A summary of the results of the alaysis will be given below.

1.1.3. Marketing Aspects:

a) The products to be marketed:

At present, there are to be marketed:
39 alabaster products, 149 ceramic products
68 products of embroidery, 31 leather products,
44 pweter products, 110 straw products
47 woven products, 122 wooden products and
8 different dolls.

This makes 618 different items made by T.J., to which outside goods have to be added. A large number of products is of excellent design.

b) Actual and potential markets:
The actual market comprises Kingston, Montego Bay, and some other places in Jamaica. Up to now, exports may be neglected as amounting to less than 1 % of the turnover.
As potential market may be considered the whole Jamaica, the USA, Canada, and the Caribic. Certain products could even sell in Europe.

c) Distribution:
About 90 % of the turnover is made in 6 retail shops, which are attached to T.J.

d) Major marketing problems:
- supply (production) does not meet demand
- feedback from the market does not work,
- quantities per item to be sold are very small,
- little advertisment,
- inappropriate packaging of finished goods.

1.1.4. Raw material and storage

a) Raw material requirement:

A few hundred items of raw material are required in current production.

b) Raw material supply:
Owing to the lack of a production plan ordering of raw materials is rather a matter of luck. Very often small quantities are ordered. This leads to high prices, high cost of transport etc., but not to optimum ordering.

c) Storage:

Storage and handling of raw materials is inadequate. Losses must be considerable. Containers are damaged, the content spoiled or wasted.
There is no proper control. T.J. timber is lying in open air though there is an empty shed; Plaster is spread over the floor of a small store-room, etc.

d) Major problems:

- no supply programme,
- high waste of raw material,
- inefficient ordering and storage,
- lack of control
- inadequate handling,
- inadequate store-rooms and location.

1.1.5. Site and location of T.J. and retail shops.

They do not represent any major problem.

1.1.6. Engineering and technology:

a) The know-how:
The know-how of T.J. covers many areas.
The level of know-how varies from department to department,

but is reasonable in most fields and does not represent the major problem. Unfortunately, T.J. looses again and again qualified labour, trained either in T.J. or abroad.

b) Machinery and equipment:

Production depends to a large extent on obsolete machinery which may break down at any time. Very critical is the situation in the ceramics department, where some kilns endanger the production and present even a danger to personnel. In the same department a few machines could help to substitute imported raw materials by local raw materials and would increase production and quality.

c) Layout:

In all departments a better lay out and production flow could improve productivity and quality. Varnishing of trays is f.i. done on the floor! The ceramics department is overcrowded and its raw material transport is very inefficient.

d) Quantities produced per item.
Economies of scale are completely disregarded for most of the products. The number of products is too large the quantity per item too small.

e) Planning of production:
There is no production plan beyond a few days or even less.

f) Major problems:
- obsolete machinery and lack of investment plan,
- inadequate lay out in several departments,
- too many items to be produced,
- too small quantities produced per item
- lack of production plan
- packaging of finished goods
- improvisation instead of planning,
- bad raw material supply

1.1.7. Management, management procedures and overhead costs

a) Organization structure:

Actually there is a formal functional organization grouping and an informal organization of subgroupes and cliques. The informal organization has develop ed its own statuses and roles which are in conflict with the functional organization. The departmentation by enterprise function is approrpiate as such, but the degree of departmentation is probably too expensive and does not correspond with the needs.

b) Procedures:

Management procedures were (and could be) discussed and ana lysed with respect to a limited number of activities only though their conceptualizing is one major item of the original terms of reference. But there was not enough time available.

c) Overhead costs:

Overhead costs are very high. Economies are possible without endangering operations

General and major problems of management:

d) Failure to plan properly:
Up to now most decisions are ad hoc decisions. Though planning precedes all other managerial functions, there is no investment plan, no production plan, no raw material supply plan, no strategic nor operational planning.

e) Failure to clarify relationships:

The failure to clarify relationships accounts for friction and inefficiencies of the organization.

f) Failure to delegate authority:

It may be observed that most managers are reluctant to push decision making down into the organization. This explains overburdening of all top executives and a continual "meeting crises".

g) Authority without responsibility and vice-versa:

Because of the actual informal organization some persons have required influence and "Authority", but they are not willing to be held responsible for their action. Vice-versa, other persons are made responsible for results without having the authority to accomplish them.

h) Failure of control:

As there are no plans, deviations from plans can not be detected and no action can be taken to correct deviations.

1.1.8. Man power and staffing

a) Manpower -structure:

The number of employees was reduced from 344 in April 1983 to 280 in December 1983.
About 155 persons may be considered as direct labour. The rest is working in administration (25), sales (49), security (23), gardening Devon House (11), housekeeping (20), cottage craft unit (11) and other fields.

b) Salaries and wages:

In December 60 persons received salaries of 58.000 J$, 220 persons received wages of 111.000 J$. About 68.000 J.$ were paid as direct cost.

c) Staffing as a subsystem of the wohle system of managing should include the interrelated processes of managerial appraisal, inventorying, selection, and development.
The main problem in staffing is the lack of enterprise plans. Therefore, considerable improvement in this field may be expected from planning and analyses of the production process.

1.1.9. Planning and implementation according to plans

Planning is unusual and rare in T.J.. This is a serious shortcoming of management leading to failures, misdirected investment and losses.

1.1.10. Financial and economic evaluation of T.J.

a) The balance sheet:

The balance sheet as at Dec. 1983 shows current assets of 1,653.930 J.$, fixed assets (net of depreciation and leaving aside 7.ooo.ooo J.$. worth of Devon House) of 620.000 J.$. and liabilities (without capital revenue Devon House) of 5,o43.801 J.$.. The difference must be considered as losses of 2,769.871 J.$. , which have been accumulated during the past.

b) Capital structure:

The capital structure of T.J. is inadequate for a company, which should be profit oriented. A bank overdraft charging about 2o % interest, is not suitable for long term finance.

c) Cash flow:
A cash flow was established for the commercial operations of T.J., thus excluding expenses for the Cultural Centre Devon House and for pure development activities. It takes into account sales revenues estimated for ten years (up to 93/94), a corresponding investment programme and expected operating costs.

d) Profitability of commercial operations:

It is assumed that T.J. commercial operations could generate an internal rate of return of 25 % under the condition that the proposed recommendations are implemented.

e) Financial implications of conversion of T.J. into a profit oriented company: The G.O.J. would have to give a grant of about 2.900.000 J.$.to write off all losses of the past and provide equity of about 2.200.000 J.$.to improve the capital structure.

f) Subsidies:

The Cultural Centre Devon House will require about 206.000 J.$., the Cottage Craft Industry Development 1,072.916 J.$. and the Craft Products Development Unit 1.101.086 J.$.

1.2. Recommendations:

Taking into account the present situation of T.J. and the objective set by the R.H. Prime Minister, the following measures may be recommended:

1.2.1. Recommendations to T.J.

(1) The number of products (618) should be reduced drastically and the output per item increased to such a point, where economi es of scale can be maximized and demand fully satisfied (exports included).

This measure will
- increase productivity and quality,
- reduce cost of production, marketing, administration, raw material.

The selection of products to be produced in larger quantities should be based both on information from the market and on production possibilities .

(2) Finished goods should be packed. The operation is part of finishing.

This measure will
- reduce losses and breakage,
- simplify storage and dispatching,
- simplify stock taking and
- facilitate marketing.

(3) A raw material supply programme should be established for each production unit and stocks should be established accordingly.

This measure will
- allow continuous production,
- reduce cost of raw material.

(4) Raw material stores should be attached to the concerned departments of production and managed by the store keeper in cooperation with the very department.

This measure will
- improve raw material handling,
- reduce cost.

(5) A production plan should be established for all departments

This measure will
- allow planning in other fields
- increase productivity,
- reduce cost.

(6) An investment programme should be established for each department. It should show the needs by priorities. Investment criteria should be applied for all investment decisions on more than 10.000 J.$. Larger investments should be based on a thorough feasability study.

(7) Necessary but obsolete machinery and equipment should be replaced.
This measure will

- allow continuous production,
- improve quality
- increase productivity,
- reduce cost.

(8) Production should be reorganized according to production plan department by department. This should include: production flow, lay out of work shop, manning table and other aspects.

This measure will increase productivity.

(9) Management procedures should be identified, improved, and written down in a "manual of standard practice".

This measure will

- force managers of all levels to think about their job, their daily activities and increase their capabilities,
- increase efficiency of management,
- simplify writing of job descriptions,
- facilitate and improve staffing,
- improve the organization as a whole,
- reduce overhead cost,
- facilitate planning of organization,
- allow the existing staff or an even reduced number of staff to cope with increased company activities.

(10) In addition to (3), (5), (6), and (8) it is recommended to introduce and develop comprehensive planning.

This measure will

- constitute the foundation of any rational management activity, as planning logically, precedes execution of all other management functions,
- facilitate the accomplishment of enterprise purpose and objectives;

(11) It is recommended to initiate business systems planning in order to identify and evaluate the need of computer support.

This measure will provide the management with the necessary information to take a rational decision.

(12) As the implementation of most of the recommendations will depend on the availability of qualified managers at all levels and as the present staff would have to deal with the implementation, though not everybody is acquainted with management techniques, a manager development programme is proposed. It should be linked to the implementation of the above recommendations and comprise

- on-the-job training and
- internal training, held once or (if necessary) twice a week

from 7 to 9 a.m. during two to three months.

This measure will

- improve the managerial capabilities of the staff,
- increase the chances that the present T.J. staff will be able to cope with new problems, and new challenges.

1.2.2. Recommendations to UNIDO-UNDP

T.J. as an enterprise and UNIDO-UNDP assistance to T.J. have been successful in various respects:

- T.J. has created a great number of new products or/and designs;
- many of the T.J. designs have been copied and imitated by many craftsmen all over the country and have been produced since then by them with relative success;
- T.J. has trained many craftsmen, who now are working on their own;
- T.J. has been purchasing and marketing considerable quantities of goods produced by small outside craftsmen and has thereby created income in the rural and poor areas;
- T.J. has developed production skills in ten different branches and has been producing in these branches at a considerable quality standard;

  etc., etc.

Nevertheless, T.J. has not succeeded so far to become a profitable enterprise. The major cause for this may be seen in the management. Therefore,it is recommended that UNIDO-UNDP assist T.J. in providing more assistance in management:

(1) <u>An expert for management and organization development.</u>
The purpose of such an assistance would be to make T.J. profitable.
The following duties should be assumed by the expert:

(a) to assist the managing director in implementing the major recommendations of this report;
Particular attention should be paid to
- o selection of products and criteria to select the products to be considered in the production programme
- o raw material supply programme
- o reorganization of stores (raw material stores)

- o production plan,
- o investment plan and
- o organization of production.

(b) to work with managerial staff individually for one or more days continuously in order to analyse critical management procedures, to guide managers to write their own and improved management procedures in an appropriate formate, and to discuss on-the-job management problems and approaches;

(c) to hold regular seminars on management principles in order to make sure that every manager has basic knowledge in management (according to the proposed manager development programme), to develop profit oriented attitudes and to improve management performance;

(c) to assist the managing director and the board of directors to work out a system of how to evaluate the performance of managers;
this approach implies that there will not be made any suggestion on hiring and firing, but rather made sure that everybody gets a fair chance to perform.
Selection and promotion of managers at all levels can then be based on more information.

(d) to make sure that the managerial transformation process comprising planning, organizing, staffing, leading and controlling, will be observed and improved in all phases.

A good result could be expected from a 3 months mission.

Organization development as the process to increase organization effectiveness through planned, organizationwide interventions can only be achieved on the spot. It should be supported by and co-ordinated with the above mentioned individual manager development.

An example: There is great evidence that most of the managers, who are actually overloaded with work, could save 30 - 50% of their time through proper time-management. But most of them are unable or unwilling to write down how much time they spend on what activity during one week or even one day. The analyst would have to do it, while working with the concerned manager continuously for some time.

Another example: To improve raw material stores, comprehensive instructions should be given at the highest level and the result should be controlled and evaluated at all concerned levels of management and execution.

(2) Expert in marketing of handicraft: At present, there is no trained local staff and it would seriously affect or even jeopardize operations, if the assistance in this field would be discontinued at the end of the year. By the time, when the organization-development-mission starts, two or more possible counterparts of the marketing manager will have to be identified so that they can participate in the manager development programme.

The present marketing expert, Mrs. Odegard, is performing very well, but she is overloaded with work and functions. She should be put into a position to train counterparts rather, as her job description requires than to have to do so many things herself.

Written management procedures would simplify the task very much. The marketing expert should concentrate: first on internal problems and participate in elaborating the production plans for each department, second on sales strategy and a sales plan, and subsequently stick to the plan. Any diverting activity should be reduced to a minimum.

Promotional activities should be included in the sales plan and be oriented towards clearly specified targets.

The marketing expert will have to stay until a local manager can take over.

(3) A ceramics expert

The ceramics department has expanded very fast and reached a quite sophisticated level. The performance is good but could be improved. Mr. Casebeer, the actual expert, is doing an excellent job, but there is no qualified counterpart to take over. The departure of the expert without qualified replacement would certainly jeoparidze operations and endanger the employment of more than 30 persons.

The ceramics expert is expected

- o to advise on all technological issues concerning the production process, claybody preparation, casting, throwing, glazing, colouring and kiln firing,
- o to prepare in co-operation with the management and organization development expert an investment study on an expansion programme and a new lay-out of the ceramics department,
- o to prepare and monitor in co-operation with other departments a production plan for ceramics,
- o to advise on staffing.

(4) There are other areas in which technical assistance would be required in addition to the ceramics department:

a) The woods department disposes of highly skilled labour, but is not organized (no proper production flow, no production plan, finishing on the floor etc.). Technical assistance in organizing production would have a great impact on productivity of the department and profitability of T.J., as a whole because of a kind of a multiplier effect (it is one of the largest departments in number of employment and turn over.) A one month mission would be enough.

b) It is also certain that T.J. would need more technical assistance in the pewter department.

c) In soft goods (like straw, embroidery and textiles) it would be of great help to have an expert who is capable to transform new designs into prototypes and to show to the workers how to make the new design.

But management and organization development is of top priority in T.J. and within the departments in 1983/84 the company made losses of more than J.$. 1,000.000- A great part of it could have been avoided by means of proper management, but not to the same extent by means of better quality in one department or by means of increasing the number of designs.

It should be stressed again that concentration on the most promising products and areas will contribute considerably to improve the success and finally the profitability of T.J.

2. Introduction

2.1. The UNDP-UNIDO-Project DP/JAM/81/002/II-56/313.2. to advise Things Jamaican on immediate organzational and administrative planning requirements:
The broader purpose of project was described in the job description as follows:
to plan and implement a National Development Programme for creating new enterprises and expanding existing ones for labour intensive handicraft industries, thereby creating employment opportunities for the weaker economic sectors in both rural and urban areas".

Accordingly, the duties of the consultant were specified and comprise:

(1) assessing the organizational structure, activities and manpower requirements;
(2) conceptualizating appropriate management procedures including organizational and communication flows, job descriptions and recruitment standards; and
(3) formulation of the management information and control system.

2.2. THE OBJECT OF ANALYSIS: "THINGS JAMAICAN LTD."

2.2.1. THE OBJECTS OF THE COMPANY.

According to the Memorandum of Association of "Things Jamaican Limited" (T.J.) of the 20th March, 1978, the Company was established:

(a) to reorganise craft development operations in Jamaica;

(b) to take over the assets and liabilities of "Craft Things Jamaican Ltd."

(c) to promote craf: work through research and the production and marketing of craft goods with a Jamaican characteristic, and to do all such other things as are conducive to the attainment of this objective;

(d) to act as agents for vendors or purchasers of Jamaican craft goods;

(e) to provide persons in the business of manufacturing or dealing in Jamaican craft goods with -

(i) assistance in acquiring financing, designs, material and other facilities for manufacturing or dealing;

(ii) information and advice on techniques of production and on the identification of markets;

(iii) any services ancillary to such business;

(f) to train persons in the skills of Jamaican craft goods manufacture and/or to promote such training by others;

(g) to promote by any and all means of publicity an increase in demand for Jamaican craft goods;

(h) to obtain copyright in designs and to assign, grant licences or otherwise deal with such copyright;

(1) to register trademarks and to assign, grant licences for registered use of, or otherwise deal with such trade marks.

(And others)

2.2.2. PRESENT OPERATIONS OF THINGS JAMAICAN

The present operations of T.J. may be associated with the following clearly distinguishable cost centres:

For Manufacturing

(1) Ceramics

(2) Wood

(3) Straw

(4) Weaving

(5) Wood drying kiln services

(6) Embroidery

(7) Doll Making

(8) Alabaster

(9) Leather

(10) Pewter

For Marketing

(11) Buying of finished goods from cottage craft and other private sector manufacturers

(12) Wholesale of raw materials and tools to craft producers

(13) Wholesale of finished goods to retailers

(14) Retail of finished goods

(15) Export of finished goods

For Development

(16) Product (craft product) development

(17) Business development services, training and organi-

zation services

(18) Production and marketing services

For Administration, Finance and other services

(19) General administration

(20) Personnel

(21) Accounting & bookkeeping

(22) Plant management - cost accounting

(23) Purchasing

(24) Raw materials stores

(25) Finished goods stores

(26) Repair and maintenance

(27) Social services, security, cleaning etc.

Relating to space the operations may be attached to the following locations:

Bumper Hall:	(1) - (27)
Devon House:	(14)
Premier Plaza	(14)
Airport Manley	(14)
Airport Sangster	(14)
Sam Sharpe	(12), (13), (14)

Operations in the cost centres (1) - (14) and (19) - (27) are considered as commercially oriented. Product development might equally be considered as commercially oriented, while business development, training, organization, production and marketing services are extended free of charge to the population.

2.3. PURPOSE OF THE PRESENT ANALYSIS AND OBJECTIVES OF A CONTINUOUS FOLLOW-UP:

The general purpose of this study is to suggest and initiate management techniques and principles which would allow -

to improve the performance of the company and

to better reach the objects of the company.

Adapting management techniques in T.J. as a way of life requires management staff throughout the company to accept a fundamental change in the way it manages and controls its activities. Another purpose of this exercise is therefore, to motivate the staff for changes and to involve the staff as much as possible and as early as possible in these changes.

Any organization is continuously faced with the need to react to changes. It is therefore necessary that organizations are dynamic and ever ready to change in order to be better able to operate effectively. This document is intended as a living working document that reflects current thinking and operating. To be useful it must be constantly reviewed and brought up to date. The implementation of the recommendations of this document is a specific management responsibility of the whole management.

A continuous follow-up of this exercise should guarantee that necessary changes take place and go in the right direction.

The present document is a report on an analysis of Things Jamaican, but it is intended as well as a guide for a continuous management planning process; it is a working document, it should be used as it is, be completed, be improved, but should not be ignored and put aside.

2.4. Outline of the report

The wohle report should serve to set the stage for the study of Things Jamaican in a broad sense.
Management problems concern the whole factory or company, therefore the report tries to present a description and analysis of all major aspects selected on this basis of their importance.

Owing to the fact that any analysis has to go through a sequence of stages and owing to the fact that there was not enough time to go through all the stages, some important aspects could not be dealt with while unimportant matters seem to be treated in details!!

Chapter 3 deals with marketing aspects. It is based on Mrs. Odegard's work and reflects the present approach.
Chapter 4 presents an approach to analyse raw material issues. It is limited to ceramics and based on M.Casebeers's work.
Chapter 5 gives some ideas on site and location.
Chapter 6 deals with engineering aspects, but only little could be done.
chapter 7 presents a description and analysis of management, management procedures and overhead costs. In fact, this chapter depends to a large extent on inputs from all previous chapters as far as analysis is concerned.
Chapter 8 presents a short description of manpower.
Chapter 9 deals with an important aspect, which has been neglected so far: coordination of activities and implementation of programmes.
Chapter 10 presents analyses of various aspects of financial and economic evaluation.

2.5. Acknowledgement

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M. Sergio Dello Strologo, SIDFA, Kingston
M. Hugh Nash, Managing Director of T.J.
Mrs. Stephanie Odegard, Marketing Advisor
M. Douglas Casebeer, Ceramics Advisor
Mrs. Angela Staples, Designer
M. Paul Wickman, Mrs. Ohilos and many others.

3. MARKETING AND RELATED ISSUES

3.1. THE PRODUCTS

3.1.1. Description of Product lines, customer information, and other information relating to all product lines produced within Things Jamaican factory not including Cottage Craft activities.

3.1.1.0. Purpose

Product development requires a continuous thinking over of the basic ideas which initiated the development of the various products and product groups, thorough consideration of the feedbacks from the market (prices, supply of competitors, quality standard, changes in taste etc.), from production, raw materials and in particular continuous checking of the economics of the product groups and of single products. It is important that ideas, arguments, pros and cons are written down and accumulated. The original ideas and targets may be changed but they should not be ignored.

3.1.1.1. Alabaster Products

This line is comprised of gift and novelty items. Products produced are mainly ornamental rather than functional. For this reason, there is little scope and market potential for this line due to the current trend worldwide in consumer interest in

craft products for utilitarian purposes as opposed to purely decorative objects. Techrology used and available, does not allow for finishing processes of alabaster products which would provide standards for utilitarian purposes. Alabaster is soft and easily breakable, is damaged with use of soap and water. Finishes observed on alabaster products from Italy which is well known for this product require special care in cleaning as they tend to chip off. Serious technological improvement and product development is required if Things Jamaican Ltd., expects to earn from this production.

The present line of products sells slowly and sporadically, when a new item is introduced, it sells well for a while. Book ends, ashtrays (although quickly ruined by washing), paperweights, and boxes are now selling. There has been no serious export interest so far. Things Jamaican competes with cottage craft producers in this product line for sales.

3.1.1.2. Ceramic Products

Things Jamaican Ltd. Ceramic products fall into the following distinct production lines:

Hand thrown items

Slip cast items

Figurines

Hand decorated items

Hand Thrown Ceramics:

Because of utilitarian value, handi crafted value, ethnic uniqueness of certain items, and possibility of import substi-

tution, there is a local demand for this product line which Things Jamaican Ltd. currently can supply, but only at a rate that is comfortable within existing conditions. A current trend in consumer demand for attractive and unique kitchenware and table top items which is likely to continue on an upward trend for some time makes this line an attractive area for growth. Further there has been some export interest in this line. Recently, Macy's Dept. Store of San Francisco, California has ordered a number of these items in test quantities.

Slip cast Items

Due to current consumer demand for ceramic items in large sizes such as containers, casseroles, bowls, etc., and because of demand for uniqueness, slip cast items do not have the appeal of the hand thrown items.

Currently important to sales are bud vases sold to flower shops; mugs which are sold plain and with logos for promotions to large companies and organizations, ashtrays, teapots, and coffee pots. Spanish jars are also important because of shape and historic uniqueness. If prices could be stabilized at a lower level than currently, a market could be reached within Jamaica in hotel and restaurant trade, which could be extended to same trade within Caricom; however, there is no market research to substantiate this. The most important selling consideration is, these products must be inexpensive and price competitive with imported products of the same quality. We should expect that even though overpriced, they will sell due to foreign exchange problems and import restrictions.

The only possibility for export as yet untested is in

container productions as there are exportable Jamaican products which can be put into a ceramic container and together sold as a unique package. Again, high costs may make this prohibitive.

Currently in production are slip cast containers for Jamaican Gourmet jams, preserves, pickles and sauces. The container is U.S.A. Food & Drug Administration approved for contact with food and an hermetic seal has been developed using cork, hot melt, and heat shrink tape. Package was designed for Things Jamaican by RPGA Designs, N.Y.C., U.S.A. Total packaged product is about to enter test market stage. Containers are also under development for J. Wray and Nephew Rums who have recently requested to order 5,000 rum jars for sample rum, and would be able to order 50,000 per year if the price is right and production consistent. Other containers have been sold to manufacturers for dry products. The department is presently not large enough to cope with these orders. There is a current export request for small flower pots with Jamaican motives It is not yet researched as to whether this would be worthwhile, but given the fact that Jamaican horticultural products are being exported and there is growth potential for this product area, it is worthwhile researching. Again prices may prohibit this.

Figurines

Consumer demand, created by Things Jamaican Ltd., in past years, exists for these products in local gift market and to tourists. Many small producers have left Things Jamaican

and now compete with Things Jamaican for local sales.

Features of Things Jamaican figurines which inhibit sales and growth are poor quality in finishing i.e. sloppy detailing and decorating. Sales of figurines have been decreasing because of price increases - people will pay more for a high quality product. Things Jamaican figurines are saleable at lower prices only. The export buyer who is most interested in Things Jamaican figurines for his market in New Orleans, Louisana, U.S.A., is unable to pay Things Jamaican prices.

Further product development may be needed for this dept. Improvements are needed in number 1, decorating and detailing, number 2, casting. If these two points are successfully met, packaging must be addressed before figurine sales expansion can be projected and realized.

Hand Decorated Ceramics

These products like the hand-thrown products, and especially when hand-decoration is combined with hand-thrown, have a wide market appeal. Uniqueness in decoration, particularly when ethnic design or historically significant design is applied makes them very marketable. Pricing will become important, if export is to be considered, and export is possible if prices are right as competition is great in international market place. If quality is consistent, production as well as supply reliable, and pricing competitive, Williamsburg, Virginia, U.S.A. would be interested in buying the blue-delft line. Macy's of U.S.A. has placed orders for several items

of this line in test quantities. Local market readily accepts these products and there is no competition from imported ware. The competition of other locally produced products in this line is negligible as Things Jamaican products are superior.

3.1.1.3. Embroidery Products

Almost all inputs of raw materials are imported and expensive. There has been a consistently erratic and sometimes non-existent supply of raw materials, therefore, there has never been much product to sell. The Things Jamaican Embroidery Dept. produces three distinctive product lines:

(1) Typical Jamaican embroidery on linens, calico and cotton duck made into "table linens," aprons, tea towels, and hand bags.

(2) A coordinated kitchen line developed in 1982 to fill a market need consisting of place mats, toaster covers, tea towels, aprons, pot holders etc., using motives developed by an employed designer.

(3) Spanish embroidery on expensive even weave linens and cottons under development. Reason for development is to meet request for embroidery to reflect Spanish period of Jamaican history.

Comments on each line

(1) This type of embroidery is typically Jamaican in choice of motives; therefore it sells locally to tourists. It is impossible to accurately analyze sales due to lack of consistent supply. However, competition with other firms and individua producers is vast and given full production capacity, it is doubtful Things Jamaican could compete effectively due to price and quality. Export potential for this is non-existent due to price, quality, and type of design. Things

Jamaican Ltd. workers mainly work at home; the dept. in-house cuts, finishes and packages the work. This product line must be updated in order to address current market trends in design, in colouration, packaging and put-up of finished products. Given price due to labour and raw materials costs, the product may still be prohibitive for export, but could be unique on local market with product development. The market trend is towards self colour, fine work and could be important for embellishing linens, sleepwear, and possibly garments. This may be out of realm for Things Jamaican due to high styling required. Research on best quality and best priced raw material would have to be undertaken.

(2) Coordinated casual kitchen accessories and table top fashion

This line now done in "bandana" is popular and could be expanded into other patterns and prints. This area is growing in importance in Jamaica as casual living is a growing factor and table top accessories are needed. Price is important; therefore costing and market testing must be done and constantly updated. Macy's U.S.A. recently bought a few pieces from this line as it fits into a "bandana" theme being used for a promotion on Jamaica. This line is mainly done as a sewn products line

and need not be done in the Embroidery dept. As there is a growing trend for this type of product, and because there is significant sewing required in other Things Jamaican finishing areas, it would seem that a sewn products and finishing dept. should be established for development and production of these products as well as for finishing of woven products and certain cottage craft products. Proper equipment must be available and planned production and training would hopefully allow for better costing resulting in better pricing. This market could be expanded locally and to tourists. To export, pricing would have to be proven competitive and unique development would be needed, preferably using local fabrics in order to obtain tax concessions in other countries. Packaging improvement would also be required.

(3) Spanish embroidery is still under development. Presently, costing is too high for type of products done. Same considerations are required in this area as in item (1) of embroidery. Product development, high quality, raw materials, fine finishing and improved packaging are all necessary ingredients for a successful market test.

3.1.1.4. Leather Products

The only products now selling are Sally and Derrick sandals. Pouches for pewter products are also sold to protect and contain pewter. A small number of novelty items such as fans and kitchen

pouches sell in small numbers. A tie case has been developed which sells to Jamaica House but has not been market tested. A leather placemat is being developed for Macy's U.S.A. Production flow is sporadic and inconsistent due to raw materials shortages and poor maintenance of equipment. Department needs upgrading. Leather products can sell very well to local market. Things Jamaican should be producing handbags for men and women, brief cases, executive desk accessories, and trims for straw and woven products. Currently straw and leather combinations are being developed.

There is little export potential due to stiff price and quality competition. It is difficult to project leather sales as the department is almost non-functional. (See report of ILO Consultant, Nov. 1982)

3.1.1.5 Pewter Products

Pewter line is comprised mainly of genuine reproductions of antique spoons from Port Royal found during excavations in the 1960's. Other items filling out the line are rum measure, stem candle holder, ashtray, and plates. From time to time, souvenir items have been added, buckles have been made, and a fork and knife were added in order to complete a table setting with the desserts, soups, and teaspoons. Plates are made occassionally in very small numbers and have been sold to special customers. The items are sold individually or in sets in leather pouches. They sell well locally, and occassionally to tourists. The low prices made

the items particularly attractive; however with recent considerably increased prices, no true sales analysis is as yet available.

Generally speaking, the articles are not finished up to a standard to justify high prices or to a quality level which would be required for table use. Export interest has been from retailers of collector items who would order the Port Royal line provided price is competitive. Other buyers have been interested because of low price in the past and have suggested novelties be added to the line.

The items themselves are very roughly finished, and the current trend in pewter sales internationally is towards a more highly finished product. Macy's of U.S.A. has taken samples for testing as they are interested in test marketing a small quantity. U.S. law requires the metal be certified safe for contact with food. Results now showing product as approved.

The report written by pewter expert Derrick Weeks of November, 1983 should be studied before decisions for further product development are taken.

3.1.1.6. Straw Products

Straw products are ladies handbags, tote bags, hats, folders, coin purses, placemats, etc. The materials used are a variety of straws purchased from country producers who plait the straw into strips. The strips are purchased by Things Jamaican in rolls. The strips of straw are then sewn together on a machine or woven on a hand loom which was developed for this purpose in 1982 by a Peace Corps

Volunteer, Steve Collins, then working at Things Jamaican. The idea of weaving the plaits was new and was developed to give the product a new and more natural look. It is slightly more elegant looking than the machine stitched-together strips. Most bags produced by Things Jamaican starting from the 1960's, were heavily embroidered in bright colours with imported plastic raffia. It is thought that these highly decorated bags are typically Jamaican and appealing to a particular segment of lady tourists who visit Jamaica in large numbers. This type of work has little or no export appeal.

In the 1960's Things Jamaican had a large healthy straw dept. producing great quantities of these products and a wide distribution throughout Jamaica and other Caribbean countries. During the following years, production of this type of product, which is easily copied and re-styled, moved to the country, especially to the St. Elizabeth area where the fibres grow. The products are still produced in mass in the country at lower prices than can be made available from a factory, in particular Things Jamaican.

In 1982, Things Jamaican had in stock great quantities of old, dead stock of the products they had been producing for years. This back stock had to be sold at prices well below cost in order to clear. The Things Jamaican straw dept. had become much smaller in size and product development work began in 1982 using new, more natural ideas which were in keeping with market trends internationally.

Several of these items have proven successful in sales; however, there is still pressure to develop more new ideas as there is an absence of good looking straw handbags on the market to appeal to the locals and tourists. In the tourist areas, one will observe masses of heavily embroidered bags which tourists buy to carry things away in. They are poorly made and do not last long.

Presently, a new designer, pattern maker is employed by Things Jamaican and is working in straw as well as in other sewn-products departments to develop designs and improve quality of finishing which has needed improvement desperately. The new designs use straw, straw-raffia combinations and straw-leather combinations. (The market trend is for subdued colours.) These new bags will be distributed through Things Jamaican distribution systems and will most likely be quickly copied by outside producers. This will upgrade over all appearance of Jamaican straw work. Prices will be lower from country producers which will force Things Jamaican into further product development. It is therefore advisable that Things Jamaican straw department continue to be mainly a product development department with a small production system for introducing the products to the market.

Things Jamaican straw dept. also develops and produces brief cases and portfolios which are sold wholesale to organizations and companies for conferences. This again requires product development as each organization requires specifics.

T.J. straw will probably never be exportable as it is not at all unique and is considerably over-priced compared to products from large straw-exporting countries namely the Philippines. Macrame products are also produced in T.J. straw dept. There is a small local market for utilitarian items. There is no export market for macrame products.

3.1.1.7. Weaving

Due to lack of raw materials in the Weaving Dept., no products are being woven now, except straw mats. (J.J. & string) which are being woven in a variety of colours. New colours have never been tested. Colour changes were made within the department without prior consultation.

New products were developed during 1982. During 1982, a Jamaican was trained in N.Y.C. by UNIDO Fellowship in the studio of UNIDO Weaving Expert. Expert then spent 3 months in Jamaica in 3 split missions which resulted in regular supply of yarns as projections were made and realized. Saleable products were developed in export quality with appropriate 100% cotton thread. After this, thread was not ordered regularly, designs and colours changed due to lack of all colours on hand. The new products had sold very well locally. We never had enough to sell for export. Due to irregular thread supply, export possibilities cannot be tested.

Currently we are receiving many export requests for hand woven items as well as requests from the North Coast hotels

catering to an up market clientele. The requests are for fashion accessories such as belts, shawls, bags, etc., and also for casual table top items such as placemats and napkins. This department could be a very active one provided product development is constantly taking place and designs are closely adhered to. Supervisors and workers must never be allowed to change colours from approved designs as the most important aspect of a hand woven item is the design and colour combination.

Woven products could be used in combinations with other T.J. productions as upholstery and furnishing fabrics to be sold to hotels and could also be specifically designed to be used by local garment producers. Fashion accessories and table-top accessories could be developed by a designer/technician and sold through T.J. distribution and exported. Yarn needs to be imported in sufficient quantities. For special export orders, buyers could supply yarn. A weaving designer/technician is needed by the department.

Present finishing is poor; however this could be rectified by introducing the sewn-products finishing area as suggested in 3.1.1.3. Finishing and quality control must be closely supervised as quality from the dept. is inconsistent and cannot be checked by Finished Goods, as articles are pre-wrapped in department.

3.1.1.8. Doll Products

Dolls and related products were designed by UNIDO Expert in 1982 for T.J. Materials for doll production were imported

and production was never organized to a level to make the dept. viable. The first dolls produced for Christmas 1982 sold very well at a retail price of $38.50 for a doll without hat. Approximately 300 dolls were sold at Devon House along with pajama bags and lined doll baskets.

When raw materials ran out, the expert was asked to use local materials which continue to be used. Quality has somewhat deteriorated for this and reasons of lack of supervision of workers. Jamaican dolls will sell locally and abroad provided they are unique and well priced. The dept. needs a supervisor and production planning if it is to continue.

Doll production should also take place in sewn-products area as suggested in 3.1.1.3. and 3.1.1.7.

3.1.1.9. Wood Products

Wood Novelty Items

T.J. wood products such as strap handle trays - still continuing to sell well after 15 years in production - salad bowls, plates, boxes and other accessories all sell very well. There are never enough to supply T.J. outlets. There are wholesale buyers for the products locally and abroad. The quality is generally of the best available in Jamaica and the woods are interesting. This production should be organized to meet market demands in quality, quantity and price.

Recently several sample boxes were done for GIMCO of Minneapolis, Minn., U.S.A. among them a leather lined gun case. They will be test marketed and if test is successful, this could lead to substantial export orders which, given the considerations

of insufficient flow of raw materials and production lacking adequate planning, T.J. will not be able to fulfil. There has also been a request for wooden bracelets (samples submitted and approved) from same GIMCO which could lead to export of ½ -1 million U.S. dollars this year in orders; however of two Jamaican companies approached, T.J. being one, the idea of production of bracelets has not been appealing.

T.J. receives numerous requests for small items such as boxes, decorative accessories both locally and from abroad; however, the dept. is not able to take on these orders.

In 1982, several hundred small boxes (Woodford boxes) were made after being designed by in-house designer. They were to have been decorated and sold. As yet they are still sitting in the storeroom. The line of small boxes could be important to sales as there is an international trend for buying small containers.

There are constant problems and debates regarding finishes for wood products. If regular supply and flow of products from the dept. were possible, these finishes could accurately be tested for market acceptance, and proper decisions made instead of using guess work. The foreign market buyers stress strong preference for matte finishes; however the local market chooses a higher gloss. These are observations and have not been accurately tested and analyzed. The finishing dept. does not always follow instructions and there is a tendency to finish products the way the finishers themselves like to see them.

Furniture - Two Lines

Contemporary lattice design in Spanish elm and mahoe as well as bunk beds, butcher block tables, and chairs. When these products were put on the market in 1982, orders were immediately booked; however due to late deliveries, T.J. has experienced fewer orders recently. Refunds have had to be given on down payments for furniture never delivered. T.J. has been able to deliver furniture orders on time and in good condition on few occasions. Customers tire of this and word-of-mouth complaints have spread rapidly. Further there are many casualties with furniture as it is carelessly handled. Furniture is also stolen frequently. Although this is a popular line, production planning is lacking and there is disincentive to sell when deliveries are always late. Sales are sometimes inhibited due to lack of a hire-purchase plan offered to customers.

Queen Ann Line: This is a high quality, expensive line selling from Devon House and soon to be featured in Jamaica Furniture Guild promotions which is directed toward obtaining export orders for Jamaican furniture from the U.S. market. (Furniture Guild is as yet uncertain of marketing strategy and presently T.J. has not made final decision as to whether to participate.) In general, finishes have to be toned down (lower gloss) and improved if export success is to be achieved. In addition, production will have to flow more smoothly.

There is also a considerable amount of furniture ordered by and charged to T.J. employees. These are generally not designs from current lines of production.

There has always been considerable interest from customers for desks and furniture to be used in businesses, hotels and restaurants. T.J. however, has never been able to produce on time and most customers are discouraged.

3.1.1.10. Kiln Drying Services

Things Jamaican Ltd., has operated the wood drying kiln very successfully for over five years. During this time, drying schedules for local lumber have been established. Lumber has been dried to less than 6% moisture content, and a lumber drying service at a reasonable price has benefited the Jamaican furniture making business. Types of wood dried are mostly pine, cedar, mahoe, spanish elm and mahogany with experimentation with coconut wood.

The lumber is brought to Bumper Hall, counted, measured, and marked as to owner. The lumber is stacked, boxed and paletized, then dried in the kiln for an average of 5½ days at a cost of J$.24 per board foot. The customer is charged J$.35 per board foot.

The present operation employs 1 supervisor, 3 general workers and a rented fork lift with operator. All water is treated chemically before use in the boiler, and standard safety procedures are followed.

The kiln is operating properly and as efficiently as possible considering our working conditions. Due to lack of demand for wood drying operation, and at times the lack of

imported lumber T.I. workswith the following variables:-

1. Moisture content of the lumber being dried during an operation may vary from 80% moisture for green lumber to 30% moisture for imported mahogany to less less than 20% for dry lumber.
2. The size of lumber may vary from 1" - 3" in thickness.
3. The variety of woods per load may vary.

One realizes that the same variety, size, and moisture content for an entire load is the most efficient way to dry lumber according to a set schedule; however, in the present situation, this is rarely possible. The policy in these situations is to dry the lumber at the most demanding schedule to insure our customers that their lumber is thoroughly dried.

On occasions there are electrical outages and water lock-offs that interrupt drying schedule.

3.1.11. The product list

T.J. has designed and developed a large number of products Table 3.0. lists the products which are still in the production programme even if sales figures are very low.

At present the production programme comprises:

39 alabaster products,
149 ceramic products,
68 products of embroidery,
31 leather products,
44 pewter products,
110 straw products,
47 woven products,
122 wooden products and
8 different dolls.

These 618 different items have to be produced and marketed.

ALABASTER - BUMPER HALL

DESCRIPTION

Creamer 4½" x 3½"

Milk Jug

Teapot 7" x 5"

Four Parts Bird

Book-end 6" x 4½" Free Form

Candle Holder Clum Shape

Cup 4½" x 4½"

Vase 9" x 4"

Tea Cup & Saucer

Trinket Box 5" x 3¼ x 2¼

Sugar Bowl 4½" x 4"

Candle Holder - Single Sprang

Candle Holder - Double Sprang

Bud Vase

Egg Cup

Soap Dish

Desk Set

Paper Weight - Pewter Medallion

Pen and Pencil Set

ALABASTER

DESCRIPTION

TRINKET BOX TURTLE 6½" x 4½"

Trinket Box Bird 6½" x 4½"

Ashtray Free Form

Trinket Box - with Cover

Pig

Turtle

Owl

Frog

Square Ashtray

Set 3 Candle Holder

Powder Box

Pumpkin Powder Dish

Free Form Powder Dish

Set 3 Square Block Candle Holder

Large Round Ashtray

Small Round Ashtray

Duck - Empty

Duck With Small Eggs

Duck with Single Eggs

Book ends

CERAMIC

DESCRIPTION

Tam Tam Drummer

Base Drummer

Standing Drummer

Congo Drummer

Mortar Man

Horn Man

Rasta Man Drummer

Rasta Base Man

Scallop Edge Ashtray

Milk Jug Saucer

Fish Vendor

Cookie

Grain Man

Rhumba Box Man

Axe Man

Fruit Lady

Large Baby Mother

Small Baby Mother

Water Woamn

Dancing Girl

Higgler

Monkey Jar Set - Regular

Pierced Candle Holder 6"

CERAMIC

DESCRIPTION

14 oz. Tankard

1692 Tankard

Large Spanish Jar

Medium Spanish Jar

Small Spanish Jar

M.B. Casserole Small

M.B. Cannister Small

M.B. Handthrown Mug

Yabbas - like Salad Bowl

Yabbas - Like Soup Bowl

Saucer

Teapot Sugar Creamer

New Teapot

C.K. Casserole

Lion Head Jar Short

10 oz. Mug

4" oz. Mug

Juice Glass

Squirrel Plates

William & Mary Plates

Ship Plates

CERAMIC

DESCRIPTION

Henry Morgan Plates

Ship Vase

Squirrel Vase

Delft 10 oz. Mug

Assorted Decorated 10 oz. Mugs

Assorted Decorated Vase

Slave Man

Cookie Jar

Sugar Bowl

Powder Dish

Simond Butter Dish

Salad Bowl

Soup Bowl-Large

Soup Bowl-small

Vase

Lip Vase

New Design Vase

Rose Hall Tankard

Sterling Tankard

Large Tankard

Bud Vase

Coffee Box

Pineapple Vase

Port Royal Bottle

CERAMIC

DESCRIPTION

Breadfruit & Cover

Breadfruit Leaf Dish

Bean Pot

Caladium Leaf-small

Caladium Leaf-large

Cigarette Tray-square

Cigarette Tray 4 x 3

Pin Tray 5 x 4

6" Ashtray

Octagonal Tray-small

Octagonal Tray-large

Curly Leaf

Pineapple Beaker

Breadfruit Leaf

Press Tray

Four Rest Ashtray

Knutsford Tower Ashtray

Large Bell

French Ashtray

Travel Ashtray

Hilton Ashtray

CERAMIC

DESCRIPTION

Guitar Man

Drummer Man

Monkey Jar Set-with Large Beakers

Lemonade Set

Monkey Jar-Single with cover

Spice Pot

Hand Thrown Beaker-large

Hand Thrown Beaker-small

Saucer

Pierced Candle Holder 4"

Bamboo Mug

Chocolate Mug

Wind Proof Ashtray

Pint Jar

Colander with no Holes

Lion Head Jar Tall"

Bud Vases A

Bud Vases B

Bud Vases C

Bud Vases D

Bud Vases D 1

Grogg Shoppe Ashtray

CERAMIC

DESCRIPTION

Bud Vases A1

BUd Vases A2

Plates - Plain Glazed

Expo Mug Bambo

Expo Ashtray Windproof

Pegasus Pot Pourri

Oval Containers 1A

Oval Containers 2

Oval Containers 5

Oval Containers 7

Baby Father

Flute Man

Yabba

M.B. Casserole Medium

M.B. Casserole Large

M.B. Cannister X Large

M.B. Cannister Large

M.B. Cannister Medium

Coffee Pot Quaker Top

Coffee Pot Cup

Bellasario Dancers

CERAMIC

DESCRIPTION

Small Bell

Butter Dish

Salt Pig

Cup & Saucer

Lemonade Jug with Ice Guard & 6 Beakers

Bird House

Casual Plate

Casual Bowls

Casual Mugs

Colander

15" Plates

20" Lebrillo Bowls

14" Lebrillo Bowls

7½ Parron Vase

16½ Vase

Lion Head Jar Tall - Decorated

Lion Head Jar Short - Decorated

EMBROIDERY COTTON DUCK

DESCRIPTION

8 Pieces Luncheon Sets

8 Pieces Luncheon Sets-Native

8 Pieces Luncheon Sets-Ja, National

8 Pieces Luncheon Sets-small designs

Breakfast Tray Sets

Runner

12 Pieces Luncheon Sets-small designs

12 Pieces Luncheon Sets-large designs

36 x 36 Cloth & 4 Napkins

45 x 45 Cloth & 6 Napkins

Picture-large

Picture-small

Sets of 4 mats

Cocktail Napkins

6 Pieces Luncheon Sets

EMBROIDERY - LINEN

8 Pieces Luncheon Sets

54 x 72 Cloth & 8 Napkins

Duchess Set

Sets of 2 Finger Tip Towels

EMBROIDERY - CALICO

DESCRIPTION

36 x 36 Cloth & 4 Napkins

45 x 45 Cloth & 6 Napkins

54 x 54 Cloth & 8 Napkins

54 x 72 Cloth & 8 Napkins

108 x 72 Cloth & 12 Napkins

124 x 72 Cloth & 12 Napkins

Tray Cloth

Tea Napkins

Duchess Sets

Runner

Breakfast Tray Sets

Centre Piece

Guest Towel

Set of 2 Finger Tip Towels

Set of 3 Finger Tip Towel

Circular Cloth & 8 Napkins

Sets of 4 Napkins

Sets of 6 Napkins

Apron-with 2 Pockets

Sets of mats

10" Wodden Handle Bag

Kitchen Towel

Head Scarf

Bread Roll Warmer

EMBROIDERY - CALICO

DESCRIPTION

Desnoes & Geddes Badge

Seprod Badge

Centre-with 4 designs

T. Shirt-small

T. Shirt-National Bird

T. Shirt-Towel size

EMBROIDERY PRODUCTS

All Embroidery products have been made sporadically since 1981 due to sporadic availability of all Raw Materials. This applies to total printed product lists. Accurate selling analysis would be impossible to compile on preceeding list due to above. The preceeding products which are made by many companies and individuals. The products sell occassionally to tourist, fairly well to ocals, and there is almost not export market for this type of product at this price .

ADDITIONAL PRODUCTS OF EMBROIDERY DEPARTMENT

DESCRIPTION

Bandana Oval Placemats

Bandana Trim Placemats

Bandana Round Placemats

Bandana Oven Mitt

Bandana Applique Mitt

Bandana Apron

Bandana Applique Apron

Bandana Toaster Cover

Bandana Applique Toaster Cover

Bandana Blender Cover

Bandana Applique Blender Cover

Bandana Trim 36 x 36 Table Cloth + 4 Napkins

Bandana Trim Calico Napkin 24" x 24"

Bandana Trim Tea Towel

Applique Oven Mitt

Fancy Apron

Calico Apron With Cotton Duck Pocket

Child Peasant Blouse Embroidered

Pillow Shams Set 2 - Daisy Patt - Self Colour

LEATHERCRAFT

DESCRIPTION

Rum Bottle Pouch

Travel Knit

Men's Belt

Lib Sandal

Hurricane Purse

Gussett Purse

Junior Purse

Summer Purse

Men's Pouch - Modify

Passport Folder

Key Ring

Coaster

Key Case

Sally Sandal

Derrick Sandal

Spoon Pouch-set of six

Ladies Wallet

Men's Walet

Water Buffalo Sandal

LEATHERCRAFT

DESCRIPTION

Individual Spoon Pouch

Rum Measure Pouch

Coin Pouch

Letter Opener Pouch

Fans A

Fans B

Fans C

Kitchen Pouch

Kitchen Pouch

Tie Case

Leather Placemats - Being Developed for Macy

Trims for Straw Productions.

PEWTER

DESCRIPTION

Pistol Handle Knife

I.C.R. Fork

I.C.R. Tea Spoon

I.C.R. Desert Spoon

Port Royal Ashtray

Port Royal Coaster

Port Royal Pieces of 8

M.C. Spoon

Sword Letter Opener

Port Royal Measuring Mug

Port Royal Candle Holder

Port Royal French Spoon

Small Court of Arm Letter Opener

Stem Candle Holder

Devon House Key Ring

Dutch Spoon

Dutch Tea Spoon

Lion Head Spoon

William & Mary Spoon

Heart Spoon

PEWTER

DESCRIPTION

I.C.R. Plates

P.F. Plates

Port Royal Pieces of 2

Port Royal Pieces of 4

20th Century Pewter Fork

20th Century Tea Spoon

20th Century Desert Spoon

Rose Hall Ashtray

Antique Copper Jug

Lantern Tepee

Antique bopper Mirror

Small Copper Plaque

Large Copper Plaque

Engraved 12" Pewter Plate

Decorative Pieces

William & Mary Coaster

Devon House Coaster

Pewter Earing

Pewter Cuff Ling

Nut Bowl

PEWTER

DESCRIPTION

Demi Tasse Spoon - L.V.

Demi Tasse Spoon - Doctor Bird

Demi Tasse Spoon - Heart

Demi Tasse Spoon - Coat of Arms

STRAW

DESCRIPTION

October Bag

St. 35 Bag

Carib Shopper

Medium Wave Straw Clutch

Blob Bag

SOO 36 Woven Bag

May Bag

JJ Bag (Ackee)

May Shopper Bag-with zip

ST K27 Bag

ST 11/19 Bag

Small Square JJ Shopper-with zip

Large Square JJ Shopper-with zip

Vie Bag

Lydia Bag

Donkey Bag

Shirley Bag

Rose Bag

Sunday Bag

JJ Clutch

Inflation

GC 35 May Bag

Large Handle Cut Bag-with raffia

STRAW

DESCRIPTION

Large Handle Cut Bag-plain

Small Handle Cut Bag-plain

B 3 Bag

Rising Sun Bag

Sisal Clutch Bag-plain

Sisal Clutch Bag-embroidery

C 22 Bag

Large Flap Clutch Bag-with Shoulder Strap

A 4 Ladies Hat

Diamond Straw Hat

C 18 Bag

Bt 11 Men's Hat

Child's Hat

Dancer Wall Plaque

JJ Round Bag-pleated sides

JJ Bag

September Embroidery Bag

September Plain Bag

12" Pound JJ Bag- Without Pocket

BT 11 Bag-with Embroidery

Costmetic-Bag-embroidery

Week-end Box Bag

STRAW

DESCRIPTION

Week-end Medium Bag

BT 27 Clutch Large-plain

JJ 12" Wall Plaque

16" Wall Plaque

Market Mary Doll

JJ Assorted Doll

JJ Head Doll-Jennie

Suzie Doll

Large Bear

Medium Bear

Small Bear

Wing Bag

XJ Brief Case

Ric Rack Clutch Bag

JJ Change Purse

Straw Panel 18' x 36"

Bankra Basket

Child's Animal Bag

Raffia Clutch-small

Art Bag-embroidery

Art Bag-plain

JJ Narrow Belt Brief Case

STRAW

DESCRIPTION

Embroidery Basket

Hibiscus Plaque

Woven Bag

Debbie Doll

Shoulder Strap Flap Clutch Bag-with Ja. embroidery

Lorna Shopping Bag

Coin Purse D 12

Sisal Clutch

Sisal Ladies Hat-Large

Shag Hat

Oval Duffy Placemats

Beach Mats

Fluffy Rugs

Pot Plant Hanger Plain

Pot Plant Hanger Beads

Double Plant Hanger

Wall Hanging

D 6 Place Mat

Barrell Purse

Barrel Bag small

Barrel Bag Medium

Barrel Bag Large

Barrel Bag Large (Extra)

STRAW

DESCRIPTION

Raffia & Straw Bags assorted straw and leather bags assorted

Briefcase straw and leather.

Sunflower Bag

Beach Bag

Round Duffy Placemats

Rectangle Duffy Placemats

STripe Folder

Diamond Folder

Woven Folder

Sisal Ladies Hat-small

WEAVING

DESCRIPTION

Kitchen Mat-Large

Kitchen Mat-Small

Beach Mat & Bag

JJ Place Mat-set of 4

Coconut Bone Mat-Set of 4

Bull Rush Place Mat-set of 4

Auto Pole

Bed Side Rug

Tablecloth

Single Bedspread

Double Bedspread

Queen size Bedspread

King Size Bedspread

Lace Weave Shawl

Stripe Shawl

Lace Weave Sash

Stripe Sash

Plain Sash

Stripe Plaid Belt

Assorted Belt

Bedside Rug

WEAVING

DESCRIPTION

Caroline Place Mat

Raffia Place Mat-set of 4

Apron & Mitt

P W Material

P M Material

Banana Panel 10½ yds. x 45" wide

Banana Panel 5 yds. x 27" wide

Banana Weave 88 yds. x 48" wide

Rasta Beach Bag

Beach Mat

Border Shawl

Spotty Shawl

Stripe Thrown

Horizantal Stripe Top

Vertical Stripe top

Jacket & Bag

18" x 12" Placemats

Solid Colour 18" x 18" Napkins

Cushion Cover Large

Cushion Cover Small

Kaftan

Upholstery Fabric - Assorted.

WEAVING

DESCRIPTION

Banana Place Mat-set of 4

African Straw Place Mat-set of 4

Cushion Cover Small

Cushion cover Small

WOODEN ITEMS - NOVELTIES

DESCRIPTION

Pineapple Cutting Board

Breadfruit Cutting Board

Turtle Cutting Board

Abstract Bird

Small Plate Rack

Large Plate Rack

15" Pie Crust Table

30" Pie Crust Table

Wine Table

Plates 10"

Plates 12"

Strap Handle Tray -inlaid

Strap Tray-map

Bird Letter Opener

Fish Napkin Holder

Bird Napkin Holder

8" Mahogany Bowl

10" Mahogany Bowl

12" Mahogany Bowl

WOODEN ITEMS - NOVELTIES

DESCRIPTION

6" Mahogany Bowl

Wooden Beer

Paper Holder

Magazine Rack-with wine Table

Pedestal Shield-small

Pedestal Shield Large

Conference Ashtray-small

Conference Ashtray-medium

Conference Ashtray-Large

Coffee Box

Three In One Boxes

Coaster In Rond Box.

Coaster-set of 8

Coaster-set of 6

Tea Trolly

Box for Demi Tasse Spoons

Coco Box For Big Spoons

Mug Rack

Cutting Bo-rd Owl

Cutting Board Fish

WOODEN ITEMS - NOVELTIES

DESCRIPTION

Cutting Board Pig

Cutting Board chicken

Pelican Desk Set

Lid For Clay Spanish Jar (For Beeny Bud)

Magazine Rack

Spice Rack

Wine Rack

Towel Rack

Paper & Towel Holder

Pear Woodford Boxes Large

Round Woodford Boxes Large

Square Woodford Boxes Large

Cut Corner Woodford Boxes Large

Pear Woodford Boxes Small

Round Woodford Boxes Small

Square Woodford Boxes Small

Cut Corner Woodford Boxes Small

WOODEN ITEMS - NOVELTIES

DESCRIPTION

Strap Handle Tray-regular

Strap Handle Tray-stripe

Lainated Bowl

Checker Tray

WOODEN FURNITURE

DESCRIPTION

Yorkshire Sitter

Yorkshire Arm Chair

Patio Chair

Samo Arm Chair

Al Arm Chair

Danish Suits

N.D.A. Wooden Chairs

Rocking Chair

Patio Table

Benches

Wall Robe

Liquor Chests

All Purpose Table 3'3"

3' Halland Head Boards

Knee Hole Dresser

Block Front Dresser

WOODEN FURNITURE

DESCRIPTION

Samo Sitter

Al Sitter

5" Round Table

Coffee Table Queen Ann

4'6" Round Table

Queen Ann Stool

Al Stool

Miller Suite

What-not-Stand-Large

What-not-Stand-small

Night Table Al

B/M Night Table

Queen/Ann Night Table

Al Bed

B/M Bed

Queen Ann Bed

Bunk Bed

King size Queen Ann Bed

Al Dresser

B/m Tripple Dresser

B/M Dresser

WOODEN FURNITURE

DESCRIPTION

Al Chester Drawer

B/M Chester Drawer

Queen Ann Night Table

Butcher Block - Round

Butcher Block - Oblong

Chippendale Book Shelf

Lattice Night Table

Lattice Head Board

Lattice Dresser

Lattice Chester Drawer

Lattice High Boy

Adam Stool

Wall Display Unit

Single Seater Side Chair

Three Seater Settee

Butcher Block Chair

Queen Ann Chairs

Corner Chair

Twin Beds

WOODEN FURNITURE

DESCRIPTION

Queen Ann Hunt Table 78"

Queen Ann Hunt Table 53"

Queen Ann Serving Table

18" Century Low Boy 4 Drawers

Pine Cubes - Seven Sizes

Spanish Elm Pine Cubes Seven Sizes

DOLL DEPARTMENT

DESCRIPTION

Brown Doll

White Doll

Doll With Hat

Large Doll

Pajama Bag

Bandana Lining Hamper Basket

Bandana Lining Tiny Basket

Doll Dresses

3.1.2. Quantitative information on product groups and selected products

3.1.2.0 Introductory remarks.

Gathering of data on all the products produced by Things Jamaican Limited is quite time consuming owing to the large number of products. At present, it is therefore not possible to make projections by product and the planning procedure had to be simplified. Data required for other purposes than projections are insufficient too. Consequently, the present exercise has its weaknesses, which should be overcome as soon as possible..

3.1.2.1. Development of sales revenues by product groups

Table 3.1. shows the sales revenues structure and its development for period of 1980 up to the present. The figures over four years show a certain trend for each department and the global operations. Nevertheless, these figures have to be dealt with carefully. They neither reflect the development of demand nor the development of production or any other aggregate that could be projected into the future (with the exception of the kiln drying - perhaps). But the figures give an idea of a very realistic minimum market segment of Things Jamaican.

The monthly figures are expected to reflect seasonal changes over the year; but even here the development is not only influenced by the market, but also by disturbances in production, raw material supply and probably other factors. More information is desirable to come to reliable results.

It would be misleading to interpret structural changes as an unavoidable development. Systematic development could and probably would give structural changes in quite different directions. Nevertheless, the present structure of sales revenues shows very well the relative importance and potential of the various departments.

Table 3.1. :

SALES REVENUES BY PRODUCT GROUPS 1980 - 1984

	PEWTER	%	WEAVING	%	WOOD	%	CERAMICS	%	LEATHER	%	STRAW	%	EMBROIDERY	%	ALABASTER	%	KILN	%	OUTSIDE	%	TOTAL	%	T.Y.TOTAL	%
1. Totals for 1980-81	6036	1.19	11620	2.3	139317	27.5	55198	10.9	10153	2.1	103604	20.4	60703	11.9	9047	1.7	104740	20.7	137951	27.2	643839	127	505888	100
2. Totals for 1981-82	2297	0.3	17290	2.9	183,238	27.6	143643	24.4	10873	1.4	116044	17.7	85807	14.5	19201	3.28	60017	10.2	184854	31.4	773423	[illegible]	555561	100
82-83	23613	2.5	73487	8.04	204796	26.1	238613	26.1	12733	1.39	120577	13.19	76661	7.39	16572	1.81	100854	11.03	560495	61.76	1,407,923	[illegible]	913027	[illegible]
Monthly Sales 1982-1983																								
April	176	0.34	1254	2.42	7074	15.0	11249	21.34	3638	7.03	10495	20.5	3556	6.93	878	1.7	12313	23.78	20578	[illegible]	72616	[illegible]	51,765	100
May	331	[illegible]	808	1.12	36330	50.4	15753	[illegible]	985	1.36	6024	8.41	4319	5.96	1193	1.65	723	1	20423	[illegible]	92878	[illegible]	72455	[illegible]
June	175	[illegible]	497	0.77	5564	7.11	9716	15.19	657	1.03	8541	13.34	5556	8.49	1221	1.41	31820	49.7	23917	[illegible]	87567	[illegible]	64250	[illegible]
July	2535	3.4	976	1.5	11507	14.34	13274	16.11	1157	1.4	32406	39.4	5544	6.8	1110	1.30	13132	5.9	44179	53.6	126551	[illegible]	82373	[illegible]
August	674	1.5	1807	4.3	4920	10.92	12160	[illegible]	696	1.55	6554	15.34	5260	11.1	710	1.5	11791	26.2	25773	[illegible]	70555	[illegible]	44562	[illegible]
September	203	[illegible]	1117	2.5	8814	22.8	10250	26.44	866	2.24	4811	12.4	4610	12.1	969	2.5	7631	19.7	25263	64.7	63705	[illegible]	38732	[illegible]
October	200	0.57	577	1.66	6839	19.63	12155	34.9	562	1.61	4887	14.01	4143	11.8	745	2.14	4693	13.4	54733	157	89573	[illegible]	34830	[illegible]
November	764	0.5	12065	30.4	4745	33.5	21200	51.7	560	1.4	6970	4.9	10152	7.2	1837	1.3	9750	6.9	30439	[illegible]	170351	[illegible]	[illegible]	[illegible]
December	6222	6.11	8175	8.03	35500	35.12	28852	28.3	405	0.4	6526	6.4	9904	9.73	1466	1.46	4357	4.27	46498	45.6	148319	[illegible]	10830	[illegible]
January	4566	5.5	3512	4.2	19055	24.0	30129	36.2	756	0.11	11001	13.2	8300	9.9	1207	1.5	3730	4.4	72788	[illegible]	155724	[illegible]	83189	[illegible]
February	4257	3.4	10978	8.7	24257	27.4	53258	43.2	1697	1.36	11954	9.5	5665	4.5	660	0.54	1466	1.19	57530	46	182363	148	124833	[illegible]
March	3731	4.2	1823	2.04	37190	36.4	17009	22.9	660	0.8	7357	9.8	9521	12.7	4564	5.5	3029	4.1	135074	[illegible]	210633	[illegible]	75590	[illegible]
Monthly Sales 1983-1984																								
April	3737	6.7	7321	13.17	11951	21.50	16696	30.0	1403	2.5	6706	12.0	5111	9.2	1928	3.47	728	1.31	70136	126	125717	226	55581	100
May	1754	2.0	12827	15.2	27769	33.0	14405	9.1	529	0.13	15439	27.5	2762	3.2	396	0.4	5124	6.0	66994	79	151098	176	84104	100
June	1017	3	3547	5.54	12607	19.67	15592	[illegible]	529	[illegible]	14841	23.4	3992	6.24	610	0.95	10385	16.2	57865	90	121901	189	64030	[illegible]
July	3744	4.1	0534	10.4	20574	22.53	26721	29	529	0.59	8200	9.11	5475	6	1301	1.43	14710	16.5	77470	85.0	165531	185	91561	[illegible]
August	2919	3.7	7046	8.9	23839	30.2	21779	27.5	874	1.1	5847	7.39	7959	10	1604	2.14	7136	9	69354	88	148807	188	79093	[illegible]
September																								
October																								
November																								
December	4.250		12715		41851		31224		1952		3243		9352		8173									

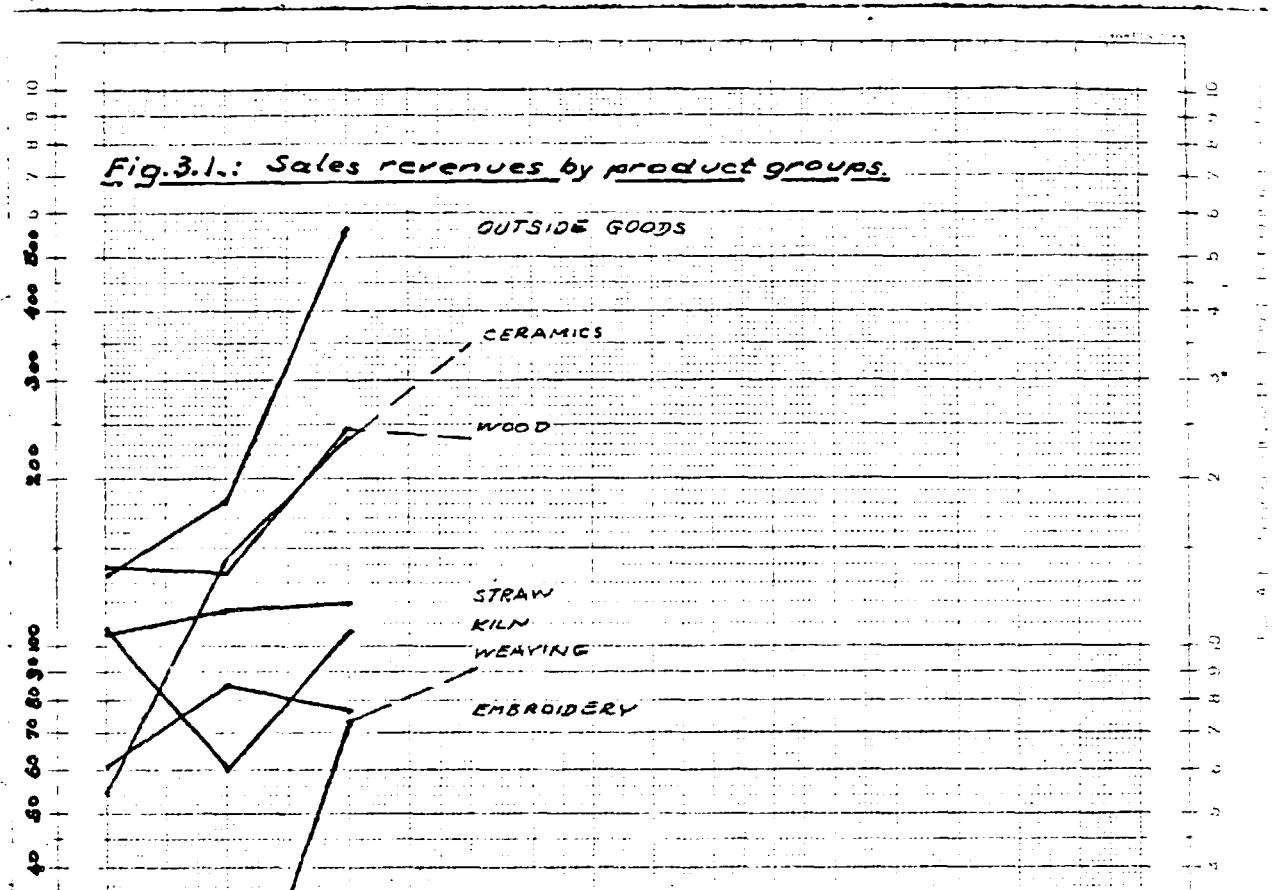
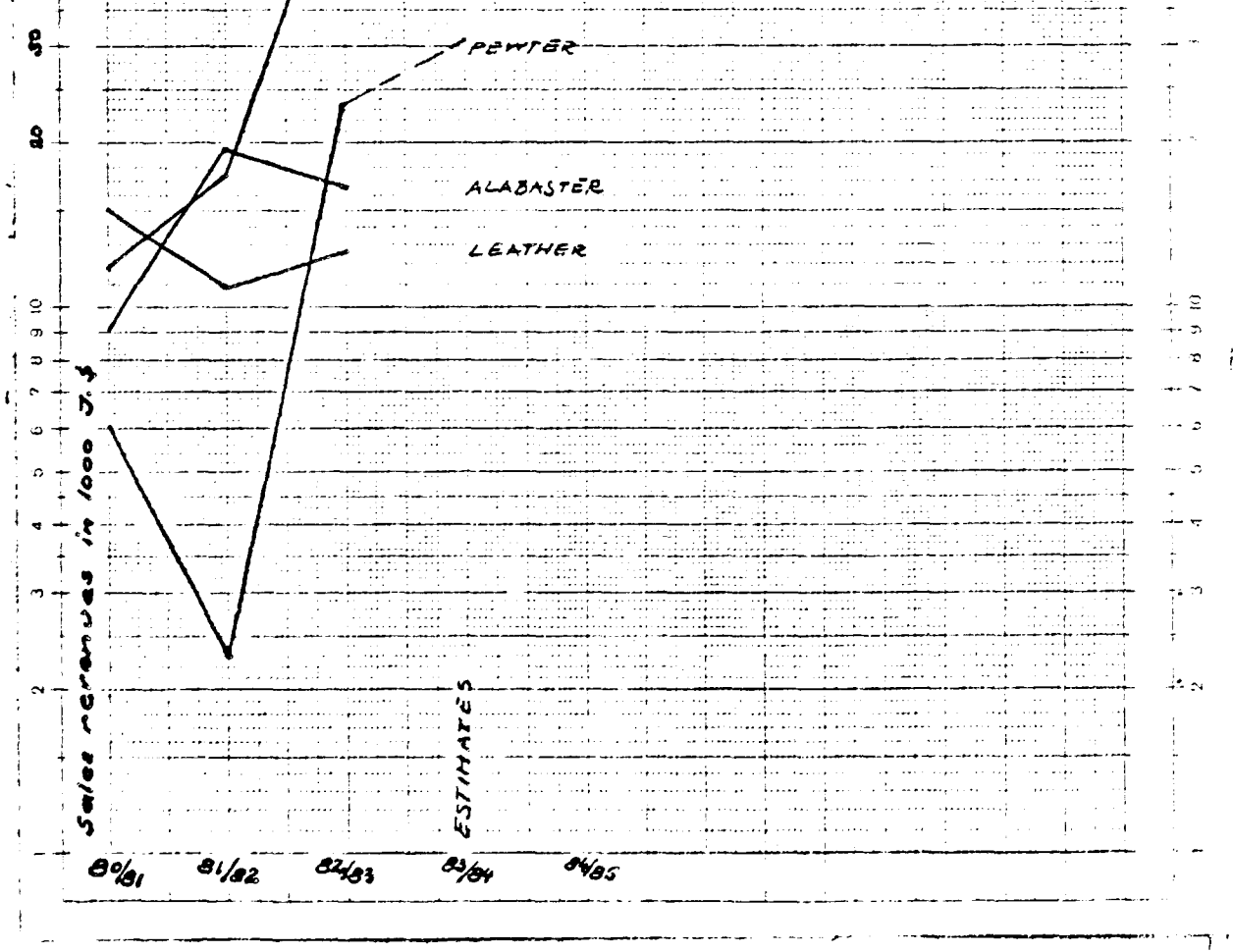


Fig.3.1.: Sales revenues by product groups.


PEWTER
ALABASTER
LEATHER
Sales revenues in 1000 J.$
ESTIMATES
80/81
81/82
82/83
83/84
84/85

It might very well be that the actual structure is disadvantageous to the Company. This aspect has to be analysed too.

Total sales figures have been growing continuously from J$505,888 1980/81 to J$913,998 in 1982/83, taking into account Things Jamaican products only. Global sales (including outside goods) more than doubled. A further increase will be achieved by the end of 1983/84.

At present, wood products and ceramics make the highest contribution to the sales, i.e. 26% each. Straw makes 15%, weaving and kiln drying services 10% each.

The most spectacular performance has been achieved in the ceramics department, the share of ceramics in total Things Jamaican sales had increased from 11% in 1980/81 to 26% (average) in 1983/84 with a monthly maximum of 43%.

As far as sales of outside products are concerned the growth rate is even higher. Sales of outside products increased total sales by 27% in 1980/81 compared with 91% in 1983/84.

3.1.2.2. Sales by product in December 1983.

Though the figures for the month of December do not allow final conclusions, they give an interesting picture of the present situation. A comparison of the number of items listed in Table 3.2. with the complete list of products shows that only part of the items of the complete list of products is sold at all. Furthermore, the turnover by product differs very much from product to product. The number of pieces sold per item is very low, hence products do not sell well, others could be sold, but there is not enough production though there would be enough raw material. There are many inconsistences, lack of co-ordination and what is most important - there is no cost conscious, profit oriented production - sales - programme. It is obvious that the number of items has to be cut and

the quantity per item increased considerably to take advantage of economies of scale.

Table: 3.2.: Sales by product in Dec. 1983

T. 3. 2. 1.	[illegible]	W/Sales Qty	W/Sales $ C	Retail Qty	Retail $ C
	Cups & Saucers	4	30.00	7	85.50
	10.25 Plate [illegible]	4	24.00	27	253.00
	7" Plate			3	24.53
	Chocolate Mugs	3	11.25	1	6.00
	Pierce Candle Holders	6	[illegible]	16	267.50
	Baskets	55	184.20	60	284.50
	Cookie Jar	29	289.30	10	282.00
	Mixing Casseroles	14	408.00	31	972.35
	Shaped Canisters	37	655.00	22	326.00
	Medium Canisters	22	531.00	23	730.50
	[illegible] Canisters	5	95.00	14	300.00
	Bud Vase #1	3	28.50	9	135.00
	Large Spread [illegible]	11	83.30	26	297.00
	Mugs	15	300.00	31	555.00
	[illegible] Dinner	25	240.00	8	160.00
	[illegible]	25	254.00	18	650.15
	Baby [illegible]	1	23.00		
	[illegible]	3	37.50	6	225.00
	[illegible]	23	280.20	16	363.00
	[illegible]	5	124.00	4	145.50
	Small Canister [illegible]			1	2.50
	[illegible]			1	1.50
	[illegible]			4	36.00
	[illegible]	6	148.00	11	311.20
	Small [illegible]	20	188.00	9	127.00
	[illegible]	1	3.00		
	Bud Vase #2	2	126.50	3	10.00
	[illegible]			6	[illegible]
	[illegible]			1	[illegible]
	Bud Vase #1	6	30.00	1	8.00
	[illegible]	[illegible]	604.70	52	1362.00
	[illegible]			3	15.00
	Small [illegible]	[illegible]	15.00	2	57.30
	[illegible]	[illegible]	[illegible]	59	[illegible]
	[illegible]	[illegible]	[illegible]	11	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]		
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]

TOTALS.

T.32.1-b Ceramics 2	Wholesale Qty	Wholesale $ C	Retail Qty	Retail $ C	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Bud Vase B	11	132 00	22	132 00	
Bud Vase D	6	60 00	22	240 00	✓
Standing Dinosaurs	3	7 50	2	5 00	
Stoneware Bud Vase A	4	15 00			
Stoneware Bud Vase C	4	15 00			
Small Round Planters	5	15 00	1	5 00	
Bud Vase D, [illegible]	2	60 00	4	120 00	
Medium Planters	8	51 50	2	25 00	
Large Baby Mixers	14	19 50	1	35 00	
Bud Vase C	5	24 00			
Teapots	3	30 00	11	219 00	
4 oz Mugs	6	24 00	21	126 00	
10 oz Mug Mixers	17	67 50	29	232 00	
CR Bread Pot			8	160 00	
Bud Vase F	3	15 00	14	112 00	
[illegible]			28	126 00	
[illegible]	1	15 00	2	87 00	
16oz Tankards	20	200 00	36	500 00	✓
CR Egg Cups			6	24 00	
[illegible]	11	132 00	28	126 00	✓
Small Ceramics			10	200 00	
[illegible]			6	54 00	
[illegible]			2	31 00	
[illegible]			5	250 00	
[illegible]	10	45 00	3	63 00	
[illegible]			13	195 00	
[illegible]			1	11 00	
[illegible]			3	51 00	
[illegible]			5	225 00	✓
[illegible]			10	661 00	✓
[illegible]	2	30 00	11	165 00	
[illegible]			1	15 00	
[illegible]			4	60 00	
[illegible]			12	180 00	
[illegible]			2	5 00	
[illegible]			4	60 00	
[illegible]			1	15 00	
[illegible]			3	51 00	
[illegible]			12	240 00	✓
[illegible]					
[illegible]					

TOTALS:

T.3.2.1.-C CERAMICS 3	W/Sale Qty	$ C	Retail Qty	$ C
B/F	776	2416 45	758	18[illegible] 65
Hand Thrown Vase			1	10 00
Base Vase			19	161 00
Small Sugar			5	30 00
Creamer	12	24 00	2	30 50
Large Chalice [illegible]			2	31 00
Spice Jar			13	124 50
Jamaica 21 Beakers			3	14 00
Lec. Spice Pots			4	46 00
Milk Jug			6	56 00
Lec. Mug			8	64 00
Cpd. [illegible] Plate			1	16 00
Open Sugar Bowl	23	237 00		
Base [illegible]	56	432 00	5	100 00
C.S. [illegible] Holder	40	132 00		
Bud Vase #2	75	331 50	5	37 50
Bud Vase Jamaica 21	8	32 00	2	15 00
Cookie Jar #	6	81 00		
Pie Pan			3	15 00
Monkey Jar Single			3	33 00
Small Sugar Bowl c M/B	5	20 00	2	15 00
C.S. Salt & Pepper Cellar	2	4 50		
Small Yobbas	10	60 00		
Chocolate Mug #21	25	150 00		
Monkey [illegible] Set			1	50 00
[illegible]			1	6 00
[illegible]			3	[illegible]
[illegible]	2	52 00	1	25 00
Honey Jar			1	10 00
[illegible]			6	[illegible]
[illegible]	2	20 00	3	116 00
[illegible]			1	40 00
[illegible]	2	[illegible]	1	40 00
[illegible]	2	[illegible]		[illegible]
[illegible]			2	[illegible]
[illegible]			[illegible]	[illegible]
[illegible]			[illegible]	[illegible]
[illegible]			[illegible]	[illegible]
[illegible]			[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]

T3.2.2:

	W/Sale Qty	W/Sale $ C	Total Retail Qty	Total Retail $ C
[illegible]			[illegible]	[illegible]
[illegible]	3	[illegible]		
[illegible]			1	[illegible]
[illegible]			[illegible]	[illegible]
B/in Oven			[illegible]	[illegible]
B/in [illegible]				[illegible]
Cup Corner [illegible]				[illegible]
[illegible] Chest			1	[illegible]
[illegible] Lock				[illegible]
[illegible]			[illegible]	[illegible]
[illegible] Cup				[illegible]
[illegible]				[illegible]
[illegible]				[illegible]
[illegible]				1500
B/in Bed				[illegible]
[illegible]				[illegible]
Coffee Table				[illegible]
[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	1	[illegible]
[illegible]				[illegible]

Totals

Material Detail

T. 3.2.2-h Wood work 2

Qty	S	C	Qty	S	e

√ 8/ACS.

T. 3.2.3.	Stras[illegible]	Sales Qty	$ C	Retail Qty	$ C
	[illegible] Holders	2	36 00	4	[illegible]
	[illegible] Holders	6	72 00	5	80 00
	[illegible]	7	22 00	16	218 40
	[illegible]	2	13 00	2	23 50
	[illegible]			12	137 60
	[illegible]	4	36 00	1	17 50
	[illegible]	1	10 00		
	Double [illegible]	3	51 00	1	24 00
	[illegible]	1	57 00		
	[illegible]	17	153 00	4	45 00
	[illegible]	1	17 00	23	226 40
	Sun Visor	10	50 00	22	129 60
	[illegible]	2	15 60	6	57 50
	[illegible]			5	83 50
	[illegible]	5	12 00	2	17 00
	Beach [illegible]	3	25 00	10	276 60
	[illegible]	2	9 00	2	11 50
	[illegible]	1	6 00		
	[illegible]	10	60 00	15	135 00
	[illegible]			6	300 [illegible]
	[illegible]			3	33 20
	[illegible] Bag			4	39 90
	[illegible]			4	36 00
	[illegible]			1	6 00
	[illegible]			2	[illegible]
	[illegible] Duffy			60	310 00
	[illegible]			1	33 00
	[illegible]			[illegible]	[illegible]
	[illegible]			[illegible]	[illegible]
	[illegible]			2	10 50
	[illegible]			2	15 00
	[illegible]			3	67 [illegible]
	[illegible]			2	17 2[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]

TOTALS

3.2.4.	N/Sales Qty	$ C	Retail Qty	$ C.
... ylon D				
	57	[illegible]	[illegible]	[illegible]

[illegible] 1983.

T.3.2.5.	[illegible]	W/Sale Qty	SC	Refail Qty	SC
	Dickens Set	3	54 00	11	296 00
	16x16 Napkins			2	20 00
	6" Wooden Handle Bags			7	231 50
	Plaid Aprons			3	28 42
	13" Embroidery Bag	8	240 00	22	837 50
	Small Design Tea Towel			1	1 80
	54x54 Cloth Napkin			1	219 00
	Set of [illegible]			1	50 00
	54x72 Cloth [illegible]	1	175 00	1	225 00
	[illegible] Towel			2	32 50
	Set of 3 [illegible] Towel			8	111 00
	Aprons			4	99 00
	[illegible]	13	75 00	17	137 00
	12 [illegible] Cotton [illegible]	2	114 00	16	1152 00
	Breakfast [illegible] Set	5	90 00	12	27 30
	[illegible] Cotton [illegible]	8	850 00	18	1024 00
	[illegible]			3	103 46
	Plaid Tea Towel			6	81 65
	[illegible]			1	21 00
	Kitchen Towel			12	94 50
	Fancy Tea Towel			2	19 18
	[illegible]	12	120 00	1	18 00
	[illegible] Bag			1	13 60
	[illegible]	2	6 00	25	124 80
	[illegible]			4	135 00
	[illegible]			8	182 50
	[illegible]			8	95 00
	[illegible]	2	40 00	2	182 00
	[illegible] Towel			30	354 00
	[illegible]			1	21 00
	[illegible]	30	115 20	2	9 60
	[illegible]			1	11 00
	[illegible]			3	[illegible]
	[illegible]			5	335 [illegible]
	[illegible]			2	14 [illegible]
	[illegible]	5	65 [illegible]	1	[illegible]
	[illegible]		8 [illegible]	1	[illegible]
	[illegible]			3	[illegible]
	[illegible]	1	[illegible]	2	[illegible]
	[illegible]			1	[illegible]
	[illegible]	13	[illegible]	26	[illegible]

TOTALS.

T.3.2.6.b Embroidery 2	Qty/Sale Qty	Sale SC	Retail Qty	Retail SC
C/F.	99	1613 10	336	8057 46
Chef Tea Towel			1	13 50
Wrap Chair Towel			6	72 50
Calico Apron Large			1	18 [illegible]
Calico Apron Plain			12	96 00
Set 6 Napkin Cotton Duck	7	12 60	1	21 60
Set 6 Black Coasters	2	24 00		
Oven Glove Pair	2	11 00	28	140 00
Blender Cover	1	15 00	1	20 00
Toaster Cover	1	10 00		
Set 6 Mat & Napkin	1	45 00	2	120 00
Hand Toaster Cover	1	17 50		
Hand Blender Cover	2	28 00		
Cocktail Napkin	12	132 00	2	20 00
Centre Pc. Drawn Stitch	1	16 00		
Set 3 D/D Tea Towel	1	12 00	15	180 00
Cushion Square			3	42 00
Chef Apron			1	20 00
Embroidered Tea Cloth			4	44 00
Roll Mat [illegible]			5	100 00
Cotton Twill Breakfast Mat 12"			1	5 00
36 x 36 Cloth Napkin			1	5 00
Bandana Coaster Set			2	27 00
	150	2030 00	550	9350 00

T.3.2.6.	Item	Subs Qty	Subs $ C	TOTALS Retail Qty	TOTALS Retail $ C	
	Pair Feet Flops.	1	45 00	1	80 00	
	Bar and 6 Coat Clasp Spoons	5	175 00	8	420 00	<
	Four Masons	8	40 00	29	566 40	<
	Large Letter Spoons	2	8 00	5	38 00	
	Pair 6 Coat Spoons			30	120 00	<
	Hotel Condiment Knives	12	153 00	1	19 00	
	Bar and 6 Coat Bud Spoon	1	35 00			
	Coat & Hat Spoons	12	45 00	11	147 20	<
	Steak Carving Knives			10	292 00	<
	Bird Spoons	6	21 00	16	80 00	<
	4H Spoons			9	55 00	<
	Williams Rose Spoons			3	23 40	
	Pair Royal Mixtures			1	34 00	
	Lucky Spoon 24g 6			4	230 00	<
	Souvenir Spoons			1	5 00	
	1901 Cream			1	1 35	
	[illegible]			2	10 00	
	[illegible]			1	1 25	
	[illegible]			36	243 00	<
	[illegible]			2	280 00	<
	[illegible]			36	100 00	<
	[illegible]			2	18 00	
	[illegible]			15	123 75	<
	[illegible]			3	150 00	<
	[illegible]			15	101 50	<
	[illegible]			1	3 00	
	[illegible]			2	102 00	<
	[illegible]				2 00	
	[illegible]			10	102 75	<
	[illegible]			3	90 00	
	[illegible]			1	18 00	
	[illegible]			1	550 00	<
	[illegible]	[illegible]	551	202	3201 75	

TOTALS.

T. 3.2.7.	Leather	W/Sales Qty	W/Sales $ C	Retail Qty	Retail $ C
	Sally Sandals			26	611 00
	Dettick Sandals			19	322 00
	[illegible] Cases			20	920 00
	Purses			1	18 60
	Pocket [illegible] Holders			1	21 00
	Wallet			1	18 00
	Kitchen Pouch			1	45 00
				88	1050 60

Q 101 ALS

T. 3. 2. 8.	Alabaster	Sales $ C	Qty	Retail $ C	
	Pumpkin Powder Dish		10	148 50	<
	Freeform Powder Dish		7	108 00	<
	Mip? Pen Holder		1	9 00	
	Stem Candle Holder	48 00	14	192 00	<
	Frog Paper Weight		5	37 50	
	Bookend pairs	36 00	24	408 00	<
	Triple Bowl Candle Holder		1	30 00	
	Wind proof Ashtray	54 00	15	138 70	<
	Bird with Egg		8	92 00	<
	Free form Trinket Box Large		3	45 00	
	Pumpkin Trinket Box Large		3	54 00	
	Pumpkin Trinket Box Small		3	45 00	
	Various Shape Pen Holders	16 80			
	Free form Ashtray	16 00	4	34 90	
	Ashtray (Large)		2	16 00	
	Oval Paper Weight		1	17 50	
	Square Trinket Box		3	33 00	
	S[illegible] Candle Holder		1	35 00	
	Candle Holder		2	26 00	
	Ashtray		3	134 00	<
	Bud Vase		4	56 00	
	Fruit trinket box		7	106 25	<
	Egg Cup		3	8 50	
	[illegible] Candle Holder		5	60 00	
	[illegible]		3	37 50	
	[illegible] Ashtray		4	48 00	
	[illegible]		3	37 50	
	[illegible]		1	18 00	
	Various 2" Candle [illegible]		1	6 [illegible]	
		170 80	156.	2002 [illegible]	

3.2. Market and Marketing Strategies..

3.2.1. The market.

The main market for Things Jamaican products including products made in the factory, cottage craft products, and commercial products of Jamaican origin has been within Jamaica with approximately .5% of gross sales having been exported in 1983/84. Approximately 91% of the total gross sales were sold from the retail outlets owned and operated by Things Jamaican. The remaining sales were from goods sold at wholesale to other Jamaican retailers.

The retail and wholesale outlets are located in six main locations within Jamaica.

Bumperhall Headquarters	- wholesale/retail outlet
Premier Plaza	- 1 retail shop
Devon House Complex	- 8 retail shops, 1 restaurant, 1 bakery, 1 ice-cream shop, 1 baked goods outlet.
Norman Manley Airport	- 1 retail shop
Montego Bay Sam Sharpe	- 1 retail/wholesale outlet
Sangster Airport Main Terminal	- 1 retail shop
Sangster Airport Charter "	- 1 retail shop

One road salesman operates out of Bumperhall, selling wholesale goods to Kingston area retailers. The Sales Manager in Montego Bay does some wholesaling in addition to managing the total operation. Three salesmen were made redundant in 1983, one in Montego Bay and two in Kingston. One of the three salesmen in Kingston is working now on a commission basis. The product line now sold at wholesale consists entirely of products made in the factory and has been restricted to certain items from certain departments as priorities for distribution of goods have been established as follows:

1. Retail outlets
2. Export sales
3. Wholesale within Jamaica.

The priorities were established and restrictions placed on wholesaling because production of Things Jamaican products is not enough to meet the market demand.

Sales are also made from time to time to interior decorators of hotels and business establishments who wish to use craft in innovative ways in decor. These are usually custom orders and sales are at wholesale prices.

There exists within Jamaica, a large wholesale market which Things Jamaican has barely tapped. A market exists in Kingston and requests from retailers are received frequently for the product lines. Other than sporadic small attempts made by a previously - employed road salesman, the Ocho Rios area has not been covered. There is a healthy growing tourist trade there including cruise ship passangers who spend their time shopping and there already exists a large number of shops which could carry the lines.

The Montego Bay area has never been adequately serviced, and although the Sam Sharpe outlet is a wholesale outlet, it is too small to carry a full line for wholesale as well as hold stock that has to be fed to the airport shops throughout the week. The Montego Bay area has fewer "interesting" shops than Ocho Rios, and according to a survey from the Ministry of Tourism more than half the visitors to Jamaica rate shopping in the major tourist areas Ocho Rios and Montego Bay as fair or below, Ocho Rios rating slightly higher. Negril being the next most important area for sales is not being serviced by Things Jamaican. A few products are sold sporadically to a hotel shop in Port Antonio, Port Antonio being the least important area for sales of Things Jamaican products.

There also exists a market for craft products and furniture within the Caribbean region. Many requests have been received from Barbados, Caymans, Bahamas, and Trinidad. Although a couple of orders (one furniture, one craft) have been sold to Trinidad, this market has not been researched due to lack of staff for this effort and day-today business of operating regular distribution channels.

As far as export to North America is concerned, market information although incomplete has been for the most part adequately available (until recently when further information is needed) due to large numbers of buyers and investors visiting Things Jamaican, requesting product information, placing orders, and providing valuable information as to possibilities for existing lines and for product development. This parade of overseas "lookers" has been continuous since 1983 and has given direction to production planning and product development both within the factory and to Cottage Craft. Export sales in 1983/84 were very low due to the following constraints:

1. Inadequate stocks due to shortage of raw materials, production of too many different items as opposed to concentration on consistency of most important products, and inconsistency of quality of production.

2. Inadequate export facility

3. Inadequate staff to export

4. Inadequate packing materials on hand

5. High costing and pricing of cottage craft products.

6. Product development still taking place as market information becomes available.

Although improvements are taking place in all of the above areas, there are still weaknesses which must be seriously addressed before export orders can be booked. The information now available on the North American market supports a strategy of concentration in specific areas.

Presently, Things Jamaican has almost no promotional material such as a brochure or complete pricelist of all products. This has not been done due to necessity of narrowing product lines which required the previous period of test marketing, analysing, product development and selection of products to be aimed at market targets. Through test marketing and other intelligence it is now known that certain products which sell locally may not be interesting for export and vice versa. Comments on specific product lines are available in section 3.1.2. For example, it is known that the export market demands different finishes on wood than is locally desired. This applies also to ceramics where certain glazes acceptable in Jamaica are not acceptable on the North American market. In the soft goods areas for example, embroidery, the "put-up" and packaging of products such as luncheon sets is unappealing overseas where napkins and mats are generally purchased separately. These products, having been merchandised this way in Jamaica for years will require new packaging designs to make them appealing. Generally, this type of merchandise is not even wrapped in stores overseas, as customers demand to see the product without cellophane or plastic in between them and the product. Sizes of these items as well as designs have had to be adjusted for export markets.

All of these factors apply to product development which has been ongoing since the inception of this project. It will continue to be ongoing but must be approached in a orderly way with careful planning, weighing the cost of making changes against the value of the potential order, and with full co-operation of producers and Things Jamaican managers to work towards this end.

3.2.2. Marketing Strategy

Before further developing and proposing the marketing strategy, it must be understood that reduction of number of items for production by Things Jamaican factory and cottage craft will take place.

This should and must result in:

1. improving overall quality of products offered;

2. producing consistent quantities of product;

3. reducing or maintaining costs of production (the above applies absolutely to Things Jamaican factory productions and in only specific areas to cottage craft)

4. stabilizing costs of cottage craft products.

The above being accepted and adhered to, minimum projection for 1984/85 can be achieved. For projections see 3.1.3. of this report.

Strategy to achieve the maximum projection for 1984/85 (see 3.1.3.) is proposed as follows, taking into consideration that conditions stated above are accepted.

1. Expansion of retail sales:

   a. this can be achieved by providing existing retail outlets with appropriate stock to sales ratio of products needed to achieve goals. This is done by maintaining stocks and stock value necessary to each outlet. In order to do this regular inventories must be taken and results made available to marketing department. Sales reporting must be done daily by sales assistants and analyzed by sales managers.

   b. having in place an adequate cash flow to purchase outside commercial and cottage craft products. This cash flow must be adequate to cover six weeks purchases of commercial products and eight weeks cottage craft purchases. This cash flow cannot be a part of same flow used for manufacturing and administration. (The justification for this is apparent in current increased turnover of outside products.) Current flow at Things Jamaican is inadequate for purchase requirements.

   c. reviewing profitability of each shop and taking any necessary action regarding this.

d. Expansion of the Montego Bay retail/wholesale outlet into an appealing shop for overseas visitors and one which will be supported by local clientele in the off-season.

e. Refurbishment of the Sangster main terminal shop, and secondly, the Norman Manley terminal shop before October of 1984.

f. Improving the quality of service available at the Devon House Complex.

2. Expansion of wholesale will include the Ocho Rios area, the remaining Kingston area, and thirdly Negril. After expansion of the Montego Bay Shop through redesigning and refurbishing existing location, this outlet can advertise to retailers in the area that stocks are available at wholesale. The potential for this business is well known.

3. Wood-drying Kiln Service Sales -
Due to the fact that wood-drying kiln services are now available from other companies which was not true in the past, it is necessary to promote Things Jamaican kiln services through advertising. The service must be properly costed and priced competitively.

4. Export to North America -

Because the product line is very diverse, there are many different channels for entering this market which will apply to different product lines. For example, a different channel is required for exporting furniture than for exporting crochet blouses. It cannot be assumed that any one sales representative, one retail outlet or one showroom will be adequate or beneficial to the marketing of Things Jamaican product lines overseas. A variety of approaches should be considered. This is further

supported by the fact that certain products are further along in stages of development. It is of course of major importance to consider which channel will be financially most beneficial from either selling most products or generating the best margin per product. With this in mind, every customer, sales representative, or proposal coming to Things Jamaican should be carefully weighed against other opportunities. In order to make these decisions wisely, further studies of objective nature will have to be done by qualified personnel at the products are in place. Certain products are reaching this stage, therefore study should begin and precede any serious booking of orders.

Some examples of proposed existing channels now being used or explored are as follows:

a. Gift items:

Individual buyers numbering about five who have purchased products mainly cottage craft to test market for distribution in the U.S.A. For the most part, these buyers, with the exception of two are not viewed as serious potential customers. Two of these buyers have taken existing products, received customer reactions and are beginning to reorder. The constraint here is pricing as these buyers are "middlemen". As Things Jamaican has no alternative at the moment, not having a qualified salesman in the export market, one who knows and understands this market, it is necessary to work with these people only when it is satisfactory financially to the Company.

b. Gift items: Noble Trading Company

Things Jamaican has received a proposal from Noble to hire Noble as Marketing Consultant. This means paying them for their service as well as paying commission on sales. Their condition is that product and market found by Noble will be sold exclusively to and by Noble. At this time, there is not enough production to justify this, but in future, it might be considered; however, further research should be done before entering into this agreement.

In the meantime, specific products are being designed and developed for Noble's review which it is thought will be items they will market and developed. This product development should be taken seriously; however, it is not necessary to make further commitments at this time.

c. Wood items:

G.I.M.C.O. Control Data, Minneapolis, Minn.
Product development as follows with estimated sales potential:

Wooden bangles and jewelery pieces in mahoe and Spanish elm - First order now being produced for 5,000 pieces, estimated potential if first test order is acceptable - U.S.$250,,000 - U.S.$1,000,000.

Wooden Gum Boxes and Ammunition Box - sample made and shipped. Potential production if ordered - 500 per year @ U.S.$50.00 each.

Carving of specific designs - potential unknown - prototypes being made now.

d. Wooden belts and bags:

G.I.M.C.O. Control Data, Minneapolis, Minn.
Handwoven samples by Things Jamaican have been shipped to potential customer with prices for production exclusive of raw material. Things Jamaican had proposed that G.I.M.C.O. provide threads and colour specs. Potential unknown specifically, however, this product line is known to have wide fashion appeal currently.

e. Macy's -
Recent order on a wide variety of all Things Jamaican and cottage craft products ordered for April 1 completion date; valuing approximately U.S.$35,000. This will be sold as

part of an in-store promotion on Jamaica. Certain product lines will have appeal and will most likely be ongoing after promotion, particularly in hand needlework area. Certain specific product development is now taking place - Macy's provided fine quality bed linen to Things Jamaican - Things Jamaican embellishing with crochet, embroidery, etc.

f. Furniture:

This is being explored with G.I.M.C.O. and the possibility of the Jamaican Furniture Guild. Potentially important export items include the Queen Anne Chair, hunt boards, corner chair, and a few other items.

As all of the above approaches are now in various stages of development, it can be assumed Things Jamaican is making a start in export. It is essential to further this and support it by:

1. Expanding the warehousing packing area, and facility now known as "Finished Goods". (Plans are underway for physical expansion).

2. Employing competent staff to pack.

3. Training competent staff in exporting.

4. Purchasing appropriate packing materials and equipment.

The U.N.I.D.O packaging expert John Salisbury is in process of preparing a proposal for this facility re space layout, materials and equipment.

After the above has been accomplished it will be important to pursue other export marketing channels. A sound start is to maintain all existing relationships that can become successful and secondly to put a sales representative "on the road" on commission basis.

Until adequate stock and facilities are in place, this should not be done and no further orders taken.
Selling product not available or improperly packed is a certain way of destroying market potential quickly.

5. Market research should be undertaken within Caribbean region particularly for ceramic products which can be produced in Things Jamaican.

6. Highly professional catalogue of products required to be used for export market distribution.

7. Product development must be ongoing. Serious,trained technicians and designers are required in specific areas such as weaving.

8. Training and real market experiences are necessary for Jamaican personnel and counterparts. Macy's promotion in San Francisco can provide first experience in training on good merchandising techniques.)

If the above proposals are accepted, adequate financing is available, and strategies followed, maximum projections can be achieved for 1984/85.

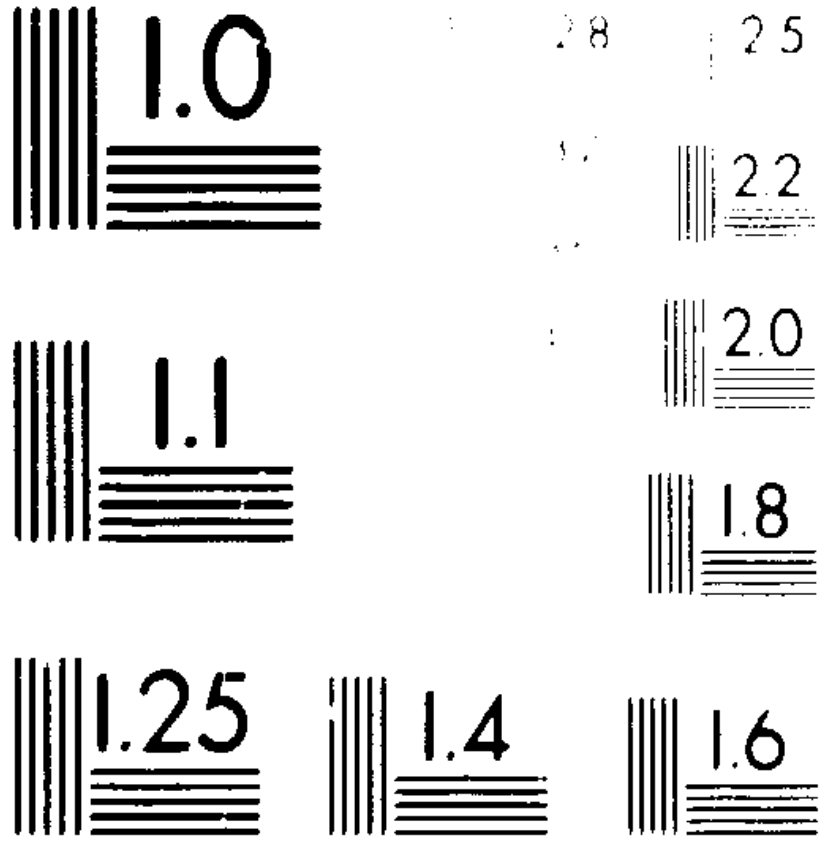
3.2.3. Product Development

Prior to 1984, product development processes were not systematized. There was no co-ordination and responsibilities were not clearly defined.

There exists now no formalized product development department, however, free-lance and part-time designers and developers are employed for product development in specific areas.

The activities of the product development process are necessary to Things Jamacian Limited. The process is outlined on the following page; it could be strengthened and formalized into an actual department. Consultants, free-lance designers, artists, packaging specialist, would form this department on a full, part-time or contract basis.

This department should also handle advertising design and promotion design, in addition to product development.



PRODUCT DEVELOPMENT PROCESS:

Ideas for Product Development can originate from following resources:

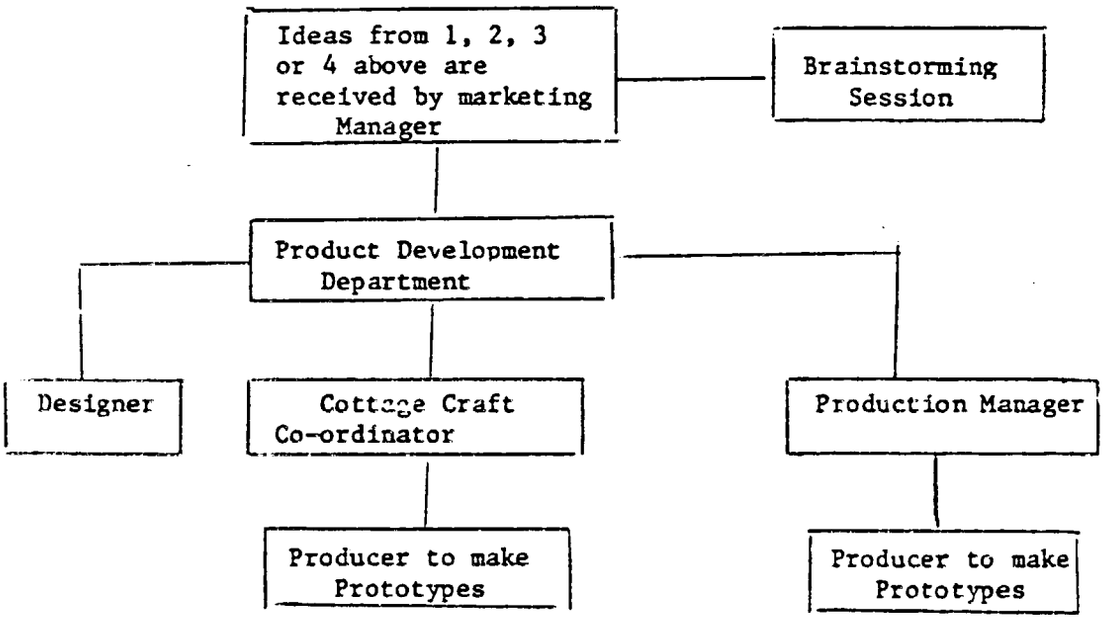
1) Local request from market

2) Export request from market

3) Analysis of sales providing direction to add new items to a particular existing line of products.

4) Sales analysis providing necessary direction to change or up-date a particular product.

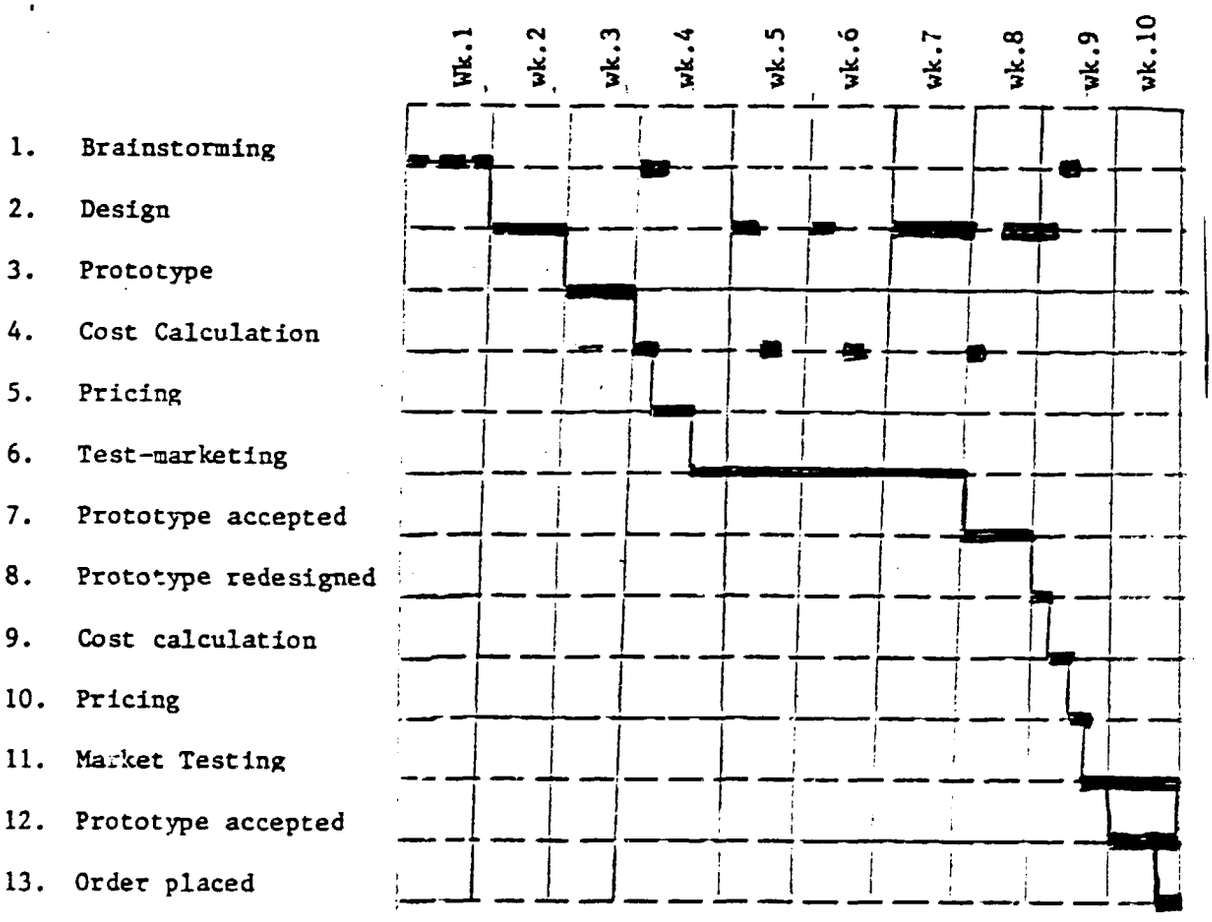
5) Brainstorming session.



- Complete prototype to be approved by Product Development Department
- Costing to be done by Production Manager or Cottage Craft Co-ordinator
- Prototype to Marketing Manager for test marketing or further follow-up.

Product Development

The development of every product should be planned. Progression from start to finish should be recorded as in the following example:



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3.3. Organizational set up of distribution

3.3.1. Actual situation - this section includes:

A. The following flow charts describe systems for:

1. Ordering products produced within Things Jamaican

2. Ordering products through Cottage Craft Unit

3. Ordering outside commercial products.

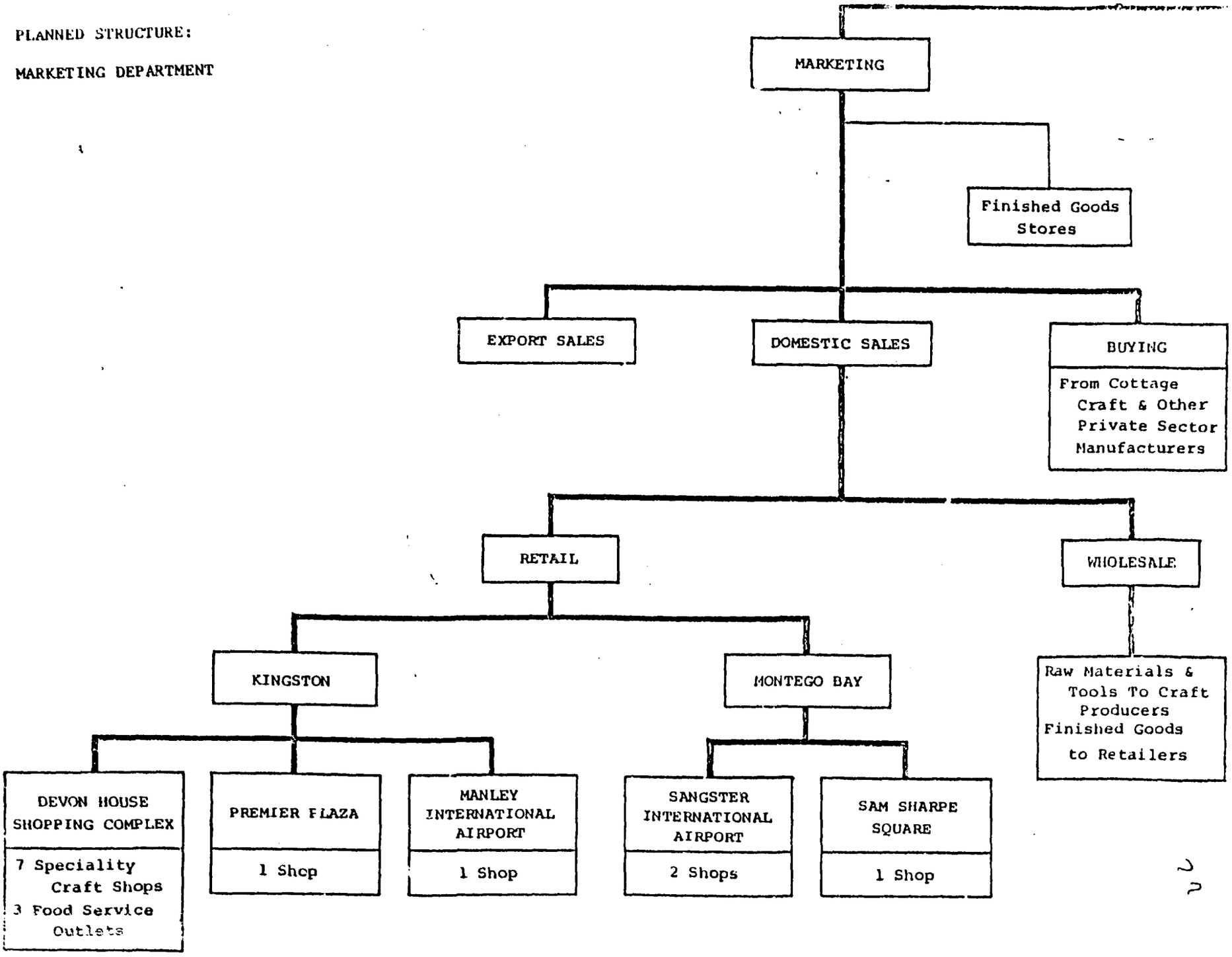
4. The distribution of the products.

B. Managerial structure of marketing department as it exists and as it is planned

C. Comparative figures of retail shop performance.

PLANNED STRUCTURE:

MARKETING DEPARTMENT



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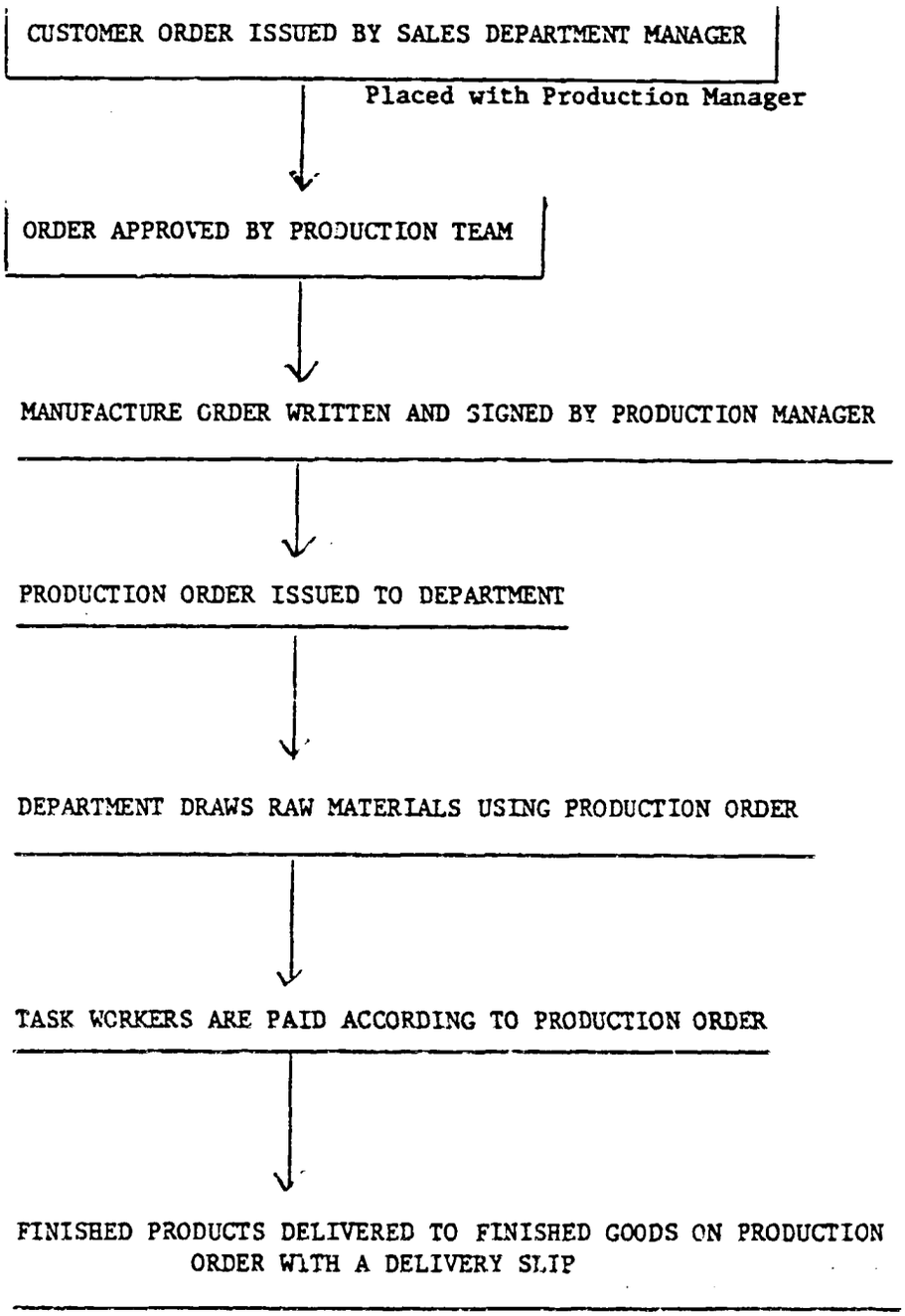
3.3.1.A.1 ORDERING SYSTEM FOR PRODUCTION



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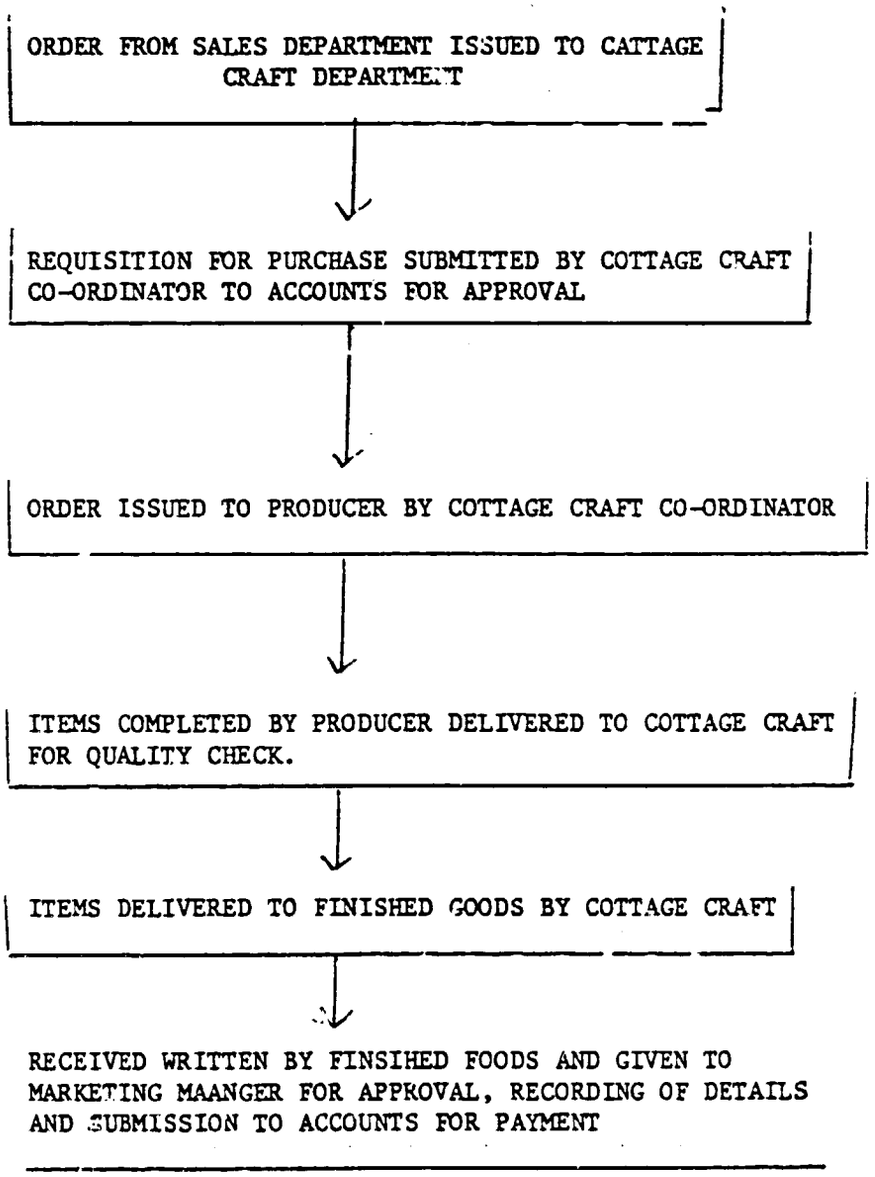
3.3.1.A.2 ORDERING SYSTEM FOR COTTAGE CRAFT PRODUCTS



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3.3.1.A.3 ORDERING OUTSIDE COMMERCIAL PRODUCTS

ORDER FROM RETAIL OUTLET RECEIVED BY MARKETING MANAGER

↓

REQUISITION FOR PURCHASE GIVEN TO ACCOUNTS FOR APPROVAL TO PURCHASE

↓

AFTER APPROVAL, ORDER ISSUED TO SUPPLIER BY MARKETING MANAGER

↓

GOODS ARE DELIVERED OR COLLECTED AND RECEIVED BY FINISHED GOODS TO RETAIL SHOP

↓

RECEIVED AND INVOICE FOR PURCHASED GOODS GIVEN TO MARKETING MANAGER WHERE DETAILS ARE RECORDED

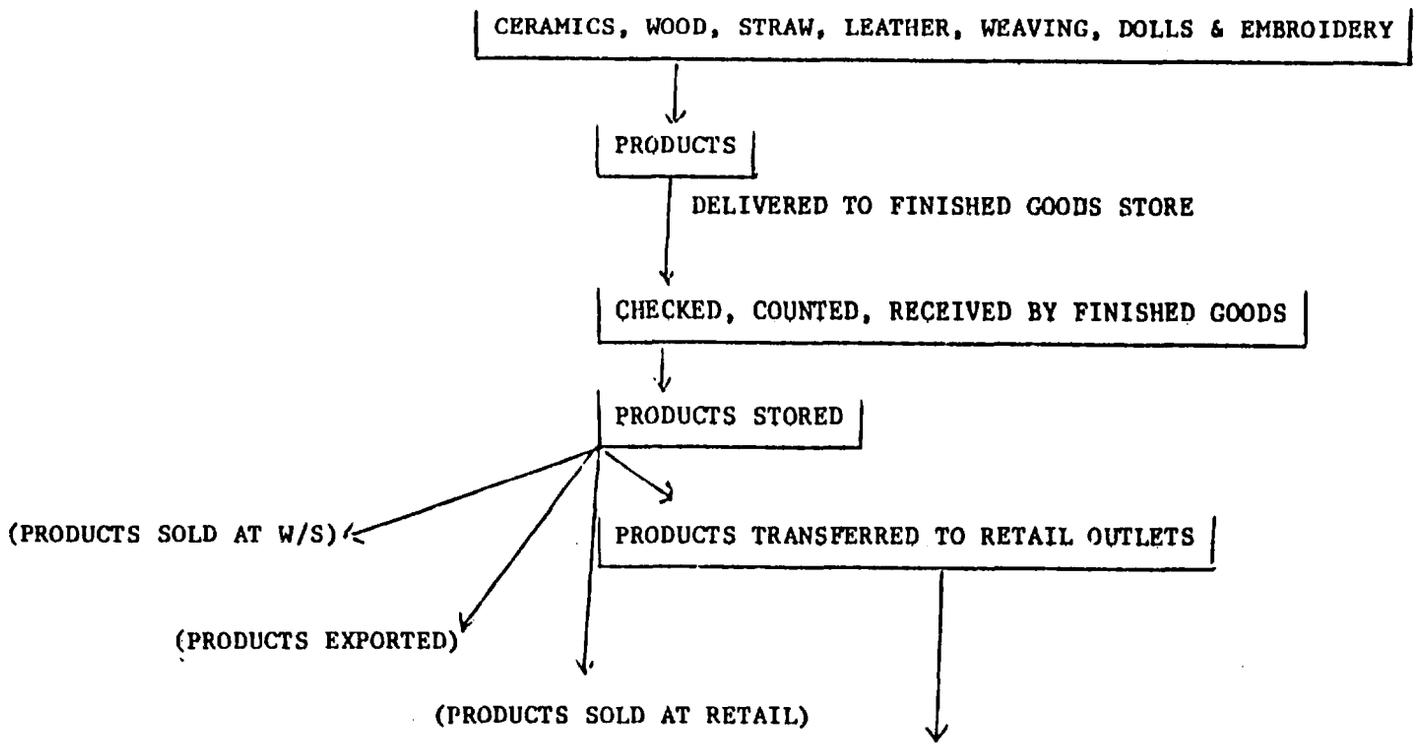
↓

DOCUMENTS GIVEN TO ACCOUNTS FOR PAYMENT

3.3.1. A.4.

FLOW OF PRODUCTS THROUGH DISTRIBUTION CHANNELS

COTTAGE CRAFT PRODUCTS - FACTORY PRODUCTION - COMMERCIAL OUTSIDE PRODUCTS*



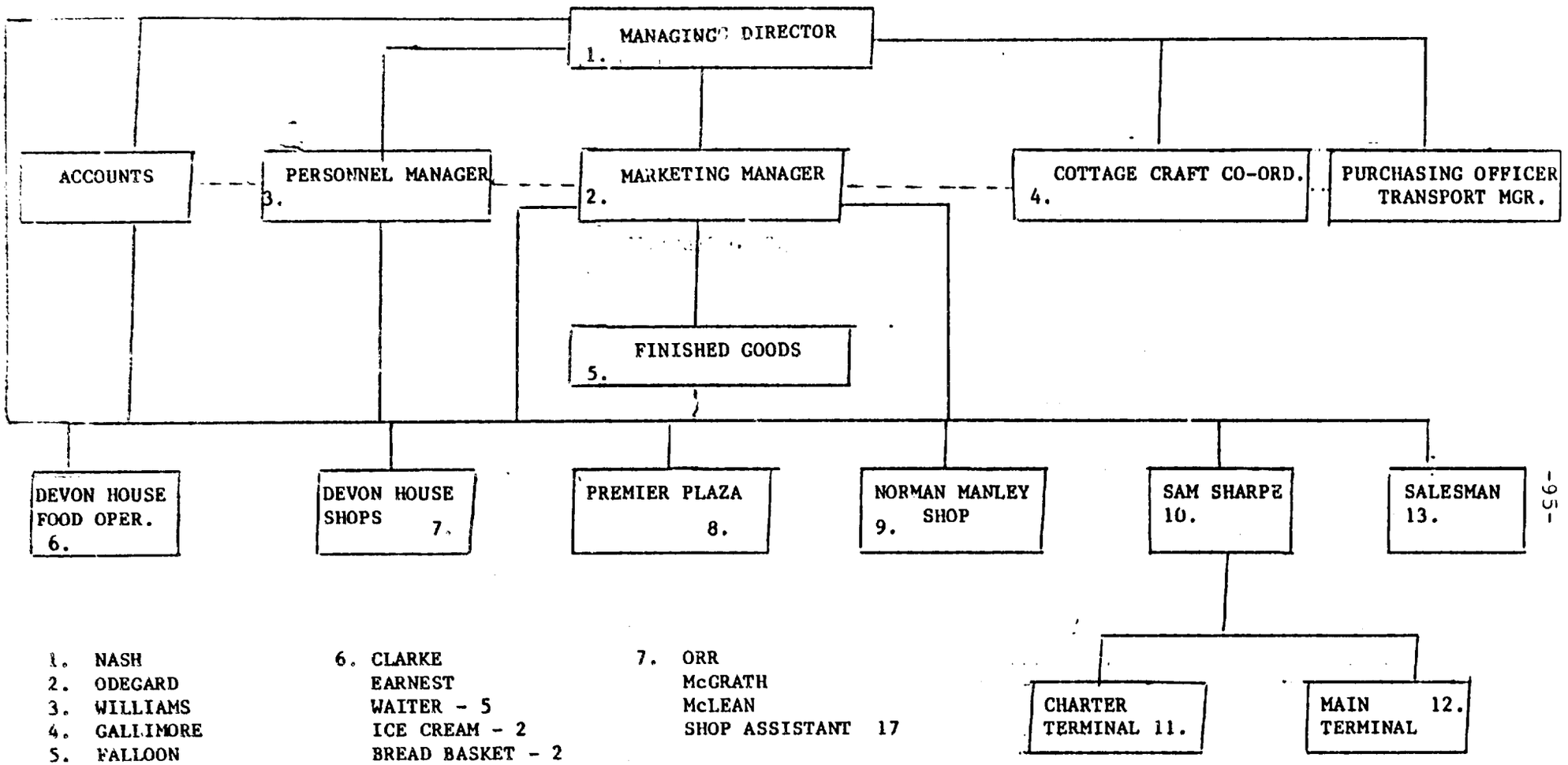
TUESDAY - PREMIER PLAZA AND NORMAN MANLEY
THURSDAY - MONTEGO BAY
FRIDAY - DEVON HOUSE

* IN CERTAIN CASES, COMMERCIAL OUTSIDE PRODUCTS ARE DELIVERED DIRECTLY TO RETAIL OUTLETS WHERE THEY ARE CHECKED AND RECEIVED. ORDERS FOR PRODUCTS ARE APPROVED BY MARKETING MANAGER - RECEIVAL DOCUMENTS ARE SENT TO MARKETING MANAGER

3.3.1. B

EXISTING STRUCTURE

MARKETING DEPARTMENT



1. NASH
2. ODEGARD
3. WILLIAMS
4. GALLIMORE
5. FALLOON
   SHETTLEWOOD
   GRIFFITHS
   KING
   STOCK BOY

6. CLARKE
   EARNEST
   WAITER - 5
   ICE CREAM - 2
   BREAD BASKET - 2

7. ORR
   McGRATH
   McLEAN
   SHOP ASSISTANT 17

8. SAMUELS
   HARRIS

9. GRIFFITHS
   RICKETTS
   GENTLES

10. BROWNE
    GRANT
    HENRY

11 & 12. THOMLINSON
    WOOLCOCK
    BELL
    BELL
    McKENZIE

13. CAMPBELL

3.3.1.c

OVERHEADS AND GROSS SALES OF SALES OUTLETS - COMPARISON
APRIL 1983 - DECEMBER 1983

	Premier Plaza	Norman Manley	Sam Sharpe	Mo-Bay Airport Shop -2	Devon House Brawta	Devon House Tannery	Devon House Essence	Devon House New TJ	Devon House Country Craft	Devon House Olde T.J.	Pickney	Devon House New Kitchen	Devon House Vault	Coffee Terrace	Devon House Bread Basket	Devon House Bakery
GROSS SALES (Thousands)	126.8	230.3	61.0	317.5	120.8	43.3	72.3	73.1	60.3	117.8	39.2	87.1	9.1	80.6	51.7	6.4
Overhead, including electricity, telephone, water, rent, wages and salaries	17.7	20.6	17.3	27.4	14.3	10.6	10.8	11.6	11.5	9.7	10.6	11.3	7.8	103.0	8.4	11.9
Percentage of Overhead to gross sales	14%	8.9%	28%	8.7%	11.8%	24%	15%	16%	19%	8%	27%	13%	85%	127.8%	16%	186%
Order of Performance	6	3	12	2	4	10	7	8	9	1	11	5	13	14	8	15

3.4. Resuming comments and sugeestions

The analysis of marketing issues and long discussions with the marketing managers, and the ceramics expert result in the following suggestions:

(1) Reduction of the number of products and simultaneous increase of output per product to an economic lot size. From the economic point of view it is inadmissible that T.J. continues to produce 618 different items. The nature of most of the products does not allow job production but requires mass production to allow to benefit of economies of scale.
Therefore it is suggested that product selection is initiated immediately. The following steps will be necessary:

(a) Set up product selection work groups for each product line compri sing the managing director as co-ordinator, the marketing manager, the work-shop manager (who should know the economics of production of the products concerned) and the de-signer.

(b) Draw up a list of criteria to select the products to be produced in larger lot sizes. Criteria should comprise
- market criteria (demand, sales figures of the past, potential markets etc.)
- production criteria (minimum lot size, estimate of economics of scale, cost of special devices etc.)
- other economic criteria.

(c) Select the 5 to 10 top products for each product line for immediate production.

(d) Introduce a product sheet for each product. It should contain: denomination of the product, space for a product code, date of design, name of designer, annual production, annual sales,

price history, direct cost, exact raw material requirement, origin of raw material (local or imported), job time, criteria for having been selected, optimum lot size,etc.

(2) Development of a product strategy:
In addition to (1) it is necessary to develop a product strategy. The following questions should be answered in writing by the top managers without consultation and discussed in brain storming sessions:

(a) What is the business of T.J.?
(b) Who are T.J. customers? (Tourists, housewives...)
(c) What do T.J. customers want?
(d) How much will T.J. customers buy at what price?
(e) Should T.J. be or become product leader?
(f) Does T.J. need new products?
(g) What advantages does T.J. have compared with competitors?
(h) What of existing and potential competition?
(i) What profit margins can be expected?

(3) Further development of the marketing strategy:

The following questions can serve as guides for establishing a marketing strategy:
(a) Who are the actual and potential customers of T.J.?
(b) How do they buy? In super-markets?
(c) How is it best for T.J. to sell?
(d) Are T.J. products known?
(e) Does a T.J. brand exist?

(4) Product-market-matrices:

Several product-market matrices could be of help in developing the marketing strategy and in production planning.

(a) Matrix of actual and potential (new) markets and products:

	Actual markets A B C D E F	New (potential) markets .....
Actual products 1 2 3 4 5 . .		
New products		

For each product should be shown estimated total demand and T.J. market share.

(b) Planning matrix of market segments and products:

Market segments

	Tourists	Souvenirs
Products 1 2 3 4 . . .		

3.5. Estimate of sales revenues:

After long discussions and based on the result of the analysis, the following estimate of sales revenues was produced:

Table 3.4.: Sales revenues in J.$.

		Min	Max
	83/84	84/85	84/85
	2.900.000	3,777.000	6.000.000
Whole sales:	250.000	627.000	1.200.000
T.J. goods	250.000	440.000	700.000
Craft outside goods	-	187,000	500.000
Retail:	2.635.000	3.000.000	3.850.000
T.J. goods	1.379.580	1.578.000	1.950.000
Craft outside goods	878.500	948,000	1.250.000
Commercial outside goods	376.920	474.000	700.000
Exports:	15.000	150.000	950.000
T.J. goods	-	52.000	400.000
Craft outside goods	15.000	78.000	530.000
Commercial outside goods	-	20.000	20.000

The cash flow table 10.2. is based on these figures. The minimum figure of 3.777.000 is supposed to be realized in 1984/85. The sales revenues will increase to 5,000.000 in 1985/86 and to the maximum of 6.000.000 J.$ in 1986/87.

The estimates may be improved , but more information and analytical work and planning will be necessary to do so.

A production plan and the cost of sales should be worked out as soon as possible.

4. RAW MATERIALS & OTHER INPUTS

4.0. INTRODUCTION

Many different raw materials are needed in T.J. and many management problems are related to each of them. This chapter deals with major aspects only: basic information on all materials and inputs, including supply and cost, raw material requirement by product, material cost by product, supply programme, storage and projections of cost of raw materials.

All issues connected with technology, cost and storage are handled at the level of and classified by production unit. Other issues like raw material cost projections are dealt with globally. Special attention is paid to imported raw materials and the possibilities of import substitution.

4.1. RAW MATERIALS AND OTHER INPUTS IN CERAMICS

4.1.0. Introduction

Raw materials and utilities are used to make:

- Clay bodies
- plaster for moulds, and
- glazes.

Some of them are of local origin, others imported. Import substitution would be possible under certain conditions. More information on this issue will be given for the concerned materials.

4.1.1. Description of raw materials

4.1.1.1. Materials used in clay bodies

(1) Liguanea Clay: (Al_2O_3-$2SiO_2$-$2H_2O$)

A) Liguanea clay deposits are found in an area extending from Harbour View to Ferry in the Kingston area; (Liguanea Plains). Due tc urban development, previous publications indicate that available sources may be depleted within ten years. (No actual tonnage estimates have ever been made.) Time table for delivery can be within 48 hours, but subject to delay from adverse weather conditions. It is easily mined and its close proximity to Kingston make accessibility easier. Supply is subject to available funds.

(B) Liguanea Clay is a red-firing, secondary clay with montmorillonite as a major constituent. Due to its high calcium content the firing range is limited to earthenware temperatures. This clay tends to crack easily during preliminary dehydration, limiting its use as a minor component in clay body formulations. If precise drying is controlled it may be suitable for small items such as figurines and non-structural ceramics, such as flower pots. Total fired shrinkage at 1210°C is 12 percent.

(C) Current unit cost is J$.105 per lb., delivered to compound and unloaded.

(2) Castleton clay (Al_2O_3-$2SiO_2$-$2H_2O$)

(A) Castleton clay deposits are found in the Northern mountains of St. Andrew parish, (Above Rocks and Castleton Gardens). Previous publications indicate

an excess of 160,000 long tons of available clay. Time-table for delivery can be 7 to 10 days and is definitely subject to delay from adverse weather conditions. Access is limited, with clay transported from site to road by donkey. Supply is subject to available funds.

B) Castleton clay is a buff-firing residual clay with holloy-site as a major constituent and a very high silica content, (Above 60 percent). This clay is suitable for the manufacture of pottery and structural ceramics, such as bricks and tiles. The firing temperature of this clay is between 1100°C to 1270°C resulting in a versatile product and process range. Total fired shrinkage at 1210°C is 10 percent.

C) Current material cost: J$.11 per lb., J$11.00 per 100 lbs.(1984 market price)
Local transportation and other costs J$87.50 per 5,000 lbs., J$.02 per lb.

Unit cost = J$ .13 per lb.

(3) Fire Clay:

A) Fire clay is at present being imported by Things Jamaican. Supply is subject to available foreign exchange. Shipping is dependent upon quantity ordered with delivery ranging between 1 to 7 months. Orders weighing over 200 lbs are shipped surface freight to reduce transportation costs. Availability

as an imported material is unlimited. Suitable substitution may be made locally if certain processing equipment is available; (ball mills and crushers).

B) Fire clay is a fairly non-plastic, sedimentary or residual clay. This clay material serves as an addition in a stoneware clay body formulation. Its relatively large particle size serves as an aggregate or filler to control shrinkage and improve workability. The average maturing temperature for such clays is 1300°C.

C) Current cost: J$.05 per lb., J$2.50 per 50 lbs. (Last order was 1978 with no recent price or other information available.)

Imported transportation and other costs:

1) J$.37 over 50,000 lbs.

2) J$.61 under 5,000 lbs.

1) Unit cost: J$.42 per lb.

2) Unit cost: J$.66 per lb.

(4) Ball Clay: $(AL_2O_3-2S;O_2-2H_2O$

A) Ball clay is at present being imported. Supply is subject to available foreign exchange. Shipping is dependent upon quantity ordered and source, with delivery ranging from 1 to 7 months. Orders weighing over 200 pounds are shipped surface freight to reduce transportation costs. Availability as an import

material is unlimited. At this time available Jamaican geological information does not conclusively reveal suitable indigenous materials. Although chemical analysis of Ball clays are very similar to some Jamaican clays.

B) Ball Clay is a highly plastic clay which is usually buff colour when fired. This is a very fine and slippery clay which will improve the workability of less plastic clays. Due to their relative purity, ball clays respond well to electrolytes, thus rendering tropical clays easier to deflocculant into a casting slip. Ball clays are also higher in shrinkage; 12% to 15% at vitrification temperatures above 1200°C.

C) Current Cost: J$.30 per lb., J$15.00 per 50 lbs. (1984 - market price, last order January 1984)

Imported transportation and other costs:

1) J$.37 over 50,000 lbs

2) J$.61 under 5,000 lbs

Unit cost: 1) J$.67 per lb.

2) J$.91 per lb.

(5) Talc: ($3MgO.4SiO_2.2H_2O$)

A) Talc deposits are found virtually worldwide. Steatite and Soapstone are attempts to name two varieties. As well as an excellent ceramic manufacturing material; talc is used in rubber and cosmetic industries. Supply is therefore

indirect through Geddes Grant distributors who furnish Goodyear Rubber Company of St. Thomas with talc, (brand name Ser-X). This is a locally available material if its major consumer continues operations. As usual, supply is subject to available finances, with delivery being 1 to 3 days upon approval. (Supply as an imported material is unlimited, but subject to available foreign exchange. Delivery ranges from 1 to 7 months depending upon source and quantity ordered.

B) Talc is added to stoneware clay bodies as a flux and to reduce thermal expansion. Talc is an important material in glaze formulation due to its low melting temperature of 900°C, and its strong eutectic with free silica. This results in tough, resilient glazes for production pottery purposes. Talc formulated glazes and clay bodies tend to promote warm, rich earth tone colours at high temperatures; browns, tans, olive greens, etc.

C) Current costs: J$.86 per lb., J$43.30 per 50 lbs. (1984 market price)
Local transportation and other costs: J$.02 per lb.
Unit cost: J$.88 per lb.

(6) Grog

A) Grog does not occur as a natural raw material. At present grog has been imported to Things Jamaican

with the last shipment being in 1978. Availability as an imported material is unlimited, but subject to available foreign exchange, with delivery ranging from 1 to 7 months depending upon quantity ordered. Suitable substitutions can be made locally if certain processing equipment is available; (ball mills, crushers, etc.) Previously, grog has been manufactured at Things Jamaican but as a solution to a mistake; (an over-fired bisque). The assistance of Scientific Research Council was employed to grind and mill material. Locally, delivery could range from 1 to 7 weeks, and subject to available funds.

B) Grog is a fired clay ground to a desired specification. It is useful in clay bodies as a filler to improve workability of high shrinkage clays. Grogs are considered either hard or soft; hard grogs are fired beyond the vitrification of intended clay body and soft grogs fired below vitrification of intended clay body. Soft grogs are advantageous to sticky tropical type clays. In general, grogs help to reduce shrinkage, warping and cracking problems associated with difficult clays. Grogs are ground and screened in various sizes; 80-100 mesh is suitable for most general pottery purposes.

C) Current cost: J$.05 per lb., J$2.50 per 50 lbs. (Pre- 1978 market price)

Imported transportation and other costs:

1) J$.37 over 50,000 lbs.

2) J$.61 under 5,000 lbs.

Unit Cost: 1) J$.42 per lb.

2) J$.66 per lb.

Current cost if locally produced: J$.47 per lb.

Local transportation and other costs: J$25.00 per 5,000 lbs. or less

Unit Cost: J$.49 per lb.

(7) Silica: (SiO_2)

A) Silica is the most important constituent of pottery production. It is present in two forms:

i) combined silica which is chemically presented in the parent clay, and

ii) free silica which is the addition to a mixture from a silica source.

It occurs naturally as quartz rock, flint, chert, and sand. Deposits are world-wide. Utilization has been from both foreign and domestic sources in the past. The majority of silica used is being imported. Supply as an imported material is unlimited, but subject to available foreign exchange; with delivery ranging from 1 to 7 months depending on source and quantity ordered. But, supply as a local material can be unlimited if there is proper access to or availability of certain processing equipment. Delivery can then range from 2 to 8

weeks. Relatively pure beach sand is a suitable silica source for most general pottery purposes.

B) Silica is a hard glassy substance which melts at 1710°C. The addition of silica to a clay body produces fired ware that is harder and more durable. It is a non-plastic material that carbonate is more preferable than heavy for pottery production purposes. Sodium carbonate is also difficult to store; requiring a very dry, cool space.

C) Current costs: J$1.32 per lb., J$66.00 per 50 lbs. (1983 market price, last order.)
Local transportation and other costs: J$.02 per lb.
Unit cost: J$1.34 per lb.

(8) Sodium Silicate $(Na_2 \cdot Si)_3$

A) Sodium silicate is the material most commonly used to transform a clay body mixture into a fluid casting slip. It is a synthetic material not available as an indigenous Jamaican resource. Imported supply is subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. Sodium silicate is considered the most effective electrolyte in the formulation of slip casting bodies.

B) Sodium silicate or "water-glass" is a soluable combination of silica and sodium carbonate. Sodium silicate is manufactured in a concentrated

form; thus very little is required to deflocculate common clays. It's purpose is to render fluid, a clay body mixture. Sodium silicate is difficult to store; (combining with carbon dioxide its deflocculating power is then altered.)

C) Current costs: J$2.60 per lb., J$65.23 per 25 lbs. (1981 market price, last order)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit Cost: 1. J$2.97 per lb
2. J$3.21 per lb.

(9) Sodium Carbonate: (Soda Ash) ($Na_2.CO_3$,

A) Sodium Carbonate is currently available locally. (Although it has in the past been an imported material.) Supply is through Geddes Grant distributors who furnish industries such as Colgate-Palmolive with sodium carbonate for the production of soaps, cleansers, detergents, etc. Its supply is unlimited if current consumers continue operations. As usual, local supply is subject to available finances, with delivery ranging from 1 to 7 days upon approval. (As an imported item its supply can be unlimited.)

B) Sodium carbonate is a highly soluble material that is generally used in conjunction with sodium silicate as a deflocculant for casting slips.

The combined use results in better fluidity of casting slips. Light density sodium acts as a filler to reduce shrinkage and warping. After firings, silica reduces the cooling contraction to improve better glaze and clay body "fit." Because of its lower eutetic, ground flint is preferred for improving earthenware clays. While quartz, (sand), is best for stoneware mixtures. Normally silica renders clay bodies more refractory. This will improve the versatility of many poor or difficult clays; such as tropical types. Silica is generally water-ground to 200 mesh sieve.

C) Current Cost: J$.64 per lb., J$32.00 per 50 lbs. (1984 market price)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit Costs: 1. J$1.01 per lb.

2. J$1.25 per lb.

4.1.1.2. α. Materials used in Glazes

(10) Nepheline Syenite: ($K_2O.3Na_2O._2AL_2O_3.9SiO_2$)

A) Nepheline Syenite is a feldspathic material that is currently being imported. Supply as an imported material is unlimited. but subject to available foreign exchange, with a delivery ranging from 1 to 7 months depending upon source and quantity ordered. Present geological information suggest possible indigenous substitutions. Further field surveys must be conducted to ascertain supply, quantity, and precise locations. Local supplies would be subject to more conclusive reports as well tc access or the availability of certain processing equipment. Delivery could then range from 1 to 10 weeks depending upon available funds.

B) Next to clay and silica, feldspar or feldspathic materials are crucial to the production of ceramic products. All igneous rocks, whether volcanic, hyabyssal or intrusive contain feldspars. Generally, there is little or no descriptive information of Jamaican stones in these categories. Feldspars can be porphyritic rocks such as New Castle porphyry (granite) and Rock Castle Hills (andesite). Jamaica also

contains feldspars of the plagioclase series, such as basalt and dolerite; which should warrant further investigations. Feldspars are used in proportions up to 25% as a flux in clay bodies and up to 100% in glaze formulas. Feldspars are generally associated with stoneware firing temperatures of 1200°C or above. But due to their high co-efficient of expansion, secondary fluxes are required to control crazing. Feldspars are usually ground to 200 mesh. Utilization of Jamaican feldspathic minerals would greatly increase the possible use of more indigenous materials.

C) Current cost: J$.231 per lb., J$11.56 per 50 lbs. (1984 price for 22,400 lbs order)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit cost: 1. J$.601 per lb.
2. J$.841 per lb.

(Local milling and transportation of a Jamaican substitution: J$.32 per lb.)

(11) Fritts, (Low Sol):

i) 362210
ii) 362212
iii) Ferro 3110

A) Fritts are synthetic compounds derived from the molten combination of basic minerals. It is

currently being imported. Supply is unlimited, but subject to available foreign exchange and delivery ranging from 1 to 7 months depending upon source and quantity ordered. Fritts could be manufactured locally if certain processing equipment was made available; (such as fritting crucibles, crushes, and mills). Some, but not entirely all, Jamaican materials can be used in the formulating of these fritt mixtures; (such as silica, soda ash, sugar cane ash, clays, etc.)

B) Low sol is a general description of a formula which is composed of two fritts; a lend fritt and a boro-silicate fritt. Low sol glazes and fritts were developed to overcome the problem of lead toxicidity. The purposes of fritting are:

1. to render otherwise solu ble minerals insoluble. (Solubles can upset the fluidity of glazes.

2. to render harmless any toxic substance;

3. to combine all required materials, and render them less volatile;

4. to give better glaze control at fusion;

5. to incorporate materials that in their natural state represent complex problems.

It is rarely necessary to fritt an entire glaze formule. Fritting will also render materials inert, which will quickly settle and set hard in the glaze bucket. Unfritted clays and feldspars are valuable suspension agents to control setting.

C) Current costs: (1982 prices)

i. 362210 (U.K.) J$1.77 per lb.
(1982 market price)

ii. 362212 (U.K.) J$1.78 per lb.
(1982 market price)

iii. Ferro 3110 (U.S.A.) J$2.89 per lb.
(1984 market price)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit Costs:

i. 1. J$2.14 per lb.
2. J$2.38 per lb.

ii. 1. J$2.15 per lb.
2. J$2.39 per lb.

iii. 1. J$3.26 per lb.
2. J$3.50 per lb.

(12) China Clay: ($Al_2O_3.2SiO_2.2H_2O$)

A) China Clay, kaolin (as a glaze ingredient). It is the purest natural clay; it is therefore indispensable in the calculation of glazes. At present Jamaica has no suitable substitutes for this material. Supply is subject to available foreign exchange with delivery ranging from 1 to 7 months depending on source and quantity ordered.

B) In glazes kaolin introduces alumina and silica to control glaze viscosity during firing. This is due to kaolin's high vitrification of 1700°C. Its whiteness helps to clarify and sustain desired glaze colours. It also helps control glaze fluidity in the bucket. At present importing must continue.

C) Current cost: J$.297 per lb., J$14.85 per 50 lbs.
(1984 price for 22,400 lbs. order)

Imported transportation and other costs:

1. J$.37 per lb over 50,000 lbs.
2. J$.61 per lb under 5,000 lbs.

Unit cost: 1. J$.667 per lb.
2. J$.907 per lb.

(13) Calcium - Limestone

i. whiting (CaCO)

ii. Wollastonite ($CaC.O_3$)

A) Calcium deposits occur worldwide as sedimentary

rocks. It is currently an imported material with supply unlimited, but subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. There are abundant supplies of calcium in Jamaica, but the majority is exported. For ceramic purposes local minerals are suitable, but subject to the usual financial approval and proper access to or availability of certain processing equipment. Delivery will range from 1 to 10 weeks. Caribbean Cement Company is suggested as a local supply. Aragonite materials are other suitable calcium sources; (such as ground sea shells).

B) Calcium is a readily available material used as a filler in low temperature glazes and as an important flux in stoneware glaze calculation; thus making feasible the utilization of more indigenous materials. Calcium also helps to control shrinkage and reduce warping. Introduction of calcium compounds in low sol glaze formulas assists the stabilization of soluble and toxic substances. Whitings are crushed limestones that are usually precipitated and therefore nearer to a pure chemical. Wollastonite as a mineral is natural combination of silica and calcium. Calcium minerals are excellent flux sources due to

their versatile eutectic with other materials. It begins fluxing at 1100°C and can remain stable up to 2500°C.

C) Current costs: i. J$.85 per lb., J$42.50 per 50 lbs.

ii. J$2.04 per lb.,
J$102.00 per 50 lbs.
(1984 market prices)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

i. Unit Costs: 1. J$1.22 per lb.
2. J$1.46 per lb.

ii. Unit Costs: 1. J$2.41 per lb.
2. J$2.65 per lb.

(14) Talc: (as a glaze ingredient) ($3MgO.4SiO_2.H_2O$)

A) See 4.1.1.1. (5) Clay Bodies

B) Talc is an important material for glaze formulation due to its low melting temperature of 900°C and its strong eutectic with silica and other oxides. Talc in glazes provides unattached magnesia and silica that begins to decompose at 900°C. It is therefore useful in producing satin matt and opaque glazes. The action of magnesia in talc acts as a catalyst to restrain the tendency of glazes to crazing.

C) See 4.1.1.1. (5) Clay Bodies

(15) Silica: (As a glaze ingredient) (SiO_2)

A) See 4.1.1.1. (7) Clay Bodies

B) Silica is the name of the chemical compound silicon dioxide. Silica is the necessary constituent in the forming of glass, (glazes). Glazes are the conversion of the quartz phase of silica into the glassy phase. Depending upon formulation and desired effects, this is achieved through the addition fluxes and the consequent melting of these materials.

C) See 4.1.1.1. (7) Clay Bodies

(16) Lead Bisilicate: ($PbO.2SiO_2$)

A) Lead Bisilicate is at present being used only to deplete the available stock. Other low sol fritts are better sources for glazing materials; such as low sol 362210 or Ferro 3110. This is due to the obvious association of lead compounds. This material was last ordered in 1981 and should not be ordered in the future. It is currently being used only for calculating glazes for figurine products.

(17) Zinc Oxide: (ZnO)

A) Zinc oxide is a multi-purpose ceramic material. Its supply is unlimited as an imported, but subject to available foreign exchange with delivery ranging from 1 to 7 months depending

upon source and quantity ordered. This material will continue to be imported whether directly or indirectly.

B) Zinc oxide is used in glaze calculation as a flux, as a general hardener, as an opacifier, and as an anti-craze agent. It is insoluble and therefore very useful in glazes. It enhances colours produced from copper and cobalt compounds. It is an excellent flux for mid-range firing temperatures, 1100°C to 1200°C. But in high percentages it maybe prone to promote glaze crawling, this is due to the high initial shrinkage in early stages of firing. Zinc oxide has a very versatile eutectic with other minerals. Although zinc oxide is an active flux, it does remain stable up to temperatures of 1800°C. Zinc oxide is volatile and therefore recommended for fully oxidized firings.

C) Current Price: i) J$2.43 per lb., J$121,50 per 50 lbs. (US$.7154 per lb., last order 1982)

ii) J$4.76 per lb. J$238.00 per 50 lbs. (US$1.40 per lb., current market value 1934)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit costs: i. (1982) 1. J$2.80 per lb.
2. J$2.04 per lb.
ii. (1984) 1. J$5.13 per lb.
2. J$5.37 per lb.

(18) Zircon ($Zr0.SiO_4$)

A) Zircon ore deposits occur in Brazil and Australia. It is therefore an imported material. Zircon is the raw earth mineral that many Zirconium products are manufactured from. Supply is subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. There are no local substitutes for this material.

B) Zircon materials are usual substitutes as opacifiers for the more expensive tin oxide. It is used as both a matting and opacifying agent in glaze calculation. The advantage of Zircon over tin is that it is more stable in varied firing conditions such as gas and electric kilns. Zircons achieve varied texture and colour results depending upon the primary fluxes used. Zircon can sustain high melting temperatures of over 2500°C. Zircon compounds have the advantage of easy dispersion in the glaze mixture; (tin oxide tends to coagulate). There are various trade names under which Zircon compounds are manufactured from: superpax, opax and Zircopax.

C) Current costs: J$4.76 per lb., J$288.00 per 50 lbs.
(1984 market price, US$1.40 per lb.)
Imported transportation and other costs:
1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb under 5,000 lbs.
Unit costs: 1. J$5.13 per lb.
2. J$5.37 per lb.

(19) Tin Oxide: (SnO_2)

A) Tin oxide has been imported in the past, but it is the opinion that Zircon substitutions are more suitable. (See section on Zircon materials) Tin oxide is excellent as an opacifing agent, but its extremely high cost makes it unfavourable for most pottery industries.

(20) Titanium Dioxide (TiO_2)

A) Titania occurs naturally in many ore deposits and sands. It is extracted from rutile type ores. Imported supply is unlimited but subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. Local paint manufacturers currently import titanium quantities much larger than any pottery factory may ever need. A suggested liason with such industries may establish a stable local supply of this raw material.

B) Titanium dioxide is another multi-purpose material for the production of ceramic items. It is particularly valuable as a lead stabilizer in low sol fritts; (under 1% will be sufficient). Moderate amounts of titania will results in limited and muted colours. High amounts can promote crystalline growth and opacity, thus producing matt type glazes.

C) Current cost: J$3.10 per lb., J$155.00 per 50 lbs. (1982 price,last order)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit Costs: 1. J$3.47 per lb.
2. J$3.71 per lb.

(21) Dolomite: ($CaCO_3.MgCO_3$)

A) Dolomite occurs widely with common deposits near areas of limestone. It is at present an imported material. Supply is unlimited, but subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. According to recent Jamaican geological reports, local quality of this material ranges from 34% to 42% magnesium, which is sufficient for industrial considerations. There seems to be ample information to suggest further research. Local supply will also be subject to

available funds and proper access to or availability of certain processing equipment. But, importing costs are relatively inexpensive compared to actual quantities required in a moderate ceramic industry.

B) Dolomite is a highly valuable fluxing material used in a variety of ceramic and metallurgical industries. It reaches full fluxing power at temperatures above 1170°C. Dolomite is used to introduce calcium and magnesia into glazes. Dolomite gives smooth, hard surfaces to glazes and remains fairly vicous at fluid temperatures over 1100°C. Dolomite is particularly favourable in stoneware glaze calculation. Dolomite can promote crystalline growth in high percentages, thus encouraging development of matt type glazes.

C) Current costs: J$.612 per lb., J$30.60 per 50 lbs.
(1984 market price)

Transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit costs:

1. J$.982 per lb.
2. J$1.222 per lb.

(22) Colemanite: Gerstley Borate ($2CaO.3B_2O_3.5H_2O$ or $1CaO.1B_2O_3$)

A) Colemanite is a crystalline mineral which occurs

in the western U.S.A. It is currently being imported. Supply appears to be unlimited, but subjected to available foreign exchange with delivery ranging from 1 to 7 months depending upon quantity ordered and source. There is no indigenous substitution.

B) Dolomite is particularly useful in low and middle temperature glazes. It begins fluxing at 900°C and above 1100°C becomes a very active flux; giving bright, shiny glazes.
Colemanite has a low co-efficient of expansion thus the glaze is less likely to craze. A small percentage in stoneware glazes acts as a trigger flux, encouraging an early eutetic with a variety of oxides. This is particularly interesting in regard to adapting local materials that tend to be more refractory. But due to the water content in colemanite, it can promote glaze crawling during dehydration.

C) Current costs: J$1.70 per lb., J$85.00 per 50 lbs.
(1984 market price)

Imported Transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit costs: 1. J$2.07 per lb.
2. J$2.31 per lb.

(23) Barium Carbonate: ($BaCO_3$)

A) Barium carbonate is a crucial material in the utilization of tropical clays. It is currently an imported material. Supply is unlimited, but subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. There are no suitable local substitutions.

B) Barium carbonate is a precipated compound that is used in both clay and glaze calculations. It is introduced in clay body formulas to reverse their natural tendency to flocculate. This is very important in the development of slip casting bodies from tropical clays which are high in soluble salts and calcium. Barium helps to form a strong bond between other oxides because of its low decomposition temperature, 900°C. Barium carbonate is insoluble and should be treated with care because it is highly poisonous.

C) Current costs: I) J$1.65 per lb., J$58.25 per 50 lbs.
(1982 price; last order)
II) J$3.57 per lb., J$178.50 per 50 lbs
(1984 market price)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit costs: I. 1. J$2.01 per lb.

2. J$2.26 per lb.

II. 1. J$3.94 per lb.

2. J$4.18 per lb.

(24) Bentonite: ($AL_2O_3.4SiO_2.2H_2O$)

A) Bentonite is a highly plastic clay that originates from the decomposition of volcanic ashes. Large deposits occur in the North western U.S.A. It is currently and will continue to be an imported material. Supply is unlimited, but subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity of accompanying order. Although most Jamaican clays are high in morillonite minerals like Bentonite, they are unsuitable for glaze calculations.

B) Bentonite is a very useful material in ceramic production. It is an excellent colloidal material for regulating glaze suspension and viscosity; up to 2% is suggested to control sedimentation in the glaze mixture. It is recommended that Bentonite be mixed thoroughly in water prior to its addition to the glaze mixture.

C) Current costs: J$.612 per lb. J$30.60 per 50 lbs.

(1984 market price)

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb. under 5,000 lbs.

Unit costs:

1. J$.982 per lb
2. J$.222 per lb.

(25) Sodium Carbonate: (Na_2CO_3)

A) See 4.1.1.1. (9) Clay body raw materials section.

B) Soda ash is one of three strong alkaline oxides that provide active fluxes in ceramic glaze calculation. Melting begins at 800°C, but in large percentages it becomes very unstable above 1200°C. Soda ash promotes low-temperature fusibility and enhances colours. It is also soluble thus crystallizing upon dehydration. This is particularly useful in formulating engobes and slips and improving the adhesion properties of the raw glaze on the bisquit.

C) See 4.1.1.1. (9) Clay body raw materials section.

4.1.1.2.b. Materials used as Glaze Colorants:

A) The following raw materials are used as colorants in glaze calculation. These will always be imported oxides, which are not to be confused with glaze stains. The only suitable indigenous material is hematite; (iron oxide). Although Jamaica possesses many small amounts of various oxides, extracting costs prevent a feasible use. Supplies are unlimited, but

subject to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered.

(26) Rutile: (TiO_2)

B) Rutile is a natural titania that has been contaminated with iron. Rutile produces crystalline growth in glazes thus promoting opacity. Colours achieved range from golden yellows to rich browns, depending upon type and quantity of primary flux used.

C) Current costs: J$3.68 per lb., J$184.00 per 50lbs. (1984 market price)

Unit cost: 1. J$4.05 per lb.

2. J$4.29 per lb.

(27) Black Copper Oxide: (CuO)

B) Copper oxide is a very strong colouring oxide, it is rarely used in amounts of over 5%. Green is the primary colour achieved with copper oxide, it can vary from deep emerald to light lime colours. It is possible to achieve brilliant red colours with copper if proper glaze calculation and firing procedures are maintained.

C) Current cost: J$11.90 per lb., J$595.00 per 50 lbs. (1984 market price)

Unit cost: 1. J$12.27 per lb.

2. J$12.71 per lb.

(28) Red Iron Oxide: (Fe_2O_3)

B) Iron oxide is one of the most abundant and common metallic oxides. It also has the most versatile colour producing range; yellow, browns, blacks, greys, and even blues. It is indispensable in the production of glazed ceramic products.

C) Current costs: J$1.45 per lb., J$72.50 per 50 lbs.
(1981 price, last order)
J$2.55 per lb., J$127.50 per 50 lbs.
(1983 market price)

Unit costs: 1. J$2.92 per lb.
2. J$3.16 per lb.

(29) Manganese Dioxide: (MnO_2)

B) Manganese occurs in association with iron ore deposits. It is useful in production of blacks and purples depending upon the type of glaze and firing procedure used.

C) Current costs: J$1.53 per lb., J$76.50 per 50 lbs.
(1984 market price)

Unite costs: 1. J$.184 per lb.
2. J$2.20 per lb.

(30) Cobalt Oxide: (CoO)

B) Cobalt is probably the most dependable oxide for glaze colouring, it is extremely powerful and needs only to be used in small proportions. It is

the primary source for blue colours of all types.

C) Current costs: J$54.40 per lb. J$544.00 per 10 lbs.
(1984 market price)

Unit costs: 1. J$54.77 per lb.

2. J$55.01 per lb.

(31) Iron Chromate: $(Fe_2O_3 \cdot Cr_2O_3)$

B) Iron Chromate is a dense compound of iron and chromium. It gives opacity to glazes and promotes grey colours.

C) Current costs: J$2.55 per lb., J$127.50 per 50 lbs.
(1984 market price)

Unit costs 1. J$2.92 per lb.

2. J$3.16 per lb.

Glaze Stains

A) The following stain materials are currently being used as colorants in glazes and for brush work of decorative products. Stains are different from oxides in that they are synthetic combinations of many oxides. The desired formulas are calculated then fritted to reduce solubility. This improves dispersion within the glaze mixture, promoting a stable, less volatile colouring agent. Stains are available in a variety of compositions depending upon desired

effects; (opacity, transparency, brightness, mattness and colour).

B) These products are good for colouring glazes but their costs render them inaccessible to most moderate ceramic industries. There are no substitutes for these imported materials; (unless local or cheaper oxides are suitable from a marketing point of view). Imported supply is therefore unlimited, but subject to available foreign exchange with delivery ranging from 1 to 7 months depending on source and quantity of accompanying order.

C) Current costs:

Imported transportation and other costs:

1. J$.37 per lb. over 50,000 lbs.
2. J$.61 per lb under 5,000 lbs.

(32) Maroon Glaze Stain

J$37.70 per lb. J$377.00 per 10 lbs.

(1982 price, last order)

Unit costs: 1. J$38.07 per lb.

2. J$38.31 per lb.

(33) Vanadium Yellow Stain

I. J$2.75 per lob., J$137.50 per 50 lbs

(pre 1980 price; last order)

II. J$45.90 per lb., J$459.00 per 10 lbs.

(1984 market price)

Unit costs: I. 1. J$3.12 per lb.

2. J$3.36 per lb.

II. 1. J$46.27 per lb.

2. J$46.51 per lb.

(34) Royal Turquoise

J$17.90 per lb., J$179.00 per lb.

Unit costs: 1. J$18.20 per lb.

2. J$18.51 per lb.

(35) Bright Yellow Stain K-83

J$17.90 per lb., J$179.00 per 10 lbs.

(1982 price, last order)

Unit costs: 1. J$18.20 per lb.

2. J$18.51 per lb.

(36) Bright Green Stain K-85

J$17.90 per lb. J$179.00 per 10 lbs.

(1982 price, last order)

Unit costs: 1. J$18.20 per lb.

2. J$18.51 per lb.

(37) Blue Glaze Stain

I. J$2.25 per lb., J$112.50 per 50 lbs

(pre-1980 price, last order)

Unit costs: 1. J$2.62 per lb.

2. J$2.86 per lb.

II. J$40.80 per lb. J$408.00 per 10 lbs.

(1984 market price)

Unit costs: 1. J$41.17 per lb.

2. J$41.41 per lb.

(38) Red Glaze Stain K-86

J$14.50 per lb. J$725.00 per 50 lbs.

(1982 price, last order)

J$59.50 per lb. J$2380.00 per 40 lbs.

(1982 price, according to invoice)

Unit costs: 1. J$59.87 per lb.

2. J$60.11 per lb.

(39) Yellow Golden Stain

J$14.50 per lb. J$725.00 per 50 lbs.

Unit costs: 1. J$14.87 per lb.

2. J$15.11 per lb.

(40) Pink Glaze Stain K-80

J$19.35 per lb. J$193.50 per 10 lbs.

(1982 price, last order)

J$33.40 per lb. J$334.00 per 10 lbs.

(1984 market price)

Unit costs: 1. J$33.77 per lb.

2. J$34.01 per lb.

(41) Paris Green Stain

J$2.25 per lb., J$22.50 per 10 lbs.

(pre - 1980 price last order)

J$32.30 per lb., J$323.00 per 10 lbs.

Unit costs: 1. J$32.67 per lb.

2. J$32.91 per lb.

(42) Victoria Green Stain

J$2.25 per lb., J$22.50 per 10 lbs.

(pre - 1980 price; last order, no current market price available.

Unit costs: 1. J$2.62 per lb.

2. J$2.86 per lb.

(43) Crimson Glaze Stain:

J$2.25 per lb., J$22.50 per 10 lbs.

(pre 1980 price, last order; no current market price available.)

Unit costs: 1. J$2.62 per lb.

2. J$2.86 per lb.

(44) Black Glaze Stain

J$2.75 per lb., J$27.50 per 10 lbs.

(pre 1980 price, last order)

J$57.80 per lb., J$578.00 per 10lbs.

(1984 market price)

Unit cost: 1. J$58.17 per lb.

2. J$58.41 per lb.

(45) Cobalt Blue Glaze Stain

J$69.60 per lb., J$696.00 per 10 lbs.

(1982 price, last order)

J$88.40 per lb., J$884.00 per 10 lbs.

Unit costs: 1. J$88.77 per lb.

2. J$89.01 per lb.

(46) Hazelnut Brown Glaze Stain

J$32.30 per lb. J$323.00 per 10 lbs.

(1984 market price)

Unit costs: 1. J$32.67 per lb.

2. J$32.91 per lb.

(47) Salmon Glaze Stain

Unit costs: (no available price)

4.1.1.3. Utilities: Electricity, gas, plaster and others.

(48) Electricity

A) Electrical power is presently being supplied to Bumper Hall by Jamaica Public Service Co. Present voltage is 240V, 150 amps., (delivered to ceramics dept.) Service is subject to both scheduled and unscheduled interruptions, plus occasional voltage fluctuations. This activity is very detrimental to sensitive electrical equipment.

B) Electric kilns should be safer and easier to operate than combustible fuel kilns. Generally, electric kilns will also tend to be higher in maintenance costs. But they have the advantage of promoting clean, pure oxidizing atmospheres in the kiln chamber. This is cruical for the glaze firing of certain oxides and stains which require a controlled atmosphere to produce

specific colours; (such as reds, yellows, oranges, pinks, purples, etc.) An oxidizing kiln is better suited for the firing of low sol fritts which may contain lead compounds as trigger fluxes. (Combustible fuels adversely effect lead and high boron glazes; the results are severe blistering.) Electric kilns are also advantageous for firing low temperature lusters and enamels which must be totally oxidized for best results.

C) Current costs: J$.3796 per KWH used

I. Kieth Kiln: $\frac{220V \cdot 156\ amp}{1000} \cdot 10\ hours = 343.2$ KWH used

343.2
x .3796

J$130.2787 per glaze firing to 1210°C

Unit cost: J$2.36 per cubic foot of firing space.

II. Catterson Smith kiln: $\frac{220V.14lamp}{1000} .9\ hours$

= 279.18 KWH used

279.18
x .3796

J$105.9767 per glaze firing to 1210°C

Unit cost: J$4.28 per cubic foot of firing space.

III. Webcott Kiln: $\frac{220V.30amp}{1000}$. 12 hours
= 79.2 KWH used.

$$\begin{array}{r} 79.2 \\ \times \quad .3796 \end{array}$$

J$30.0643 per glaze firing to 1130°C

Unit cost: J$3.45 per cubic foot of firing space.

(49) Propane Fuel

A) Propane fuel is presently being supplied by Shell Oil Co. of Jamaica. Supply is subject to available funds with delivery ranging from 1 to 4 days upon approval. Local propane appears to be less than a suitable quality. Composition requests indicate a fuel that is 70% propane, 25% butane and betane and the remaining 5% inert materials; water.

B) The main advantage of gas fuel over electricity is the apparent cost savings. It can also provide uninterrupted service if sufficient supply is at storage tank. In general gas kilns are lower in maintenance and service costs, plus they tend to outlast comparative type electric kilns. Higher stoneware temperatures can be achieved at lower costs, (fuel and maintenance), thus enabling the use of more indigenous glaze materials which results in a lower product cost.

C) Current costs: J$4.38 per gallon

(1984 market price)

IV. Gas Kiln #1 : Bisque - 36 gallons used
73.31 cu.ft. x 4.38
$157.68 per firing to 950°C

Unit costs: J$2.15 per cu. ft. of firing space.

Glaze - 60 gallons used
x 4.38
$262.80 per firing to
1220°C

Unit costs: J$3.58 per cu.ft. of firing space

V. Gas Kiln #2 : Bisque - 36 gallons used
64.26 cu. ft. x 4.38
J$157.68 per firing to
950°C

Unit costs: J$2.45 per cu. ft. of firing space.

Glaze - 10 gallons used
x 4.38
J$262.80 per firing to 1220°C

Unit costs: J$4.08 per cu. ft. of firing space.

(50) Plaster ($2CaSO_4.2H_2O$)

A) Plaster is calcined, hydrated calcium sulphate. It is at present both a local and imported raw material. Imported supply is subjected to available foreign exchange with delivery ranging from 1 to 7 months depending upon source and quantity ordered. Local supply is also subject to available funds with delivery ranging from one

to four days upon approval.

B) Plaster of Paris is very essential in the production of slip-cast and press mould ceramic items. It has been used in the production of ceramics since the early 18th Century in Paris. Plaster is a white powder prepared from the calcination of gypsum stone. Upon proper burning, plaster is rendered hard by the addition of a desired water ratio, (please note plaster/water ratio chart). Plaster is used in two varieties: (1) imported - Due to the present inferior quality of local plaster, pottery plaster grade #1 is imported to produce master, (jack), case moulds and models; (2) Local - the relatively inexpensive and availability of local plaster make its use feasible, inspite of its present inferior state, (this is due to the improper burning of gypsum stone for pottery needs.) At present is only prepared at a construction grade of quality. The local plaster must also be sieved at 120 mesh to remove large aggregates that are detrimental to slip-casting operations. These problems could be rectified if there was better control in the requirement of locally produced plaster.

C) Current costs:

I Imported Plaster Pottery #1

J$54.40 per 100 lbs. (1984 market price)

temperatures during firings even if the kiln is equipped with a pyrometer. While the pyrometer may actually tell the temperature, the cones are a more reliable indication of the state of the glazes, since their melting indicates the effort of both heat and time on ceramic materials in the kiln. Different type cones are used for specific firings and temperatures; glaze, bisque, enamels, lusters, etc. Cones currently used are:

Large - 010, 08, 06, 04, 1, 3, 5, 7, 8;

Small -021, 017, 03, 1, 3.

C) Current costs: J$11.90 per 50 large size

J$ 9.35 per 50 small size

(1984 market price)

4.1.1.3. (51)

ORTON LARGE CONES				CONE	ORTON SMALL CONES	
60C°	108F°	150C°	270F°	NUMBER	300C°	540F°
585°C.	1085°F.	600°C.	1112°F.	022	*630°C.	*1165°F.
602	1116	614	1137	021	643°C.	1189°F.
625	1157	635	1175	020	666	1231
668	1234	683	1261	019	723	1333
696	1285	717	1323	018	752	1386
727	1341	747	1377	017	784	1443
767	1407	792	1458	016	825	1517
790	1454	804	1479	015	843	1549
834	1533	838	1540	014	*870	*1596
869	1596	852	1566	013	*880	*1615
866	1591	884	1623	012	*900	*1650
886	1627	894	1641	011	*915	*1680
887	1629	894	1641	010	919	1686
915	1679	923	1693	09	955	1751
945	1733	955	1751	08	983	1801
973	1783	984	1803	07	1008	1846
991	1816	999	1830	06	1023	1873
1031	1888	1046	1915	05	1062	1944
1050	1922	1060	1940	04	1098	2008
1086	1987	1101	2014	03	1131	2068
1101	2014	1120	2048	02	1148	2098
1117	2043	1137	2079	01	1178	2152
1136	2077	1154	2109	1	1179	2154
1142	2088	1162	2124	2	1179	2154
1152	2106	1168	2134	3	1196	2185
1168	2134	1186	2167	4	1209	2208
1177	2151	1196	2185	5	1221	2230
1201	2194	1222	2232	6	1255	2291
1215	2219	1240	2264	7	1264	2307
1236	2257	1263	2305	8	1300	2372
1260	2300	1280	2336	9	1317	2403
1285	2345	1305	2381	10	1330	2426
1294	2361	1315	2399	11	1336	2437
1306	2383	1326	2419	12	1355	2471

The clay is bagged in plastic and stored in a damp room until required. Preparation of mixture #2 is by blunging. Proper procedures must be followed to render specific casting formula fluid. The correct amount of water and eflocculant are weighed into blunger and allowed to mix. The mixture components are separated into non-plastic and plastic materials with the plastic materials (i.e. clays) being added first. After sufficient time for dispersion of plastic materials, the non-plastic materials are added, (silica, talc, etc.) and the mixture is blunged for 1 to 1½ hours. It is then sieved through 120 mesh screen to remove any large aggregates which might inhibit the slip's casting ability.

4.1.2.1. (1) Figurine Clay body mixture - 1130°C maturing temperature

Material number (1) Liguanea Clay 100%

4.1.2.1. (2) Throwing Clay body mixture - 1220°C maturing temperature

Material number (2)	Castelton Clay:	63%-7 wheel barrows	= 1260 lbs x .13¢ =$163.80
(1)	Liguanea Clay:	18% - 2 wheel barrows	= 360 lbs. x .11¢ = $ 39.60
(4)	Ball Clay:	3.15% - 1 3/4 buckets	= 63 lbs. x .91¢ =$57.33
(3)	Fire Clay:	3.6% - 2 buckets	= 72 lbs. x .66¢ = $47.52
(5)	Talc, (Ser-X)	3.6% - 2 buckets	= 72 lbs. x .88¢ =$63.36
(6)	Grog:	6.3% - 3½ buckets	= 126 lbs. x .66¢ = $83.16
			1953 lbs. $454.77

Unit cost: $.2328¢ per lb. dry weight.

13% shrinkage at 1220°C

4.1.2.1. (3) Slip Casting Clay body mixture - 1220°C maturing temperature

Material number	(2)	Castleton clay: 72.26% - 10 3/4 buckets	= 387 lbs. x .13¢	
			= $50.31	
	(1)	Liguanea Clay: 10.08% - 1½ buckets	= 54 lbs. x .11¢	
			=$ 5.94	
	(4)	Ball Clay: 5.04% - 3/4 bucket	= 27 lbs. x .91¢	
			= $24.57	
	(5)	Talc, (Ser-X): 7.56% - 1 1/8 buckets	= 40.5 lbs. x .88¢	
			=$35.64	
	(7)	Silica: 5.04% - 3/4 bucket	= 27 lbs. x 1.25¢	
			= $33.75	
	(8)	Sodium Silicate: .017% - 1 1/4 cups	= 1.015 lbs. x3.21¢	
			=$ 3.26	
	(9)	Sodium carbonate: .017% - 1 1/4 cups	= 1.015 lbs.x 1.25¢	
			=$ 1.26	
	(23)	Barium carbonate .0151% - 1 cup	= .8125 lbs. x 4.18¢	
			= $ 3.39	
			538.34 lbs.	$158.12

Unit cost: .2937¢ per lb. dry weight

13% shrinkage at 1220°C.

Water content of above formula is 13½ buckets which equals 337.5 lbs. The pint weight of this slip should be 34oz. to 35 oz. after sieving. High water content in casting slips made from tropical clays is due to the presence of Halloysite and montmorillonite materials which are non-slaking and difficult to deflocculate clays. Therefore it has been

necessary to supplement the local clays with an imported ball clay to improve casting properties. Additional local clays could be used if access was made available.

4.1.2.1. Glaze Preparation

All glaze formulations are on the batch method; the terms of measurement can be either by pounds, grams, parts, cups or a percentage. Batch formulating allows more movement to adjust and regulate glaze characteristics. This is vital for the development of Jamaican materials as glaze components. All glazes are to be sieved through 120 mesh screen no less than 3 times, this is due to the lack of proper milling equipment. The sieving must be repeated periodically to maintain smoothness and suspension of raw glaze. An addition of 1% to 2% Bentonite in any glaze will assist the suspension of low or insoluble materials. All glazes should be tested and approved by supervisor prior to application on product. This is to ensure glaze stability and no surprises due to improperly prepared glaze mixtures. Testing and constant re-testing should be departmental policy. Application of glaze is by spraying and pouring. The addition of water to batch glaze ingredients increases the volume of dry materials. It is necessary to mix 5 gallons of dry glaze in a 10 gallon container to avoid spillage and waste.

4.1.2.1. (4) Spotty Blue Glaze - 1200°C maturing temperature.

Material number (11i) Low sol 362210: 66.66% - 26 lbs. x 2.39 = $62.14

(15) Silica: 5.12% - 2 lbs. x 1.25 = $ 2.50

(12) China Clay: 10.25% - 4 lbs. x .90 = $ 3.60

(17) Zinc Oxide: 5.12% - 2 lbs. x 5.37 = $10.74

(14) Talc,(Ser-X) 5.12% - 2 lbs. x .88 = $ 1.76

(18) Zircon: 7.69% - 3 lbs. x 5.37 = $46.11

(30) Cobalt oxide .64% - 4 oz. x 3.43 = $13.72

(approx:480 oz. water per batch) 39.25lbs. dry weight $140.57

1 batch = 640 fluid oinces of glaze

Unit cost: $.2196 per fluid ounce used

4.1.2.1. (5) Blue Delft Glaze - 1220°C maturing temperature,oxidation, c/3

Material number (11i) Low sol 362210: 44.17% - 18 lbx. x 2.39 = $43.02

(11iii)Low sol 362212: 19.63% - 8 lbs. x 2.38 = $19.04

(12) China Clay: 4.9% - 2 lbs. x .90 = $ 1.80

(15) Silica: 14.77% - 6 lbs. x 1.25 = $ 7.50

(17) Zinc oxide: 1.22% - 4 oz. x .33 = $ 1.32

(18) Zircon: 12.88% - 4.5 lbs. x 5.37 = 24.16

(24) Bentonite: 2.45% - 8 oz. x .07 = $ .56

(37) Blue Stain: .30% - 2 oz. x 2.58 = $ 5.16

(approx. 480 ox. water per batch) 39.3lbs. dry weight $102.56

1 batch = 640 fluid ounces

Unit cost: $.1602¢ per fluid ounce used.

4.1.2.1. (6) Buckskin Glaze - 1200°C maturing temperature, oxidation, c/3

Material number (11i)Low sol 362210 66.66% - 26 lbs. x $ 2.39 = $62.14

(15) Silica 5.12% - 2 lbs. x $ 1.25 = $ 2.50

(12) China Clay: 10.25% - 4 lbs. x $ .90 = $ 3.60

(17) Zinc Oxide: 5.12% - 2 lbs. x $ 5.37 = $10.74

(14) Talc,(Ser-X) 5.12% - 2 lbs. x $ .88 = $ 1.76

(18) Zircon: 7.69% - 3 lbs. x $ 5.37 = $ 46.11

(24) Rutile: 2.56% - 1 lb. x $ 4.29 = $ 4.29

(38) Red Glaze Stain 5.12% - 2 lbs. x $60.11 = $120.22

(approx. 480 oz. water per batch) 42 lbs. dry weight $251.36

1 batch = 640 fluid ounces of glaze

Unit cost: $.3927¢ per fluid ounce used.

4.1.2.1. (7) Honey Glaze - 1200°C maturing temperature, oxidation, c/3

Material number (11i) Low sol 362210: 74.82% - 25 lbs. x $ 2.39 = $62.14

(1) Liguanea Clay: 4.31% - 1.5 lbs. x$ .11 = $ .165

(10) Nepheline Syenite: 5.03%-1.75lbs. x $ .84 = $ 1.47

(13ii) Wollastonite: 2.87% - 1 lb. x $ 2.65 = $ 2.65

(15) Silica: 5.75% - 2 lbs. x $ 1.25 = $ 2.50

(12) China Clay: 7.19% - 2.5lbs. x $ .90 = $ 2.25

(28) Red iron oxide: 2.87% - 1 lb. x $ 3.11 = $ 3.16

(29) Manganese dioxide: 1.43% - .5 lb x $ 2.20 = $ 1.10

(20 Titanium dioxide: .53% - 2 oz. x $ .23 = $ .46

(approx. 480 oz. water per batch) 40.75lbs. dry weight $75.89

1 batch = 640 fluid ounces of glaze

Unit cost: $.1185 per fluid ounce of glaze used.

4.1.2.1. (8) 15A Green/Grey Glaze - 1225°C maturing temperature; gas reduction, c/7

Material number (10) Nepheline Syenite 70% - 14 lbs. x $ .84 = $11.76

(13i) Whiting: 12% - 2.25 lbs. x $1.46 = $ 3.28

(15) Silica: 10% - 2 lbs. x $1.25 = $ 2.50

(24) Bentonite 3% - 6 lbs. x $1.22 = $ 7.32

(17) Zinc Oxide: 5% - 10 lbs. x $5.37 = $53.70

(28) Red Iron oxide 1% - 2 lbs x 3.16 = $ 6.32

(approx. 432 ox water per batch) 36.25 lbs dry weight $84.88

1 batch = 576 fluid ounces of glaze

Unit cost: $.1473 per fluid ounce of glaze used.

4.1.2.1. (9) Satin Grey - 1200°C maturing temperature, oxidation, c/3

Material number (11i) Low sol 362210: 45.33% - 17 lbs. x $2.39 = $40.63

(18) Zircon 27.02% - 10 lbs. x $5.37 = $53.70

(10) Nepheline Syenite: 18.91% - 7lbs. x $ .84 = $ 5.88

(31) Iron Chromate: 2.70% - 1 lb x $3.16 = $ 3.16

(12) China Clay: 5.40% - 2 lbs. x $ .90 = $ 1.80

(24) Bentonite: 1.35% - .5 lb. x $1.22 = $ .61

(approx 480 oz water per batch) 37.5lbs. dry weight $105.78

1 batch = 640 fluid ounces of glaze

Unit cost: $.1652 per fluid ounce of glaze used.

4.1.3. Supply Programme

The maximum realization of an effective supply programme is to stock pile 1 year in advance some raw materials according to production plan. Basic materials must be available and consistent to ensure product quality and stability. Continuity in a ceramics factory will always be disruptive if raw material supplies can not be stock piled.

Influencing factors of an optimum supply programme:

(1) Lack of proper system to monitor and to alert of raw material quantities. Raw material scheduling be a minimum of 6 months in advance. The stability and quality of the product is directly effected by the consistency and supply of raw materials. Certain materials can change characteristics from one mine source to another. An example is the varying strengths of cobalt oxide that are available.

(2) Inadequate foreign exchange. In lieu of current foreign exchange restrictions and locally available finances, raw material supplies may always fluctuate. Ceramic raw materials should be purchased in bulk as recommended above. But supply is always subject to the approval and allocation of available funds.

(3) Lack of access to, or availability of certain processing equipment. The transfer of processing technology will make available the use of less expensive domestic materials. An example of this is silica. The current imported cost is J$1.25 vs. a local manufacturing cost of J$.60 to J$.70. This particular material can be

locally unlimited. The primary source for this material is white beach sand.

(4) Availability and shortages. Due to current status of raw material ordering and delivery, certain design/ marketing sacrifices might be realized. An example has been in the shortage of cobalt oxide which is an integral material for Delft reproductions. Thus production of decorative wares stopped temporarily. Fuel shortages either gas or electric adversely affect production planning. This appears to be a controllable variable.

(5) Adverse weather conditions - alter a steady flow of local clays. The past two years Jamaica has been in a drought. The dry weather has been favourable for clay mining. But fore sight should be taken to avoid clay shortages during rainy weather. This further suggests that clay should be stock piled in minimum 6 months quantities. This will also improve product stability by maintaining a consistent clay supply.

(6) The lack of a qualified glaze and clay technician. Inevitably in all ceramic industries problems do occur. It requires that a qualified ceramist be available to identify and correct problems before they become liables. Further personnel issues will be addressed later.

4.1.3.0. Synopsis

Development and research of Jamaican clays and their potential is paramount to developing and organizing ceramic industries in Jamaica. At the same time, equal consideration should be given to the following primary materials: silica, limestone, dolomite, steatite, and haematite. Although careful research has been conducted in the past, further quantitative and qualitative investigations in relation to ceramic industries should proceed as soon as possible. But equally as important as identifying raw materials, is the transfer of processing technology.

Jamaica possesses many alluvial and residual clays suitable for the production of ceramic items. Maximum potentials will only be realized through a collective standardization and centralization. It appears that clay body continuity and consistency can be maintained only by using a blended clay body formula utilizing as many Jamaican clays as possible. The alluvial deposits in Western Jamaica should produce some clays similar in nature to Ball and China type clays. Although there will probably be no pure kaolin source available unless the parent rocks and their origins can be located. It is said that the major sources of Jamaican clays are becoming less obtainable and cultivated more for agricultural reasons. There are also large deposits of residual, and hydrothermal clays in the eastern and central parishes. But research on these clays by Jamaica Bauxite Institute on behalf of U.N.I.D.O., have suggested that these clays are not suitable for ceramic purposes by themselves. The indication of halloysite

as a major constituent sustains this theory. Halloysite is a non-slacking clay which can create problems similar to montmorillionite clays. The St. Catherine and St. Mary clays are rarely spoken of, but may in fact be excellent sources as major ceramic materials. Further research should be conducted to produce more conclusive information on all indigenous materials available for ceramic production.

4.1.4. Storage

Storage and monitoring of ceramic raw materials should be an activity of the same said factory. Particular safe-guards should be taken to protect valuable raw material stock. Facilities should be provided that are dry and free from rain. Some ceramic materials set hard if exposed to water moisture. Materials should be elevated off the floor by means of wooden pallets. Designated area of storage should also be large enough to permit comfortable access to all materials. Inadequate and cramped facilities can result in spillage and contamination of sensitive materials. All raw materials should be properly marked and identified. Improperly labeled materials can result in bad glazes which means losses, embarrassments, and damages to products, kilns, and equipment.

4.2. Comments and suggestions

The chapter on raw materials covers only the ceramics department. It has to be completed as far as supply programme and the other departments are concerned.

5. Site and location

The main premises of T.J. are located at Bumper-Hall in Kingston, retail shops are located at Manley Airport, Kingston and Sengster Airport, Montego Bay as well as Sam Sharpe. The site at Bumper-Hall is large enough to increase production as shown in the cash flow table. But it might be necessary to look for a new place if a major expansion were envisaged.

6. Engineering and related issues

This chapter was discussed with staff members. It should comprise:

- a description of the production process, including a production flow chart,
- the layout of production lines, showing machinery, space , labour, means of transport, location of stocks etc.,
- investment cost and investment plans,
- production cost,
- capacity utilization, through-flow chart,
- a production plan and other information for each department of production.

Considerable preparatory work was done for the ceramics department, some for the wood department and a first draft of the general lay out.
But there was no time for an analysis.

7. Management, management prodecures and overhead costs

7.0. Introduction

Effecitve and perceptive management demands that all those responsible for the work of others, at all levels and in any type of activity, regard themselves as managers. If we use the term in this sense, we may find weaknesses and difficulties at any level of management of T.J.

The major problem may be described as follows:
In general one may say that the major task of managers is to establish the environment for group effort in such a way that individuals will contribute to group objectives with the least amount of such inputs as

- money
- time,
- effort
- discomfort, and
- materials.

By the very definition of the task, this becomes the goal of managers.
But if the managers were ever to know whether the efforts of those for whom they are responsible are effective and efficient - whether they are attaining goals with least costs - they obviously must know what group goals are. Not only must there goals be known to managers, and preferably to all those for whom they are responsible but they should also be known in a verfiable way. Otherwise, managers can never measure either their own effectiveness and efficiency or the effectiveness and efficiency of their group. This is the case - to a large extent - at T.J.

The Bank of America said a few years ago in its Small Business Reporter: "In the final analysis more than 90 % business failures are due to managerial incompetence and inexperience".

The waekness and difficulties of T.J. management can be shown in a very basic model of the system of operational management. In such a model the various inputs (capital, human ressources, technical know-how and materials) are transformed through the managerial functions of planning organizing, staffing, leading, and controlling into outputs (products for customers, income for employees and profit or other goals.)

While organizing, staffing and leading may have to be improved , planning and controlling are practically not applied at all. This may be considered as major management problem of T.J.

It may be recognized that the management problem can not be solved in, and thorugh a report only. Furthermore, the most important aspects can not be dealt with because of lack of preparatory work and time for implementation. Therefore, two general issues will be treated in the following sections: common management responsibilities and management procedures.

7.1. Common management responsibilities

Within the new organization, virtually all key executives have certain common responsibilities:

1. Making forward plans
2. Organizing the activities under their command
3. Developing the skills of their staff
4. Establishing and maintaining operating procedures
5. Directing day-to-day operations
6. Controlling costs of operation
7. Keeping superiors informed.

These underlying responsibilities reflect broad principles of good management, and every member of T.J. management should be expected to discharge them effectively in addition to the more specific responsibilities of his individual position.

This section (a) explains the actions needed to carry out these common responsibilities effectively, and (b) indicates the criteria by which the performance of managers in carrying them out should be judged.

The pattern of behaviour outlined here represents an ideal. Therefore, managers should re-read this section regularly to assess how they can make further progress towards that goal.

OPERATING EFFECTIVELY

To carry out these common responsibilities, a manager should make sure he understands and regularly carries out the following specific actions:

1. To plan the operations under his jurisdiction, a manager will:

   - Keep informed of all phases of overall plans that affect the operations for which he is responsible

- Establish objectives and action plans that are consistent with overall planning
- Identify and evaluate objectively alternative methods of resolving major operating issues.

2. To organize the activities under his jurisdiction, a manager will:
   - Define clearly the responsibilities, duties and authorities of his subordinates
   - Ensure that all activities essential to the unit's success are provided for
   - Allocate the resources of his unit to match responsibilities
   - Identify opportunities and recommendations for improving the organization structure, to increase its effectiveness or adjust to changing conditions.

3. To develop an effective work force, a manager will:
   - Select (or approve the selection of) personnel with proper qualifications to fill subordinate positions
   - Explain to subordinates the policies and the organization structure to help them relate their own work to other Corporation activities
   - Train and coach subordinates - analyse and communicate their strengths and weaknesses, and help them to develop accordingly
   - Identify and develop an understudy for each position, including his own, so that removal of any individual need not seriously disrupt operations
   - Encourage creative effort by welcoming suggestions and giving credit to subordinates for their contributions.

4. To establish adequate operating procedures, methods, and techniques so that subordinates can work with maximum effectiveness, a manager will:

   - Provide written guidelines for use by personnel
   - Ensure understanding and compliance with established methods and procedures
   - Establish adequate conditions and support services to ensure effective and regular work schedules
   - Develop better ways of doing the job - encourage recommendations from subordinates and adopt those that can be expected to improve operations.

5. To direct and coordinate activities under his jurisdiction, a manager will:

   - Make assignments to subordinates that clearly define the desired end result, and a reasonable date for completion
   - Schedule major undertakings in sufficient detail and sufficiently in advance for subordinates to plan and schedule their own work properly
   - Supervise operations by personal observation, regular consultations with subordinates and analysis of records so that work is completed according to plan
   - Ensure that his unit cooperates with, and is of maximum assistance to, other departments and Group companies
   - Clear important matters with his superior and/or others whose concurrence is required before taking action; except in emergencies, advise interested parties in advance of contemplated action.

6. To control the numbers of employees, costs, and the expenses of the activities under his jurisdiction required by optimum economy, a manager will:

   - Arrange for maintenance of adequate statistics on operations to be aware of direct and indirect expense
   - Establish reasonable standards for quality, quantity, and speed of work

- Analyse these and other performance data periodically to form sound conclusions on expenditures and opportunities for savings
- Justify operating costs and proposed expenditures on the basis of factual evidence.

7. To inform his superior fully on progress of activities under his jurisdiction and especially to inform him of major developments and problems, a manager will:
   - Transmit regular reports demonstrating accomplishments of the activities under his jurisdiction
   - Arrange periodic meetings with his superior for discussion of problems or report of work status.

In addition to his management responsibilities, each senior manager may participate from time to time in special projects, or serve on ad hoc committees. In order to make a maximum contribution to these assignments, a manager should:

Ensure he understands the purpose of the project and the nature of the contribution (ideas, information or advice) that he can make

Display a positive, constructive attitude in the conduct of discussions

Carry out individual assignments promptly and thoroughly.

EVALUATING PERFORMANCE

The following specific questions should be asked in evaluating the performance of a manager in carrying out these common responsibilities:

1. Does he have an explicit plan of operation for his unit that is consistent with overall plans?
2. Does he maintain a clearcut organization chart that is well understood by his unit?
3. Can he define the current development requirements of his staff and report on action being taken to meet them?

4. Does he have potential replacements for each key position?

5. Are procedures and facilities for his unit appropriate for efficient operation?

6. Is morale in his unit high - as measured by productivity and turnover?

7. Does his unit cooperate well with other departments and Group companies?

8. What action has been taken in his unit over the past year to reduce costs and increase efficiency and what improvements have resulted?

9. How well informed is his superior on progress and major developments in his unit?

7.2. General Management procedures

Managers and staff are generally knowledge workers rather than production workers. They do not produce physical products, but ideas, information, recommendations. The techniques for managing and carrying out knowledge work are different from and more difficult than for physical work. The knowledge worker cannot be supervised continuously, or controlled mechanically. He can only be helped. But he must direct himself, and he must direct himself towards making an effective contribution to the Corporation.

The purpose of this section of the guide is to suggest ways in which T.J. executives can improve their procedures and methods of work. It should be used as a reference document, and re-read regularly. Individual sections will be revised or added to, to reflect the development of T.J. needs and management thinking.

The section contains guidelines on the following subjects:

1. Completed Staff Work
2. Conservation of Time
3. Planning and Conduct of Meetings

COMPLETED STAFF WORK

'Completed staff work' is the study of all facets of a problem and the presentation of a solution, so that all that remains for a superior (a department head or the General Manager) to do is to indicate his approval or disapproval of the completed recommendation. The principle of 'completed staff work' has these major benefits for the Corporation:

1. It reduces the time that a superior need spend on detailed matters and allows him to concentrate on his policy supervisory duties
2. It improves the quality of recommendations made by ensuring that all alternatives have been thoroughly considered

3. It helps the subordinate develop his own initiative and to receive a responsive hearing when he presents a good proposal.

To apply the principle of completed staff work, an executive should remember and use the following guidelines:

1. Do not ask your superior what to do. Your job is to recommend to your superior the best alternative course of action with an appropriate timetable. It is not to ask him what the solution should be. He needs answers, not questions. You should study, write, restudy and rewrite until you have evolved a single proposed action from all those you have considered.

2. Work out the details yourself. You should avoid consulting your supervisor in working out details, no matter how perplexing they may be. You may and should consult other members of the staff. Your end product, whether it is the statement of a policy or a recommendation for action should be presented in finished form. If comprehensive information on which to base a recommendation is not available, state this but make an intelligent estimate.

3. Do not prepare long explanations and superflous memoranda. As often as possible, completed staff work should result in a single document prepared for signature of the superior, without accompanying comment. If the recommendation is sound, the superior will usually recognize it at once. If he wants comment or explanation, he will ask for it. A good test of the relevance of a statement made is to ask yourself the question 'so what?'.

4. A rough draft must not be a half-baked idea. The theory of completed staff work does not preclude a 'rough draft'. But a draft must be completed in every respect except that it lacks the requisite number of copies and need not be neat. It must not be used as an excuse for shifting to the superior the burden of formulating the action.

5. Apply the final test of 'completed staff work' to yourself. To do this ask: if you were the superior, would you be willing to sign the document you have prepared and stake your professional reputation on its being right? If not, take it back and work it over, because it is not yet 'completed staff work'.

CONSERVATION OF TIME

In knowledge work there are constant pressures towards unproductive and wasteful use of time. Yet the supply of time is totally inelastic; it cannot be replaced. Therefore, to be effective an executive must know how to conserve and manage his time. If this cannot be managed, nothing else can.

Managing time requires a conscious and continuing effort. The following working rules are designed to focus that effort.

Planning the Use of Time

1. Become accustomed to allocating time to tasks, (preparation of documents, visits, meetings, etc.) by drawing up a written programme of work. This can be done quickly by using a standard format

2. Set deadlines for all important activities and regularly check progress against them. If these cannot be kept, time will start to slip away.

3. Identify tomorrow's tasks in advance; avoid starting the day by having to think 'what should I do now?'.

4. When a series of things needs to be done, plan it to follow a logical sequence so that the end result is not held up because of an unforeseen time lag.

Reducing Time-Wasters

1. Avoid too many meetings; when consulting people, focus on a concrete issue and finding a solution to it.

2. Reduce the amount of time spent on writing by training yourself to prepare an outline of major topics first and to produce finished documents at a first attempt. Avoid drafting in long hand: wherever possible dictate, type or annotate a document.

3. Use standard formats (questionnaires, or spread sheets) to force yourself to tackle questions thoroughly and consistently.

4. Train yourself to record and retain information immediately and systematically, to avoid having to repeat previous work. Plan and keep a list of your personal files.

Consolidating
Productive Time

1. Schedule time so that it is available for important tasks in sufficiently long periods: a report cannot be drafted properly in half-hour bursts.

2. Recognize that your own productivity varies widely; starting early and promptly will give better results than long hours.

3. Make appointments as far in advance as practicable so that they cause minimum disruption to the flow of work, evaluate critically the usefulness of outside appointments. Keep courtesy calls to a minimum.

PLANNING AND CONDUCT OF MEETINGS

A meeting is one of the typical work situations of the executive. It is important, therefore, that all meetings should be planned and directed to good effect. If this is not done, the cost to the Corporation can be considerable. First, meetings represent a drain on executive time. Secondly, when the conclusion of a meeting is not clearly defined and understood, confusion and waste of effort can result. Finally, ineffective meetings induce a loss of a sense of urgency among the participants in carrying out their other duties.

This section contains a summary checklist of good meeting practices. There are a few basic principles that govern throughout. These are:

Hold a meeting for a definite purpose

Be thoroughly prepared before the meeting

Focus on securing the specific contribution of the participants

Bring the meeting to a definite conclusion.

Defining Purpose Of the Meeting

Before calling a meeting, the responsible executive should always determine the reasons for holding it and consider whether the business can be handled more efficiently through personal executive action, written communication or telephone calls. Don't hold a meeting because it has been standard practice, when you know beforehand that it isn't necessary and won't accomplish anything. A meeting may be appropriate for one of the following reasons:

1. To review reports from all or most of the participants

2. To reach a Group judgement as the basis for a decision

3. To identify, analyse, or solve a problem

4. To gain acceptability for an idea, programme or decision

5. To achieve a training objective

6. To reconcile conflicting views

7. To provide essential information for work guidance or for control of results

8. To obtain immediate reactions when speedy response is important.

On the other hand, a meeting is usually not a productive method for

a. Establishing the facts of an issue, or

b. Communicating general information.

Preparing for a Meeting

Having decided that a meeting is necessary, three main preparatory steps must be taken for it to be effective.

First, the participants must be selected, bearing in mind that the ability to communicate effectively diminishes as the number of people attending increases. It is not sufficient that a person attended the last similar meeting. Each participant should have one of the following qualifications:

1. The individual or his department will be responsible for carrying out a decision that will be reached at the meeting

2. The participant possesses unique contributory information or expertise

3. The approval of the participant will be needed

4. The individual has functional responsibility for the matter to be discussed.

Secondly, the relevant information and documentation to achieve the purpose of the meeting must be provided. This should include:

1. A formal agenda, communicating to the participants the major issues to be discussed, that is limited to a manageable number of topics

2. Complete documentation, providing participants with a basis for their own contribution.

If this information is not available, the meeting is unlikely to be useful and should not be held.

Thirdly, the administrative arrangements for the meeting must be completed.

1. The meeting room must be selected and reserved (through the Office Manager), taking the number of participants and facilities required into account.

2. Support services or equipment (e.g. seating, visual aids) must be provided, as necessary.

3. Participants must be informed of the arrangements for the meeting.

4. Arrangements must be made to prevent interruptions by visitors or telephone calls.

Managing the Meeting

The chairman, or leader, of the meeting has the prime responsibility for seeing that the meeting achieves its purpose. To do this he has three main tasks to carry out.

Supervising meeting arrangements: This will include

1. Assuring beforehand that all is in order; checking seating arrangements, if this is important

2. Opening the meeting promptly and closing it, wherever possible, within an alloted time

3. Arranging for appropriate notes or minutes to be taken (as a rule these should be kept to a minimum unless an agreed record is essential).

Structuring the meeting. The skills of the meeting leader are put to the test in leading the discussion that is to result in solving a problem or reaching a decision. He should do this by ensuring that four key steps are carried out in sequence.

1. Define the issue to be resolved. Before engaging in extensive fact finding, make sure the problem has been fully understood, since this will lead to more intelligent and economical procurement of useful information.

2. Determine whether facts are available. Use the participants to bring out the facts on which they are most knowledgeable in the light of their responsibilities. If it is clear that the facts are not at hand, determine how and when they are to be obtained, or terminate the discussion.

3. Concentrate on reaching conclusions. Put a limit to fact finding in the interest of bringing a decision to a head. As a preliminary to decision, get the participants to agree on criteria of selection among alternatives. Seek a group concensus, if possible, but reserve executive judgement when this is necessary.

4. Fix accountability for action. The meeting is only useful if it leads to some form of action. Therefore, make sure that everyone is quite clear as to the decisions reached, and assign and verify responsibilities as part of the conclusion. Arrange for follow-up review (by a specified date) so that you will know that responsibilities are being discharged. If it is an information meeting, summarize or recapitulate the points that have been communicated.

Disciplining the discussion. Make sure the meeting is addressed to its purpose. This discipline should be imposed on every participant. The meeting leader should be particularly sensitive to the balancing of participation and judgement.

1. Move in promptly when you see signs of floundering, dissension, or deadlock; head off digressions or repetitions, neutralize unproductive controversies.

2. Slow up discussion when you see a wrong decision in the making. Ensure that all who can contribute are called on.

3. Above all, do not let the meeting drift without apparent plan. Focus on accomplishment.

7.3 suggestions on manager development, and organization development.

The management problems are crucial for the success of T. J.. They have been neglected so far.
In order to control the situation it will be necessary to act on two levels+

- -organization development
- -manager development.

Organization development implies to continue and bring to an end the present analysis, particularly the chapters on raw materials engineering and management.
Manager development could be based on "on-the-job" training combined with internal training.
The internal training could consist in a seminar on management functions. It could take place before or after working hours once or twice a week.
The "on-the-job" training could be directly combined with data gathering for the organization development and the necessary analysis of particular management procedures and operations.

8. Staffing and manpower.

The managerial function of staffing involves effective recruitment, selection, placement, appraisal, and development of people to occupy the roles in the organization structure. Staffing is closely related to organization and depends on the latter and on thorough knowledge of operations and duties. The analysis could not be advanced to this point.

9. Planning and implementation according to plans.

This important managerial function was discussed with respect to the following plans: product development plan, marketing plan production plan, investment plan, and financial plan, but it was not possible to deal with it in detail.

10. Financial and economic evaluation

10.1. The balance sheet

Table 10.1. shows the balance as at 31st December 1983 and as at 31st March 1984. The figures concerning current assets and liabilities were taken from the accounts. The amount of J $ 7,000.000 is to reflect the value of Devon House. As the Company cannot dispose of, the same amount is shown as capital reserve - Devon Hosue. This booking may be disputed, but reflects best the facts. Land and buildings at Bumperhall do not show up in the balance sheet, they are property of the Government.

The item equipment includes a reasonably conservative value for Bumperhall and Devon House. The conditions of the equipment at Bumperhall do not allow to consider a higher value.

The liabilities are composed of items which need an urgent repayment owing to the high interest burden (PAYE: 60% per annum, Bank Overdraft: 21 % per annum, other Statutory deductions: 20 % per annum).

Liabilities exceed current assets by $ 2,941.995 as at 31st March 1984. These losses could be increased by J $ 128.510 representing provisions for bad debts and disputed bills.

There is no equity to write off the losses and the liquidation of the Company would not solve the problems.

10.2. Cash flow table for financial planning

The proposed cash flow is based on the objective to run Things Jamaican as a profit oriented Company. Therefore, two activities which are not profit oriented had to be isolated. Devon House Cultural Centre, and pure develop-

TABLE 10.1: PROJECTED BALANCE SHEET

	AS AT DECEMBER 31,1983	AS AT MARCH 31,1984	PROPOSED STRUCTURE APRIL 1'84	
Assets (total)		9,195,963	9,195,963	
1. Current Assets (as per)	1,653,930	1,480,963	1,480,963	
a) Accounts Receivable	428,368	350,000		
b) Raw Material	540,748	497.097		
c) Spare Parts	-	-		
d) Work-in-Progress	96,064	107,236		
e) Finished Goods	481,154	502,630		
f) Purchases-Outside Craft	under e			
g) Other Purchases, including raw materials and tools for craft	under e			
h) Cash in Hand	82,740	15,000		
i) Bank Balance	24,856	9,000		
2. Fixed Assets (net of depreciation)	7,620,000	7,715,000		
a) Land, building, furniture, D.H. Cultural Centre	7,000,000	7,000,000		
b) Buildings & Special Civil Works - B.H.	-	-		
c) Equipment, motor vehicles furniture - B.Hall	380,603	380,603		
d) Equipment D.H. Shops	239,397	334,397		
3. Losses	2,769,871	2,941,995		
	(2,898,381)	(3,070,505)		
Liabilities	12,043,801	12,137,958	9,195,963	
1. Equity or Similar	200	200	2,000,200	
2. Loans (G.O.J.)	1,852,142	1,852,142*		
3. Suppliers' Credits	778,871	779,948		
4. Excise & Consumption	503,788	546,422	-	
5. Statutory Deductions	696,913	668,185	-	
6. Pension Scheme	232,607	241,061	-	
7. Bank Overdraft	979,280	1,050,000	-	
8. Capital Revenue D.H.	7,000,000	7,000,000	7.000.000	
Provision for Bad Debts and disputed bills	128,510	128,510	-	

* This amount may be increased by interest charges for 1983/84

ment activities. Separate lines will show their financial needs.

The cash flow for the profit oriented activities was established for a life span of ten years in order to evaluate the viability of the Company and to show the impact and necessity of further investment as well as of the financial burden inherited from the past. The line on financial resources remains void at this stage. Sales revenues are based on a new marketing concept, which is tentatively presented in chapter 3. The increase by J$ 877.000 in 1984/85 is conservative, yet it requires a large number of measures to be taken in all fields of activities. The increases during the following years demand similar attention.

Though only half of the expansion will be based on Things Jamaican products, the necessary increase in production can only be achieved if a severe programme is implemented. Special attention will have to be paid to the investment programme which can be split into replacements and net (new) investment. The replacement programme is absolutely necessary to keep production at the actual level. New investments will be required to improve the quality of products and to decrease cost of production.

The figures inserted into the cash flow are conservative estimates. New investments refer only to investments in ceramics and the Finished Goods Store. No new investment should be made without comprehensive study!!

The increase in turnover will require an adequate increase of current assets. The terms of payment have to take into account the usage on the market and a period of the month will have to be allowed in many cases in the wholesale trade. Correspondingly, the accounts receivable will be built-up. THe same applies for raw materials stocks and finished

good stocks. The value of work-in-progress could be relatively reduced by organizing a faster flow-through.

The operating costs constitute the paramount item. It will be necessary to reduce operating costs wherever it is possible: mainly overheads for personnel, travel and telefone. There is great evidence that economies can be made, but they are only partly taken into account in the cash flow.

The cash flow shows a deficit during the first three years beginning 1984/85. This deficit is due to investment expenditures of J$ 560.000, 434.000 and 484.000 respectively in fixed investment and to the building up of working capital of J$ 460.000, J$ 595.000, and J$ 595.000 during this period. From the fourth year to the nineth year of operation, a surplus of about J$ 650.000 may be expected. This amount is considerably increased in the tenth year owing to the residual value of working capital and fixed assets.

The Company could operate at an internal rate of return of 25 % if liabilities of J$ 5,137.000 were paid back and the losses written off.

The alternatives will have to be discussed.

TABLE No.2

CONSOLIDATED CASH FLOW

	EST. 83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94
Commercial Operations:											
Cash Inflow	2.874	3.834	5.060	6060	6060	6060	6060	6060	6060	6060	8735
1. Sales Revenues	2.900	3.777	5.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
a) Sales of outside products	1.270	1.707	2.300	2.950							
b) Sales of T.J. products	1.630	2.070	2.700	3.050							
2. Other Revenues (concession)	104	57	60	60	60	60	60	60	60	60	60
3. Residual value											2.675
Cash Outflow		4.820	5.350	6.410	5.410	5.400	5.416	5.400	5.400	5.340	5.330
1. Fixed Investment Cost		560	434	484	79	79	86	76	76	10	
a) Replacement		120	76	76	76	76	76	76	76	-	-
b) New (Net) Investment		440	358	408	3	-	10	3	-	10	-
2. Current Assets Increases		460	595	595	-	-	-	-	-	-	
a) Accounts Receivables		105	140	140	-	-	-	-	-	-	384
b) Raw Material	-172	150	200	200	-	-	-	-	-	-	550
c) Spare Parts											
d) Work-in-Progress	41	35	45	45	-	-	-	-	-	-	125
e) Finished Goods	144	150	200	200	-	-	-	-	-	-	550
f) Cash-in-Hand and Bank		20	10	10	-	-	-	-	-	-	40
3. Operating Cost	4.273	3.800	4.650	5.330	5.330	5.330	5.330	5.330	5.330	5.330	5.330
a) Direct raw material & labour	1.098	900	1.200	1.355							
b) Overhead cost	2.043	1.700	1.800	1.845							
c) Cost of Outside Products	1.132	1.200	1.650	2.130							
Surplus (Deficit) in cash.	(-1.402	-986	-620	-350	+ 650	+ 650	+ 644	+ 660	+ 660	+ 720	3.400

IRR = 25%

II. Financial implications of the conversion of T.J. into a profit oriented company.

T.J. is not in a position to pay back by its own the debts accumulated in the past.

They comprise

	J.$.
Statutory Deductions	668.000
Bank Overdraft	1.050.000
Pension Scheme and Medical	241.000
Excise and Consumption	546.000
Suppliers' Credits	780.000
G.O.J. Loans	1.852.000
Total	5.137.000

In case of liquidation of the company, current assets of 1.486.000 J.$. and fixed assets of 715.000 J.$. could be used to cover the debts. No other values are available. Therefore, only 2.196.000 J.$. out of 5.137.000 J.$. are covered. The difference are accumulated losses. If the company goes bankrupt, suppliers' credits of 780.000 J.$. would probably not be paid back. THe rest of the losses would diminuish the amount, which could be paid to other creditors. The G.O.J. would probably loose the loan of 1.852.000 J.$. and statutory deductions etc. The result would be unsatisfactory in many respects.

In order to convert the company into a profit oriented enterprise, it is necessary
- to write off the losses and
- to improve the capital structure.

The losses could be written off by means of a waiver of the G.O.J. concerning:

- the loans of	J.$. 1,852.142
- the tax on excise and consumption of	J.$ 546.422
amounting to	J.$. 2.398.564
and a grant of	J.$. 543.431
Total losses	J.S. 2.941.995

The capital structure should mainly be improved in the sense that expensive liabilities are replaced by equity.

The following liabilities are concerned

Statutory deductions	668.185
Pension scheme	241.061
Bank overdraft	1.050.000
Total	1.959.246

It is suggested that this amount be raised by the G.O.J., which would become shareholder for this amount.

Capital needed for further investment could then be raised on the capital market or through international organizations etc.

III. Devon House - Cultural Centre.

Cash outflow:	
Expenditure	J.$. 268.500
Cash inflow	
Revenues (entrence fee etc,)	J.$. 63.500
G.O.J. -subsidy	J.$. 206.000

IV. Cottage Craft Industry Development

Cash outflow:	
Expenditure	J.$. 1.072.916
Cash inflow:	
G.O.J.-subsidy	J.$. 1.072.916

V. Craft Products Development Unit:

Cash outflow:	
Expenditure	J.$. 1.101.086
Cash inflow:	
G.O.J.-subsidy	J.$. 1.101.086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