OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

FAIR USE POLICY

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

RESTRICTED

[illegible]
[illegible] January [illegible]
Original: English

0 7057

ASSISTANCE TO THE LEATHER INDUSTRY

IS/JAM/74/001

JAMAICA

TERMINAL REPORT

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

United Nations Industrial Development Organization

[illegible]

United Nations Development Programme

ASSISTANCE TO THE LEATHER INDUSTRY

IS/JAM/74/001

JAMAICA

Project findings and recommendations

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

Based on the work of B. B. Sen-Gupta, leather technologist

United Nations Industrial Development Organisation
Vienna, 1976

Explanatory notes

References to dollars ($) are to United States dollars unless otherwise stated.

A comma (,) is used to distinguish thousands and millions.

The following abbreviations are used in this report:

ADC	Animal Development Corporation
DIP	Direct injection process
DMS	Direct-moulded sole
JIDC	Jamaica Industrial Development Corporation
JMA	Jamaica Manufacturers Association

CONTENTS

SUMMARY

The Jamaican leather industry is facing increasing demands for quality products owing to a rise in the prices of synthetic materials and a swing back in public preferences for natural leather. In 1974 there existed only one upper-leather tannery in the country to meet such demand, but it had plenty of room for expansion and was implementing a programme designed to achieve a yearly production of 3 million square feet of shoe upper-leather and fancy leather. To assist the upper-leather tannery in improving its processes and techniques in order to meet the requirements of the local leather utilization industries, the Government of Jamaica, in a letter dated 20 September 1973, addressed a request to UNDP for the services of a tanning expert for 12 months. The request was approved by UNDP on 12 April 1974, with UNIDO as the executing agency, and the expert assigned to the project, entitled "Assistance to the Leather Industry" (US/JAM/74/001), took up his duties in September 1974.

Very good progress was made by the leather and footwear industries during the term of the mission thanks primarily to the determined effort of the tannery to improve the quality of their goods and raise their production levels, and to government measures such as import controls and tax incentives to shoe manufacturers using local leathers. In order to ensure continued progress, there is a need for increased mechanization, training and production centres for leather shoe workers, further action to promote the production of the leather-consuming industries, and an integrated plan for the development of the leather and footwear industry.

INTRODUCTION

A viable leather industry presupposes three interdependent factors: a good raw materials base; a progressive technology in an efficiently managed agricultural, tanning and footwear industry; and a growing market. In 1974, with consumer tastes having become highly sophisticated and demand for quality goods steadily rising, Tanners Ltd, which accounts for 96% of Jamaican-produced leather, was operating at only 50% capacity, and the leather industry as a whole was hampered by poor quality raw materials - owing to animal health and husbandry problems - and insufficient supplies - as a result of the consumption of hides as food, which causes the loss of as much as 30-40% of the cattle hides produced in the country. However, from an initial study of the Tannery's capacity it emerged that output could be doubled within a year with little modification or innovations in operational methods and inputs. In conjunction with measures designed to overcome the supply problem and a co-ordinated programme of expansion and modernization to meet the requirements of the footwear and other leather-consuming industries in the country, the momentum thus gained could be kept up and production trebled in another two or three years.

To enable the Jamaican leather industry to come up to the increasingly high standards of quality expected by consumers and to meet growing demand, the Jamaican Government requested UNDP to provide the services of an expert in the finishing of leather for a period of 12 months. UNDP approved the request on 12 April 1974, making a contribution of $30,000, with UNIDO as executing agency and counterparts assigned by the Jamaica Industrial Development Corporation (JIDC) and by Tanners Ltd. The 12-month project began in September 1974, with the specific objective of providing direct assistance to the existing upper-leather Tannery, particularly in improving its processes and techniques for the finishing of various types of leather. The expert was attached to the JIDC, and was entrusted with the tasks of indicating deficiencies in production methods, in the quality of the materials used and in leather finishing techniques; and of recommending measures for improving leather finishing methods and techniques, for maintaining the necessary quality controls of finished leather, and for further developing the leather industry in Jamaica in order to meet increasing local requirements.

During his mission the expert prepared a preliminary report and work plan, dated 18 October 1974, describing the background, objectives and activities of the project, and a mid-term progress report and analysis of the situation in the Jamaican leather industry, dated 11 April 1975, both of which are on file at UNIDO headquarters. A survey of the leather-consuming footwear industry, originally conceived by the expert but completed by counterpart personnel of the JIDC, was also produced, and the expert agreed on the whole with the statistics and views contained therein, although on specific points, such as the conclusion that the Tannery could treble production merely by working three shifts, he was in disagreement. The survey is filed with the JIDC.

In the course of the project the Tannery made a determined effort to raise its quality standards, and local demand more than doubled thanks to government incentives to shoemakers using Jamaican leather. Moreover, while it was not possible to hold formal technical training courses, every opportunity was taken to explain the technical aspects of particular problems and subjects, and there was a general improvement in the morale and efficiency of the participants in the JIDC supervisory training programme. UNIDO/UNDP technical assistance during the period 1964-1971 and in the project covered by this report has had a significant effect on the Jamaican industrial development programme.

I. PROJECT ACTIVITIES

A. Marketing

Local conditions and survey of the industry

As previously indicated, direct government tax incentives to footwear manufacturers using Jamaican leathers led to a substantial increase in demand, paved the way for the production of higher quality leather in more economic quantities, and stimulated business confidence. At the same time, efforts continued to be made to expand the volume of regular demand for heavily printable materials through the development of local production of children's shoes and service boots from Zuggrain leather, and markets were found for accumulated stocks. It is hoped that sufficient interest in such production has now been generated, and that a regular outlet for defective local raw hides will thus be created.

As previously mentioned, a survey of the leather-consuming footwear industry has been produced, but it did not evoke the expected response. Two very important figures which were expected to emerge from the survey could not be accurately determined, namely: (a) the total installed capacity of current footwear production; (b) the actual volume of current footwear production. It is hoped that in future there will be more co-operation in the collection of factual information for planning purposes.

Since the completion of the mid-term report there seems to have been a definite decline in the number of complaints about leather quality, and a draft "Handbook on leather" for shoemakers has been prepared. On the other hand, arrangements for a symposium on the leather and footwear industry were delayed by the survey and other factors, but it was hoped that such a symposium could be organized within the framework of the JMA leather show, its basic objectives being to highlight important aspects of, and bring about an exchange of ideas between, different sectors of the industry, within the context of the national target requirements.

New products. Diversification away from shoe lines has begun only on a limited scale, owing to an upsurge in orders for shoe leathers.

Upholstery leather. A standardized product was issued to the Jamaica Development Bank, and it is hoped that in due course Jamaican diplomatic and consular offices at home and abroad will be displaying Jamaican-made furniture covered with Jamaican-made upholstery leather, and that the Tannery will soon be able to market growing quantities of its products for the upholstery industry.

Heavy print leather. Progress has not been fast enough in the use of local hides unsuitable for smooth finished grain as heavy print import substitution leather for defence service boots, work boots and school shoes, despite the full co-operation of the Defence Department. Nevertheless, leather and leather boot prototypes have been manufactured, and appropriate standards are being adopted. Since the profitability and number of these boots and children's shoes are rather low, it is difficult to arouse the interest of private sectors in them, and it has therefore been suggested that the Government, through JIDC, should, in the public interest, consider taking the initiative to encourage production either through a joint-sector or a wholly public-owned enterprise (in this connexion, see annex III). In response to preliminary inquiries addressed to seven different manufacturers throughout the world, a leading machine manufacturer has submitted a plan for the daily production of 1,000 pairs of children's shoes and 200-500 pairs of service boots. The relevant papers will be left with the Promotions Department for any follow-up required. Such a project would not only solve the problem of outlets for a particular type of local raw materials and create direct and indirect employment for about 200 people, it would also enable the Government to overcome a serious shortage of service and work boots and children's shoes.

Forecasts and sales programming

By early 1975 plans based on 1974 sales had to be revised owing to a doubling in the volume of orders which enabled the Tannery to utilise its productive capacities to the full. The supply of raw materials and chemicals had to be ensured and output increased, so that a regular flow of deliveries could be achieved within a couple of months. The situation has now improved, and it has therefore become possible to revise the forecasts and sales programme.

One positive effect of long-term planning in the Tannery has been its impact on medium-sized shoe factories, which, like the larger ones, have started to organize their operations more efficiently.

Export ventures

A start has been made with a shipment to Trinidad, but unless production is expanded to cover more than local market requirements, the main aims of the current export effort must be to convince the local market of the international acceptability of Jamaican leather and to develop goodwill for future market expansion abroad.

Small-scale manufacturers

The survey shed some light on the economic constraints to growth faced by this part of the shoe industry. If some positive form of financial aid or guarantee (for the purchase of raw materials, etc.) was provided by the Government or by banking agencies (as in many developed and developing countries), then these small shoemakers could become more productive and would be able to perform much more independently of middlemen. Small manufacturers would become more product conscious if they had sufficient financial freedom to select their retailers or to retail directly to consumers, with such benefits to the latter as quality improvements and price reductions. The Tannery would also be able to increase its very low proportion of sales to smaller manufacturers, and achieve a better balance in the relative market positions of the large- and small-scale manufacturers.

B. Technology and production

Training of supervisors

JIDC supervisory training programme. There was a significant improvement in the general morale and efficiency of the participants in the course, which was held on plant premises outside working hours. The basic objective of increasing self-confidence and discipline was achieved, as reflected in the rise in production and the high esprit de corps prevailing after a long period of almost continuous hard work. The credit must undoubtedly be attributed to the excellent relationship between management, supervisors and workers.

Technical training. It was not possible to organise such training because of the heavy production schedule. However, opportunities were taken, whenever possible, to explain the technical aspects of specific problems or subjects, especially during the brief period when the technical manager was away and the expert was standing in for him.

Development of a second line. Now that the stability and continued progress of the Tannery seem assured, the Managing Director is devoting his attention to this very important subject for the organisation at all levels.

Standards and standardization

Finished leather standards. As mentioned in the previous report, these have been revised through the Bureau of Standards, taking into account Jamaican conditions.

Standards for upholstery and gloving leather. These have been considered and are to be adopted in due course by the Bureau of Standards to enable the Tannery to standardize and diversify its products. The production of industrial gloves has recently doubled to meet local demand, and processing operations have been made more efficient by the elimination of conventional drying methods.

Standards for leather-soled and DMS boots. These are being introduced in order to encourage local industry and import substitution. The Tannery, as already stated, hopes to develop a regular market for heavily embossed leathers made from about 35% of local hides which are too defective for smooth grain finish.

Process standardisation. This has been more or less completed for the main product lines. The method of processing wet-blue imports has to be worked out as and when they arrive.

Metrication of weights and measures. Although the conversion chart for the platform weighing scale has been drawn up and given to the maintenance engineer for painting on the dial-scale, this work has been held up for the past few months owing to heavy production requirements. It is hoped that management will make the switch-over in due course.

Quality control and innovations

Quality control is being organized by the technical manager through his supervisors. If production remains at or grows from its present peak, consideration should be given to the appointment of a full-time quality control assistant to make independent checks and to assist the manager in other ways.

Quality failure analysis. No serious complaints from the consuming industries have been received since the completion of the last report, but the Tannery is continuously monitoring for quality failures in order to refer this problem, whenever required, to process control or adjustment, or to the raw materials department.

Product developments. The specially designed spray room for the production of polyurethane-finished patent leather is now nearing completion. This will make it possible to increase product variety in the local market and to make use of lower quality local raw materials. The room can also be used for the production of high-gloss finished goat skins required for women's shoes and some light men's shoes.

By-product utilization. Steps are currently being taken to set up a plant small enough for the efficient production of local splits into leather boards for shoe industry consumption.

Cost and efficiency. On the basis of the analysis contained in the mid-term report, a comparative assessment was made of the profitability of various types of raw materials which the Tannery could use to increase production (annex I). Taking into account long-term world trends, it was suggested that wet or rewettable chrome would be the best type of raw material on which to concentrate future import plans.

Production planning and control. The recent upsurge in production has underlined the weaknesses in the production process, as a result of which efforts are being made to obtain more drums, a spare fleshing machine, a stand-by wide shav ng machine, a dryer, another automatic sprayer, and other equipment which would increase capacity to 500 hides per day (5 million sq ft/year). This is a very wise step which will not only help to meet the demand for leather more effectively, but also make the Tannery more economically viable.

Rationalisation problems. A regular exchange of technical ideas is ensured through close co-operation with the technical/plant manager.

C. Raw materials

Since the previous report was completed, there has been no significant improvements in the quality of local hides.

The new meat-processing plant at Bog Walk, commissioned by Agro-Industries Ltd (Jamaica), with a capacity of 200 head of cattle and 200 pigs a day, will help considerably to reduce the number of flay-cuts and to encourage farmers to take better care of their animals and hides.

Import of rawhides and crust. The use of crust obtained by the air-dash process has so far been very successful in meeting the sudden rise in local demand, and there have been hardly any quality defects. The Managing Director of the Tannery was found to be very well informed on this matter, which is essential to the survival or progress of any Tannery.

II. CONCLUSIONS AND RECOMMENDATIONS

Raw materials

Local resources will for the next five years or so continue to yield between 250 to 300 hides a day, whereas the Tannery will require 500 hides a day to meet minimum local consumer demand for leather shoes. Therefore, from 200 to 250 hides a day must be imported from neighbouring surplus countries of North or South America. A study should be carried out as soon as possible to determine the types of raw material imports which would be of greatest benefit to the Tannery and the country.

From the points of view of both cost and quality, the import of wet-blue or rewettable-blue is expected to increase in the future because they are highly durable, less bulky, and easier to handle than salted hides. These inputs should therefore be carefully studied and developed.

Immediate task

The Tannery needs to be reorganized to meet demand fully and to produce 500 hides a day instead of the present average of about 250 hides a day. New machines, trained personnel and improved planning will be needed, and the opportunity should be taken to buy the cheaper-priced good machines now available in Europe as a result of recent rationalization measures in many tanneries. The present momentum created by new demand for leathers provides favourable conditions for expansion through the acquisition, in particular, of two drums, one flesher, one vac-dryer, and a new beam-house.

Better mechanical efficiency

Ensuring maintenance services and round-the-clock production work is difficult, especially with older machines. Yet the present team, backed by the management and a consultant mechanical engineer on the board, is finally managing to cope with the situation. In that connexion, the emergency measures taken by the management are very wise, but the long-term solution must be newer machines.

Idle machines and their utilization

Some machines, like the curtain coater, are underutilized. Could it be made more useful by coupling a drying conveyor to it, modifying the idle passing

conveyor, as in the finishing of splits, heavy coated leathers, and even with polyurethane? The problem of non-productive or less-productive machines should be dealt with by the management, now that the initial problem of the survival of the Tannery is off their minds.

Selection and training

Selecting and training second lines of command at all levels of management and supervisory organization should contribute to the success of future programmes to expand production to 500 hides a day.

Long-term planning

A long-term plan must be worked out for more profitable utilization of local hides of poorer quality (since hides improvement will take much longer). Efforts should therefore be continued to develop defence, police, public services and safety boots, as well as cheaper (tougher and healthier) children's shoes, out of Jamaican-made Zuggrain (heavily printed) leather. Prototypes have already been made, and standards are being established.

Footwear

The need for a central training and production service centre seems to be now more generally recognized. Not only will the training of skilled craftsmen help to overcome the present shortages and low productivity in the industry as a whole, it is also expected to reduce substantially the amount of defective or sub-standard production. A design assistance service together with a common machine pool could also be of benefit to smaller manufacturers, as outlined in previous reports. If the industry cannot itself organize such a centre, the JIDC should take the initiative, using voluntary staff from the shoe industry and whatever accommodation might be available on its premises. The Garment Industry Sewing Training School (JIDC) could be of some initial assistance.

One way in which the above-mentioned objectives could be achieved would be by combining them with the Sites and Services Programme to set up shoe units manufacturing boots and children's shoes (as outlined in annex III), or at least to set up a direct moulding sole machine centre to service boot uppers made by different smaller factories for assembly with soles at the centre. If, owing to low profitability, private enterprise remains

unresponsive, feasibility studies should be initiated by the Government as a matter of public interest, with a view to the launching of public or joint public and private ventures. Preplanning papers will be left with the JIDC Promotions Department. An investment of approximately $400,000 in the latest machines to obtain a daily production of 1,000 pairs of children's shoes and from 200 to 500 pairs of boots (injection moulded soles) would give a great boost to the economy, the supply of leather consumer goods and the country's shoe industry.

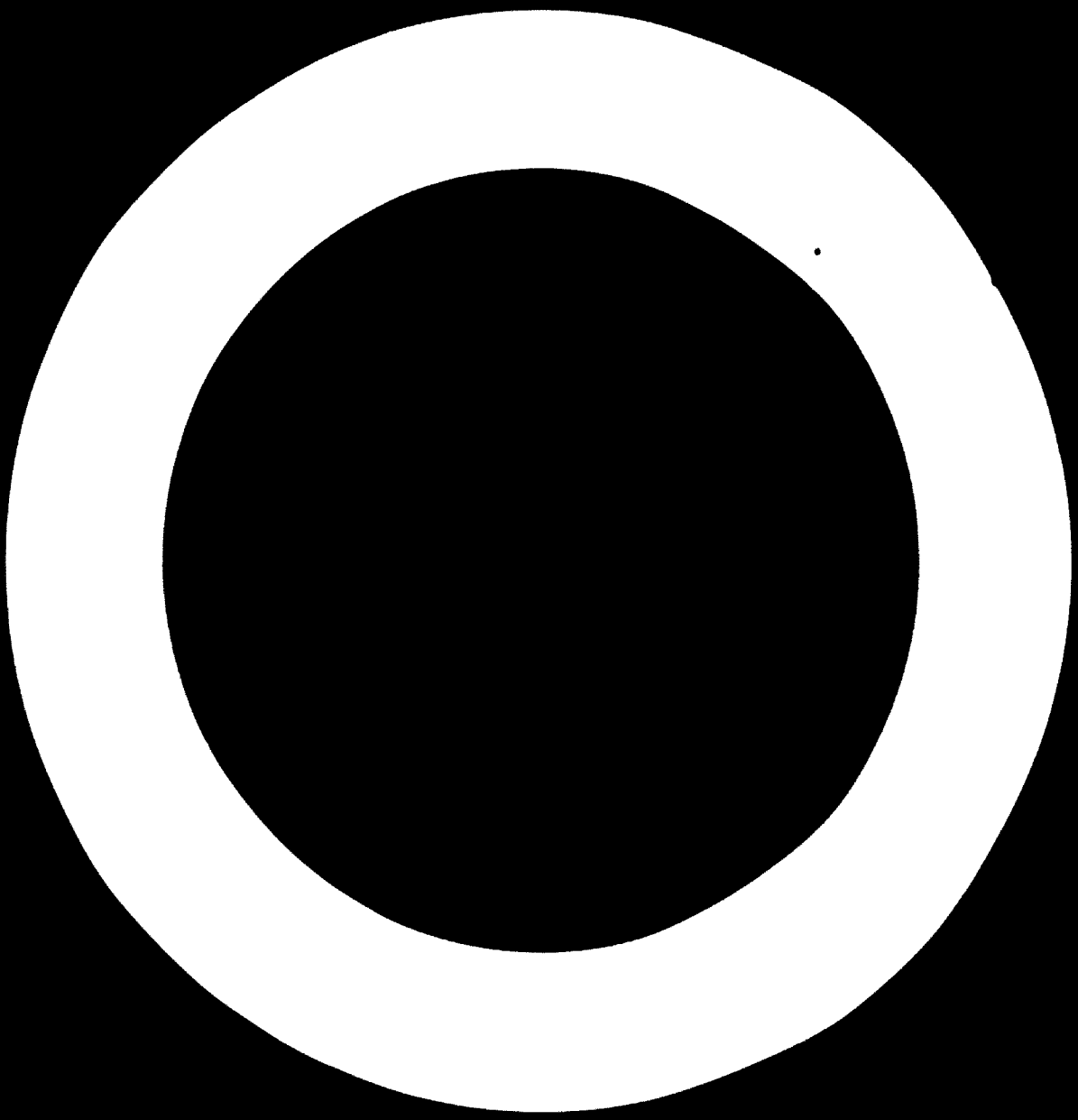
Ancilliary industries

Apart from the promotion of the above-mentioned project, either through the Sites and Services Programme or separately through private, public, or joint entrepreneurship, JIDC has encouraged leather unit sole production by private enterprise (annex II).

Leather clothing. Since initial efforts in this field have more or less failed to evoke sufficient response, the idea of a leather clothing venture needs to be thoroughly reviewed, assessed and actively promoted.

UNIDO/UNDP assistance

To ensure its harmonious development, the leather and footwear industry should receive further assistance from international sources. Given the available technological know-how and human resources, international technical assistance to the country in this particular field could help to achieve considerable progress in the near future.



Annex I

THE PROCUREMENT OF RAW MATERIALS: THE SITUATION IN JULY 1975

Available raw materials

The following are available:

(a) Jamaican hides. Limited to 200 hides per day (6,000 sq ft) expected to become more regularly available (the current average is about 130 per day) when the ADC-organized slaughterhouse is commissioned. Considering the Tannery's present capacity of 300 hides per day, which is likely to be expanded to 500 hides per day to meet increased market requirements, there will be a regular shortage of raw materials;

(b) Imported rawhides. The current price is $0.26/lb for an average lot of 44 lb, giving 40 sq ft per piece, or $0.29 per sq ft;

(c) Imported wet-blue. An average of $13.70 per side, producing 22 sq ft gives a price of $0.62 per sq ft (actual quality and profitability to be worked out by trial import lots);

(d) Imported crust. The current price is $0.80 per sq ft (a steep rise from $0.65 in four months).

Cost of production and differences in profitability of each item

Item	Raw materials per square foot			
	a	b	c	d
Raw	0.20	0.29	0.62	0.80
c.i.f.	-	0.04	0.04	0.02
Chemicals	0.22	0.22	0.13	0.08
Labour	0.15	0.15	0.10	0.08
Overheads	0.20	0.20	0.12	10
Total costs	0.77	0.90	1.01	1.08
Selling price (smooth:print)	0.96	1.00	1.06	1.10
1.10:0.90	(30:70)	(50:50)	(80:20)	(100:0)
Margin	0.19[a/]	0.10[a/]	0.05[a/]	0.02[a/]
Cycle time	6 weeks	6 weeks	3 weeks	2 weeks
Margin/sq ft/ 6 weeks	0.24	0.15	0.10	0.07
Profitability	4	2.5	1.66	1

a/ Add 0.05 for splits.

Capacity utilization and efficiency of plant maintenance

The preceding 7 months were characterized by the frequent breakdown of machines, many of them rather old, and by the failure of the maintenance team to keep up with heavy production demands. A full load or the over-taxing of machine capacity should therefore be avoided, and an expert reappraisal of the maintenance programme should be immediately undertaken. In the meantime, in order to ease the pressure it would seem advisable to continue urgent deliveries, with less profitable crust purchases, and to rest and redeploy both the maintenance team and the machines.

Even if a target capacity of 500 hides per day (20,000 sq ft) for 1978 is fixed, up from the current 300 hides per day, the shortage of local hides will still need to be offset by imports, and machines will have to be deployed accordingly.

Marketing problems and deliveries

The orders in hand amounted to 1.1 million sq ft. Even if production was expanded by round-the-clock finishing of crust to 60,000 sq ft per week, or deliveries totalling 240,000 sq ft per month, the problem would still not be overcome by the end of the season.

Orders in hand: 1,000,000 sq ft (Christmas and New Year)

Programme	September	October	November	December
Produce and deliver	240,000	240,000	240,000	240,000
New orders expected	100,000	75,000	75,000	75,000
Balance in hand	960,000	795,000	630,000	465,000

Thus, in order to avoid Christmas market disappointments or losses due to the Tannery's inability to fill all orders in time, it seemed advisable to authorize the importation of 250,000 sq ft of non-black leathers. In formulating import policy, account should be taken of such factors as the quicker turnover and lower inventory costs and buying prices of crusts, despite their low unit profitability. If a bargain price could be arranged on the basis of bulk orders and extended terms of payment, it would to some extent compensate for the lower profitability and also satisfy immediate market demand.

Suggested procurement policy

A policy along the following lines is recommended. Its quantitative aspects have to be worked out accordingly.

Phases	Jamaican	Imported raw	Wet blue	Crust
September October November	Normal purchase 400-600 per week	Slow down, until price fall	Trial lot imports	Very heavy purchase to meet Christmas demands
December January February	"	Winter kill, buy more to make up short-fall	Build up stocks for crusts	Slow down
March April May	"	Slow down, hot season	Import more; develop regular purchase	Emergency purchase only

Annex II

LEATHER UNIT SOLE INJECTION

To the Trade Promotions Department

Comments by the UNIDO Leather Industry Adviser: 20 May 1975

Potential market. The feasibility study of the project has confirmed that since the prices involved are almost double those of normal plastic soles, leather-soled shoes will only attract the more sophisticated higher-income group. However, being a tourist island, Jamaica can create a speciality line and develop an invisible export of leather-bottomed footwear.

It is possible to offset a part of the higher cost of production (due to initial lower productivity, etc.) and yet offer tourists a product at a much cheaper price than what they would have to pay back home. For example, a leather jacket imported into the United States at $40 would reach the consumer at a retail price of about $120, whereas Jamaica can make and profitably offer the same at about $80, and the situation would be similar for top-class leather-soled shoes.

Raw materials. A certain percentage of Jamaican cowhides are too defective to be profitably made into upper leather (which would be unsaleable); normally such hides are better suited for vegetable tanning into light sole leather, from which leather unit soles can be manufactured.

If 500 pairs of unit soles per day should be the minimum required to break even in the projected plant, these would require only 20 hides per day, which the upper leather tannery can profitably transfer to vegetable tanning after a normal pre-tanning inspection. There are 5 smaller vegetable or sole tanneries, which may also find a regular outlet, especially when the full capacity of 2,000 pairs per day is reached, requiring about 80 hides a day and representing 500,000 pairs per year mainly for the tourist market.

Production costs. This factor has to be carefully considered after inviting estimates of machine costs and studying capacity and projected balance sheets.

One unit sole manufacturer suggested that while plastic soles cost about $1/pair, leather unit soles would cost about $3 (including about 30% labour cost). But similarly, there will always be a higher selling price difference in favour of the leather soles.

Even if the commercial "profitability" does not turn out to be initially encouraging in the light of machine investment charges, the "social benefits" in terms of creating more employment and improving skills, especially among the handicapped, should be taken into account.

Such a production unit may also produce other leather articles, for example shoe uppers and components, to supply the industry and to keep busy all the year round.

Other benefits would be: more profitable utilisation of a poorer raw material for manufacturing an export item; utilisation of unused machine capacity for making sole leather; import substitution.

Sales promotion and feasibility. Participation in the Leather and Footwear Fair should be considered, and, with the co-operation of the JMA Footwear Section, current and future interest in and demand for leather unit soles should be reviewed. Moreover, to facilitate the process of costing, the tanneries should be requested to offer suitable samples, prices and data regarding capacity. Quotations (informal and not binding on JIDC), should also be invited from different shoe machine manufacturers for a complete unit (capacity 500 to 2,000 pairs/8 hours), so that feasibility studies can be undertaken. A final decision to shelve or proceed with the project can then be considered.

Annex III

TECHNICAL AND ECONOMIC FACTORS RELATING TO THE DEVELOPMENT OF THE FOOTWEAR INDUSTRY IN JAMAICA

To the JIDC Sites and Services Department, July 1975

Background

It is estimated that only 50-60% of the installed capacity of the footwear industry is now being utilized. Among the reasons for such underutilization are: lack of materials, lack of trained labour and problems relating to the management of industrial relations.

Consumer hardship is caused by the high price of children's shoes and their short supply. Children's shoes are produced less because of their low returns. For the same reasons, service boots still have to be imported, and although there are three small manufacturers of work boots, the quality of their soling and their volume of production can be very much improved by mechanization.

A market is provided by the country's growing economy, with per capita annual consumption in Jamaica around 2.5 pairs, compared to about 5 pairs in developed countries (and 1.6 pairs as the minimum stipulated target for developing countries). Because of either prices or styling, or perhaps both, it is common for travellers from abroad to import a fair amount of footwear, thus indicating the existance of big potential markets for local manufacturers.

Objectives of the setting up of additional shoe production units

The additional shoe production units will have the following purposes:

(1) Training a skilled labour force which can partly compensate for the current manpower shortage, thus helping to bring into service unutilized capacity throughout the industry;

(2) Supporting existing units by supplying unit components and job-work;

(3) Producing and marketing such items as children's shoes and boots, the scarcity of which cause consumer hardship, while servicing, wherever possible, with more sophisticated machines and facilities, the productive activities of the small manufacturers of similar items;

(4) Encouraging the use of local raw materials.

A phased programme

Phase one. This will correspond to the long initial period devoted to the training of skilled personnel to ensure the necessary increase in the industry's production.

Phase two. During this phase common facilities or production service assistance to industry should be given.

Phase three. During this phase the production of essential items should begin, with a view to achieving self-sustained economic growth.

Benefits to be derived from the production of boots and children's shoes

The following benefits are expected to arise from the manufacture of boots and children's shoes:

(1) The raw material used will be Jamaican upper leather with heavy print or embossing, available in substantial quantities without affecting demand for fashion or casual footwear;

(2) The combination of large (boot) and small (children) components will improve cutting economy or utilization, thus bringing down material costs;

(3) The supply of children's shoes will increase and market prices will stabilize;

(4) The country's defence forces and the region will not depend on imports.

Production flow rationalization

The three main stages of production, i.e. preparation, assembly and finishing, will be progressively established in the above-mentioned phases, in order to ensure the best utilization of resources and investment. Boots will be manufactured by the direct injection process (DIP) of sole attachment, and children's shoes by the DIP as well as by the united cemented sole method, to ensure variety and the local production of unit rubber soles.

Annex IV

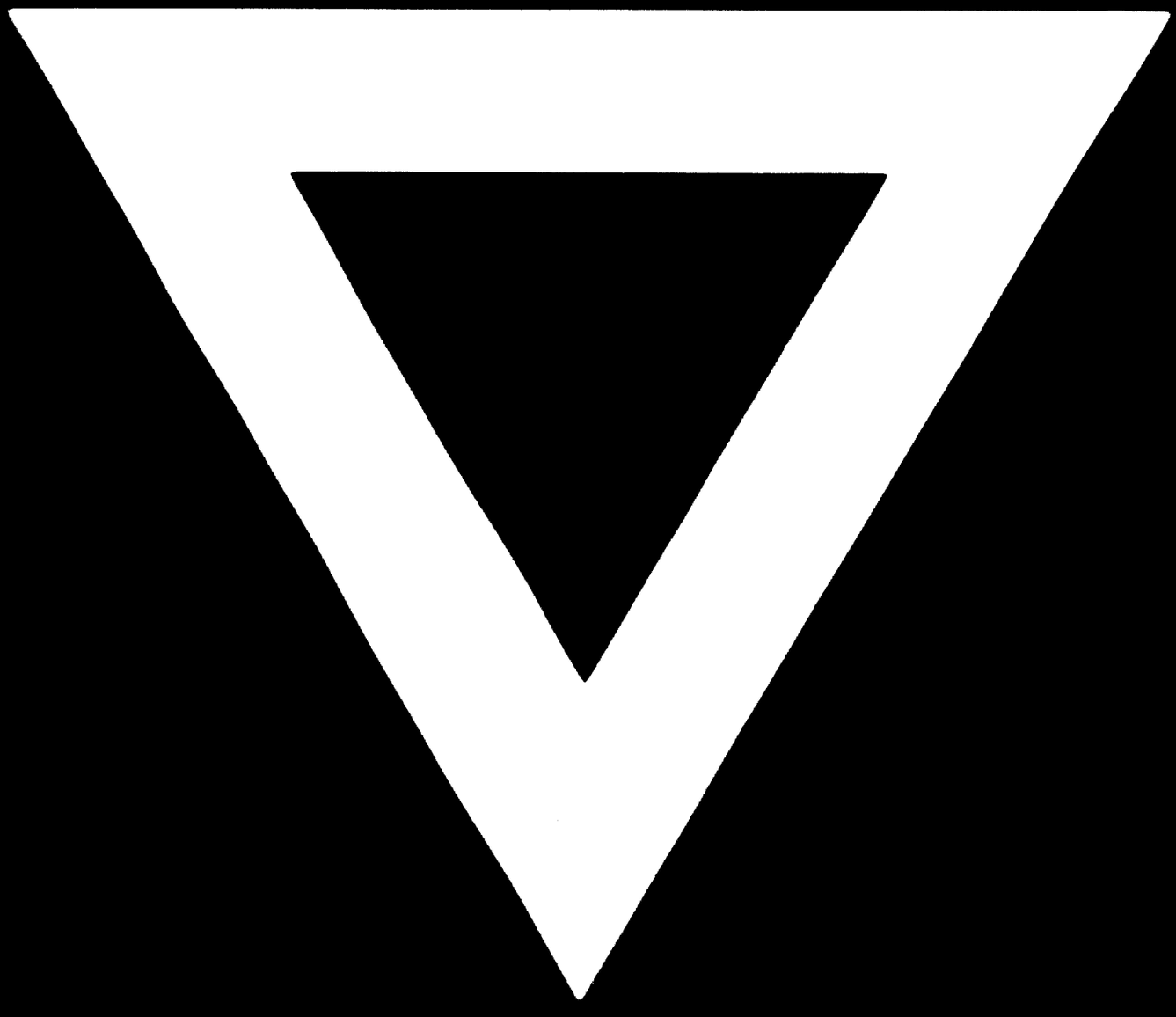
SUMMARY OF THE MID-TERM REPORT

1. Technologically, the quality and capacity of upper leather production is making good progress. But to keep pace with national requirements, the raw materials resources need urgent attention from the top for improvements.

2. Progress has been maintained on the working plans and programme as stipulated in the preliminary report on the project, especially work regarding standardisation aspects of finished leather. On the basis of experience gained, particular areas will now be concentrated upon.

3. Technical training, a tannery production manual, a handbook for the leather consumer, a survey, followed by a symposium on the problems and prospects of leather and footwear industry in Jamaica, will be included in the remaining six months of the term.

C-272



77.07.04