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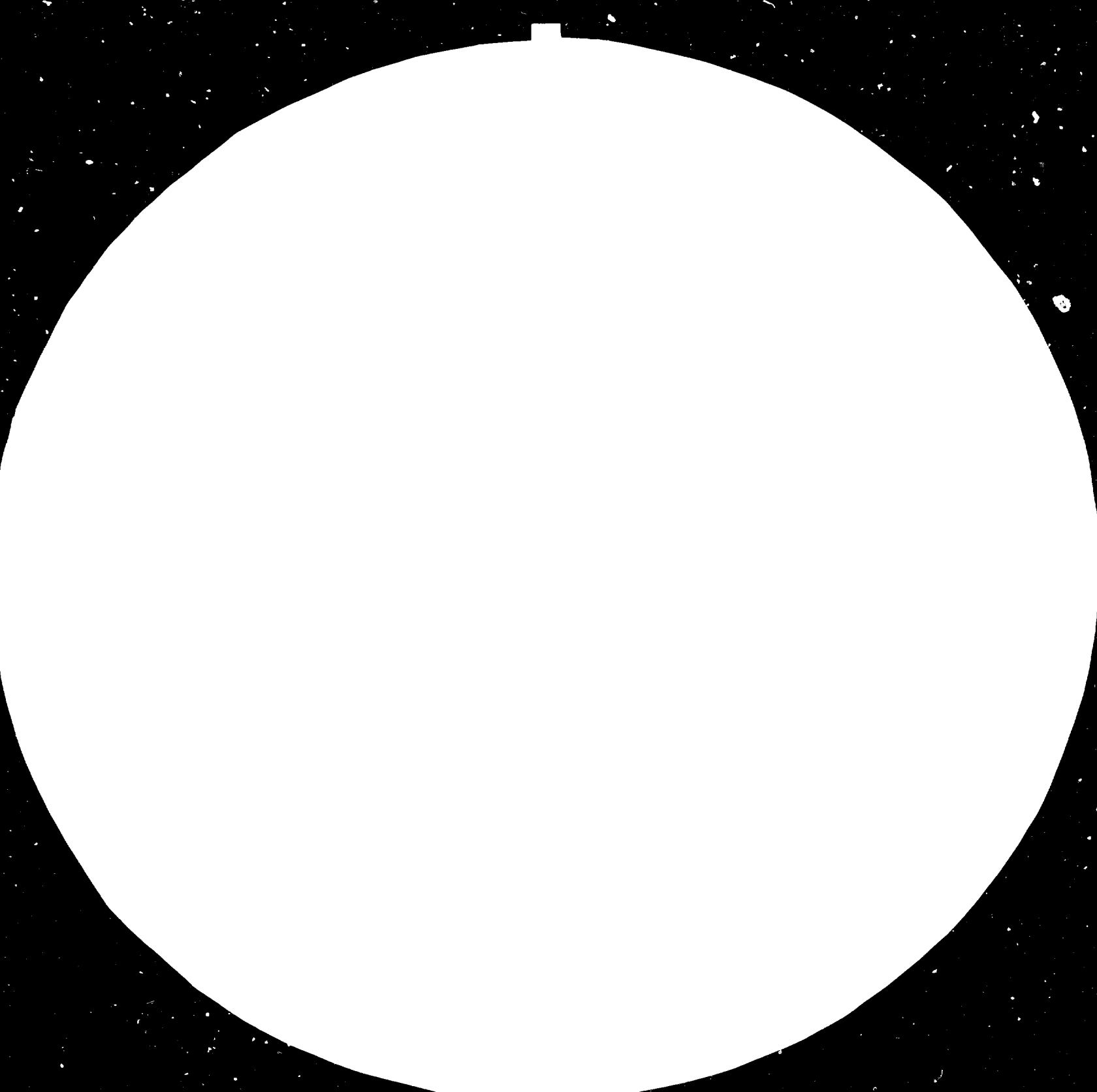
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REHABILITATION OF MUKISA FOODS
LIMITED

DP/UGA/81/001

UGANDA

Technical report*: Rehabilitation of a Biscuit Manufacturing Plant

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

Based on the work of Alain Ledunois
expert in biscuit and cereal products technology

United Nations Industrial Development Organization
Vienna

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I. EXPLANATORY NOTES

a) Value of the local currency during the period of the project

In June 1981, when the project document was signed: 1 US Dollar = 8.5 Ugandan Shillings.

From January 1982 to August 1982 the rates were: 1 US Dollar = from 90 to 105 Ugandan Shillings.

From August 1982 up to now, the Ugandan Government decided to apply two different rates. The first one, called officially "Window One", is used only for the importation of crucial raw materials and equipment and the exchange rate from September 1982 up to May 1983 was: 1 US Dollar = from 100 to 115 Ugandan Shillings. The second one, called officially "Window Two" is used for all other importations and the exchange rate from September 1982 up to May 1983 was: 1 US Dollar = from 230 to 250 Ugandan Shillings.

In the report, for the purpose of computing financial input, exchange rates are applied as follows:

- 1 US\$ = 8.5 Ugandan Shillings (page 4)
- 1 US\$ = 97 Ugandan Shillings (page 19)
- 1 US\$ = 107 Ugandan Shillings (page 20)
- 1 US\$ = 240 Ugandan Shillings (pages 9, 10, 15, 23)

b) Abbreviations

- UP: Ugandan Police
- UNLA: Uganda National Liberation Army
- UNDP: United Nations Development Programme
- UNIDO: United Nations Industrial Development Organization
- MT: Metric tonne
- MPDE: Ministry of Planning and Economic Development
- FOT: Free on Truck

II. SUMMARY

The purpose of the project was:

- i) to improve and update the existing manufacturing facilities in the factory;
- ii) to assist in the installation of the new equipment;
- iii) to increase production in order to meet the local demand and subsequently to export products to neighbouring countries;
- iv) to train nationals in food technology management, marketing techniques and the operation and maintenance of plant machinery.

The duration of the project being reported on is 17 months (from January 1982 to May 1983).

The first and second purposes of the project, as above mentioned, should be considered as achieved. However, the third and fourth have to be considered as incomplete.

The main recommendations are as follows:

- to request a revision of the project document which has to be amended to reflect the actual input necessary for the achievement of the objectives foreseen in the project document. The only priority which should be given, is the presence of one expert on the site for launching the production and completing the training of the national staff;
- to allocate Mukisa Foods with adequate foreign exchange in order to avoid a breakdown of production due to the lack of raw materials imported from overseas (foreign currency used for the importation of biscuits which can be produced by Mukisa Foods should be used for that purpose).
- to review the sales tax policy (40% for biscuit) to solve the marketing difficulties met by Mikisa Foods in case of full and constant production.

III. INTRODUCTION

a) Objectives and logic of the Project

Project Background

The development of the food industry in Uganda is still in its embryonic stage. It is the fact that the establishment of Mukisa Foods production of sweets and biscuits is of a low level with the result that the country imports sweets heavily from Kenya to meet the increasing local demand. The situation has become worse since 1974, due to the lack of foreign exchange and reduced imports, while the demands have increased. In April 1979, during the liberation war, Mukisa Foods was given up to plunder and became incapable of resuming its production, consequently, biscuits and sweets were not available in the country.

Official Arrangements

The assistance for the rehabilitation of Mukisa Foods was requested in 1980 and the project document was signed on 2 March 1981 by:

- Mr. Sam Odaka, Minister of Planning and Economic Development, on behalf of the Government;
- Mr. Bradford Morse, Administrator of UNDP, on behalf of UNDP;
- Mr. Bradford Morse, Administrator of UNDP, on behalf of UNIDO (telex - Bekele's Misc. 135 refers) executing agency of the project.

The project was in operation in January 1982. The work was carried out by UNIDO, acting as executing agency of the UNDP. The Government implementing agency was Mukisa Foods Ltd., under the Ugandan Development Corporation, Ministry of Industry.

Contribution

The planned UNDP contribution included one consultant for six months (see Annex I), supported by one secretary and two drivers recruited locally. The training component included a study tour in Europe in management and fellowship training programmes in quality control, repair and maintenance. Also, this included one large biscuit line (see Annex II) and miscellaneous as needed.

The planned inputs from the Government mentioned in the project document i.e. from the implementing agency Mukisa Foods Ltd., included all the physical facilities and supplied counterpart staff as well as plant employees (see Annex VI) to work with the UNIDO expert and also to be trained. The estimate total value of the inputs, provided directly by the Government to the project, was US\$ 200,000 to buy a new biscuit line during the year 1981 including Ugandan Shillings 671,000.

The scope of the project and the original budget were under-estimated in the project document. The Mukisa Foods management, requested the extension of the expert's six months contract twice through the Ministry of Planning and this was approved. Also, an increment of UNDP input of US\$ 50,000 for subcontractor's fees and small equipment items has been allocated to the project.

All of this was adequate to achieve the basic objective of the Rehabilitation of Mukisa Foods Limited.

The immediate objectives of the project were:

- to make an assessment of the existing equipment, technological process, production programme, quality of the products produced and level of technical personnel;

- to identify bottleneck and all shortcomings of a technical, technological and organization nature;
- to assist in improving the general operation of the plant and the elimination of technical and technological shortcomings;
- to assist in the preparation of a programme of expansion of the plant, specifications of the necessary equipment, list of potential equipment suppliers;
- to identify the level of technical personnel, their training requirements and to organize a training programme in the operation and maintenance of processing equipment, processing technology quality control and the organization of an industrial plant of this kind and size.

The development objectives of the project were:

- to reduce the importation of biscuits and sweets and at the same time save much of the required foreign exchange;
- to use local raw materials, if available in Uganda;
- to improve the welfare of the people of Uganda.

b) Activities carried out and outputs produced

In January and February 1982, the UNIDO expert made an assessment of the existing equipment of the factory.

In the Sweets Section, most of the machines needed thorough cleaning and some fittings, and were not in a position to start production again.

In the Biscuit Section, two very old lines were not in working order. They were rusted and quite a lot of tools were missing. It was decided that they should be sold as scrap. One new biscuit making line (French line) has never been in operation due to the lack of electricity. Two new wrapping machines, with sufficient working capacity for the existing new line and also for the new one expected (German line) were provided.

Auxilliary Equipment

The capacity of the transformer had to be increased from 297 KVA to 829 KVA. The boiler which was in a bad state, had to be repaired locally. The electrical circuit and water piping system were also in a very bad state. The workshop was almost void.

The buildings were in a very bad condition.

Main activities from January 1982 to June 1982

- technical rehabilitation of the sweets section which started operation on 13 May 1982;
- cleaning and preparation of the biscuit section in order to fix the new equipment properly;
- study of a new organization chart, stationery requirements, budgeting (see Annex III), raw material requirements (see Annex IV);
- some trial with the French line once the necessary raw materials were delivered in June.

Main activities from July 1982 to December 1982

- launching (at 50% of capacity) of the industrial production with the French line in September (with only two types of simple biscuit recipes) after solving the necessary fitting done by a supplier technician in August;
- once delivered, starting of the erection of the German line in October. Due to the delay of getting a new transformer (which was requested from UEB in June 1982), it has been difficult to make the industrial trial with the equipment after the German fitter went back to Germany in early December;
- full equipment of the workshop which is now reliable, was put to use.

Main activities from January 1983 to June 1983

- March 1983, the achievement of the industrial trial with the German line under the supervision of a technical supplier after the installation of a new transformer;
- early April, the biscuit production and training of the national staff were stopped due to a lack of vegetable fat (see Annex V);
- training abroad of the Technical Manager, counterpart of UNIDO expert;
- mandatory final report by the UNIDO expert leaving Uganda at the end of May 1983.

c) Achievement of Immediate Objectives

As the situation stands in May 1983, the immediate objectives should not be considered as fully achieved. All the training aspects of the project are more or less still unaccomplished as well as some engineering works, consequently Mukisa Foods Limited is not very fit to fulfill the development objectives.

Manufacturing Facilities

Regarding the sweets section, there is an urgent need to replace some of the existing equipment i.e. wrapping machines, boiler, cooker (see Annex VII) any time these machines can break down and stop the sweets production. This kind of situation is a result of the old slow functioning equipment. Regarding the biscuit section, the German line is properly fixed and can be run without any problem. Only the French line should be moved from its present place to another one in order to fix the wrapping machines properly at the German line (see Annex VIII). This particular work should be done under the control of the equipment supplier. This situation reduces the production capacity of the German line.

Capacity of production of Mukisa Foods in May 1983

Sweets Section

For the reasons already explained above, the daily sweets production (for 8 hours) does not exceed 1000 kgs., considering the days spent in cleaning the machines, repair and the workers annual leave, the actual production corresponds to 200 MT a year.

Biscuit Section:

For the reasons explained in this report, the daily reduced biscuit production (for 8 hours) is as follows.

French line 800 kgs., German line 1600 kgs. Considering the days spent in cleaning the machines, repair and the workers annual leave the actual production equals 480 MT a year.

The actual yearly production capacity of finished products of the factory is; 480 MT of biscuits plus 200 MT of sweets = 680 MT. This actual capacity can be multiplied by two in fixing a second production shift; (the first one starting at 6.00 pm and breaking off at 2.00 am, the second one from 2.00 am up to 10.00 am).

Possible capacity of Mukisa Foods Ltd. in the future

Sweets Section

If any investment in new equipment is undertaken, the production will stay at its normal level.

Biscuit Section

If the engineering task as already described is completed, the daily production could reach (for 8 hours) 4,000 kgs. This implies, the production

of 800 MT a year inclusive of the workers annual leave, time for cleaning, repair and maintenance. This production capacity can be multiplied by two in fixing a second production shift. In case of a decision, to introduce the second biscuit and sweets production shift, the total capacity of the factory could be a) 200 MT of sweets +800 MT of biscuits = 1000 MT and b) 400 MT of sweets + 1600 MT of biscuits = 2000 MT.

Training

Planned Project Activities Included

- training of one candidate for a quality control course for three months in the UK;
- training of two candidates in repair and maintenance for two months each in France.

This component of the project was not realistic for the following reasons:

a) It was difficult to find a suitable training course of three months in the UK for only one candidate.

b) There was no reason for sending candidates to the UK when the Company is equipped with French and German machinery.

c) Since the French supplier could train the workers in the workshop, there was no need to send them to France where they would have had language difficulties.

d) Assisting the supplier in the erection of the new line gave an opportunity of being briefed and trained hard on site.

e) The necessity of keeping the candidates in the factory during the rehabilitation works and particularly during the installation work carried out.

In this case, the candidates for repair and maintenance were not sent for training and this fact did not affect the implementation of the project. They have been sufficiently trained on site by the four French and German technicians who were recruited to the Mukisa Foods factory for fitting, erection and trial of the new equipment.

The UNIDO expert counterpart was recruited in August 1982 (eight months after the beginning of the project). After falling sick he was given sick leave. Despite taking all the necessary action through the Ugandan High Commission in London, Mukisa Foods did not obtain a positive response for a three month course in quality control.

At the same time, action was taken to undertake training from 12 to 29 April 1983 in Werner and Pfleiderer (suppliers of the German line) Stuttgart, Germany, followed by 4 weeks at Ecole de Boulangerie et de Patisserie, Paris, France.

The duration and nature of this training may be considered as insufficient and more as a study tour. It will be impossible to achieve on the spot the crucial task for the continuation of the project, because the quality control candidate arrived back in Uganda when the UNIDO expert was leaving the country.

Immediate Training

The training of the middle staff and basic workers in the use of the German line still remains pending. A few days after the installation and fitting, the factory ran out of fat and consequently the production stopped.

The French line has never operated at full capacity, but only at 50%. Even if the national staff were well trained for the use of it at this level, they may not be considered capable to increase the production by themselves up to its full capacity.

Due to a number of technical problems, only three types of biscuit recipes were taught to the national staff. Only a few former workers of the factory resumed duty when the biscuit production was launched. The rest came from various activity fields, having no knowledge of the new work.

Marketing

The actual possible production or the future one are obviously below the internal market demand. The actual Ugandan population is 13,600,000 and according to the production of Mukisa Foods, the population demand can be met, per year, as follows:

<u>Mukisa Foods Production</u>	<u>Ugandan Population</u>	<u>Per Capita</u>
680 MT	13,600,000	0.050 Kg.
1,360 MT	13,600,000	0.100 Kg.
1,000 MT	13,600,000	0,070 Kg.
2,000 MT	13,600,000	0.147 Kg.

During the first half of 1982, according to the estimate administrative expenditure foreseen for the current year (see Annex 2), an industrial prime cost was carried out for the biscuits and candies as follows:

Candies

Raw material input	235 U.Shs. per Kg.
Administration expenses input	133 " " "
Industrial prime cost	468 " " "
Mukisa Foods Ltd., profit 20%	49 " " "
Net Industrial sell price	294 " " "
Advolerum taxes (30%)	88 " " "
Sale price FOT factory	383 " " "

Mukisa Foods Ltd., has never been facing a marketing problem regarding the sweets sales. However, the use of "Window II" (see page 2) for importing the raw materials, will increase the input cost up to U.Shs. 329, making a sale price FOT factory U.Shs. 1200 per Kg which cannot be easily met, after considering the addition of the resellers profit, the purchase power of the largest portion of the Ugandan population.

Biscuits

Raw material input	205 U.Shs. per Kg.
Administration expenses input	133 " " "
Industrial prime cost	330 " " "
Mukisa Foods Ltd., profit (20%)	67 " " "
Net Industrial sale price	405 " " "
Advolerum taxes (40%)	162 " " "
Sale price FOT factory	567 " " "

That figure making a biscuit packet of 350 gms., at the price of U. Shs. 200. Due to the very closed industrial prime cost of the different brand of biscuits, it has been decided to apply the same net sale price to all of them. (the above figure regarding the raw material cost input is an average).

Sometime after starting the selling, Mukisa Foods stated, despite the quality of the biscuit, few people were coming to the factory to buy these products. After looking for the reason, it became evident that the public selling price was too high.

Up to date, due to the lack of packaging material for a packet of two and four biscuits, it is impossible to offer a smaller packaging system to the resellers, thus giving the people the possibility to buy fewer biscuits each time. The sum of U. Shs. 250 is still a large expense for the low and middle Ugandan social ranges.

The use of "Window II" (see page 2) for importing the raw material will increase the raw material input cost up to U. Shs. 507 per Kg., making a sale price FOT factory per packet of 350 gms., U.Shs. 376 which, cannot after considering the resellers profit which has to be done over that price, meet the purchase power of the largest portion of the Ugandan population.

d) Utilization of Project Results

During the time of the project, it became evident that:

- the level of all the national staff of the factory is such that they could be trained successfully to carry out the work properly without any assistance in the future;
- the factory can be brought to a satisfactory level of production;
- the technical rehabilitation has never been stopped due to a lack of equipment but only some belated input can be noted;
- the financial result of Mukisa Foods Ltd., shall be positive soon (see Annex X) and also generate foreign exchange to Uganda through exports;
- the factory once fully rehabilitated, could help in strengthening the national economy;

However, the utilization of the project results will depend on the continuation of the general economical and industrial rehabilitation of the country and the possibility and capability in undertaking the tasks required, in order to achieve the project objectives.

According to the original project document, financial input was on the low side, after two revisions, the funds became adequate to reasonably achieve the objective of the rehabilitation of Mukisa Foods Ltd., during the whole period of the project. Most of the national input came more or less on time, however, Mukisa Foods has not been allocated on time, and with the right amount of foreign exchange to import crucial raw materials despite the fact that all the planned requirements were well known and indicated on time.

e) Recommendations

Further steps to be taken to attain the objectives of the project

The project may be amended to reflect additional inputs necessary to achieve the Rehabilitation of Mukisa Foods. The Japanese Overseas Development Corporation is willing to co-operate in providing experts to UNIDO executed technical assistance project, while bearing 75% of the expert costs. The implication of this would be the reduced costs for personnel. In any case a complete achievement of Mukisa Foods rehabilitation requires further assistance of an overseas expert and this may be further explored.

If the above could be arranged, the conditions to be met by Mukisa Foods before further assistance could be provided must be as follows:

- all the necessary raw materials and chemical products should be available for a minimum of six months production of biscuits (see Annex III);
- all the necessary national staff, not yet recruited, should be selected and present on the site (see Annex XI);
- all the laboratory equipment, not yet delivered, should be properly fixed in the Research and Control Laboratory once rehabilitated (see Annex II).

Expert's Tasks which Remain Pending

- moving the French line from its place to another;
- starting the industrial production at the full capacity of both lines;
- training the local staff in the operation of both lines;
- developing new types of biscuits in close co-operation with the counterpart staff;
- drafting the programme extension of the factory.

The estimated duration of the new expert services is 12 months, to achieve the above, after considering the local work conditions.

Mukisa Foods Ltd., should complete the following engineering tasks still pending

i) Sweets Section

- replace or repair the steam piping system from the boiler up to the sweets section. Too much steam is lost due to a number of leakages;
- fix the second air conditioner, which is missing in the wrapping section;
- paint a new coat inside the sweets section.

ii) Biscuit Section

- to order locally, a brushing system for the oven conveyor of the German line and also a lifting unit for the rotating moulding rollers;
- to rehabilitate the research and control laboratory located on the first floor;
- to build a metallic frame supporting the exhaust pipe of the German line;
- to prepare the site according to the new place of the French line i.e. electrical connection points, electrical cable system etc.

- to repair the leakages of the roof;
- to erect a steam piping system from the boiler up to the biscuit section in view of the weekly general cleaning.

iii) Store

- to order locally a sieve unit for the flour for the elimination of insects from it;
- to undertake a general deep cleaning and then fumigate before the delivery of the new wheat flour consignment;
- to resell to PAPCO, for example, all the useless packaging stock i.e. UAAF flutte boxes, WHRIGHT carton boxes of which there are still plenty inside, giving quite a lot of free space.

iv) General Building

- to install the water piping system collecting rain water from the roof to the banks;
- to scrap out all the old machinery from the garden;
- to install a new lighting system where necessary;
- to repair the wire guard of the plant along the Kawempe main road.

v) Offices

- to request Posts and Communication to connect the telex and telephone properly. All this equipment is already installed in the office but not in working order. Consequently, all communication with the town must be done by direct contact;
- to finish buying all the necessary desks, chairs and closets for the senior and middle staff;
- to paint the inside of the offices and repair the doors and windows everywhere it is required.

Regarding the raw material purchase, the following policy should be undertaken. Its main aims must be:

- to avoid any break off of raw material which would stop production;
- to buy the largest quantity of raw materials locally if a) they are not already imported but produced locally (Mukisa Foods has not spent money for the profit of the importers) and b) their price is compatible with an acceptable industrial prime cost (refer to page 10 of the report and see AnnexIV).

Its means have to be:

- in January, according to the production plan, Mukisa Foods should receive all the right requirements (if even one is missing, Mukisa Foods will be incapable of production) and at the same time undertake all the necessary steps with regard to the long banking process and transit time, so that the right quantity of raw materials will be delivered in June for the following six months. This rotation has to be kept permanently;
- to be in constant contact with all the Ugandan potential suppliers to check their new supply possibilities;
- the banks should allocate Mukisa Foods foreign exchange twice a year, for the necessary six months raw material input. If for any reason they are not in a position to do this, it would be better to wait until it becomes possible otherwise, this would imply the stopping of production. Most of the raw materials are perishable food stuffs, and if Mukisa Foods is out of production due to the lack of one item, all that is already in stock may be spoiled.

Uganda is still importing biscuits from overseas for UNLA and UP and also some import firms are doing the same from the U.K. and other countries. It is impossible, due to the lack of commercial and financial statistics, to know exactly what amount of foreign currency is spent yearly for this purpose. According to the potential production of Mukisa Foods and also the quality of biscuits produced, the Ugandan authorities can easily reduce these imports and with the foreign exchange facility, save the money and allocate more to Mukisa Foods, to import adequate raw materials. Also the price of the biscuits produced by Mukisa Foods is cheaper than those imported.

With regard to the commercial field, the following policy can be applied. According to the production of Mukisa Foods, the Ugandan population requirement can be met by 50 gms to 147 gms of biscuit per year and per capita. This is obviously under the internal market need. However, when Mukisa Foods reach full production capacity, they will face a sale problem because few people will be able to buy biscuits. If the sale prices remain at the present level, Mukisa Foods may have a large quantity of unsold biscuit stock. It becomes evident that the selling price FOT factory of U.Shs. 200 per packet has to be reduced. The means for reaching this aim can be as follows:

- to convince the relevant authority to make a marked reduction on the advalorem tax of 40%. Biscuits cannot be considered as a superfluous food but as a normal and high energy food;

- some of the administration expenses are not depending on the quantity of products produced, but are fixed. (e.g. repairs and renovation, stationery plus some of the general factory expenses). Up to now, the amounts are portioned out for a production of 680 tonnes a year, when the production increases, the administration expenses will stand at the same level but will be portioned out through the largest tonnage reducing administrative expenses input and production prime cost. Also, the raw material input of the prime cost must stand at the same level.

In the commercial field the export possibilities have to be considered. The main aim is to re-import the foreign currency already spent on buying overseas raw materials thus helping the Ugandan commercial balance with foreign countries. The yearly estimated foreign exchange facilities needed by Mukisa Foods is, according to the production of finished products of 1000 MT a year, US\$ 1,127,000. According to Mukisa Foods sale price, excluding the sales tax, the export price FOT Kampala for biscuits can be US\$ 4 per kg., or US\$ 1.4 per packet of 350 grammes. The above figure seems a little bit too high and Mukisa Foods should soon undertake a simple market study in the neighbouring countries in order to find out which quality and quantity can be exported to these countries and which price level can be applied, according to the local biscuit price and Mukisa Foods net sale price.

IV. CONCLUSION

Before formulating future assistance it would be necessary to request a short consultation of an industrial food plant expert, to advise MPED and UNDP on the means and time to undertake and achieve the project objectives.

All the inputs from the Ugandan Government and UNDP were adequate for achieving the project objectives within a reasonable period of time. However, such a food plant, needs imports from overseas and too much crucial raw material paid in foreign currency (in future Ugandan agricultural resources will be able to cover most of the factory raw material requirements i.e. wheat flour, sugar, butter oil, milk etc. but its rehabilitation is not yet finished). The project has now been temporarily stopped due to the lack of foreign currency allocated to Mukisa Foods to import only one raw material (shortening) despite the fact that the Ugandan authorities, from the beginning of the project, were eagerly willing to support it.

It is evident that it is possible to fully rehabilitate Mukisa Foods and the main part of the work has already been done. Only some tasks are still remaining unaccomplished, in order to make the factory run prosperously. Once Mukisa Foods is fully rehabilitated and running at its full capacity, a constant equilibrium must be kept between the sale price FOT factory of the candies and biscuits and the purchase power of the largest portion of the population. Otherwise, Mukisa Foods will fail to reach one of its main objectives which is to increase the welfare of the Ugandan people.

INTERNATIONAL STAFF

Alain LEDUNOIS (France)
UNIDO Expert, Acting Project Manager
7 January 1982 to 3 June 1983

Heinz GRAUDMAN (West Germany)
Technician of Werner Pfleiderer (UNIDO - Subcontractor)
came on site to assist in erecting the German line
6 October 1982 to 15 December 1982

Guy BOROSKI (France)
Technician of Aucouturier (UNIDO - Subcontractor)
came on site to fit the two wrapping machines properly
24 August 1982 to 5 September 1982

Paul LEROUX (France)
Technician of Bonnard Lornac (UNIDO - Subcontractor)
came on site to fit the French line properly
24 August 1982 to 5 September 1982

Horst SCHINDLER (West Germany)
Technician of Werner Pfleiderer (UNIDO - Subcontractor)
came on site to achieve the German line erection
2 March 1983 to 27 March 1983

Hanz ARTEMEYER (West Germany)
Engineer of Werner Pfleiderer (UNIDO - Subcontractor)
came on site to assist in making industrial trials with
the German line
16 March 1983 to 27 March 1983

EQUIPMENT FUNDED BY THE PROJECT

One TOYOTA station wagon plus fire extinguisher and spare parts for two years.

One TOYOTA van plus fire extinguisher and spare parts for two years.

One OLIVETTI typewriter plus ribbons.

One PROLABO hair hypometer and one TOBBAL balance, which have not yet been delivered.

One PROLABO Multicellular oven.

One complete WERNER PFLEIDERER biscuit making line.

ADMINISTRATION EXPENSES (ESTIMATE AND
ACTUAL) AS AT 31ST DECEMBER 1982

		<u>Estimate</u>	<u>Actual</u>	<u>Variance</u>
AE 1	Wage/Salary (a)	2,319,000	915,544	1,403,456
AE 2	Director's Allowance	192,000	9,480	182,520
AE 3	Audit Fees	100,000	0	100,000
AE 4	Repairs/Renovations	5,425,000	3,312,209	2,112,791
AE 5	Stationery	5,000,000	668,840	4,331,360
AE 6	Electricity (a)	600,000	1,506,821	- 906,821
AE 7	Water (a)	1,872,000	568,858	1,303,142
AE 8	Posts Tel. Telex	371,000	74,932	296,068
AE 9	Welfare & Medical Expenses (a)	11,149,000	2,314,562	8,834,438
AE 10	General Expenses (a)	5,318,000	33,640	5,284,360
AE 11	Travel Expenses	600,000	590,417	9,583
AE 12	Advertising	120,000	69,000	51,000
AE 13	Factory Expenses (a)	6,290,000	12,769,440	- 6,079,440
AE 14	Valuation Expenses	150,000	-	150,000
AE 15	Interest	2,500,000	4,000,000*	- 1,500,000
AE 16	Bank Charges & Commissions	550,000	1,000,000*	- 450,000
		<u>42,556,000</u>	<u>27,833,743</u>	<u>14,722,257</u>

(a) The above estimate figures were for 2560 hours of production for the year 1982, however, Mukisa Foods worked for only 956 hours.

YEARLY RAW MATERIAL FROM ABROAD AND COSTING FOR A 1000 MT PRODUCTION

<u>ITEM</u>	<u>QUANTITY</u>	<u>COST OF FACTORY</u>
Sweets Section		
Colouring powder	0.025 MT	1,000 US \$
Flavour	0.050 MT	2,000
Plastic bag	200,000 pieces	14,000 US \$
Wrapping paper	36,000,000 pieces	200,000 US \$
	Sub total	<u>217,000 US \$</u>
Biscuit Section		
Wheat flour	480 MT	346,000 US \$
Shortening	112 MT	354,000 US \$
Flavour	1.5 MT	60,000 US \$
Colouring powder	1 MT	40,000 US \$
Chemical product	2 MT	4,000 US \$
Corn starch	24 MT	83,000 US \$
Cream of tartar	3.6 MT	13,000 US \$
Wrapping paper	230,000 pieces	10,000 US \$
	Sub total	<u>910,000 US \$</u>
	TOTAL	1,127,000 US \$

EXPLANATION OF THE RUNNING OUT OF FAT

During the first half of the year 1982, an estimate of the raw material requirements was carried out for regular biscuit production.

After starting production in September 1982, it became evident that the Mukisa Foods Ltd., fat stock will end around March 1983, and the Management immediately requested several potential suppliers proforma invoices in order to select the cheapest one. The foreign exchange at "Window I" (see page 2) was requested from the relevant Government authorities and despite the steps undertaken, nothing happened.

Early April, 1983, the biscuit production stopped due to the lack of fat. Following the UNIDO expert's advice, the Mukisa Foods Management requested the Dairy Corporation through the World Food Programme and UNDP which are sponsoring this company with several hundred tonnes of fat a year, 40 metric tonnes of butter oil as "a temporary accomodation". At the end of April, the official World Food Programme negative response came from Rome.

The estimate delivery of the new fat consignment should be around November 1983, due to a delay in the banking process and the time in transit, if Mukisa Foods Ltd., is to get its allocation immediately.

SENIOR COUNTERPART STAFF

Alfred OMARA (General Manager) with Mukisa Foods from May 1978

Abel KAAHWA (Production Manager) with Mukisa Foods from September 1982

Joel SEWAGABA (Sales Manager) with Mukisa Foods from February 1983

Francis SINYOLI (Financial Accountant) with Mukisa Foods from January 1975

Yovani BWAMBALE (Purchasing Officer) with Mukisa Foods from September 1975

Godfrey KISIGA (Biscuit Section Supervisor) with Mukisa Foods from April 1970

William BALIGEYA (Sweet Section Supervisor) with Mukisa Foods from October 1969

SWEETS SECTION: SUMMARY OF
COST INVESTMENT

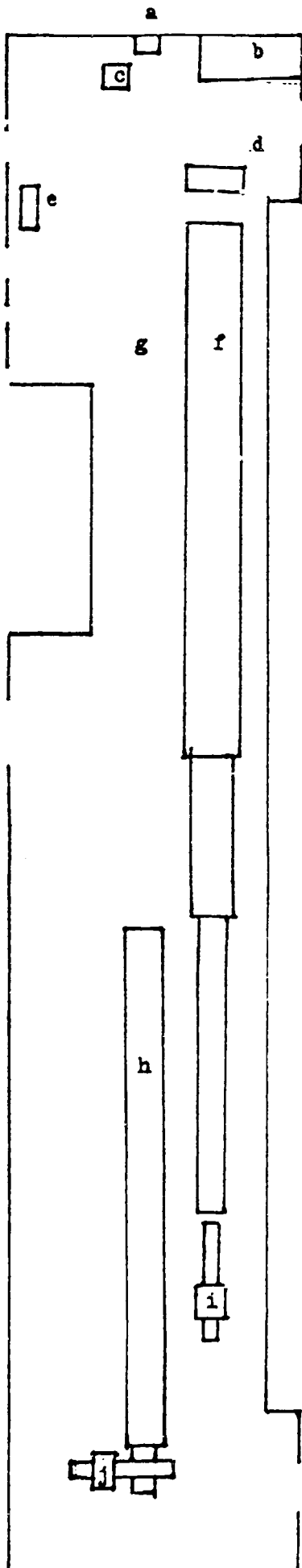
- 1) To be done as soon as possible to avoid a definite stop of production:-
- one new electrical boiler
from Collins Walker Ltd. (U.K.) US \$ 11.875

 - two new double twist wrapper
machines from Carle Montanary
(Italy) US \$ 42.830 x 2 = US \$ 85.660

 - one new dye for the moulding
machine from Hamac-Hansella
(West Germany) US \$ 5.000
- T O T A L US \$ 102.535
- 2) To be done in the future due to the aging of the actual equipment.
- one sugar dissolver
 - one continuous vacuum cooker
 - one batch roller
 - one rope sizer
 - one moulding machine

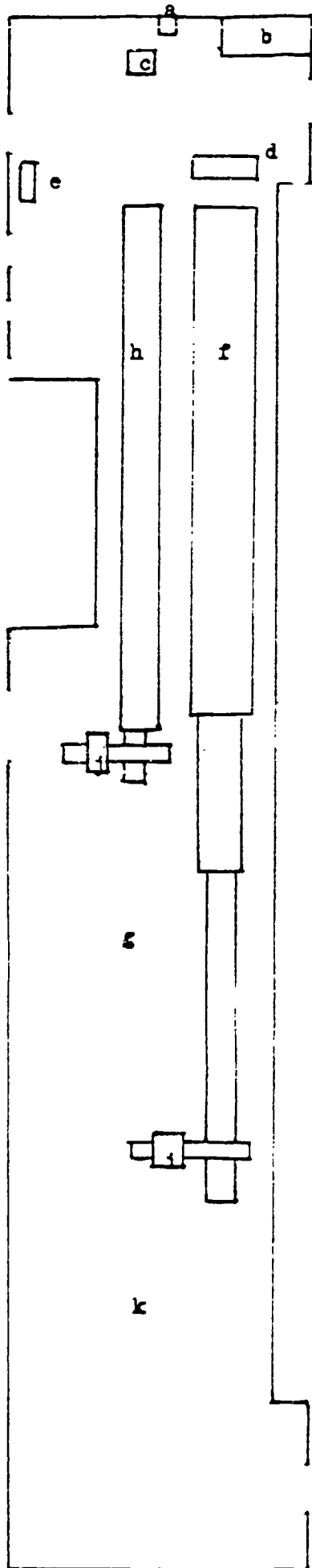
The above equipments' proforma invoices which are not yet quoted, can be got from:-

- Hamac Hansella (West Germany)
- Carle Montanary (Italy)



Sketch showing how the equipment is fixed in the biscuit section to date

-
- a: Water station
 - b: Bus-bar
 - c: Mixer for the French line
 - d: Mixer for the German line
 - e: Grinder for salt and sugar
 - f: German line
 - g: Space where the old biscuit line already scraped out was standing.
 - h: French line
 - i: Wrapping machine not properly installed
 - j: Wrapping machine properly installed



Sketch showing how the equipment in the biscuit section has to be re-installed in future, in view to:-

- 1) Make the wrapping machine of the German line run at full capacity (i)
- 2) Give space for fixing new equipment at the end of the French line i.e. Sandwiching machine (g)
- 3) Stock the daily production properly (k)

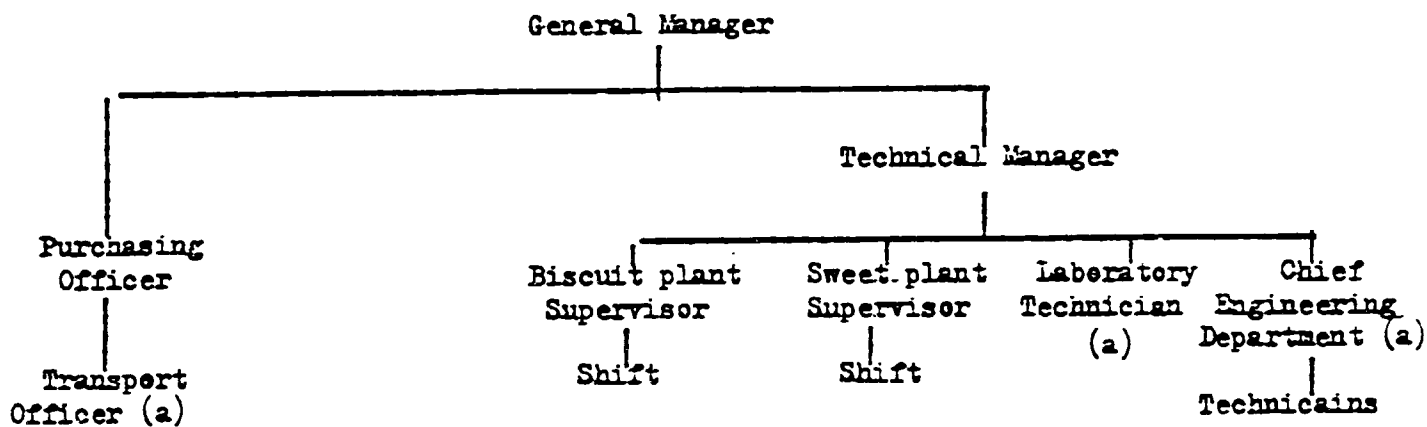
- a: Water station
- b: Bus-bar
- c: Mixer for the French line
- d: Mixer for the German line
- e: Grinder for salt and sugar
- f: German line
- g: See No. 2 above
- h: French line re-installed
- i: Wrapping machine properly installed
- j: Wrapping machine properly installed.
- k: See No. 3 above

FINANCIAL RESULTS FOR 1982

Banking position (31 12 81).....	400	
Stock of raw material (31 12 81) ..	4 682 940	
Administration expenses	27 833 743	
Purchase (local)	3 389 500	
(Import)	13 568 319	
Net sales value (a)	32 381 826	
Stock of raw materials (b)		
(31 12 82)	48 653 995	
Stock products produced		
(31 12 82)	0	
Banking position (31 12 82)	12 931 030	
	98 649 791	44 791 562

- (a) A sum of 10.578.765 was paid over total that amount to the Uganda Treasury Department as sales tax
- (b) Most of those raw materials were already paid during 1981 and still in transit early 1982.

SUGGESTED TECHNICAL ORGANIZATION CHART



a: Not yet recruited

BISCUIT MAKING PROCESS AND
NEW PRODUCTS TO
DEVELOP

Mukisa Foods equipment is now up to date and able to run properly. However, both lines are similar, producing exactly the same type of dry biscuits. The range of biscuit produced will remain limited. During the time of the project, only three brands of biscuits were produced (NICE, PETIT BEURRE and SHORT CAKE) using very simple recipes. Mukisa Foods staff is perfectly capable of starting the production again on its own although not well trained and fit to embark alone in the development of new products. The delivery of the laboratory equipment and the rehabilitation of the laboratory rooms has to be done before undertaking this task. The complex nature of the following phases requires the presence of an expert.

Definition of a recipe according to:

- the raw material and chemical products available in the factory or in Uganda;
- the finished product expected.

Checking of the accordance between:

- packaging of raw material in stock;
- possibility of the wrapping machine;
- size and nature of the stamps of the different dyes of the moulding machines.

Adjust the kneading operation in view to obtain a dough suitable for the moulding machine:

- fit the rollers and knife of the moulding machine;
- calibrate the vibrating deposit machine for sugar, coconut.

Establish the cooking curve of the oven according to:

- baking time of 6 minutes maximum;
- the fact that the biscuit must keep the same dimension avoiding problems in wrapping;
- fix the stacker properly and the speed of the cooling fans for packing the biscuits when they are cold.
- set the speed of the wrapping machine and adjust it in accordance with the biscuit production coming out of the line.

Between making the decision to launch a new production and starting the sale of the new biscuits, a period of 2 months is strictly required to carry out the above tasks properly. After the biscuit production (recipe

and process) is established, absolutely nothing must be changed. If even one factor is modified, all the production will be in disorder.

After considering the equipment, Mukisa Foods should be able to produce the following brands of biscuits in future:

- salted biscuits;
- chocolate biscuits (using chocolate flavour combined instead of cocoa powder);
- sandwich biscuit (with different types of cream) after buying and fixing the adequate equipment;
- nutritional biscuits for hospital and medical field.



